



# Working Instruction, Mechanical

Applicable for P910a, P910c, and P910i

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# 1 General



When handling this product take care to keep all surfaces clean of dirt, dust, debris, and hand grease. Use appropriate ESD precautions when working on this product. The use of finger cots or gloves, an ESD mat, and an ESD wrist strap are required at minimum.

# 2 Disassembly

**Tools:**

- Torque screwdriver
- JCIS No. 0 bit
- Style 2A ESD-safe tweezers (Blunt Tip)
- Orange stick
- Nylon pointer
- Front opening tool

**NOTE!** Whenever the phrase “pry tool” is used, a nylon pointer, an orange stick, or a front opening tool may be used, depending on the user’s preference.

Step-by-Step Instructions	
<ol style="list-style-type: none"> <li>1. Locate the grip location on the battery cover that is just below the camera window.</li> <li>2. Remove the battery cover by pressing down on grip location and simultaneously sliding battery door towards the bottom of the phone (away from the camera) until a 4 to 5 MM gap forms between the bottom of camera window and top of the battery cover. The battery cover can then be lifted away from the phone.</li> </ol>	
<ol style="list-style-type: none"> <li>3. Remove the battery by placing your hand over the battery cavity and orienting the phone so that the battery cavity is in a downward position. The battery should drop into your hand.</li> </ol> <p><b>NOTE!</b> Do not tap the phone against a hard surface in an attempt to get the battery out. Damage to the phone may result!</p>	



### Step-by-Step Instructions

**NOTE!** Be careful not to scratch or scar the phone or the flip hinge cover when removing the flip hinge cover.

4. With the flip in the closed position, slide the flat end of a pry tool under one of the accessible corners of the flip hinge cover and rotate the pry tool away from the system connector. The hinge cover should start to separate from the phone along the edge adjacent to the system connector.



5. Once you have got the separation of the flip hinge cover started, work the pry tool along the flip hinge cover's separating edge to finish releasing it from the phone.

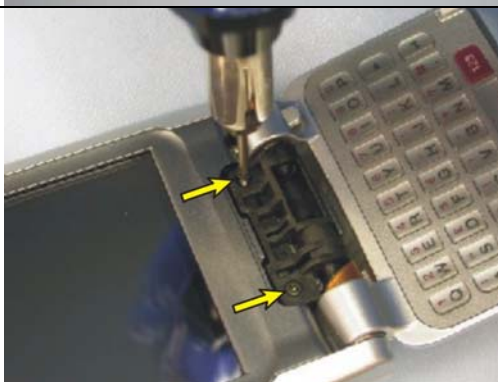




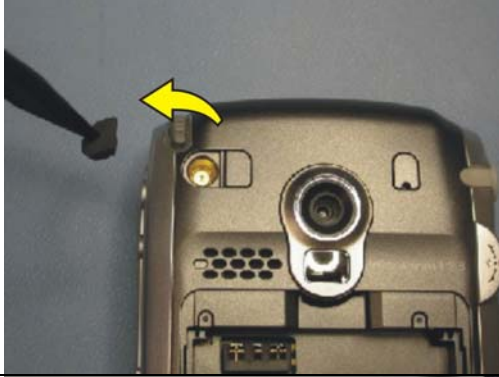

6. Once the edge of the flip hinge cover is released from the phone, lift the hinge cover's free edge up and out away from the phone as shown. The flip hinge cover should easily slide out from between the flip and the front cover when lifted in the manner shown.



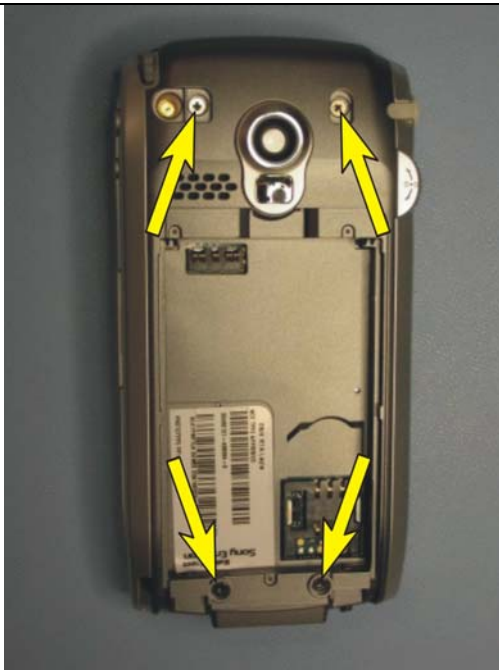


7. Using a torque driver with a JCIS No. 0 bit, remove the two M1.4 x 3.5MM screws holding the flip assembly.

**NOTE!** Do not reuse the screws that hold the flip assembly in place.



<b>Step-by-Step Instructions</b>	
<p>8. Support the hinge joint by placing your finger on the black portion of the hinge.</p> <p>9. Then rotate the flip so that it forms a 90° angle with the rest of the phone.</p>	
<p>10. Remove your finger from the black portion of the hinge and rotate the flip away from the phone. While rotating the flip, it should come free from the phone.</p>	
<p>11. Orient the phone so that the side of the phone with the camera is towards you and the end of the phone with the system connector is the bottom of the phone.</p> <p>12. Insert the pointed end of the nylon pointer into small hole in the RF port cover and rotate the nylon pointer down towards the outer edge of the phone. The RF port cover should lift from its cavity.</p>	
<p>13. Using a pair of tweezers, press inward on side of the left side screw cover that is accessible from the RF port opening. While applying inward pressure on the left side screw cover, pry the cover upward away from the phone.</p> <p>14. Once the left side screw cover is loose, remove it from the phone.</p>	

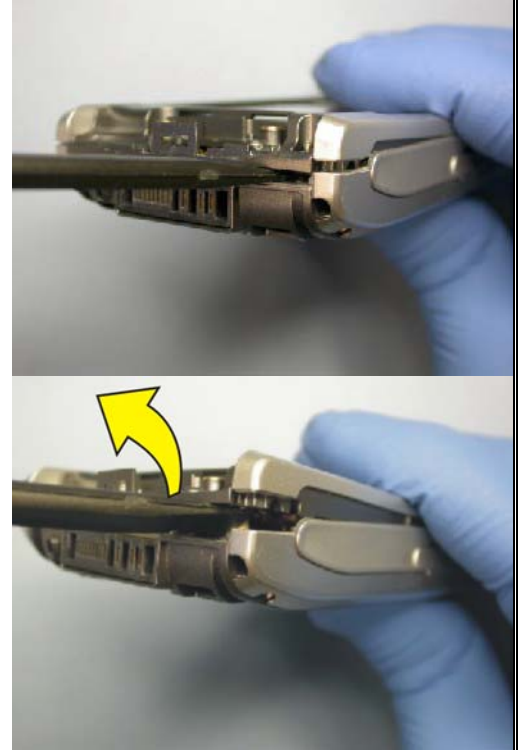
Step-by-Step Instructions	
<p>15. Using the pair of tweezers, press the tip of one of the tweezers' arms down into the notch in the right side screw cover and pry the cover up out of its cavity.</p> <p>16. Once the sides of the right side screw cover are accessible, lift it from the phone using the tweezers.</p>	
<p><b>NOTE!</b> If the disassembly procedure is only being preformed for the purpose of removing the front cover, the following two steps can be skipped. Otherwise the following two steps need to be preformed before removing the front cover.</p> <p>17. If present, remove the memory stick.</p> <p>18. If present, remove the SIM card.</p>	
<p>19. Remove the four screws from the back cover using a torque driver with a JCIS No. 0 bit.</p> <p><b>NOTE!</b> The two screws near the system connector <b>cannot</b> be reused. The two screws near the camera window are self-tapping screws and can be reused.</p>	



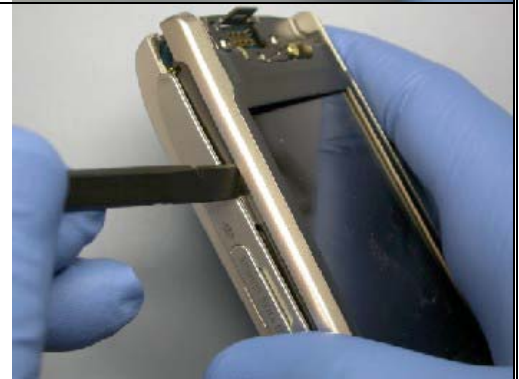


### Step-by-Step Instructions

20. Starting at the end of the phone that contains the system connector, work a pry tool in the seam between the front and back covers and gently twist the pry tool to separate the covers.



21. Once the separation of the front and back covers is started at the bottom of the phone, move to one of the seams that run along each side of the phone where the front and back covers come together. Using the flat end of a pry tool, gently twist the pry tool to separate the front and back covers. As the seam opens up, switch from side to side working the seam open by sliding the pry tool down the seam and twisting. Continue doing this back and forth along each side until the seams are opened up on each side just passed where the top of the display is located.



22. Remove the front cover by lifting up and rotating it away from the end of the phone with the system connector.





### Step-by-Step Instructions

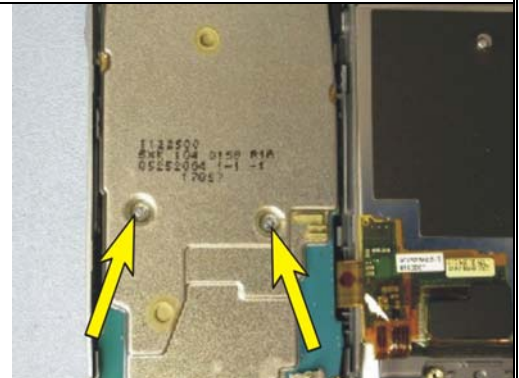
**NOTE!** The display is connected to the non-accessible side of the circuit board. Therefore the circuit board has to be removed from the back cover before the display can be disconnected from the circuit board.

**NOTE!** Be careful not to damage the display or its flex film while trying to remove the circuit board from the back cover.

23. Lay a scrap front cover, external side up, adjacent to the side of the back cover that the camera key is located on and rotate the display so that it is laying on top of the scrap front cover.

24. Remove the two screws from the shielding can using a torque driver with a JCIS No. 0 bit.

25. Then lift the shield can away from the circuit board.





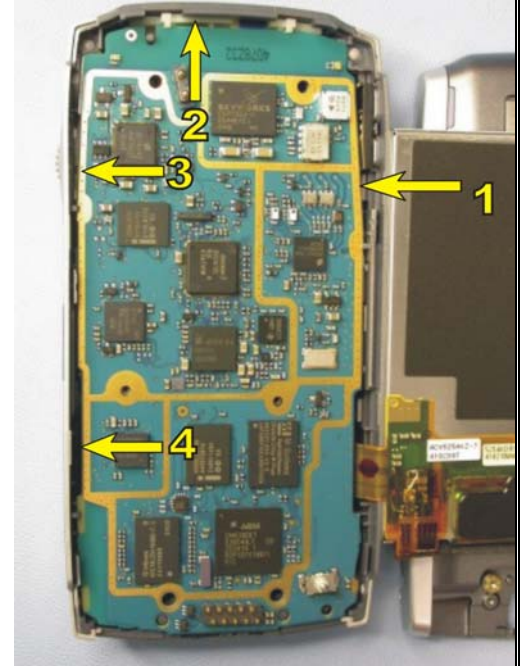
### Step-by-Step Instructions

26. There are 5 latches that hold the circuit board in the back cover. To release the circuit board, gently pry between the circuit board and the back cover in the 4 locations indicated in the order specified.

**NOTE!** Only pry as much as is needed to release the latches!

**NOTE!** When prying in location 2 make not to pry over the portion of the antenna that is visible.

**NOTE!** Be careful not to damage the RF port when prying to release the latches at location 2.



27. Once the latches holding the circuit board are released, slightly lift up the side of the circuit board the display is adjacent to and using a pry tool, carefully disconnect the flex connection of the display from the circuit board. Then set the display aside.



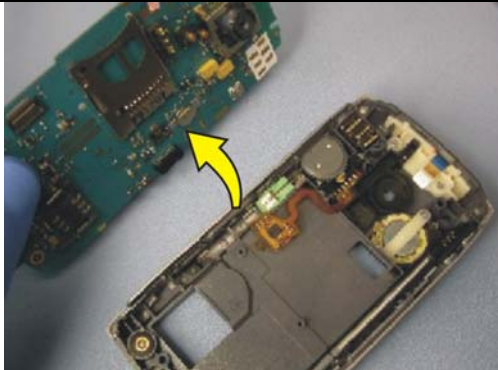
28. Once the display is removed, increase the size of the opening between the circuit board and the back cover and locate the jog dial flex film connection.

29. Using a pry tool, carefully disconnect the flex connection of the jog dial from the circuit board.








Step-by-Step Instructions	
30. Then lift the circuit board away from the back cover.	

### 3 Reassembly

**Tools:**

- Torque screwdriver
- JCIS No. 0 bit
- Style 2A ESD-safe tweezers (Blunt Tip)
- Orange stick
- Nylon pointer
- Front opening tool

**NOTE!** Whenever the phrase “pry tool” is used, a nylon pointer, an orange stick, or a front opening tool may be used, depending on the user’s preference.

Step-by-Step Instructions	
<p><b>NOTE!</b> Make sure that the camera gasket is in its correct position before proceeding so that the circuit board fits correctly into the back cover.</p> <p>1. Lay the edge of the circuit board inside the edge of the back cover so that the contact pads on the board for audio jack are adjacent to the jack in the back cover as shown.</p>	



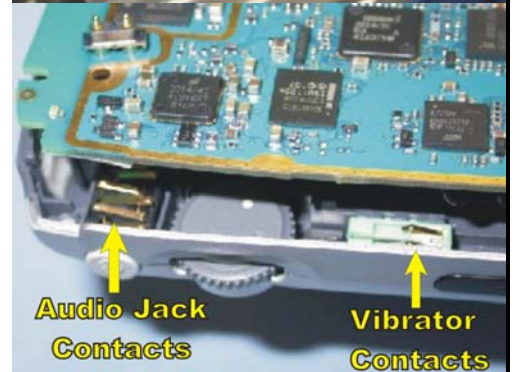
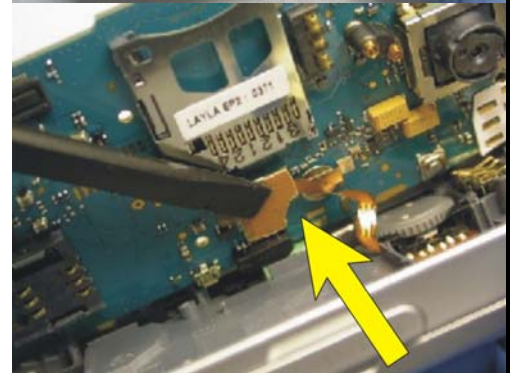
### Step-by-Step Instructions

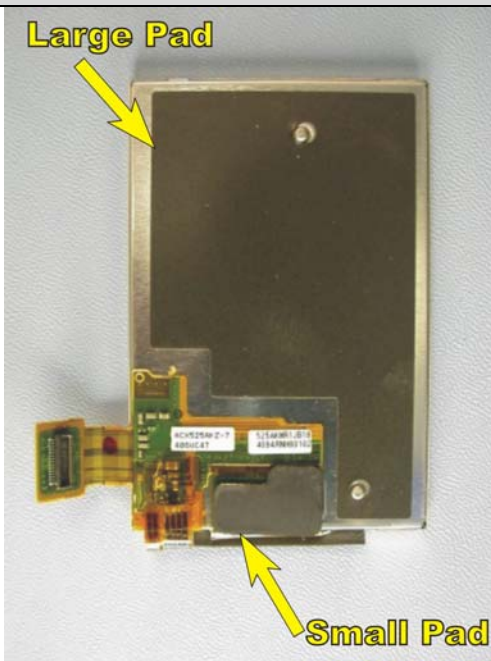
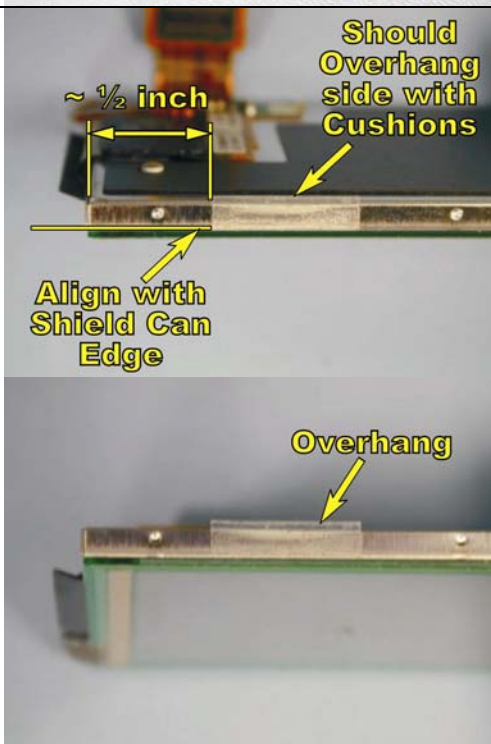
**NOTE!** Be careful not to damage the vibrator contacts or the audio jack contacts when connecting the jog dial to the circuit board.

2. Rotate the circuit board towards the back cover so that the jog dial's flex connection can reach its corresponding connector on the board.

3. Plug the jog dial flex film connection to the board and rotate the board down into the back cover.

**NOTE!** Check the vibrator contacts and the audio jack contacts to make sure that you did not damage them during the process of connecting the jog dial to the circuit board.



<b>Step-by-Step Instructions</b>	
<p>4. If a new display is being installed, mount the two cushions shown onto the display as indicated.</p>	
<p>5. If a new display is being installed, mount a display spacer onto the edge of the display as shown. If the old display is being reinstalled, verify that a display spacer is mounted onto the edge of the display as indicated. If a display spacer is not present, install one as shown.</p>	

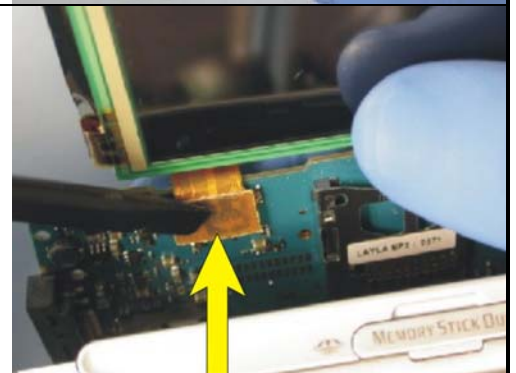


### Step-by-Step Instructions

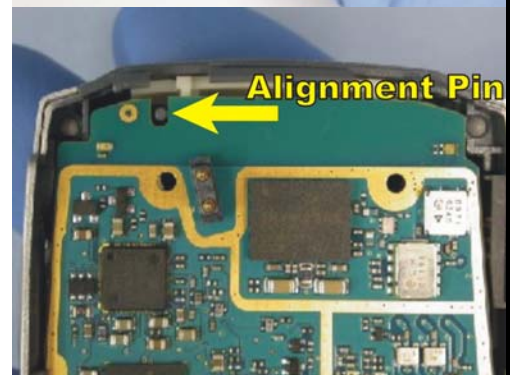
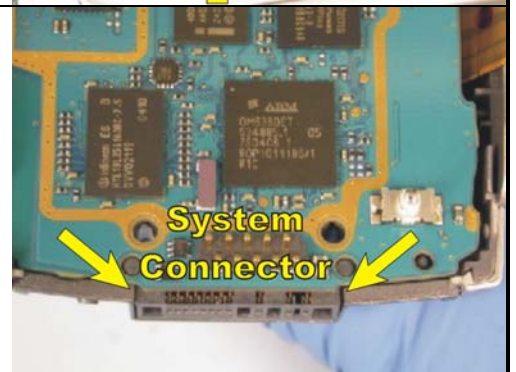
6. Hold the partially assembled phone in your hand with the board towards you and place the display in the same hand beside the phone with the back of the display as the visible side and its flex connection orients towards the circuit board as shown.



7. Rotate up the side of the circuit board that the display attaches to and carefully connect the flex connection of the display to the circuit board. Then rotate the circuit board back down into the back cover.



8. Make sure that the system connector and the alignment pin are aligned with their corresponding features.

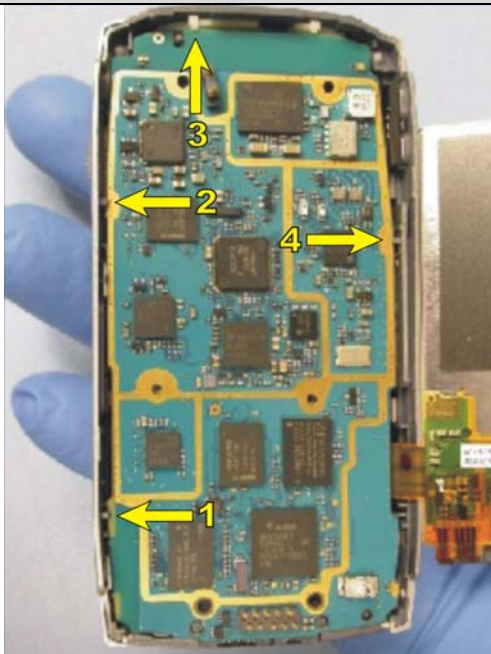




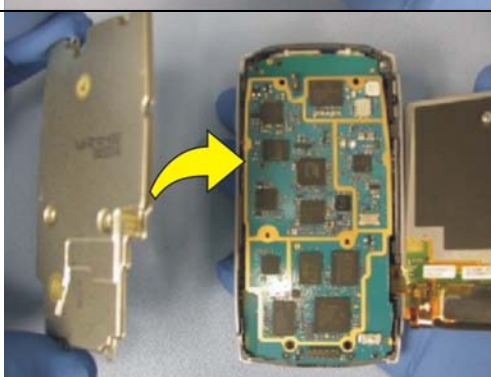


### Step-by-Step Instructions

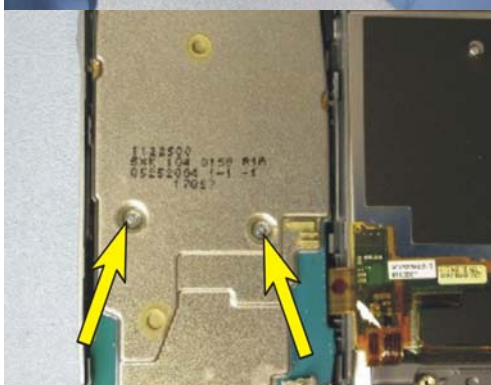
9. Snap the circuit board into the back cover by pressing the board in the 4 locations shown in the order indicated so that 5 latches on the back cover that hold the circuit board in place engage.



10. Place the shield can over the circuit board so that the shield can matches up with the outline on the circuit board.



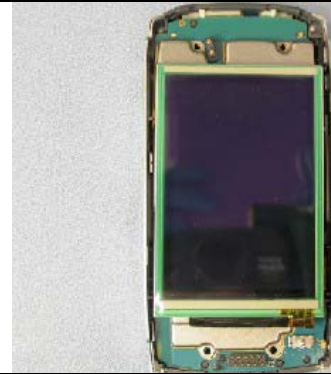
11. Install two M1.4 x 4MM screws using a torque of 7 N\*cm in the two locations indicated.





### Step-by-Step Instructions

12. Rotate the display so that it is laying on top of the shield can.



**NOTE!** Hold the display in place while installed the front cover so that the display does not move around and put unnecessary strain on the display's flex film.

13. Work the top of the front cover down over the three catches at the top of the back cover.



14. Once there is no gap between the top of the front cover and back cover, rotate the rest of the front cover down onto the phone and squeeze the front cover and the back cover together until the front cover snaps into place.





### Step-by-Step Instructions

**NOTE!** The two M1.6 x 11MM screws that mount in the back cover cannot be reused and must be replaced if they are removed. The M1.7 x 14.5MM screws are self tapping and can be reused.

15. Using a torque screwdriver set to 15 N\*cm and a JCIS No. 0 bit, install two M1.6 x 11MM screws in the screw locations nearest the system connector. Using a torque screwdriver set to 24 N\*cm and a JCIS No. 0 bit, install two M1.7 x 14.5MM screws in the screw locations nearest camera window.



### Step-by-Step Instructions

16. Orient the phone so that the side of the phone with the camera is towards you and the end of the phone with the system connector is the bottom of the phone.
17. Remove the protective backing from the right side screw cover.
18. Orient the right side screw cover so that its side with adhesive is towards the back cover and the screw cover's shape matches up with the shape of its cavity.
19. Insert the right side screw cover into its cavity and apply pressure to it for 3 seconds so that a good bond forms between the screw cover and the back cover.

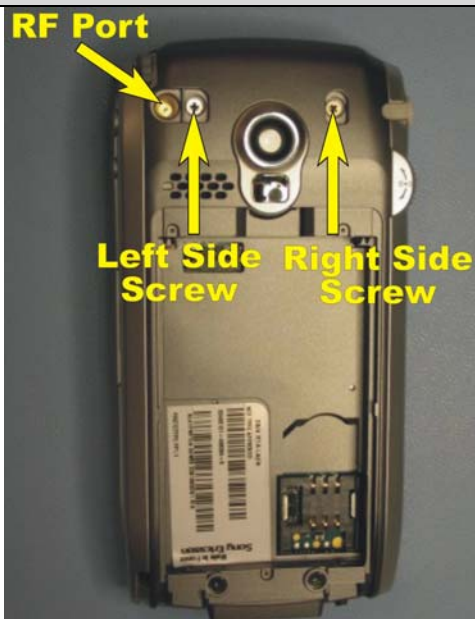
**NOTE!** When correctly installed the visible surface of the screw cover should be flush with the outer surface of the back cover.

20. Remove the protective backing from the left side screw cover.
21. Orient the left side screw cover so that its side with adhesive is towards the back cover and the screw cover's shape matches up with the shape of its cavity (the cavity adjacent to the RF port).
22. Insert the left side screw cover into its cavity and apply pressure to it for 3 seconds so that a good bond forms between the screw cover and the back cover.

**NOTE!** When correctly installed the visible surface of the screw cover should be flush with the outer surface of the back cover.



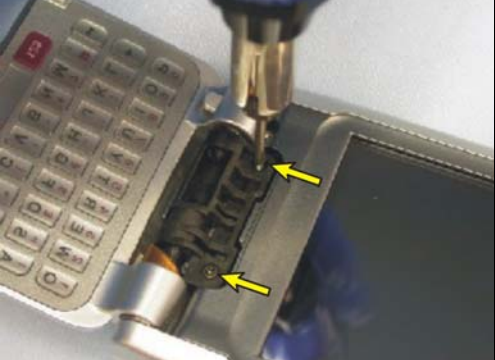

23. Insert the RF port cover into its RF port in the back cover.

**NOTE!** When correctly installed the visible surface of the RF port cover should be flush with the outer surface of the back cover.







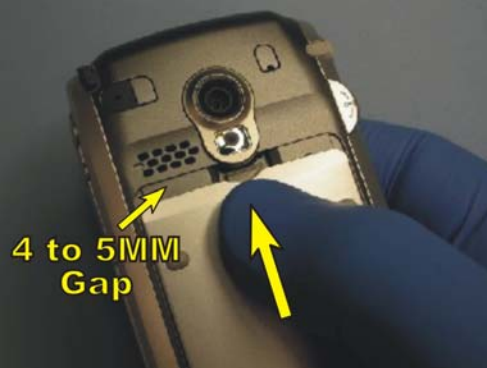




Step-by-Step Instructions	
<p><b>NOTE!</b> Be careful when handling and adjusting the portion of the flip assembly that contains the contacts so that contamination of the contacts is avoided.</p> <p>24. Adjust the portion flip that contains the contacts so that the contacts are visible when viewing the side of the flip assembly with that standard phone keypad.</p>	
<p>25. Mate the contact portion of the flip assembly in the corresponding features at the bottom of the front cover.</p> <p><b>NOTE!</b> The screw holes in the contact portion of the flip assembly should align with the screw inserts in the front cover.</p>	
<p><b>NOTE!</b> The M1.4 x 3.5MM screws that hold the flip assembly in place cannot be reused and must be replaced whenever they are removed.</p> <p>26. Using a torque driver set at 7 N*cm with a JCIS No. 0 bit, install the two M1.4 x 3.5MM screws that hold the flip assembly to the phone.</p>	
<p>27. Rotate the flip assembly so that an angle of ~120° is formed between the flip and the display.</p> <p><b>NOTE!</b> You may have to hold the flip at the 120° angle.</p>	



Step-by-Step Instructions	
<p>28. Insert the edge of the hinge cover with the two 6.5MM tabs into the corresponding notch in the front cover just below the bottom edge of the display.</p>	
<p>29. Press down on the logo on the hinge cover until the hinge cover snaps onto the front cover.</p> <p><b>NOTE!</b> Make sure there is no gap along the seam between the hinge cover and the front cover that is just above the system connector. If no gap is present the hinge cover is correctly installed.</p>	
<p>30. With the label side of the battery oriented away from the phone, insert the end of the battery with the three contact pads into the end of the battery cavity where the battery connector is located. The two corners of the battery closest to the phone's battery connector should slide under catches in the corners of the battery cavity.</p>	
<p>31. While pushing the battery towards camera, simultaneously press the other end of the battery down into the battery cavity.</p>	

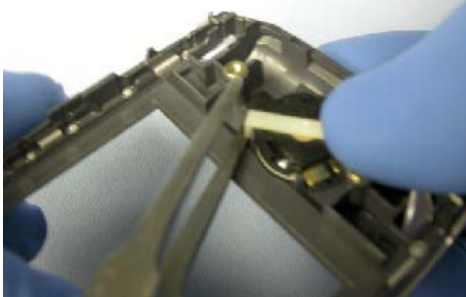
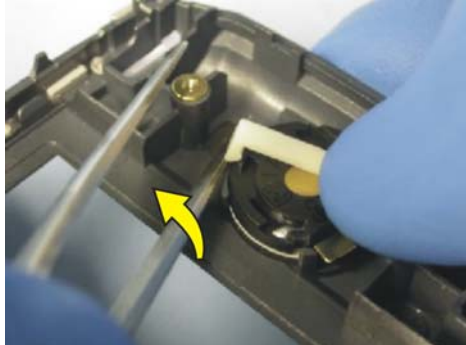
Step-by-Step Instructions	
<p>32. Place the battery cover over the battery cavity, so there is a 4 to 5 MM gap between the bottom of camera window and top of the battery cover.</p> <p>33. Press down on grip location on the battery cover and simultaneously slide battery cover towards the top of the phone (towards the camera window).</p>	

## 4 Replacement of Mechanical Parts

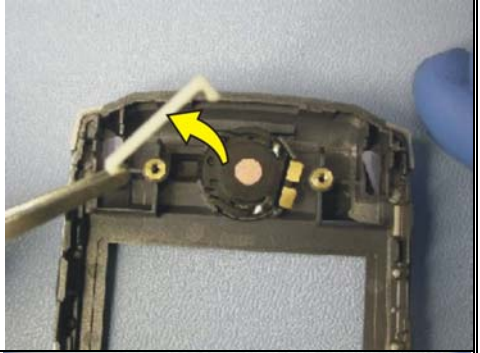
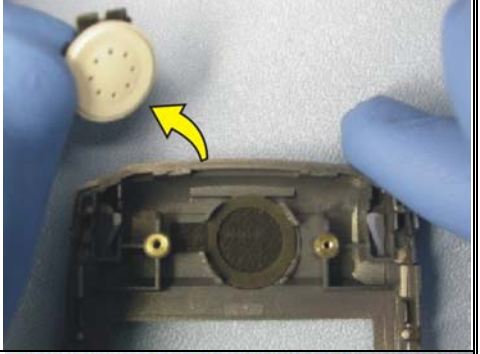
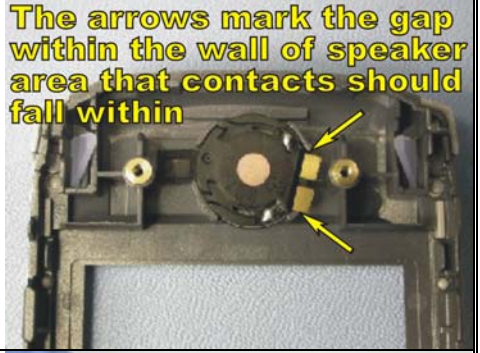

### 4.1 Front Cover

**Tools:**

- 2A (blunt tip) ESD-safe tweezers
- Lint-free wipes
- Perform the steps 1 - 22 of “Disassembly” section before proceeding

Step-by-Step Instructions	
<p>1. Using 2A (blunt tip) tweezers, slide the tip of one of the tweezers' arms under the lip of the accessible leg of the speaker holder.</p>	
<p>2. Place a finger over the speaker holder to keep it from flying off when releasing it.</p> <p>3. Twist the tweezers away from the speaker and the holder should release from its catch on the front cover.</p>	



Step-by-Step Instructions	
4. Lift the holder from atop the speaker and set it aside.	
5. Lift the speaker from front cover.	
6. Obtain a new front cover. 7. Place the speaker into the new front cover's speaker area. When placing the speaker, orient it so that the speaker's contacts are within the gap in the side of the speaker area that is opposite to the location where the tab portion of the speaker cloth extends for the speaker area.	<p><b>The arrows mark the gap within the wall of speaker area that contacts should fall within</b></p> 
8. Locate the two catch features that are in the placement walls around the speaker area. 9. Hook one of the legs of the speaker holder into one of the placement wall catches. 10. Rotate the speaker holder down over the speaker and press down on the speaker holder until the unlatched leg of the speaker holder snaps into its corresponding catch feature.	
<ul style="list-style-type: none"><li>Perform the steps of "Reassembly" section starting at the note before step 13 to complete the reassembly of this phone.</li></ul>	




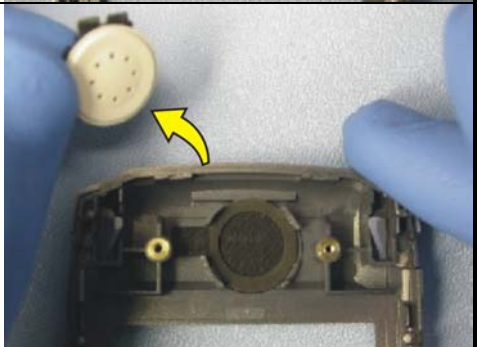




## 4.2 Front Speaker, Speaker Holder, and Speaker Cloth

### Tools:

- 2A (blunt tip) ESD-safe tweezers
- Lint-free wipes
- Perform the steps 1 - 22 of “Disassembly” section before proceeding.

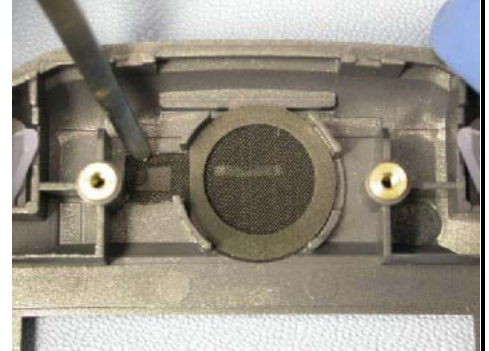
Step-by-Step Instructions	
1. Using 2A (blunt tip) tweezers, slide the tip of one of the tweezers' arms under the lip of the accessible leg of the speaker holder.	
2. Place a finger over the speaker holder to keep it from flying off when releasing it.	
3. Twist the tweezers away from the speaker and the holder should release from its catch on the front cover.	
4. Lift the holder from atop the speaker and set it aside.	
<b>NOTE!</b> If the speaker holder is the only component being replaced, skip to step 8 and use a new speaker holder when proceeding.	
5. Lift the speaker from front cover.	



### Step-by-Step Instructions

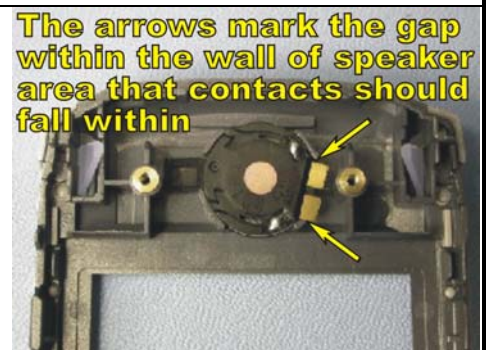
**NOTE!** The speaker cloth only has to be removed if it is being replaced, otherwise skip the following step.

6. If replacing the speaker cloth:
  - a. Slide the tip of a tweezers' arm under the tab portion of the speaker cloth and peel the speaker cloth up from the front cover.
  - b. Remove any remaining adhesive residue from the speaker cloth attachment area.
  - c. Place a new speaker cloth in the front cover as shown. The side of the speaker cloth with adhesive mates to the front cover. The tab portion of the speaker cloth should cover the rectangular opening that is adjacent to the speaker area and the round portion of the speaker cloth should completely fill the bottom of the speaker area.



**NOTE!** If the speaker is the component being replaced, a new speaker should be used when performing the following steps.

7. Place a speaker into the front cover's speaker area. When placing the speaker, orient it so that the speaker's contacts are within the gap in the side of the speaker area that is opposite to the location where the tab portion of the speaker cloth extends for the speaker area.



8. Locate the two catch features that are in the placement walls around the speaker area.
9. Hook one of the legs of the speaker holder into one of the catch features in the placement wall.
10. Rotate the speaker holder down over the speaker and press down on the speaker holder until the unlatched leg of the speaker holder snaps into its corresponding catch feature.



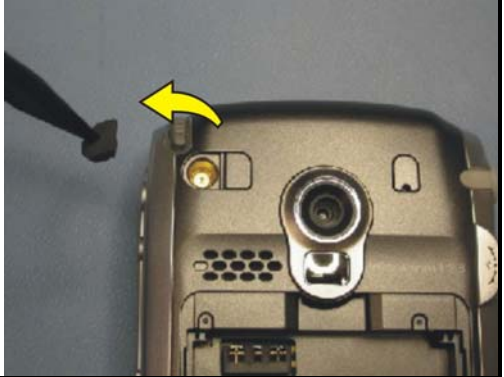

- Perform the steps of "Reassembly" section starting at the note before step 13 to complete the reassembly of this phone.

**NOTE!** If the front speaker is replaced, the front speaker audio reset software must be run on the phone. Instructions for running the speaker audio reset can be found in the Test Instruction, Mechanical.



## 4.3 RF Port Cover

**Tools:** • Nylon Pointer

Step-by-Step Instructions	
<p>1. Orient the phone so that the side of the phone with the camera is towards you and the end of the phone with the system connector is the bottom of the phone.</p> <p>2. Insert the pointed end of the nylon pointer into small hole in the RF port cover and rotate the nylon pointer down towards the outer edge of the phone. The RF port cover should lift from its cavity.</p>	
<p>3. Insert a RF port cover into the RF port in the back cover.</p> <p><b>NOTE!</b> When correctly installed the visible surface of the RF port cover should be flush with the outer surface of the back cover.</p>	

## 4.4 Battery Cover

The removal and installation of this part is covered in the “Disassembly” and “Reassembly” sections of this document. Limit the amount of disassembly to only that which is needed to remove this part. If this part is being replaced, a new part should be used in the place of the old part when reassembling.

## 4.5 Display

The removal and installation of this part is covered in the “Disassembly” and “Reassembly” sections of this document. Limit the amount of disassembly to only that which is needed to remove this part. If this part is being replaced, a new part should be used in the place of the old part when reassembling. Two cushions and a spacer must be mounted on a new display before it can be used. The installation of these two cushions and the spacer are covered in the “Reassembly” section.



## 4.6 Flip Assembly



The removal and installation of this part is covered in the “Disassembly” and “Reassembly” sections of this document. Limit the amount of disassembly to only that which is needed to remove this part. If this part is being replaced, a new part should be used in the place of the old part when reassembling.

## 4.7 Flip Hinge Cover

The removal and installation of this part is covered in the “Disassembly” and “Reassembly” sections of this document. Limit the amount of disassembly to only that which is needed to remove this part. If this part is being replaced, a new part should be used in the place of the old part when reassembling.

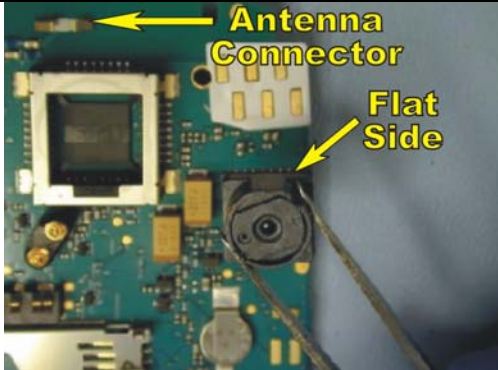
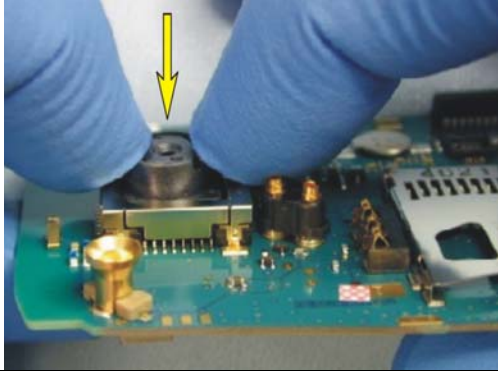
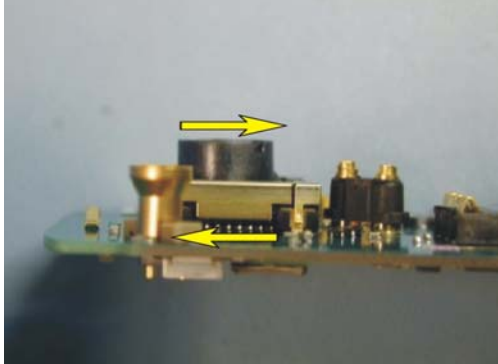
## 4.8 Camera Module

- Tools:**
- 2A (blunt tip) ESD-safe tweezers
  - Perform the steps of “Disassembly” section before proceeding.

Step-by-Step Instructions	
1. Position a pair of blunt tip tweezers so that the arms of the tweezers are parallel to the circuit board and so that the cylindrical portion of the camera is between the arms of the tweezers.	
2. With the tweezers oriented as specified, grip the camera with the tweezers and rock the camera back in forth while lifting the camera away from the circuit board. The camera module should come free from the camera connector.	





Step-by-Step Instructions	
3. Orient a new camera module so that flat side of the cylindrical portion of the camera module is adjacent to the antenna connection.	
4. Once correctly oriented, insert the new camera module into the camera connector and press the camera module down into the camera connector until it is fully seated.	
<b>NOTE!</b>	
Make sure that the top of the camera module is parallel with the surface of the board. If the camera module is not parallel, check whether the camera module is completely seated down into the camera connector.	

- Perform the steps of “Reassembly” section to complete the reassembly of this phone.





## 4.9 Back Cover

### Tools:

- Torque screwdriver
- JCIS No. 0 bit
- Style 2A ESD-safe tweezers (Blunt Tip)
- Orange stick
- Nylon pointer
- Front opening tool

**NOTE!** Whenever the phrase “pry tool” is used, a nylon pointer, an orange stick, or a front opening tool may be used, depending on the user’s preference.

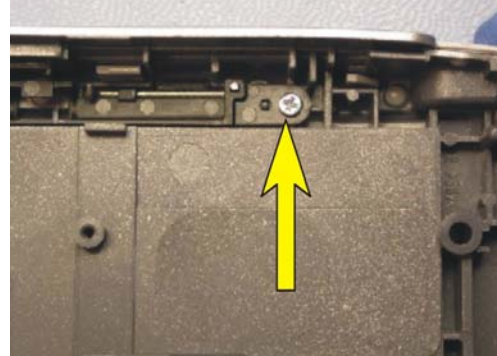
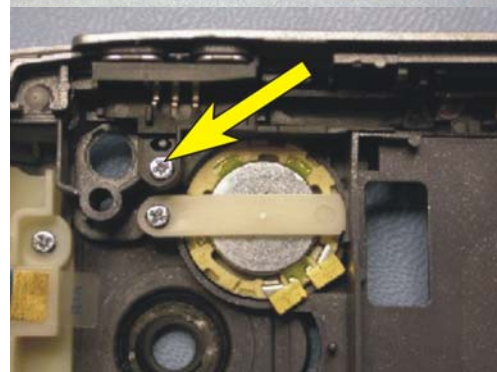
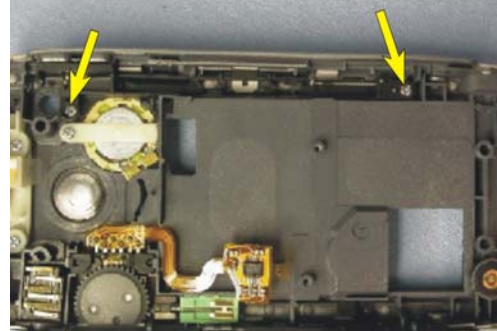
- Perform the steps of “Disassembly” section before proceeding.

Step-by-Step Instructions	
<p>1. Remove the camera gasket from its position in the back cover using a pair of tweezers.</p> <p><b>NOTE!</b> The camera gasket some times sticks to the circuit board when the circuit board is removed so if the speaker gasket is not present in the back cover locate it.</p>	
<p>2. Remove the stylus by sliding it away from the back cover as indicated.</p>	



### Step-by-Step Instructions





3. Remove the two screws that are holding the stylus holder in the back cover using a torque driver with a JCIS No. 0 bit.



**NOTE!** Be careful when removing the stylus holder not to damage the camera/ internet key switch.

4. Using a pair of tweezers, lift the end of the stylus holder near the antenna off of its guide pin and gently work the stylus holder free from the back cover and set it aside.



Step-by-Step Instructions	
<p>5. Remove the memory stick cover from the access hole in the side of the back cover. Once free from its access hole, the memory stick cover should lift out of the hole.</p>	
<p>6. Using a torque driver with a JCIS No. 0 bit, remove the screw that is holding the rear speaker holder in the back cover.</p>	
<p>7. Lift the speaker holder from atop the rear speaker and set it aside.</p>	
<p>8. Rotate the back cover so that the rear speaker and its speaker cloth fall into your hand. Then set the items aside.</p> <p><b>NOTE!</b> If the speaker cloth does not fall out of the speaker cavity into your hand, remove the speaker cloth from the back cover using a pair of tweezers.</p>	

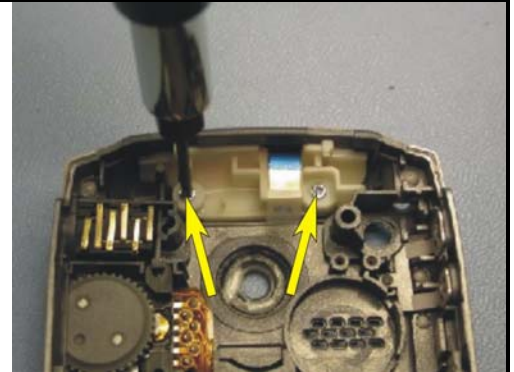




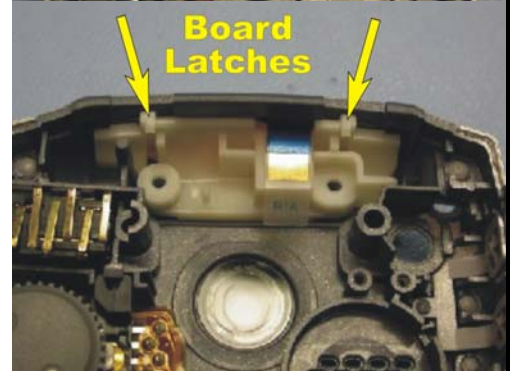
### Step-by-Step Instructions

**NOTE!** Be careful not to damage the antenna when removing the antenna assembly.

9. Remove the two M1.4 x 4MM screws that hold the antenna using a torque driver with a JCIS No. 0 bit.



10. Using the tip of one arm of a pair of blunt tip tweezers, pry between the back cover and the antenna assembly at one of the antenna assembly's board latches to free that side of the antenna assembly from its catch feature in the back cover.



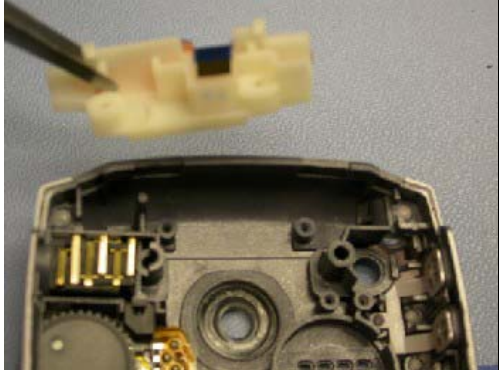
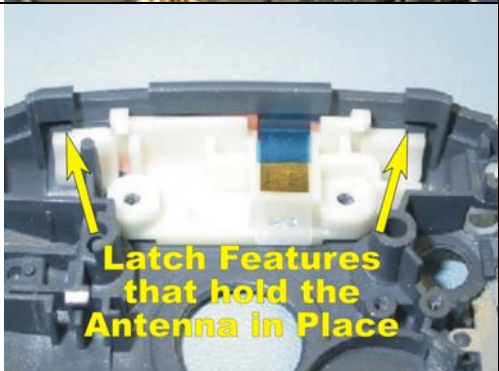
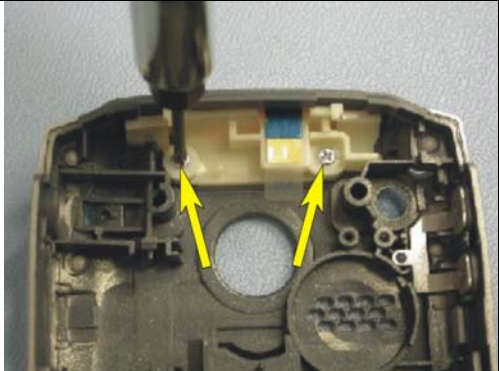

11. Once one side of the antenna assembly is free, repeat the same procedure at the antenna assembly's other board latch.



12. Continue prying at each of the antenna assembly's board latches until the edge of the antenna assembly clears the bottom edge of the back cover latches that hold the top of the front cover in place.



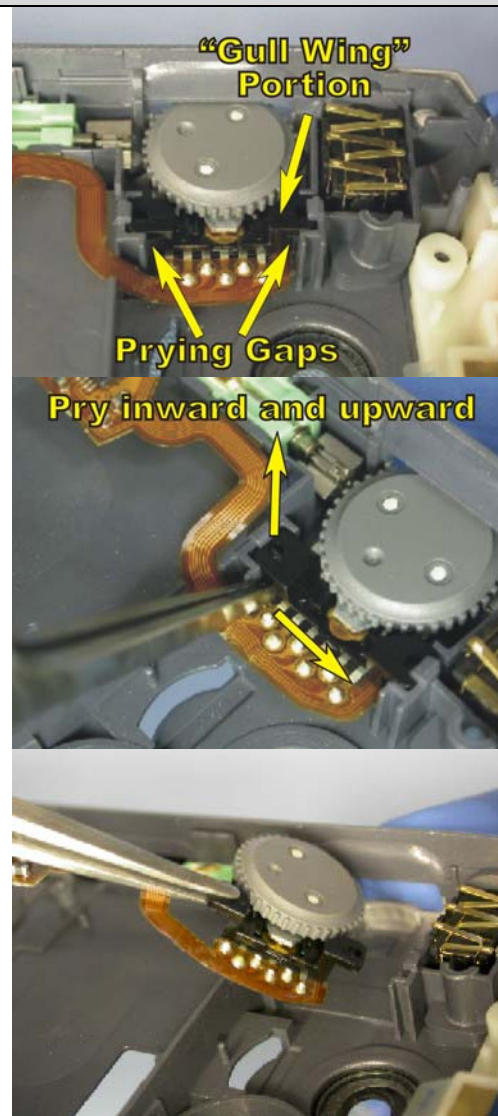


Step-by-Step Instructions	
13. Once all of the features of the back cover that the antenna could get hung on have been cleared, lift the antenna assembly from the back cover.	
<p><b>NOTE!</b> Do not press on the antenna's contact pad when reinstalling the antenna assembly, contamination of the pad may occur.</p> <p>14. Obtain a new back cover and position the antenna assembly in the back cover in the location shown.</p> <p>15. Then press the antenna assembly down into the back cover until each end of the antenna assembly catches under the latches in the back cover that hold the antenna in place.</p>	
16. Using a torque driver set at 7 N*cm with a JCIS No. 0 bit, install the two M1.4 x 4MM screws that hold the antenna.	
17. Locate where a portion of the jog dial's flex film is pressed down around an alignment peg protruding from the back cover. Using a pair of blunt tip tweezers, free the flex film from the alignment peg.	



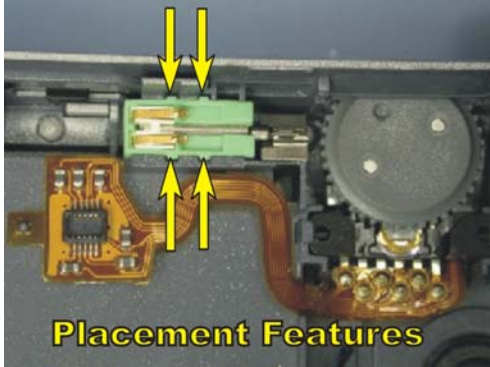


### Step-by-Step Instructions

18. Locate the “gull wing” portion of the jog dial that mates with features in the back cover to hold the jog dial in place.
19. Insert the tip of a pair of blunt tip tweezers in the gap between the back cover and the portion of the “gull wing” that is perpendicular to the jog dial’s flex film.
20. Pry inward (towards the jog dial) and upward (away from the back cover) simultaneously until the latch feature of the jog dial becomes unhooked from the back cover.
21. Once one of the latch features is free from the back cover, lift the latch feature that is free away from the back cover while pressing inward on the dial itself until the jog dial assembly lifts from the back cover.










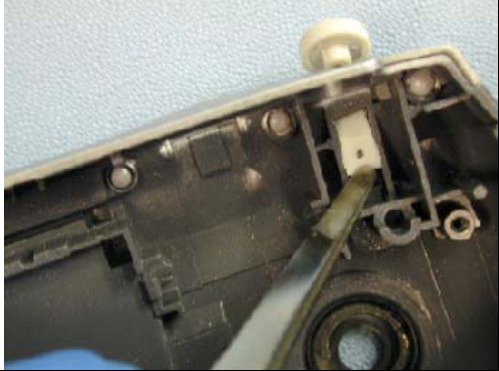


<b>Step-by-Step Instructions</b>	
<p>22. Insert the jog dial into the new back cover so that the dial portion protrudes through the slot in the side of the back cover and the two wings of the gull wing portion of the jog dial are aligned with their corresponding back cover notches.</p>	
<p>23. Press one of the jog dial's wings into its corresponding notch in the back cover until the wing snaps into place.</p>	
<p>24. Press the other wing into its corresponding notch in the back cover until the wing snaps into place. The jog dial is now installed.</p>	
<p>25. Using a pair of tweezers, work the vibrator from its cavity by gently lifting the vibrator by its weight.</p> <p><b>NOTE!</b> Be careful not to damage the vibrator contacts or to bend the shaft of the vibrator when removing it.</p>	
<p>26. When installing the vibrator into the new back cover, orient the vibrator so that its weight is toward the jog dial, the contacts are facing out away from the back cover, and the placement features along each side of the vibrator's boot are aligned with the corresponding notches in side walls of the vibrator cavity.</p>	 <p><b>Placement Features</b></p>
<p>27. Place the vibrator over the vibrator cavity and gently press it into place.</p> <p><b>NOTE!</b> Do not push on the vibrator contacts!</p>	




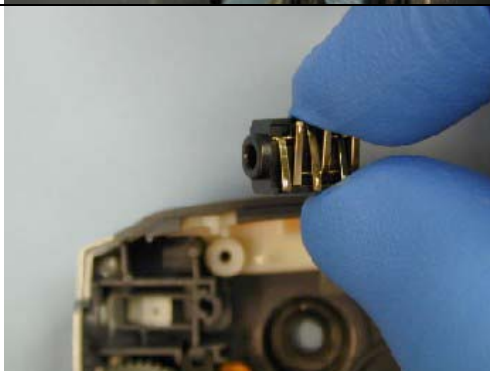

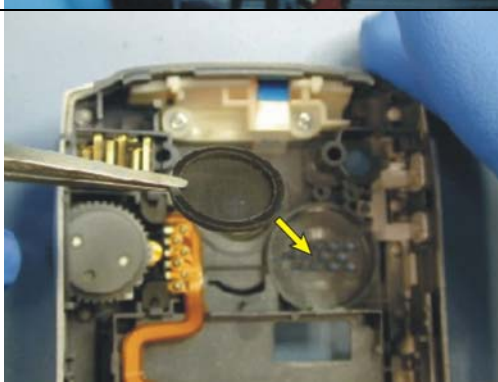


Step-by-Step Instructions	
<p><b>NOTE!</b> Avoid damaging or contaminating the conductive elastomer when removing or reinstalling the microphone assembly. If the conductive elastomer comes off during the removal of the microphone assembly, use a new microphone assembly in the new back cover.</p>	 <p><b>Conductive Elastomer</b></p>
<p>28. Remove the microphone assembly from the microphone cavity in the back cover.</p>	
<p>29. Insert the microphone assembly into the microphone cavity of the new back cover so that the side of the microphone assembly with the three holes is down inside the microphone cavity. Use the flat end of a pry tool to press the microphone assembly down into it cavity so that contamination of the conductive elastomer is avoided.</p>	
<p><b>NOTE!</b> The side of the microphone assembly with the two gold concentric rings is the side of the microphone assembly that should be visible if the microphone assembly is correctly installed. There should be a clear elastomer over the top of the two gold concentric rings.</p>	 <p><b>Two Gold Rings</b></p>
<p>30. Remove the audio jack cover from the audio jack hole.</p>	




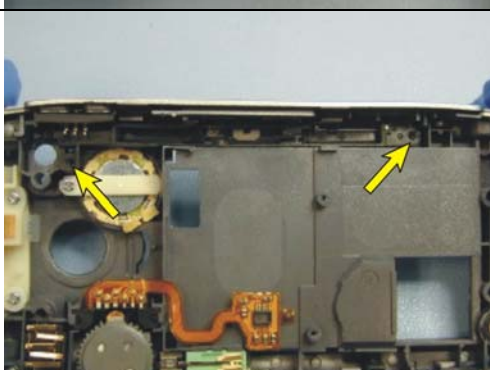


Step-by-Step Instructions	
31. Insert the tip of a pair of blunt tip tweezers into the audio jack hole. Gently rotate the tweezers down towards the audio jack cover and the audio jack should lift free from its cavity.	
32. Locate the portion of the audio jack cover that is pressed down around an alignment peg. Using a pair of blunt tip tweezers, free the audio jack cover from the alignment peg.	
33. Gripping the external portion of the audio jack cover, pull it perpendicular to the battery cavity and it should easily slide out of the back cover.	
34. Orient the audio jack cover so that the side of the cover with the plug will mate with the hole in the audio jack once installed.	
35. Slide the leg of the audio jack cover through the hole in the new back cover indicated.	



Step-by-Step Instructions	
36. Wrap the audio jack cover into its cavity on the outside of the back cover and hold it there while pressing the leg of the audio jack cover down over the alignment peg at the bottom of the audio jack cavity.	
37. Orient the audio jack so that its end with the hole is oriented towards the wall of the audio jack cavity with the corresponding hole.	
38. Insert the end of the audio jack with the hole first so that the cylindrical portion extending from the side of the jack can slide inside the hole in the wall.	
39. Then press the other end of the audio jack down into the audio jack cavity.	
40. Insert the speaker cloth into the speaker cavity of the new back cover so that the side of the speaker cloth with the gasket is oriented away from the back cover as shown.	



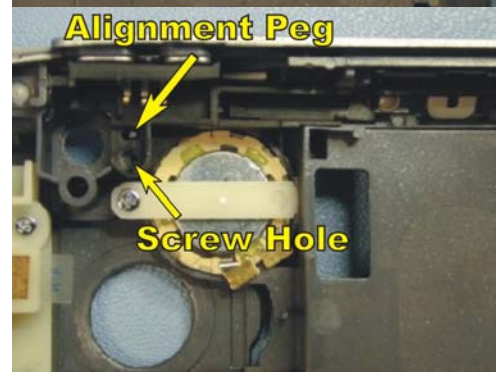
<b>Step-by-Step Instructions</b>	
<p>41. Place the speaker in the speaker cavity and position it by placing the alignment feature on the edge of the speaker into the notch in the wall of the speaker cavity as shown.</p>	
<p>42. Place the speaker holder over the speaker so its notched end is inside the pocket above where the speaker cavity wall and battery cavity wall connect. Position the other end (rounded end) of the speaker holder so that it is seated over the screw boss above the speaker.</p> <p>43. With both ends of the speaker holder in place insert a M1.4 x 4MM screw through the hole in the rounded end of the speaker holder and torque the screw into place using a torque driver set at 7 N*cm and a JCIS No. 0 bit.</p>	
<p>44. Insert the memory stick cover into its socket in the side of the new back cover as shown.</p>	
<p>45. Orient the stylus holder so that the screw hole near each end matches up with their corresponding screw bosses in the back cover.</p> <p>46. Work the stylus holder down into its cavity in the back cover.</p> <p><b>NOTE!</b> Be careful not to damage the camera/ internet switch when installing the stylus holder.</p>	



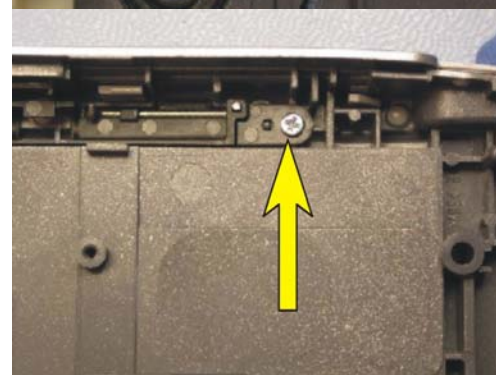
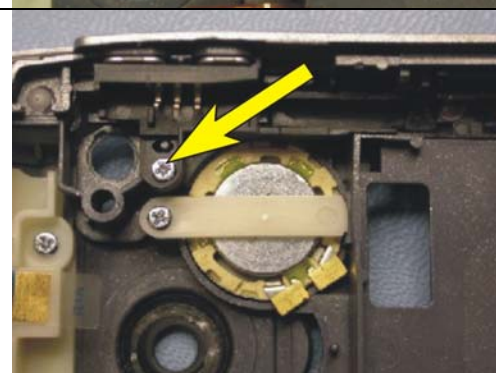





### Step-by-Step Instructions

47. Verify that the hole in each screw boss is visible through the corresponding hole in each end of the stylus holder. Also verify that the alignment peg adjacent to each screw boss protrudes through their corresponding holes in the stylus holder.

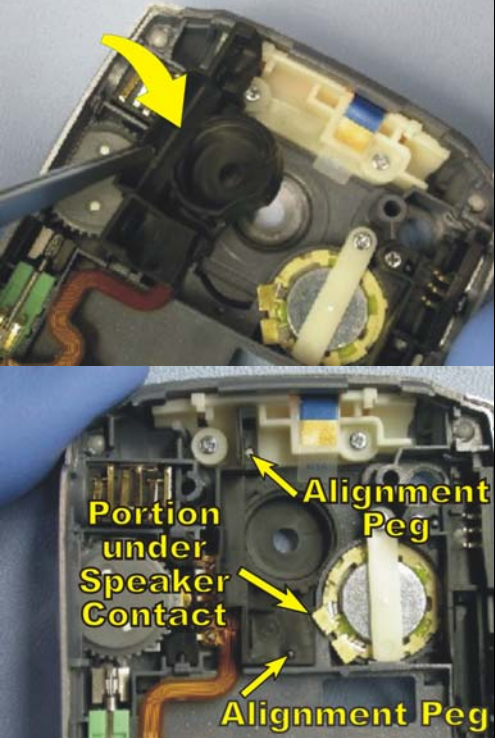


48. With the stylus holder in place, install a M1.4 x 4MM screw in both screw holes and torque the screws into place using a torque driver set at 7N\*cm and a JCIS No. 0 bit.



Step-by-Step Instructions	
<p>49. Obtain a new camera window assembly and remove the protective film from its adhesive surface.</p> <p>50. Locate the cavity on the outer surface of the new back cover that corresponds to the shape of the camera window assembly.</p>	
<p>51. Mount the new camera window assembly into its corresponding cavity on the new back cover and apply pressure for 3 seconds to assure a good bond forms.</p>	
<p>52. Install the stylus by sliding it into the hole in the outer surface of the back cover as indicated.</p>	



Step-by-Step Instructions	
<p><b>NOTE!</b> When installing the camera gasket, a portion of the camera gasket has to be worked under a speaker contact</p>	
<p>53. Insert the camera gasket into to the back cover as shown.</p> <p><b>NOTE!</b> Make sure that an alignment peg protrudes through the hole at each end of the camera gasket.</p>	

- Perform the steps of the “Reassembly” section to complete the reassembly of this phone.
- A new label must be generated and installed. Refer to the “Label” section for steps on creating and installing a label.

## 4.10 Internet Key

This part is heat stacked to back cover, therefore to replace this part you must replace the back cover of the phone. Refer to the “Back Cover” section of this document for instructions on replacing the back cover.

## 4.11 Camera Key

This part is heat stacked to back cover, therefore to replace this part you must replace the back cover of the phone. Refer to the “Back Cover” section of this document for instructions on replacing the back cover.

## 4.12 Power On/Off Key


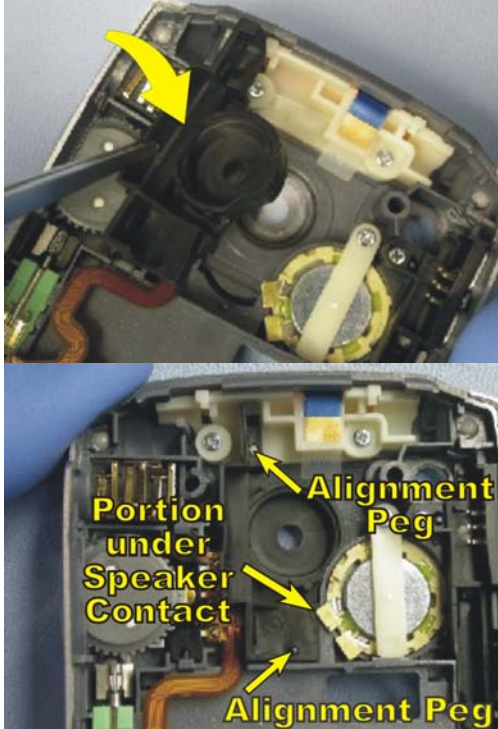
This part is heat stacked to back cover, therefore to replace this part you must replace the back cover of the phone. Refer to the “Back Cover” section of this document for instructions on replacing the back cover.



## 4.13 Camera Gasket

**Tools:** • 2A (blunt tip) ESD-safe tweezers

- Perform the steps of “Disassembly” section before proceeding.

Step-by-Step Instructions	
<p>1. Remove the camera gasket from its position in the back cover using a pair of tweezers.</p> <p><b>NOTE!</b> The camera gasket some times sticks to the circuit board when the circuit board is removed so if the speaker gasket is not present in the back cover locate it.</p>	
<p><b>NOTE!</b> When installing the camera gasket, a portion of the camera gasket has to be worked under a speaker contact</p> <p>2. Insert the camera gasket into to the back cover as shown.</p> <p><b>NOTE!</b> Make sure that an alignment peg protrudes through the hole at each end of the camera gasket.</p>	

- Perform the steps of the “Reassembly” section to complete the reassembly of this phone.





## 4.14 Vibrator

The removal and installation of this part is covered in the “Back Cover” section of this document. Assume that this part is being replaced instead of the back cover. A new part should be used in the place of the old part when reassembling. Limit the amount of disassembly to only that which is needed to replace this part.

## 4.15 Rear Speaker, Holder, and Cloth

The removal and installation of these parts is covered in the “Back Cover” section of this document. Replace the needed part instead of the back cover when performing instructions of the back cover section. A new part should be used in the place of the old part when reassembling. Limit the amount of disassembly to only that which is needed to remove the part that is being replaced.

## 4.16 Audio Jack and Audio Jack Cover

The removal and installation of these parts is covered in the “Back Cover” section of this document. Replace the needed part instead of the back cover when performing instructions of the back cover section. A new part should be used in the place of the old part when reassembling. Limit the amount of disassembly to only that which is needed to remove the part that is being replaced.

## 4.17 Microphone Assembly and Microphone Cloth


### Tools:

- Style 2A ESD-safe tweezers (Blunt Tip)
- Nylon pointer
- Front opening tool
- Orange stick



**NOTE!** Whenever the phrase “pry tool” is used, a nylon pointer, an orange stick, or a front opening tool may be used, depending on the user’s preference.

- Perform the steps of “Disassembly” section before proceeding.

Step-by-Step Instructions	
<b>NOTE!</b>	Avoid damaging or contaminating the conductive elastomer when removing or installing the microphone assembly.
<b>NOTE!</b>	If the conductive elastomer comes off during the removal of the microphone assembly, use a new microphone assembly.
1.	Remove the microphone assembly from the microphone cavity in the back cover.





Step-by-Step Instructions	
<p>2. If the microphone cloth is being removed or replaced, remove the microphone cloth from the microphone cavity at this time.</p> <p>3. If the microphone cloth was removed, a new microphone cloth must be installed in the microphone cavity of the back cover before proceeding. When installing a microphone cloth, orient the cloth so that the side with adhesive is towards the back cover.</p>	 <p>Microphone Cloth</p>
<p><b>NOTE!</b> If the microphone assembly is being replaced, use a new microphone assembly when performing the remaining steps.</p> <p>4. Insert the microphone assembly into the microphone cavity so that the side of the microphone assembly with the three holes is down inside the microphone cavity. Using the flat end of a pry tool, press the microphone assembly down into it cavity so that contamination of the conductive elastomer is avoided.</p> <p><b>NOTE!</b> The side of the microphone assembly with the two gold concentric rings is the side of the microphone assembly that should be visible if the microphone assembly is correctly installed. There should be a clear elastomer over the top of the two gold concentric rings.</p>	 <p>Two Gold Rings</p>

- Perform the steps of the “Reassembly” section to complete the reassembly of this phone.



**NOTE!** If the microphone assembly is replaced, the microphone audio reset software must be run on the phone. Instructions for running the microphone audio reset can be found in the Test Instruction, Mechanical



## 4.18 Jog Dial

**Tools:** • 2A (blunt tip) ESD-safe tweezers

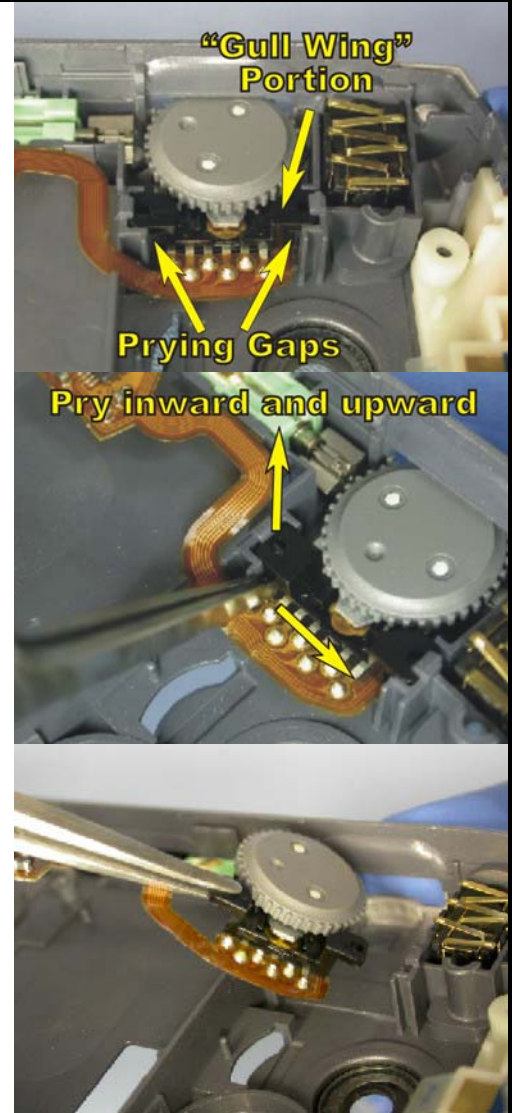
- Perform the steps of “Disassembly” section before proceeding.

Step-by-Step Instructions	
<p>1. Remove the camera gasket from its position in the back cover using a pair of tweezers.</p> <p><b>NOTE!</b> The camera gasket some times sticks to the circuit board when the circuit board is removed so if the speaker gasket is not present in the back cover locate it.</p>	
<p>2. Locate where a portion of the jog dial's flex film is pressed down around an alignment peg protruding from the back cover. Using a pair of blunt tip tweezers, free the flex film from the alignment peg.</p>	

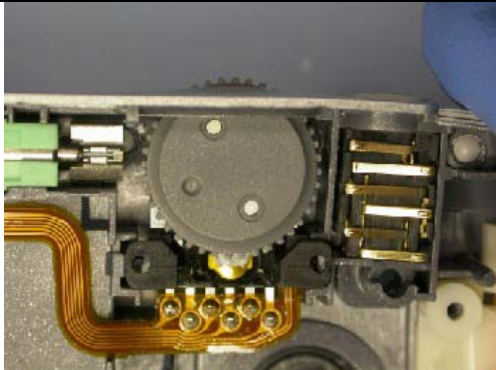


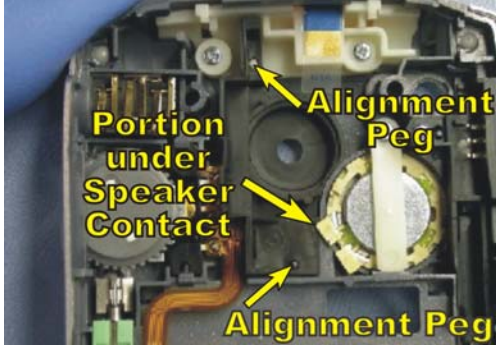


### Step-by-Step Instructions

3. Locate the “gull wing” portion of the jog dial that holds the jog dial in place by mating with features in the back cover.
4. Insert the tip of a pair of blunt tip tweezers in the gap between the back cover and the portion of the “gull wing” that is perpendicular to the jog dial’s flex film.
5. Pry inward (towards the jog dial) and upward (away from the back cover) simultaneously until the latch feature of the jog dial becomes unhooked from the back cover.
6. Once one of the latch features is free from the back cover, lift that latch feature away from the back cover while pressing inward on the dial itself until the jog dial assembly lifts from the back cover.





Step-by-Step Instructions	
<p>7. Insert a new jog dial into the back cover so that the dial portion protrudes through the slot in the side of the back cover and the two wings of the gull wing portion of the jog dial are aligned with their corresponding notches in the back cover.</p>	 
<p>8. Press one of the jog dial's wings into its corresponding notch until the wing snaps into place.</p>	
<p>9. Press the other wing into its corresponding notch until the wing snaps into place. The jog dial is now installed.</p>	
<p><b>NOTE!</b> When installing the camera gasket, a portion of the camera gasket has to be worked under a speaker contact</p>	 
<p>10. Insert the camera gasket into the back cover as shown.</p>	
<p><b>NOTE!</b> Make sure that an alignment peg protrudes through the hole at each end of the camera gasket.</p>	

- Perform the steps of the “Reassembly” section to complete the reassembly of this phone.



## 4.19 Antenna Assembly

**Tools:**

- Torque screwdriver
- Nylon pointer
- Style 2A ESD-safe tweezers (Blunt Tip)
- JCIS No. 0 bit
- Orange stick
- Front opening tool

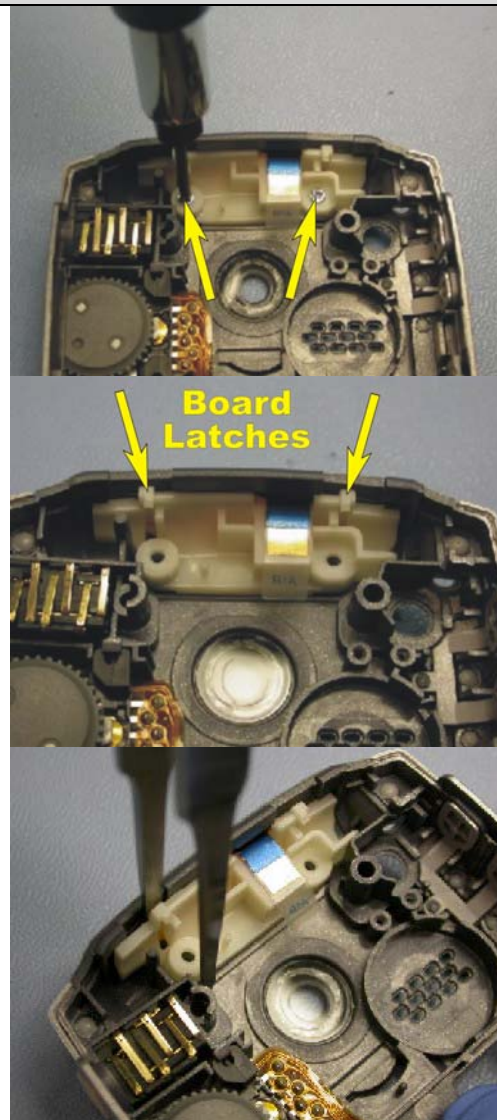
**NOTE!** Whenever the phrase “pry tool” is used, a nylon pointer, an orange stick, or a front opening tool may be used, depending on the user’s preference.


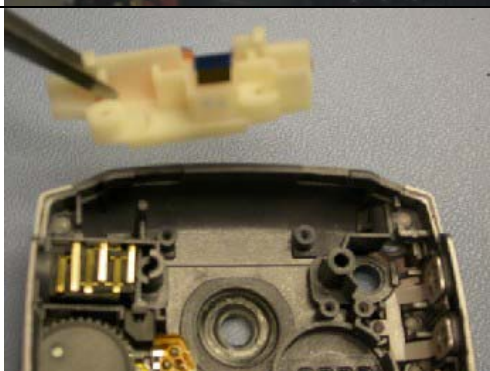

- Perform the steps of “Disassembly” section before proceeding.

### Step-by-Step Instructions

**NOTE!** Be careful not to damage the antenna when removing the antenna assembly.

1. Remove the two M1.4 x 4MM screws that hold the antenna using a torque driver with a JCIS No. 0 bit.
2. Using the tip of one side of a pair of blunt tip tweezers, pry between the back cover and the antenna assembly at one of the antenna assembly’s board latches so that that side of the antenna assembly becomes free from its catch feature in the back cover.
3. Once one side of the antenna assembly is free, repeat the same procedure at the antenna assembly’s other board latch.

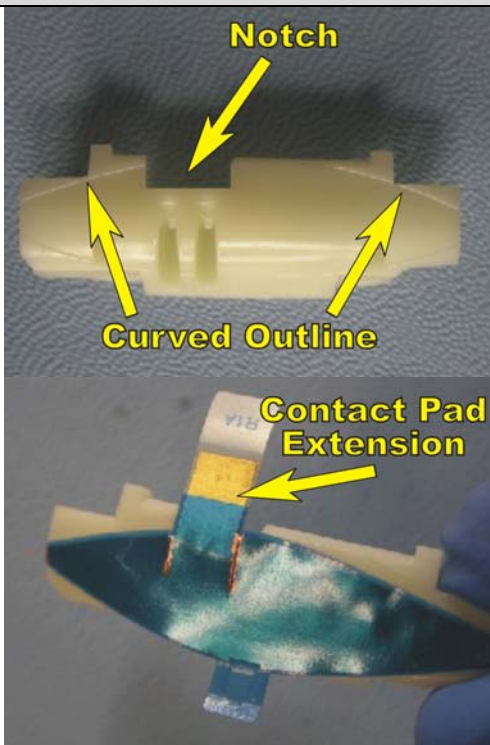


Step-by-Step Instructions	
<p>4. Continue prying at each of the antenna assembly's board latches until the edge of the antenna assembly clears the bottom edge of the back cover latches that hold the top of the front cover in place.</p>	
<p>5. Once all of the features of the back cover that the antenna could get hung on have been cleared, lift the antenna assembly from the back cover.</p>	
<p><b>NOTE!</b> If the antenna or the antenna support is being replaced, use new parts for both items when putting together the antenna assembly.</p> <p><b>NOTE!</b> Handle the new antenna by its two non-adhesive tabs.</p>	
<p>6. Remove a new antenna from its protective backing.</p> <p>7. Orient the new antenna and the new antenna support so that the adhesive side of the antenna is towards of the curved outer surface of the antenna support.</p>	



### Step-by-Step Instructions

8. Align the edge of the antenna from which the contact pad extends to the curved outline that runs tangent to the edge of the antenna support that has a notch for the extension of the antenna to fold down into as shown.



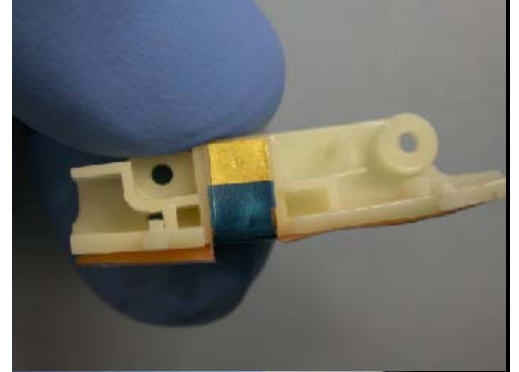




### Step-by-Step Instructions

9. Rotate the extension of the antenna with the contact pad down onto the ledge that is behind it.

**NOTE!** When the extension of the antenna is correctly positioned on the ledge the edge of the antenna contact pad should be aligned with the end of the ledge.

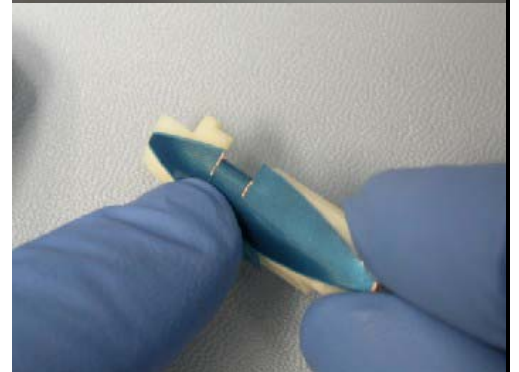


10. Once the extension of the antenna is in position, use the flat end of a pry tool to apply pressure so that a good bond forms between the two parts while avoiding contamination of the antenna's contact pad.



11. Make sure that the edge of the antenna from which the contact pad extends is still aligned with the curved outline that runs tangent to the edge of the antenna support with the notch that the extension of the antenna folds down into.

12. Once positioned smooth the remaining portion of the antenna on to the antenna support.



**NOTE!** Do not press on the antenna's contact pad when reinstalling the antenna, contamination of the pad may occur.

13. Position the antenna assembly in the back cover in the location shown.

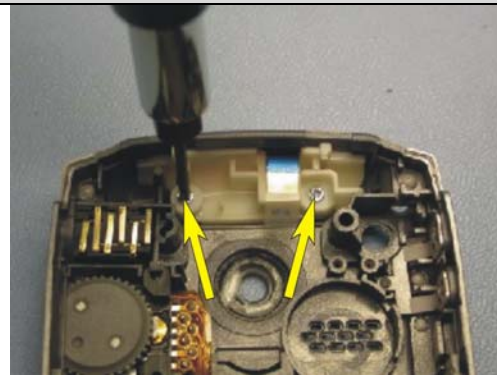
14. Then press the antenna assembly down into the back cover until each end of the antenna assembly catches under the latches in the back cover that hold the antenna in place.





#### Step-by-Step Instructions

15. Install the two M1.4 x 4MM screws that hold the antenna using a torque driver set at 7 N\*cm with a JCIS No. 0 bit.



- Perform the steps of the “Reassembly” section to complete the reassembly of this phone.

## 4.20 Memory Stick Cover

The removal and installation of this part is covered in the “Back Cover” section of this document. Assume that this part is being replaced instead of the back cover. A new part should be used in the place of the old part when reassembling. Limit the amount of disassembly to only that which is needed to replace this part.

## 4.21 Camera Window Assembly

The removal and installation of this part is covered in the “Back Cover” section of this document. Assume that this part is being replaced instead of the back cover. A new part should be used in the place of the old part when reassembling. Limit the amount of disassembly to only that which is needed to replace this part.



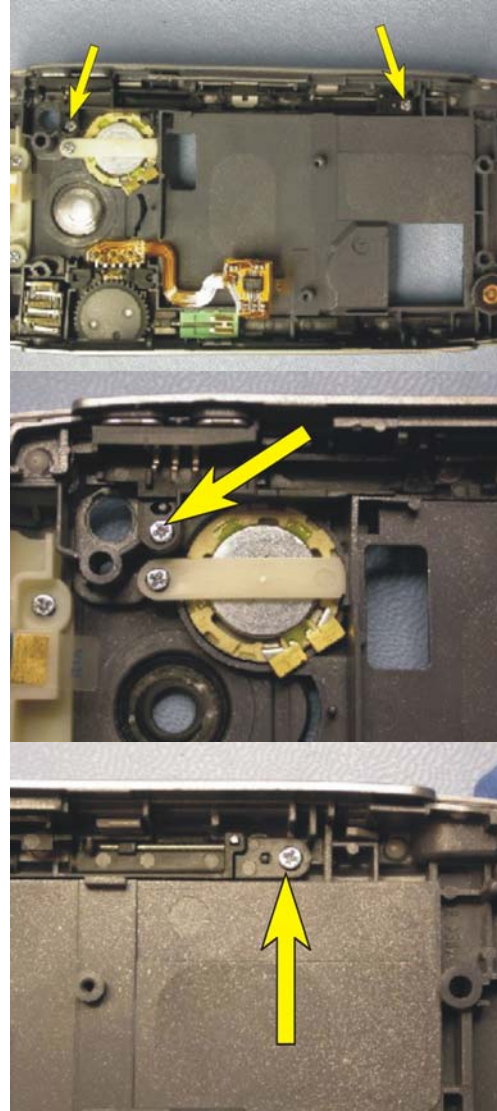
## 4.22 Camera/Internet Key Switch

**Tools:**

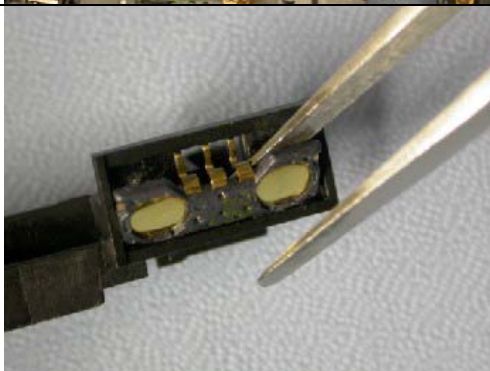
- Torque screwdriver
  - Style 2A ESD-safe tweezers (Blunt Tip)
  - JCIS No. 0 bit
- Perform the steps of “Disassembly” section before proceeding.

### Step-by-Step Instructions

1. Remove the two screws that are holding the stylus holder in the back cover using a torque driver with a JCIS No. 0 bit.





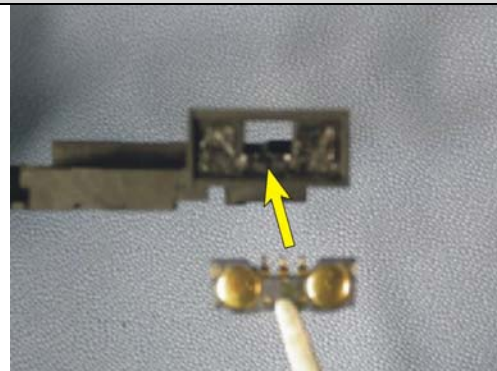
Step-by-Step Instructions	
<p>2. Using a pair of tweezers, lift the end of the stylus holder near the antenna off of its guide pin and gently work the stylus holder free from the back cover and set it aside.</p>	
<p><b>NOTE!</b> Be careful not to damage the stylus holder when removing the camera/internet key switch.</p> <p>3. Using a pair of blunt tip tweezers, pry the camera/internet key switch from the stylus holder.</p> <p>4. If any of the adhesive tape that holds the camera/internet key switch in place remains on the stylus holder remove it and clean the cavity with alcohol and a lint-free wipe.</p>	
<p>5. Place a new piece of adhesive tape in the camera/internet key switch's cavity oriented as shown.</p>	





### Step-by-Step Instructions

6. Insert a new camera/internet key switch so that the two round contacts are oriented away from the stylus holder and the three spring fingers protrude through the hole in the stylus holder's switch cavity.

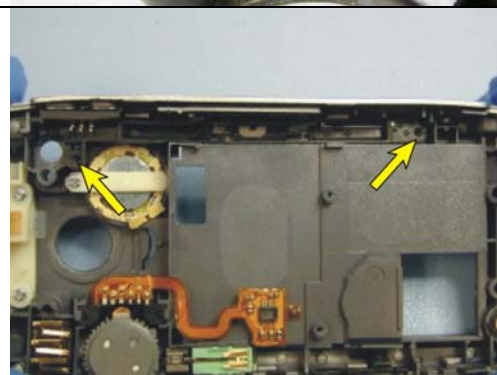


**NOTE!** The tips of the three spring fingers should point away from the stylus holder if the switch is oriented correctly.

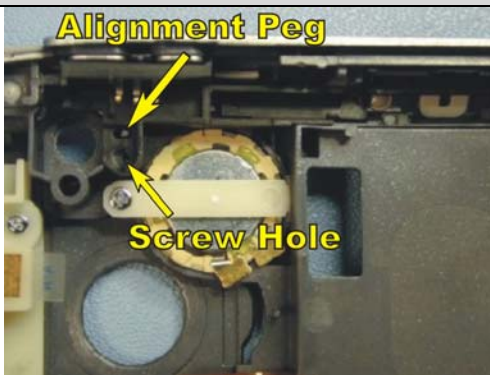

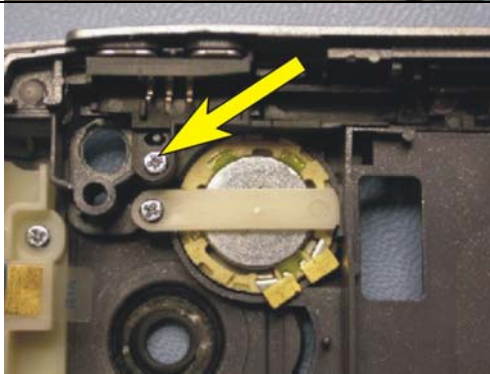
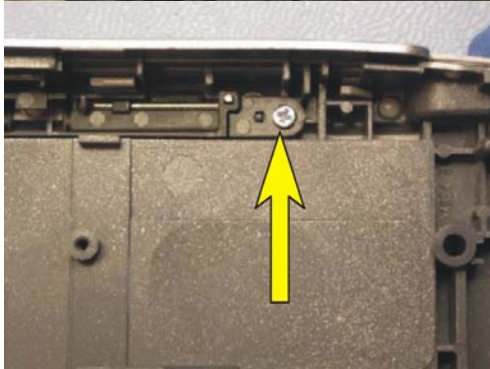


7. Orient the stylus holder so that the screw hole near each end matches up with their corresponding screw bosses in the back cover.
8. Work the stylus holder down into its cavity in the back cover.

**NOTE!** Be careful not to damage the camera/internet switch when installing the stylus holder.





Step-by-Step Instructions	
<p>9. Verify that the hole in each screw boss is visible through the corresponding hole in each end of the stylus holder. Also verify that the alignment peg adjacent to each screw boss protrudes through their corresponding holes in the stylus holder.</p>	
	
<p>10. With the stylus holder in place, install a M1.4 x 4MM screw in both screw holes and torque the screws into place using a torque driver set at 7N*cm and a JCIS No. 0 bit.</p>	
	

- Perform the steps of the “Reassembly” section to complete the reassembly of this phone.



## 4.23 Stylus Holder

**Tools:**

- Torque screwdriver
- Nylon pointer
- Style 2A ESD-safe tweezers (Blunt Tip)
- JCIS No. 0 bit
- Orange stick
- Front opening tool

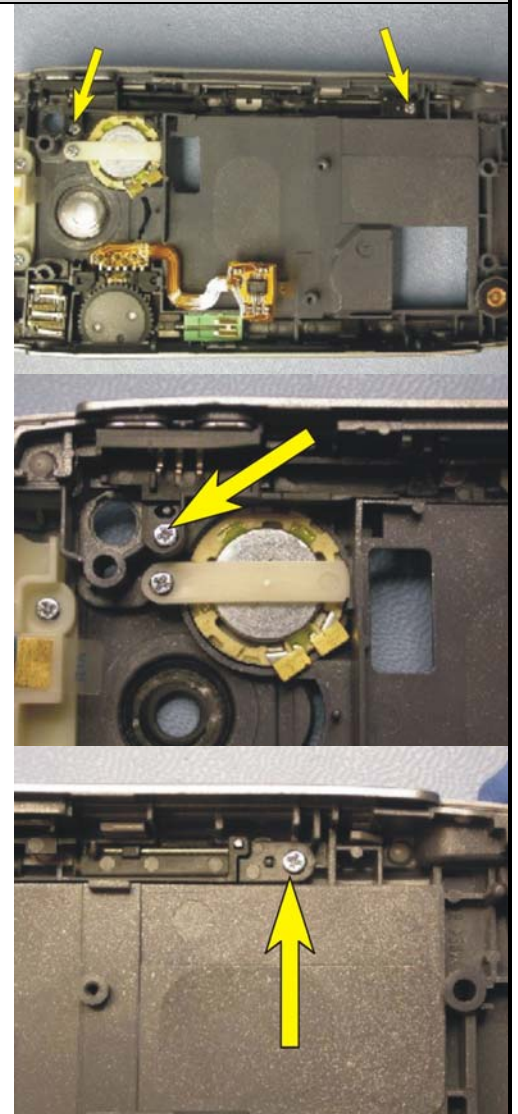
**NOTE!** Whenever the phrase “pry tool” is used, a nylon pointer, an orange stick, or a front opening tool may be used, depending on the user’s preference.

- Perform the steps of “Disassembly” section before proceeding.


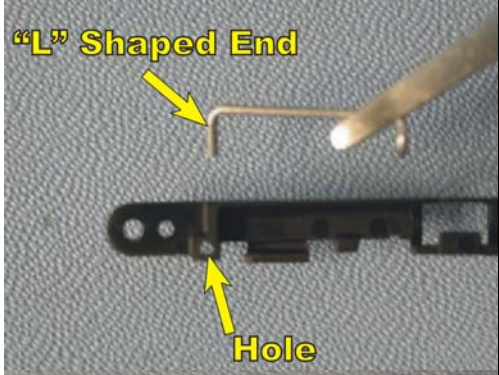

### Step-by-Step Instructions

**NOTE!** When replacing the stylus holder, do not reuse the camera/internet key switch or the stylus spring. Use all new parts.

1. Remove the two screws that are holding the stylus holder in the back cover using a torque driver with a JCIS No. 0 bit.





Step-by-Step Instructions	
<p>2. Using a pair of tweezers, lift the end of the stylus holder near the antenna off of its guide pin and gently work the stylus holder free from the back cover and set it aside.</p>	
<p>3. Obtain a new stylus holder and a stylus spring.</p> <p>4. Insert the “L” shaped end of the spring into the hole shown.</p>	
<p>5. Position the spring so that its rests in the groove as shown.</p>	





### Step-by-Step Instructions

6. Using a pry tool, press the accessible end of the spring towards the stylus holder so that the long portion of the spring snaps between the two catches as shown.



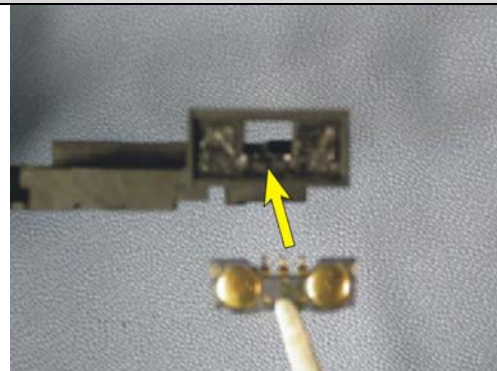
7. Place a piece of adhesive tape in the camera/internet key switch's cavity oriented as shown.





### Step-by-Step Instructions

8. Insert a new camera/internet key switch so that the two round contacts are oriented away from the stylus holder and the three spring fingers protrude through the hole in the stylus holder's switch cavity.

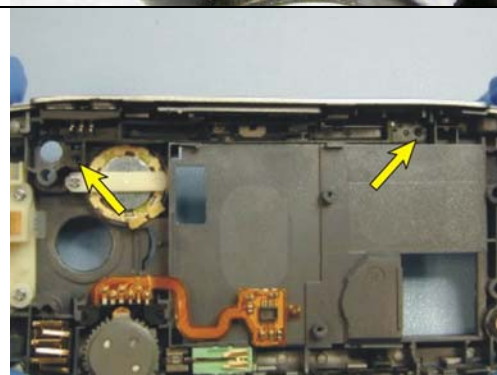


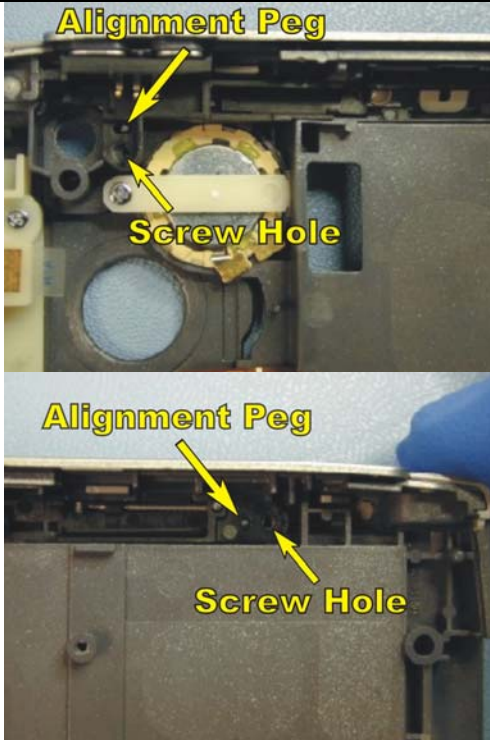
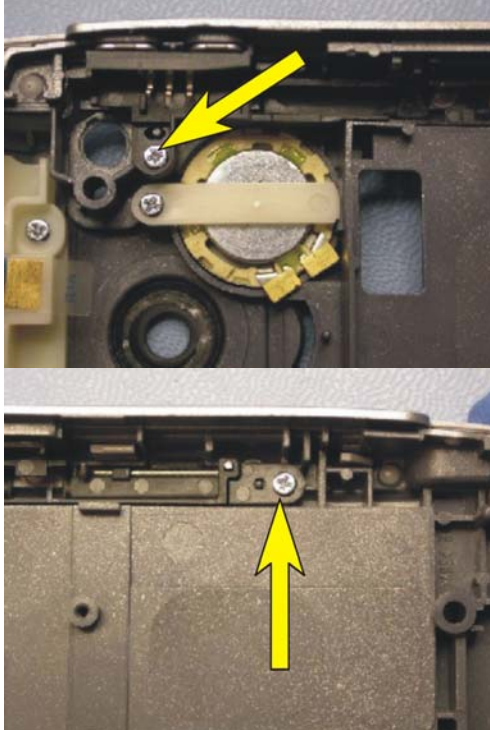
**NOTE!** The tips of the three spring fingers should point away from the stylus holder if the switch is oriented correctly.



9. Orient the stylus holder so that the screw hole near each end matches up with their corresponding screw bosses in the back cover.
10. Work the stylus holder down into its cavity in the back cover.

**NOTE!** Be careful not to damage the camera/internet switch when installing the stylus holder.



<b>Step-by-Step Instructions</b>	
<p>11. Verify that the hole in each screw boss is visible through the corresponding hole in each end of the stylus holder. Also verify that the alignment peg adjacent to each screw boss protrudes through their corresponding holes in the stylus holder</p>	
<p>12. With the stylus holder in place, install a M1.4 x 4MM screw in both screw holes and torque the screws into place using a torque driver set at 7N*cm and a JCIS No. 0 bit.</p>	

- Perform the steps of the “Reassembly” section to complete the reassembly of this phone.

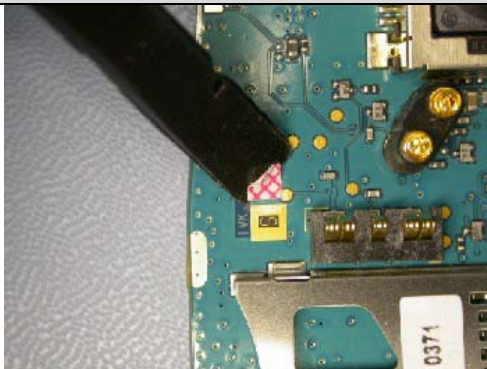


## 4.24 Water Indicator Label

### Tools:

- ESD-safe tweezers
- Orange stick
- Front opening tool
- Lint-free wipes
- Nylon pointer

**NOTE!** Whenever the phrase “pry tool” is used, a nylon pointer, an orange stick, or a front opening tool may be used, depending on the user’s preference.

- Perform the steps of “Disassembly” section before proceeding.

Step-by-Step Instructions	
1. Using the flat end of a pry tool, gently remove the water indicator label.	
2. Clean off any adhesive residue in the label area using alcohol and a lint-free wipe. 3. Obtain a new water indicator label and place the new label on the circuit board near the battery connector in the location shown.	
4. Apply pressure to the water indicator label so that a good bond forms between the label and the circuit board.	

- Perform the steps of “Reassembly” section to complete the reassembly of this phone.






## 4.25 Label Replacement

**Tools:**

- ESD-safe tweezers
- Hot air device
- Lint free wipes
- Remove the battery door and the battery as described in the Disassembly section of this document.

Step-by-Step Instructions	
<b>NOTE!</b> This instruction should be used when exchanging an old label or mounting a new one.	
1. Print a new label.	
<b>NOTE!</b> The text must be fully readable and the barcode must be scannable.	
<b>NOTE!</b> If one label or less is present on the phone, proceed to step 3.	
<b>NOTE!</b> Heating up the old label(s) with a hot air device may significantly decrease the difficult of peeling the labels off.	
2. Carefully remove the old labels.	
<b>NOTE!</b> Avoid scratching the frame when trying to get the peeling off of the labels started.	
<b>NOTE!</b> Make sure that all adhesive residue is removed. Carefully clean off any residue in the label area with alcohol and lint free wipes.	
<b>NOTE!</b> <b>No more than two labels</b> are allowed on the battery cavity.	
3. Position the new label so that it falls within the recessed area in the floor of the battery cavity that is adjacent to the SIM connector. The shape of the recessed area corresponds to the shape of the label.	
4. Once the label is correctly positioned on the floor of the battery cavity, carefully smooth the label into place.	

- Install the battery and the battery door as described in the Reassembly section of this document.



## 5 Revision History

Rev.	Date	Changes / Comments
A	2004-08-13	<ul style="list-style-type: none"><li>Initial Release</li></ul>