

Programmes After Market Services NPW-2NX Series Transceivers

8. Disassembly / Assembly

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Disassembly of the NPW-2NX

Preparation for Disassembly

Disassembly Tools



Shown left to right: Torque-limiting screwdriver (torque set at 16.9N-cm), fiberglass soldering aid, and T6 torx driver.

ESD Protection



Some form of ESD protection should be used when handling the PWB and other electronic components. The photo above shows a wrist strap, which can be grounded to a bench. This or some other form of ESD protection should be used when handling the phone.

Step-by-Step Disassembly Instructions

1. Remove the battery cover.



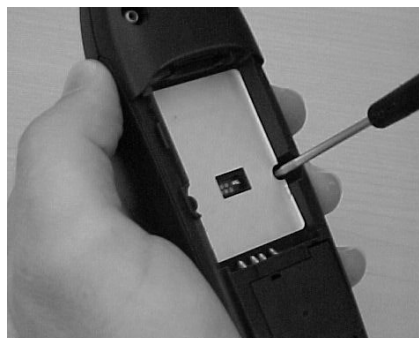
Press on the bottom of the battery cover with the palm and slide the cover downward, maintaining pressure.

2. Remove the battery.



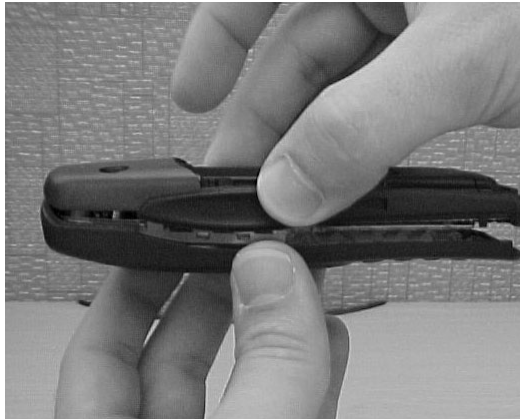
Peel the battery out of the phone by pulling outward on the top edge, as shown.

3. Loosen and remove D-cover screws.



There are four screws to be removed: two in the battery recess and two at the bottom in the GPS cover. Using a T6 driver, loosen and remove the four screws.

4. Separate A-cover assembly from D-cover assembly.



While holding the phone (with the A-cover side down), gently rotate the A-cover away from the D-cover. There is a snap at the top of the phone that will disengage as the A-cover is rotated.

5. Disassemble the A-cover assembly.



Now the A-cover assembly of the phone may be disassembled. Show above is the A-cover assembly, along with the keymat assembly, power key/speaker gasket, and the speaker.

6. Remove keymat.



Starting from the top hard keys, peel the keymat out of the A-cover assembly.

7. Remove speaker gasket/power key and speaker.



Using the fiberglass soldering aid tool, gently pry upward on the speaker gasket with the speaker still in place.

8. Remove the speaker.



Being careful *not* to touch the spring contacts, gently apply pressure with a finger to the backside of the speaker in the speaker gasket to remove it from the gasket. It is critical that no damage is done to the thin membrane on the outside of the speaker.

9. View of A-cover side of phone (disassembled).



The above photo illustrates the A-cover side of the phone disassembled down to the component level.

10. View of phone without the A-cover.



Above is the remainder of the phone once the A-cover has been removed.

11. Remove the screws from LCD assembly/PWB assembly.



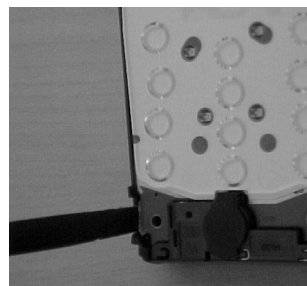
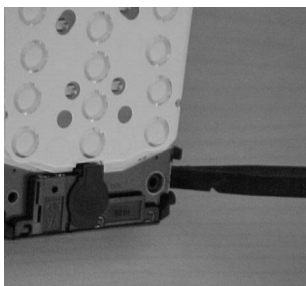
Using a T6 screwdriver, remove the two 10mm screws from the top of the phone.

12. Remove the PWB.



Insert the flat end of the fiberglass soldering aid into the area behind the snap between the PWB and the D-cover. Gently lift upward until the PWB pops out of the snap.

13. Right snap and left snap.



Be sure to apply the removal technique described in Step 12 above to both snaps, as shown.

14. Remove the PWB assembly/LCD assembly from the D-cover assembly.



Once the snaps at the bottom have been disengaged, the PWB/LCD assembly can be lifted out of the D-cover assembly, as shown.

15. PWB/LCD assemblies and D-cover assembly.



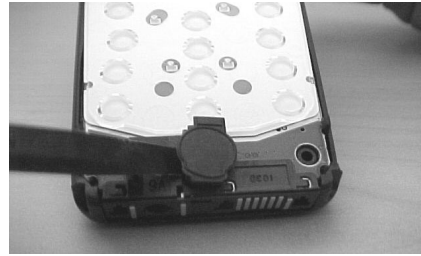
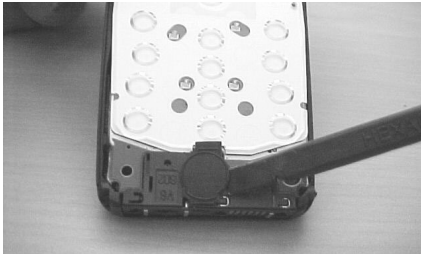
Shown above are the two pieces, with screws removed and snaps disengaged.

16. PWB/LCD assembly.



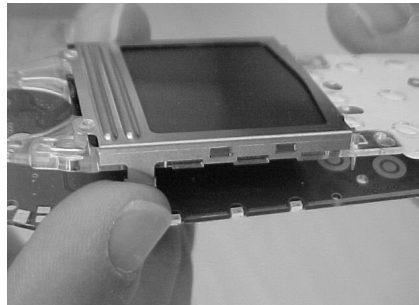
The PWB/LCD assembly can now be further disassembled.

17. Loosen and remove microphone assembly.



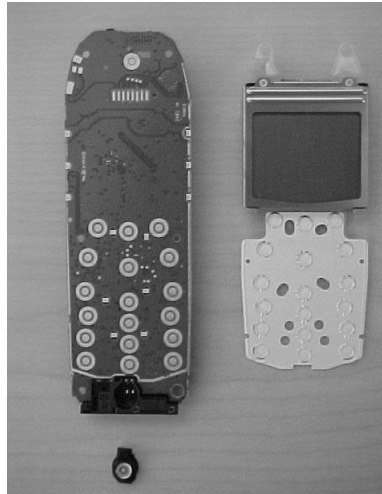
Using the fiberglass soldering aid, loosen the microphone assembly first from one side and then work it gently out from the opposite side.

18. Remove LCD assembly.



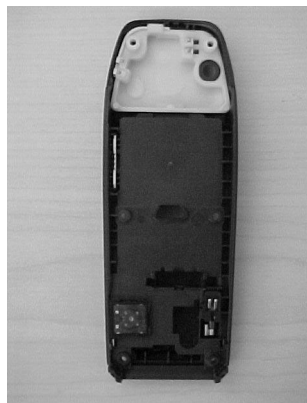
Remove the LCD assembly from the PWB by pushing outward at the bottom of the metal snap engagement tab on the metal frame. Once one side is disengaged, it should be possible to rotate the LCD assembly completely off of the PWB. Be careful *not* to touch or loosen the elastomer connector between the LCD assembly and the PWB (not shown).

19. Disassembled PWB/LCD assembly.



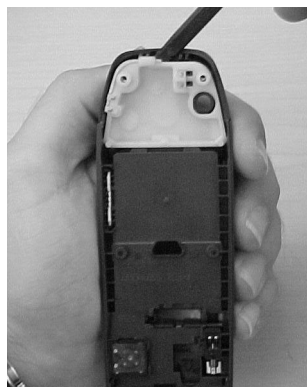
Above is the PWB/LCD assembly, disassembled down to the components.

20. D-cover assembly.



Shown above is the D-cover assembly with the antenna and the GPS cover attached.

21. Remove antenna.



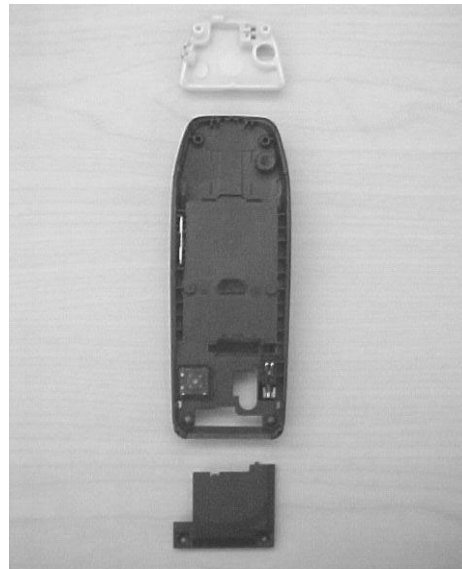
Slide the flat end of the fiberglass soldering aid in between the back of the antenna and the D-cover to pop the antenna out of the D-cover assembly.

22. Remove GPS cover.



To disengage the snap, slide the tip of the pointed end of the fiberglass soldering aid into the opening in the GPS cover, as shown above. The GPS cover should easily pull away from the D-cover at this point.

23. D-cover assembly with antenna and GPS cover removed.



The D-cover assembly, along with the antenna and the GPS cover, is illustrated above.

24. 6360 Disassembled to Components.

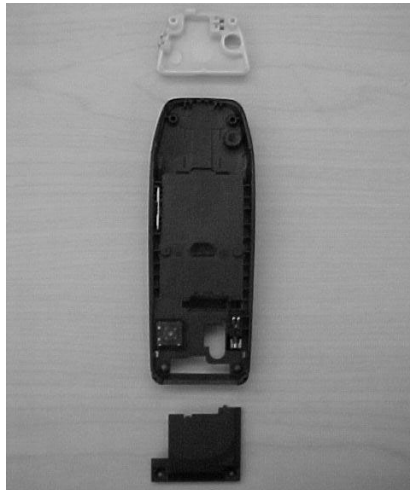


Assembly of the NPW-2NX

1. 6360 Disassembled to Components.

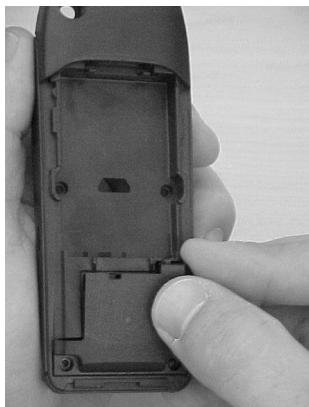


2. D-cover assembly with antenna and GPS cover.



Begin with the D-cover assembly and its components, as shown above.

3. Insert GPS cover.



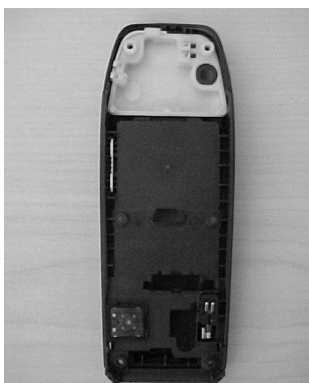
Place the GPS cover onto the back of the D-cover assembly by aligning the bottom bosses with the cutouts in the D-cover. Push on the top of the GPS cover to snap it into place.

4. Add antenna.



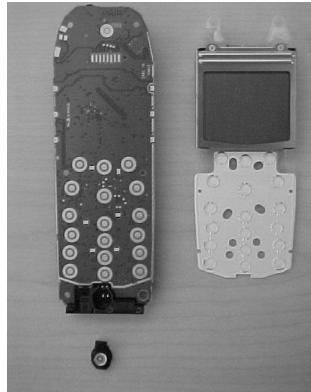
Grasp the outer edges of the antenna as shown, being careful *not* to touch any of the metal-plated contact areas on the antenna. Simply drop the antenna into the opening at the top of the inside of the D-cover assembly.

5. D-cover assembly with added components.



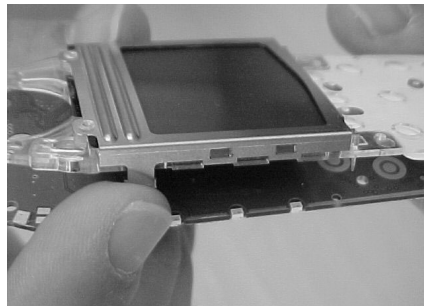
Shown above is the D-cover assembly, with the antenna and GPS cover attached.

6. Disassembled PWB/LCD assembly.



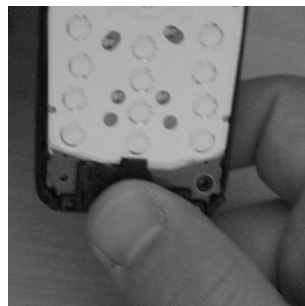
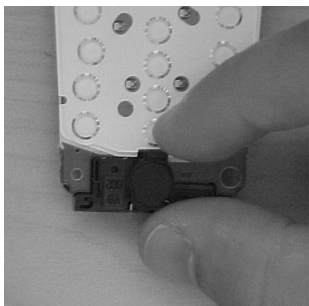
The next step is to assemble the PWB and LCD assemblies.

7. Add LCD assembly.



To assemble the LCD assembly to the PWB assembly, first align the guide pins with the holes in the PWB, as shown above. Next, push on the top of the metal frame until the snaps on the metal frame are engaged.

8. Place the microphone assembly.



Insert the microphone assembly into the system connector at the bottom of the PWB assembly. The small tab should be oriented toward the lightguide, as shown above at left. Press on the top of the microphone assembly to seat the rubber in the cavity (above, right).

9. PWB/LCD assembly.



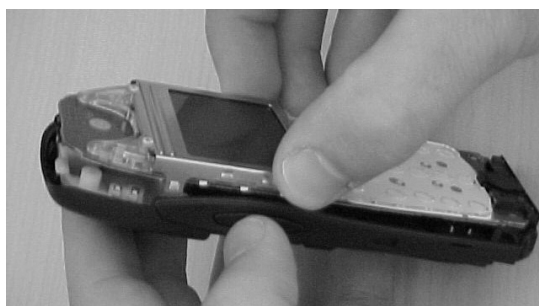
The LCD assembly now is attached to the PWB assembly and the microphone assembly is in place.

10. D-cover assembly and PWB assembly.



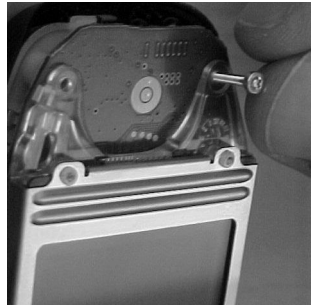
The PWB/LCD assembly now is ready to be installed into the D-cover assembly.

11. Add PWB/LCD assembly to D-cover assembly.



Insert the PWB/LCD assembly into the D-cover assembly by aligning the system connector cutouts with the bottom D-cover bosses. Press on the PWB at the bottom near the D-cover snaps to engage the PWB. Ensure that the snaps are fully engaged and that the screw holes at the top are aligned.

12. Add screws to the LCD/PWB assembly.



Insert the two 10mm long screws in the top of the phone through the lightguide holes as shown above at left. Torque the screws down to the specified torque value (16.9 N-cm or 23.9 in-oz) with a torque-limiting screwdriver or a pre-set pneumatic screwdriver (above, right).

13. Assembled phone without A-cover.



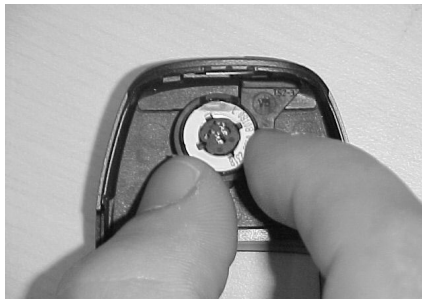
Above is the phone with the D-cover, LCD, and PWB assemblies attached.

14. A-cover side of phone (disassembled).

Shown above is the painted A-cover assembly, keymat assembly, speaker, and speaker gasket/power key.

15. Add speaker gasket/power key.

Insert the speaker gasket/power key into the A-cover assembly by aligning the power key portion with the cutout in the IR window on top of the phone. Insert the key into the hole and then seat the speaker gasket portion onto the ribs in the A-cover.

16. Add speaker.

Insert the speaker into the gasket in the A-cover.

17. Add keymat.



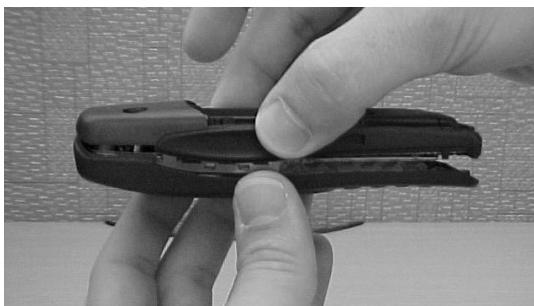
Insert the keymat assembly into the A-cover assembly by aligning the keys in the keyhole cutouts in the A-cover.

18. A-cover assembly with keymat and speaker installed.



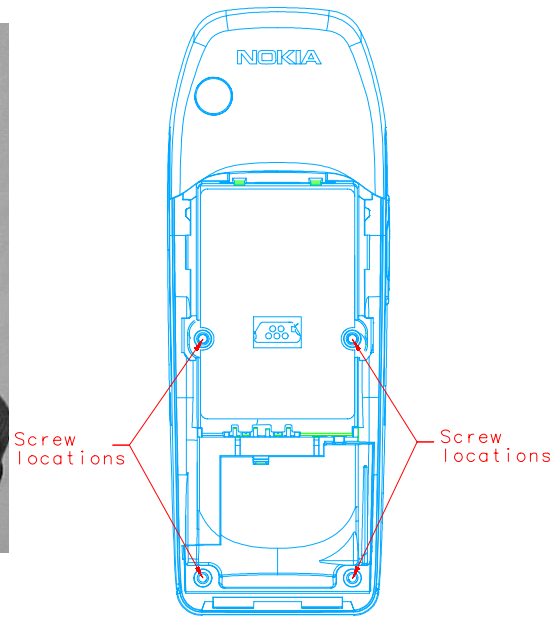
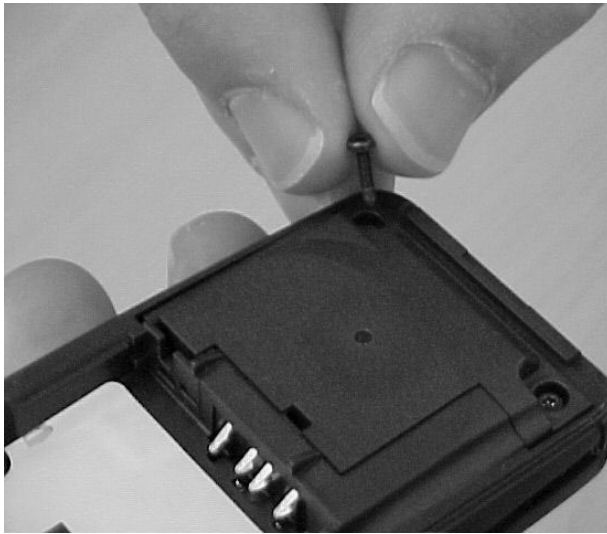
Shown above is the A-cover assembly with the keymat, speaker, and speaker gasket/power key installed.

19. Add D-cover side of phone to A-cover side.



While holding the A-cover face down, place the D-cover side of the phone into the A-cover by aligning the PWB snaps at the bottom of the D-cover with the cutouts in the A-cover. Press on the top of the phone until a distinctive snap sound is heard, which ensures proper snap engagement.

20. Add screws to the back of the phone.



Backside of Phone

Add screws to the backside of the phone in the locations indicated above.

21. Torque down screws.



Torque the screws down to the specified torque value (16.9 N-cm or 23.9 in-oz) with a torque-limiting screwdriver or a pre-set pneumatic screwdriver.

22. Add battery.



Insert the battery into the battery recess in the back of the phone by first aligning the pegs in the bottom of the D-cover with the cutouts in the bottom of the battery. Press the battery firmly into place.

23. Add battery cover.



Insert the battery cover onto the back of the phone to where the tab at the top is just below the cutout in the D-cover. While applying pressure, push the battery cover upward until the locking features snap into place.