iPod Nano 4th/5th Generation Hold/Lock Switch Ribbon Cable Repair

Most of us have been there. The first big headache you encounter when opening up a 4th or 5th generation Nano is the hold switch cable. I'ts about 1mm wide, has a sharp right angle bend in it and only a little bit stronger than a piece of bathroom tissue.

Written By: Pete Green

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INTRODUCTION

I have tried a few repair methods concerning this cable and have given it much thought. The first, and obvious one, was soldering but I found that I was beaten by surface tension. Working with stuff so small surface tension becomes a huge force and just throws the two components apart. In the end I did the job with silver conductive paint, which, would you believe, has the oppposite effect.

🔧 TOOLS:

- Super Glue (1)
- Block Sanding Sponge (1)
- Scotch tape (1)
- Precision Utility Knife (1)

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Step 1 — iPod Nano 4th/5th Generation Hold/Lock Switch Ribbon Cable Repair

- This is the broken hold cable resting on a thin wooden wedge. The copper tracks are embedded in the plastic and have to be exposed. These tracks are closer to the surface on one side than on the other. Check this carefully with a strong magnifier. Tracks will appear more clear on the near side. Place cable right side up on a thin piece of wood. Stick this down with a blob of Blu Tack and gently rub away at about 3-4mm length at the end of cable. The aim is to rub down through the plastic to expose copper track. I used one of those sandpaper boards sold for filing fingernails.

- A more precise tool for this job would be a piece of fine abrasive paper glued to a popsicle stick.

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- When you can see two separate bits of bright copper side by side you are ready to go. Next, you need to make a cut of about 3-4mm using a sharp blade. I used a craft knife. This is not as difficult as it may appear as you can "feel" the space between the tracks if you apply a very light pressure. Hold the ribbon flat with a blob of Blu Tack and position the ends of two 3-4in lengths of 46 AWG wire as shown. I used bare copper but solderable varnished

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wire would be better. Hold the wires with another blob of Blu Tack and carefully nudge them into position.

Step 2

- When the two wire ends are in position, apply the silver paint over them. Try to leave the paint just below the cut in the ribbon. If you carefully part the two pieces with a thin sliver of plastic you should get a reading with testmeter set to "Diode". Infinity one way and about 1.5 ohms the other. You're reading a silicon diode somewhere.

- You now need to make the whole thing mechanically secure.

- Squeeze a small blob of superglue on to a clear area of the wood strip. Pickup a tiny speck of this with the end of a toothpick. Place a dot of glue on top of the wire near to the end of the ribbon. When this is dry, (small quantities of glue don't need to be trapped between surfaces to go off), You should have the wires securely locked into place. Using too much superglue would"take up" the silver and you would loose your connection.

Step 3
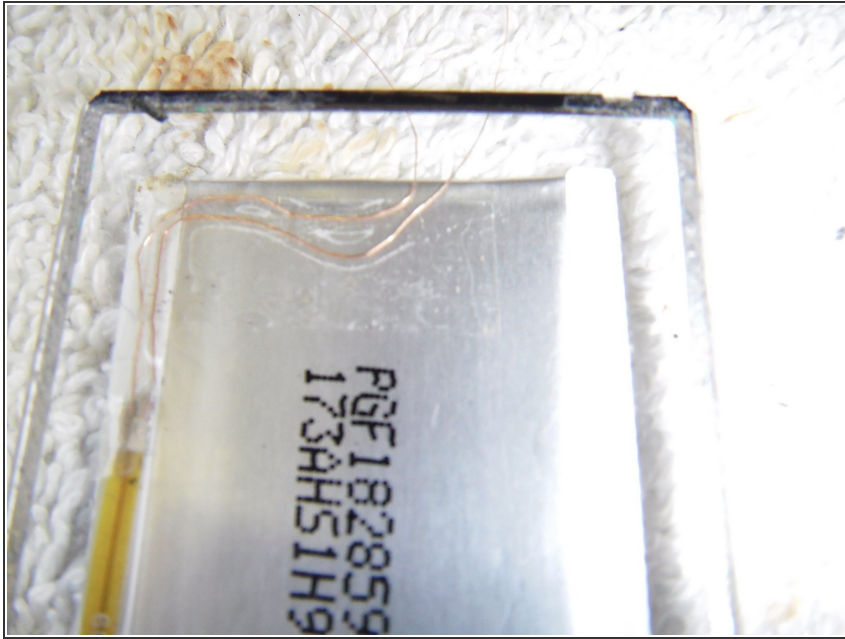
- You now need to lead the two wires up to the top of the Nano.

- Insert a thin slice of Scotch Tape between the two "legs" of the ribon and stick this down to the battery. Lead the wires along the battery and stick down with more tape.

Step 4
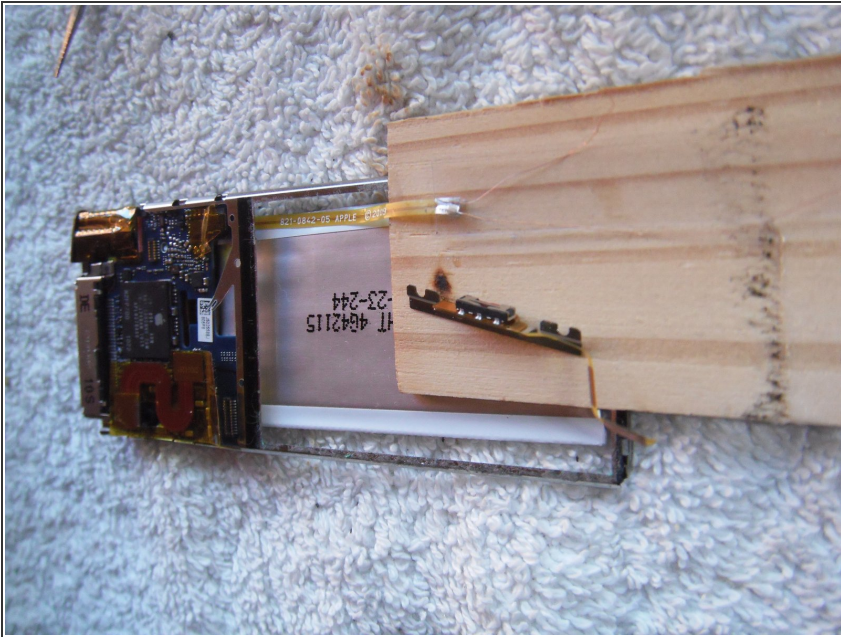
- When you connect up to the hold switch you just need to check with a testmeter which of the two points are needed. There appears to be a changeover switch here. (Three connections) but be aware as the format seems a bit unconventional.

- Snip off the broken piece of ribbon cable and solder wires to the correct points. This neeeds to be shorted or closed for "lock" and open for unlock. Check this with a meter before connnecting.

- All that remains now is to carefully tuck the wires into place and replace the top of the Nano. Since bare wire strands were used, It needed a squirt with the wife's hair lacquer - after masking the ipod off, of course!

- This may sound a bit long winded but don't worry. There's usually plenty of ribbon cable to practise on. I didn't get it right the first time. Especially witht the sandpapering. The procedure is also very forgiving insofar that you can keep trying with the same bits.

To reassemble your device, follow these instructions in reverse order.

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