

# Popular Mechanics

January 2010



diy

**Tech**

## The DIY Touchscreen PC

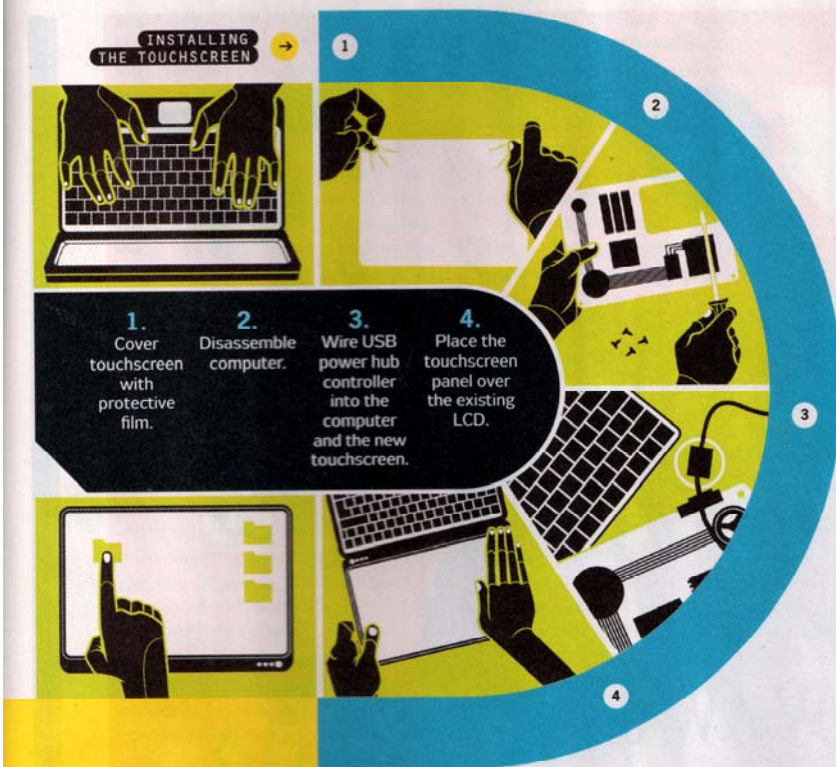
TABLET PCS MAY BE THE NEXT BIG THING IN COMPUTERS. HERE'S HOW TO MAKE YOUR OWN TOUCHSCREEN PC, STARTING WITH AN OFF-THE-SHELF NETBOOK. BY ANTHONY VERDUCCI

By outfitting an off-the-shelf netbook with a touchscreen, we were able to make our own finger-friendly PC.

→ If the buzz is to be believed, 2010 will be the year of the touchscreen tablet PC, with multiple major manufacturers lining up products that they claim will give us a carry-anywhere way to read e-books, watch movies and surf the Web.

And while I suppose I could just buy one of these machines, I thought it'd be more fun to make my own touchscreen PC out of last year's "it" computer: the lowly netbook. The advantage: Unlike these new tablets, my creation would also have a keyboard, making it far more practical for typing-heavy tasks like e-mail and running Word. The project's total cost: less

INSIDE × SILICA GEL + SMARTPHONE BATTERY LIFE + SYNCING BLACKBERRIES



than \$500, including the computer.

First, I needed to gear up. I bought a Lenovo IdeaPad S10-2 netbook (retail price: \$350) and a Hoda Technology Solderless Touch Screen Kit (\$96 from [fidohub.com](http://fidohub.com)), which contained everything I'd need to transform a netbook into a touch-friendly tablet. Hoda offers a variety of models that are designed to fit specific netbooks, so make sure you get the right one if you try this at home.

I wanted to be sure the new touchscreen was properly protected, so I purchased a BodyGuardz transparent scratch-proof skin, which is designed to protect touchscreens without impairing their sensitivity. Before covering the new panel, I gave it a once-over with a can of compressed air—otherwise, dirt and dust could be forever trapped under the BodyGuardz.

### Taking the PC Apart

→ **Next came the fun part.** In order to wire in the new screen, I first needed to disassemble much of the netbook. I

started with the easy stuff: I removed the battery, unscrewed the underbelly screws and took out the hard drive. Removing the keyboard and screen bezel was a bit trickier—they had to be pried off with a filed-down plastic knife (plastic is less likely to scratch than metal). If you decide to take on this project, open the screen and look for a seam that runs along the side, around the entire machine, either just above or just below the USB slots. Using the knife (or a similar tool), gently pry into this seam until the case begins to separate. With the underbelly screws removed, this should be very easy. To take apart the screen bezel, look for a similar seam along the side of the display, and use the knife to pry it apart as well. The bezel should pop right off.

Of course, the new touchscreen needed to get its power from somewhere. The kit comes with an internal USB power control hub—basically a USB hub that is installed inside the computer. This hub needs to be

crammed inside the machine, which can be tricky with a cramped netbook (mine fit just above the computer's Wi-Fi card). From there, it feeds power from the motherboard to the screen. After the hub is hooked up, it will actually have two unused internal USB cords.

These are free to deliver power to components. I took one and attached a Kensington Bluetooth USB Micro Adaptor (one of the smallest Bluetooth dongles on the market), giving my netbook the ability to wirelessly communicate with a Bluetooth keyboard, mouse or phone.

### Placing the Panel

→ **Now it was time** to attach the touchscreen panel. The new screen has to be placed on top of the old one with perfect alignment.

To do this, I put the battery back in the computer and turned the screen on, allowing me to see the LCD's exact borders. One side of the new touch panel comes coated with adhesive, so I pressed this side into place over the lit-up screen. After I restarted the computer, the touchscreen was working—and I was able to accurately control the cursor with my finger. But it's smart to give it a test run before you put the computer back together—just to be sure everything is in place.

While the laptop was open, I thought it couldn't hurt to add some upgrades—more RAM and a faster and higher capacity storage drive will help a previously sluggish netbook stave off obsolescence, at least for a little while. I upgraded my machine to 2 GB of DDR2 SDRAM and a solid-state storage drive. I was now done and ready to put it all back together again—a fairly straightforward procedure. The final product: a powerful, portable, touch-friendly computer. Did it let me do anything a normal PC couldn't do? Not really, although that could soon change, now that developers have the ability to build touch capabilities directly into Windows 7 applications. But it did let me move away from the netbook's cramped touchpad and keyboard and spread my hands over a spacious touchscreen. And it certainly draws stares when I pull it out at a Starbucks. **PM**