Touchy-Feely: a TouchBook teardown

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The Always Innovating TouchBook is a touch-sensitive tablet/netbook device, powered by an TI OMAP-3530 processor and running Linux. They're currently in very limited supply, although many pre-orders should be shipping soon, according to the company.

I was lucky enough to get one of the earlier models, and decided to tear it apart for everyone's edification. The whole is, as usual, greater than the sum of the parts (viz, *it works*), but having a bunch of parts strewn around your house looks really impressive to non-technical friends.

There's a Flickr set with more photos.

Uncasing it

I'm assuming that if you intend to tear this thing to pieces, you've already figured out how to get the back cover off. You'll see something like this:
removing it, and both kind of suck.

CHOICE 1: You can very carefully insert a putty knife or other thin, dull piece of metal under the top left corner of the battery, and slowly work it downwards, cutting the glue. Go slowly as you get towards the middle of the device. The glue stops, and if you go at it with the putty knife you might hit the small, delicate cable located below the bottom half of the battery (see below).

This will, of course, permanently weaken the stickiness of the glue; you'll have to re-glue the device when you're done with it. There's a less-expected downside to this method: the battery is not reinforced, and is therefore pretty flexible. You will almost certainly bend the battery while doing this, and could damage or destroy it. (Remember, all of the exploding cell-phone/iPod incidents were caused by damaged batteries, and most of those are a *lot* smaller than this one.) Here's mine after the removal:

CHOICE 2: remove the battery's shield with the battery still attached to it. The shield is secured to the case at four points, as seen below (with the battery already unstuck via the first method).

When you've got all four screws off, *very gently* lift the battery towards the bottom of the unit, angling slightly upward and feeding the black cable through, as the cable is still attached to the display underneath

with a very thin connector. When you have enough clearance, detach the display cable from underneath. This is what the cable looks like when attached:

Whether you want to break the glue or try *not* to break the cable is up to you. I went the first route, as I didn't know what was underneath the battery when I started digging, but I may have tried the second method if I had.

Once the battery's clear, using either method, you can unscrew the main PCB; two screws anchor it at the top of the unit, and one at the bottom. Rotate the board clockwise slightly, moving the top left away from the case; then lift the top of the board slowly until it is free. There's one last cable anchoring the board to the case. It's attached close to the left side of the PCB; you'll need to rotate it like it's hinged on the outside left of the case to see it without damaging it.

There's no trick to this cable; just pull, gently but firmly, until it releases from the socket. (Reassembling works the same way, athough a pair of pliers may help in applying enough force to the cardboard backing the contacts to get it to properly mate in such a small space.)

The rest of the tear-down is pretty obvious. Take a look at the Flickr set linked above if you'd like to see the results.

Enjoy your TouchBooks!