

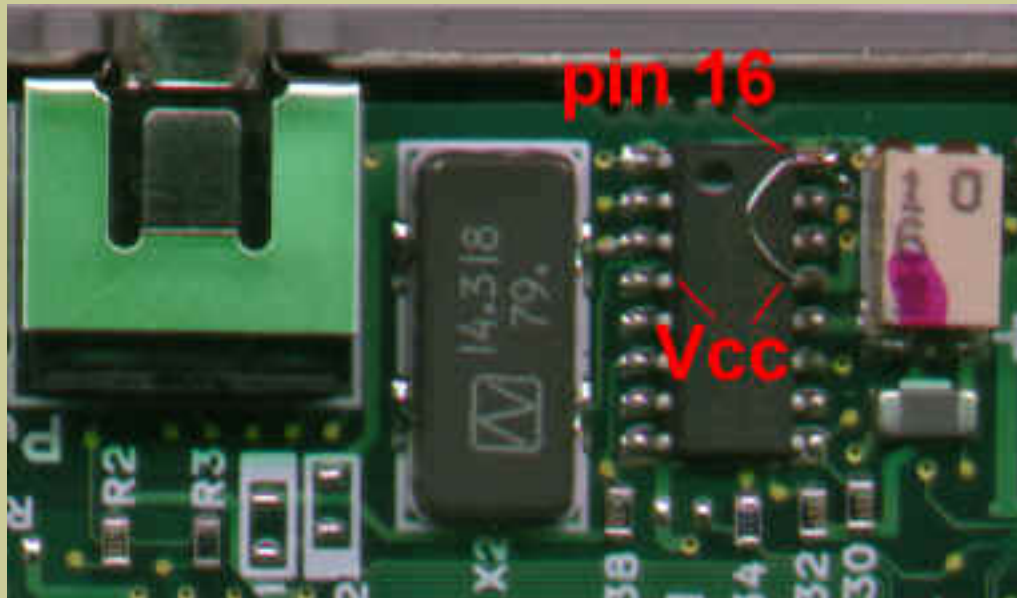
**XIN**

## **Overclock Libretto 70 to 200 Mhz!**

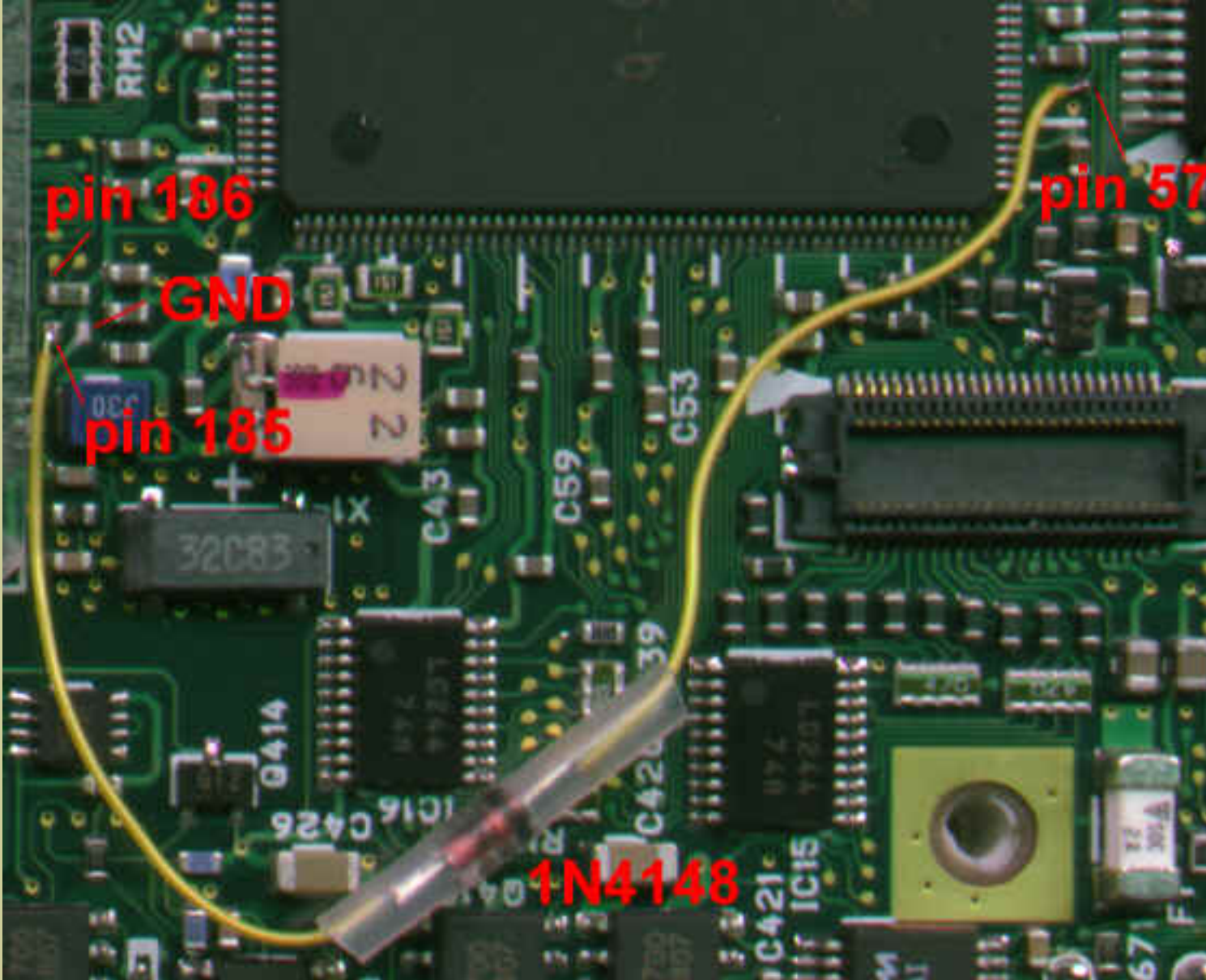
By **Xin Feng** (11/15/98) updated (11/25/98)

1) Change bus speed from 60 Mhz to 66 and get 133 Mhz speed.

Lift the pin 16 and pull it to VCC (pin 4 or 13):



2) Diode pin 185 to pin 57 and get 133/166 Mhz switchable. It will run at 133 normally. If you hold the power button for 2-3 seconds while start it from cold or hibernation, it will run at 166. Based on my experience, my L70 runs at 166 without any problem. If you do not want to use a diode, you can simply jump pin 185 to the nearby GND and it will run 166 forever. If you did not change the bus speed, you'll get 120/150 instead.

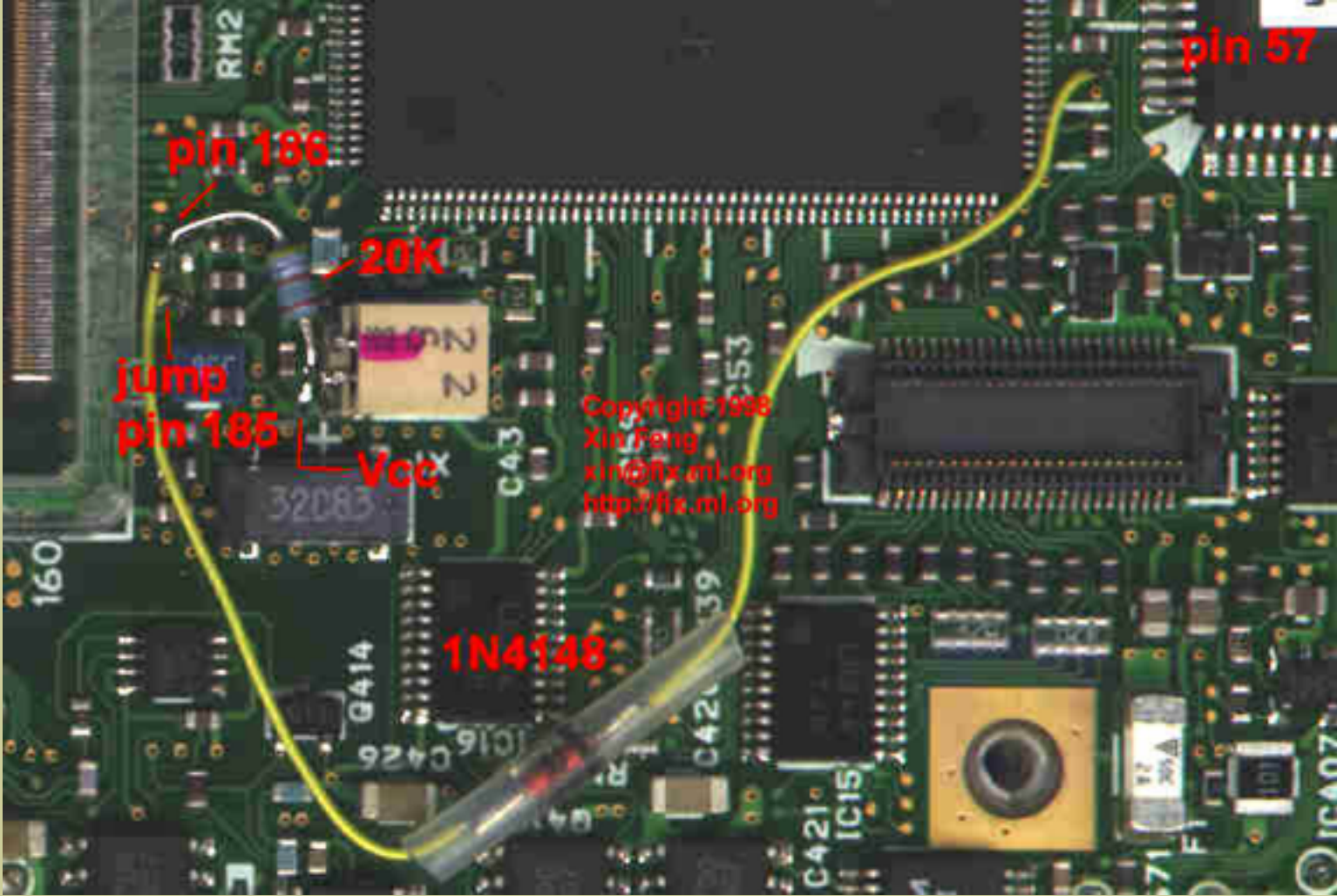


3) If you need even higher speed, i.e. 200 Mhz, remove the pin 186 jumper and jump the pin 185 instead. It is very easy to remove the jumper: just use a solder-gun with a tip that is wide enough to touch both sides of the jumper. Don't try to diode pin 185 to 57 to get 100/200, because it will not boot at 100. Again, if you did not change bus speed to 66, you get 180 instead.



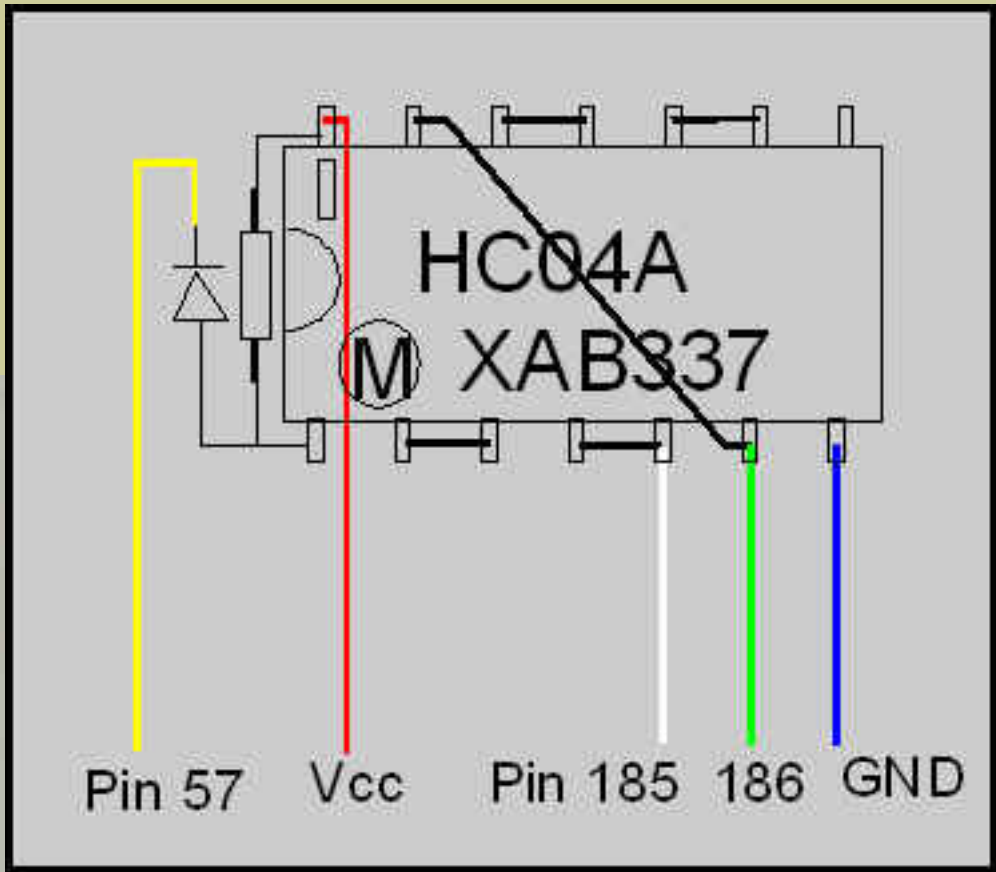
4) If you want to be able to switch between 166 and 200, you have to use a 20K resistor and a diode. Replace the pin 186-Vcc jumper in above picture with a 20K resistor and diode pin 186 to 57. Again, if you did not change bus to 66, you get 150/180 instead of 166/200.

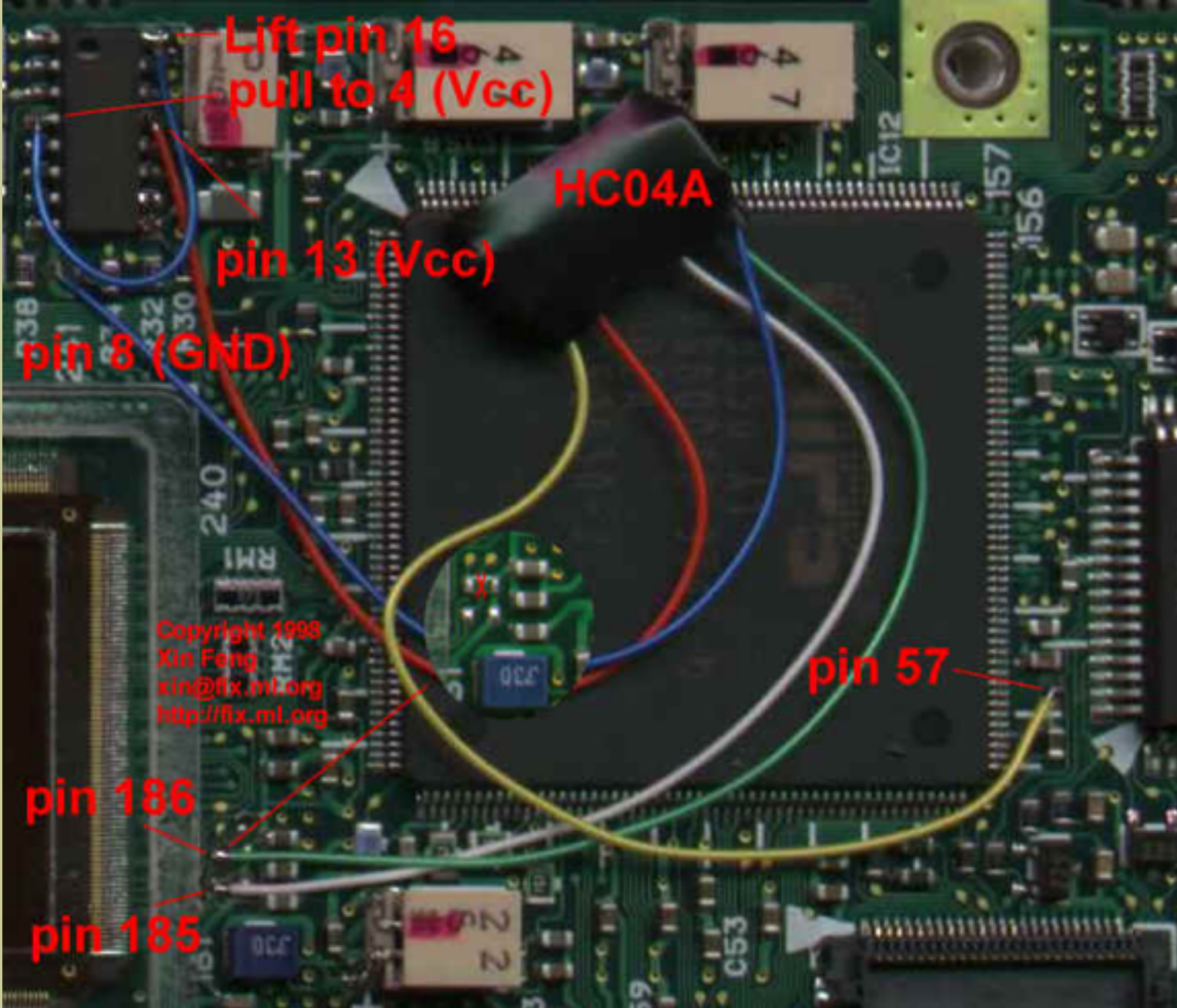




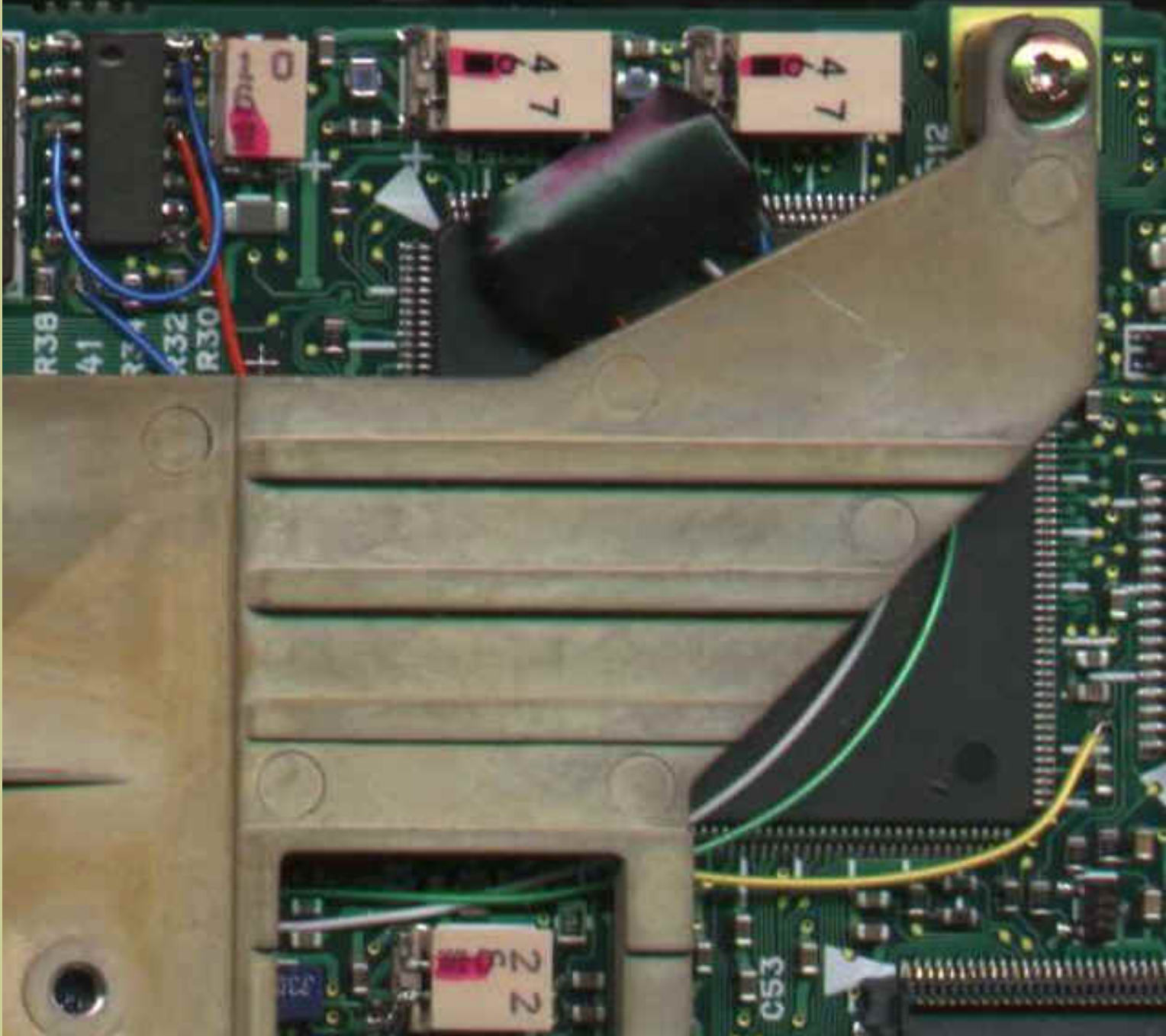
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5) If you want to be able to switch between 133 and 200, you have to use a HC04A (surface mount type, Motorola product, \$0.99 for two at Fry's Electronics). Don't be scared by the wiring, they are actually safer. Most of the job will be done off the motherboard. All you'll do on the motherboard is to solder wires to the corresponding points. The motherboard will stay clean.









By the way, recent L70s , including mine, come with 2GB hard drives actually. However you have to download the BIOS 6.2 from [Toshiba](#) to be able to see and use the entire 2GB.

(11/16/98) You can download the Powerleap CPU Control Panel (<http://www.powerleap.com/downloads/plprommx/setup.exe>) which tells you your CPU speed.

(11/25/98) It is still running at 200Mhz with a Megahertz network card without any problem or extra heat. So it must have actually a 200 or higher CPU that has been underclocked to 120 by Toshiba. Therefore what I am doing here is not overclocking. Correct-clocking instead. The battery life between 133 and 200 is not significantly different. But I'll still keep the 133 option for the next hot summer.

Many thanks go to David Chien and his dedicated [adorable Libretto site](#).

(11/26/98) [Some tips for soldering](#).

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