

HOW TO EXTEND THE BATTERY LIFE OF YOUR LAPTOP WITHOUT LOSING POWER: REDUCE THE PROCESSOR VOLTAGE



Earlier we saw how to extend the battery life (and the computer to overheat less, also extending its life) tweaking the settings of the graphics card . This time we will do the same, but without any danger to your computer, **without slowing it, lowering processor voltage.**

Did you know that it will continue working as before and safely? Indeed. And I'll explain why.

Assemblers buy computer components (including the processor, AMD, Intel, or whatever) and then merge them into assembly.

However, when making **the processors are produced in batches of thousands of units, and each comes with its own characteristics** (may have tiny defects, with a different quality, which may slightly affect the performance of each) a particular "batch" sample is tested, and labeled with the voltage required to operate safely and without fail, usually with a large margin of error.

We **will find out what the lowest safe voltage possible** for each processor operating frequency that our laptop mounts, **and apply it using a program** (RM-Clock for intel or AMD K10Stat for K10), so our team will to do the same job, but with less energy, less warming, lengthening its life, and thus making the battery last longer. **It sounds complicated, but you will see that it is not.**

This applies especially to older processors; for current (Phenom, I3 / I5 / I7) can not find them programs that can configure or that you have to make the change through the BIOS (I think that Intel now are marked with fixed voltage factory without the possibility of change "on the fly").

In this post we will see **how to reduce the voltage (undervolting) with AMD K10 processors**, in this case an **AMD Turion 64 X2**, which already is quite "glutton" battery.

This processor comes with a particular excess voltage, so you'll notice much change in temperature and battery (and power consumption, which may involve some cash each month).

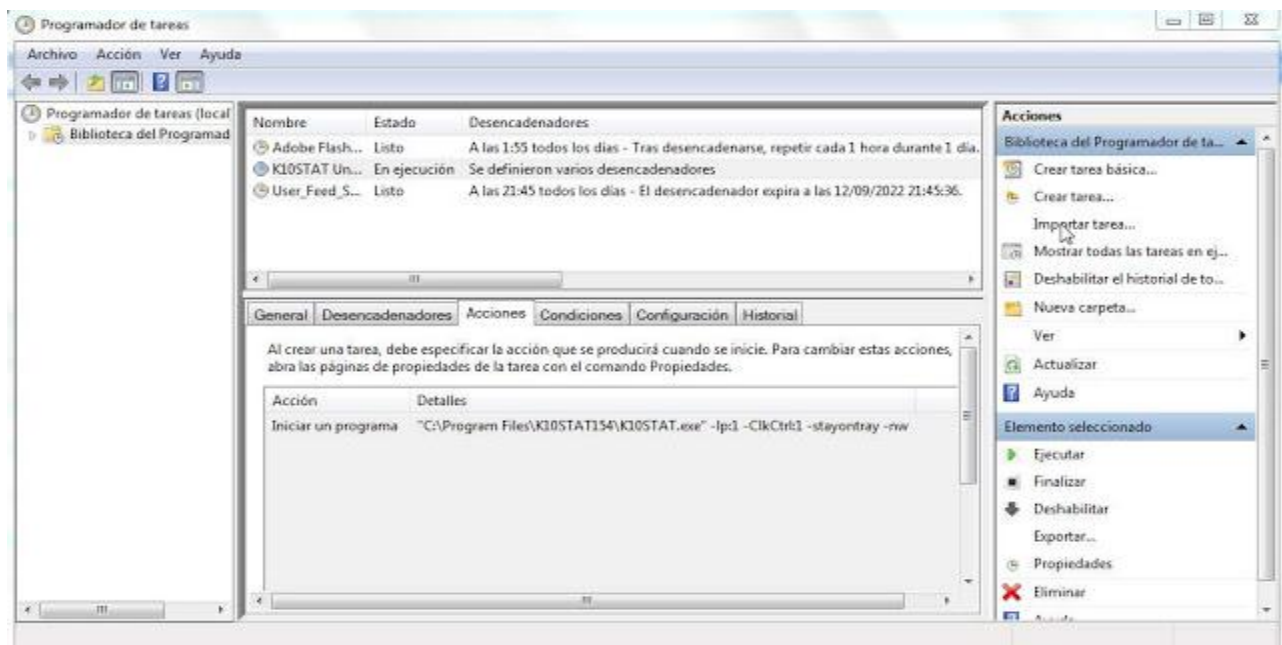
If you have an Intel Core 2 Duo you can use RMClock (no 64-bit libraries too), you can Google it.

This is completely safe, because in case of mistakes, enough off the computer and turning it back on (if it freezes hold down the power button for more than 5 seconds to turn off), to return to try other values.

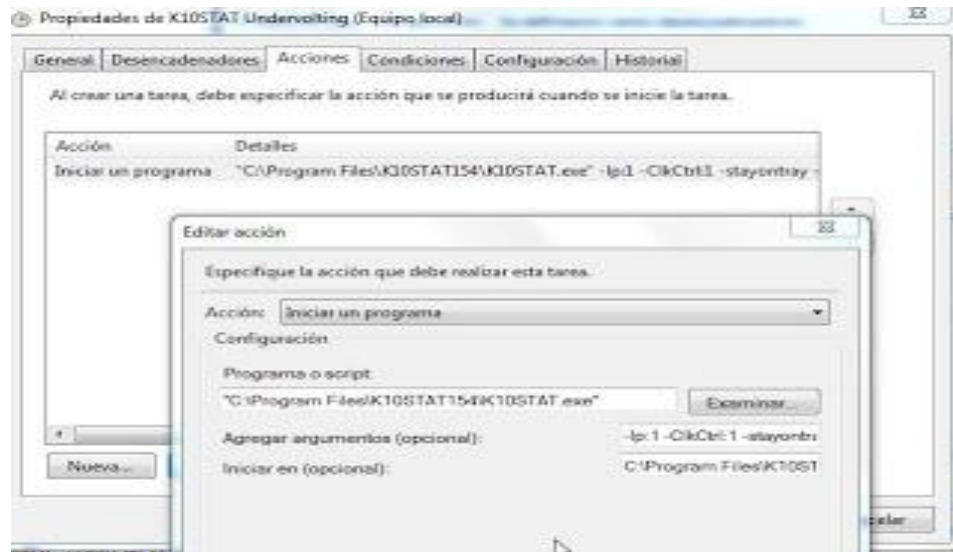
Option 1: Install the task already configured

You have two options, either install the K10Stat already set (punch) for this processor (tested with 3 different computers and operating properly Toshiba voltages), and if you can not hang your computer, you save the whole process of trial and error, or follow the steps in Option 2 (to finally add the task).

If you've decided on this first, and you have the zip downloaded, and just add the task to the task scheduler in Windows 7 (the option to import),



Or set up a new one to run "c: \ directory where is \ K10Stat.exe" with the options "-lp: 1 -ClkCtrl: 1 -stayontray -nw" (without quotation marks, as in the picture below)

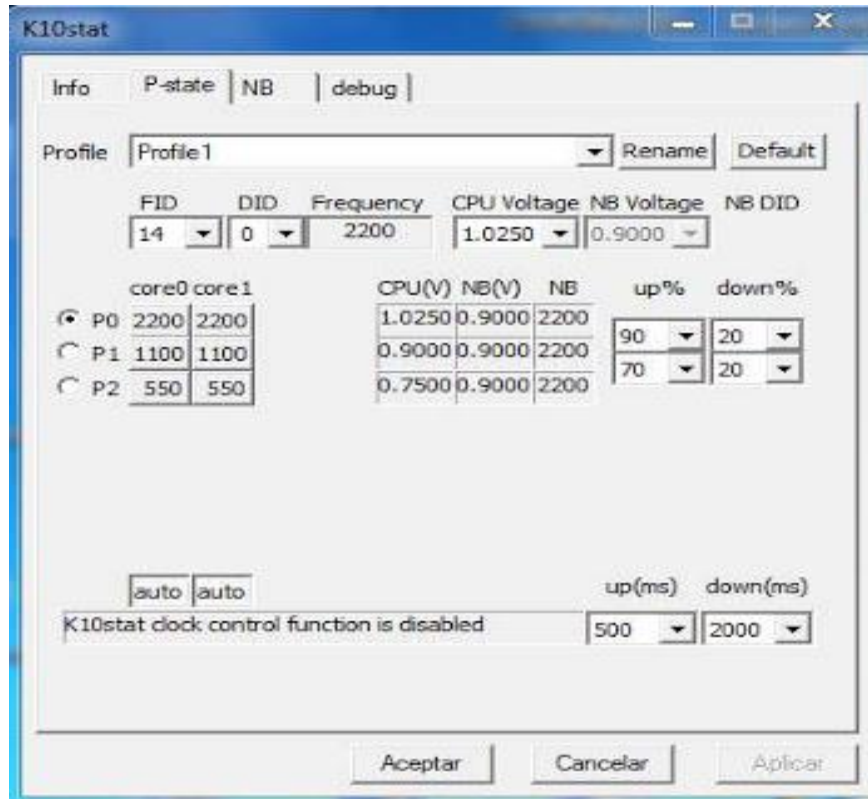


And that is triggered whenever any user logs on or resumed session.

Option 2: The tortuous path of trial and error

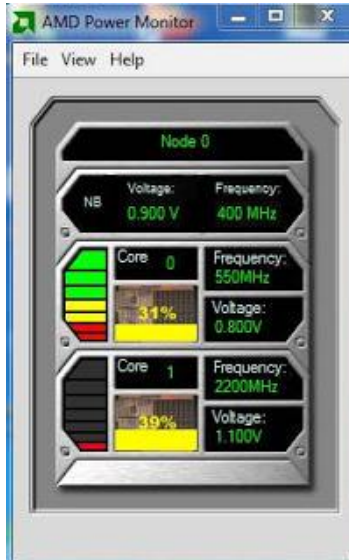
We need to unburden K10Stat here (click) , the latest version 1.54, as indicated in the tutorial Noticias3D, keep trying to lower the voltage for a given frequency (the OS automatically switches the processor speed as the demand for labor to save power).

To lock the frequency, for example, P0, we have to activate the "K10Stat clock control" option. **All this and explained** at this link (copy here), so **I'll explain just above.**



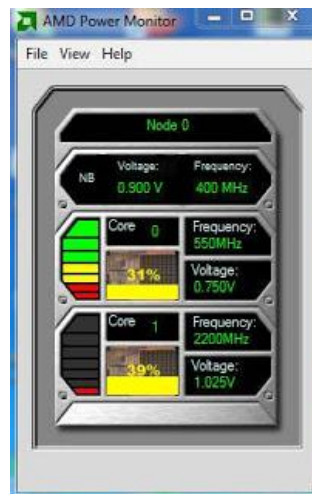
Using IntelBurn Test (program to "stress" the CPU and check if no errors or crashes), we can start losing 0,025 and, for example, 2.2 GHz processor is powered at 1.1 volts, go down to 1,075 and see if it is stable. To check if you have really lowered the voltage, we will either a program like AMD Power Monitor , which shows real-time speed and voltage of each processor core utility created by AMD:

In this case, for the version of AMD CPU riding TOSHIBA Satellite L300D laptop, get yourself down to 0.1 volts, the voltage in the case of P1 to 1.1 GHz and 0.075 GHz to 2.2 volts (seems little, but it is quite noticeable at those speeds).



Before applying the changes

The battery has gone from barely used one hour (with average use on the internet) for almost an hour and a half.



AMD Power Monitor: Voltages and modified

Should we lock the computer, we will try to download something less to find a voltage at which the computer does not hang for 1 or 2 hours working with Interburn program.

Once found the best voltages for each state or frequency of the processor, disable the frequency control, save changes in K10Stat, and schedule the task to start automatically whenever we start meeting, as indicated in the above guide.

Source: <http://crecimiento-sostenible.blogspot.in/2014/10/how-to-extend-battery-life-of-your.html>