

Quick OC guide for P5W DH/Conroe

It's wise to read some generic overclock articles to learn about the risks of overclocking and the sacred importance of the cooler. If you don't trust your cooler, think twice, at least.

It's also wise to have ddr2-667 or ddr2-800 so you won't need to run your memory at a rate slower than CPU. 667 is sweet enough if you want a 25% (fsb333) overclock, so you can keep a 1:1 FSB:RAM ratio, which is said to be smart. If you want a 50% OC (400fsb), ddr2-800 is the way to go.

I like having the bios updated. Some people are having problems with latest bios, so it's up to you. My rig is running good at bios 1901 and a small OC (25%). Asus update in windows is plain easy, just remember it won't allow you to roll back to previous version if anything gets messed, for that you'll need a fudger.

Let's get to the BIOS. First things first, disable what you don't use:

1- On the Main bios screen, disable all unused IDE. Where you read "undetected" set them to ignore or uninstalled.

2- Go into Power > Hardware Monitor and disable everything Q-Fan and AI Quiet. While you're at there, disable the monitoring of fans you don't have or use (where you see N/A or some strange values, set it to ignore – my bios was reading 111000rpm from a fan that doesn't exist).

You may also set all profiles to performance mode for extra safety (it's probably not necessary, I've actually never touched these settings).

Make sure your fan is at its highest if it has an external control.

3- Now the Advanced tab, Onboard Devices Configuration, disable the Jmicron if you don't use the second (black) IDE connector.

4- At Advanced > CPU Configuration, set Ratio CMOS Setting to your cpu multiplier (8 for my 6400, as in $8 \times 266 = 2.13\text{ghz}$). Disable all these:

- Max CPUID Value Limit
- Execute Disable Function
- Intel Speedstep

5- Slip into Advanced > Chipset Configuration and turn off HyperPath3. Set PEG Link Mode to Normal.

You should turn on Configure DRAM timings by SPD if you want to go for high OC. If you're going for fsb333 (25%OC), you can disable SPD and set your memory to the tightest (lowest) timings they can handle. Check your memory specs for these.

6- We're getting there. Jump to Advanced>JumperFree Configuration. Set AI Overclocking to Manual. Now you'll see all the OC settings.

FSB should be 266 for the 6000's Conroe series.

Set your DRAM Frequency to 533. This will keep the 1:1 ratio mentioned above: (2x266):533.

Leave Performance Mode at Auto or Standard (I'm not sure what this setting does)

Set PCI Express Frequency to 100.

Set PCI Clock Synchronization Mode to 33.33.

Set Memory Voltage as in your memory specs.

Set MCH Voltage to 1.50V

Set ICH Voltage to 1.05

For FSB Termination Voltage, use 1.30 for a 25%OC(fsb333). You may need to set it to 1.40 if you're going for higher clocks.

For VCore voltage, it'll depend on your luck. Some chips don't need high voltages and some do. I overlocked my rig to fsb333 on 1.3vcore. Tomshardware's forum guide suggested these values:

E6300=1.370V E6400=1.375V E6600=1.400V E6700=1.400V X6800=1.400V

There's basically two ways of overclocking:

1- you rise the fsb and the voltage to high values from start and then tune it downwards until you lose stability

2- you rise the fsb and voltage in small steps checking stability and stop at the last stable settings when things get unstable.

What you want is high FSB and low voltages.

I would choose some vcore in the range 1.3000-1.3625 and pray I won't need to go above this (for a 25% OC).

We have not yet touched the CPU Frequency (fsb) setting, so we're not overlocked. Calm down, press F10 and let the bios save everything.

Get back to that same JumperFree Configuration after reboot.

Now set the CPU frequency to 333 (press +). You'll see DRAM frequency changes accordingly (to 667). If you go for extreme clocks like fsb400, your memory would reach ddr2-800 at this ratio. Make sure you don't go into DRAM frequency that your memory can't handle. Also make sure you have the correct timings for that final frequency set at Chipset Configuration (as in our step 5 above) if you're not using SPD.

Press F10 again, save and reboot.

Smile. You're OCed.

Test system stability and temperature with wPrime and SpeedFan (if you're in Vista, you have to tell wPrime to use 2 threads).

Make sure vcore voltage is not fluctuating. Make sure temps are in range.

If everything is ok, you can try higher Cpu frequency or lower voltages until you get satisfied with your CPU Clock/Voltage/Temperature.

If you mess things up, hold Insert while booting to reset bios settings or clean the cmos manually (check the board manual for this).

Good luck and have fun. Sorry if my English is not perfect. If I missed something or wrote bad advice, please let me know.