

## BIOS-POST

BIOS (Eng. Basic Input-Output System) - basic input-output - a small program that is in ROM, (Eng. Read-only memory, permanent memory) is responsible for the most basic functions of interface and hardware configuration. The most widely known among computer users BIOS motherboard BIOS but present in almost all components of the PC: Video adapters, network adapters, modems, disk controller printer.

The main function of the motherboard BIOS - initialization devices connected to the motherboard, right after the power of the computer. BIOS checks the devices during POST-test sets low-level parameters of their work (eg, bus frequency CPU), and then looks for the bootloader operating system (Eng. Boot Loader) on available carriers and passes control to the operating system (OS). BIOS also contains a minimum set of service functions (such as displaying messages on the screen or receiving characters from the keyboard), which results in decoding its name: Basic Input-Output System - basic input-output.

POST-test (Power On Self Test) - an independent, automated testing of means PC when you turn on the power.

The vast majority of PC Action at boot test related to the implementation of its important components, including processor support circuitry, keypad, drives drives videopidsystemu memory.

After turning around 0.3-0.5 PC comes with self-test power supply. If all the power supply voltage levels are within acceptable limits, the motherboard signal «Power Good».

So, after receiving a signal «Power Good» shaped signal «Reset» to the processor. With instructions recorded at FFFF: 0000h, the processor starts to execute commands. The first such instruction will team at the beginning POST-test. First of all, test the processor, as in case of incorrect operation, all subsequent operations will become simply meaningless.

Then checked whether the read instruction system memory.

Then followed the test timer, zero channel which is connected to the processor via interrupt controller is configured that heneruyuye interrupts approximately every 18.2 ms.

After this step becomes available alarm diagnostics. After initializing the timer POST-test begins to perform tests read-write memory controller registers and if there are no errors, runs a periodic regeneration system memory. At this stage tested and keyboard controller, also located on the motherboard.

Two major node must be tested on the motherboard - a cache controller and interrupt controller.

At the final stage POST-test is testing and initialization of peripherals - keyboard, parallel ports, serial ports, drives.

Major surgery POST-test at this stage is, of course, initialize the video PC. After this procedure POST-test already has the ability to display messages on the monitor. After initializing the video POST-test checks the memory of the personal computer, which was not yet fully tested. At this stage POST test procedure is completed.

POST-test results are given on the screen to start downloading the disk operating system. Each PC can have their own characteristics and display of POST-test results on the screen. Subject to successful completion POST-test, then load the operating system.