

## Part III: Troubleshooting hardware

Hardware in the system are devices that are not easily damaged. However, it is quite possible that one good day these devices will malfunction and the blue screen error is a dangerous symptom that informs users that they have reached their lifespan.

Part I: Basics of "green screen" error in Windows

Part II: Troubleshooting "Blue screen"

**Hardware in the system are devices that are not easily damaged. However, it is likely that one beautiful day these devices will malfunction and the "blue screen" error is a dangerous symptom that informs users that they have reached their lifespan.**

In Part III, in case the system cannot even boot in *Safe mode* and the "*Last known good configuration*" option does not help anything, the cause of hardware failure is taking up a very high rate.

As with software, first, we need to examine each case. Consider whether any of the latest hardware is attached to the system, potentially causing an error. Turn off the power, remove the component (except CPU) and restart the system.

In case you do not often remove or change hardware components or the above processing does not solve the problem, we proceed to the system memory.

### Check memory

Before you start testing any memory testing program, be aware that you are installing how much memory (RAM) on the system. If you have more than 2, then experiment with each one. After that, we can use memory testing programs like Windows Memory Diagnostic, Docmem or Memtest86 +. All three are free, but highly accurate utilities, often used by hardware repair engineers. Use on floppy disks or CDs to check while booting the system.

The Memtest86 + 1.70 version has two test modes: "basic" and "advanced", they differ in the mechanism, the level of scrutiny and the test time. Install Memtest86 + on a floppy disk or CD and boot the system, press "C" to open a new menu that allows you to select the test mode. Any errors in memory are displayed at the bottom of the screen.

```

Memtest86+ v1.88 | Pass 41x #####
Pentium 4 (8.13) 3800 Mhz | Test 78x #####
L1 Cache: 8K 24589MB/s | Test #4 [Moving inv, 32 bit pattern, cached]
L2 Cache: 512K 28978MB/s | Testing: 96K - 255M 255M
Memory : 255M 2442MB/s | Pattern: ffbfffff
Chipset : Intel i875P (ECC : Disabled) - FSB : 250 Mhz - PAT : Enabled
Settings: RAM : 288 Mhz (DDR400) / CAS : 2.5-2-2-5 / Dual Channel (128 bits)

WallTime  Cached  RsvdMem  MemMap  Cache  ECC  Test  Pass  Errors  ECC Errs
-----
8:01:02  255M  864K  e82b-Std  on  off  Std  8  8  8

[ESC]Reboot (c)configuration (SP)scroll_lock (CR)scroll_unlock

```

```

(P) Pause (X) Exit (T) Run extended tests | Windows Memory Diagno
Test name: WINUC Pass: 1 Test: 6
Test description: Runs an inverse coupling test using data
                  patterns tailored for the memory in this system.
Pass progress: |-----|
Test progress: |---|
Range progress: |-----|

Pass  Test  Cache  System memory map
-----
1  LRAND  On  Succeeded  [00001000 - 00020000]
1  Stride6  On  Succeeded  [00030000 - 000a0000]
1  WMA7S+  On  Succeeded  [00100000 - 00100000]
1  WINUC  On  Active  [0010c000 - 1fff0000]

Results  Pass  Test  Cache  Address  Expected  Actual
-----
No errors have been found. The memory diagnostic will continue running
until the (X) key is pressed or the machine is powered off.

```

Check memory errors with Memtest86 + and Windows Memory Diagnostic

**Handling** : If any RAM error is detected, turn off the power, remove the plug from the power outlet and remove the defective RAM from the slot. Carefully clean with RAM pins and slots. Then try plugging in another slot. Turn on the power and restart the system to check whether the memory is working properly. If the problem persists, the RAM is damaged and it's time to replace a new RAM. Or to make sure, you can also bring the RAM to another system and then check.

**Check the operating system**

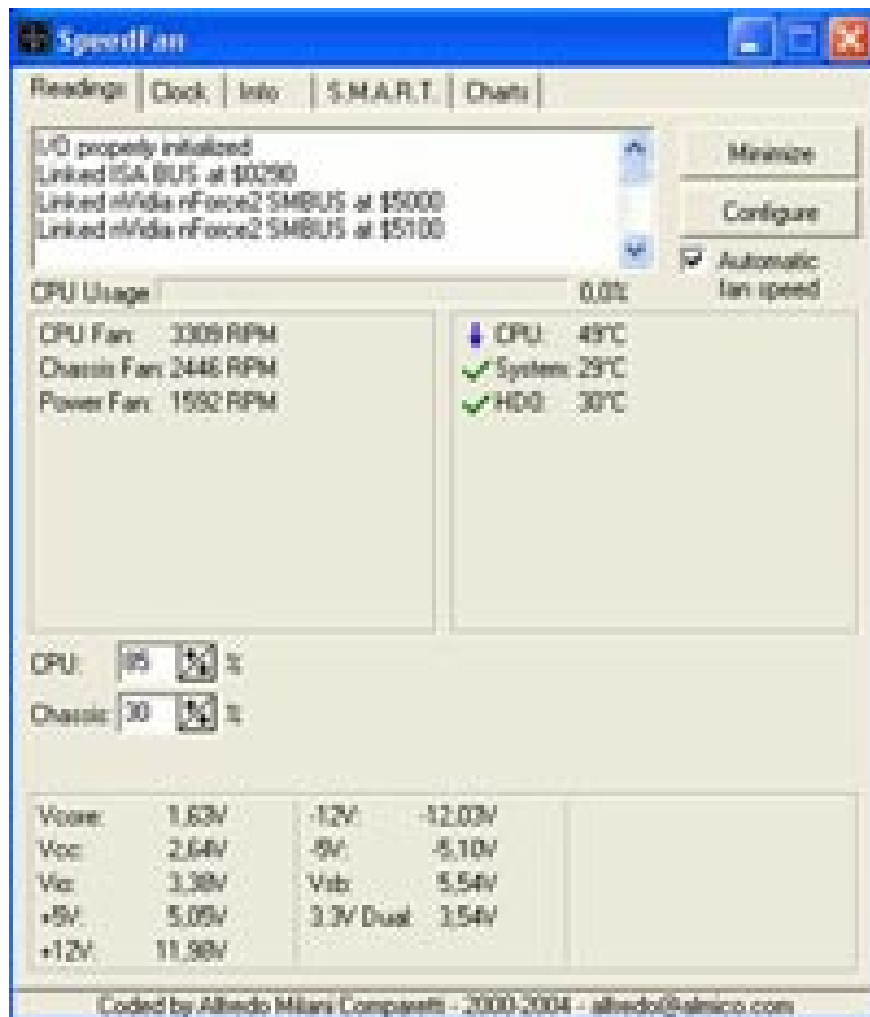
Windows XP often stops working if the system files are lost or drive errors, viruses are destructive. In addition, when you transfer the entire operating system installed on the hard drive to another hardware system, it is likely that there will be a "blue screen" error. In order for the OS to work well again, we must perform the repair and update of the system file.

**Handling** : we use the " *Repair Install* " function. This function allows re-installing all system files in Windows but ignoring folders, settings and does not affect user data.

1. Insert the Windows XP installation CD into the CD-Rom drive.
2. Go to CMOS setup boot from CD drive to boot with Windows.
3. Select the option " *Press Enter to set up Windows XP now* "
4. Press F8 to bypass the copyright policy (EULA)
5. Press " *R* " *KEY* to start repairing the installation.

Your available data will not be replaced, the system simply reinstalls the system files and scans all hardware information. When the process is finished, the system will restart. Note that after doing this, you should update Windows at Windows Update to update the patches as the process will remove the entire update.

If the above cases and remedies still do not help you solve the problem, refer to the remaining cases.



SpeedFan interface with many functions to support monitoring of hardware temperature, fan speed .

**Hard drive:** Normally, if it is caused by the hard drive, unfortunately for you that the hard drive may have damaged the head (drive). The first thing to do when listening to the hard drive emits a heavy "roar" noise while operating or radiating excessively hot heat is to back up all important data to a CD, DVD or hard drive. save another.

Ideally, in this case, you should reserve and buy another hard drive because the life of the hard drive you are using is "limited". The hard drive on the hard drive can be replaced when damaged but the magnetic head drive cannot because it is covered with a vacuum.

**Processor:** More precisely, is the processor fan fan damaged or not? You can check the temperature of the processor, the temperature inside the case to see if it is over allowed in the BIOS or with SpeedFan software.

In addition, video card (power card), power supply (PSU) may also be the cause. Therefore, once you want to determine the error to be able to resolve the root, refer from the software to the hardware or according to the processing experience and then manipulate each component one by one.

If you are not knowledgeable about assembly, testing, testing then bring the system to the technician to handle when you often meet " *dead blue screen* " (BSOD) because that is the signal to your system. are in danger of being damaged.

## **Thank Truc**

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