

## Re: XP PRO repair questions

**Source:**

[http://www.tech-archive.net/Archive/WinXP/microsoft.public.windowsxp.help\\_and\\_support/2004-08/5290.html](http://www.tech-archive.net/Archive/WinXP/microsoft.public.windowsxp.help_and_support/2004-08/5290.html)

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**From:** gem4353 ([gem4353\\_at\\_discussions.microsoft.com](mailto:gem4353_at_discussions.microsoft.com))

**Date:** 08/17/04

Date: Tue, 17 Aug 2004 11:35:01 -0700

Hi Tom,

I was in no way trying to be disrespectful of the advice offered by you or the the others, or not do all the steps offered.

I should have explained that I am currently housebound due to recovery from surgery, am not allowed to drive and do not have a way to get out and get a multimeter at this time, or have someone that can go get it for me. I do plan on getting one and testing as you suggested, was simply trying other things to temporarily help. I've also run Memtest86 with no problems. So at this point I'm stuck until I can get out to get the multimeter.

Thank you for taking the time to write down on the steps and tools, I appreciate it. Hopefully it will turn out to be something easily repairable or replaceable. I'll be extremely happy if it turns out to be a failing power supply. That's an easy fix :-)

Gem

"w\_tom" wrote:

- > *Performed were solutions often promoted by repairmen who*
- > *typically have insufficient computer knowledge. Moving cards*
- > *around to increase cooling only cures the symptoms of a failed*
- > *component. Posted previously because it is so necessary: a*
- > *common source of intermittents in electronics is a slowly*
- > *failing power supply. Especially when intermittents occur*
- > *without any obvious common factor. Now the keyboard is*
- > *failing? Will you reload software inside that keyboard single*
- > *chip computer? Was power supply integrity first confirmed?*
- > *If not then every strange failure has the same and single*
- > *reason.*
- >
- > *Posted previously were some powerful tools. Do not be*
- > *selective. If you don't do them all, then you are simply*
- > *'wildly speculating' a solution. Those tools come from*
- > *experience that is probably longer than most lurkers have even*

- > existed. Not listed as performed are two most critical
- > tests. Run comprehensive diagnostics at elevated
- > temperature. Measure DC volts. Without doing those, then
- > everything else is equivalent to 'spitting in the wind'.
- >
- > Swapping cards to fix computer temperature is a classic
- > "rearranging deck chairs on the Titanic" example. All those
- > cards must work just fine when even bunched together, must
- > work just fine bunched together inside a 100 degree F room,
- > AND must work just fine when so hot as to be uncomfortable to
- > touch. Again, as was posted previously: if cooling the
- > computer solves an intermittent, then the problem still
- > remains. A computer must work just fine in a 100 degree room
- > with cards all bunched together. No cooling solution in a 70
- > degree room is a valid solution.
- >
- > The procedure requires a multimeter. Some use an excuse
- > that they don't have the meter. I did not have a shovel;
- > therefore I could not plant crops and starved to death? It
- > was not my fault? Not acceptable especially when meters are
- > so ubiquitous (even sold in Sears Hardware, Home Depot, and
- > Radio Shack) and so inexpensive. Get the meter now.
- >
- > Yes this is blunt because some of the best solutions were
- > provided and apparently the most important ones were not
- > performed. The tone says either you do it, or do not want to
- > solve the intermittent. Stop reading a solution that involves
- > more fans, better cooling, removing dust, or reloading
- > software. They are 'deck chair manipulations' if hardware
- > integrity was not first confirmed. Everything provided to
- > test hardware is simple even for Junior High School students.
- >
- > Do not – I repeat – do not fix intermittents by first
- > reloading software. It can result to more complex problems
- > when hardware is the real reason for failure. Problems that
- > can then make the hardware solution more difficult. The
- > software was working just fine. Why did it change?
- >
- > First confirm hardware is OK. Did you run comprehensive
- > diagnostics at elevated temperature? If so, then memory
- > swapping would not solve the problem. Only after all hardware
- > is confirmed – everything I had posted was performed – only
- > then move on to suspect software that did not change itself
- > when the machine was working fine.
- >
- > gem4353 wrote:
- > > Hi Tom and Colin,
- > >
- > > thank you both for the advice – here's what I've done so far:
- > >
- > > I've opened the case and rearranged my workspace to get more

> > *airflow – things were a little crowded. I tried different memory*  
> > *(swapped with another system) and the problems still continued on*  
> > *the original system, but nothing on the system I swapped with.*  
> >  
> > *I don't have any conflicts in device manager and nothing unusual*  
> > *showing up in event log. Plus the errors in IE and outlook are*  
> > *progressing so i think I'm going to reinstall IE and see if that*  
> > *helps.*  
> >  
> > *I've looked for a hidden recovery partition and don't see anything*  
> > *in disk management. Is there anyplace else I might be able to see*  
> > *it if there is an option like that?*  
> >  
> > *Now I'm also getting intermittent keyboard errors when booting.*  
> >  
> > *thank you,*  
> >  
> > *Gem*  
> >  
> > *"w\_tom" wrote:*  
> >  
> >> *Before fixing things, first keep doing what you were doing.*  
> >> *First identify the problem. For example, you ran*  
> >> *comprehensive hardware diagnostics to find an intermittent.*  
> >> *Good. But many intermittents even pass diagnostics when*  
> >> *running in 70 degree F rooms. Effective testing is called*  
> >> *burn-in testing. Run those diagnostics in a 100 degree room*  
> >> *or run diagnostics while heating the tested component with a*  
> >> *air dryer on high. Hot enough to be uncomfortable to touch*  
> >> *but not leave skin is a normal operating temperature.*  
> >> *Intermittents become more obvious when component operates at*  
> >> *the extreme limits of normal temperatures.*  
> >>  
> >> *Especially necessary to find intermittent SIMM memory is*  
> >> *heat. Either run Memtst86 or the manufacturer's comprehensive*  
> >> *memory diagnostic – at elevated, normal temperature – to*  
> >> *verify memory integrity. Again intermittent memory can pass*  
> >> *at room temperature but will fail at elevated temperatures.*  
> >> *This same reason is why so many, instead, recommend more*  
> >> *fans. More fans to cure the symptom rather than use heat to*  
> >> *identify and replace a failing component.*  
> >>  
> >> *In the meantime, what does the system (event) log report?*  
> >> *Does Device Manager report any conflicts or other problems?*  
> >> *See Windows Help, if necessary, to locate these two important*  
> >> *sources of information.*  
> >>  
> >> *Measure DC voltages from power supply. A motherboard*  
> >> *voltage monitor is not sufficient for measuring voltages.*  
> >> *That voltage monitor can only report voltage changes – not*  
> >> *accurately report voltages. All voltages must measure within*

> > > upper 3/4 limits of voltage chart as posted in either:  
> > > "Computer doesnt start at all" in alt.comp.hardware on 10  
> > > Jan 2004 at <http://tinyurl.com/2t69q> or  
> > > "I think my power supply is dead" in alt.comp.hardware on 5  
> > > Feb 2004 at <http://www.tinyurl.com/2musa>  
> > >  
> > > Essential is a 3.5 digit multimeter; so ubiquitous as to be  
> > > sold even in Sears, Home Depot, Lowes, and Radio Shack. That  
> > > is the least expensive solution to measuring voltages and a  
> > > tool as important as a screwdriver.  
> > >  
> > > BTW don't waste good money on a UPS or surge protector to  
> > > fix this problem. First, surges occur typically once every  
> > > eight years. Second neither the plug-in UPS nor power strip  
> > > protector even claim to protect from surges that damage  
> > > hardware. Third, if AC mains voltage dropped so low as to  
> > > cause a computer failure, then incandescent lamps are  
> > > routinely dimming to less than 40% intensity. Furthermore, if  
> > > such AC mains voltage problems were causing problems, then the  
> > > multimeter would identify that problem. Brownouts never  
> > > damage properly constructed electronics. Brownouts are  
> > > destrutive to motors. But computers are more resilient.  
> > >  
> > > Colin Cogle has recommended some good software solutions.  
> > > But his knowledge of the hardware side is severely lacking.  
> > > He recommends too many hardware myths. 1) Surges destroy  
> > > hardware. How many other appliances are damaged? 2) Spikes  
> > > are so irrelevant to computers that spikes are routine from a  
> > > UPS in battery backup mode (270 volt spike on the 120 volt  
> > > output). Spike may damage small electric motors but will not  
> > > harm the more resilient computer. Spikey outputs are one  
> > > reason why plug-in UPSes are so inexpensive. They can output  
> > > large spikes because computers are a most resilient  
> > > appliance. 3) Brownouts never damage properly constructed  
> > > electronic hardware. In fact Intel specs demand that a  
> > > computer even power up normally when AC voltage is so low that  
> > > incandescent lamps are at 40% intensity.  
> > >  
> > > Spikes, surges, and brownouts causing problems are too often  
> > > promoted by myths. If any power line problem is causing your  
> > > problem, then the procedures cited above using a 3.5 digit  
> > > multimeter will identify that problem – in seconds.  
> > >  
> > > I cannot emphasize enough the power of a tool called heat in  
> > > locating intermittent and future failures. There is no less  
> > > expensive tool than a multimeter to confirm electricity from a  
> > > power supply. Once you have used the multimeter to calibrate  
> > > a motherboard voltage monitor, then that voltage monitor can  
> > > properly report future voltage problems. But again, first the  
> > > multimeter is necessary.  
>