

CMOS Battery Replacement

I am almost embarrassed to write this how-to on replacing your CMOS battery. As a matter of fact, if you are a gamer, or a power user, you can stop reading right now if you want, because you aren't likely to learn anything. If, however, you have stumbled across this article as a newbie or casual user read on, because this information will come in handy one day. As with most things to do with computers, there are two schools of thought about when you should change your CMOS battery. The most popular opinion is you replace your battery only when the current one is completely dead. My personal opinion is that you should replace your battery at a pre-determined interval of time.

In my experience, once every two years is sufficient. CMOS batteries are typically good for three to five years, so this schedule still allows for a considerable margin of safety. If you follow this schedule, you should minimize system down time. How do I know when my battery is truly dead and not some other malfunction? This one is pretty easy. If your system is losing settings, or if your BIOS clock has the wrong time after you have set it, then your CMOS battery needs to be replaced.

When you have determined it's a failed battery or your maintenance schedule says it's time to replace your good battery, because of its age, here's how you do it. If your battery is still good and your are replacing it as preventative maintenance, enter the BIOS setup and write down or print all your current settings. These will be useful later. If your battery is already dead you can skip this step, since your current settings are nothing more than system defaults at this stage.

Look on the board and physically locate your CMOS battery. There are at least two types of CMOS batteries. If your motherboard is less than three years old you are in luck you have the easy type, your CMOS battery should look like a watch battery. Later in the article we will discuss the second, more uncommon type.

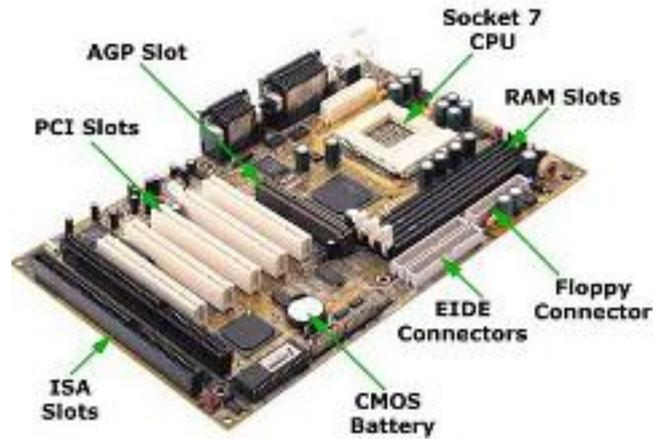
Carefully remove the battery from its holder, paying special attention not to damage the clip. Obtain a replacement battery. Target sells the battery for my ABIT board, a CR2032. If you can't locate one at Target or Wal-Mart, the next place to look is Radio Shack. Insert the new battery into the socket from where you removed the old one; fasten the clip. From there, power on the machine, enter the BIOS setup, then reset the time and date. Next, re-enter your other settings, which you previously recorded.

If you were for some reason unable to save your previous settings (say, for instance, your battery was already dead), then enter the system defaults. Save the changes and reboot. If your computer is now functioning normally (as it should be) re-enter the system setup and try setting your BIOS to optimal or performance settings; save and reboot. If your system is stable with the optimal settings, leave it this way; this option is usually faster than system defaults. There is a third manner to set your BIOS settings individually but it is beyond the scope of this article. I may write a latter how-to on that subject. If you encounter system lock-up, the machine fails to boot, or other miscellaneous flaky behavior, especially if this behavior was not present before the CMOS battery was replaced. You should reset BIOS options to default settings.

If, however, your motherboard has an old style CMOS battery, which resembles a giant transistor (two small wire leads on each end with a large barrel in the middle), your one remaining do DIY option is to search on your board or in the motherboard manual for a pinheader labeled "universal" or "generic" CMOS battery replacement.

If you have an old style CMOS battery and are unable to locate this, your best solution is a new motherboard, or professional CMOS battery replacement, since most motherboards lacking the CMOS pinheader require soldering to remove and insert CMOS batteries. Soldiering is not only beyond the scope of this article but is actually dangerous, to you and your motherboard if your don't know what you are doing.

If your motherboard does contain a pinheader for a generic or universal CMOS battery replacement, your local Mom & Pop computer store will either stock or be able to order you a universal replacement. Plug the replacement battery into the motherboard pinheader taking care to correctly match the polarity of positive to positive, and negative to negative. Secure replacement battery with included Velcro. Power on the system, enter the BIOS setup screens and proceed as above. In the same manner that you would with other CMOS battery type. I have received several e-mails from newbies asking for a picture of the normal placement of the BIOS battery to go with the explanation I have given, so here it is, enjoy.



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