

## THE COMPUTER CORNER

# No. 177: The Care and Feeding of Laptops

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Some of you know that I rebuild and distribute computers to ARES/RACES groups throughout the state. So far this year I have sent out 44 units, only 9 of which were desktops, a clear change in proportion from previous years. Hams have discovered that laptops can do most anything a desktop can do. Logging, Winlink, PSK, Echolink, etc., all can be done with a laptop, and they take much less space to set up in an Emergency Operations Center or other such site.

Moreover, one does not need a separate monitor or set of speakers, since these are built in to a laptop. Another plus is that they "keep on chugging" if the power goes out, at least for a while if the battery is good. Clearly, laptops have advantages over a desktop.

Not all of the laptops I receive can be rebuilt. Some have CPUs or motherboards that have been "fried", most commonly by dirt that has accumulated to an extent that the interior parts have overheated. This could often have been prevented with just a little preventive maintenance. So here is what you should do to keep your laptop going.

**Bill of Materials:** a 1" paint brush, a vacuum cleaner (with hose), a can of compressed air, and a small container of lens cleaner (safe for coated lenses).

**Get The Dust Out:** Unplug the laptop's power supply and remove the battery. Look at the edges of the base of the laptop. Somewhere, usually in the back or on one side or the other near the back, you will find a grille. It is there to allow warm air to be blown out of the unit by the built-in squirrel fan. Start the vacuum and put the end of the hose right up against the grille for a few seconds. That will suck out a significant amount of dust and dust "bunnies". Then, give several short bursts of compressed air into the grille. Just use a couple of blasts, and very short. A long, sustained blast can drive that squirrel fan to a speed it was not made to sustain. You don't want to do that and risk ruining the fan! Use the vacuum again to suck out any remaining dust.

**Clean the keyboard.** Use the dry paintbrush to loosen cracker crumbs, strands of hair and other junk between the keys and around the keyboard margins. You can use an old toothbrush, too, but their stiff bristles can loosen keycaps, to be avoided at all costs. Keep that vacuum hose close while brushing to suck up what has been loosened. Use care, though! Don't get the hose so close to the keys that it sucks off key caps! If that happens, it is a real pain to get a laptop key back on properly. Then clean the key caps with a soft cloth moistened with rubbing alcohol, or even mineral spirits. Use a soft touch and don't get fluid between the keys. Make it a white cloth so you can see the finger grease you have removed. Clean off the bezel around the keyboard while you are at it.

**Clean the screen:** I use the lens cleaner supplied by my optician for eyeglasses, because it is safe for use on all lenses, even coated lenses. Again, a soft white cotton cloth is the best for this job. The very best is an old white cotton T-shirt that has been laundered many times. That is even safe for microscope lenses (I was a Professor of Human Histology in a previous life, and used light microscopes every day).

Put the battery back in and plug in the power supply. You are done. At least the unit will not die because of dust clogging its air supply! And, it is now clean.

Happy computing!