

Re: Current-sense AC over a threshold

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- *From:* John <look@xxxxxxx>
 - *Date:* Fri, 25 Apr 2008 11:01:05 -0400
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On Thu, 24 Apr 2008 09:22:53 -0700 (PDT), "Mr. Land" <graftonfot@xxxxxxxxx> wrote:

Greetings,

When in use, a few of our home theater components heat up the interior spaces of our entertainment center to a temperature that I feel is too hot (yes, that's a very subjective statement). The entertainment center uses tall, mostly glass doors, and they are one-piece, therefore when they are open they protrude pretty far into the room. When they are closed, there is little-to-no ventilation inside the cabinets. One evening, I mustered up some courage and tried simply leaving the doors open but sure enough, one of my kids came close to ripping the entire door off of its hinges when she bumped into it.

I encountered a similar heating problem when putting an LCD TV in a cabinet. I came up a fix using a \$3 PICAXE chip that is programmable in BASIC and a \$5 temperature sensor that gives the actual temperature (in degrees C). The sensor is mounted above the hottest point of the TV (nothing inside any component). It's powered by a "wall wart" supply, so all the wiring is low voltage. The PICAXE programming software is a free download from <http://www.rev-ed.co.uk/picaxe/>

<http://www.picaxe.us/AV-fan.html>

You can set the on and off temperatures (in the program code) to whatever works best for you. A more sophisticated version would use the PWM capability of the PICAXE chip to control fan speed, running the fan(s) only fast enough to maintain an acceptable temperature rise.

John

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