

George <gh424NO584SPAM@cox.net> wrote:

> address_is@invalid.invalid says...
>
>> Those chips, especially TED, were not built to last.
>> They fail in every 264 series machine If you are lucky
>> you may buy a working C16 for the price some dudes ask
>> for TED alone :-(
>
> Nah. I've had a Plus4 running continuously since 1992.
> It's my caller ID computer. And it still runs fine.

Not everyone's got that much luck as I can still well remember.

> I've always felt that CBM computers in general were subject
> to damage caused by power glitches and a resulting
> collision in which two or more chips end up trying to drive
> the address or data lines at the same time, which should
> never happen normally, but can happen when the power
> flutters and the chips get confused.

I've seen many machines fried by power supplies or by users (after CBM introduced the PSUs with just four pins in a round DIN plug, meant to connect to 7-pin socket in the C64) but I am rather skeptical about your theory.

> So I added a Max 690 circuit to my Commodores. That's a
> little 8-pin watchdog chip that pulls a hard ground on the
> *Reset line when Vcc drops below about 4.5V, which turns off
> all the line drivers of the various chips, and holds *Reset
> low until Vcc has again stabilized at 5V for a period of
> time. Seems to work well to prevent power glitches from
> causing damage.

I did some rather extensive tests back in the days, when I tested how much down can the voltages go in a 64 and how the machine behaves under such conditions. I got a number of strange effects at various levels of 5,12 and AC but never caused any damage by under-powering the computers. But maybe I've been just lucky too.

>
> Of course I can't prove this theory, but, you know, 1992.
>
> By the way, with respect to looking for replacment chips,
> it's possible that a number of the major chips

> are the same in the C16 and +4, even including the PLA.

All 264 series share the TED and many other chips, but - according to my in-memory statistics - none of the others is as susceptible to failures as the mighty TED. The CPU comes next, trailed by the 16/116 PSU..

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SD!
