PacCom Tiny2 Battery Tale

By G8MNY (New Jan 08)
(8 Bit ASCII Graphics use code page 437 or 850)
I have been looking at the disastrous results of adding external backup battery connection to a tiny2, as the small rare soldered in Li battery had died.

The external batteries outside the metal case had been wired from the anode of low voltage drop D5 to JPB 2 battery 1k earth jumper link.

```
+3.6V  External Replacement
<    Li  2x AA in Holder
D4    battery
  oVCC
  Li
D5    +3.6V

1u === 1k
```

As you see from the circuit there is very little other than the 1uF protecting the static sensitive memory IC from external electrical shock (static & HF). The Li battery current limiting 1k earth resistor left in the external battery system only making matters worse!

THE DAMAGE
In the end the TNC packed up with a blown up memory 62256 IC & a Z80 S10/0 IC Which handles the data bus to the memory & Z80 CPU. This was found by swapping ICs to another TINY2, luckily all in sockets. The logic IC U4 a 78HC132 took the Zapp OK!

MY SOLUTION
After replacing the ICs, I unsoldered the Li battery & wired the battery connections to 2x AAA Alkaline cells (soldered to batts with special solder or file ends) all taped up (parcel tape) to provide insulation & some battery leakage protection to the PCB & double side taped the bundle to the PCB where the 82C88 IC hole space is.

```
12V  (--------)    DD  SW
    ( 2x AAA )  45 [Li]
RIG
DIN
    ~--------
sw
  L
2  3  2
Z80  Z80
S10  CPU
    EP
    ROM
    RAM
    MEM

```

I expect the 2 AAAs should last as long as the original Li?

I hope this tale stops anyone else from zapping there TNC.

Why Don't U send an interesting bul?