RASPBERRY PI USB PORT LOCKUP SOLUTION

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Our group has used Raspberry Pi's and linbpq very effectively to create packet digital nodes, however we were plagued with random lockups of the $5 Adafruit USB audio adapters.   A bit of research on the Internet indicated this was a known, common problem with Raspberry Pi's, related to their simplified USB hardware, and their default of running the USB processor at 480 MHz (USB 2.0 speed).   The slightest interruption might then be enough to lock the port up.   Rebooting the Raspberry seemed to be the only solution.

A known fix to this problem worked well for our group: slow the USB ports down to 12 MHz, the USB 1.1 standard.   This is done by simply adding a phrase to the end of the (run-on) line contained in

```
/boot/cmdline.txt
```

One must become root in order to edit this file, and then carefully add this exact phrase to the end of that line: (note the underscore)

```
dwc_otg.speed=1
```

Before making the edit, one might want to store a backup copy of the original file, just to be safe;

```
cp cmdline.txt cmdline.txt.bak
```

After this patch was employed, our Raspberry Pi - "$10TNC" stations became very reliable.