

THE METER OF KEYSIGHT U1272A AND MACOS

The meter

Once the dongle's installed and you've got a suitable `/dev/tty.PL` entry, then it's fairly straightforward to talk to it.

Inevitably, there's the usual serial configuration mess to navigate. My meter was set to 9600 baud, 8-bit, no parity and 1 stop-bit, but you should check for yourself in the meter's setup (see section 4 of the fine manual for details). I tried to set the baud rate to 19200, but failed: I'm not sure why.

One other minor issue: if the meter's in logging mode it seems keen to send each reading over the port as it's made. That might be handy for some applications, but it's not compatible with my code. You could of course use this to test the comms though!

The Mac isn't well blessed with nice serial terminal emulators, but the screen program can be press-ganged into the task. A word of warning: it's hardly user friendly!

To try it:

- Start the screen program:

```
$ screen /dev/tty.PL* 9600
```

- Type the following (note that you won't be able to see what you're typing):

```
*IDN?
```

- Send the command by hitting CTRL-J. You should see the meter identify itself:

```
Keysight Technologies,U1272A,MY12345678,V1.30
```

- Make sure that the meter's data logging mode is set to AUTO. Start the meter logging data by holding the 'Hz % ms / Log' button down until the 'LOG' icon is displayed. You should see a message every time a new datum is stored. Frankly I don't understand the format properly, but the meter reading seems to be stored in the third to seventh digits (XXXXXX) in this example:

```
"01XXXXXX110000"
```

- Stop the logging by holding the 'Hz % ms / Log' button down until the 'LOG' icon disappears.

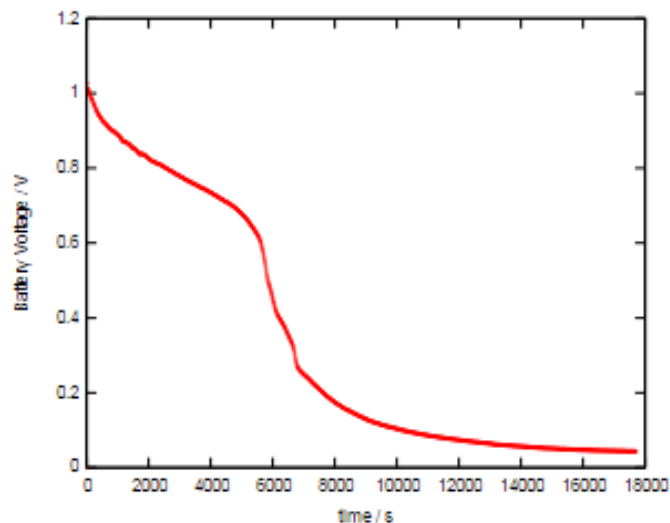
- Quit screen by typing CTRL-A k.

Sadly there's not yet any proper documentation from Keysight for commands the meter understands, but the Internet is full of helpful and knowledgeable people.

An example

The graph below was produced using the code. It shows the voltage across an alkaline AA cell as it's cruelly discharged through a small resistor.

Data were logged every 10s by the meter, then the logs downloaded to the computer. The data were scaled, then plotted with gnuplot. There's a real pleasure in measuring and plotting 1700 points so easily!



Source: <http://www.mjoldfield.com/atelier/2011/06/agilent-macos.html>