Icom PCR-1000 Python Script

Clone git repository into home directory.

```
git clone https://github.com/ideoforms/pcr1000
cd pcr1000
```

List the pcr1000.py program to determine which libraries need to be imported

```
more pcr1000py

      import re

      import glob
      import time
      import serial
      import threading
      from Queue import *
```

Use Python `pip list` to determine which libraries are currently installed, some can be installed from `pip` and others need to be installed using `apt install`.

`pip list | grep re`	`sudo apt install python-regex`
`pip list | grep glob`	`pip install glob2`
`pip list | grep time`	`sudo apt install python-time`
`pip list | grep serial`	Serial is already part of the Pi build.
`pip list | threading`	`pip install thread6`
`pip list | queue`	`pip install Queuelib`

Determine which serial port the USB serial interface uses:

```
ls /dev/tty*
```

In this case `/dev/ttyUSB0` appears when the USB serial interface is plugged in.

Using the idle editor, replace the following line of text within the pcr1000.py at line 80

```
            # see if we can find a default FTDI-style interface ID
            self.port_name = None
Replace     interfaces = glob.glob("/dev/cu.usbserial-*")
            interfaces = sorted(interfaces)

With        Interfaces = glob.glob("/dev/ttyUSB0")
```

Create a small python test script copied from the readme that calls the pcr1000 class.

```
#!/usr/bin/python

import time
from pcr1000 import *

pcr = PCR1000()

# start connection

pcr.open()

# start receiving

pcr.start()

# tune 1kHz down from the GRAVES radar on 143.050 MHz

freq = int(143.049e6)
pcr.tune(freq, PCR1000.MODE_USB, PCR1000.FLT_3K)

# the sleep at the end may be needed ?

sleep(2)
```

Run the script to turn on the radio, tune to the appropriate frequency, mode and filter settings:

```
python pcrtest.py
```

More work is required to set the AGC off and control the volume etc.