

Raspberry Pi SIG - APRS, Telemetry, SSTV

SSTV & APRS Transmissions

- 1) Update your system. These commands should be run on a regular basis.

```
sudo apt-get update
sudo apt-get upgrade
```

- 2) Install python modules for AFSK modulation

```
sudo apt-get install python-pip python-dev fswebcam
sudo pip install afsk
```

- 3) Grab pifm and sstv binaries from server

```
wget thathamkid.com/pisstv.tgz
tar zxvf pisstv.tgz
cd pisstv
```

Usage (SSTV):

```
fswebcam -S 30 --png -o image.png
./sstv image.png 22050
sudo ./pifm 144.5 image.png.wav 22050
```

Usage (APRS):

```
aprs -c <your call> -o aprs.wav "> Some status comment"
sox aprs.wav -r 22050 aprs-tx.wav
sudo ./pifm 144.39 aprs-tx.wav 22050
```

1-Wire Thermal Sensors

- 1) Load kernel modules for 1-wire sensors

```
sudo modprobe w1-gpio
sudo modprobe w1-therm
```

- 2) Change directories to 1-wire device

```
cd /sys/bus/w1/devices/28-<tab>/
# For <tab>, press tab key, and address will autofill
```

- 3) Check value of sensor

```
cat w1_slave
```

Typical Response:

```
50 05 4b 46 7f ff 0c 10 1c : crc=1c YES
50 05 4b 46 7f ff 0c 10 1c t=24143
```

Pin 1: GND

Pin 2: Data

Pin 3: 3v3

