# Licor 7500 configuration

We want to sample the 7500's at 20 Hz. The record lengths in terse mode (no labels) are about 49 bytes long. This is a throughput of 49 bytes/sample * 20 sample/sec * (10 serial bits/byte) = 9800 bits/sec. This exceeds 9600, so we'll set the baud rate to 19200.

To change the configuration of the licor:

- adn
- minicom ttyS8 (start minicom at 9600 baud)

```
ctrl-A F   (control-A F sends BREAK, which puts the Licor in command mode at 9600 baud)

(Outputs (RS232 (EOL "0A") (Labels FALSE) (DiagRec FALSE) (Ndx FALSE) (Aux FALSE) (Cooler FALSE)))

ctrl-A F

(Outputs (RS232 (CO2Raw TRUE) (CO2D TRUE) (H2ORaw TRUE) (H2OD TRUE) (Temp  TRUE) (Pres TRUE) (DiagVal TRUE)))

ctrl-A F

(Outputs (BW 20) (Delay 0) (RS232 (Freq 20.0)  (Baud 19200)))

ctrl-A F

(Outputs (Dac1 (Source NONE)(Zero 0)(Full 5)) (Dac2 (Source NONE)(Zero 0)(Full 5)))

ctrl-A Q    (quit minicom)
```

An "Output" statement must occur all on one line, so they've been split into 3 lines above. After sending the Baud 19200 command you will see garbage data in minicom, because the baud rate has changed. You can change the minicom rate to 19200 with ctrl-A P F, or just exit minicom and see if the data system is receiving the data, as follows:

- aup
- wait a few seconds
- rs 8

The Licor data should look like so:

```
249\t0.08451\t14.7814\t0.04891\t349.722\t25.91\t82.6\t\n
249\t0.08450\t14.7759\t0.04889\t349.021\t25.87\t82.6\t\n
249\t0.08449\t14.7741\t0.04884\t349.602\t25.95\t82.6\t\n
249\t0.08450\t14.7807\t0.04892\t349.765\t25.95\t82.6\t\n
249\t0.08452\t14.7761\t0.04891\t349.665\t25.91\t82.6\t\n
249\t0.08452\t14.7775\t0.04887\t349.152\t25.91\t82.6\t\n
249\t0.08452\t14.7764\t0.04890\t349.480\t25.89\t82.6\t\n
249\t0.08451\t14.7803\t0.04895\t349.623\t25.93\t82.6\t\n
249\t0.08451\t14.7790\t0.04897\t349.508\t25.93\t82.6\t\n
ctrl-D
```