

# 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
```