Interfacing the Progressor

The Progressor device is utilize Bluetooth 4 (LE) to communicate. As the device is running on a coin cell battery, it has been tuned to use as little as energy as possible. 10 minutes after disconnect the device will sleep.

Basic Bluetooth knowledge is a prerequisite to understand this document.

Tools to debug the device

Nordic Semiconductors nrfConnect is a good utility to debug connection.

Service UUID

The Progressor device presents one service with UUID:

7e4e1701-1ea6-40c9-9dcc-13d34ffead57

Notification UUID

The device reports current weight/ROF by subscribing to this UUID:

7e4e1701-1ea6-40c9-9dcc-13d34ffead57

The payload received on notification is a TLV:

1st byte is Type
2nd byte is Length
3rd and following bytes is value(payload)

Types

Type identificatory (Byte)	Length (byte)	Payload
1 (WeightMeasurement)	4	Float32
2 (RateOfForceMeasurement)	4	Float32

No notification will happen unless before the Progressor has been told to.

Command UUID

To start and stop measurement you have to issue a write a command to the Progressor on the following UUID:

7e4e1703-1ea6-40c9-9dcc-13d34ffead57

Command	Int/Byte	Description
CMD_TARE_SCALE	100/0x64	Tare the load cell

`CMD_START_WEIGHT_MEAS`	101/0x65	Tell the load cell to start measuring. Weight notification over notification UUID on TLV 1.
CMD_STOP_WEIGHT_MEAS	102/0x66	Stop weight measurement
CMD_START_PEAK_RFD_MEAS	103/0x67	Initiate 5 seconds of rate of force. Command will notify weight rapidly over notification UUID TLV 1. Change in Rate Of Force will be notified over notification UUID TLV 2
CMD_ENTER_SLEEP	110/0x6e	Put cell to sleep. Device will disconnect, and will only wake up by pressing button.