Operational Description

The circuit is powered directly from two series AA batteries. There is a reverse battery protection circuit to ensure no components are damaged in the event the batteries are inserted in the incorrect orientation. The board gets in ground from the battery and the second layer is dedicated to ground.

There is a user interface a red/green LED that will show green when the device is first powered and will show red if the unit encounters an error.

The Power Sensor circuit which takes RPM inputs from the flywheel of the LeMond Revolution Trainer and additional sensors including pressure and temperature in a nRF51422 which uses an M0 Arm processor to calculate virtual power. The virtual power and transmit via nRF51422 using the ANT+ RF protocol to a cycling computers. The RF is radiated from a meandering F antenna.

Additionally, the Power Sensor can receive cadence information to determine if a user is actually pedaling or not.