Future Work

Potential future work on this topic include improvements in hardware design and construction, enclosure design, testing, and calibration methods.

* Hardware design
  + Purpose-designed frequency generation and measurement circuits. This may include:
  + Signal generator with control loop to stabilize output amplitude and frequency
  + Precision instrumentation rectifier to make accurate amplitude/magnitude measurements
  + Battery power system
  + Data logging or transmission
* Hardware construction
  + Custom ordered PCBs and waterproof connectors
* Enclosure design
  + Waterproof enclosure for circuitry
  + Mechanically more robust cable enclosure
  + Waterproof connectors
* Testing
  + Use of better electrical test equipment, including a digital impedance analyzer, vector network analyzer, etc.
  + Better mechanical testing
  + Field tests
  + Usability and interface tests
* Calibration
  + Construction of automated calibration method.
  + Use of commercial curve fitting software