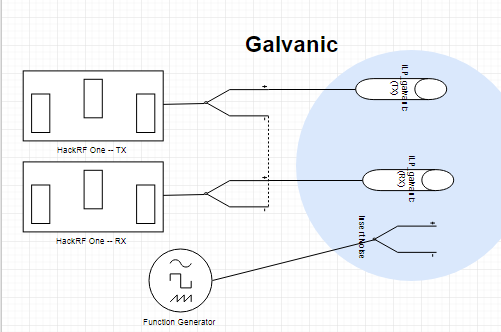
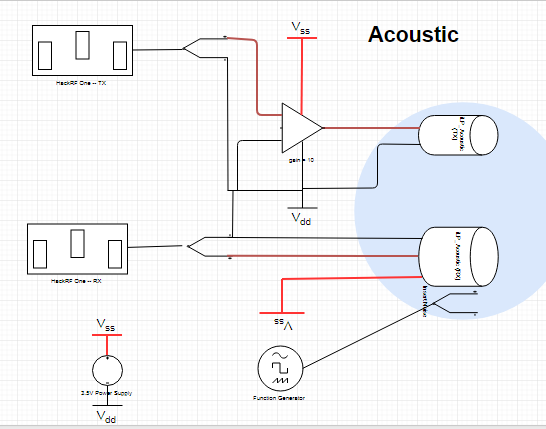
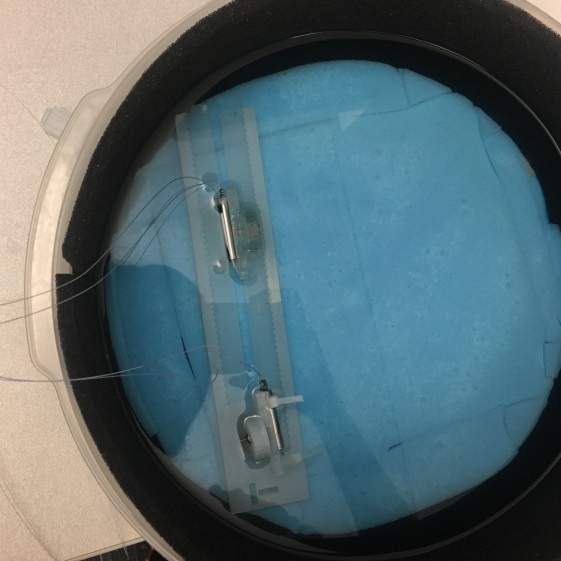
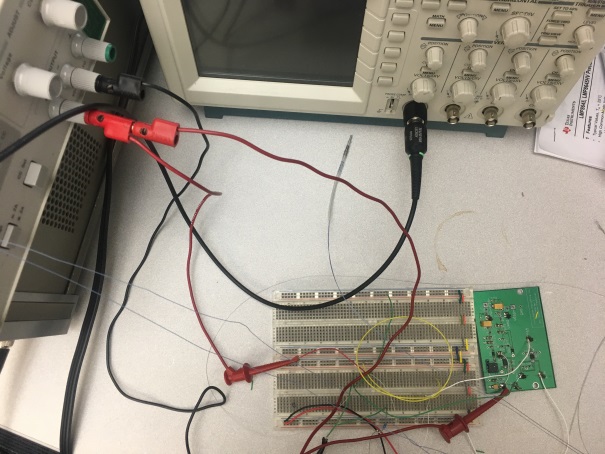
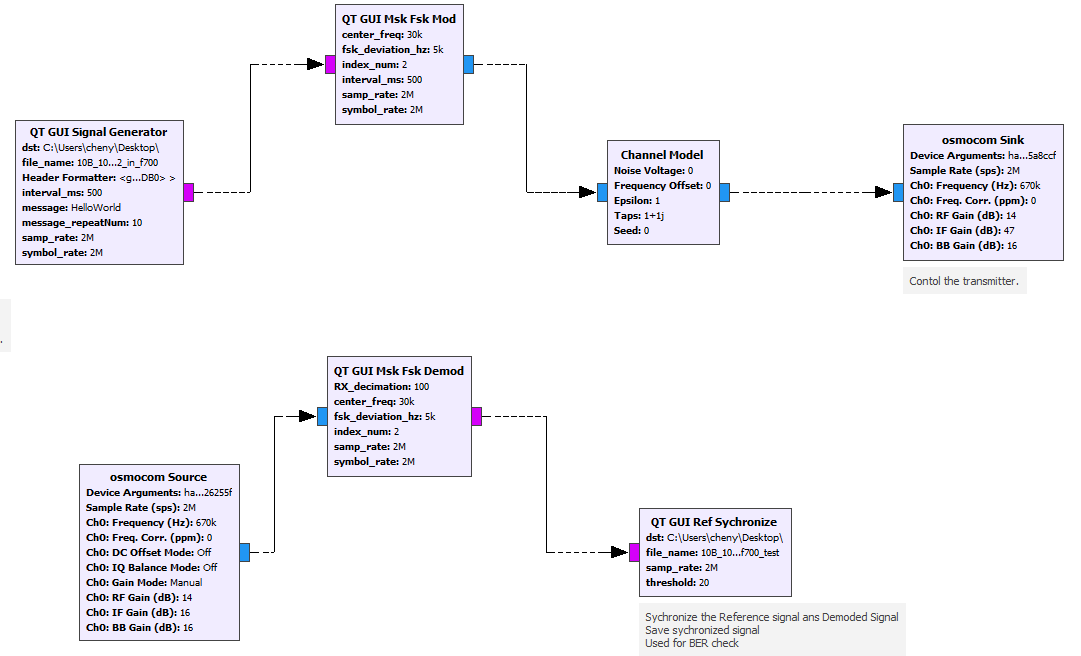
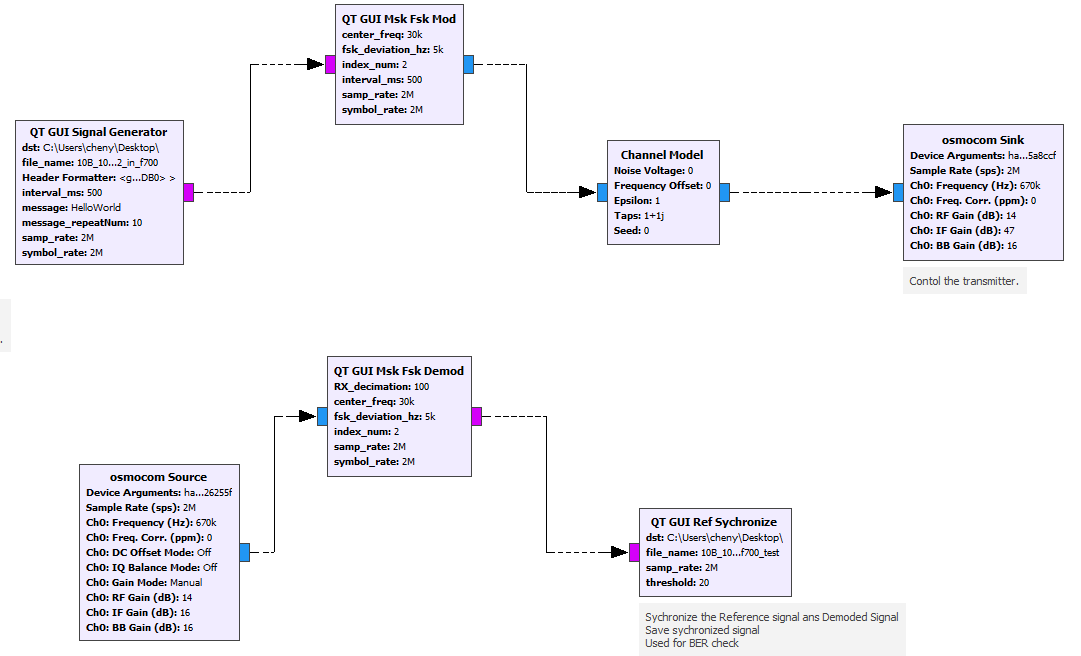
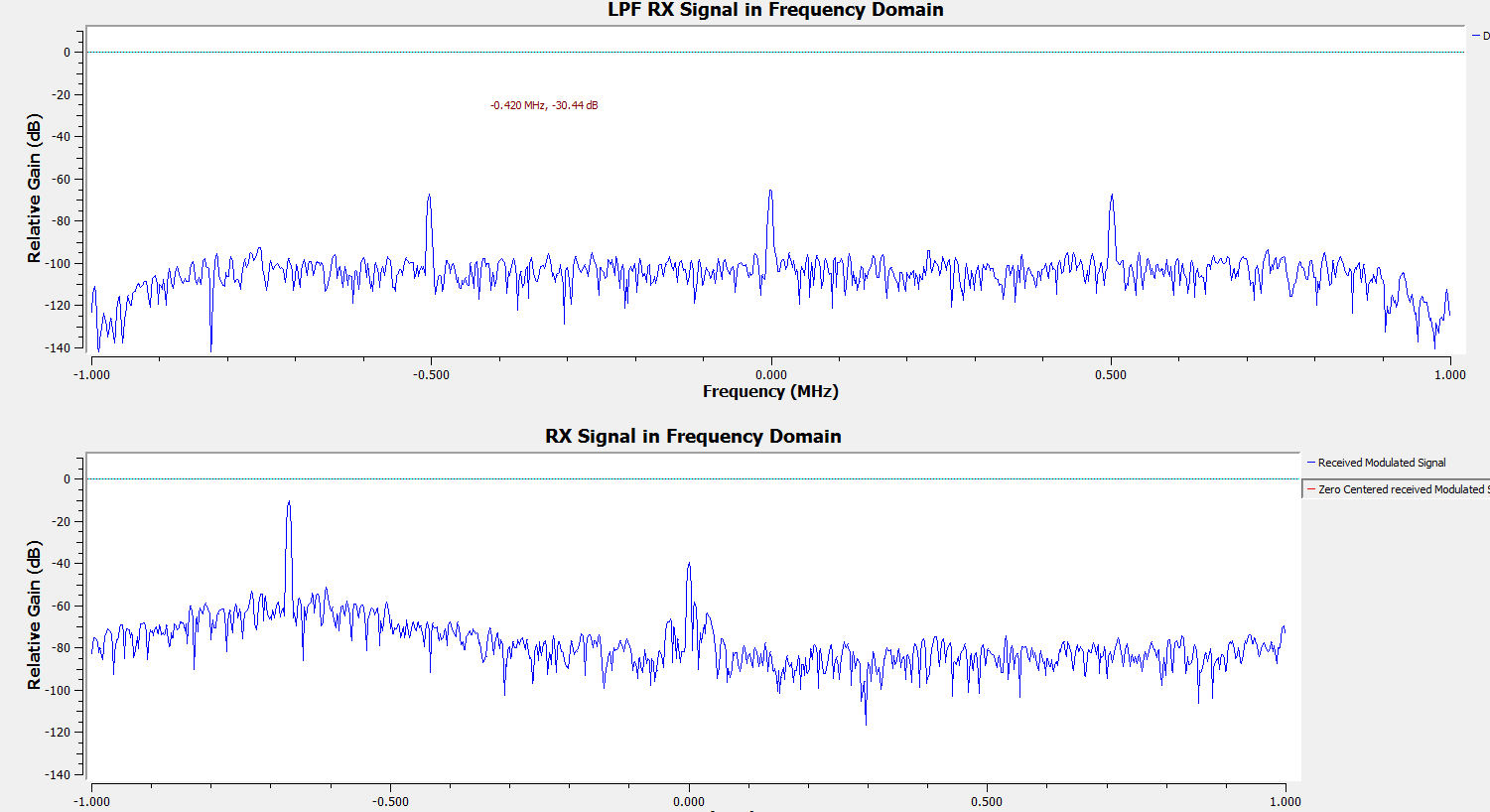
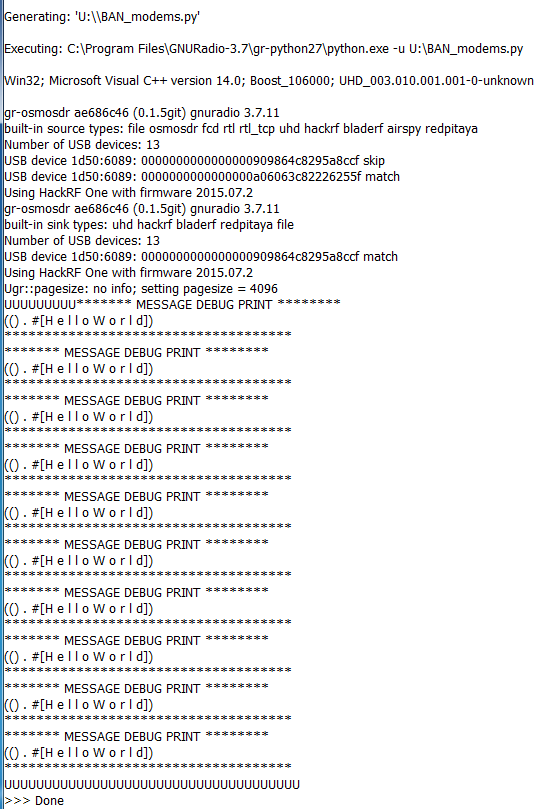
* Instruments:
  1. A Power Supply (0-6V)
  2. A Function Generator
  3. An oscilloscope
  4. An amplifier (Gain = 10)
  5. An container surrounded by acoustic – bounce material
  6. A breadboard
  7. Two Hackrf One
  8. A pair of acoustic iLp; A pair of galvanic iLP
* Schematic:





* Setting examples:
  1. 
* Parameter Explanation:
  1. Physical Setting related:
  2. Environment related:
  3. Software algorithm related:
* Some comments:
  1. Galvanic iLP theoretically can transmit any frequency. But because Hackrf One cannot produce enough amplitude when f < 1M and will include more noise when amplify low frequncy, so the limitation for testing galvanic iLP is:
     1. 600 KHz without external noise (TX amp ~=92-650mV)
     2. 700KHz with external noise (TX amp ~=94-751mV)
* Testing examples:
  1. Setting (galvanic without external noise; the most idealist case):
  2. 
  3. 
  4. 
* Debug Process:
  1. Check if Hackrf One is working: the 3V3,1V8,RF and USB LEDs should all be on. During transmission RX/TX should be on.
  2. Check if the cable connect