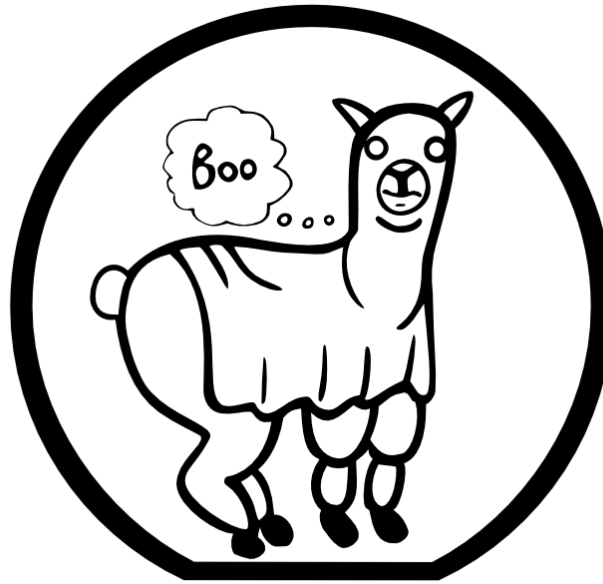


# BLACKCHAT INCOGNITO MESSAGING SYSTEM

Alpaca Security Solutions



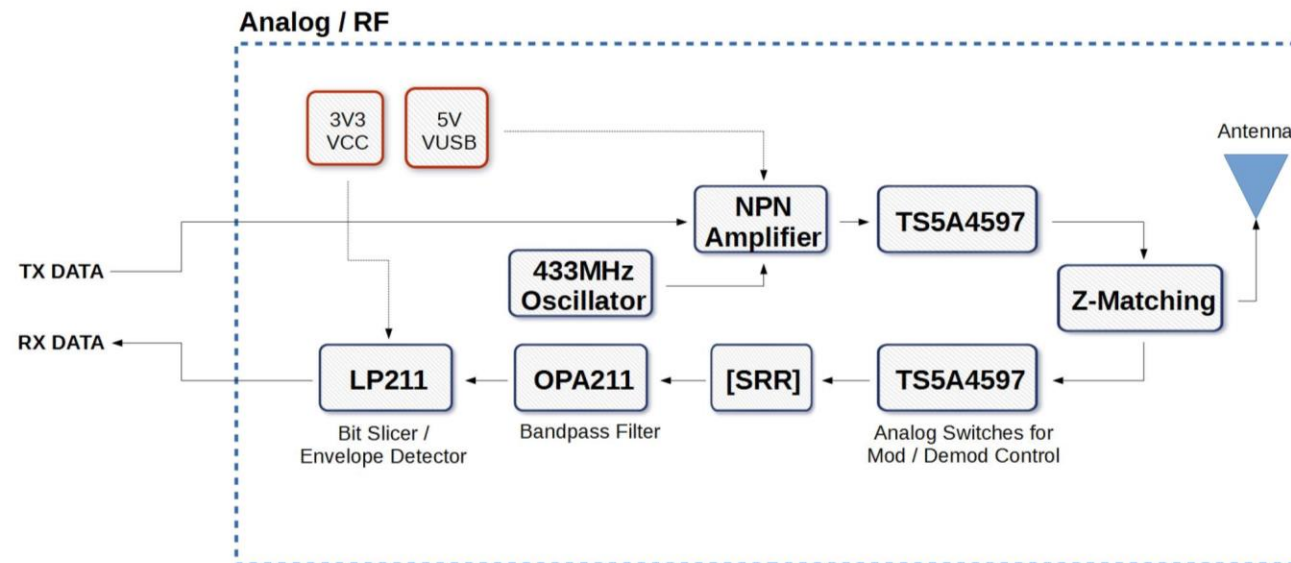
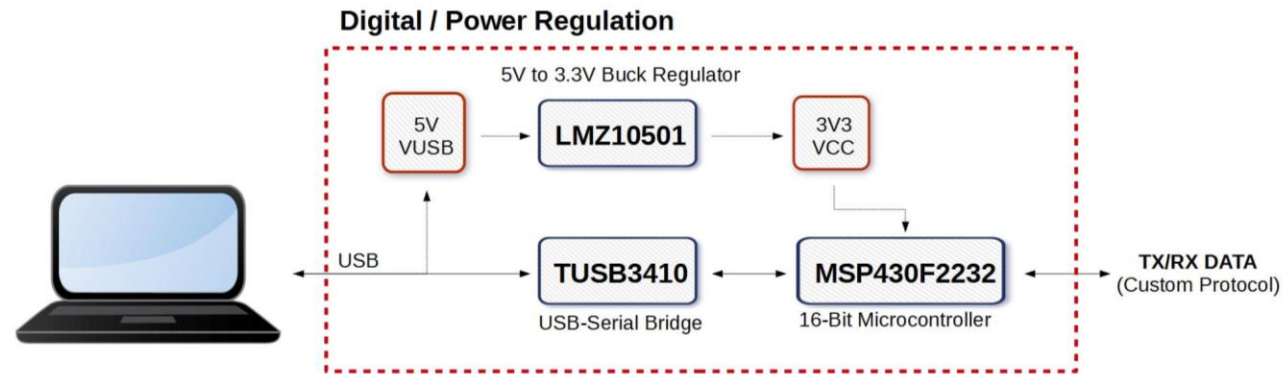
*completely  
invisible*

Patrick Lloyd  
Russell Crowe

# SYSTEM LEVEL

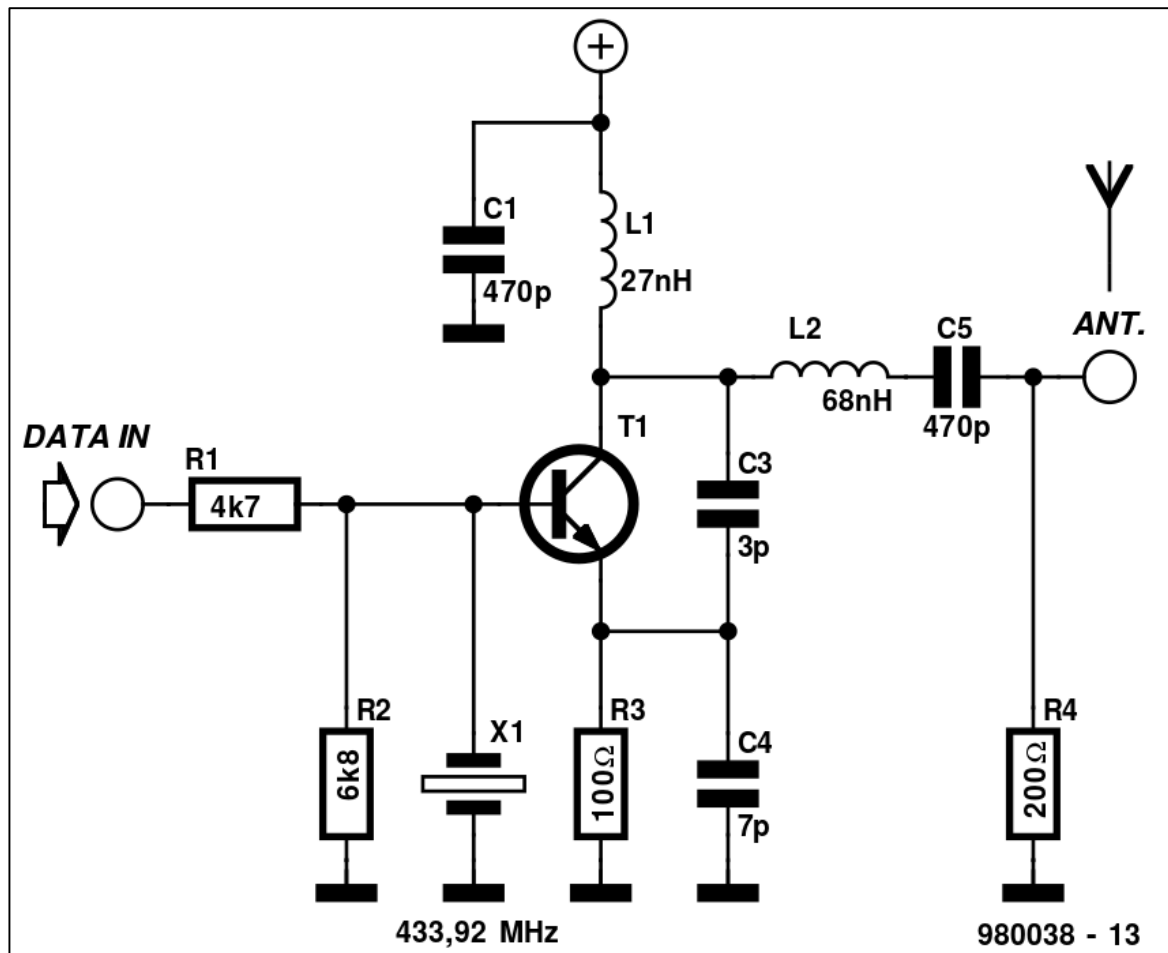
- **External USB device for wireless text messaging**
  - MSP430F2xxx processor
  - AES-128 encryption
  - Portable Linux interface
- **Discrete RF transceiver**
  - 433MHz ISM band
  - OOK modulation scheme
  - Super-regenerative receiver
  - <10mW broadcast power

# HARDWARE – TOP LEVEL

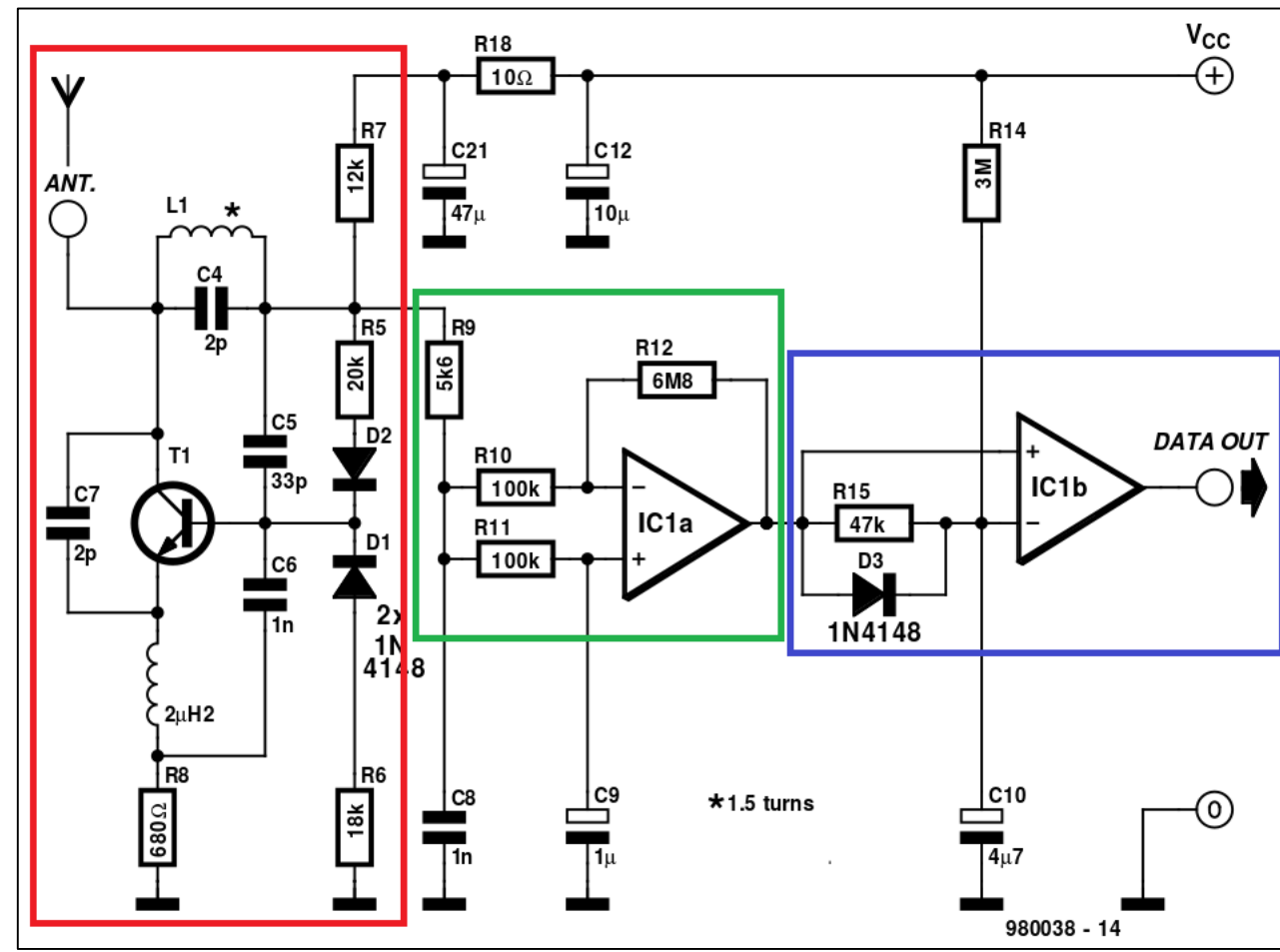


# HARDWARE - RF

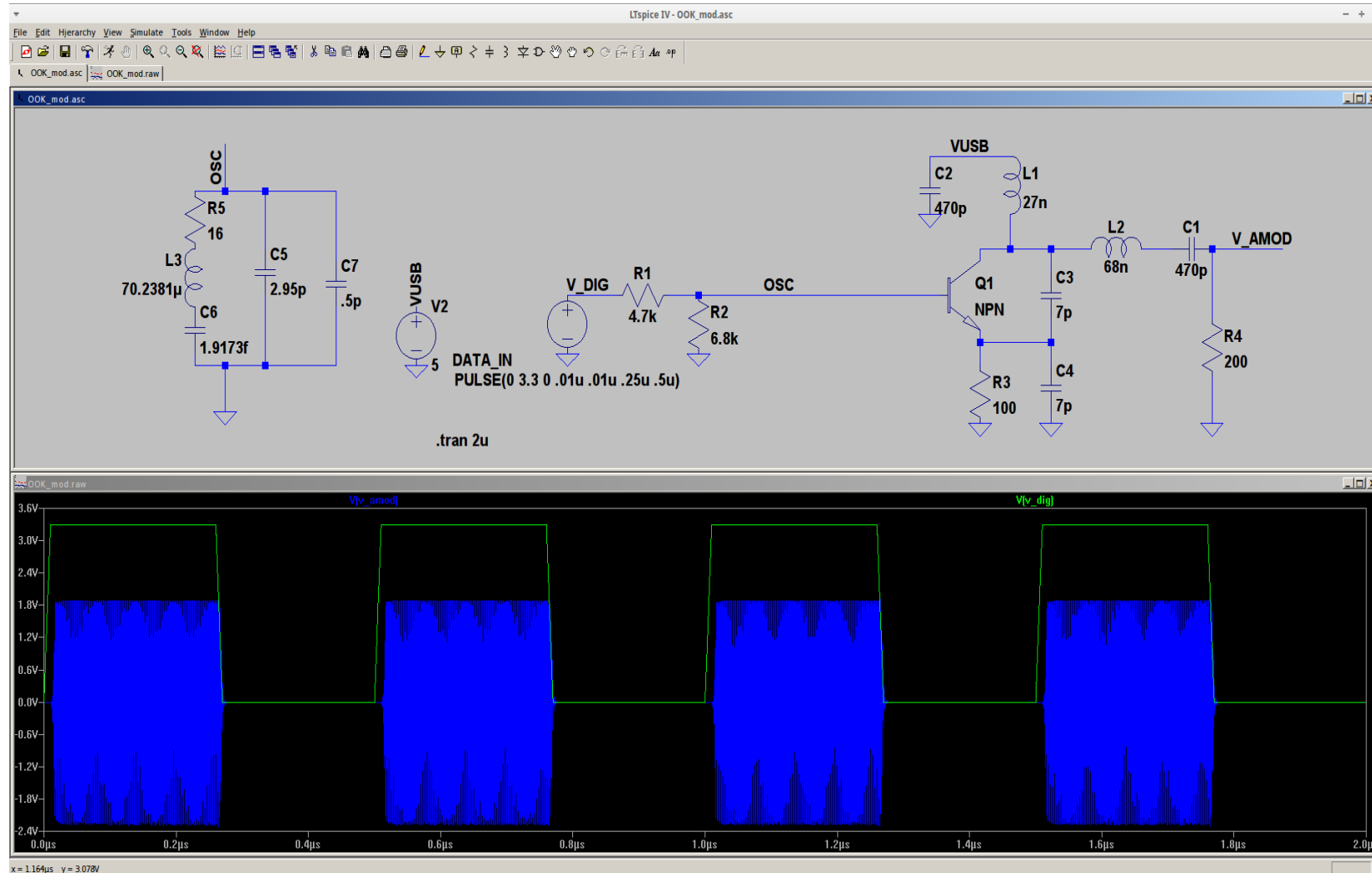
Modulator



Demodulator

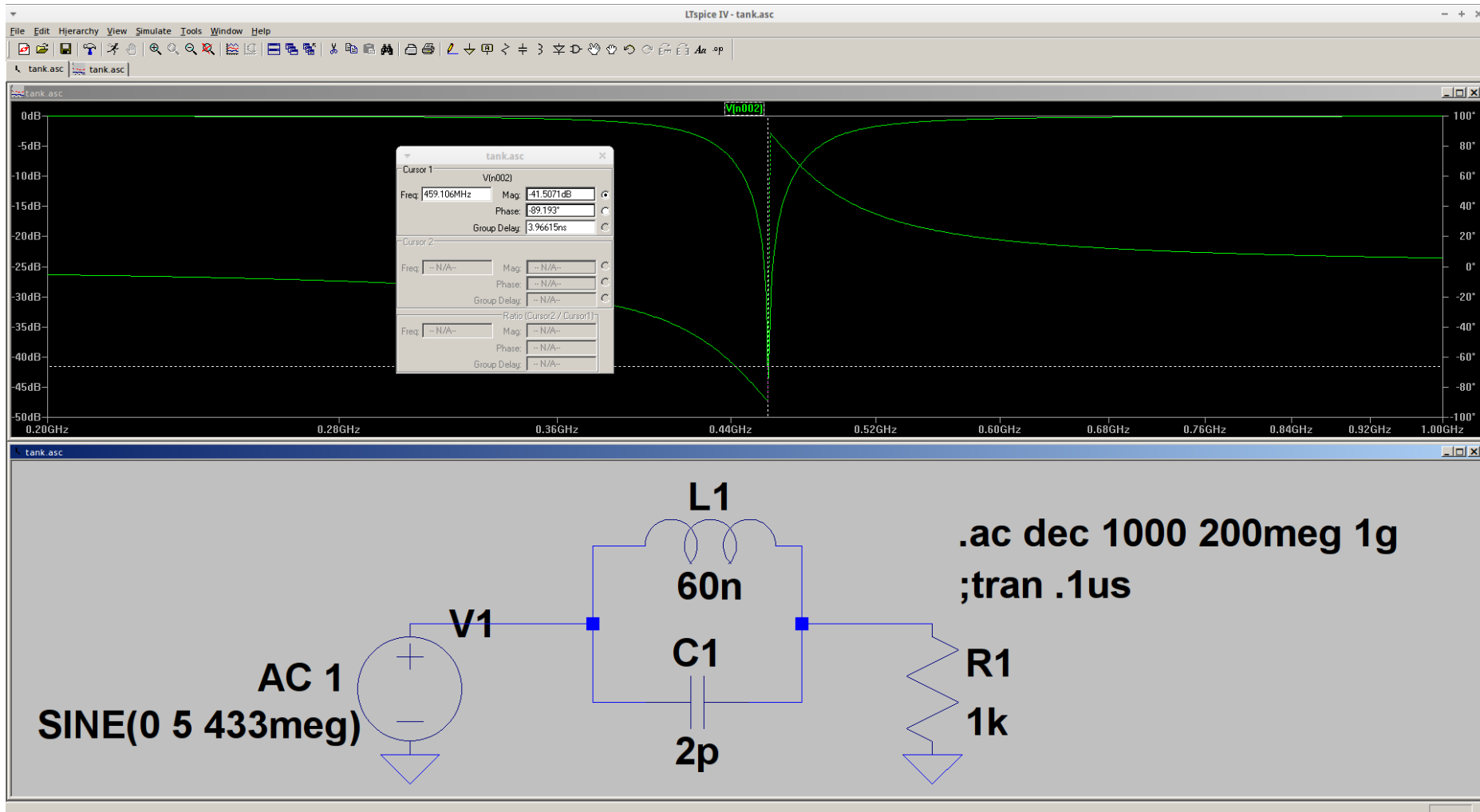


# SIMULATIONS – MODULATOR

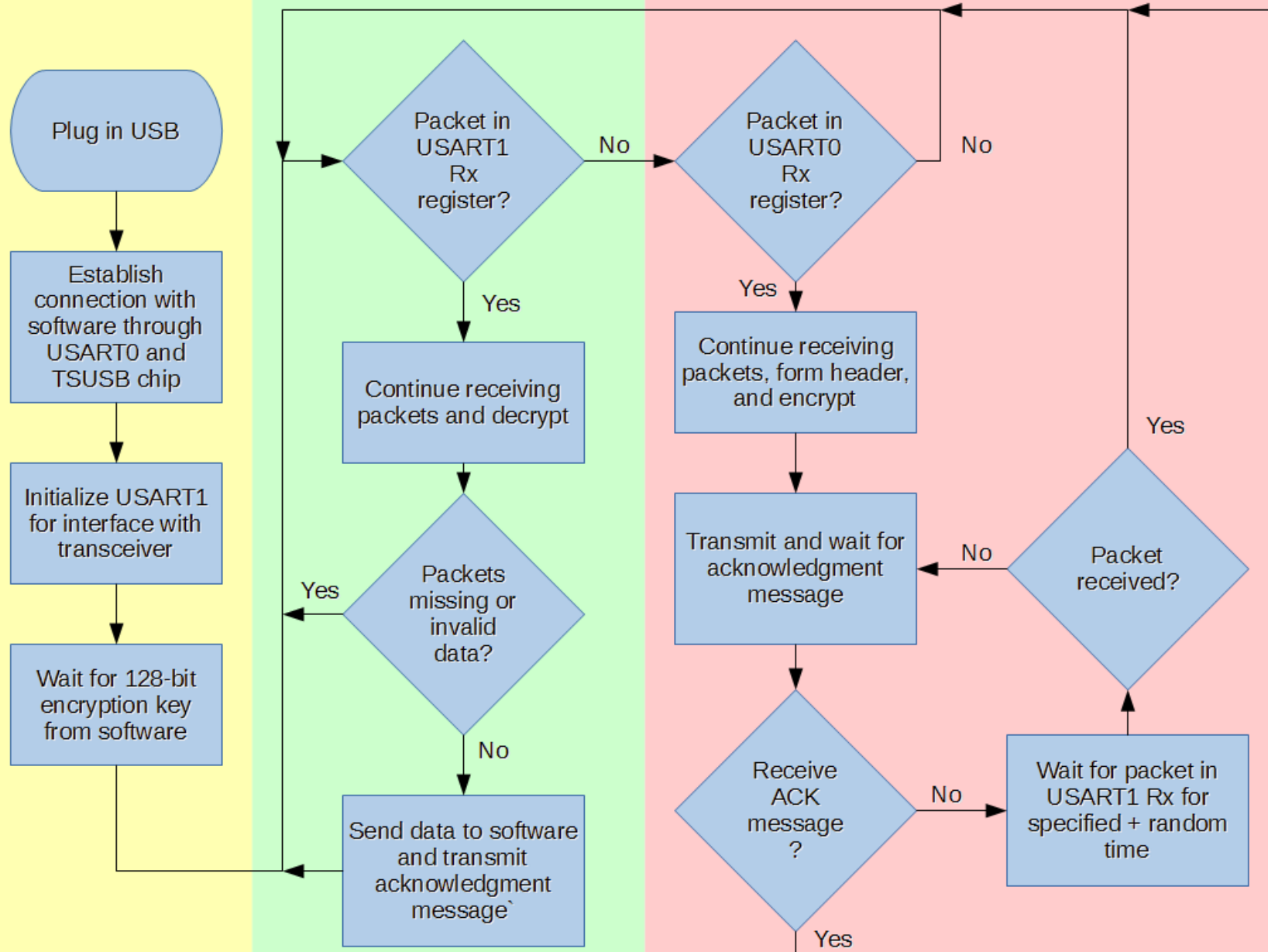




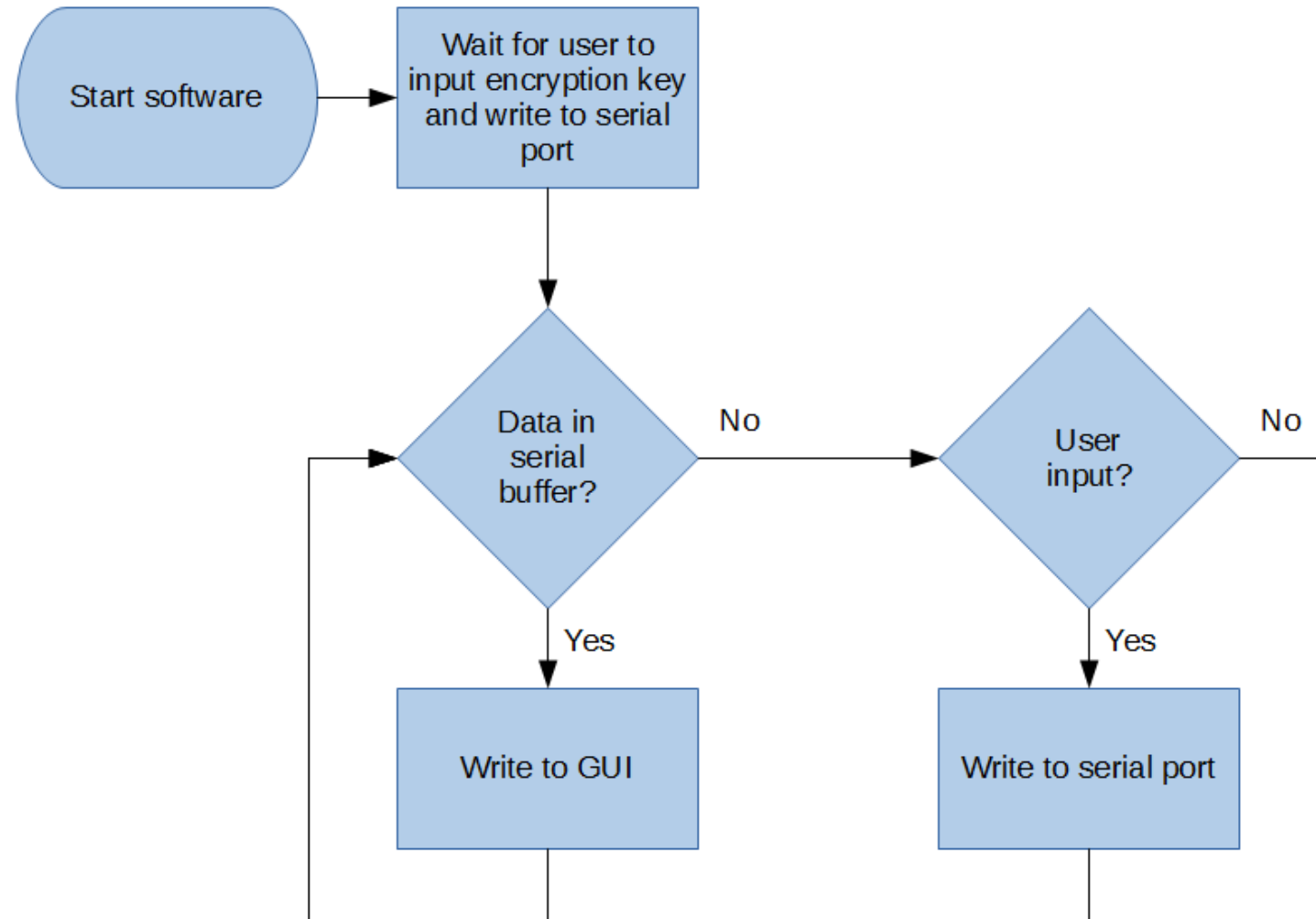
# SIMULATIONS – LC TANK



# FIRMWARE



# SOFTWARE





# DIVISION OF LABOR

	Russell	Patrick
PDR	( \$ )	( \$ )
Transmitter	( # )	
Antenna		( ^ )
Receiver		( * )
Firmware	( @ )	
uC-TRX Interface		( - )
Laptop Software	( & )	
uC-Laptop Interface	( ! )	
Final Board Design	( % )	( % )
Testing & Validation	( \ )	( \ )
Stretch Goals	( + )	( + )

# GANTT CHART

[illegible]



# STRETCH GOALS

## **Near**

- 3+ module communication
- More discrete form factor
- Cross platform (Windows compatibility)

## **Far**

- 2.4Ghz transceiver with more robust modulation scheme
- Forward error correction
- Plausibly deniable filesystem



**QUESTIONS?**