

TDR: Treasure Detection Robot

Frederick Reitberger
EEL 5666 Intelligent Machine Design Laboratory

Purpose



- Treasure Detection



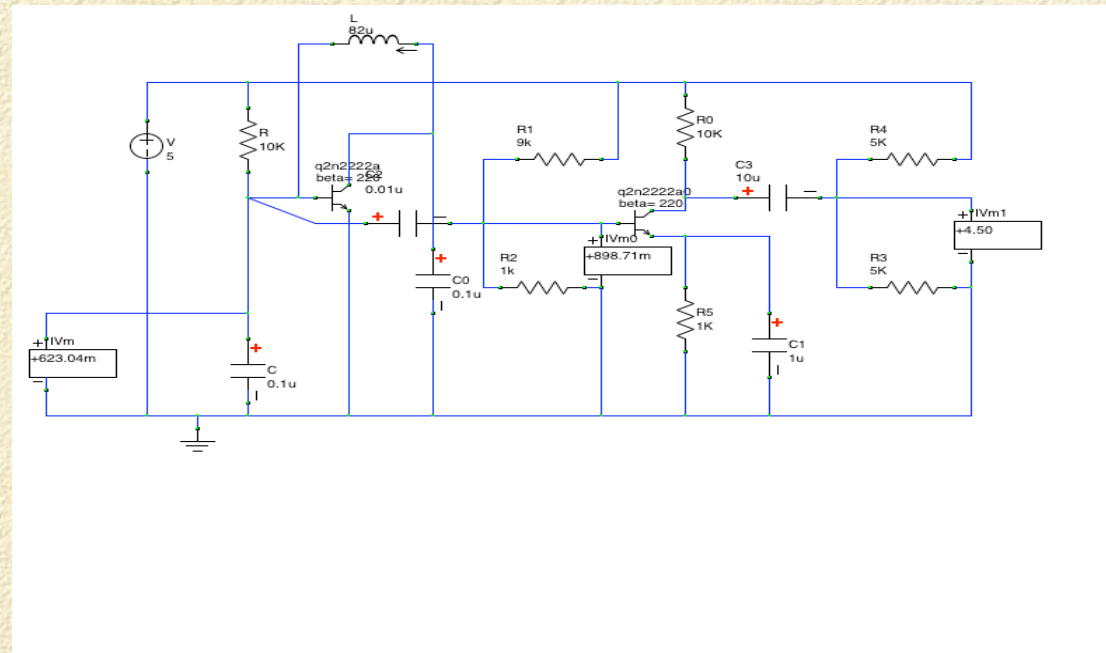
Behaviors

- ❑ Searching Pattern
- ❑ Collision Avoidance
- ❑ Treasure Detection
- ❑ Celebration

Hardware

- CPU: PIC 16F877A @ 20 MHz
- Language: Forth
- Motor: Twin DC Motor Gearbox
- Sensors:
 - Bump Sensors
 - IR sensors
 - Metal Detector

Metal Detector



- Single side of a BFO with an amplifier

Challenges

- PIC CPU & Programming
- Forth
- Metal Detection

Future Work

- Audio Record/Playback Chip
- Improved Searching Patterns
- More Accurate Metal Detector