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| 1.12 | Weekly Status Report for Software Defined Radio | |
|  | October 10, 2018 | Submitted by: James Bell |
|  | Faculty Advisor: Dr. Stapleton | Team Members:  James Bell [PM]  Samuel Hussey  Zachary Schneiderman |
|  | Sponsor: Texas State University |

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| Yellow | Current Project Status |
| We have divided out the functional schematic parts, built the amplifier we designed using parts available on campus from the parts carts in RFM, and compared the results to the simulation. The simulation and the actual build did not match at all and the gain dropped dramatically as the frequency was increased. We are researching the possible causes and new designs for the amplifier to eliminate this. | |

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| Activities/Accomplishments this week | |
| Team Member | Description |
| James Bell | Researching the code and functions present in code to try and get a better grasp of digital signal processing. I am trying to create a comprehensive flow chart for the signals to better understand the devices functions. |
| Samuel Hussey | Assembled RF amplifier and began in circuit testing. Finished drafts of assigned functional spec sections. |
| Zachary Schneiderman | Worked on RF Amp and BP Filters, need to redesign and create our own custom one. Pre-designed filters and amplifier do not behave to my liking |

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| Problems Encountered | |
| Severity | Description |
| High | Pre-designed amplifiers do not have the frequency response we desire. The 80m and 40m bandpass filters do not have the roll-off characteristics we desire, so a redesign for all those components is necessary |
| Med | We are unsure which type of inductor to get/build for our project as we have received multiple differing opinions on it, we are doing extra research in to it now. |
| Low | LTSpice testing shows that amplifier maintains gain with increase in frequency but in circuit tests show that in drops significantly. |

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| Activities planned for next week | |
| Team Member | Description |
| James Bell | Finalizing the functional schematic and preparing our presentation for the initial design review. |
| Samuel Hussey | Finalize functional spec, continue amplifier testing and assemble bandpass filters if possible. |
| Zachary Schneiderman | Create custom amplifier and bandpass filters in LTspice, then test in-circuit. Finishing functional spec |

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| Upcoming Course Deliverables (next 2 to 3 weeks) | | |
| Deliverable | Due Date | Status |
| Functional Specifications | 10/15/18 | In Progress |
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| Sponsor and Faculty Advisor Meetings Held/Planned | | |
| Who | Date | Topic(s) |
| Dr. Aslan | Wednesdays, 8:20am | Weekly Meeting and discussion on project. |
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