6.101 FM Over Fiber Project Checklist

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- **FM**
  - Wimp goal is 1 channel FM
  - Medium goal is 2 channels FM
    - Multiple FM channel mixing
  - Awesome goal is >=3 channels FM

To achieve our medium or awesome goals we will have to construct a fast mixer. This will be done using a very fast op amp. With radio, this mixer isn’t necessary since physics does the mixing for us.

- **Fiber-optic transmission**
  - Wimp goal is to not use fiber-optic and to instead use antenna transmission
  - Medium/Awesome goal is to actually use fiber optic
    - Transimpedance amplifier if necessary (probably not)

Testing for good fiber-optic transmission can be done using the oscilloscope on receiver directly or on the output of the (probably unnecessary) transimpedance amplifier.

- **Demodulation**
  - Wimp goal is to just have demodulation working at all
  - Medium is to have an audio amp built into the demod circuit
  - Awesome is to do this on a PCB

The goals here are pretty clear: demodulate the signal, potentially amplify the signal, and do it on a PCB if time permits.

- **Project as a whole**
  - Wimp goal is to have audio come out the end
  - Medium goal is to transmit many channels
  - Awesome goal is to do all of this on a PCB