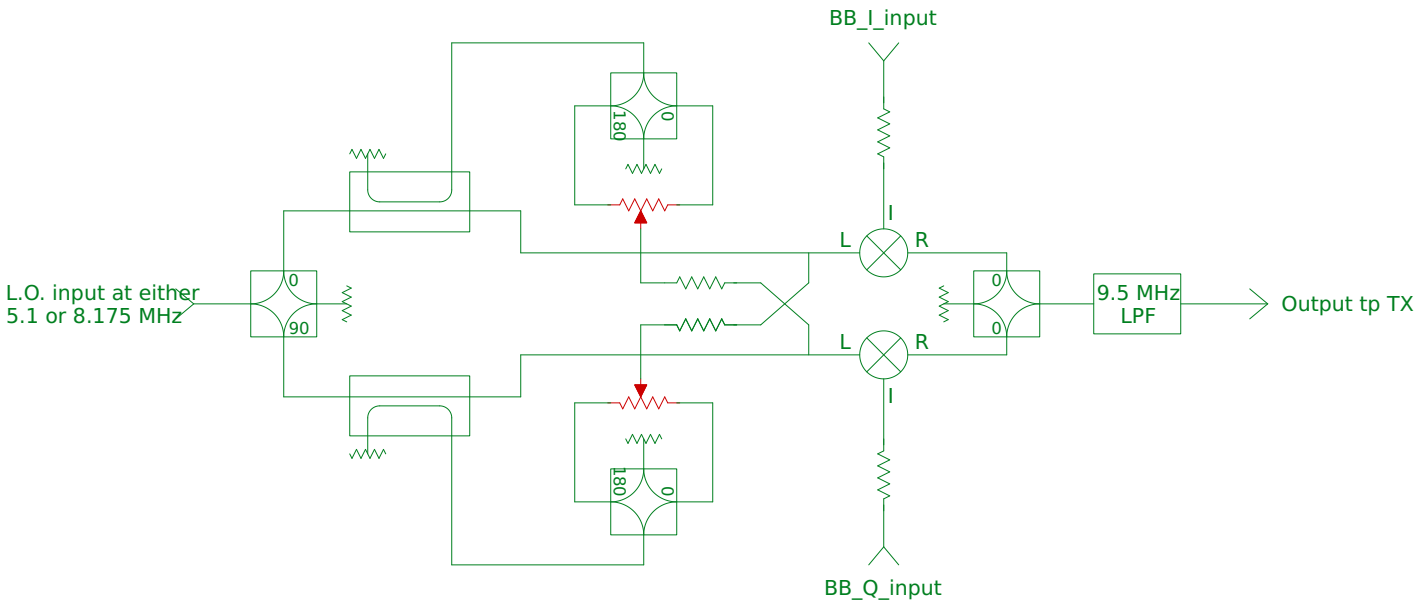
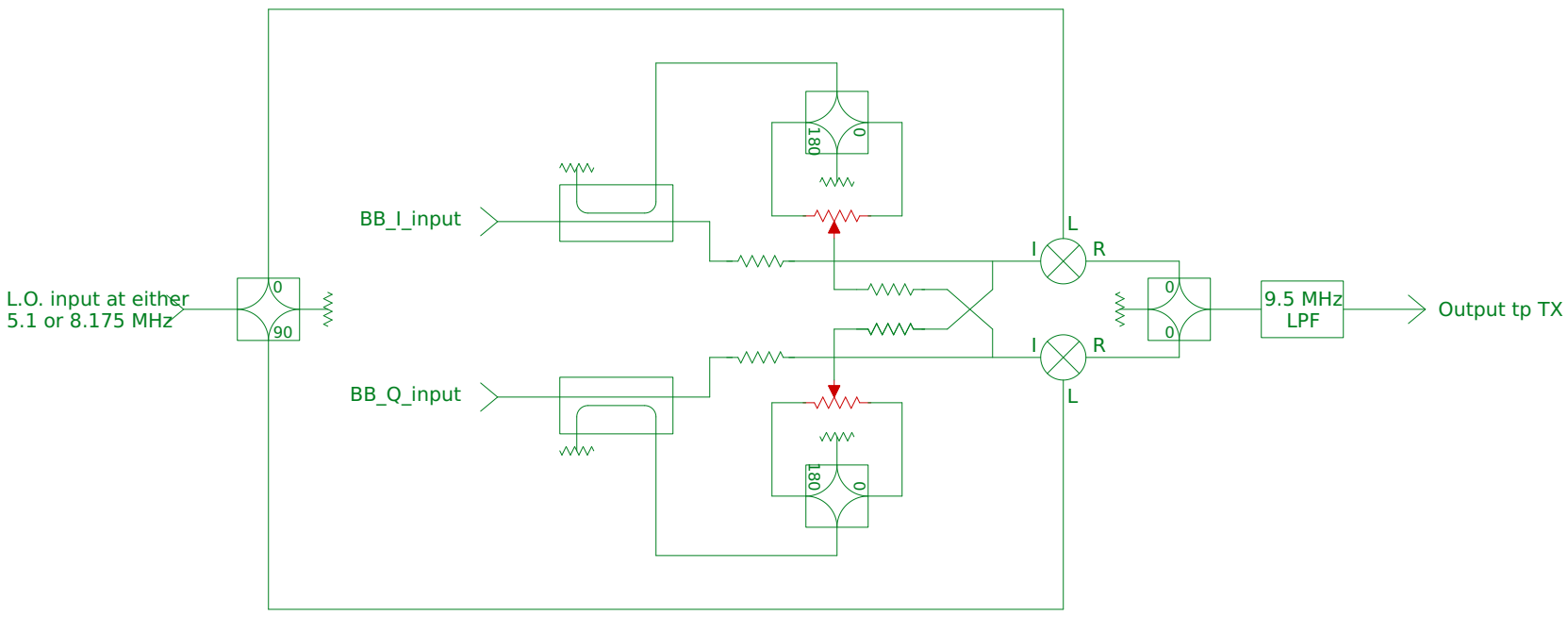


Option A: Do quadrature corrections in LO Path



Option B: Do quadrature corrections in Signal Path

NOTES:

1. Which of option A or option B is better is yet to be determined. I believe that option A is probably to be preferred since the correction is applied most closely to the error source. However, the RF voltage waveforms involved would have high harmonic content and might introduce unanticipated complications of some diffculty to mitigate. I am thinking about how to do an adequate simulation to answer this question.
2. The adjustment pots shown in red are for the purpose of trimming out quadrature phase error in the system, primarily arising from the 90 deg hybrid splitters in these two diagrams.
3. These adjustment pots are intened to be adjusted as if they are ganged, and in fact physically-ganged pots would be much preferred if available.
4. It might be nice to replace the pots with "digital pots". However the ICs I've been able to find are very poorly suited for this application, and getting around this issue would add very considerable complexity to the circuitry.
5. The required pot settings would presumably differ, perhaps by a considerable amount, between 5.1 & 8.175 MHz. Thus two sets of pots would be required, probably under SW selection, to simplify the tasks associated with changing beyween frequency bands.
6. These are block diagrams and do not reflect the full complexity of the practical circuit.