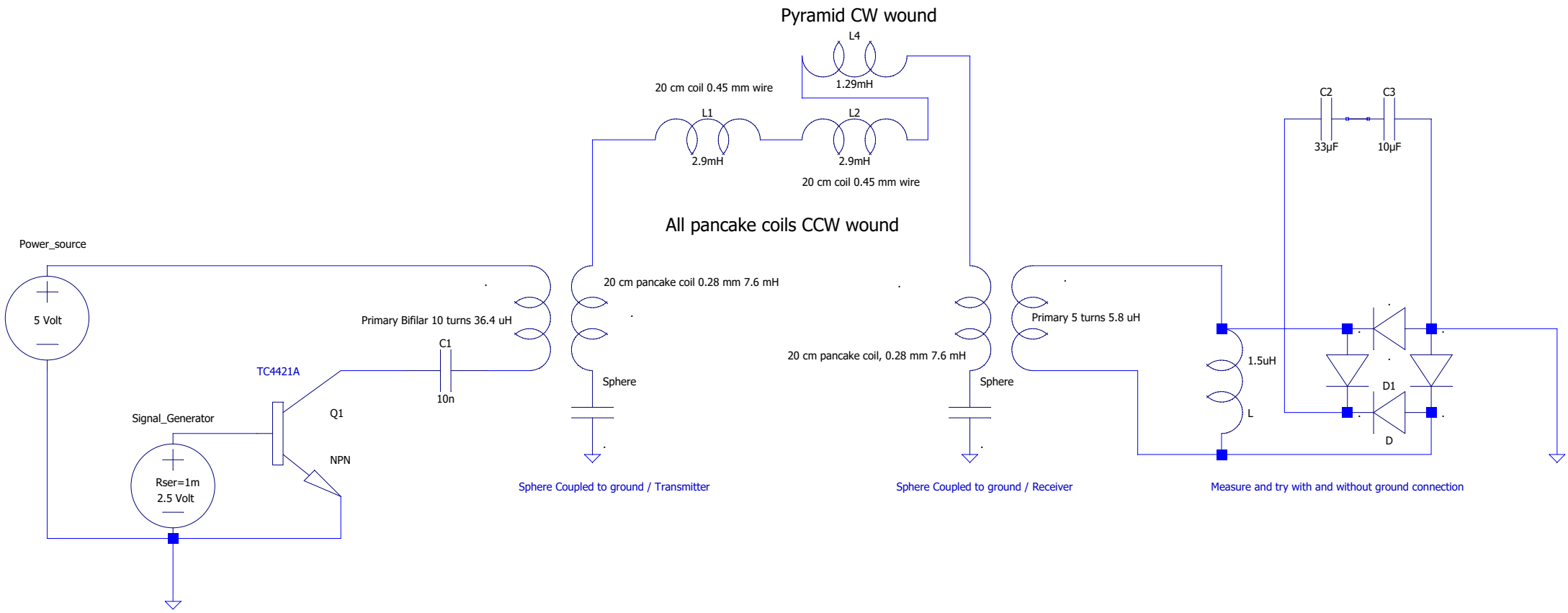Enhanced scalar network