

Ham 75 – Winding transformers – Some notes

Dr. Marc & Rosemary © 2211114

1. Transformer windings
 - a. Non-conventional.
 - b.
2. Theory: Corroboration: <https://squashpractice.com/2021/06/23/performance-of-491-ferrite-core-transformers/>
 - a. No capacitor, recirc causing heating
 - b. Small core better than big
 - c. 20 MHz max capable for saturation
3. John Oppenheimer, KN5L, and his EFHW transformer design and analysis.
 - a. It is a perfect example of extending the lessons learned here to a practical design. Rather than a physical compensation capacitor, the KN5L winding method enhances the distributed primary winding capacitance by winding the first part of the secondary back on top of the primary turns.
 - b. Back winding makes high voltage across enamel
 - c. two FT114-43 cores with 4 primary turns to get $\sim 16 \mu\text{H}$ p
4. Practice: <https://squashpractice.com/2021/07/20/engineering-the-efhw-491-transformer-and-antenna/>
 - a. The blue trace above shows the results of adding a 6-turn 2" coil about 6.5 ft. from the box.
 - b. Best" results are with 2450Ω drive impedance and the 3.3m counterpoise, so it is not surprising

