DXR Electronics Bits

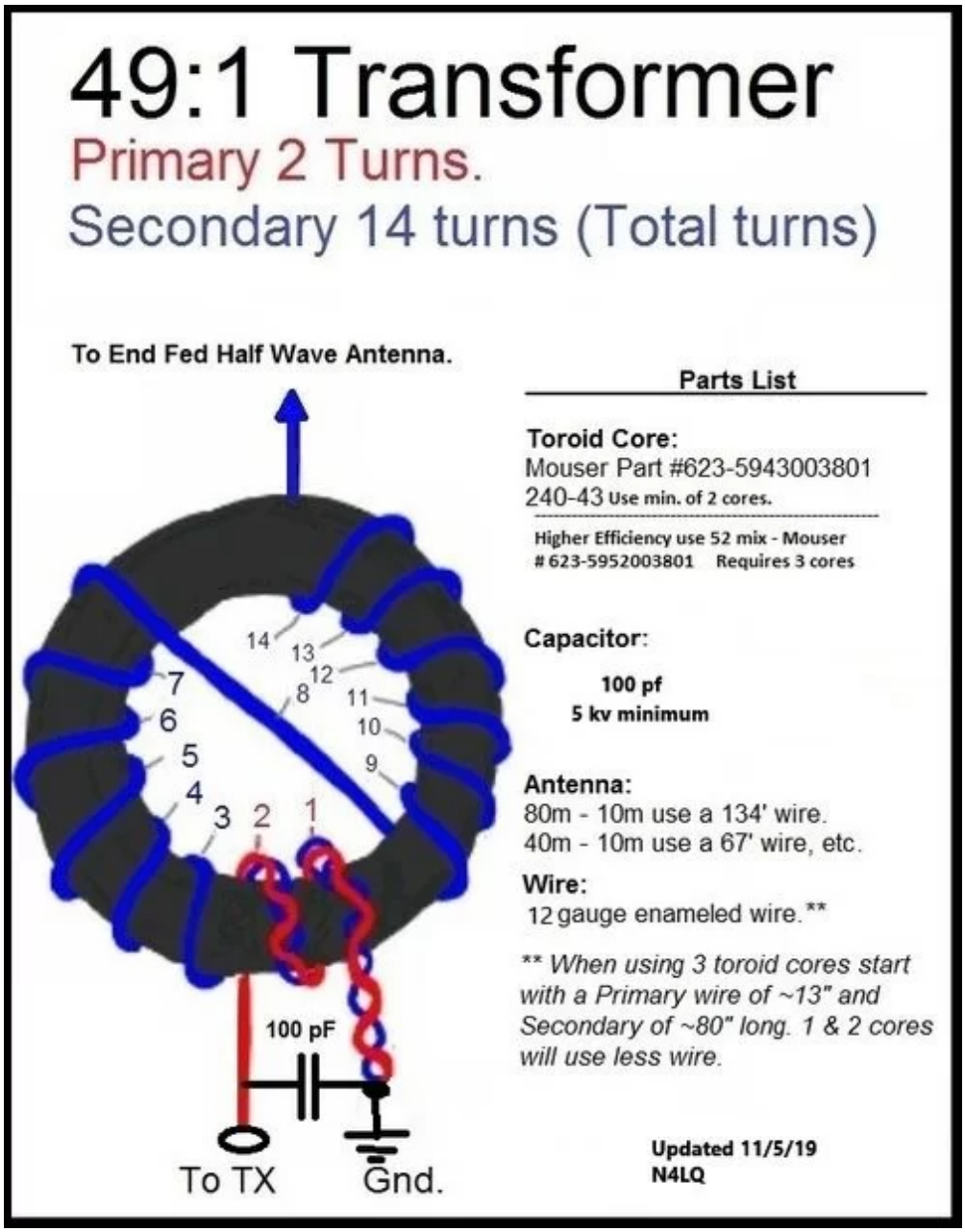
Electronics and Technical resources from vu3dxr

1:49 UNUN using two stacked FT240-43 cores for endfed halfwave antenna

February 18, 2022 Antenna, DIY admin

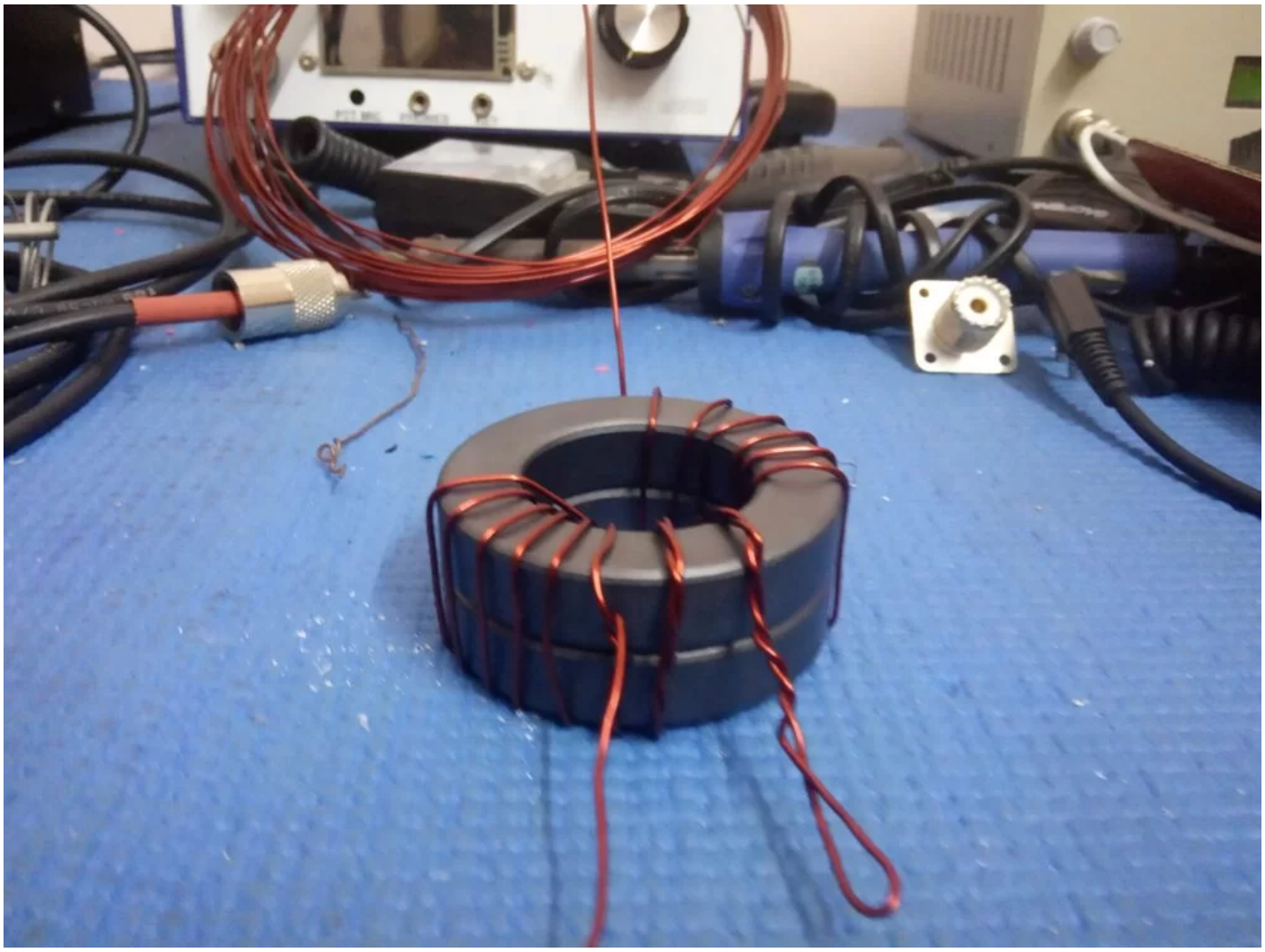
1:49 UNUN using two stacked FT240-43 cores for end fed halfwave antenna

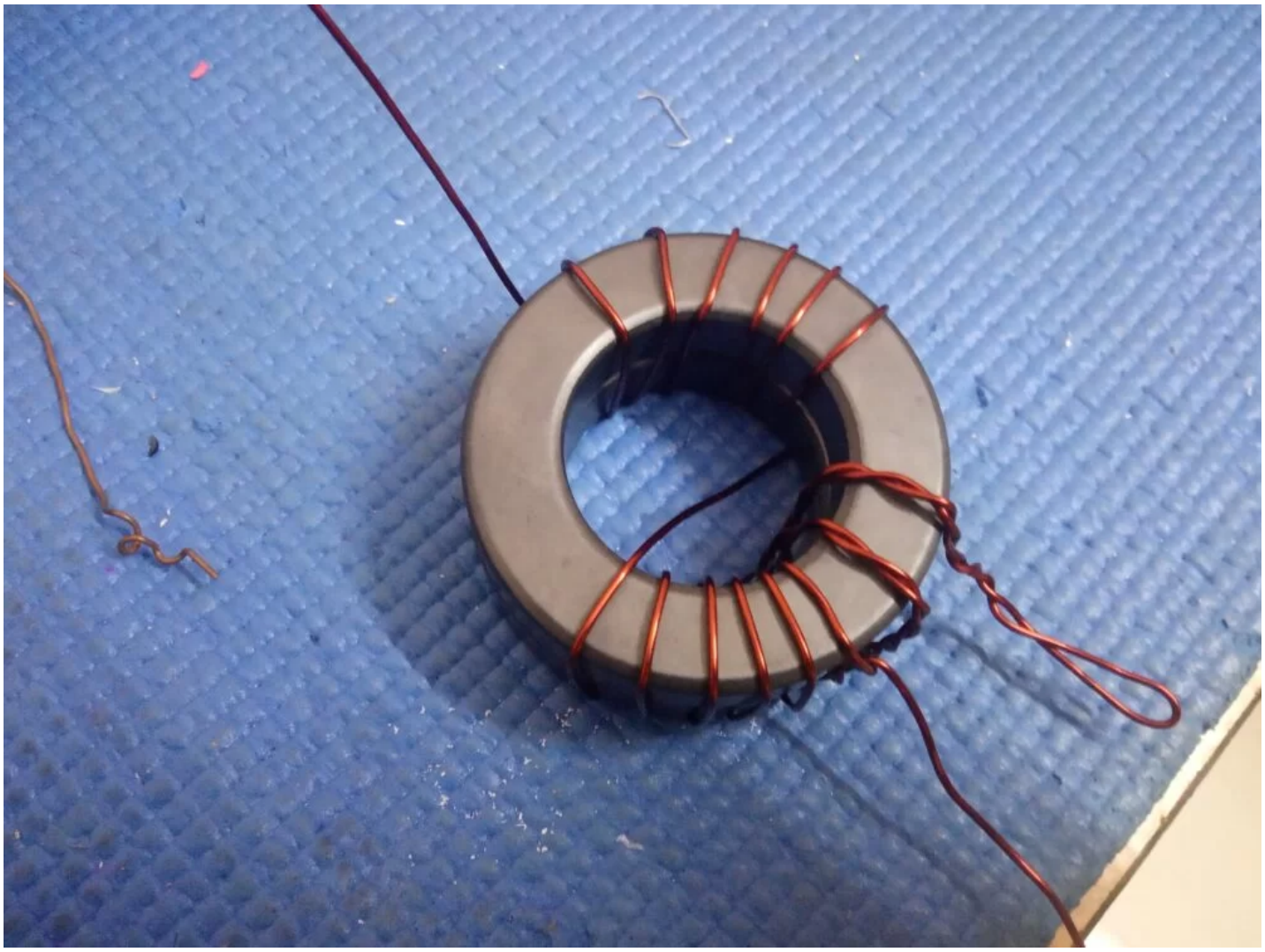
In order to match the end fed half wave antenna to the coaxial feeder, it is necessary to have a matching network or transmission line transformer. The coaxial feeder is likely to be 50Ω and the antenna impedance is possibly around 4000 or 5000Ω, the impedance needs to be matched. Often a transformer is used to perform this match. As it matches an unbalanced load to an unbalanced load, these transformers are often referred to as “ununs” as opposed to the more familiar balun that matches a balanced to unbalanced line.



The impedance transformation is approximately 50:5000 or 1:100. As the impedance at this point is not well defined, many people use a 1:9 transformer, although this only matches to an impedance of 450Ω. It is far preferable to use a 1:49 or 1:64 ratio. There are several requirements for these transformers in terms of electrical performance. At low frequencies, like all transformers, they require adequate primary inductance at lowest frequency.

The below images are my attempt to build a unun for my end fed antenna.





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Tags: efhw, end fed antenna, unun

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xavier March 28, 2023 at 7:42 pm

Good morning
I allow myself this message to ask you what is the maximum admissible power in your model of Unun 1:49

Thank you in advance for your answer
Sincerely, Xavier

REPLY

admin May 18, 2023 at 11:31 am

with single core, the maximum SSB power is 100 watts.

REPLY

admin July 14, 2023 at 12:17 pm

ok

REPLY

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