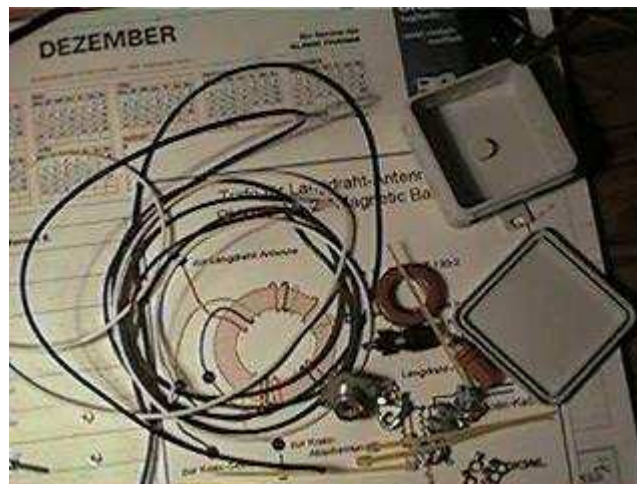
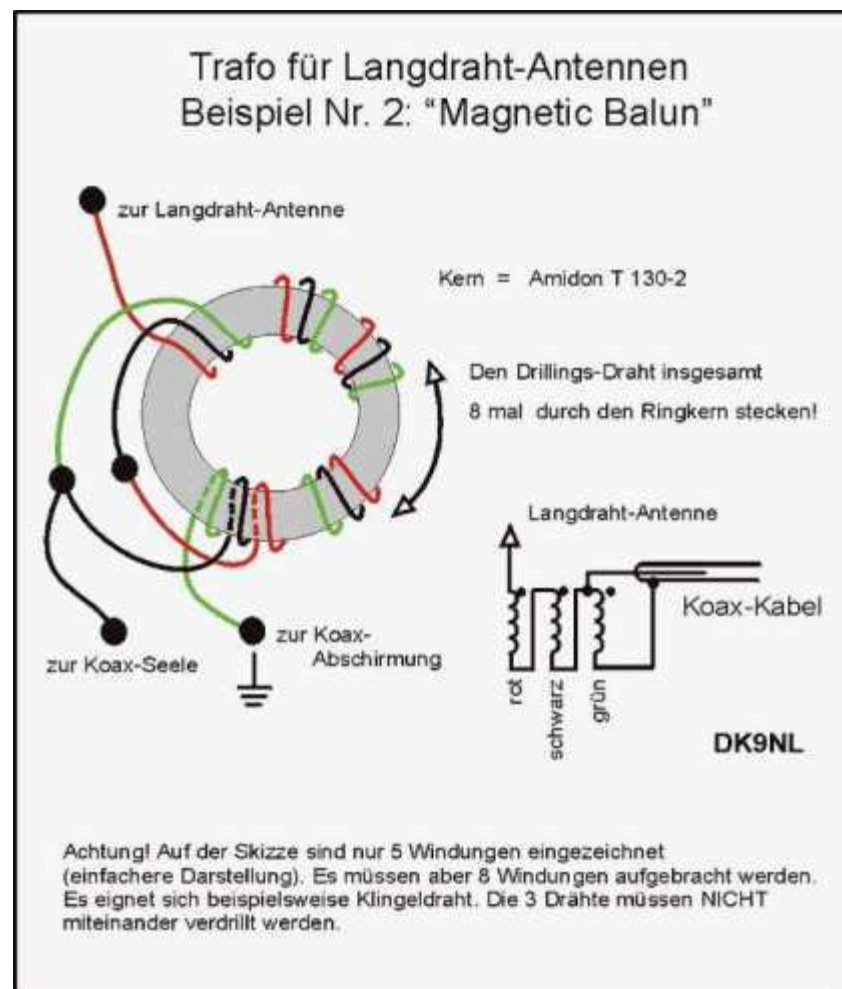


Longwire Antenna with Magnetic Balun

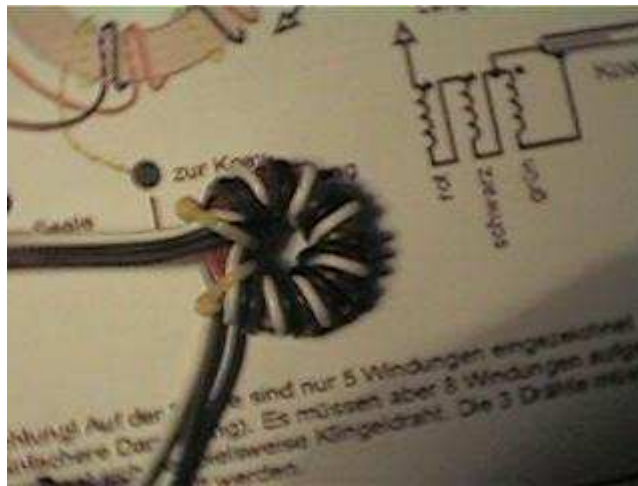


All stuff what we need to build the balun and the antenna. The Antenna wire is not in the Picture. It's an isolated copper wire with 2mm.

At first i make the balun. I take an magnetic balun Cirurit from DK9NL. Thanks to him, that he public this Cirurit.



Here is the Cirurit of the Magnetic Balun.



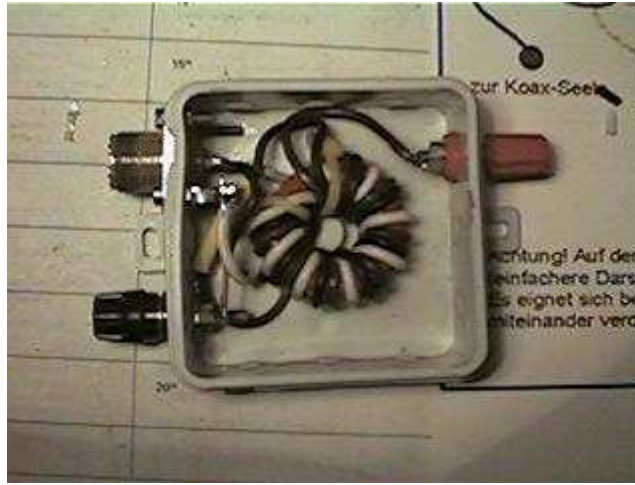
The toroidal core is an Amidon T130-2 with 8 times an triplet wire (take tree colors). Take time for this work. It hurts an little bit, but make it hart and exactly. I take an isolated 0,7mm wire for this. I think you can give him about 500 Watts PEP (without garanty).



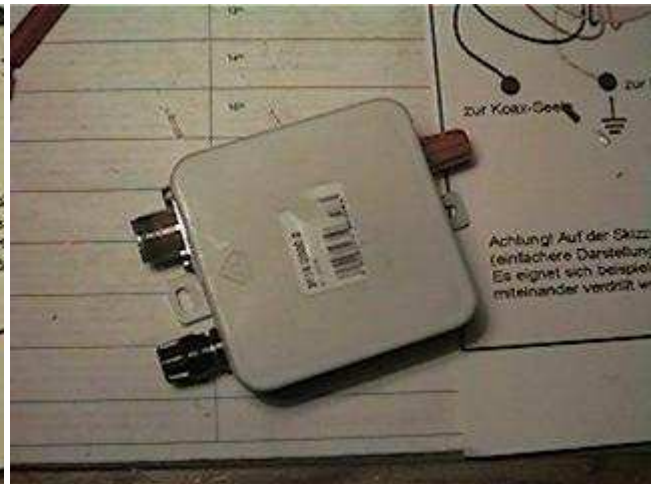
After that i cut holes in the waterproof plastic case. One big for the PL jack, and 2 little for the antenna and ground.



Here are all jacks build in.



Near finished. The toroidal core is build in the case.



Now we can close the case.



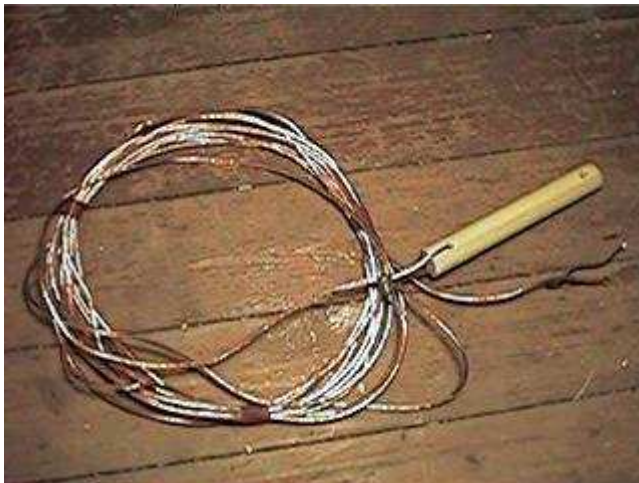
With the Dipmeter we can check the frequency the balun works. He works from 1.8MHz up to 35MHz. Thats enough for us. At 28 the SWR goes an little bit up.



I build an second one for outside, what i will leave at the housetop. The first one is my portable one. All parts are silver or rust-resistant parts.



Now we can continue with the antenna. At first i make the isolator. This is an part of an Wood shaft.



This is the finished wire from 15m(Antenna side). The other one for the ground is 10m long.



The finished antenna. I caulking all holes with hot-melt adhesive. Now i must see , the antenna works or not. An magnetic balun is not for 1:1 SWR !!! You also need an Antenna Tuner ! But the very high impedance of an end feet antenna goes so far down that you can match an 6m wire so , it works with low SWR on 80m.

SWR without an antenna tuner ! Testet with an FT-7B

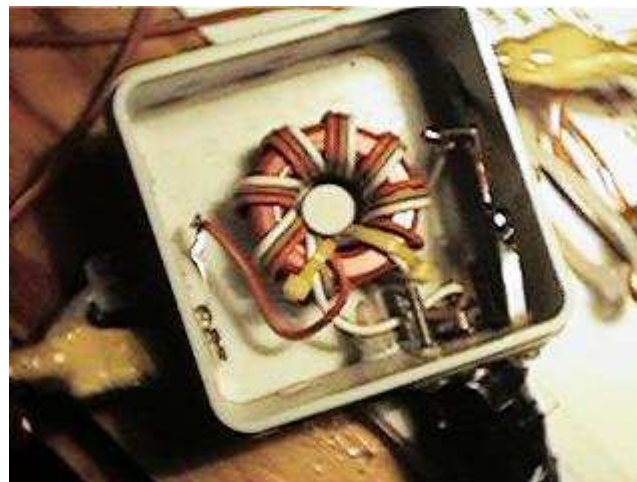
Band	SWR blank	SWR with Lowpass	SWR with Lowpass and tuner
80m	1:1,5	1:1,0	no tuner need
40m	1:2,0	>1:3,0	1:1,2
20m	1:2,0	1:1,0	no tuner need
15m	1:1,5	1:2,5	1:1,0
10m	1:1,0	1:1,0	no tuner need

The Lowpass filter is in my 'Self Build Ham Stuff' side

The costs of all:

toroidal core	1.68 EUR
Plastic case waterproof	1.03 EUR
Copper Wire Antenna 25m	10 EUR
Copper Wire balun 3 colors 6m	1 EUR
Wood shaft 1m long	3.50 EUR
Jacks are from trash box.	0,00 EUR
=====	=====
Complete Antenna with magnetic balun	17,21 EUR

Update after an Test from 1 week:



The Mag balun i make with thinner wire (Bell wire).



In the antenna wire side i insert after 2m an coil with 20 times on an 5cm tube. Thats 5m wire more.



After the balun i insert an "coat wave ban" (Mantelwellensperre). I hat hear me in my Computerspeaker. After that it was away.
Thats 8 times RG58 cable with an diameter from 15cm.

With this mods the Antenna goes not bad. I get 58 from Ural in Russia and 59 from Spain. Testet on 15m and 20m. On 40m the Antenna goes the best. But i have on 40m QRM with 9. I try the same wire with an 1:6 Balun in the next time.

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