

Vojtech Bubnik, AB2ZA, OK1IAK

Dipole 2x7.5m about 12m high with 14m homebrew ladder line

Antenna measurements by iw3hev VNA (first design, 30dB resolution A/D converters) Balun is 1:1 current (Guanella) type wound with flat cable on binocular core glued from two big clamp on choke cores. The balun has sufficient inductance to act as balun on 160m at 50 Ohm.

Band	SWR to 50 Ohm	Z	R serial	X serial	Balun
40m	44	1000	316	870	N
40m	38	1028	537	877	Y
30m	64	446	62	442	N
30m	69	190	11	190	Y
20m	86	1289	402	1225	N
20m	122	272	13	272	Y
17m	109	425	31	424	N
17m	175	108	1.48	108	Y
15m	1.64	56	50.9	25	N
15m	1.43	48	45	16	Y
12m	213	1400	203	1386	N
12m	64	98	2.93	98	Y
10m	19	164	32	161	N
10m	55	53	1.98	53	Y

Following table shows configuration of T1 auto tuner used with the dipole and balun between the transceiver and T1. The configuration is reported by the tuner. Actual values may be slightly different. T1 is a L matching circuit. Configuration: A – capacitor is at antenna (impedance up), T – capacitor is at transceiver (matching down).

Band	SWR	L (uH)	C (pF)	Configuration
40m	1	7.26	82	A
30m	1.1	4.02	0	
20m	1	2.68	30	A
17m	2.6	0.05	121	A
15m	1	0.38	0	