

TUNER UPPER FOR 80, 20M(SSB), 17, 15, 12 AND 10 METER BANDS

By Song Kang, WA6AYQ

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Tuner Upper, available from NorCal QRP club, operates on 40, 30 and 20 meter. However, it can operate at other bands with few changes - crystal, oscillator tank, and LPF.

3.579MHz, widely available, is used for 80m, and 14.318MHz for 20m SSB. 17, 15, 12 and 10m crystals were purchased from Expanded Spectrum Systems. T37-2 toroids are used T1 and L1 for all bands, except for 80m. T50-2 must be used for T1 due to high inductance requirement.

Parts list for alternate bands:

Band	C1	T1-Prim	T1-2nd	C5	C6	C7	C8	L1	C9	C10
80m	100pf	55T	8T	1500pf	NL	NL	180	17T	NL	1500pf
20m SSB	NL	30T	5T	390pf	NL	NL	56pf	9T	NL	390pf
17m	NL	26T	5T	150pf	150pf	NL	43pf	7T	150pf	150pf
Note: Wind 7T on half of the core for L1.										
15m	NL	23T	5T	270pf	NL	NL	39pf	7T	NL	270pf
12m	NL	22T	5T	220pf	NL	15pf	15pf	7T	NL	220pf
Note: wind 7T fully spread over the core for L1.										
10m	NL	19T	5T	100pf	100pf	NL	22pf	6T	100pf	100pf
Note: wind 6T full spread over the core for L1.										

The second harmonic on 80m is 35dBc. All other bands are 43dBc or better. The oscillator power level is about 2dB higher on 17, 15, and 20m. The detector LED may be little brighter at matched point.