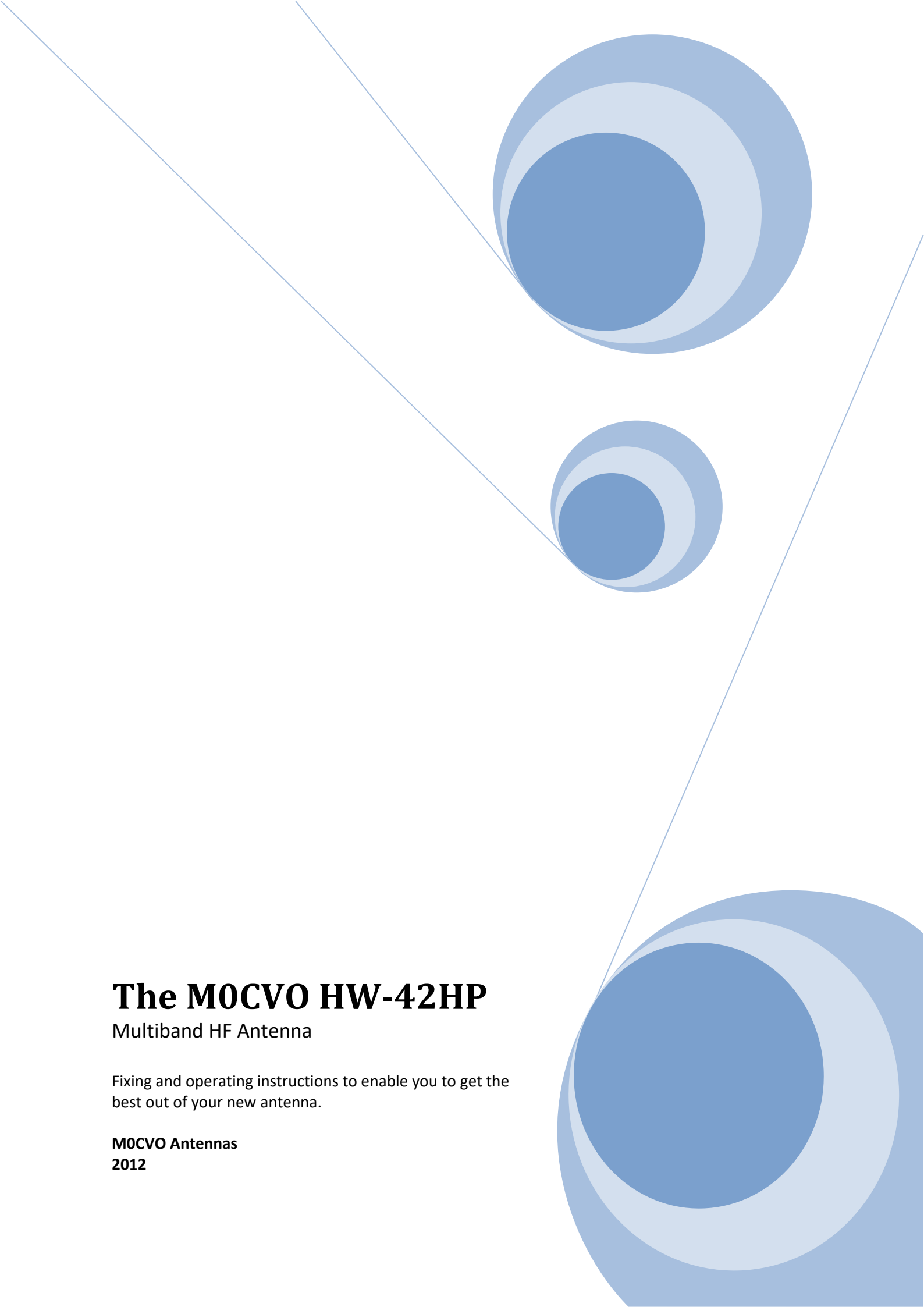




The M0CVO HW-42HP

Multiband HF Antenna

Fixing and operating instructions to enable you to get the best out of your new antenna.

M0CVO Antennas
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The HW-42HP is an Off Centre Fed Dipole with a difference. Designed to operate on all bands from 40m (7MHz) - 6m (50MHz). It will operate on 40, 30, 20, 17, 15, 12 and 10m without an ATU plus 6m with an ATU. Having a feedpoint at 1/3 of the way along instead of halfway along gives a feedpoint impedance of 200Ω. This is not ideal for modern day transceivers requiring an antenna with a 50Ω impedance. Therefore, a 4:1 current balun is added at the feedpoint to alter the impedance to something closer to the 50Ω required. This then allows the antenna to be fed using standard 50Ω coaxial cable such as RG8 or RG213.

The overall length of the antenna is 20.28m or 66'. It may be mounted horizontally, as a sloper, or as an inverted vee. If space is at a premium it may also be 'bent' to fit in with no loss in performance. Best performance will be seen when mounted at least one quarter wave above the ground at the lowest frequency (approx. 33' or 10m). It may be mounted lower if necessary but due to the varying nature of the ground below, the overall impedance and performance may be affected slightly.

If necessary, a piece of nylon fishing line or guy rope may be tied to the bottom of the second spacer and then fixed to the end insulator to retain tautness of the lower element.

The specified power rating of this antenna (400W) is for intermittent amateur modes such as CW or SSB. Modes employing FSK (100% duty cycle) such as FT8, FT9, JT65, etc claim to multiply the power factor by up to 12 times that of CW or SSB transmissions. In an unmatched antenna the coil in a BALUN/UNUN can show as a resistance so some power is transformed into heat. If you multiply this temperature change by 12 it could lead to damage so power should be kept to $\leq 30W$ when using these modes.

