

Inverted "V" dipole antenna 3535 - 3740 kHz with relay switches



Specifications

1. The antenna is resonant at two frequencies 3535 kHz and 3740 kHz using relay switching.
3. Built-in high quality ferrite balun with common mode impedance more than 2 kOhm
4. Comes with power supply with Interference filter and CW / SSB switch.
5. Changing frequencies is done from ham radio shack.
6. Comes with 20 m wires for relays switches.
7. Maximum recommended power input 1500 W.
8. SO 239 antenna connector.
9. Comes with 2 x zinc plated V-bolts with serrated saddle. Mast up to 50 mm.

Setting method:

The supplied antenna wires are 19.2 m. Longer than necessary.

First adjustment:

- Power supply OFF (LED does not lit)
- Place the antenna on working height observing all precautions and care for working at height.
- The ends of the wires extend with fishing line (nylon) least 1mm thick.
- The ends of the antenna would be preferable to have at least 3 m away from all objects.
- Measure the resonant frequency.
- Depending on the height and wire angles resonance frequency might be around 3690 kHz.
- Depending on the resonant frequency it will need to shorten wires to the desired frequency by the following equation.
For every 20 kHz frequency increases both ends should be shortened for 101 mm or 5.5 mm each end for 1 kHz.
- For example. If the antenna resonates at 3685 kHz and it is necessary to move resonance to 3740 kHz.
 $3740 - 3685 = 55 \text{ kHz}$. $55 \times 5.5 = 278 \text{ mm}$. It need to shorten both ends of the antenna for 278 mm.
- It is very important that do not cut wires at once but two steps.
First cut wires half needed and measure resonance again.

Second adjustment:

- Switch ON power supply (LED lit). Previously antenna must be adjusted to 3740 kHz.
- Now resonance will be around 3535 kHz. If resonates below frequency (depending on the SSB frequency) then the coils should be symmetrically stretch by hand.
- If the antenna resonates above 3535 kHz then coils should shrink.
- Important. CW resonance frequency does not affect SSB resonance, **but it is important to first adjust SSB frequency then CW.**
- Minimum achieved SWR at resonance depends on height of the antenna installation and angle of antenna wires.
- High quality antenna like this with perfect common mode balun has a very sharp resonance.
- For SWR of about 1.5 bandwidth is 85 kHz.

The optimum antenna height for local is about 20 m. Optimum antenna height for DX is "as high as possible".