

## Spreader Kit for 1 el Quad

The Quad Spreader Kit has been designed for building portable 1el Quad loops mounted to our 12m Spiderbeam fiberglass pole. The Kit includes all needed parts, i.e. a metal center joint (with rubber padding) and two telescopic fiberglass tubes (4m long).

The metal center joint has very small packaging dimensions, as it can be disassembled completely. The kit is well suited for building a 1el Quad for 20m and all bands above.



1el Quad 20/15/10 on 12m fiberglass pole

The metal center joint is mounted to our 12m fiberglass pole at a height of 8m, letting the remaining upper 4m of the 12m pole protrude above the center joint. The two 4m long telescopic tubes are inserted into the left and right leg of the metal center joint. These two 4m long tubes are absolutely identical to the upper 4m part of the Spiderbeam 12m fiberglass pole.

Thus a quadratic cross with an 8m long diagonal is formed, enabling you to string quad loops of up to 22m circumference. For example the photo above shows 3 quad loops for 20/15/10m. The loops can be fed at the lower corner (i.e. approx 4-5m above ground). The resulting effective height of the loop is 8m above ground, ensuring a good radiation pattern.

## Parts list & Assembly Instruction

Amount	Description
2	4m long telescopic fiberglass tube
4	100mm long EPDM rubber hose, black, 29/24mm
2	aluminium angle "type A" length = 200mm
2	aluminium angle "type B" length = 240mm
12	stainless steel Allen screw, M4x20
12	stainless steel square nut, M4x10
1	Allen key for M4 screws



The metal center cross is constructed of two 2 aluminium angles "type A" (200mm long, no cut-outs) and 2 aluminium angles "type B" (240mm long, with center cut-out). Stick them together as shown in the photo and attach the screws. As the square nuts are self-blocking against the aluminium angle, it is easily possible to assemble the metal cross from only one side, needing just a single screwdriver.

The 200mm long part of the metal center joining is mounted vertically to the Spiderbeam 12m Fiberglass pole (at the joint between the 8. and the 9. fiberglass segment). Before assembly, protect the mast by sliding two 100mm long pieces of rubber hose over it (= working as a rubber padding). Use the remaining two pieces of rubber hose to protect the ends of the 4m long telescopic tubes. Then insert those 4m tubes into the left and right side of the center joint.

The quad loop can be affixed to the cross e.g. with cable ties, adhesive tape or hose clamps. The impedance of a 1 el quad loop is approx. 100Ω. Impedance matching to a 50Ω coax cable can be achieved by using a 2:1 balun or a  $\lambda/4$  piece of 75Ω coax cable. Have fun!