spiderbeam
high performance lightweight antennas

Mounting Guide for the Spiderbeam 40m Add-On Dipole

MATERIAL LIST AND INSTRUCTIONS

Version 2024

spiderbeam Mounting Guide: Spiderbeam 40m Add-On Dipole

Spiderbeam 40m Dipole

Material included in both versions:

Pos	QTY	Description	PID
1	22 m	Wireman CQ-532 Copperweld Wire	PA025
2	210cm	Enamel-Insulated Copper Wire 1.5mm dia.	DP4003
3	2	Coil Form, 35mm dia., 50mm long	DP4005
4	14 cm	Heat-Shrink tubing, 3/1mm with hot-melt-glue inside	PA029
5	26cm	Heat-Shrink tubing, 6/2mm with hot-melt-glue inside	PA028
6	10 cm	Heat-Shrink tubing, 9/3mm with hot-melt-glue inside	UL013
7	12 cm	Heat-Shrink tubing, 40/13mm with hot-melt-glue inside	DP4004
8	8	Polyethylene Insulators, black, UV-resistant	PA020
9	2	M6 Tubular Solder Lugs, galvanized and tinned	PA026
10	25m	PVDF Monofil Line, 1mm diameter	PA219
11	10	Cable-tie, UV-resistant 200 x 4.8mm	PZ01-1
12	1	Plastic spool (20cm diameter)	PA036

Only for Portable Beam Version:

13	2	Fiberglas-Tube, length = 1.15m, diameter = 35mm, wall thickness = 1mm	PA001
14	2	Stainless Steel Hose-Clamp, 30-45mm diameter, 9mm wide	PMF007
15	25cm	Flat Rubber Strip UV-resistant), 15mm wide, 3mm thick	PMF020
16	20cm	Heat-Shrink tubing, 13/6mm	PMF021

Only for HD Beam Version:

17	2	HD Fiberglas-Tube, length = 1.15m, diameter = 30mm, wall thickness = 2mm	PA051
18	2	Stainless Steel Hose-Clamp, 25-40mm diameter, 9mm wide	PMF006
19	22cm	Flat Rubber Strip (UV-resistant), 15mm wide, 3mm thick	PMF020
20	16cm	Heat-Shrink tubing, 13/6mm	PMF021

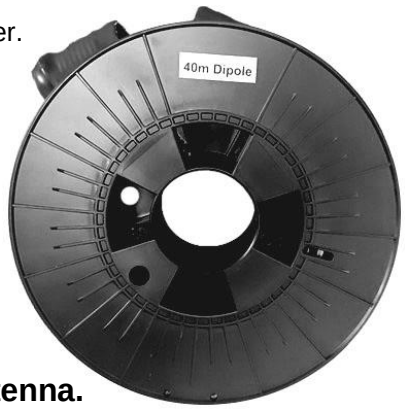
1 Wire Elements with Loading Coils

- You will receive a complete wire set including the Rubber shrinked Coil and connectors to mount it on your Spiderbeam Yagi.

2 T-Wire (Capacitive-Loading Wires) and Monofil Guy Line

- 283cm piece connected with two 210cm pieces of CQ-532 wire.
- Two 575cm long pieces and two 645cm long pieces of Monofi.
- T-connected with shrink tube like this: 
- 10cm (the end of the capacity-loading) wire are folded back for possible tuning. at the point 5cm away from the knot and fasten with two small cable-ties. The Insulator is connected with the 575cm long Monofil Line through the other end of the insulator, puled through to the slot, and secured by 3-knots over each other (on the slot side of the insulator). The other end of the Monofil through the end of a second insulator, with the line through to the slot side, then secure with another triple-knot, 535 cm away from the first not.

- The dipole sets come wound onto a **plastic spool**, one after the other.



3 Mounting Brackets (Hose Clamps)

- You need these rubber padded clamps to attach the Dipole at the segments.

4 Installation and mounting into your Spiderbeam Yagi antenna.

The 40m dipole can be used either with a separate feedline and balun, or it can be connected to the existing balun of the Spiderbeam. When using only one balun, the forward gain and front-to-back ratio for the higher bands are not affected, but the front-to-side ratio is reduced, especially on 15m.

We strongly recommend the use of our original Spiderbeam Balun – Our add-on Dipole and Yagi antenna was developed and optimized for this Balun.

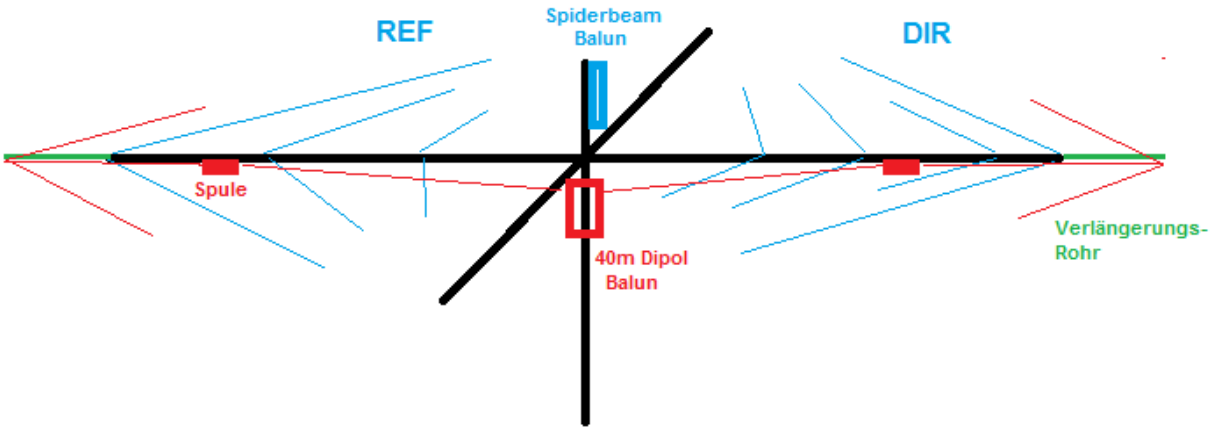
4.1. For the addition of the 40m dipole, each end side of the boom must be extended with one additional fiberglass tube section. The boom consists of the two spreaders supporting the middle of the wire elements. The front side supports the Directors, the back side supports the reflectors.

4.2. Connect the 40m dipole to the balun in the middle of the Spiderbeam. Stretch out the side marked DIR towards the Director side of the boom. When you reach the T-Junction (where the two CQ-532 wires are soldered to the dipole leg), fasten the T-Junction to the extension tube on the Director side of the boom using a clamp prepared in section 3. above. The fiberglass extension tube is longer than required. You can leave it open unused or may saw off the excess length if you wish, being careful not to saw off too much.

4.3. Stretch the Capacity-loading wires to the left and to the right, and fasten their Monofil extension lines to the ends of the side spreaders.

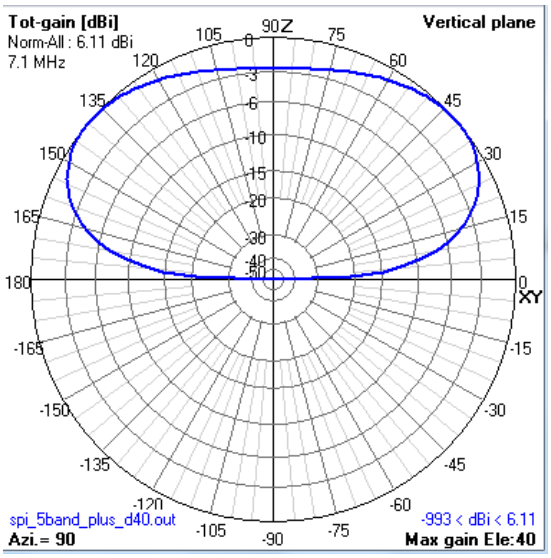
4.4. Optional: The loading coils may be fastened to the boom with cable-ties, but this is not a must.

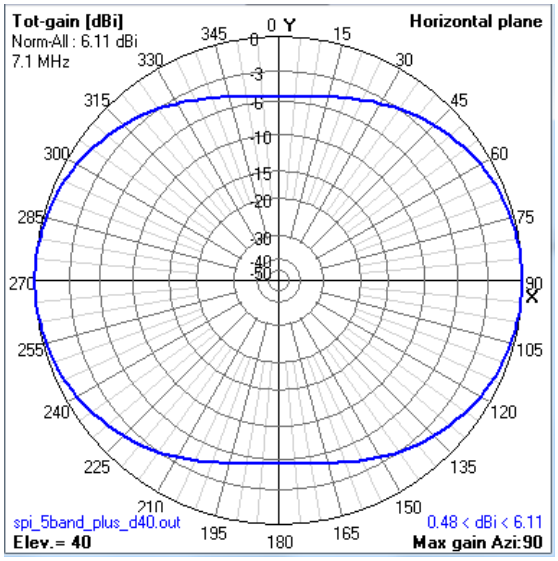
4.5. Repeat steps 1-4 for the dipole side marked with “REF”, fastening it to the extension tube on the Reflector side of the boom. NOTE: YES, the capacity-loading wires on the REF side are longer than those on the DIR side. This is intentional. (You can see it in the sketch image below)

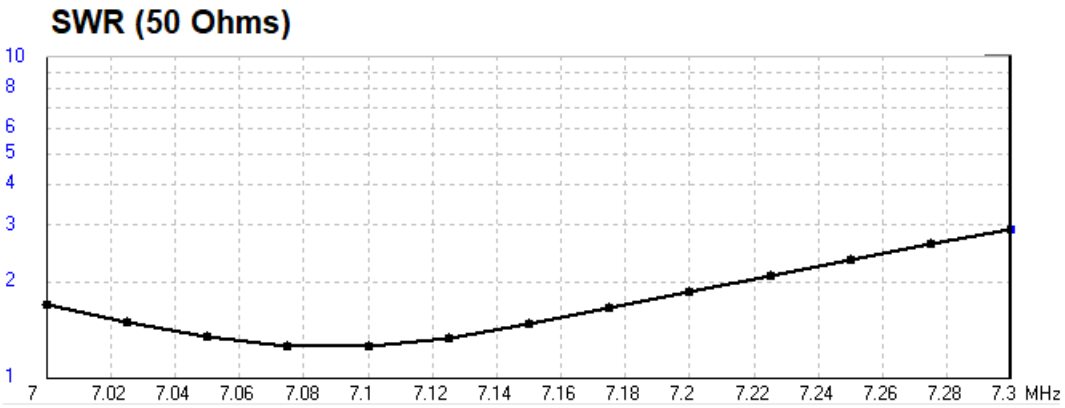


(translation note: “Verlängerungs-Rohr“ = Extension Tube; “Spule“ = Loading Coil)

5 Radiation Pattern und SWR in 15m Height above Ground







Note and request to all users:

Despite all testing and calculations, the antenna may work even better if fine-tuned for the local conditions. Your help and cooperation for the further improvement of the Spiderbeam antennas is always welcome. We are curious and grateful about your experience reports and informations about your adjustments of your antenna by email to info@spiderbeam.com.