



*** Oy Suomen Antenni AB *** Oy Finnish Antenna Ltd *** Oy Finska Antenn AB ***

JP Tribander Owner Manual

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JP-Tribander Technical overview

JP-Tribander is effective tribander beam for 20m, 15m and 10meters with full size elements without traps. Antenna is designed using latest computer modelling techniques to achieve best overall performance. All modelling results are carefully tested in normal real life environment.

All hardware solutions are carefully tested and analysed with different methods to provide best mechanical and electrical product quality. For example specially designed element to boom mounting system makes possible to achieve simple but reliable element mounting.

This design provides you following features:

- 6 active fullsize elements: 2 element for 20m, 2 element for 15m and 2 element for 10m.
- No traps, no powerlimits (except possible balun)
- Single feedline
- Direct 50ohm feed (JP Current Choke-H 1:1 balun is recommended)
- All parts are from aluminium or rustproof steel
- Antenna can be used as a dipole on 17m band (SWR will be as high as 3)
- On 12m band antenna gives 3-4dB gain and 10dB F/B ratio, but SWR is high, about 5.
- Mast clamp fits 80mm to 45mm

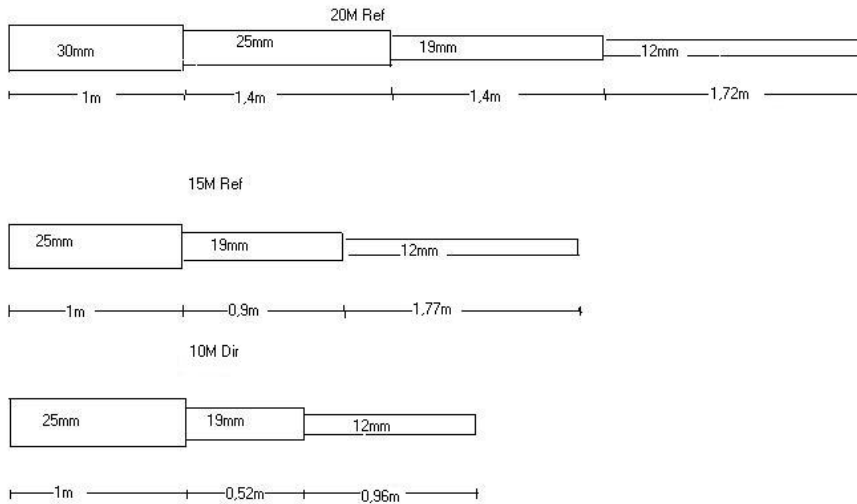
Boom length:	4.7 m
Wind load:	0.88 sqm
Turning radius:	6.05m
Weight:	17.80kg



JP-Tribander Constructing – Dimensions

Distance from reflector		Alum. tubing size				1/2 length
Meters		30mm	25mm	19mm	12mm	
0	20m Ref	1	1,4	1,4	1,72	5,52
0,59	15m Ref		1	0,9	1,77	3,67
2,92	15m Sleeve		1	0,9	1,61	3,51
3,26	Driven	1	1,4	1,4	1,3	5,1
3,41	10m sleeve		1	0,52	1,22	2,74
4,7	10m Dir		1	0,52	0,96	2,48

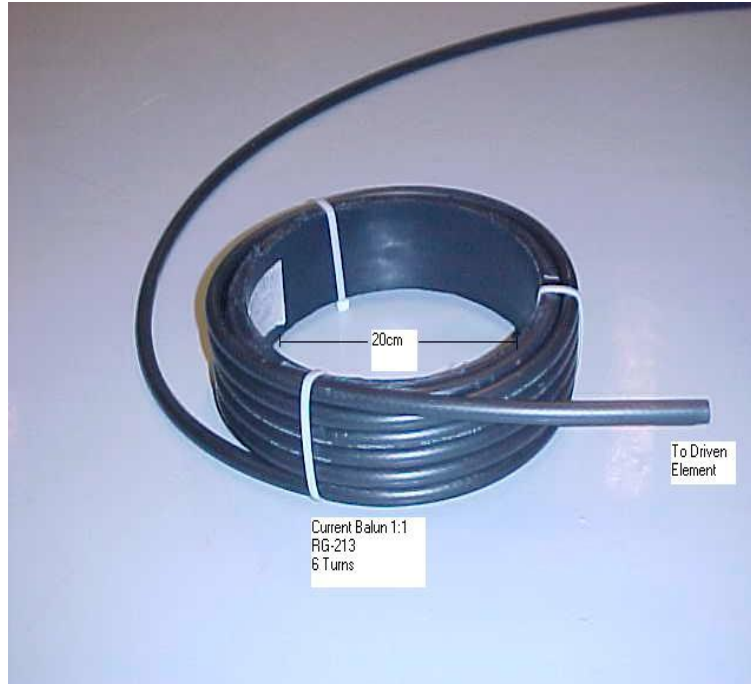
Connect feedline to 20m Driven element. 1:1 Current balun will be needed and JP-Current Choke-H baluns is recommended. Please remember also to use some rope inside all 12mm tubes.





JP-Tribander Constructing – Balun

For 1:1 Balun you will need some coaxial. Any 50ohm coaxial will do the job! When constructing the balun take care that diameter of balun is about 20 cm. Try to keep the coaxial leads as short as possible when connecting coaxial to feed element. This balun can also be replaced with the JP Current Choke-H product.



Coaxial balun can be replaced with JP-Current Choke-H:





JP-Tribander Constructing – Driven element

Use longer U-bolts for 20m driven element. Connect coax to yellow connectors via current balun (e.g. JP-Current Balun-H)





JP-Tribander Constructing – Element clamp

Element clamps are meant for:

Ref 20m, 15m

Sleeve 15m and 10m, and 10m director

Please note that there are two size for clamp washers. 20m reflector has 30mm washer and for 10/15 elements 25mm washer





JP-Tribander Constructing – Worm clamps

Packet contains following worm clamps:

Worm clamp 19mm to 12mm tube

Worm clamp 25mm to 19mm tube

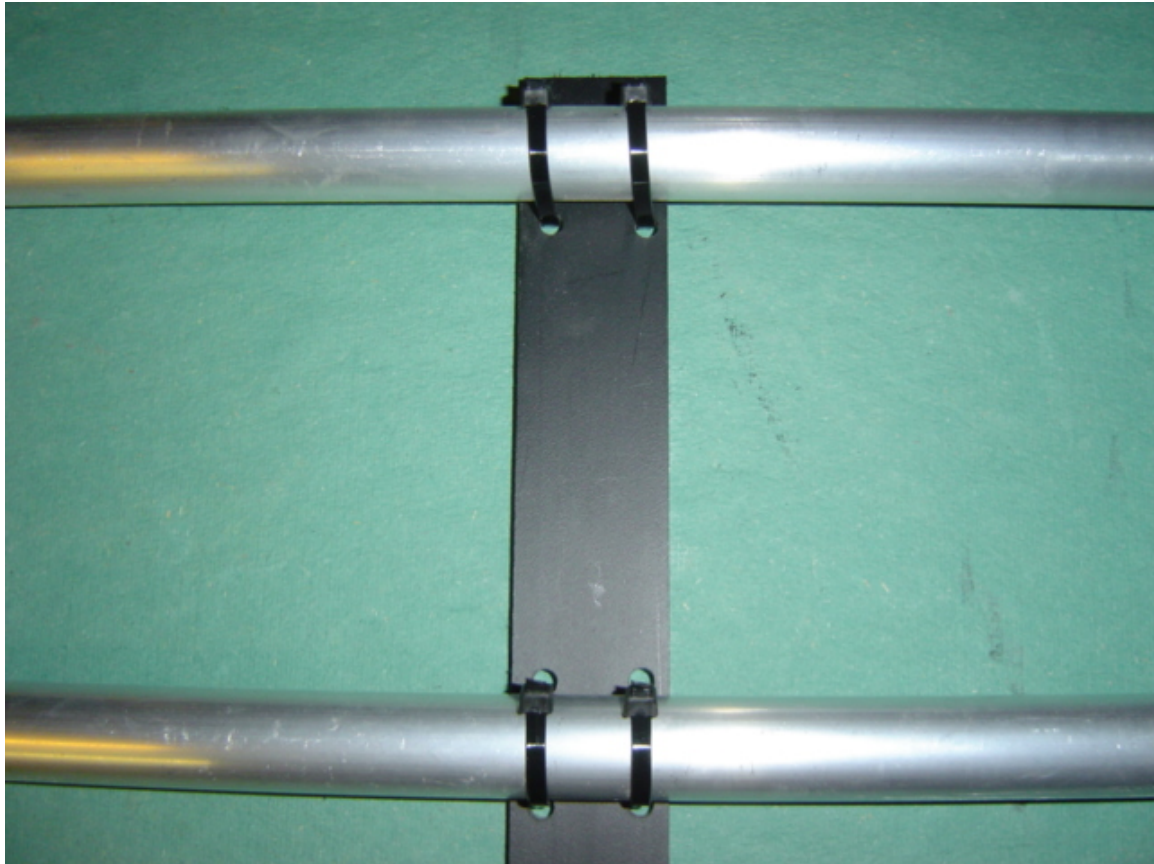
Worm clamp 30mm to 25mm tube

Please note that correct positioning of the clamp is very important. Otherwise it will not tighten enough. Be careful when tighten worm clamps (4,5Nm max)





JP-Tribander Constructing – Spacer



Use spacer between 20m driven and 10m sleeve element



JP-Tribander Packing list: Elements

Band	Diam (mm)	Length (m)	pcs
20m ref dir	30mm	2m	1pcs
20m driven	30mm	1m	2pcs
20m	25mm	1,5m	4pcs
20m	19mm	1,5m	4pcs
20m ref	12mm	1,82m	2pcs
20m driven	12mm	1,4m	2pcs
15m	25mm	2m	2pcs
15m	19mm	1m	4pcs
15m ref	12mm	1,87m	2pcs
15m sleeve	12mm	1,71m	2pcs
10m	25mm	2m	2pcs
10m	19mm	0,6m	4pcs
10m driven	12mm	1,32m	2pcs
10m dir1	12mm	1,06m	2pcs



JP-Tribander Packing list: Other parts

Parts	pcs
el clamp 50mm	5
30mm driven el insulator 20M	8
M10*50mm machine srew driven el	4
M10 lock nuts driven el	4
el hook standard	5
el hook long driven el 20m	2
30mm clamp washer 20M elements	1
25mm clamp washer 15/10M elements	4
M8 lock nuts	14
M8 washer	14
boom 50mm x 2m	1
boom 50mm x 1,65m	2
boom plate	1
mast clamp 52mm	4
M6*60mm bolt(boom)	4
M6 washer(boom)	4
M6 lock nut(boom)	4
M4*15mm machine srew drive el 20m	2
M4 washer	4
M4 lock nut	2
M4 nut	2
19-28 worm clamp	16
12-19 worm clamp(own)	12
plastic cap (black)	12
apiko connector	2
spacer	2