

PRO.SIS.TEL.

Produzione Sistemi Telecomunicazioni

Multi-band V dipole 12-17-30 or 40m band – V1.3

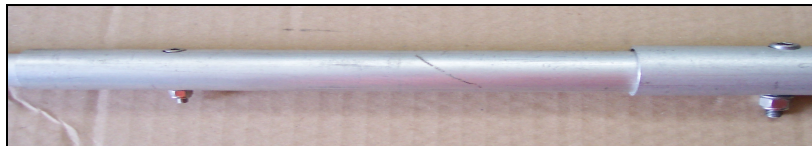
PST-27TV - PST-273TV - PST-274TV

Antenna assembling instructions:

Take antenna parts out the box and find the semi-dipole main alluminum tubes. They have pre-assembled inside the other tubes in a telescopic sequence. Tilt down the main tube end and shake it to have each one inner tubes heads out for about 15 cm or 6 inch. Make sure to have enough free space to extend the entire semi-dipole. Pull out the smaller tube, find the passtrought hole on the inner end, make it coincident whith the passtrought hole present on the next diameter tube which has two different diameter holes, from the larger hole side insert and push down the hallen screw passing trough the inner tube hole, put washer and selflock nut and screw down.

Make sure to have the bolt head as in the picture below. Do not forget to lubricate the stainless steel bolts or nuts before to install them. Any kind of oil or grease is ok.

Do the same way for the other tubes joints. Some inner ends have more holes, they will help you in tuning antenna on your preferite band section, use the one in the middle for now.



Make sure to have heach one tubes connection having bolts head on the same side.

When completed, insert on the semi-dipole end the trap set (following the sequence 12m, 17m, 30 or 40m if you got triband) Bolt down each one tube joint following the same way used before. Insert the 17m end. If you got triband version, install traps sets that are pre-assembled already, joints in between traps have multi holes on the inner tubes, improving antenna tuning steps if necessary). Longer antenna lower frequency, shorter antenna higher frequency. Start tuning operations from the highest band Any new tuning step on the higher frequency will have effect on the other lower bands. **Make sure to have traps drainage holes on the lower side.**



Half dipole tapering (pieces gross length).

27 = d35mm 115cm - d30 115cm - d25 75cm --|__T12__|-- d16/10mm 10/44cm = about 375cm

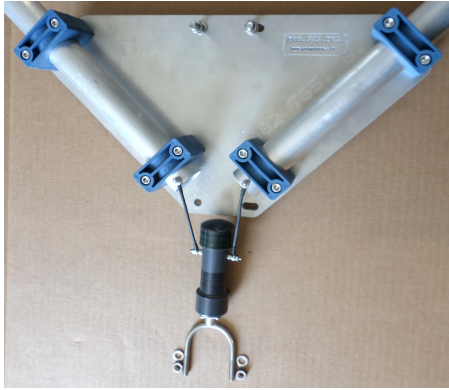
273 = d35mm 115cm - d30 115cm - d25 75cm --|__T12__|-- d25 25cm --|__ T17__|-- d16 20cm-
d12 65cm - d8 82,5cm = about 552cm

274 = d35mm 115cm - d30 115cm - d25 75cm --|__T12__|-- d25 77cm --| T17 (black coil)__|--
d16 100cm - d12 100cm = about 606cm



Final lenght of each element depends from final tuning.

When both semi-dipoles are ready, assembly the antenna center main frame as in the picture below. Make sure to have about 25mm or one inch of the 35mm tube end clearance from the insulator clamp, with connection bolts aligned on the front side, as in the picture below.



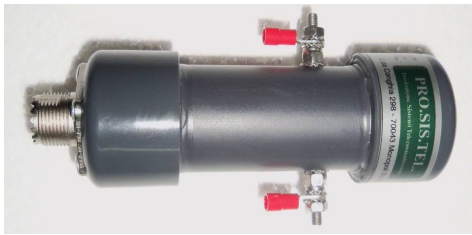
Version with 12-17-30m



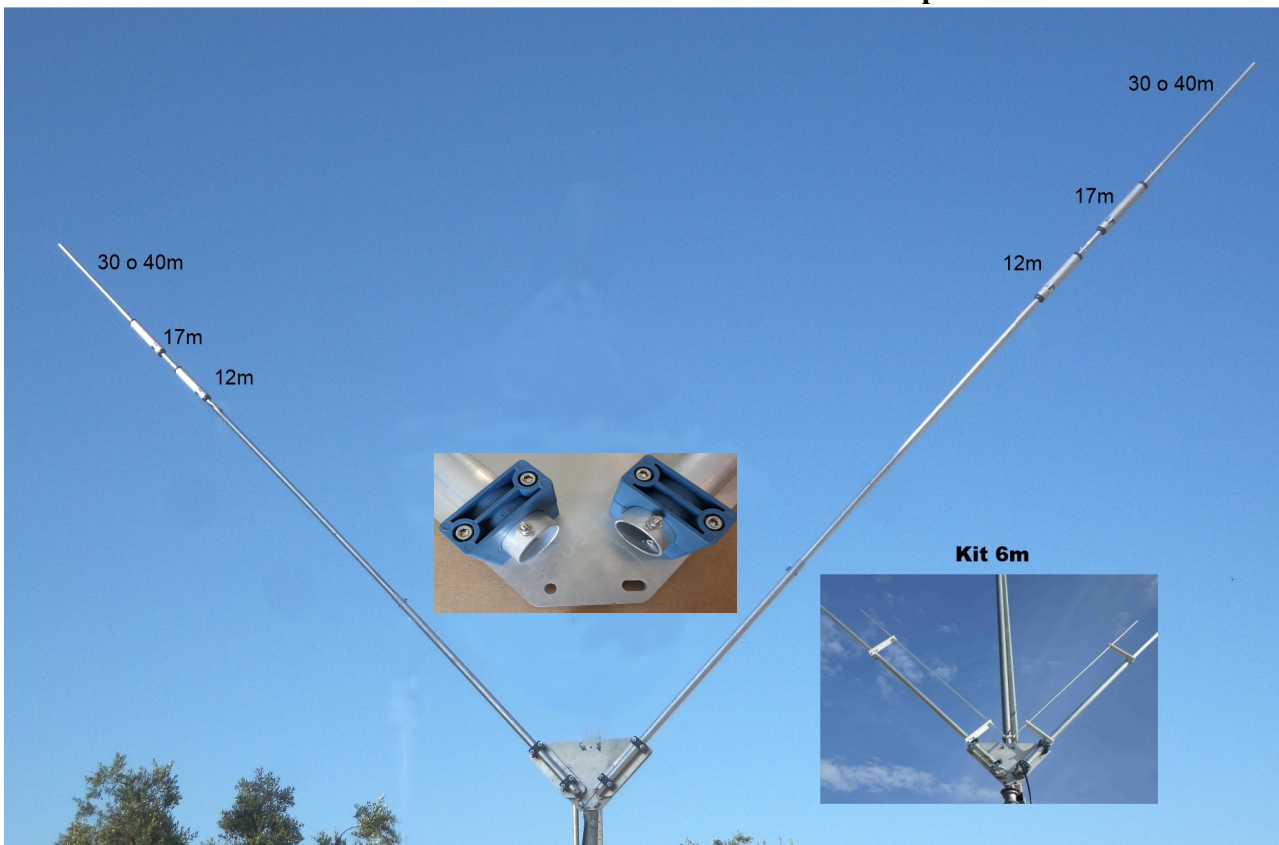
Version with 12-17-40m

Connect a 1:1 balun (suggested) using two short wires, not longer than 8-10 cm or 3-4 inches (connections wires will influence the antenna tuning making it longer), if you don't use a balun, than use a coax cable choke, open the coax ends to have two short leads like a V no longer than 3-4 cm or 1-2 inches, soldering on them two eyelet ends. Don't forget to insulate and seal coax end from moisture. (If you don't have any sealing liquid, use nails painting and when dry, cover with good rubber tape)

(Balun and eyelet ends are optional not included in the antenna parts)



When assembled antenna will looks like the one in the picture below.



Version with 40m, use air-pin coil to match right impedance.

Install antenna on your mast, make sure to have almost 5-6meters or 15-20 ft over the roof or ground and if installed over an HF yagi antenna, make sure to have dipole in line with yagi's boom spacing them almost 2m or 8 ft. Antenna will have the best performance if installed almost a $\frac{1}{4}$ wave of the lower frequency band, over the ground.

Using an antenna analyzer or a SWR meter, check the antenna tuning on each band.

Antenna tuning frequency could be influenced from the environmental conditions for which could became necessary retuning it. If necessary begin from the higher band, unbolt the multi holes dipole joints and move to next hole, don't forget, longer element lower frequency, shorter element higher frequency.

In some conditions the antenna can also be installed as shown below.



Specifications:

Bands: 12 - 17 + (30m or 40m tri-band version)

Impedence: 50 ohm

SWR: \leq 1:1,3

Gain: 0dBd

Max power: 2Kw pep SSB, 1Kw pep RTTY-CW

Usable Part of band:

12m/17m/30m: full band

40m: \sim 120Kc/s

Mast diameter: 40-50mm

Materials: alluminum 6060T6 Stainless stell hardware.

Kit 6m (optional)

The 6m kit must be installed as shown below.



For improvement and technical - productive needs, specifications and construction details can undergo variations, without modifying the final purpose of the product.



Do not install the antenna near power lines or equipment that could result in electrical contacts. You could be seriously injured or killed.

The antenna must be installed in accordance with / local / national laws.

If necessary get a professional installer.

Prosistel can not be sued for damages for non-compliance of equipment rules.



Dear buyer,

thank you for purchasing a Pro.Sis.Tel antenna ..

Making it we have used the best materials available on the market, worked and finished with the best care possible allowed by the state of art.

Use it within the rating for which it was built and will serve you faithfully for many years.

In case of doubts or concerns, our technical department is always ready to provide all the necessary help.

If you are satisfied tell the others, otherwise tell to us.

Your opinion and your suggestions will help us to improve even more our products.

Best regards

Annamaria Fiume IK7MWR

MADE IN ITALY

WARNING! Defend the environment

Disposing components and materials

The antenna consists mainly of aluminum, in the event of disposal, conferred the scrap to a specialized disposal center, in compliance with the requirements of local law.

