



The basic principle is a quarter-wave line of two coax-cables in parallel. One end of the line is connected to the radiator, the other to a socket, which is grounded at the metallic boom and has two functions:

1. It transforms the resistance of the radiator to the 50 Ohm of the feeding line.

With 2x75-Ohm-cables 28 to 50 Ohm.

With 2x50-Ohm-cables 12.5 to 50 Ohm.

With 3x93-Ohm-cables 18 to 50 Ohm

2. This line is a simplified coaxial sleeve balun to avoid sleeve-waves on the braid of the cable running to the station. Very effective!

Antennas which that match have some advantages:

- You do not need a folded dipole or any exotic radiators like loops, the length of a normal dipole can be corrected easier.
- The radiation pattern is very clear.
- Simple mechanical solution for the match with the coax-cables.
- For shortwave and 6m you can wind the cable to a choke with an additional suppression of sleeve-waves

With usual coax of 50 and 75 Ohm the following cases are interesting:

Radiation resistance Z of the Yagi	Lambda/4 Coax-cable	Impedance of the line
12.5 Ohm	2x50 Ohm parallel	25 Ohm
18 Ohm	50+75 Ohm parallel	30 Ohm
28 Ohm	2x75 Ohm parallel	37.5 Ohm

12.5-Ohm: Good for high-gain yagis with small bandwidth in the 6-m- and 2-m-Band, losses tenable

18-Ohm: Can be used on 6m and 2m, medium bandwidth

28-Ohm: Best balance for all antenna parameters on 2 m and 70 cm