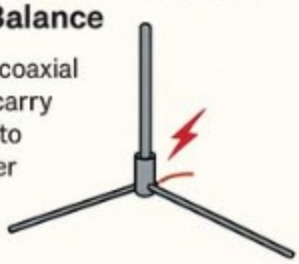
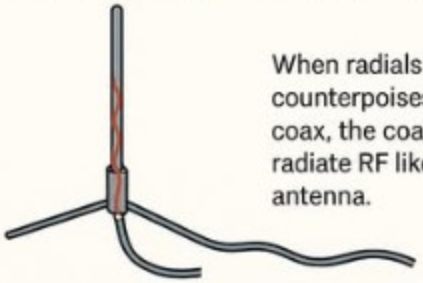
Counterpoises and Radials Should Never Touch the Coax Cable Feedline

1. Preserving Coax Shield Integrity and Feedline Balance

The outer shield of a coaxial cable is designed to carry return currents back to transmitter or receiver while shielding the inner conductor from unwanted RF.



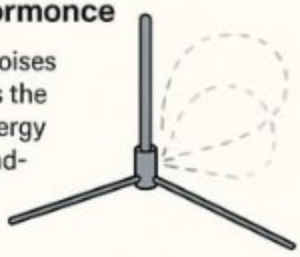
2. Preventing Common-Mode Currents



When radials or counterpoises contact the coax, the coax begins to radiate RF like part of the antenna.

3. Maintaining Predictable Antenna Performonce

Radials and counterpoises are meant to serve as the return path for RF energy in ground-plane or end-fed configurations.



4. Avoiding Coupling Issues and Signal Degradation

Coax cables are often run near other equipment. When the radials or counterpoises toucıh the coax, they can couple unwanted energy into other parts of the system.