

TRAP ON COAXIAL CABLE

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If a multi-band antenna or a symmetrical antenna is installed at insufficient environment it is possible when the antenna works to transfer, a part of RF energy is reflected from closest subjects to the antenna itself and to the braid of the coaxial cable of the antenna. From the braid of the coaxial cable the energy goes to ham's shack and causes damage to all radio equipment in to the shack.

A trap on the coaxial cable helps to eliminate the sneaking of the reflected RF- energy to the shack. The trap can be made from the coaxial cable that feeds the antenna. **Figure 1** shows installation of the trap. The data for the trap for all amateur SW-ranges are shown in **Table 1**. The trap can be made for a range, where the sneaking of the RF- energy does the most trouble.

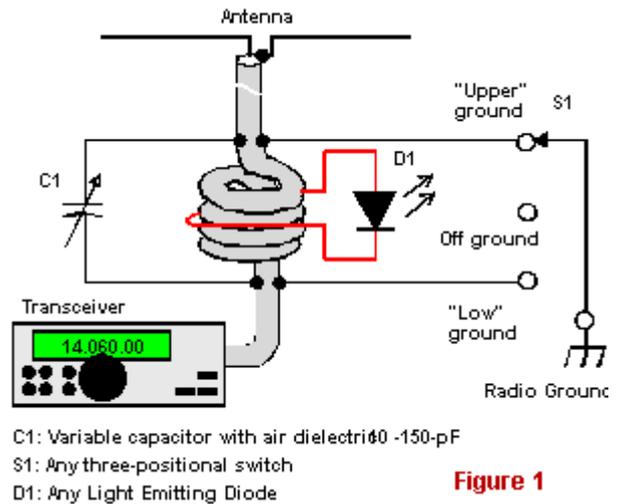


Figure 1

If several ranges are suffered from the incidental reflected RF- energy, then several proper traps are installed on the coaxial cable. In this case the first from the antenna trap should be tuned to the most high frequency range.

the resonance to frequency of the reflected RF - energy. If the reflected RF-energy has not enough power to make the LED glow, the trap can be tuned with the help of an RF-voltmeter that should be disposed near by the trap.

Empty plastic bottles of soft drinks are used for forms to the traps. A Scotch fixes coils of the trap. The diameter of the trap could be differed to plus/minus 20 % compare indicated in **Table 1**. The trap is placed where the coaxial cable entered in to the shack. One turn of copper wire in diameter 1 mm loaded to a LED (Light Emitting Diode) is coiled above the trap. LED shows when the trap is tuned to

If you have a good radio - ground try to connect the ground to upper, or to bottom side of the trap. Instead of a radio - ground you may try a device 'Artificial Ground' connected to thick copper wire by a length of 5-20 meters. In some cases radio - ground does not give any effect. Try the connection in experimentally way.

Table 1 Data for trap

Band, MHz	Inductance, uH	Diameter, mm	Length of winding, mm	Turns quantity, n
3,6	30	100	100	30
7	10	50	100	18
10	5	50	50	12
14	2,4	40	50	10
18	1,5	50	50	7
21	1,2	50	50	6
24	0,9	50	40	5
27-30	0,6	30	35	5

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