Remote Antenna Switch Project

Modifying a Relay for use as an RF Antenna Switch

**Typical Relay**

Note that the black wire is connected between the lug and the center contact. The wire is also positioned light beside the coil. If RF is run through the black wire, the coil may pick up the RF and “chatter”.

**Modified Relay**

Remove the black wire from the lug and connect directly to an RF connector—this will be the “Common”. If using one relay in the antenna switch, connect both lugs to RF connectors. If you are using several relays, connect only the NC contact to an RF connector. You can leave the unused contact open or ground it, depending on your system.

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Simple 2 Position Switch, 1 relay

Diode 1N4148
Cap: 0.01 uF, 50V

Schematic of the 2 Position Switch
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3 Position Position Switch Schematic

Each relay coil has diode and cap as per the figure below. In this version, the normally closed contact may be grounded when the relay is not energized, and multiple antennas can still be connected in parallel. This is the preferred version. I have used this type of system up to 200W CW in a contest without issues and up to 1000 Watts SSB intermittently; again without issues.

Control Box Schematic