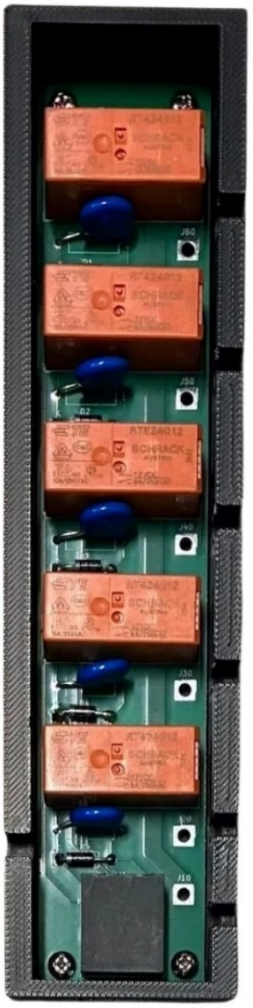
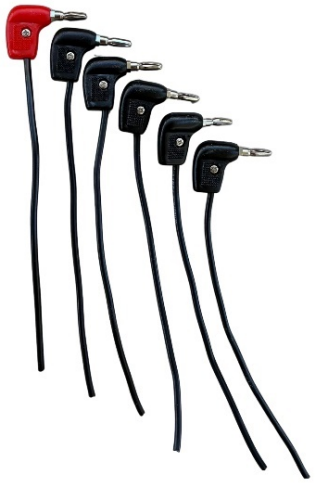
Mad Dog Coils “Lazy Dog” – User Guide



The Lazy Dog is a remote-controlled switching device for switching frequency bands when paired with the Mad Dog Coils range of antenna inductors. The relay board has five relays used to switch in and out up to five tuning collars. The controller board has a six-position rotary switch which control’s the relay unit (positions: Off, 1, 2, 3, 4 & 5). The controller unit is powered by 12 volts DC and the controller board is connected to the relay board by a cat 5e or cat 6 networking cable which carries the control voltage from the remote to the relay unit.

Relay Board Unit

The Relay Board comes mounted in a 3D printed enclosure. The board can be used with or without the enclosure. The enclosure has a slide-on lid which helps protect the board from the elements such a light rain, but is not be waterproof.



Also supplied are six banana plugs with 15 cm (5.9 inch) of wire soldered to the banana plug. These wires can be cut to exact length by the user and then soldered to the relay board. To complete this task the user will need to remove the board from the enclosure by removing the four screws that hold the board to the enclosure.

1. The red banana plug wire is used to connect to the red socket on the coil. This is the RF input wire to the relay switching board. Cut the wire to the correct length required.
2. The red banana plug wire is solder at pad labelled J10
3. Cut the five wires that have the black banana plugs to the desired lengths (or less than five based on the number of tuning collars used). These are the output wires.
4. Solder the wires with the black banana plugs to pads labelled J20 to J60. (only solder the quantity required based on the number of collars and if the coil has an upper bypass socket intended for use)
    - When the remote switch is at position 0 none of the output wires are live.
    - The wire connected to J20 is live when the remote switch is at position 1
    - The wire connected to J30 is live when the remote switch is at position 2
    - The wire connected to J40 is live when the remote switch is at position 3
    - The wire connected to J50 is live when the remote switch is at position 4
    - The wire connected to J60 is live when the remote switch is at position 5
5. Refix the relay board into the enclosure using the four supplied screws. Be careful not to over tighten the screws as this will scrip the plastic.

The Relay board, whether used in the enclosure or not, is now ready for use. The relay board can just hang in place, or it can be fastened to a product such as the little dog.

Controller Unit

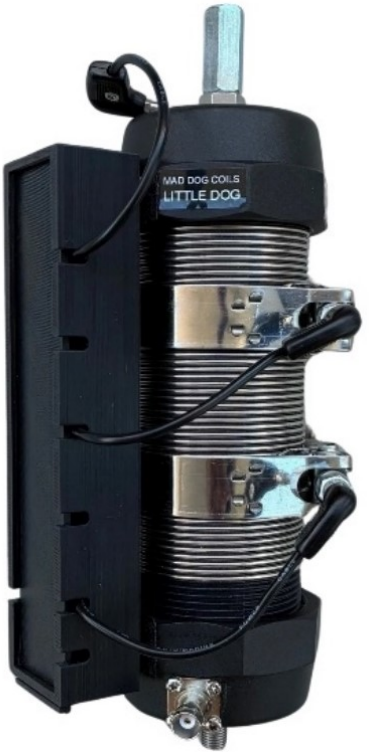
The controller board is housed in a 3D printed case. The unit is powered by 12 volt DC via power pole plug on the right side of the unit. On the left side is a RJ45 socket where the Cat 5e or Cat 6 connecting cable goes. The Switch on top of the unit controls what relay is turns on.

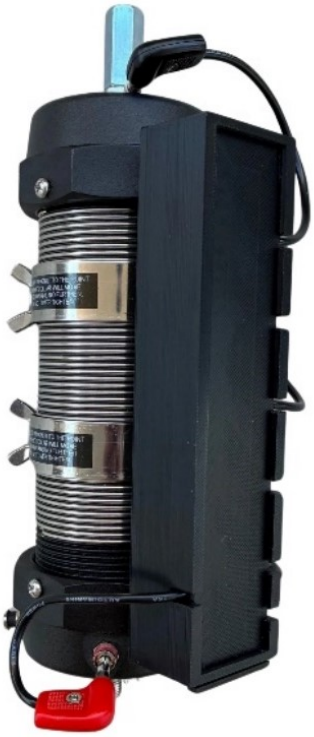
- Position 0 indicates all relays are off (no RF is getting through)
- Position 1 indicates that the banana plug lead connected to J20 on the relay board has continuity and RF will pass through from the red input connection.

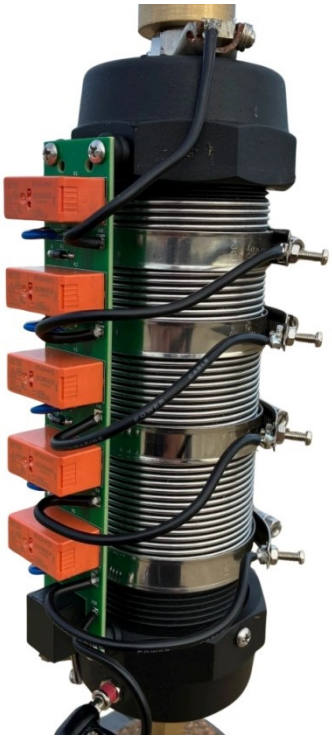
- Position 2 indicates that the banana plug lead connected to J30 on the relay board has continuity and RF will pass through from the red input connection.
- Position 3 indicates that the banana plug lead connected to J40 on the relay board has continuity and RF will pass through from the red input connection.
- Position 4 indicates that the banana plug lead connected to J50 on the relay board has continuity and RF will pass through from the red input connection.
- Position 5 indicates that the banana plug lead connected to J60 on the relay board has continuity and RF will pass through from the red input connection.

Mounting the Relay Unit

The examples below show how the relay unit can be attached to the MDC Little Dog. The first two images are using adhesive Velcro. The third image shows the relay board directly screwed to the Little Dog Coil. In this case eye terminals were used instead of banana plugs and bolted to a different type of collar. The relay unit does not have to be attached to the coil, it can just hang in place with the banana plugs connected.







RF Power Rating

SSB:100 W
CW: 75 W
AM/FM/Digital: 50 W

Power Supply Requirements

12 VDC (10 – 14 VDC range) via power pole connection
Current draw when relay active: 38 mA
it will take 26 hours to draw 1 amp from the power supply

NOTES: - The user will need to supply their own power lead connection and Cat 5e or Cat 6 cable.
- Maximum length of Cat 5e or Cat 6 Cable is 15 meters (50 ft).
- The design of the Lazy Dog is for one remote box to be paired with just one relay unit.

I hope you get many years of use and enjoyment out of your Mad Dog Coils product.

73’ Marty VK4KC the Mad Dog

Disclaimer

It should be noted that the Mad Dog Coils Lazy Dog should only be used in accordance to our specifications and within our stipulated intended use. All details of intended use are detailed in the documentation that is shipped with the product. We accept no liabilities for such uses outside of our intended use and stipulations.