

16 Position Choke - 0 to 15ft in 1ft Increments

A very simple circuit to control 4 relays from a BCD encoded switch with high current (1.5a) transistor drivers.

This circuit will work within the range of 8 to 20 volts and beyond and provides very low base current of around 4.5ma for a 150ma load. This is also the switch current which gives a maximum of around 18ma, well within the 250ma rating. The transistors are rated at 1.5 amps so everything should remain cold.

The relays use only the NC contacts which are generally rated lower than NO contacts so be sure they can handle the expected load. As the NC contacts are always connected by the choke wire there is little or no arcing and they should last indefinitely. NO contacts can be left disconnected or used for other purposes.

Parts List -

- 1 x Grayhill BCD Rotary Switch - PN 26ASD22-01-1-AJS (supplier - digikey.com)
- 4 x BD135 NPN Power Transistor
- 4 x 1/4 watt 3k Resistor (anything from 2k to 5k should work)
- 4 x Small Power Diodes - 1N4004 or similar
- 4 x SPDT Automotive Relays - minimum 40 amp rating on NC contacts - 60 amp is better.
- Box, wire, connectors, etc.

