

### **Remote Control Transmitter:**

When the levers in the Remote Control Unit are pushed, electrical contacts are made connecting the 9V battery power to the transmitter, indicating which commands the user wants sent to the Rover. Forwards/Backwards commands for each set of wheels and two extra functions are controlled by different levers or buttons. Each of these use a different set of electrical contacts which encode a sequence of electrical pulses; the pulse sequence depends on which command(s) are being sent. Some of the pulses in the sequence represent which channel setting (A-B-C) the remote control is on. This allows three units to use the same operating frequency in the same room at the same time without interfering with each other. An electrical circuit that is tuned to a frequency of 27 MHz creates a signal that is sent to the antenna when the pulses are active. The antenna converts this electrical energy into radio energy, creating a stream of radio energy bursts, which travel through the air and are picked up by, and understood by, the radio receiver in the car. The frequency of 27 MHz was selected for your Rover with the approval of the FCC (the US government) to minimize radio interference between this product and all other electrical products.