

Description of Operation

The remote commander is a battery powered OOK data transmitter. The microcontroller controls all the functions - reading the keypad, displaying the operation modes, sending data to the RF transmitter. Pressing any pushbuttons cause the processor to send corresponding code sequence to RF transmitter. It is the SAW operated single frequency On-Off-Keyed oscillator. The operating frequency is 916.5 MHZ +/- 0.1 Mhz. Following the oscillator is the Low-Pass Filter, which suppress high order harmonics of the transmitted signal. Antenna used in this design is a microstrip slot antenna and it is printed on the top side of the circuit board assembly.

Remote commander is powered by 4 AA size batteries. In order to prolong battery life the processor goes to sleep mode if no buttons were pressed for a few minutes, and wakes up as soon as any pushbutton was pressed.