

Function description of RX

This receiver can receive the control signal (49.86MHz) from transmitter. The power supply is 4.5V by 3pcs AAA batteries.

This receiver circuit uses a Sunplus - 5 functions remote control decoder IC, SPRC206A. This is a remote control decoder, which decodes the serial bit-stream data received from the TX (transmitter) and interprets the 5-line information as 5-bit output data to control the corresponding external component. The SPRC206A will be activated only when 2 consecutive and equal frames are received.

The antenna receives signal through L1 & C1, then the signal will be selected by the “tuning circuit” which consists of RF coil, C2, T2, R1, R2, C3, R3, C4 and R4. The tuning circuit will amplify the selected signal and send to “regeneration receiver circuit” for demodulation, which consists of C7, Q19, L2, R5, C5, R6, C8 and L8.

After demodulation, the signal will be sent to IC (pin IN1) for decoding through C18 and R8. Once the IC knows which button had been pressed on TX, the IC sends the corresponding outputs to control the rotation of motors then the TX can control the movement of receiver.