

Function Description of Transmitter (TX)

The TX (transmitter) sends radio frequency signal (49.68MHz) to control the movements of Mini Creature. The power supply of TX is 3V by 2pcs AA batteries.

It consists of a control IC, sunplus – SPRC205A, it is a RC encoder which encodes five lines of binary information into a serial bit-stream data. When any of the 5-line information is activated (eg. Go forward, turn right buttons), built-in crystal oscillator and power amplifier will be enable to deliver the encoded bit-stream data.

In the circuit, the resistor R10 turns 128kHz clock frequency to IC input - ROOSC. The 49.860MHz crystal gives the oscillated frequency to the IC input – OSC0 and OSC1. The IC will encode the signals and detect which button had been pressed. The signal will be output by IC pin – RFO. This output signal will be sent through C15, L4, C18, L5, C8, L3 and antenna for control the movement of receiver.