

The description of PR-26

Transmission for the Water Gun Remote Control:

The TX of the Water Gun remote control is see the PR26 Schematic-TX.PDF.

When pressed any of the 5 buttons (S1-S5), Through the diode gate circuit (D1-D5) and Zener-diode (D6) can opens Q1 (Transistor) and supply the Power GND for MCU (U1) and RF circuit; also, the DATA CODE output of MCU (U1-8). The DATA CODE is sent to the RF circuit for modulation.

The RF circuit using R3, Y1, L1 and Q3 to generator the oscillator frequency, and using R2, C8 and Q4 to modulate the DATA CODE. The modulate frequency are 27.145MHz. Also, the transistor Q4 is power amplification.

The C11, L3 and antenna comprises a transmission circuit.

Receive for the Water Gun Main Squa:

The RX of the Water Gun Main Squa is see the PR26 Schematic-RX.PDF.

After the button (S6) of the Water Gun Main Squa is pressed and released, The MCU(U1) can open Q25(transistor) and supply the power VCC for RF circuit, will receive the signals and RF circuit stay on work mode and generates oscillation frequency of 27.145MHz. Meanwhile, the whole circuit stays on work mode.

The RF signals received from the antenna go to Q1 for high frequency amplification and then proceed to demodulation to filter out high frequency. The RF signals then further go to Q3 for demodulation to become intermediate frequency, and after going through 3 class intermediate frequency amplification (Q3, Q4, Q5), the signals then are sent to Q6 for reverse and amplification to restore to DATA CODE. The DATA CODE is sent to MCU (U1) through motor driver circuit (Q20, Q7,Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19) to control Water Gun Main Squa shot of water (M3), moved up and down (M1),the right and left rotation (M2).