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FCC ID: N8Q830-430-1-T

Model: Coleman 830-430 Remote Control Tent Light
Part Name: Transmitter Unit

Technical Description

1. Power Supply

The 12V battery is the power supply for the transmitter unit.

2. Voltage Regulator

Zener diode D2 regulates the voltage of the power from the 12V battery. Capacitor C7 filters out power supply noise.

3. On/Off Tact Switch

When the tact switch is pressed, the transmitter circuit is energized and LED D1 is light up as power indicator.

With the tact switch pressed, capacitor C6 and resistor R5 switch the state of the output signal of chip IC1, either from "on" to "off" or from "off" to "on." For example, if the initial state of the output signal from IC1 is "off," pressing the tact switch will make the transmitter emit an "on" signal. Pressing the tact switch again, the transmitter emits an "off" signal. The result is a "push-on push-off" feature for the transmitter to remote control the receiver unit.

4. Signal Oscillation, Encoding, and Modulation

The output signal ("on" or "off") from chip IC1 is encoded by the address bits A0 to A7. The encoded signal is then oscillated and modulated internally by IC1.

5. RF Amplification and Transmission

After the encoded signal is oscillated (into RF frequency) and modulated by IC1, it will be amplified and then transmitted out by transistor Q1, inductor L1, capacitors C1, C2, C3, C4 and C5, and resistors R1 and R2. The variable capacitor C1 is tuned for the transmitter to transmit at the 318 MHz RF frequency.