

EXHIBIT B

(FCC Ref. 2.1033(b)(4))

"Description of Circuit Functions"

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**Description of Circuit Function for Remote Control Series TR300, RC270 & RC270D****TR300**

TR300 is a hand held battery operated 433.92MHz transmitter. A 9-volt battery is used to supply power to the transmitter module while a 3V regulator (U3) provides power to the micro-controller. U1 is the micro-controller which scan the keypad and generates the pulse train to be transmitted whenever a key is pressed. This signal is passed to the transmitter module to act as On/Off keyed modulation. In the transmitter module, transistor Q1 is used as the oscillator while the frequency control element is the SAW resonator (Y1). A trace on the printed circuit board is used as the built-in antenna. LED is lighted during transmission operation.

**RC270**

RC270 is a 120V AC plug-in remote control receiver with relay control. Capacitor C13 and Diodes D6~D9, Capacitor C12 and Zener Diode D5 forms the 120V AC to 24V DC supply circuit. The 24V DC is used to drive the switching relay. Regulator U4 is used to provide regulated 5V DC for the micro-controller and receiver circuit.

In the receiver section, L1 and C2 forms the frequency selection circuit and Q1 is used as an regenerative receiver circuit. The received signal is then amplified and shaped by the Operational Amplifier IC U1. The output from the amplifier is then input to the micro-controller. The micro-controller decodes the signal from the receiver and also checks the user key input. The output from the micro-controller is used to control the relay through transistor driver Q2.

**RC270D**

RC270 is a 120V AC plug-in remote control dimmer receiver with TRIAC control. Capacitor C16, Diode D2, Capacitor C14 and Zener Diode D4 form the 120V AC to 12V DC supply circuit. D3 and R19 further regulate the voltage to 5.6 V DC for the micro-controller and receiver circuit. Zener Diode D5 and R22 form the zero-crossing detection circuit for the micro-controller for phase control purpose.

In the receiver section, L1 and C2 forms the frequency selection circuit and Q1 is used as an regenerative receiver circuit. The received signal is then amplified and shaped by the Operational Amplifier IC U1. The output from the amplifier is then input to the micro-controller. The micro-controller decodes the signal from the receiver and also checks the user key input. The output from the micro-controller is a phase-controlled pulse used to trigger the TRIAC that controls the intensity of the lamp attached. Coil L4 and Capacitor C13 comprises the noise filtering circuit. R23 and neon lamp LP1 is used to indicate the output status of the dimmer.