## **EXHIBIT B**

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

"Description of Circuit Functions"

Mandolyn/RC420 FCC ID: PLJRC420 Marstech Report No. 22174D Description of Circuit Function for Remote Control Series RC100, RCT100, RCT150 & RC420

## RC100/RCT100/RCT150/RC420

RC100/RCT100/RCT150/RC420 is a 120V AC plug-in remote control receiver with relay control. Capacitor C13 and Diodes D7~D10, Capacitor C12 and Zener Diode D6 forms the 120V AC to 24V DC supply circuit. The 24V DC is used to drive the switching relay. Regulator U2 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 microcontroller. 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.

## **Period of Keyed Modulated RF - Carrier**

Model: TR300

RC100/RCT100/RCT150/RC420

Carrier Frequency:

433.92MHz

Bit Rate:

512 bits / second

Encoding:

Pulse width modulation

1 pulse of 1.28 ms low, 0.64 ms high for logic 1 1 pulse of 0.64 ms low, 1.28 ms high for logic 0

Word Format:

36 bits / word

Operating Period:

One transmission of 3 words each time (depends on user)