

EXHIBIT B

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

“Description of Circuit Functions”

Channel	Transmitter V.C.O. frequency	Receiver V.C.O. frequency
0	903.370	868.67
1	906.370	871.67
2	907.870	873.17
3	909.370	874.67
4	912.370	877.67
5	915.370	880.67
6	919.870	885.17
7	921.370	886.67

Chart 1

## ***Circuit Function Description***

The receiver and transmitter are operated as half duplex. The receiver is powered only at initial power-up to measure ambient transmissions at the eight operating frequency bands. Once all bands are sampled, the "quietest" one is selected and used as the transmission band frequency, the receiver is turned off and the transmitter is turned on.

### **Transmitter Function:**

Digital data from the Digital micro controller is modulated at the transmitter using frequency shift keying. An accurate 12.00MHz voltage-controlled crystal oscillator serves as the frequency reference for the transmitter. The reference frequency is directly modulated. The bandwidth on the frequency shift is constrained to 25kHz through a two-pole low-pass filter.

The modulated 12.00MHz reference frequency is applied to the Phase-Locked-Loop (PLL). The PLL, combined with a 902-928MHz VCO (see table above) forms a stable frequency synthesizer.

A buffer amplifier is used to isolate the VCO from the antenna, and increases the output power of the transmitter. The buffer output is connected to a low pass filter used to suppress harmonic emissions. The filter output is connected to the antenna.

FCC ID: P55-T0111  
Marstech Report No. 21458D  
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