

EXHIBIT B

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

"Description of Circuit Functions"

Exhibit B(1)-1 - Circuit Description



Graco Baby Monitor Circuit Description

1. **RF Transmitter**
This circuit modulates the voice or data onto a carrier frequency using FM. The modulated carrier signal is amplified and feeds to the antenna.
2. **RF Receiver**
Modulated RF signal is received through the antenna. The received signal is downconverted to a lower frequency IF.
3. **Frequency Synthesizer**
Both transmit and receiver frequencies are generated based on a reference frequency derived from a quartz crystal. This allows accurate and stable frequency generation. A microcontroller is used to set both transmit and receive frequencies by sending signals to the frequency synthesizer therefore allowing multi-channel operation.
4. **FM Demodulator**
The IF from RF receiver is converted into audio signal by this circuitry. The demodulated audio goes into the speaker amplifier while the recovered data signal goes into the microcontroller.
5. **Microphone Amplifier**
The audio signal picked up by the microphone is a very low-level signal. A microphone amplifier is used to amplify this signal so that it can be transmitted.
6. **Speaker Amplifier**
The amplifier is used to amplify the received signal to sufficiently high levels before feeding into the speaker.
7. **Microcontroller**
This is the 'brain' of the system. It determines the transmit/receive frequency pairs to use, handles the handshaking signal between the mobile and fixed units to setup a communication signal and mutes the audio paths accordingly. It also switches off the transmitter when it is not required.