900MHz Baby Monitor Circuit Description:

RX unit

The receiving path is established by below stages:

1) Low Noise Amplifier (LNA)

FM signal receive from antenna and input to low noise amplifier Q200 and output to SAW band pass filter.

2) SAW Band Pass Filter

Filter out of the spurious signal and fed to mixer.

3) Mixer

Mixer is included Q201 and local oscillator Q202, which is controlled by U200 PLL pin. The IF (10.7MHz) is fed to Q205 to amplify and filtering by 10.7MHz ceramic filter F201. Then the IF signal is fed to U200 pin 40.

4) IF amplifier

U200 has a built in IF amplifier. Amplified IF is filtering again by a ceramic filter F202. The filtered IF will input to FM demodulator U200 pin33.

5) FM demodulator and expander

The IF signal is demodulated by quad-coil L205, then the recovered audio signal is input to the expander stage in U200 for de-emphasis before output to the speaker the audio amplifier in U200.

6) Audio amplifier and speaker

U2 is an audio power amplifier whose gain is controlled by VR1 resistor.

7) Micro Control Unit (MCU)

The VCO frequency is controlled by MCU (U2) that is using programming to control PLL(U200).

Rx Frequency	Rx LO Frequency	Rx VCO Frequency
927.4 MHz	916.7 MHz	458.35 MHz
927.8 MHz	917.1 MHz	458.55 MHz
927.2 MHz	916.5 MHz	458.25 MHz
927.6 MHz	916.9 MHz	458.45 MHz