SoniqCast ›))

Introduction

This document provides the background technical data necessary for FCC submittal for the *FM transmitter* (FCC ID: RTC-1000FM) within the SoniqCast Aireo wireless audio player (model SQ-1000-NA).   SoniqCast LLC is headquartered at 4400 Baker Road, Minnetonka, MN and has been assigned a FRN of 0010017416.

The Aireo player contains two transmitter functions, a *FM transmitter* detailed herein, and an 802.11b radio (FCC ID: RTC-1000WF) detailed in a separate submittal.

1 General Functions

The SoniqCast Aireo is a portable wireless audio player for the consumer electronics market. It plays audio content, including music and voice, in MP3, WMA and .wav digital formats. Content is stored on an internal hard disk and an optional removable SD format memory card. Content is loaded via a USB interface and/or an 802.11b wireless LAN connection. Audio output is via external headphones or is modulated onto a carrier in the 88-108 MHz band for receipt on a conventional FM radio receiver.

The user interface consists of a power button, keypad and LCD screen.

2 Circuit Operation

A single IC, the Rohm BH1415, provides a FM stereo transmit function with the audio supplied from the device.   A PLL controlled VCO is implemented with a varactor controlled LC tank circuit, tuning over the 88-108 MHz band. Digital tuning of the PLL is by the unit microprocessor. 75us pre-emphasis is implemented for compatibility with the US market. The transmitter is automatically disabled when any headphone jack is populated.

Reference the external documents *1000FM Schematic.pdf* and *1000FM Block Diagram* for further information.

3 Device Antennas

As a battery powered portable product, no external grounding system is used with the unit antennas. All transmit antennas are internal to the unit with no provision for external antennas.

3.1 FM Transmitter
A pcb trace is used for the FM transmit antenna. The trace forms a simple, short monopole. The transmitter is disabled if any headphone jack is populated.