5200 Auto Club Dr.
Dearborn, Michigan 48126-9982
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Re: Certification for Lear Corporation
Receiver, Model NG SKREEM
FCC ID: KOBDR06SB
IC: 3521A-DR06SB

DESCRIPTION OF OPERATION

GENERAL DESCRIPTION

The product for which certification is pursued will be manufactured for DaimlerChrysler Motor Company by Lear Corporation for automotive applications. The module is intended to perform two functions: RKE (Remote Keyless Entry) and TPM (Tire Pressure Monitoring). The receiver is to be mounted in the vehicle and will work in conjunction with the 315 MHz handheld transmitter and tire sensors. The receiver base-station is part of a keyless entry system that can be used to perform certain functions such as lock and unlock of the driver and passenger doors, open the trunk, etc… depending on how the receiver module is programmed. The receiver is also part of a tire pressure monitoring system that take be used to check the pressure and/or temperature of the vehicle's tires. There are different housings this receiver module will be mounted in and will have a DaimlerChrysler/Lear part number stamped on the back of the housing. The PCB, microprocessor and RF circuitry on all versions are identical.

TECHNICAL DESCRIPTION

When the buttons on the handheld transmitter is depressed, a RF modulated signal is generated that will only be recognized by a matched receiver matching the correct data protocol. The code is carried by 315 MHz carrier with AM OOK (on-off keying) modulation and demodulated by the receiver basestation. The data code is of a Manchester modulation format to express bits "0" and "1". RF detection is accomplished with an off-board wire antenna internal to the receiver base-station. The receiver is of a super-heterodyne, single conversion, narrow band architecture that demodulates the RF transmission present on the off-board antenna. Demodulated data is then made available to the system microprocessor that decodes the transmitted message and performs the desired function. The local oscillator is a PLL crystal-based system with a frequency tolerance of ± 16kHz.

When the tire sensors are actuated either by pressure, rotational force or triggered, a RF modulated signal is generated that will be recognized by a receiver matching the correct data protocol. The code is carried by 315 MHz carrier with FM FSK (frequency shift keying) modulation and demodulated by the receiver base-station. The data code is of a Manchester modulation format to express bits "0" and "1". RF detection is accomplished with an off-board wire antenna internal to the receiver base-station. The receiver is of a super-heterodyne, single conversion, narrow band architecture that demodulates the RF transmission present on the off-board antenna. Demodulated data is then made available to the system microprocessor that decodes the transmitted message and performs the desired function. The local oscillator is a PLL crystal-based system with a frequency tolerance of ± 16kHz.