

Technical Description of the transmitter type designation : 25758220

(GMX295 Domestic – 315MHz FM)

Brief Description

A block diagram of the RTPMS is shown in figure 1. The transmitter has the following sections:

- RF circuit
- Pressure sensor
- roll switch
- Transponder Coil (125kHz LF Learn Switch)
- ASIC

The system has been developed to monitor a vehicle's tyre pressures whilst driving or stationary. An electronic unit inside each tyre, (referred to as the RTPMS transmitter) mounted to the valve stem, periodically measures actual tyre pressure. By means of RF communication, this pressure information is transmitted to a receiver/decoder which is fitted in the car.

The tire pressure value is detected by the ASIC (Application Specific Integrated Circuit) via a pressure sensor. The data is transmitted using a Manchester coding protocol at a maximum data rate of 4.096 Kbits/sec. The clock generator for the ASIC is crystal controlled. The block transmission format is shown in figure 2. The valve stem is part of the transmitting antenna. while the vehicle is parked (Stationary Mode), there is no transmission. when the vehicle is moving (roll switch closed) the RTPMS transmit each minute 8 words as shown in figure 2. The transmitter will remain in drive mode for a period of time known as the Service Period after the vehicle comes to rest (roll switch open). After the Service Period time has elapsed the transmitter returns to Stationary Mode.

The RTPMS uses a Transponder Coil, which when activated with 125kHz LF, will 'LEARN' the ID code to the receiver/decoder in the production line of the vehicles.