FCC ID:OUCG8D-360M

OMRON

G8D-360M

Receiver, Tire Pressure Monitoring System

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1. Constitution of the Tire Pressure Monitoring System for vehicle

Tire Pressure Monitoring System is the system that receives the information, from transmitters installed at each tire, about the inflation pressure or temperature of tires detected by the sensor, so that the system can detect the abnormality of tires like fallen inflation pressure. This system consists of transmitter, receiving antenna, and receiver. The transmitter sends information of tire, read by the sensor, in the form of radio wave at constant intervals. The receiver is fixed inside the vehicle. If IG is OFF, it works intermittently to prevent the battery exhaustion. When the receiver detects the synchronous code and IG is ON, it runs continuously to receive the signals completely. If the received code is normal, the system will not inform the user. As shown below, in the case that the transmitter sends information that the tire is in abnormal condition, and that the receiver system has a trouble, the system will output to Combi meter ECU and inform the user with lighting up Warning LED.

TPMS Warning LED is lit by the following situations.
Bulb disconnection detection output（The warning light is On for 3 sec. when IG=OFF→ON）
Tire air pressure warning output (Warning light is ON)
System warning output (Warning light is blinking)

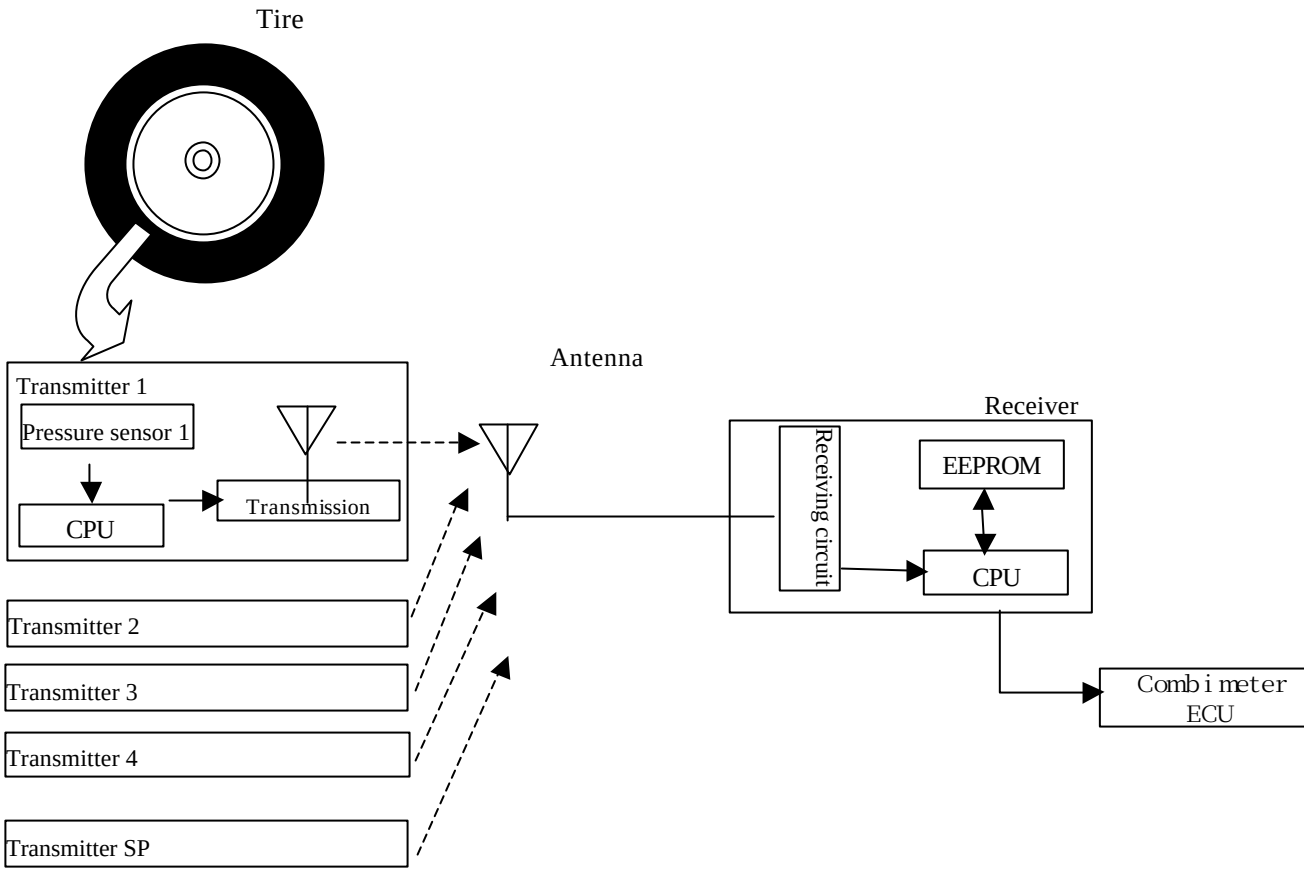
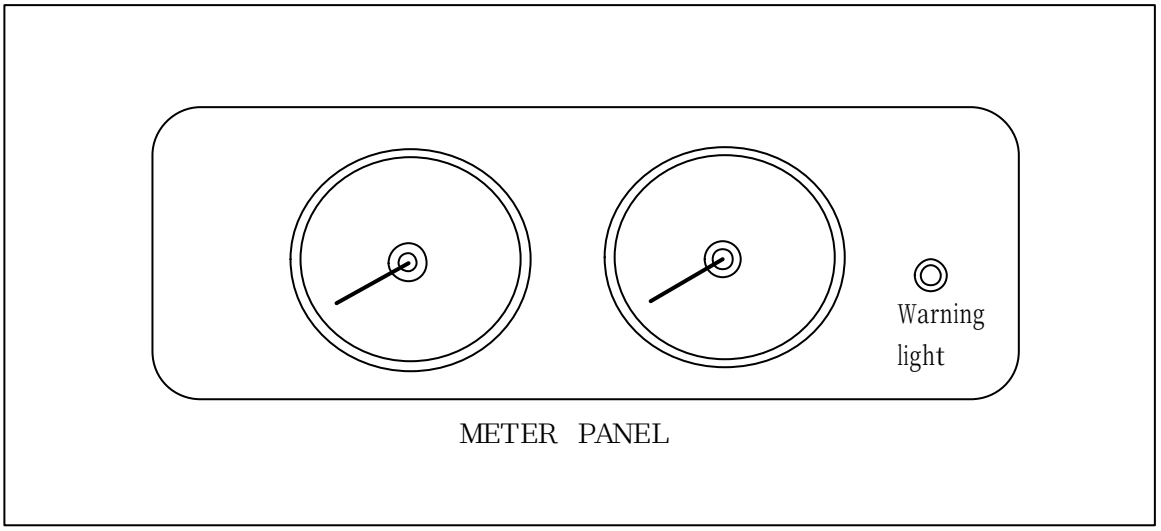


Figure 2-1 System Architecture

2. User's manual (provisionally)



Tire inflation pressure warning light

This light illuminates if the inflation pressure of any tire (except for compact spare tire) drops while the ignition key is in the "ON" position. It normally illuminates when the ignition key is turned to the "ON" position and goes off a few seconds later.

If the warning light illuminates while driving

Avoiding hard braking, hard steering, and high speeds, drive to the nearest gas station or authorize car dealer and adjust the tire inflation pressures.(except for compact spare tire)

If the warning light blinking wfile driving

It is thought abnormality of the device, go to the check to the nearest car dealer as soon as possible.

Whenever the tires and wheels are replaced with new ones

Tire inflation pressure sensors must be fitted on the new wheels and their ID codes must be programmed into the system. Have tire and wheel replacement performed by an authorized car dealer to avoid the risk of damaging the tire inflation pressure sensors.

CAUTION

- If the tire inflation pressure warning-light does not illuminate when the ignition key is turned to the "ON" position the system may be faulty.
- If the tire inflation pressure warning light illuminates while you are driving, avoid hard braking, hard steering, and high speeds. Otherwise, you could make the vehicle unstable and have a serious accident.
- The tire inflation pressure warning light may not illuminate immediately in the event of a tire blowout or rapid leak..

3. Block diagram

This is the block diagram concerning to the receiver.

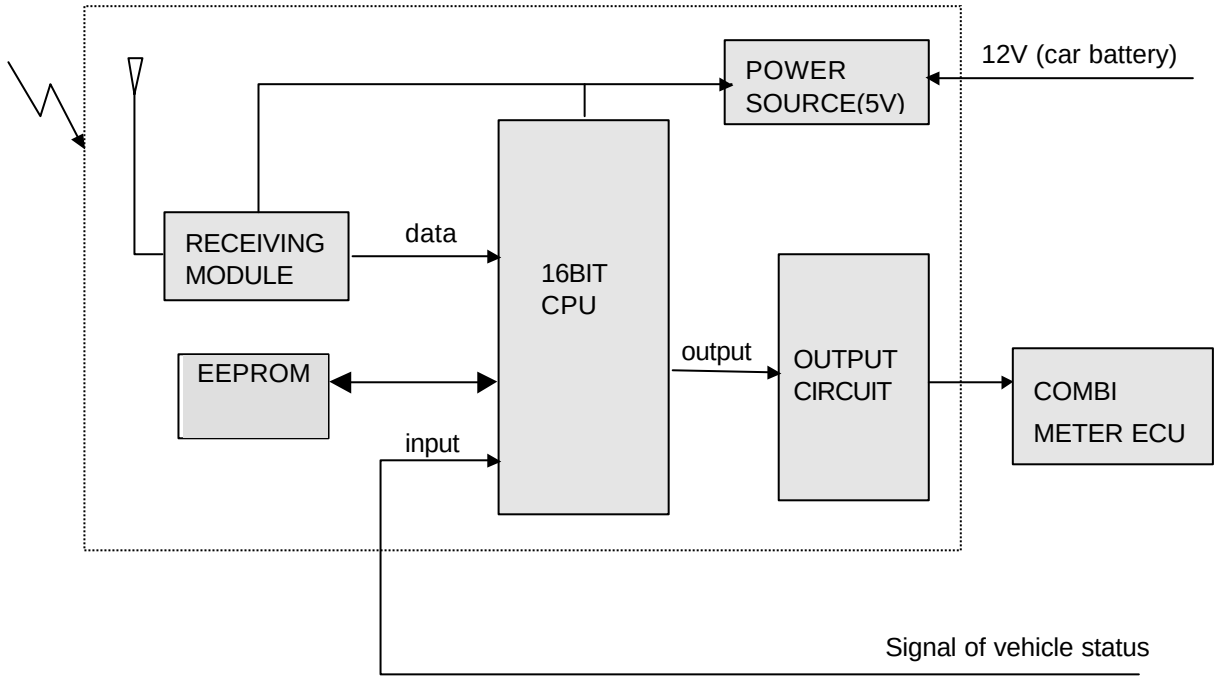


Figure 3.1 block diagram of the receiver

4. Specification

4.1 CPU

Type	M30102(16bit) Manufacturer: MITSUBISHI
ROM	24K bytes
RAM	1Kytes
Clock frequency	8.00MHz
Clock frequency generation	Crystal oscillator
Package	48pin QFP

4.2 RF block

Local clock frequency	423.22MHz
Frequency generation	Crystal resonator
Modulation	Single Superheterodyne
Bandwidth	±200KHz
Sensitivity	30dBuV

4.3 Others

Dimension	83mm× 64mm× 31mm
Weight	120g
Battery	Car Battery (DC 12V)
Operation Voltage	DC 12V, 20mA
Operation temperature	-30℃ ~ +80℃

5. Features

Battery saving

The receiver works intermittently to reduce the battery consumption. The microcomupter embedded on the receiver controlls the power supply for the RF circuit. In case of the microcomputer detects the wake-up signal during the power supplied, the microcomputer continue supplying the power until the data frame will be received.