

3-4. System Description

Transmitter is composed of four buttons as below.

- Door Lock button
- Door Unlock button
- Trunk button
- Panic Alarm button

There is no difference among LOCK, UNLOCK, TRUNK and PANIC conditions regarding the electrical and mechanical function of a transmitter. Also there is no difference on each condition regarding the frequency of radiated emissions. The only difference is a transmission code.

Transmitter operation with a lithium battery (: CR2025)

Radio frequency Oscillator: Carrier: 315.0 MHz
Amplitude Modulation: 100 %

Action principle of Transmitter of Keyless Entry System is written below:

Transmitter can transmit signals by pressing button, when all circuits are in stop condition, inclusive of microcomputer.

(: Stop condition means the condition of waiting for button switch input.)

Even if Transmitter is in the stop condition, as soon as one of four buttons is pressed, microcomputer starts to operate.

Microcomputer reads ID code, which was memorized before, from the EEPROM. EEPROM set up with in microcomputer. When the read process is over, data is transmitted according to transmission format for each button switch. The maximum transmission time is 358.28 msec.

Microcomputer communicates with an oscillator. When the output of microcomputer is "HIGH", the oscillator works, and when the output of microcomputer is "LOW", the oscillator stops.

When transmission process of all data is over, the oscillator stops and microcomputer returns to be in the stop condition (: waits for button switch input again).

As concerns Transmitter for test sample, the software program is modified to continue to transmit data "0" after a battery is set in.