

OMRON

---

# G8D-382H-B

---

Receiver, RF Keyless Entry System

## Table of contents

|     |                                                                                                      |    |
|-----|------------------------------------------------------------------------------------------------------|----|
| 1.  | Constitution of the Radio Frequency Keyless Entry system with Door Lock Controller for vehicle ..... | 1  |
| 2.  | User's manual (provisionally) .....                                                                  | 2  |
| 3.  | Block diagram .....                                                                                  | 3  |
| 4.  | Specification .....                                                                                  | 4  |
| 5   | PCB                                                                                                  |    |
| 5.1 | Circuit diagram .....                                                                                | 5  |
| 5.2 | Parts layout (front).....                                                                            | 6  |
| 5.3 | Pattern layout .....                                                                                 | 7  |
| 5.4 | Parts list .....                                                                                     | 9  |
| 5.5 | Connector .....                                                                                      | 12 |
| 6.  | Photographs .....                                                                                    | 13 |

# 1. Constitution of the Radio Frequency Keyless Entry System with Door Lock Controller for vehicle

The radio frequency keyless entry is a system that it controls locking and unlocking the door by wireless remote controller. This system consists of two components. The TRANSMITTER is a device that transmits the signal when the button is pressed. The transmission signal consists of several synchronous codes, unique identification code, security code and function code. The RECEIVER is fixed inside the vehicle. It works intermittently to prevent the battery exhaustion. When the receiver detects the synchronous code, it runs continuously to receive the signals completely. After receiving the signal, the receiver decides which operation will be performed. The user can select the following operations by pressing the button of the remote transmitter.

| OPERATION           |  | ACTION                            |
|---------------------|--|-----------------------------------|
| <b>LOCK</b>         |  | Lock the door                     |
| <b>UNLOCK</b>       |  | Unlock the door (Open the window) |
| <b>BOOT RELEASE</b> |  | Release the boot                  |

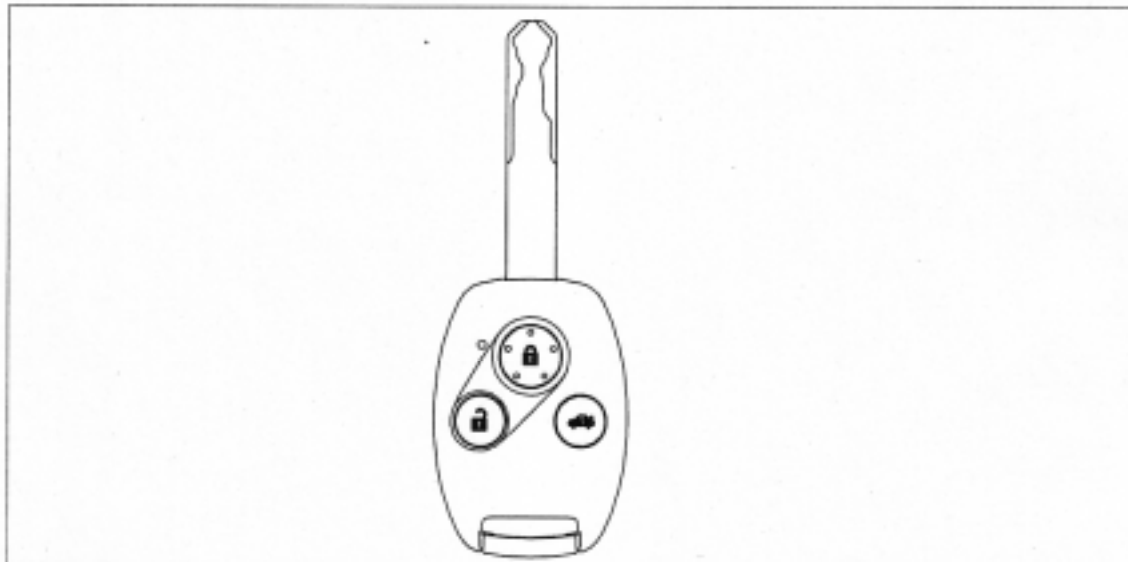
This receiver also controls wired operation. When the key is in the driver's side key cylinder, all doors will Unlock if the key is turned to UNLOCK and hold more than one second. In case of the operation time is shorter, the only driver's side door is mechanically unlocked. It is also available to control the door lock status by using the remote door control switch(both driver's and passenger's side).

Transmitter

$f = 433.92\text{MHz}$

## 2. User's manual (provisionally)

### REMOTE TRANSMITTER



You can lock and unlock your vehicle with the remote transmitter.

#### LOCK

When you push the LOCK button, all the doors will lock.

You cannot lock any of the doors with the remote transmitter if any door is open or the key is in the ignition switch.

#### UNLOCK

When you push the UNLOCK button, all the doors will unlock.

You cannot unlock any of the doors with the remote transmitter if the key is in the ignition switch.

When you push the UNLOCK button more than about 1.0 second, the window will open.

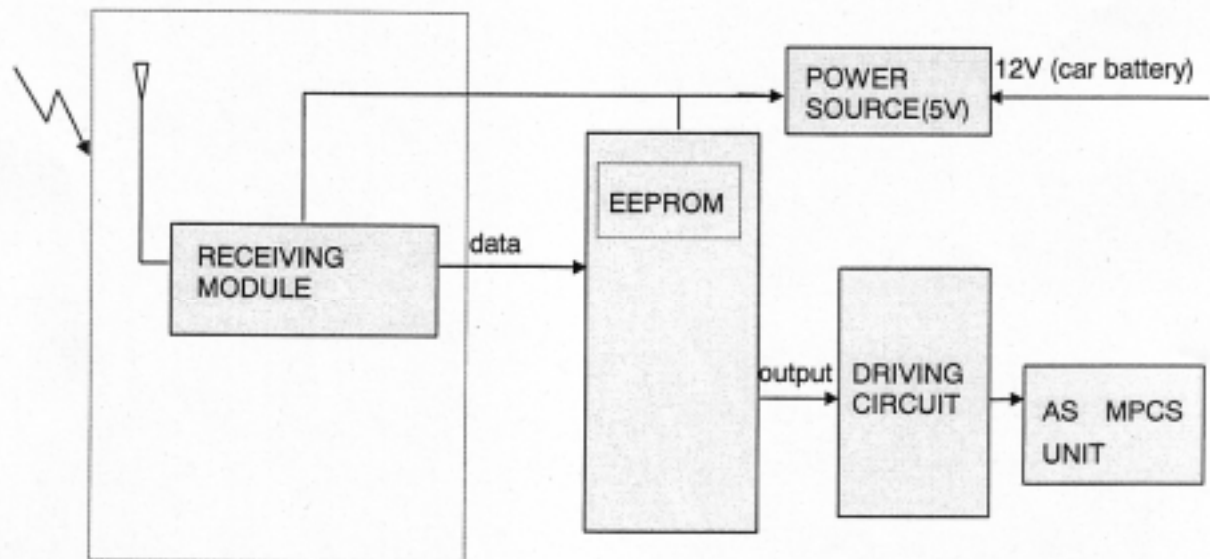
#### BOOT RELEASE

To open the boot, push the BOOT RELEASE button for approximately one second.

The boot will not open if the key is in the ignition switch.

### 3. Block diagram

This is the block diagram concerning to the receiver.



**Figure 3.1** block diagram of the receiver

## 4. Specification

### 4.1 RF block

|                       |                        |
|-----------------------|------------------------|
| Local clock frequency | 423.22MHz              |
| Frequency generation  | Crystal resonator      |
| Modulation            | Single Superheterodyne |
| Bandwidth             | $\pm 200\text{KHz}$    |
| Sensitivity           | 30dBuV                 |

### 4.2 Others

|                       |                                           |
|-----------------------|-------------------------------------------|
| Dimension             | 40.9 mm $\times$ 48.2 mm $\times$ 29.8 mm |
| Weight                | 18 g                                      |
| Battery               | Power Source (DC 5V)                      |
| Operation Voltage     | DC 5V, 10mA                               |
| Operation temperature | -30°C ~ +80°C                             |