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# OKA-750R

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Transmitter, RF Keyless Entry System

## Table of contents

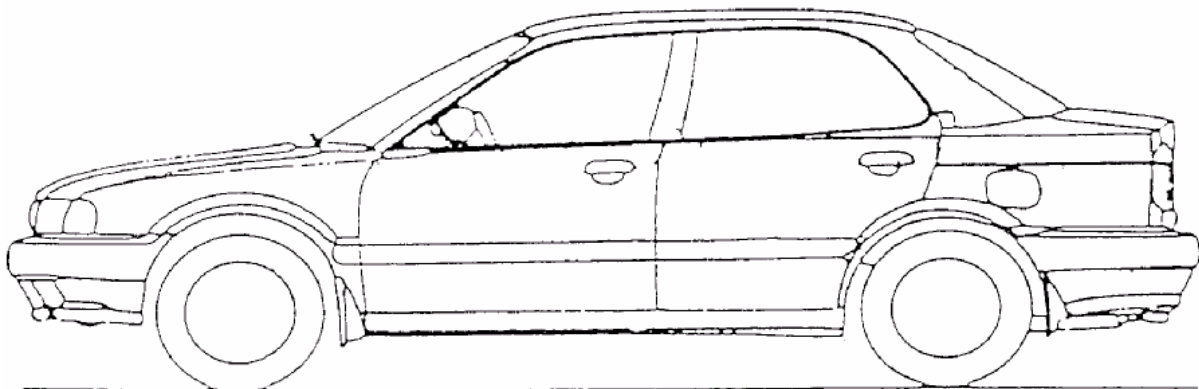
|     |                                                                                       |    |
|-----|---------------------------------------------------------------------------------------|----|
| 1.  | Constitution of the Radio Frequency Keyless Entry system Controller for vehicle ..... | 1  |
| 2.  | User's manual (provisionally) .....                                                   | 2  |
| 3.  | Block diagram .....                                                                   | 3  |
| 4.  | Specification .....                                                                   | 4  |
| 4.1 | CPU                                                                                   |    |
| 4.2 | EEPROM                                                                                |    |
| 4.3 | RF Receiver Module                                                                    |    |
| 4.4 | Other                                                                                 |    |
| 5.  | Features .....                                                                        | 5  |
| 5.1 | Door lock control                                                                     |    |
| 5.2 | Battery saving                                                                        |    |
| 6.  | Derivatives .....                                                                     | 6  |
| 7.  | PCB .....                                                                             | 7  |
| 7.1 | Circuit diagram                                                                       |    |
| 7.2 | Parts layout                                                                          |    |
| 7.3 | Parts list                                                                            |    |
| 7.4 | Connector                                                                             |    |
| 7.5 | Photographs                                                                           |    |
| 8.  | RF Module .....                                                                       | 8  |
| 8.1 | Block diagram                                                                         |    |
| 8.2 | Circuit diagram                                                                       |    |
| 8.3 | Parts Layout                                                                          |    |
| 8.4 | Part list                                                                             |    |
| 9.  | Sticker .....                                                                         | 9  |
| 10. | Antenna .....                                                                         | 10 |

# 1. Constitution of the Radio Frequency Keyless Entry System for vehicle

The radio frequency keyless entry is a system that it controls locking and unlocking the door and the trunk and the panic by wireless remote controller. This system consists of three 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 and crc 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          |
|-----------|-----------------|
| LOCK      | lock the door   |
| UNLOCK    | unlock the door |
| TRUNK     | open the trunk  |
| PANIC     | alarm the horn  |



Transmitter  
 $f = 313.85\text{MHz}$



## 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 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 any door is open or the key is in the ignition switch.

#### TRUNK

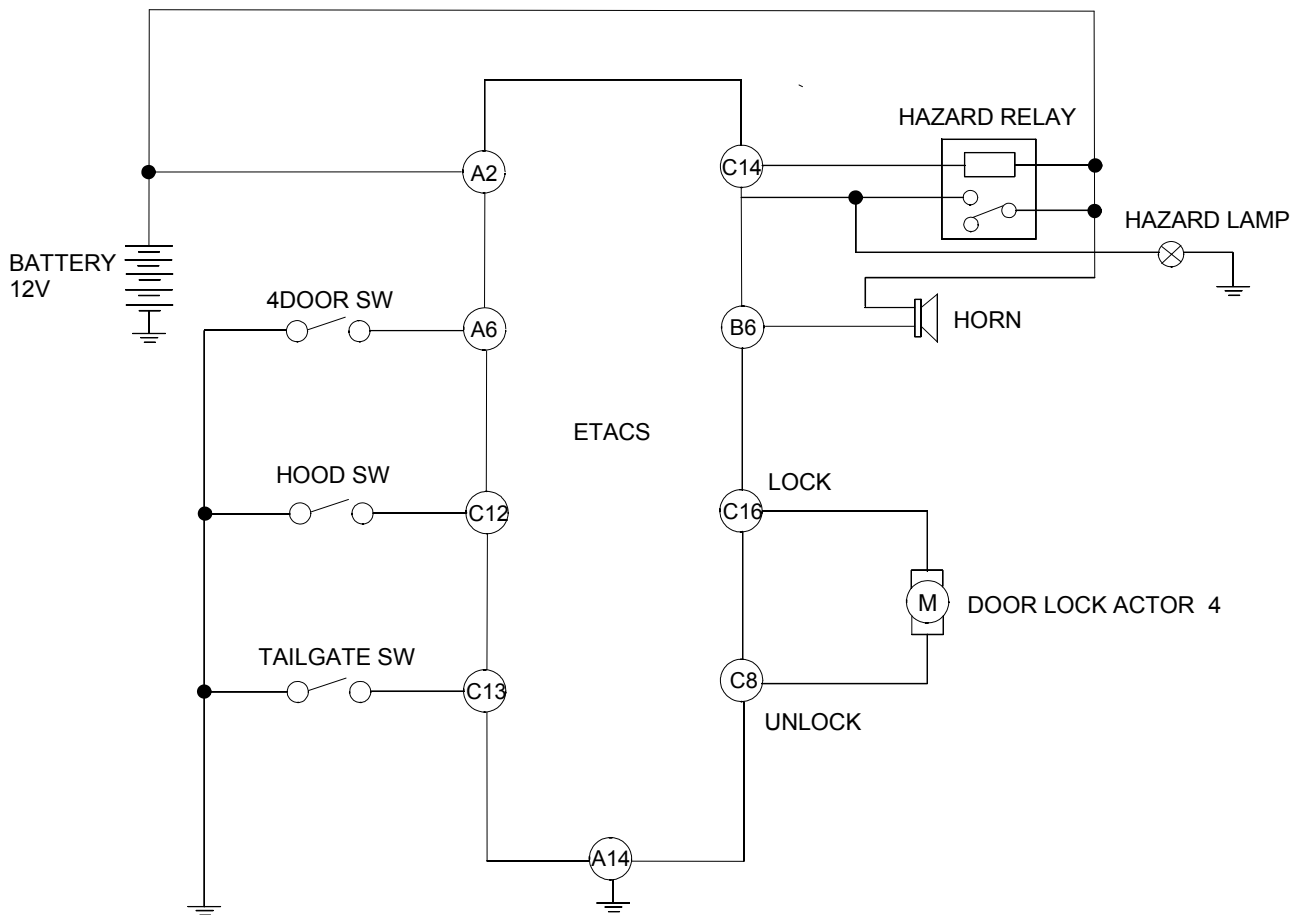
When you push continuously the TRUNK button during 0.5s, TRUNK will open.

#### PANIC

When you push the PANIC button, horn will alarm.

### 3. Block diagram

This is block diagram concerning to the receiver



## 4. Specification

### 4.1 CPU

|                            |                      |
|----------------------------|----------------------|
| Type                       | MB90F548GLSPF(16bit) |
| ROM                        | 128Kbytes            |
| RAM                        | 4Kbytes              |
| Clock frequency            | 4MHz                 |
| Clock frequency generation | Crystal resonator    |
| Package                    | 100pin QFP           |

### 4.2 EEPROM

|         |            |
|---------|------------|
| Type    | S-93C46XXX |
| Memory  | 1Kbit      |
| Package | 8pin SOP   |

### 4.3 RF Receive Module

|                            |                   |
|----------------------------|-------------------|
| Type                       | G8X-21RXIAM       |
| Receiver frequency         | 313.85MHz         |
| Frequency generation       | Crystal resonator |
| Modulation Scheme          | FSK               |
| Bandwidth                  | ±200 KHz          |
| Carrier Detect Sensitivity | 11dBuVemf         |

### 4.4 Others

|                            |                             |
|----------------------------|-----------------------------|
| Dimension                  | 112mm× 92mm × 36mm          |
| Weigh                      | 324g                        |
| Battery                    | CAR Battery(DC 12V)         |
| Operation Voltage, Current | DC12V,50mA (4mA on standby) |
|                            | -40℃ ~ +105℃                |

## 5.Features

### 5.1 Door lock control

The LOCK relay in the receiver drives the door lock actuators to "LOCK"-side when LOCK button of transmitter was pressed. The UNLOCK relay in the receiver drives

### 5.2 Battery saving

To prevent the battery exhaustion , the micro-computer of the transmitter is usually inactive. When the button will be pressed, the micro-computer wakes up immediately and judges which button is pressing. Then the micro-computer constructs the transmission frame and radiates it from the antenna .After transmitting, the micro-computer switches stand-by mode by itself.

## 6. Derivatives

OKA-750R is an integrated controller for a car body control, includes the keyless entry receiver. The integrated. controller consists of the multiple control functions as follows, centralized door lock, turn-signal lamp, room-lamp, intermitted wiper, power window timer, ignition key illumination, warning buzzer and so on.