

OMRON
AUTOMOTIVE
ELECTRONICS
KOREA

OKA-750R

Transmitter, RF Keyless Entry System

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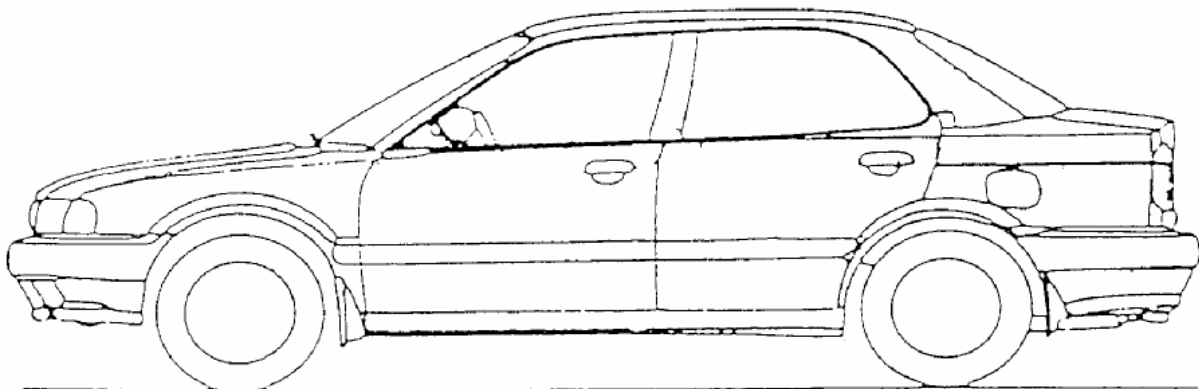
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1. Constitution of the Radio Frequency Keyless Entry System for vehicle

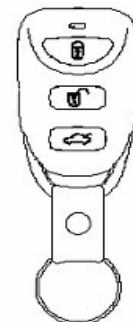
The radio frequency keyless entry is a system that it controls locking and unlocking the door and the trunk and the panic by wireless remote controller. This system consists of three components. The TRANSMITTER is a device that transmits the signal when the button is pressed. The transmission signal 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

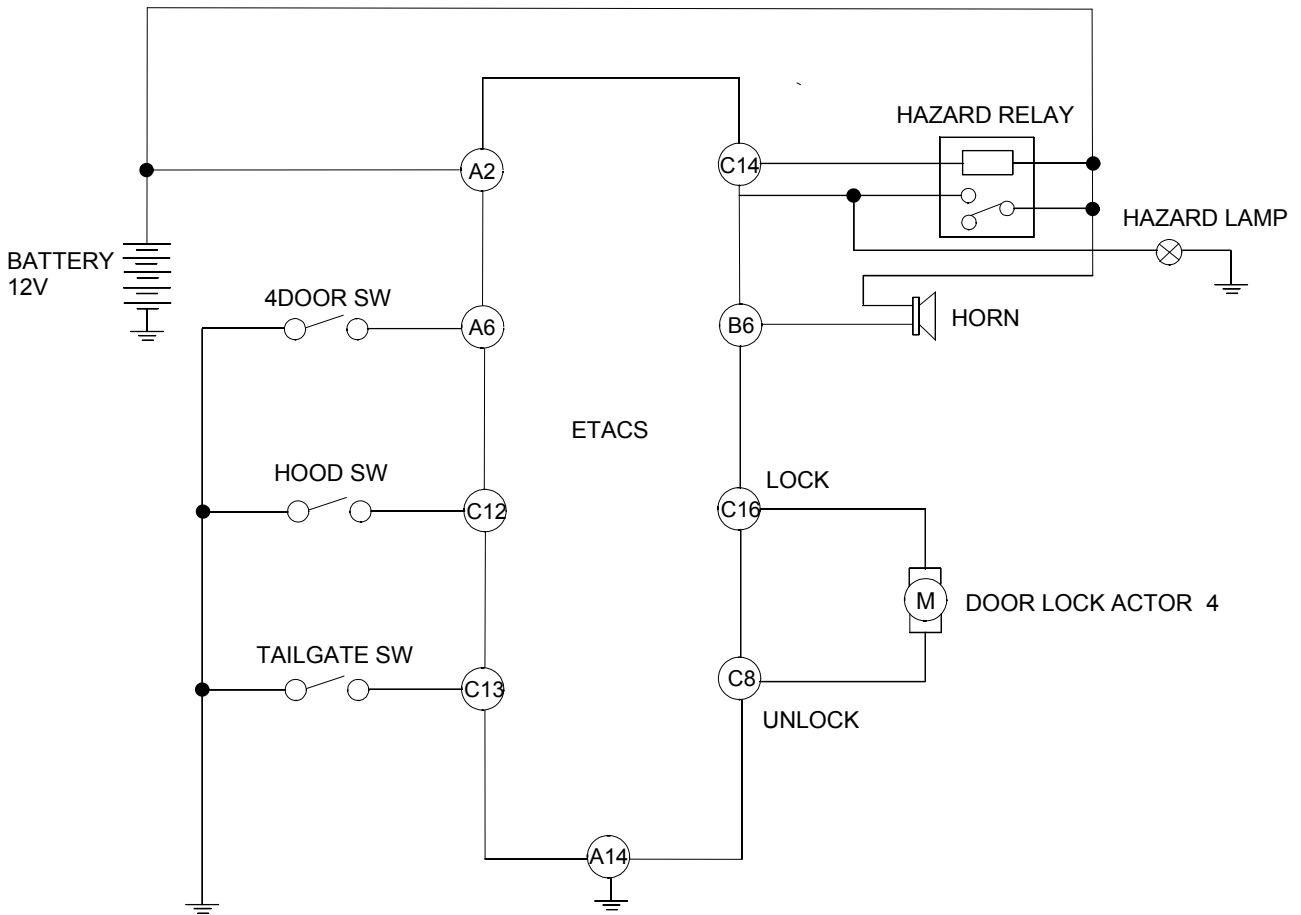
When you push continuously the TRUNK button during 0.5s, TRUNK will open.

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.