

**OMRON
AUTOMOTIVE
ELECTRONICS
KOREA**

OKA-620R

RECEIVER, RF Keyless Entry System

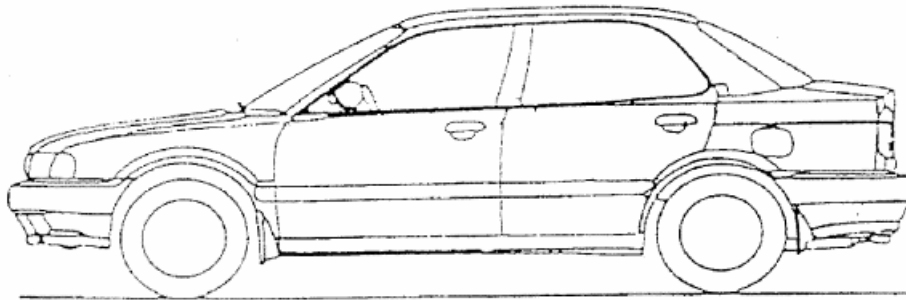
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1. Constitution of the Radio Frequency Keyless Entry System for vehicle

The radio frequency keyless entry is a system that it controls locking and unlocking the door and alarm the horn 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. 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
PANIC	alarm the horn

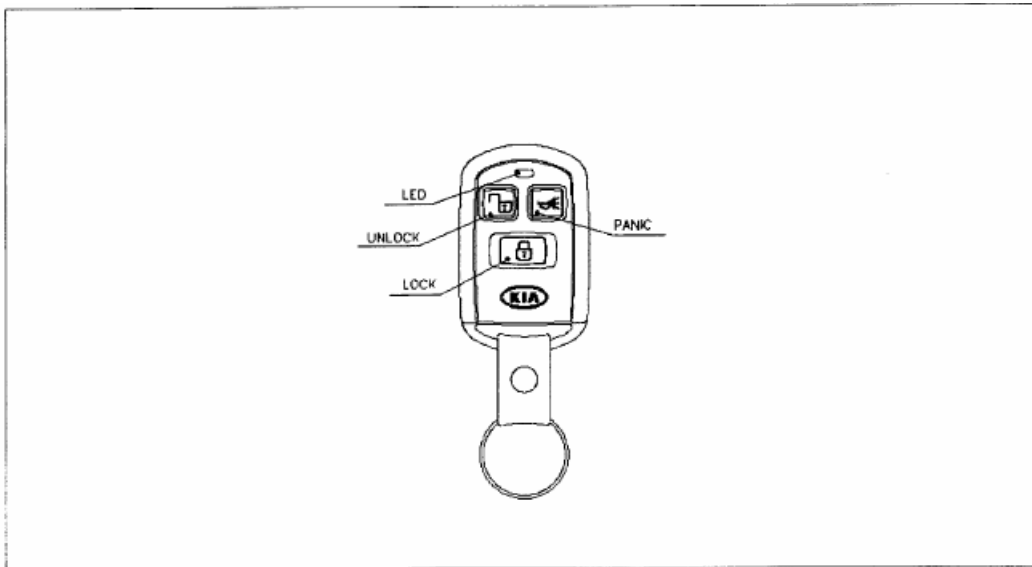


Transmitter
f = 313.85MHz



2. User's manual (provisionally)

REMOTE TRANSMITTER



You can lock and unlock and alarm the horn 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.

PANIC

When you push the PANIC button, horn will alarm.

3. Specification

3.1 CPU

Type	uPD789104AMC (8bit) Manufacturer : NEC
ROM	8k x 8 bit
RAM	256 bytes
Clock frequency	4.19MHz
Clock frequency generation	CRYSTAL resonator
Package	30pin SSOP

3.2 EEPROM

Type	S-93C46XXX Manufacturer: Seiko. Elec.
Memory	1Kbit
Package	8pin SOP

3.3 RF Receiver Module

Type	G8X-28RXIAM26 Manufacturer: OMRON Elec.
Local clock frequency	313.85MHz
Frequency generation	Crystal resonator
Modulation Scheme	FM (Single Superheterodyne)
Bandwidth	±200kHz
Carrier Detect Sensitivity	11dBuVemf

4.4 Others

Dimension	105mm × 88.5mm × 35mm
Weigh	88.7g
Battery	CAR Battery (DC 12V)
Operation Voltage, Current	DC12V, 50mA (3mA on standby)
Operation Temperature	-30 °C~+80 °C

4.Features

4.1 Transmission frame

The transmission begins immediately in case of LOCK and UNLOCK and PANIC button is pressed.

The transmission frame consists of the synchronous frame and the data frame. The synchronous frame has 30 synchronous codes that it will be used for the receiver to wake up. The data frame consists of 24bit length identification code, 16bit security code and function code. 16million different identification codes are available.

The security code is always changed in case of any of the buttons is pressed. The transmission time is typically 600 milliseconds.

4.2 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.

5. Derivatives

OKA-620R 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, and so on.

WARNING

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operations.