

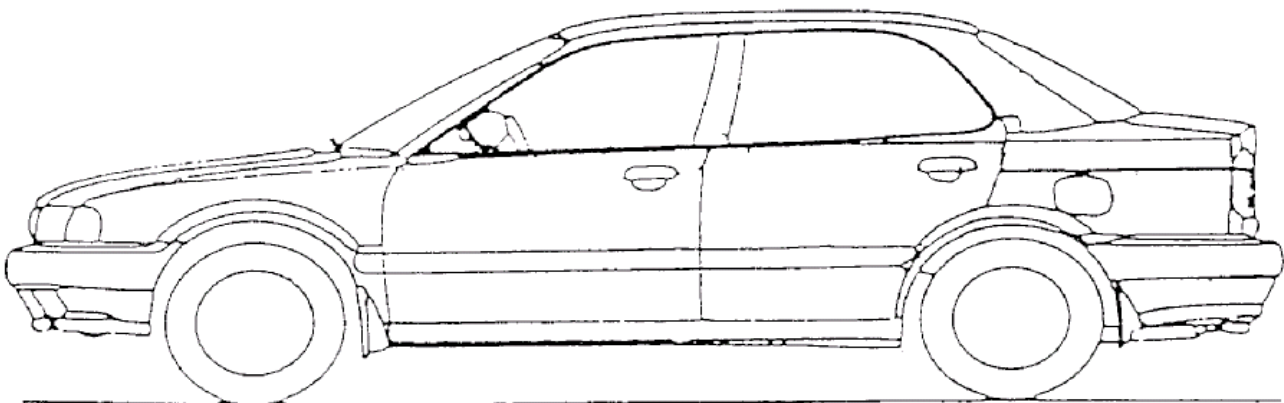
Constitution of the Radio Frequency Keyless Entry System for vehicle

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

PRODUCT NO.	OPERATION	ACTION
OKA-450T	LOCK	LOCK THE DOOR
	UNLOCK	UNLOCK THE DOOR
	TRUNK	UNLOCK THE TRUNK



Transmitter
 $f = 433.92\text{MHz}$



User's manual (provisionally)

◎REMOTE TRANSMITTER



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

LOCK

When you push the 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 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 the TAIL GATE button for 1.0sec, It will unlock.

Attention

For use only with battery PANASONIC Battery corporation etc., Lithium cell (CR2032)

Specificati

1 CPU

Type	uPD78F0567-xxx(8bit)
	Manufacturer : RENESAS Corporation
ROM	8 Kbytes
RAM	128 bytes
EEPROM	32 bytes
Clock frequency	–
Clock frequency generation	RESONATOR OSCILATION
Package	20pin SSOP

2 RF block

Carrer frequency	433.92MHz
Frequency generation	X-TAL
Modulation	FSK
Bit transmission rate	2Kbps or 1Kbps
Bandwidth	±40KHz
RF output power (field strength)	≤10mW (e.r.p.)

3 OthersOthers

Dimension	71.7mm(H) x 39.2mm(W) x 18.05mm(T)
Weigh	54.5 g
Battery	Lithium cell (CR2032)
	Manufacturer : PANASONIC Battery corporation etc.
Operation Voltage	DC3V
Operation Temperature	–20℃ ~ +60℃

Features

1 Transmission frame

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

The transmission frame consists of the synchronous frame and the data frame.

The synchronous frame has 320bit 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 4bit function code and 8bit crc 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 300 milliseconds.

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.

Marking label

RF Keyless Entry System

CE0682

Model Number : OKA- 450T

Transmitter: 3 \---

Omron Automotive Electronic Korea

FCC Part 15.19

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 operation.

FCC Part 15.21

Any changes or modifications (including the antennas) to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

This device complies with Industry Canada licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.