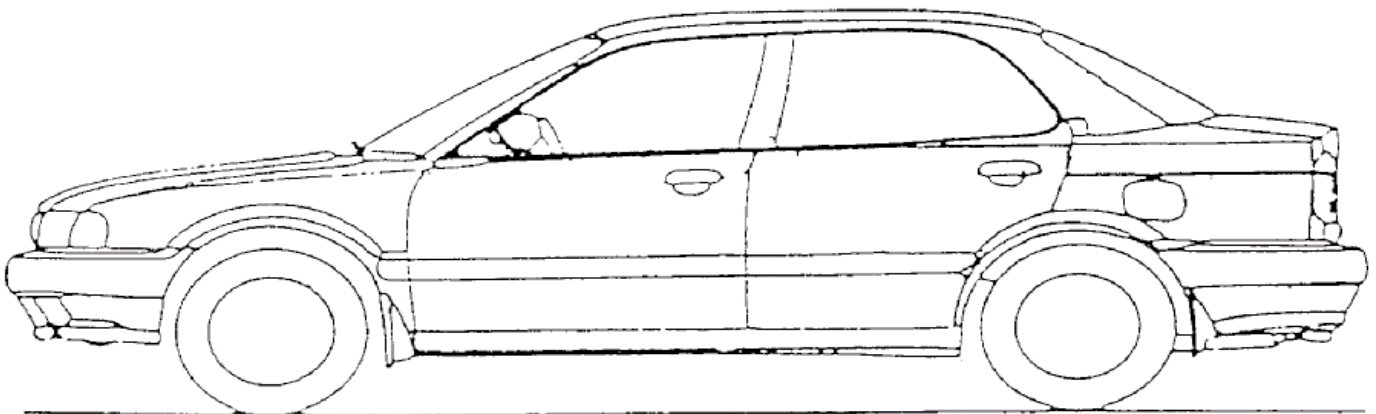


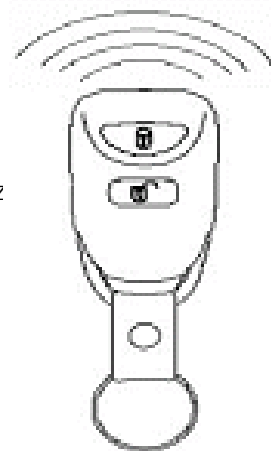
1. Constitution of the Radio Frequency Keyless Entry System for vehicle

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

PANIC

When you push the PANIC button, horn will alarm.

TRUNK

When you push the TRUNK button, trunk will open.

4. Specification

4.1 CPU

Type	uPD789860-xxx(8bit)
	Manufacturer : NEC Corporation
ROM	4 Kbytes
RAM	128 bytes
EEPROM	32 bytes
Clock frequency	4.19MHz
Clock frequency generation	X-TAL OSCILATION
Package	20pin SSOP

4.2 RF block

Carrer frequency	313.85MHz
Frequency generation	X-TAL
Modulation	FSK
Bit transmission rate	500bps or 1000bps
Bandwidth	120KHz
RF output power (field strength)	$\leq 75.6\text{dBuV/m}$

4.3 Others

Dimension	62mm×34mm×15mm
Weigh	23g
Battery	Lithium cell (CR2032)
	Manufacturer : PANASONIC Battery corporation etc.
Operation Voltage	DC3V
Operation Temperature	-20°C ~ +60°C

This device complies with part 15 of the FCC Rules and IC RSS-GEN. 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.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.