05ICW–01

SYSTEM DESCRIPTION

1. WIRELESS DOOR CONTROL SYSTEM DESCRIPTION

(a) This system is a convenient system for locking and unlocking all the doors from a distance. The wireless control system has the following features:

- The door control receiver performs the code identification process and the multiples network body ECU operates the door lock control. A serial data link is provided for communication between the door control receiver and multiplex network body ECU.
- A key–integrated type transmitter is used and it contains the following 2 switches: the door lock switch and door unlock switch.
- An LED (Light Emitting Diode) is mounted on the transmitter to show if the battery is depleted.

2. FUNCTION OF MAIN COMPONENTS

Components	Functions
Door control transmitter	• Contains LOCK and UNLOCK switches. • Transmits weak electric waves (recognition codes and function codes) to door control receiver. • Illuminates indicator lamp (LED) during transmission.
Door control receiver	Receives weak electric waves (recognition codes and function codes) and outputs them as code data to multiplex network body ECU.
Halfway switch (inside key slot)	Detects if key slot has key inserted or not.
Front door courtesy lamp switch assy Rear door courtesy lamp switch assy Luggage compartment door courtesy lamp switch assy	Turns on when door is open and off when door is closed. Outputs door status (open or closed) to multiplex network body ECU.
Door lock position switch	Transmits door lock positions of each door to multiplex network body ECU.

3. SYSTEM FUNCTION

(a) Door lock/unlock function:

With no key in the key slot (key switch is off) and all door courtesy lamp switches off, pressing the door control transmitter's LOCK/UNLOCK switch causes the transmitter to output weak electric waves which are then input to the door control receiver. The door control receiver reforms these waves into code data in its internal high frequency circuit and outputs to the code data (recognition codes and function codes) and outputs its judgment results to the multiplex network body ECU. Upon receiving a door lock/unlock request signal, the multiplex network body ECU outputs a door lock/unlock control signal to each door lock assy. Each door lock assy then locks/unlocks its door and turns on/off its door lock position switch according to the signal.

(b) Answer–back function:

The multiplex network body ECU receives the door unlock detection switch's on/off signals and uses these signals to confirm if door control operation has completed. The multiplex network body ECU then outputs hazard warning lamp's output the control signals to flash the hazard warning lamp as an answer–back.

(c) The wireless door lock control system has the following functions.

Function	Outline
All door unlock operation	Pressing LOCK switch locks all doors.
Answer–back operation	Hazard lamps flash once when doors are locked,and flashes twice when doors are unlocked to inform that operation has been completed.
Automatic lock function	If none of doors are opened within 30 seconds after they are unlocked by wireless door lock remote control, all doors will lock again automatically.
Repeat function	If door is not locked in response to locking operation of transmitter, multiplex network body ECU will output a lock signal after 1 second.
Illuminated entry function	With all doors locked, pressing door unlock switch causes room lamp to illuminate simultaneously with unlocking operation.
Security function	Sends signal as rolling code.
Transmitter recognition code registration function	Enables 4 modes for registering (writing and storing) transmitter recognition codes in EERPOM, which is built into multiplex network body ECU.
Self–diagnosis	If system has malfunction, multiplex network body ECU sets DTC in its memory.