

1995 - 2004 Corvette: Service News: Passive Keyless Entry



Subject: Passive Keyless Entry

Model and Year: 1995 - 2004 Corvette

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When the driver exits the vehicle, doors are locked and the UTD system is armed.

The PKE system uses a motion sensor in the remote control transmitter, or key fob, that sends out a signal. (To preserve battery power, the PKE system is active only when it senses motion, such as when the driver is walking within range of the vehicle.) It includes an identification signal and a function signal. If within range, the antennas will send the signal to the remote control receiver. An antenna is located in the doors or hatch area on 1995-96 models and is part of the Remote Function Actuation (RFA) receiver on 1997-98 models. If the identification signal matches the one stored in the receiver, the function is performed.

The PKE system is part of the Remote Function Actuation system, which, in addition to keyless entry, also performs the Tire Pressure Monitoring (TPM) system functions through the same receiver. Tire pressure information is sent from the sensors in the wheels to the receiver. So any repairs involving the receiver due to the TPM

system also will involve reprogramming the RFA system. Keep in mind that on 1997 and 98 Corvette models (C5) the "service tire warn sys" message displayed on the IPC indicates an RFA malfunction in either the keyless entry system or the TPM system.

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PROGRAMMING

Three transmitters can be programmed for a vehicle. If the programming procedure is canceled or interrupted, by disconnecting the battery, for example, the receiver retains only the codes just stored. If no codes were stored, the receiver retains the previous codes.

Programming the transmitters on 1997-98 models involves using the Driver Information Center (DIC). Follow the programming procedure outlined in the service manual. Several buttons need to be pressed in a specific order to begin the programming sequence. The transmitters are programmed by simultaneously pressing the LOCK and UNLOCK buttons for a number of seconds.

On 1995-96 models, entering the program mode requires pushing the odometer button and the fuel information button on the instrument panel. Once the PKE telltale lamp begins flashing, programming can begin. By bringing a transmitter into range, the receiver stores the code and the lamp is illuminated continuously. After three transmitters are programmed, the lamp will not illuminate when a transmitter is in range.

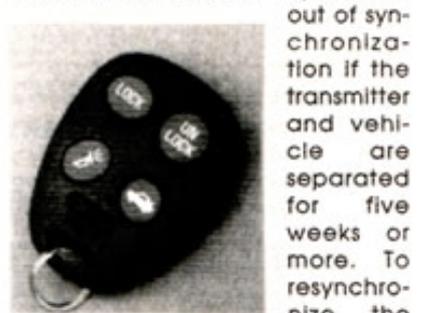
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TRANSMITTER OPERATION

The transmitter may not communicate with the receiver and need to be reprogrammed if:

- the transmitter battery is disconnected
- the vehicle battery is disconnected, or
- the receiver is disconnected.

On vehicles using a rolling code transmission, the codes may become out of synchronization if the transmitter and vehicle are separated for five weeks or more. To resynchronize the transmitter, press the LOCK and UNLOCK buttons simultaneously within range of the receiver. The horn will chirp once the transmitters are synchronized.



The PKE system also has the ability to arm and disarm the Universal Theft Deterrent (UTD) system. If the PKE system locks the doors, it then sends a signal to the BCM (or central control module on 1995-96 models) to arm the UTD system. The courtesy lamps are turned off and the horn chirps to confirm that the system is armed. To disarm the system, a valid transmitter must be in range, the key is not in the ignition, and the receiver has identified the transmitter.

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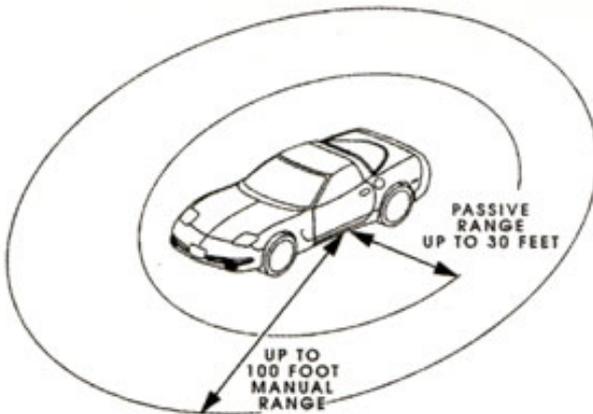


PASSIVE KEYLESS ENTRY

...DON'T JUST DO SOMETHING, STAND THERE

Many Corvette owners like to feel that they share a sixth sense with the car. That the two can somehow communicate with one another on the road, and even anticipate what the other is going to do. This is true for the driver who knows how the car will react going into a curve, or judges just the right time to shift gears. And it's also true for the car, which can sense when the driver approaches and automatically perform several functions.

It all starts with the Passive Keyless Entry system. The PKE system has been a standard feature of the Corvette since the 1995 model year. It allows easy entrance to the vehicle by automatically unlocking the doors, disarming the Universal Theft Deterrent (UTD) system and activating the courtesy lamps if ambient light is low.



fied the proper command from the transmitter.

The operating range of the PKE system is considerably less than in the manual mode. As transmitter battery life decreases, so does the maximum operational range. On 1995-96 Corvette models, the range is up to seven feet. On 1997-98 models, the range increases up to 25 feet in the passive mode, and up to 100 feet in the manual mode.

The functionality of the PKE system also may be personalized for the driver. Using the DIC, the RFA system can be set to determine whether or not the passenger door unlocks passively with the driver door, and if the approach lights illuminate with the unlock command.

The memory seat functions also are coded into the PKE signal, providing drivers with custom seating positions. The memory function also can recall the outside rearview mirror position, climate control temperature, the last radio station displayed and other settings. The memory function captures this information for drivers using separate key fob transmitters.

However, if the key is turned to the ON position before the driver's door is closed, the stored memory information is erased and can not be recalled. In this case, the seats for example, will move to the default position the next time the vehicle is entered.

All of the functions of the PKE system add to the feeling of the Corvette. Between car and driver, it's personal.

– Mark Spencer

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