Component Procedures: Garage Door Opener Transmitter

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Garage Door Opener (Article 13232)

The garage door opener is fixed and rolling code capable. Rolling code is a system that allows the code that the customers receiver receives from the garage door opener to change every time the garage door opener is used within operating range of the receiver. Rolling code programming requires the customer to push a learn/program button on the garage door opener receiver at their home. This button is usually located on the receiver unit under a cover (light cover) on one end of the unit. The customer must follow the garage door opener manufacturers instructions to program/learn the receiver to accept the Universal Home Remote System as an authorized opener for their unit . When the receiver and the garage door opener are initially programmed together, a code is established and a new code is created for every new transmission. The software in the receiver recognizes the garage door opener and accepts the new code.
The garage door opener is compatible with most, but not all types and brands of transmitters.
The garage door opener is a transmitter operating between 288–434 MHz. The power and range of the transmitter is limited to comply with laws governing the generation of radio frequency interference. The transmitter is programmed by the user to accept the signal generated by the user's transmitters.
The garage door opener has 3 buttons that may be programmed for individual transmitter/receiver combinations to control up to 3 garage door openers, security gates, lighting systems, etc. Each button represents a transmitter code section of the transmitter, which operates separately from any other button, and may be considered a separate transmitter. Operation consists of simply pressing a button to activate the corresponding transmitter.
The garage door opener does not need any programming after it is replaced. However, for the opener function it must be programmed to the customer’s garage door or other devices such as a gate. The programming can only be performed at the device being programmed, it cannot be programmed at a service facility. Instructions for programming are listed in the Garage Door Opener Malfunction document in a Diagnostic Aid.

Garage Door Opener Transmitter Pushbutton Replacement (Article 13249)

Callout Component Name
1 Roof Console Refer to Roof Console Replacement
2 Garage Door Opener Bolt/Screws (Qty: 3) Caution: Refer to Fastener Caution . Tighten 2.5 Nm (22 lb in)
2.5 Nm (22 lb in)
3 Universal Garage Door Opener Support Bracket
4 Garage Door Opener Procedure Disconnect the electrical connectors. Refer to Control Module References for programming and set-up procedures.
Procedure
- Disconnect the electrical connectors.
- Refer to Control Module References for programming and set-up procedures.

Garage Door Opener Programming and Setup (Article 10737)

Replace and Program ECU or Reprogram ECU
This ECU does not require SPS programming but does require the following setup procedures after a new ECU is installed:
The customer must learn the device they wish to control. This must be done at the device (garage door opener , electric gate, etc.) and cannot be performed at a dealership. Refer to the vehicle owner's manual for programming instructions.

Garage Door Opener Malfunction (Article 13245)

Diagnostic Instructions
- Perform the Diagnostic System Check - Vehicle prior to using this diagnostic procedure.
- Review Strategy Based Diagnosis for an overview of the diagnostic approach.
- Diagnostic Procedure Instructions provides an overview of each diagnostic category.

Diagnostic Fault Information
Circuit Short to Ground Open/High Resistance Short to Voltage Signal Performance
B+ 1 1 — —
Ground — 1 — —
1. Universal Home Remote Malfunction
Circuit/System Description
The universal home remote is a transmitter operating between 288 and 434 MHz. The universal home remote has three buttons that may be programmed for individual transmitter/receiver combinations to control up to three

garage doors, security gates, lighting systems, etc. Each button represents a unique transmitter code section, which operates independently of the other buttons, and may be considered a separate transmitter.

Diagnostic Aids

To program up to three devices:

- Hold the end of the hand-held transmitter for the garage door opener or device being programmed about 3 to 8 cm (1 to 3 in) away from the Universal Remote system buttons with the indicator light in view..
- Press and release one of the three Universal Remote system buttons that you would like to program. Press and hold the hand-held transmitter button. Do not release the hand-held transmitter button until the indicator light changes from a slow to a rapid flashing light or a continuously on light. Then release the button.
- Press and hold the newly programmed Universal Remote system button for five seconds while watching the indicator light and garage door activation.
- If the indicator light nstays on continuously or the garage door moves when the button is pressed, then programming is complete.
- If the indicator light does not come on or the garage door does not move, a second button press may be required. For a second time, press and hold the newly programmed button for five seconds. If the light stays on or the garage door moves, programming is complete.
- If the indicator light blinks rapidly for two seconds then changes to a solid light and the garage door does not move perform the additional 3 steps below.
- Locate the Learn or Smart button inside the garage on the garage door receiver. The name and color of the button may vary by manufacturer.
- Press and release the Learn or SMart button. The following step, step 3, must be completed within 30 seconds of pressing this button.
- Inside the vehicle, press and hold the newly programmed Universal Remote system button for three seconds and then release it. IIf the garage door does not move or the lamp on the garage door receiver does not flash, press and hold the same button a second time for three seconds then release it. Again, if the door does not move or the garage door lamp does not flash , press and hold the same button a third time for three seconds then release it..

The Universal Remote system should now activate the garage door. Repeat the process for additional buttons. Some radio-frequency laws and gate operators require transmitter signals to time out or quit after several seconds of transmission. This may not be long enough for the Universal Remote system to pick up the signal during programming.

If the programming did not work, replace Step 2 under “Programming the Universal Remote System” with the following:

Press and hold the Universal Remote system button while pressing and releasing the hand-held transmitter button every two seconds until the signal has been successfully accepted by the Universal Remote system. The Universal Remote system indicator light will flash slowly at first and then rapidly. Proceed with Step 3 under “Programming the Universal Remote System” to complete.

Reference Information

Schematic Reference

Remote Function Schematics

Connector End View Reference

Master Electrical Component List

Description and Operation

Garage Door Opener Description and Operation

Electrical Information Reference

- Circuit Testing
- Connector Repairs
- Testing for Intermittent Conditions and Poor Connections
- Wiring Repairs

Special Tools

J 41540 - Universal Home Remote Tester

Circuit/System Testing

- Ignition OFF, disconnect the harness connector at the S25 Garage Door Opener.
- Test for less than 10 Ω between the ground circuit terminal 3 and ground.
- If 10 Ω or greater Test for less than 2 Ω in the ground circuit end to end.
- If 2 Ω or greater, repair the open/high resistance in the circuit.
- If less than 2 Ω, repair the open/high resistance in the ground connection.
- If less than 10 Ω
- Ignition ON.
- Verify a test lamp illuminates between the B+ circuit terminal 1 and ground.

- If the test lamp does not illuminate and the circuit fuse is good
- Ignition OFF.
- Test for less than 2 Ω in the B+ circuit end to end.
- If less than 2 Ω, verify the fuse is not open and there is voltage at the fuse.
- If the test lamp does not illuminate and the circuit fuse is open
- Test for infinite resistance between the B+ circuit and ground.
- If less than infinite resistance, repair the short to ground on the circuit.
- If infinite resistance, replace the S25 Garage Door Opener.
- If the test lamp illuminates
- Verify the LED on the S25 Garage Door Opener illuminates or flashes when each button on the S25 Garage Door Opener is pressed.
- If the LED does not illuminate or flash when each button is pressed Replace the S25 Garage Door Opener.
- If the LED illuminates or flashes when each button is pressed
- Instruct the customer to program the S25 Garage Door Opener to their device. Refer to the vehicle owners manual. If further malfunction occurs, a possible rolling code or incompatibility with the S25 Garage Door Opener will prevent programming.

Repair Instructions

Perform the Diagnostic Repair Verification after completing the repair.

Control Module References for garage door opener replacement, programming, and setup