

Immobilizer Programming Procedure (M-A)

Mazda 626 (1998-2002)

Mazda MPV (2000-2006)

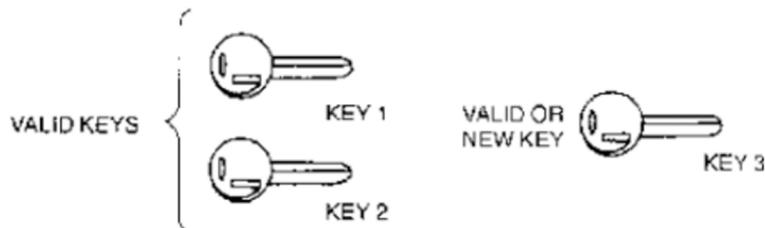
MX-5/Miata (2001-2005)

Note: If there are no valid keys (keys paired to the original immobilizer module), the immobilizer module will need to be replaced as well.

Please make sure the battery is fully charged before proceeding

DIRECTIONS

Method 1 (two valid keys present)



Note: If no specific time interval is given, step should be performed within 30 seconds of the previous step.

1. Cut new transponder equipped key(s) if necessary.
2. Replace PCM.
3. Using key 1, turn ignition switch to ON, and observe security light illumination (for 1—2 seconds) in instrument panel.
 - a. Turn key 1 to LOCK.
 - b. Turn key 1 to ON then back to LOCK six times. Key should not remain ON or LOCK for more than one second. It is particularly important to ensure that the 6th turning is done within 1 second.
 - c. Remove key 1.
4. Using key 2, turn ignition switch to ON. Observe security light illumination (for 1—2 seconds).
 - a. Turn key 2 to LOCK and remove from steering lock.
5. Using key 1, start engine. Observe security light illumination (for 1—2 seconds) and engine continues to run.
 - a. Turn key 1 to LOCK and remove from steering lock.
6. Repeat step 5 with key 3.
7. If there are 4—8 keys (valid and/or new keys), repeat step 5.
8. Wait for 30 seconds to quit reprogram mode.
9. After reprogramming, clear DTCs of PCM with NGS.

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Method 2 (One valid keys present, code word required)

NOTE: If no specific time interval is given, step should be performed within 30 seconds of the previous step.

1. Cut new transponder equipped key(s) if necessary.
2. Replace PCM.
3. Using key 1, turn ignition switch to ON. Observe security light illumination (for 1—2 seconds) in instrument panel.
 - a. Turn key 1 to LOCK and remove from steering lock.
4. Using key 2, turn ignition switch to ON then back to LOCK six times. Key should not remain ON or LOCK for more than one second. It is particularly important to ensure that the 6th turning is done within 1 second.
 - a. Observe flashing of security light (300 ms ON — 300 ms OFF) in instrument panel.
 - b. Wait for 5 minutes until security light decrease in flashing frequency to 1.2 seconds.
 - c. Input code word. (See below)
 - d. Observe the security light stops flashing and illuminates.
 - e. Turn key 2 to ON. Observe security light illumination (about 1—2 seconds).
 - f. Turn key 2 to LOCK and remove from steering lock.
5. Using key 3, start engine. Observe security light illumination (for 1—2 seconds) and engine continues to run.
 - a. Turn key 3 to LOCK and remove from steering lock.
6. Repeat step 5 with key 1.
7. If there are 4—8 keys (valid and/or new keys), repeat step 5.
8. Wait for 30 seconds to quit reprogram mode.
9. After reprogramming, clear DTCs of PCM with NGS.

Code Word Input Procedure

NOTE: A code word is composed of eight digits from 1—9 and is part of the immobilizer unit from the manufacturer. Each unit has its own code word. To obtain the code word, you need to have the immobilizer serial number, then ask the distributor.

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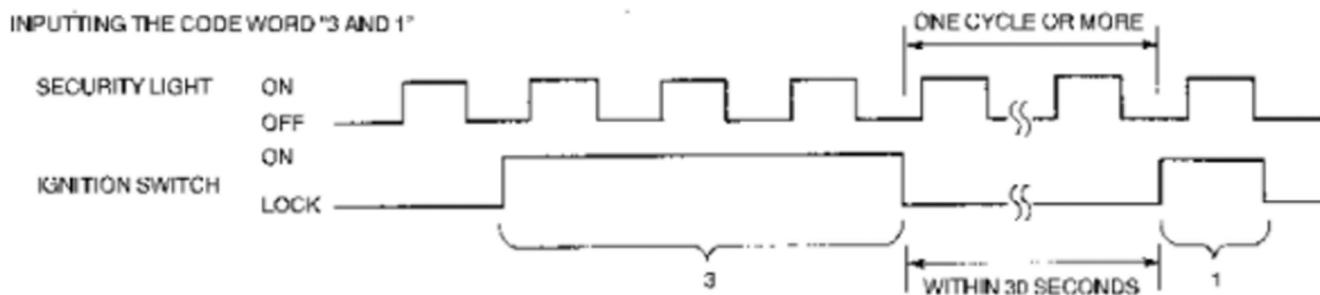
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Code Word Input Procedure (continued)

To input the code word into the PCM, turn the ignition key and count the number of flashes of the security light. The calculation of the number of flashes of the security light comes with the timing of the turning of the key.

1. Wait for 5 minutes until security light flashes slowly. (300 ms ON— 300 ms OFF → 1.2 s ON— 1.2 s OFF)

2. Input the code word as shown in the example below.



- Turn ignition switch to ON position while security light is off and count three illumination cycles. As the light goes out after the third illumination, turn key to LOCK position.
- Wait at least one illumination cycle and within 30 seconds of going to LOCK position, turn ignition switch to ON position while security light is off and count one illumination cycle. As the light goes out after the first illumination, turn key to LOCK position.
- Repeat Step (2) for rest of six digits.

3. When code word is registered correctly in the PCM, the security light stops flashing and illuminates.

4. As soon as the security light stops flashing and illuminates, the following immobilizer system reprogram procedure should be started.

NOTE: If the code word is not input correctly, the security light goes out after all eight digits are input. In this case, perform the “Code Word Input Error Recovery Procedure”.

Examples of Incorrect Input of Code Word

The security light must flash one or more times between the digits of the code word.

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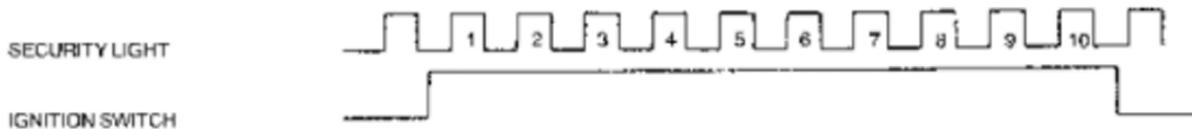
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Examples of Incorrect Input of Code Word (continued)

The security light must flash one or more times between the digits of the code word. If the code word is input incorrectly, the security light goes out. Turn the ignition switch to ON position then back to LOCK position five times (except PCM replacement) or six times (PCM replacement) and repeat the procedure to input all eight figures for the code word.

When an error occurs during the reprogram procedures except when both the immobilizer unit and PCM are replaced, repeat the procedure from Step 1. If you still cannot reprogram, confirm how many keys can start the engine. Then, perform the key replacement or addition reprogram procedure according to the valid key number.

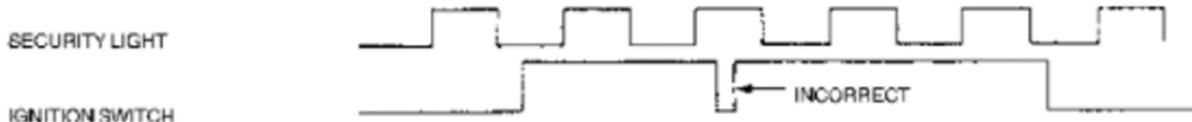
- The security light flashes ten or more times while the ignition switch is at ON position.



- The ignition switch is turned to ON position and LOCK position while the security light is off.



- The ignition switch is turned to LOCK position and ON position while the security light is on.



- The ignition switch is turned to LOCK position and ON position while the security light is off.



Code Word Input Error Recovery Procedure

1. Turn ignition switch to ON position then back to LOCK position five times (except PCM replacement) or six times (PCM replacement). The key should not remain at ON position or LOCK position for more than 1 second.
2. Repeat the "CODE WORD INPUT PROCEDURE".

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