

Mazda Module Programming

User's Guide



Version 2
October 8, 2008

Table of Contents

1.	GLOSSARY	1
1.1.	Terms	1
1.2.	Icon Definitions.....	1
2.	SYSTEM REQUIREMENTS	3
2.1.	Mazda Module Programming Subscription	3
2.2.	User ID	3
2.3.	PC Requirements	3
2.4.	Software Requirements.....	4
2.5.	SAE J2534 Pass-thru Device.....	4
2.6.	Internet Access.....	4
2.7.	Recommended Hardware Configurations	4
2.8.	Authorized Modification Label	6
2.9.	Programming Related to a Field Service Action	6
3.	SOFTWARE DOWNLOAD, INSTALLATION AND SET UP.....	7
3.1.	Software Download and Installation	7
3.2.	Application Start Up.....	8
3.3.	System Set Up	9
3.3.1.	Setting User ID.....	9
3.3.2.	Setting Proxy ID and Password	9
3.4.	Viewing User Information	9
3.5.	Viewing System Information.....	9
3.6.	Selecting a Different SAE J2534 Pass-thru Device	10
4.	VEHICLE IDENTIFICATION.....	11
4.1.	Vehicle ID	11
4.2.	Manual Vehicle ID	11
5.	MODULE PROGRAMMING	13
5.1.	Programmable Module Installation.....	13
5.2.	Module Reprogramming.....	14
5.2.1.	Calibrations Related to TSB's	15
5.3.	Programmable Parameters	15
6.	PATS FUNCTIONALITY.....	16
6.1.	Vehicles with Timed Access PATS Functionality	16
6.2.	Vehicles with Coded Access PATS Functionality	16
7.	SESSION MANAGEMENT	18
7.1.	Closing a Session.....	18
7.2.	Restoring a Previous Session	18
7.3.	Additional Previous Session Features	19
7.4.	Viewing the Log.....	19
8.	TROUBLESHOOTING.....	20
8.1.	SAE J2534 Pass-thru Device Issues	20
8.2.	PC Issues	20
8.3.	Software Issues.....	20

List of Figures

Figure 1: System used to program modules with Mazda Module Programming	3
Figure 2: Configuration using phone line and network card with Windows 98, 2000, XP or later	5
Figure 3: Configuration using RS232 with Windows 98, 2000, XP or later	5
Figure 4: Configuration using a network card and a hub or LAN connection with Windows 98, 2000, XP or later	5
Figure 5: Configuration using a building LAN connection with Windows 98, 2000, XP or later	6
Figure 6: Configuration using two network cards – Can be used ONLY with Windows XP or later.....	6
Figure 7: Minimum Internet Explorer settings recommended for Mazda Module Programming download..	7

List of Tables

Table 1: Module Programming Error Messages	20
--	----

1. Glossary






1.1. Terms














NOTE: Many of the terms in the Mazda Module Programming application are written in blue text and underlined. A single left mouse click on these terms will provide a definition at the bottom of the screen. Some of the definitions are provided below.

- **DLC:** Data Link Connector – The connector under the instrument panel of the vehicle used to connect the SAE J2534 pass-thru device to the vehicle
- **Hotspot:** A term in the application that is printed in blue and underlined. When these spots are selected by using a single left mouse click, a definition of the term will appear at the bottom of the screen.
- **PATS:** Passive Anti Theft System – Anti-theft system used on some Mazda vehicles. This system may require reprogramming when an electronic module has been reprogrammed or a new module has been installed and programmed.
- **PCM:** Powertrain Control Module – The electronic module on a vehicle that is used to control the engine and transmission
- **SAE J2534 Pass-thru Device:** A device which allows the Mazda Module Programming application installed on a PC to communicate with a vehicle
- **Tear Tag:** A tag with a combination of four letters and numbers that can be used to identify the calibration contained in a Mazda PCM. At the vehicle assembly plant the tear tag is placed in an obvious location such as the inside edge of the driver's door, the A or B pillar, the shock tower, or the radiator support.
- **TSB:** Technical Service Bulletin – A bulletin describing a vehicle symptom and an associated recommended repair
- **WDS:** Worldwide Diagnostic System – A diagnostic tool used with Mazda vehicles.

NOTE: When the term "WDS" is used in Mazda Module Programming, it refers to your hardware and software system.

1.2. Icon Definitions

- **System tab:** Used to set up the system and view information related to the system.
 - **System Information sub-tab:**  Used to display system information
 - **System Utilities sub-tab:**  Used to set up the system and display user information
- **Vehicle ID tab:**  Used to identify the modules on the vehicle
 - **Vehicle Session sub-tab:**  Used when a vehicle is being identified and programmed or the list of previous sessions is being viewed
 - **Log Viewer sub-tab:**  Used to view the information recorded while identifying modules

- **Configure Log Viewer button:**  Used to change the view in the Log Viewer
- **Close Session sub-tab:**  Used to close a Vehicle session
- **Multiple Sessions Selector button:**  Used to select multiple previous vehicle sessions
- **Erase Session button:**  Used to erase previous vehicle sessions
- **Sort Sessions button:**  Used to sort previous vehicle sessions
- **Toolbox tab:**  Used for programming electronic modules and accessing PATS functionality
- **Module Configuration and Programming tab:**  Appears when a module is being programmed
- **Tick icon:**  Used to accept a statement or screen
- **Cancel icon:**  Used to cancel or close a statement or screen
- **Menu icon:**  Used to print a screen or exit a session
- **Information icon:**  Used to view information related to the current screen
- **Lock icon:**  Appears when a function is being performed that cannot be interrupted
- **Back button:**  Used to go to the previous screen

2. System Requirements

The Mazda Module Programming application is intended to be used by vehicle repair shops to program modules on Mazda vehicles. In addition, PATS functions such as Keycode Erase/Reprogram and PCM Parameter Reset can be done using this application. It must be used with a system that includes a PC connected to the public Internet, an SAE J2534 pass-thru device, a vehicle, and cables connecting the pass-thru device to the PC and to the vehicle. Figure 1 shows the basic system.

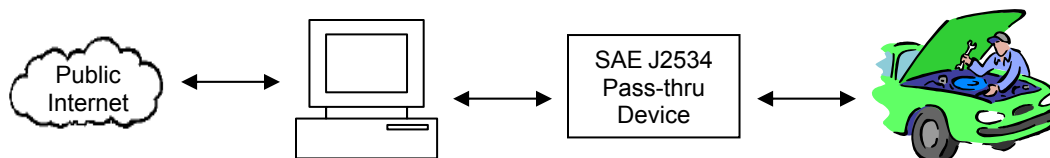


Figure 1: System used to program modules with Mazda Module Programming

WARNING: This application is intended to be used **ONLY** with Mazda vehicles. Usage with other manufacturer's vehicles may lead to unintended results.

2.1. Mazda Module Programming Subscription

A subscription to the Mazda Module Programming application can be purchased on the Internet at the Mazda Tech Info website (www.mazdatechinfo.com). This subscription will provide the user with the software required to program modules on Mazda vehicles. The software must be downloaded via the Internet and installed on the user's PC.

NOTE: Mazda Technical Service Bulletins (TSB's) and As Built data may also be required while programming a module. Access to this information may be purchased on the Mazda Tech Info website (www.mazdatechinfo.com).

2.2. User ID

When a user first accesses the Mazda Tech Info website (www.mazdatechinfo.com), they must establish a User ID and Password. This User ID is required when Mazda Module Programming is installed on a PC and when a module is programmed.

2.3. PC Requirements

It is recommended that the Mazda Module Programming application be installed on a PC with the minimum features listed below.

Recommended Minimum PC Requirements

- Processor – 500 MHz
- Memory – 128 MB of RAM
- Available Hard Disk Space – 200MB
- Graphics Card – 800x600 16-bit color
- Internet Connectivity – High-speed Internet connection, such as DSL or Cable Modem

2.4. Software Requirements

In addition to the Mazda Module Programming application, other software is required in order to use the application to program modules. Standard applications that are required include:

- Operating System – Windows 98, 2000, XP or later
- Web Browser – Internet Explorer Version 5.5 or later
- Adobe Acrobat Reader – Version 5 or later

Note: When the Mazda Module Programming application is being used, the only applications that should be open are:

- Mazda Module Programming
- Internet Explorer

No other applications should be running.

2.5. SAE J2534 Pass-thru Device

In addition to the Mazda Module Programming application installed on a PC, an SAE J2534 pass-thru device is required in order to program a module. This pass-thru device can be purchased from an independent supplier. Information regarding the pass-thru devices used for validation at Mazda and the method of ordering these devices is provided on the Mazda Tech Info website (www.mazdatechinfo.com).

The cables that connect the pass-thru device to the PC and to the vehicle must also be purchased separately, and are usually available from the pass-thru device supplier.

2.6. Internet Access

An Internet account and an e-mail account are required in order to use the Mazda Module Programming application. An Internet account is required for the following reasons:

- To purchase a subscription to Mazda Module Programming
- To download the Mazda Module Programming application from the Internet
- To program a module

An e-mail account is required for the following reasons:

- To contact the support center
- To obtain Module Build (As Built) data
- To receive notification of subscription expiration

2.7. Recommended Hardware Configurations

Recommended hardware configurations are shown in Figures 2 through 6.

NOTE: With Windows 98, the SAE J2534 pass-thru device can NOT be connected using an Ethernet connection and two network cards.

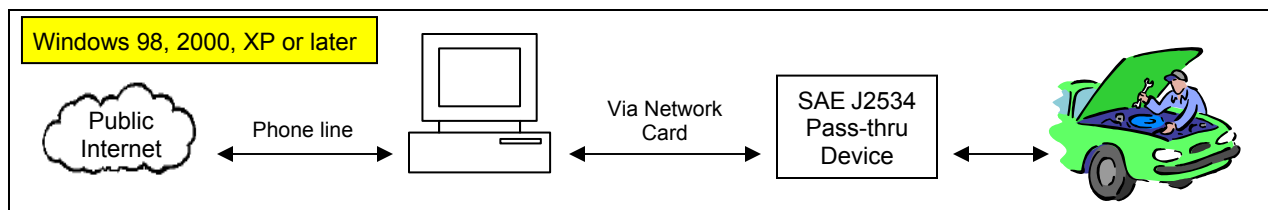


Figure 2: Configuration using phone line and network card with Windows 98, 2000, XP or later

NOTE: If the configuration in Figure 2 is used with Windows 98, Mazda Module Programming must be launched before the phone connection to the Internet is established.

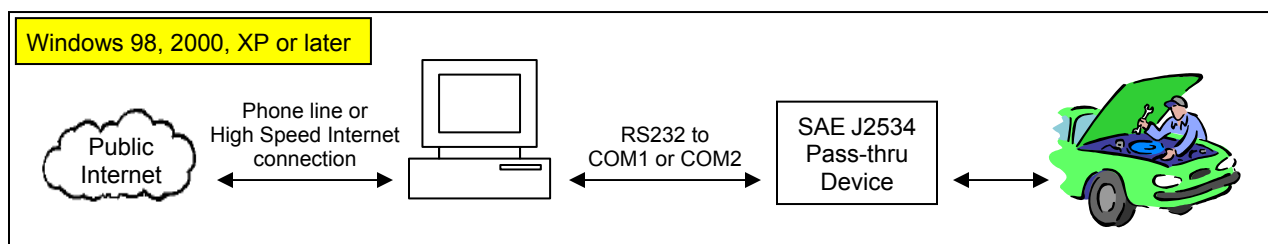


Figure 3: Configuration using RS232 with Windows 98, 2000, XP or later

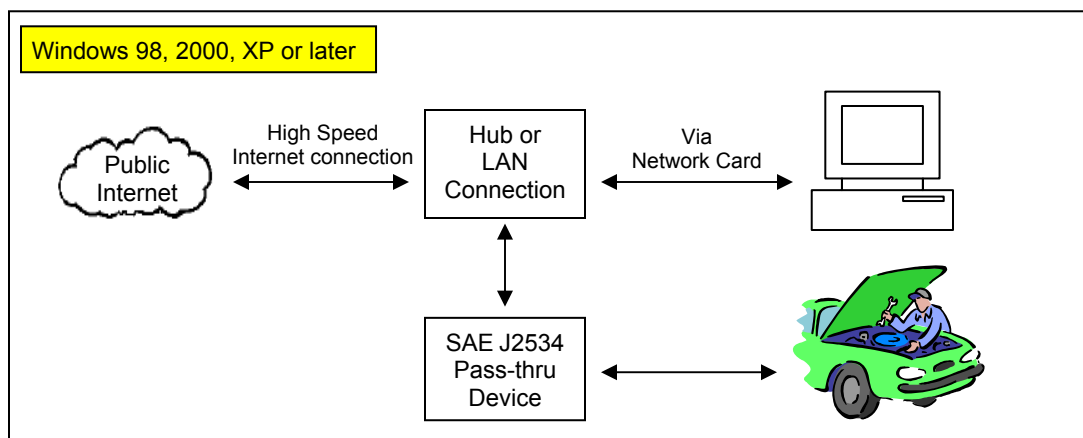


Figure 4: Configuration using a network card and a hub or LAN connection with Windows 98, 2000, XP or later

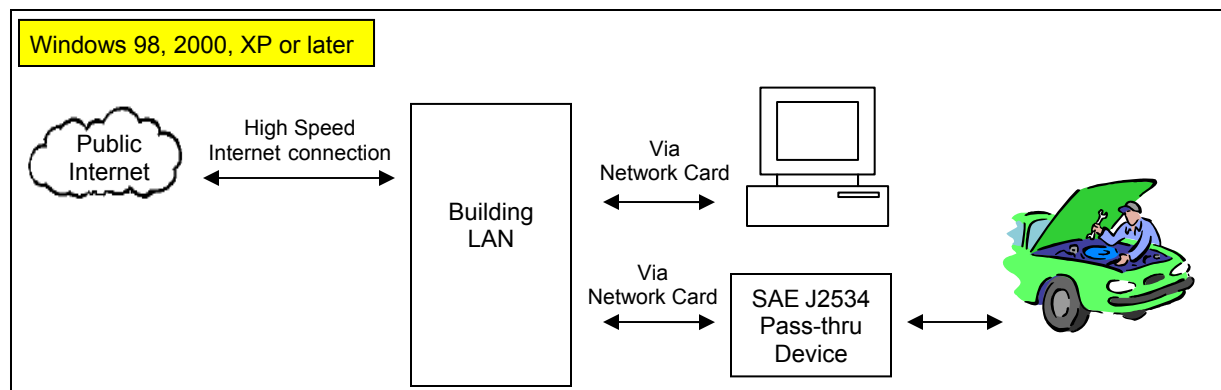


Figure 5: Configuration using a building LAN connection with Windows 98, 2000, XP or later

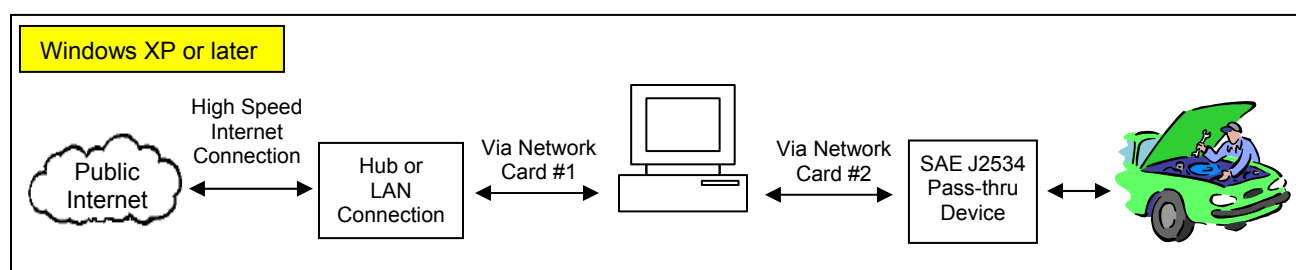


Figure 6: Configuration using two network cards – Can be used **ONLY** with Windows XP or later

2.8. Authorized Modification Label

If a module is programmed because of an emissions recall or required emissions-related TSB, an Authorized Modification Label must be applied to the module. Information related to obtaining these labels is available on the Mazda Tech Info website (www.mazdatechinfo.com)

2.9. Programming Related to a Field Service Action

NOTE: The module programming that is performed may pertain to a Field Service Action that has been recommended for the customer's vehicle by Mazda. In many instances, such services are provided free of charge to the customer when that service is provided by the Mazda dealer. As part of the terms and conditions of the use of the Mazda Module Programming application, the user is obligated to inform the customer of this fact. Prior to performing any service on their vehicle, the user must allow the customer the opportunity to check with their local dealer to determine if their vehicle is in fact eligible for the repair free of charge. The manufacturer will not reimburse a customer for such services if not performed by a dealer.

3. Software Download, Installation and Set Up

3.1. Software Download and Installation

A subscription to the Mazda Module Programming software can be purchased on the Mazda Tech Info website (www.mazdatechinfo.com).

After the purchase is complete, the software can be downloaded and installed on the user's PC. Before starting the download, temporary Internet files should be deleted and the Temporary Internet files folder should be set to at least 50 MB. To accomplish this:

- Open Internet Explorer
- Select "Tools" from the toolbar
- Select "Internet Options..."
- Select the "General" tab
- Under "Temporary Internet files", select "Delete files..."
- Select "OK"
- Under "Temporary Internet files", select "Settings..."
- Under "Temporary Internet files folder", if the setting is not at least 50MB, set it to 50
- Select "OK"
- Select "OK"

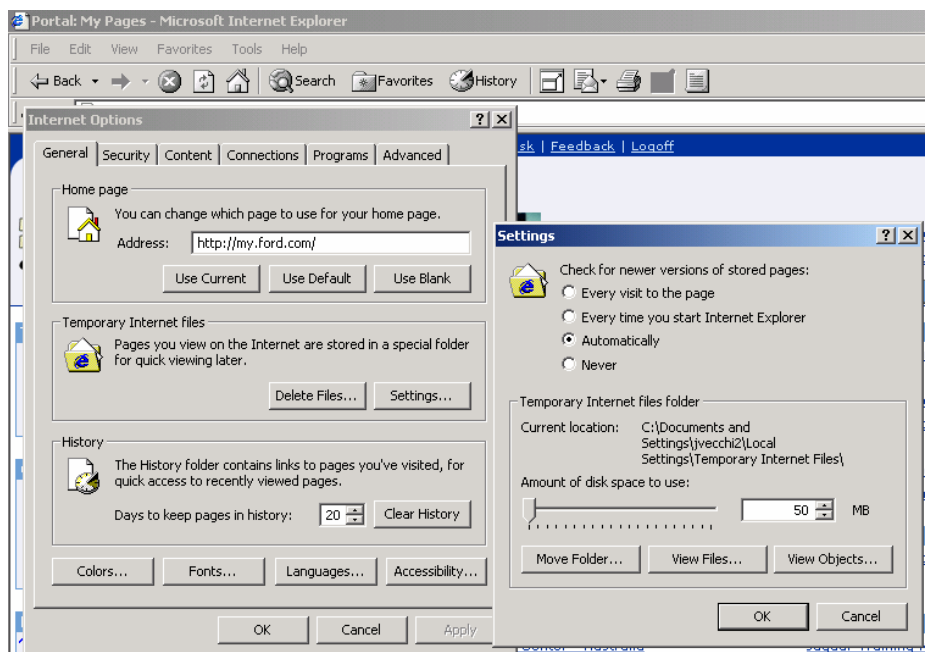


Figure 7: Minimum Internet Explorer settings recommended for Mazda Module Programming download

In addition, to download the file when using Windows 2000 or Windows XP, the person who is logged on must be listed as an administrator. This setting can be checked by doing the following:

- Select "Start" on the Windows toolbar at the bottom left corner of the screen
- Select "Settings"
- Select "Control Panel"
- Select "Users and Passwords"
- Verify that the person who is logged on is listed as an administrator

To download the application, use the following sequence:

- Go to the Mazda Tech Info website (www.mazdatechinfo.com)
 - Log in using the User ID and password used when the subscription to Mazda Module Programming was purchased
 - Click where indicated to begin the download of the application to the PC
 - If using Internet Explorer (as recommended), you will be offered two options:
 - "Open" or "Run" will transfer the installation file to a pre-selected folder on your computer and install the application automatically. The installation file will then be removed from your computer.
 - "Save" will copy the installation file to your computer and place it in a folder. You can either select the folder or use the suggested one. In either case, note the folder name and the file name.
 - If you have chosen to save the installation file to your computer, go to Windows Explorer and locate the folder. Double click on the file MMPxx.x.exe to start the installation process.
- There will be two interactive screens provided during the download process:
- The user will be asked to agree to a software license agreement
 - The user will be asked to provide a User ID. This is the same User ID that was established on the Mazda Tech Info website and was used to purchase the Mazda Module Programming subscription.

The time required for the software download will depend on the type of Internet connection. The download will require a longer time if a dial-up connection and modem are being used than if a high-speed connection is being used. An estimate of the time required will appear on the screen as the download is being executed. The download can be cancelled at any time during the process.

3.2. Application Start Up

After the installation is complete, a Mazda Module Programming icon will be provided on the PC desktop.

NOTE: Before starting the Mazda Module Programming application, always make sure that:

- The SAE J2534 pass-thru device is attached to the PC and powered up
- The software that was received with the SAE J2534 pass-thru device has been installed on the PC

To start the Mazda Module Programming application:

- Double click the Mazda Module Programming icon on the desktop
- If this is the first time that the application is being used, a dialog box will appear indicating that the SAE J2534 pass-thru device has not been defined. Select the manufacturer and name of the pass-thru device that you are using from the lists provided.

NOTE: If there are no J2534 pass-thru devices listed, the software that came with the device has not been installed on the PC. Exit the application, install the software that was shipped with the device, and begin the Start Up process again.




- Select "Save Device"
- Select "Exit Application"
- Restart the application using the icon on the desktop

3.3. System Set Up



In order to use the software, a valid User ID must be set in the application. In some cases, a proxy ID and password must also be set to allow the application to access the public Internet to retrieve files during module programming.

3.3.1. Setting User ID

If the User ID was not set during installation of the Mazda Module Programming application, or if the User ID has changed, it can be set using the following sequence. The application cannot be used without a valid User ID set in the application.






- Select the System top tab 
- Select the System Utilities sub-tab 
- Select "Set User Information"
- Select the tick mark  or the Enter key
- Type in the User ID used when the subscription was purchased

NOTE: User ID's are case sensitive and must match the User ID used when the Module Programming subscription was purchased.

- Select the tick mark  or the Enter key
- To return to the home page, select the Vehicle top tab 





3.3.2. Setting Proxy ID and Password

Some computer systems are set up with a Local Area Network (LAN) and firewall. These systems may require a User ID and password to access the public Internet. The ID and password must be stored in Mazda Module Programming to allow the application to retrieve data from the public Internet. Use the following steps:

- Select the System top tab 
- Select the System Utilities sub-tab 
- Select "Public Internet Access ID/Password Configuration"
- Select the tick mark  or the Enter key
- Type in the User ID and Password used to access the public Internet
- Select the tick mark  or the Enter key
- To return to the home page, select the Vehicle top tab 

3.4. Viewing User Information




Information related to the Mazda Module Programming application (e.g., User's Guide and Release Note) can be viewed from within the application by following these steps:

- Select the System top tab 
- Select the System Utilities sub-tab 
- Select the type of information that you would like to view
- Select the tick mark  or the Enter key
- To return to the home page, select the Vehicle top tab 

NOTE: To read information, Adobe Acrobat Reader must be installed on the PC.

3.5. Viewing System Information

Information related to the hardware and software system being used can be viewed by following these steps:

- Select the System top tab 
- Select the System Information sub-tab 
- To return to the home page, select the Vehicle top tab 

3.6. Selecting a Different SAE J2534 Pass-thru Device

During the initial application start up, an SAE J2534 pass-thru device was selected (See Section 3.2). If a different SAE J2534 pass-thru device is going to be used, it can be selected using the following steps:

- Close the Mazda Module Programming application
- Install the software that was received with the new pass-thru device on the PC
- Click on the Windows "Start" button
- Select "All Programs"
- Select "Ford Motor Company"
- Select "MMP"
- Select "Change J2534 Device"
- Select the manufacturer of the new device
- Select the specific device
- Select "Save"
- Select "Exit"
- Connect the new pass-thru device to the PC and power it up
- Start Mazda Module Programming using the icon on the desktop

4. Vehicle Identification

4.1. Vehicle ID

The calibrations contained in the modules on a vehicle are vehicle specific. Programming them correctly is dependent on proper identification of the vehicle. Therefore, identifying the vehicle is always the first step in programming a module. The following steps must be used to ID the vehicle.

Step 1: Select the Vehicle tab at the top of the screen



Step 2: If the User ID has been set and the SAE J2534 pass-thru device has been selected, select "Continue". If these parameters have not been set, follow the directions on the screen and then select "Continue".

Step 3: Select "Start New Session".

Step 4: Select the tick mark  or the Enter key

Step 5: Make sure that an Internet connection has been established and then select "Confirm"

Step 6: Wait while the system checks the User ID and software and database versions. If the User ID or software or database version is not current, the vehicle cannot be ID'd. If necessary, follow the instructions on the screen to do the required updates.

Step 7: Make sure that the PC is connected to the SAE J2534 pass-thru device and that the pass-thru device is connected to the Data Link Connector (DLC) under the instrument panel in the vehicle.

Step 8: When the hardware setup is complete, select the tick mark  or the Enter key


Step 9: Wait while the PC establishes communication with the Powertrain Control Module (PCM).

Step 9A: If communication with the PCM cannot be established, see Section 4.2.

Step 10: Read the vehicle information displayed and select "Yes" if it is correct or "No" if it is not correct.

Step 10A: If the vehicle information was not correct, a series of screens will be displayed that will allow manual vehicle identification. See Section 4.2.

Step 11: After the vehicle has been correctly identified, fill in the last eight digits of the VIN on the screen displayed. The Repair Order Number and Odometer reading may also be recorded. These fields are optional, but will be saved with the session and can be used later if the session is retrieved from the previous sessions list.

Step 12: When the information has been entered, select the tick mark 

Step 13: Select the toolbox tab  to program a module (See Section 5)

4.2. Manual Vehicle ID

Some vehicles will fail to communicate during the Vehicle ID process or provide incorrect vehicle information. In these cases, the Mazda Module Programming application will ask if you wish to retry. If you suspect a poor connection in the hardware setup, reconnect and select "Yes". Another attempt to communicate will be made.

If you do not wish to retry, select "No" and follow the on-screen instructions. If communication still cannot be established, the system will display a list of possible vehicles. If your vehicle is not on the list, select "Other". Enter one of the following three unique identifiers:

- PCM part number – Located on the PCM
- Vehicle calibration number – Located on certification label
- PCM tear tag number – A combination of four letters and numbers that can be used to identify the calibration contained in a Mazda PCM. At the vehicle assembly plant the tear tag is placed in an obvious location such as the inside edge of the driver's door, the A or B pillar, the shock tower, or the radiator support.

After one of these identifiers has been entered, the vehicle information will be displayed.

5. Module Programming

After the vehicle has been ID'd, the user can reprogram an existing electronic module or install a new module and program it. Three options are available:

- Programmable Module Installation – Used when it is necessary to install a new module
- Module Reprogramming – Used when it is necessary to reprogram a module, such as a PCM, with an updated calibration
- Programmable Parameters – Used when it is necessary to change specific module configuration parameters due to customer preference (e.g., horn chirp or auto lock) or vehicle modifications (e.g., tire size or axle ratio)

When a Vehicle is ID'd all information from the vehicle's programmable modules is stored with the other session information. This data is used during module programming.

NOTE: The vehicle must be ID'd before a module can be programmed (See Section 4)


5.1. Programmable Module Installation

When it is necessary to install a new module, the configuration data must be transferred from the old module before it is removed. The new module must then be programmed using this information. Use the following steps to download the data and program the new module:

Step 1: Select the toolbox tab at the top of the screen




Step 2: Select "Module Programming"

Step 3: Select the tick mark  or the Enter key

Step 4: Select "Programmable Module Installation"

Step 5: From the fly out menu, select the type of module to be installed

Step 6: Select the tick mark  or the Enter key

Step 7: Make sure that an Internet connection has been established and then select "Confirm"

Step 8: Follow the instructions on the screen. These instructions vary depending on the type of module being installed.


NOTE: Be sure to follow these instructions in the exact order that they are given. Do not remove or install any modules until instructed to do so. Failure to follow the instructions correctly may result in the configuration data received during vehicle identification being programmed incorrectly or not at all.

- **Step 8A:** If Mazda Module Programming was unable to retrieve the configuration data due to either a non-functioning module or a module which was removed before the data was retrieved, the application will request that the user obtain information from the As Built database. Access to this database can be purchased on the Mazda Tech Info website (www.mazdatechinfo.com). The data can be obtained by sending an e-mail message to asbuilt@mazdausa.com. Be sure to include the Vehicle Identification Number (VIN) in the message. When the information is returned, return to Mazda Module Programming and enter the requested information.

Step 9: If necessary, apply the reprogramming label to the PCM

If an emissions recall has been performed or a required emissions-related TSB has been completed, an Authorized Modification label must be placed on the PCM. Information about these labels can be found on the Mazda Tech Info website (www.mazdatechinfo.com).

NOTE: It is the responsibility of the technician to inform the customer that Mazda will not reimburse the vehicle owner for field service actions that are not completed at a Mazda dealership.

Step 10: When the "Programming complete" screen appears, select the tick mark  or the Enter key. If PATS initialization is required, Mazda Module Programming may automatically link to the PATS parameter reset and/or key relearn procedures. Two ignition keys may be required to complete the PATS initialization procedure.

Step 10A: If PATS initialization is required and Mazda Module Programming did not link to that functionality automatically, go to the Toolbox tab  and select "PATS". Detailed instructions are provided in Section 6.


5.2. Module Reprogramming

When a module such as a PCM is reprogrammed, it is not removed from the vehicle. All programming is done through the communications network. To reprogram an existing module, follow these steps:

Step 1: Select the toolbox tab at the top of the screen




Step 2: Select "Module Programming"


Step 3: Select the tick mark  or the Enter key

Step 4: Select "Module Reprogramming"

Step 5: From the fly out menu, select the type of module to be reprogrammed

Step 6: Select the tick mark  or the Enter key

Step 7: The application will compare the current calibration level to the latest one available for that vehicle. A message will appear.


Step 7A: If no later calibration is available, a message will appear indicating this. Select the tick mark  or the Enter key to return to the Module Programming menu.

Step 7B: If a later calibration is available, a message will appear asking if you want to reprogram the module with this calibration. If you do not want to reprogram the module, select "No". You will be returned to the Module Programming menu.


Step 8: If you want to reprogram the module, select "Yes" in response to the question "Do you want to program the vehicle with this calibration?"

Step 9: Make sure that an Internet connection has been established and then select "Confirm"

Step 10: You will be presented with a screen that recommends that you carry out Self Test. If you choose to complete this test, you will receive a list of Diagnostic Trouble Codes (DTC's) that have been set on the vehicle. When finished viewing this list, select "Exit".

Step 11: Follow the on-screen instructions to prepare the vehicle and turn the ignition key off and on. Select the tick mark  or the Enter key after each one.

Step 12: If necessary, apply the reprogramming label to the PCM
If an emissions recall has been performed or a required emissions-related TSB has been completed, an Authorized Modification label must be placed on the PCM. Information about these labels can be found on the Mazda Technical Information website (www.mazdatechinfo.com).

Step 13: Select the tick mark  or the Enter key to return to the Module Programming menu.


5.2.1. Calibrations Related to TSB's

Some vehicles have a message associated with them related to a Technical Service Bulletin (TSB). In this case, the application will display a message and ask if the user would like to read the TSB. A TSB subscription can be purchased on the Mazda Tech Info website (www.mazdatechinfo.com)


5.3. Programmable Parameters

Certain modules support the ability to program individual parameters based on customer preferences. For instance, the security module may allow the customer to select whether or not they want to have the horn chirp when the security system is activated. Other modules require parameters to be changed if the vehicle is modified, such as when larger tires are installed.

In order to reprogram programmable parameters, complete the following steps after Vehicle Identification is complete:


Step 1: Select the toolbox tab at the top of the screen 

Step 2: Select "Module Programming"

Step 3: Select the tick mark  or the Enter key


Step 4: Select "Programmable Parameters"

Step 5: Select the desired parameter from the fly-out menu

Step 6: Select the tick mark  or the Enter key

Step 7: A list of allowable values for the selected parameter will appear on the right side of the screen. The current setting, if known, will be indicated with an asterisk (*). If more selections are available than can be displayed on one screen, use the up and down arrows on the keyboard to scroll through the selections.

Step 8: Select the new setting for each item on the left that requires modification. There must be a value for each parameter.

Step 9: Select the tick mark  or the Enter key. When complete, you will be returned to the Module Programming menu.

6. PATS Functionality

Some vehicles have a security system known as the "Passive Anti Theft System" (PATS). When a new Powertrain Control Module (PCM) is installed in a vehicle, this PATS system may need to be reprogrammed. In some cases the Mazda Module Programming application will link automatically to this functionality after the PCM is programmed. If this does not occur, the PATS functionality can be accessed using the steps below.

In addition to reprogramming the PATS module, the PATS functionality can also be used to reprogram keys, program additional keys or erase keys.

NOTE: The Vehicle ID process (described in Section 4) must be completed prior to accessing PATS functionality.

6.1. Vehicles with Timed Access PATS Functionality

Use this process for the following vehicles:


- 1999 MY and later Mazda trucks (except B2500)
- 2001 MY and later Mazda Tribute

Step 1: Select the toolbox tab at the top of the screen



Step 2: Select "PATS Functions"


Step 3: Select the tick mark  or the Enter key

Step 4: A screen displaying information about the PATS system for this vehicle will appear. Review this page, then select the tick mark  or the Enter key.

Step 5: A screen will appear asking if the user wants to enter the PATS security access area. Accessing this area requires a 10-minute wait.

Step 5A: If "No" is selected, PATS functionality will be aborted

Step 5B: If "Yes" is selected, the system will go through a 10-minute wait period and then enter the security access area.

Step 6: If you have chosen to enter the security access area and the operation is complete, select the tick mark  or the Enter key.

Step 7: PATS functions applicable to this vehicle are listed on the left side of the screen. When a function is selected it is described on the right side.

Step 8: Select the tick mark  or the Enter key when the desired function is highlighted.

Step 9: Follow the instructions provided on the screen.

6.2. Vehicles with Coded Access PATS Functionality


Use this process for the following vehicles:

- 2003 MY and later Mazda 6

Step 1: Select the toolbox tab at the top of the screen 

Step 2: Select "PATS Functions"

Step 3: Select the tick mark  or the Enter key

Step 4: A screen displaying information about the PATS system for this vehicle will appear. Review this page, then select the tick mark  or the Enter key.

Step 5: A screen will appear asking if the user wants to enter the PATS security access area.


Step 5A: If "No" is selected, PATS functionality will be aborted

Step 5B: If "Yes" is selected, a 6-character PCM PATS "OUTCODE" will be displayed. Record the OUTCODE and go to www.mazdaserviceinfo.com to access Immobilizer / PATS function.

Step 5C: Fill out the Coded PATS access form and submit. Your Coded PATS INCODE will be processed and e-mailed back.

Step 5D: Enter the INCODE and select the tick mark  or the Enter key.

NOTE: If the ignition key is cycled 5 or more times prior to entering an INCODE, you must retrieve a new OUTCODE and resubmit the Coded PATS access form.

Step 6: If you have chosen to enter the security access area, select the tick mark  or the Enter key.

Step 7: PATS functions applicable to this vehicle are listed on the left side of the screen. When a function is selected it is described on the right side.

Step 8: Select the tick mark  or the Enter key when the desired function is highlighted.

Step 9: Follow the instructions provided on the screen.

7. Session Management

The process of IDing a vehicle and programming modules on that vehicle is called a "session". These sessions are saved to the hard drive of the PC and can be recalled and viewed or used at a later time.

7.1. Closing a Session

When all of the work to be done on a vehicle has been completed, the Close Session sub-tab should be selected. This will provide three options:



- **Hold** – Saves the session so that work on the vehicle can be continued at a later time. Putting the session on "Hold" saves all vehicle information for future use. Up to 20 sessions can be placed on hold.
- **Complete** – Saves the session, but deletes recordings. Placing a vehicle session in "Complete" status stores the Vehicle ID information, but deletes any diagnostic information that may have been recorded.
- **Delete** – Deletes the session

If the vehicle ID process has not been completed, "Abort" is the only option available when Close Session is selected.

7.2. Restoring a Previous Session


If the user chooses to recall information previously gathered about a vehicle, the session can be restored. For example, this may be necessary if a module is being replaced and there is a waiting period between the time it is ordered and the time it arrives. To restore a previously saved session, follow these steps:

Step 1: Select the Vehicle tab at the top of the screen



Step 2: If the User ID and SAE J2534 pass-thru device have been set, select "Continue". If they have not been set, set these parameters using the instructions on the screen and then select "Continue".

Step 3: Select "Previous Sessions"


Step 4: Select the tick mark  or the Enter key

Step 5: Make sure that an Internet connection has been established and then select "Confirm"

Step 6: Wait while the system checks the User ID and software and database versions. If the User ID or software or database version is not current, the vehicle cannot be ID'd. If necessary, follow the instructions on the screen to do the required updates.




Step 7: From the list of previous sessions displayed, highlight the desired vehicle.

Step 8: To reactivate the session, select the tick mark  or the Enter key.


Step 9: Select the Toolbox tab  to program a module or use the PATS functionality (See Sections 5 and 6).

7.3. Additional Previous Session Features

In addition to reactivating a previous session, the following features are available when dealing with previous vehicle sessions.

- The multiple sessions button  allows the user to select multiple previous sessions listed on the screen in order to delete several at one time. To turn on this function, select the icon. When the multiple sessions feature is "On" there is an "X" across the button. When the button is selected a second time, the "X" will disappear and single selection will be enabled.
- The erase sessions button  erases previous sessions that have been highlighted.
- The sort sessions button  allows the user to sort the previous sessions that are displayed. Sessions can be sorted by User ID, Model, Date, VIN, or RO number.

7.4. Viewing the Log

Selecting the Log Viewer sub-tab at the bottom of the screen  displays information collected during a Vehicle ID session. It can be used with a current session or a previous session. The information that is logged includes:

- Date and time of session
- Vehicle information gathered during Vehicle ID
- Actions taken

8. Troubleshooting

8.1. SAE J2534 Pass-thru Device Issues

Issues with the SAE J2534 pass-thru device should be forwarded to the pass-thru device supplier

8.2. PC Issues

Required hardware and software and recommended configurations are provided in Section 2 of this guide. Specific issues with the PC should be addressed to the PC supplier.

8.3. Software Issues

Error messages have been supplied in the Mazda Module Programming application to attempt to diagnose some issues that may arise when using the application. Those messages and possible methods of fixing the issue are listed below.

If the problem persists, contact software support using the following process:

- Go to the Mazda Tech Info website (www.mazdatechinfo.com)
- Complete the Software Assistance form provided

The support center will provide a response within 48 hours. Support center hours are Monday – Friday, 9:00 a.m.– 5:00 p.m. Eastern Time.

Table 1 – Module Programming Error Messages

Error Message	Actions
Application cannot determine DIF file name. Contact software support	Contact software support using the instructions in Section 8.3
Cannot unzip file. Contact software support.	Contact software support using the instructions in Section 8.3
Proxy/firewall authentication failed. Invalid or blank Public Internet Access ID and Password. Please enter Setup and select Public Internet Access ID and Password Configuration to provide valid credentials.	<ol style="list-style-type: none"> 1) Go to the System Page 2) Go to System Utilities 3) Select "Public Internet Access ID/Password Configuration" 4) Enter the User ID and Password required to access the public Internet
A connection to the server has not been established. Close this application and confirm that your Internet connection is working properly. Then restart the application. If you are still unable to connect to the server, contact software support.	<ol style="list-style-type: none"> 1) Close the Module Programming application using the "X" in the upper right corner of the screen 2) Determine that you are able to access the Yahoo website (www.yahoo.com) 3) If you cannot access Yahoo, check your Internet connection cables or lines and attempt to log into Yahoo again 4) When you are certain that an Internet connection has been established, start the Module Programming application again 5) If you are still unable to connect to the server, contact software support using the instructions in Section 8.3.

Error Message	Actions
Module Programming failed to get the required calibration file. There was an error during file transfer or the file does not exist on the Web Server. Contact software support.	Contact software support using the instructions in Section 8.3. Provide the file name included in the error message.