

# MX5 Diagnostic Tool

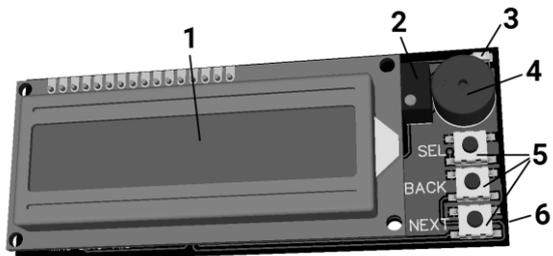


## User Instructions

### 1. Precautions

- Only to be used in the engine bay diagnostic port on MK1 and appropriate MK2 Mazda MX5 and Eunos cars with original ECU. No responsibility is accepted for incorrect use or any damage caused by use of this tool.
- Do not use if pins are bent or any part of the board is damaged.
- Do not expose to moisture or extremes of temperature.
- Keep stored in original packaging to protect the pins.

### 2. Features



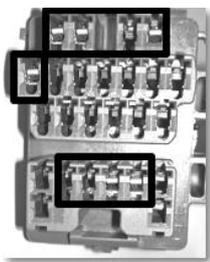
- 1=Backlit LCD display. Clean with soft cloth if required.
- 2=Contrast Adjust. 3=Red LED Indicator. 4=Sounder.
- 5=Control buttons. 6=Connection Pins (Underneath)

### 3. Plugging and Unplugging

To install the tool, ensure ignition is off. Open the diagnostic port cover located in the engine bay near the air filter. Carefully align the pins of the tool with the pins of the diagnostic port as shown.

Holding the sides of the board (not the display), press vertically down with a gentle but firm pressure so that the pins engage by 1 or 2mm into the port. The tool should remain level at all times.

To remove the tool, grasp the sides of the black circuit board and apply gentle but firm pressure upwards until the tool releases.



### 4. Turning On

Once the tool is firmly in place, turn the ignition on but **DO NOT START THE ENGINE**. The display should immediately illuminate and the buzzer should emit a series of beeps. If the display does not illuminate, turn off the ignition and check that the pins are correctly located and that the tool is firmly pressed into the connectors. *Note: If you have previously turned off sound, no beeps will be heard on switch on.*

### 5. Adjusting the Contrast

The contrast level is pre-set during manufacture so in normal use this adjustment should not normally be required. However, if the display illuminates but shows no text or solid black blocks, then you will need to adjust the contrast. Using a small flat-blade screwdriver, turn the small screw in the top of the contrast adjuster (2) until text appears. You may need to turn the adjuster many turns to make text visible. You can also use this adjuster to slightly alter the contrast of the display to suit your personal preference.

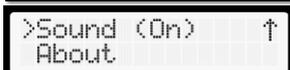
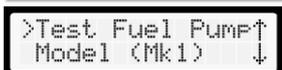
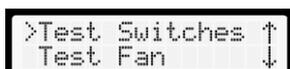
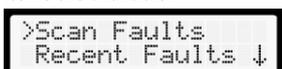
### 6. Setting the Model

On first use, you will be prompted to select whether you wish to use the tool on a MK1 or MK2 vehicle. This is because these vehicles transmit different format codes. The default is MK1 but you can use the **SEL** button to select MK2 if required. When the correct model is selected, press **BACK** to go to the menu. The model can be changed at any time by selecting the **Model** menu item.



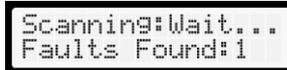
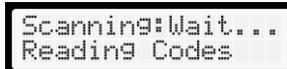
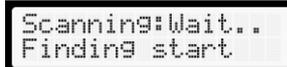
### 7. Using the Menu

The various functions are accessed using a menu system. The current menu item is marked with a ">" symbol and arrows at the end of the display show the direction you may go for more menu items. Use the **NEXT** and **BACK** buttons to navigate up and down the menu. Use the **SEL** button to select the currently marked menu item. The following menu items are available: -



### 8. Scanning for Fault Codes

To scan for any faults, choose the **Scan Faults** menu item. The tool will begin scanning for fault codes. As the flash codes are received you should notice the red led (3) flashing. If the LED does not flash, after a short period of time the tool will inform you that there are no faults. In this case, click **BACK** to return to the menu. The if LED is flashing the tool will begin looking for the start of a message. After a few seconds (longer on MK2), the tool will find the start of the fault data and begin reading in codes. As each fault code is read, the tool will give a short beep and a count of faults found so far will be displayed. This will continue until all codes have been read. At this point the tool will play a series of tones to alert you that the scan has completed and display the first fault code. The code number is the raw code sent from the ECU. The bottom line will display the fault related to this code and possible causes. Long messages will scroll across the display. The causes are simply suggestions and the user should check all reasons for any displayed faults. Any further faults can be displayed by clicking the **NEXT** buttons. Click **BACK** to return to the menu. *Note: MK2 codes are 4 times the length of MK1 codes and consist of 4 digits. Consequently, they will take much longer to scan – please be patient!* At any point during the scan process, click **BACK** to abort.

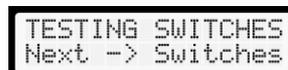


### 9. Viewing Recent Faults

The most recent scan results are stored permanently in the tool, even when powered off, until a subsequent scan overwrites them. Use the **Recent Faults** menu item to view the results of the most recent scan.

### 10. Switches Test

The tool can indicate whether a selection of switch inputs into the ECU are working. Select the **Test Switches** menu item to enter this mode. The display will indicate that you are in Switch Test mode and prompt you to click **NEXT** to see details of which switches can be tested. You do not need to click next for this function to operate as all switch inputs trigger the same output. The **NEXT** function is solely to remind the user which switches can be tested. As each switch is operated in the vehicle, the display will indicate whether the operation was detected along with an audible warning. Click **BACK** to return to the main menu. *Note: If the sounder and LED operate immediately after entering this mode, this indicates that one or more of the switches are already operated. Press the BACK button to return to the menu and check all switches before re-trying.*

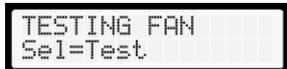


enter this mode. The display will indicate that you are in Switch Test mode and prompt you to



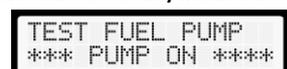
### 11. Cooling Fan Test

*Note: This function may not work on some later models which have the cooling fan controlled by the ECU.* To enter this mode, select **Test Fan** from the menu. The display will indicate that you are in fan test mode. Ensure that nothing is blocking the fan and that all loose clothing and hands are clear, press and hold down the **SEL** button to operate the cooling fans. The display will beep and display the fact that the fan is now operating. Release the **SEL** button to stop the fan. Click **BACK** to return to the main menu.



### 12. Fuel Pump Test

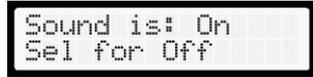
To enter this mode, select **Test Fuel Pump** from the menu. The display will indicate that you are in fuel pump test mode. The operation time of the fuel pumps is limited to 2 seconds to prevent over-pressuring of the system, especially if there is a leak or fault. **This test is only meant for testing fuel pressure and should be carried out only by competent technicians.** Press and hold down the **SEL** button to operate the fuel pump. The display will beep and display the fact that the fuel pump is now operating. Release the **SEL** button to stop the fuel pump. Click **BACK** to return to the main menu.



### 13.Sounds

The sound output of the tool can be turned on or off as required. Select the **Sound** menu item.

The display will indicate whether the sound is currently on or off. Use the **SEL** button to toggle between sound on and off and click **BACK** when done. Your selection will be permanently stored in the tool.



```
Sound is: On
Sel for Off
```

### 14.About

This function displays the current version of the firmware used by the tool. Please quote this version number if you ever need to contact us regarding your Diagnostic Tool. Click **BACK** to return to the menu.



```
MX5 Diagnostic
V1.2 (c)MX5Tech
```

### 15.Resetting codes

If the Diagnostic Tool has detected fault codes which you have consequently repaired or fixed, they can be cleared from the ECU by disconnecting the battery and pressing the brake for a few seconds. Alternatively, you can remove the fuse marked **BTN** instead of disconnecting the battery. Unfortunately, there is no way to reset the ECU codes via the diagnostic connector.

### 16.Additional Important Notes

- When the Diagnostic Tool is plugged in, the ECU is automatically placed into test mode. **Do not attempt to run the engine with the tool plugged in.**
- If the tool does not immediately operate on turning on the ignition, turn off and double check the pin positioning.
- This tool will **NOT** work with aftermarket or modified ECUs, nor will it work with cars after the year 2000 with full ODB systems.

### 17.Problem Solving

If you have any problems with the Diagnostic Tool, please thoroughly read the information above. If the unit does not operate, the most likely cause is mispositioning of the pins or the tool not being plugged in firmly enough.

If the LED is flashing but codes are not being correctly read or not read at all, the most likely cause is that you have selected the wrong model of car. Check that you have selected MK1 or MK2 correctly.

If no text is appearing on the screen but it is lighting up, most likely the contrast needs adjusting (see section 5).

More information and an FAQ is available on the website at [www.mx5tech.co.uk](http://www.mx5tech.co.uk)

If you need to contact us regarding your Diagnostic Tool, please send us an email at [support@mx5tech.co.uk](mailto:support@mx5tech.co.uk)