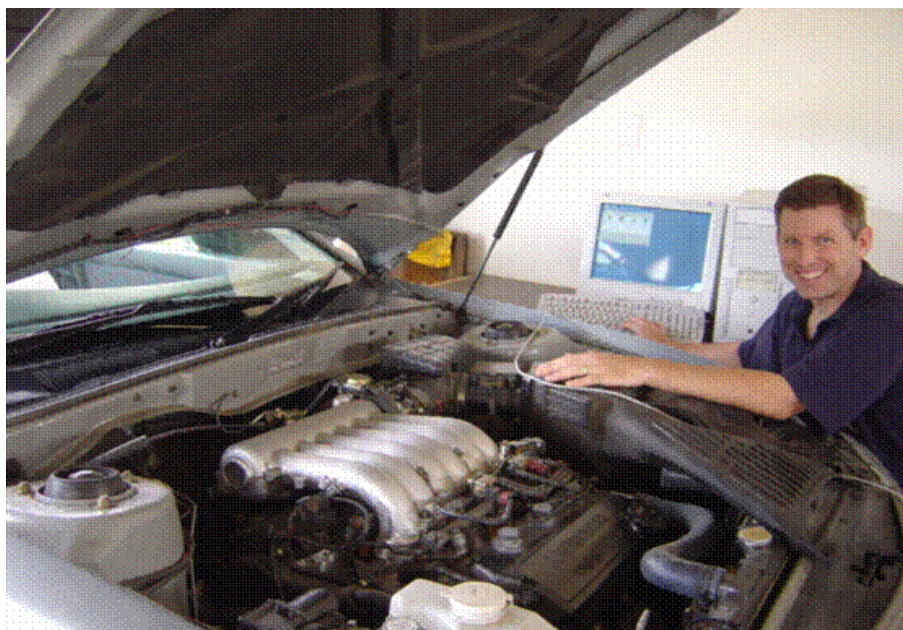




Rennacs PC CodeReader Manual



Version 1

For Support Email: support@rennacs.com

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1. Installing The CodeReader™

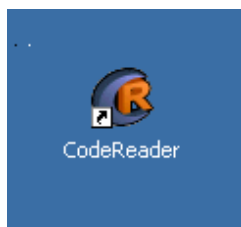
As the Rennacs CodeReader program is constantly being updated, the best place to get the CodeReader software is from our website. We will send you the link to download the software when you purchase.

After you download the CodeReader software, double click on the file to run it. The Rennacs CodeReader Install Wizard should run. Follow the onscreen directions; be sure to agree to the license agreement when it appears.

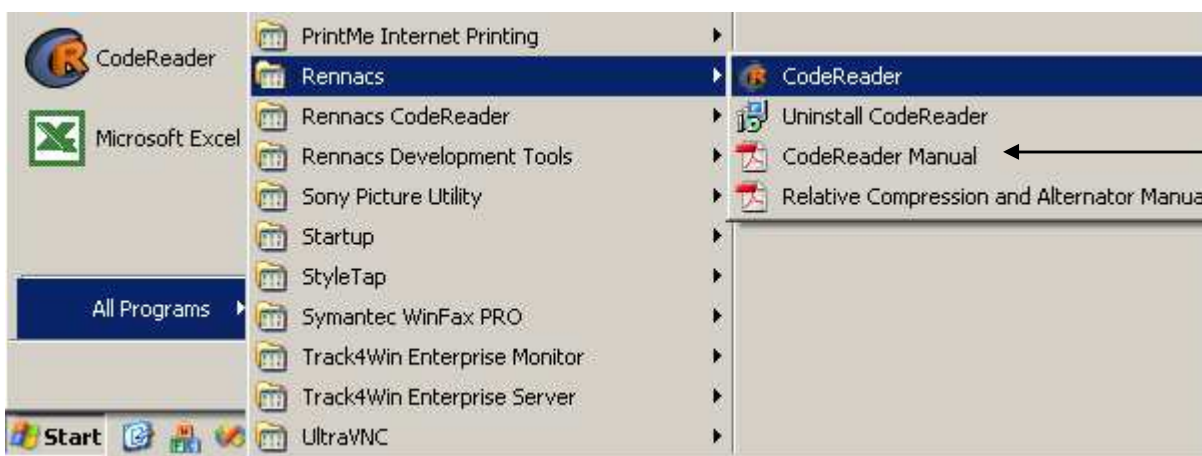
You will need to enter your unlock codes that will be sent to you at the time of purchase, to activate the CodeReader software to work with the Rennacs CodeReader hardware.

2. To start the CodeReader program

Either Double-Click on the CodeReader Icon on your computer desktop, or access it by clicking **Start**, then **Programs** then, **Rennacs** and selecting the **CodeReader** Program.



Double-click on the CodeReader Icon



Or find CodeReader in the Start Menu. You can also find an electronic version of his manual in the same location in the Start Menu

3. Performing a Test.

First click on the system of the test you would like to perform. There are currently five options below, Petrol Engine (EFI), ABS, Transmission, Airbag/SRS, Diesel Engine (EFI).

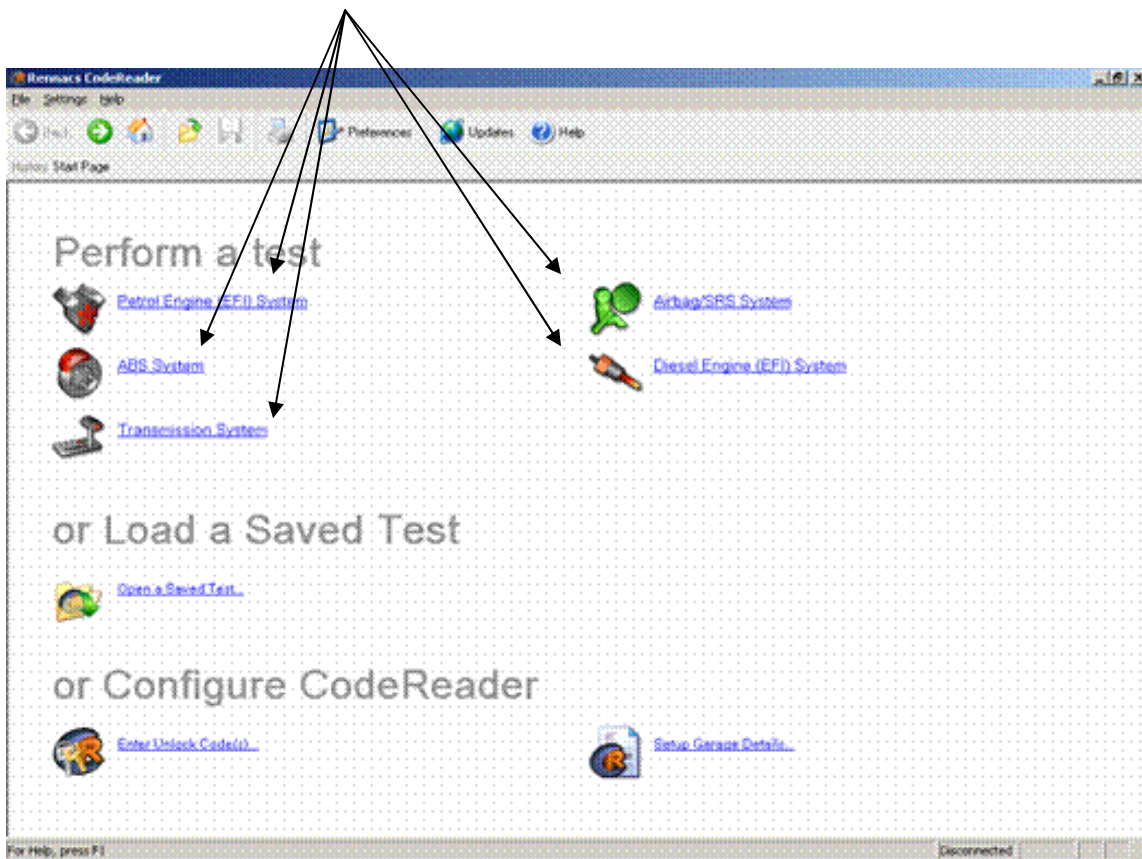
In this case the manual will follow a Petrol Engine (EFI) test however the principles remain the same for all the software systems.

Please Note:

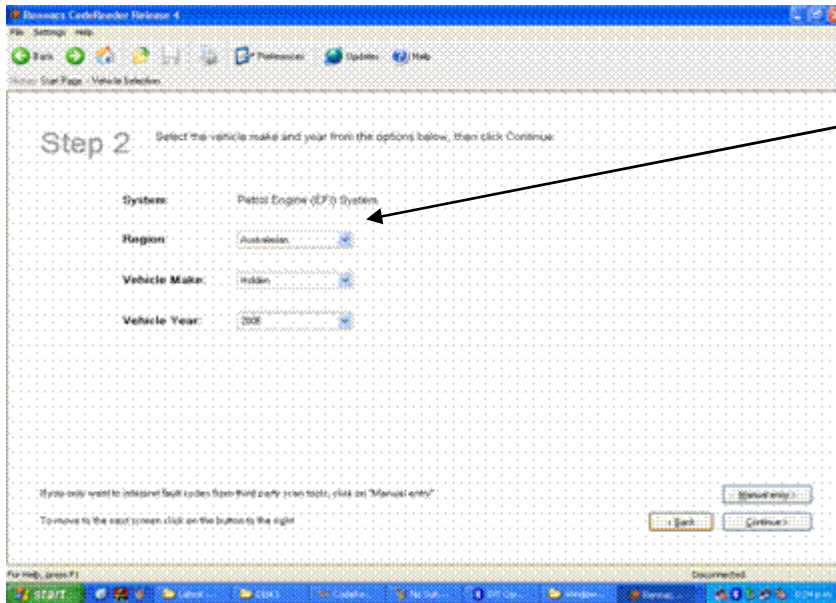
Generic and Manufacturer Specific codes are included in all of the options:
Petrol Engine (EFI), ABS, Transmission, Airbag/SRS & Diesel Engine (EFI)

3.1 Start Page

Click on the type of test desired



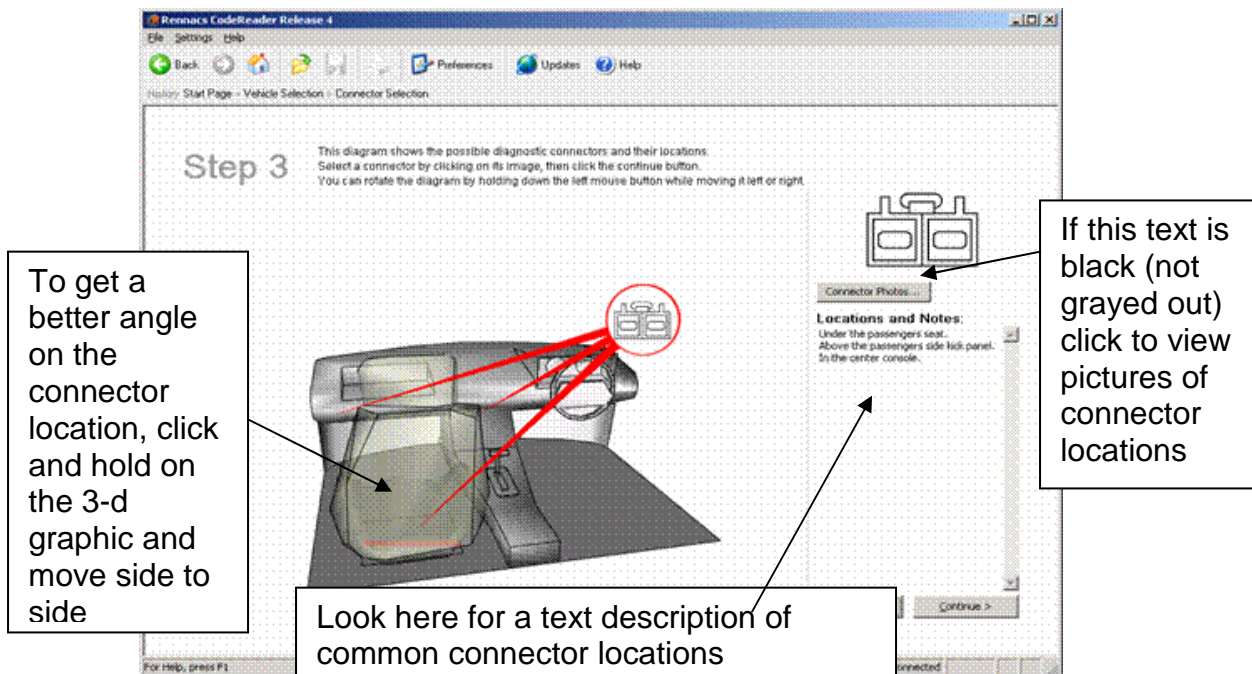
3.2 Vehicle Selection Page



Select from the drop down boxes. For Regions, select the region that the vehicle was manufactured in or marked for. Then select the Vehicle Make and Year and press “Continue”

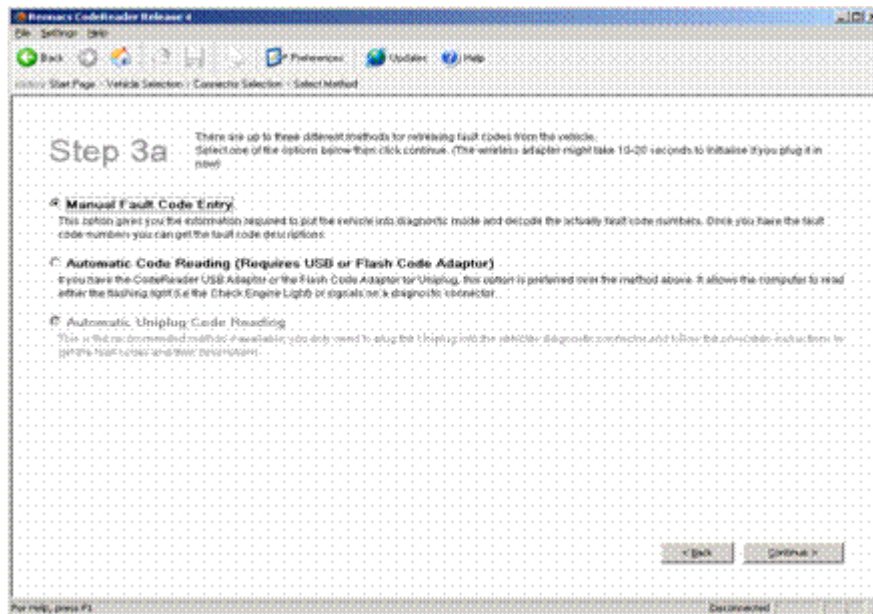
3.3 Connector Selection Page

This screen will show diagrams of all the connectors known to be fitted for the make and year entered previously. The red arrows show approximately where each connector will be found on the 3D graphic of the car. Observe the diagram and tips below that further explain the features of this screen before clicking Continue. Click on the connector diagram to select it. If more than one connector is shown you will need to determine which one is fitted in your vehicle by looking in the various locations.



3.4 Select Method Page

The screen below will appear next. There are three methods of retrieving codes from the vehicle. Both Manual and Automatic code reading are methods to read flash codes (slow codes). "Automatic UniPlug Code Reading" is a method for reading OBD2 / EOBD and other Serial Data (fast) codes, which are present on later model vehicles. Each method will be discussed in turn below.



Manual Fault Code Reading

Manual fault code reading requires only some simple tools as described by clicking on the blue text within the program, (this will be explained in full later).

Automatic Code Reading (hardware not supplied, so please ignore this option)

Rennacs supplies hardware to take the away the difficulty of manually reading fault codes. This method uses the CodeReader Optical Sensor, or the CodeReader Red Clips.

Automatic UniPlug Code Reading

The CodeReader UniPlug is special hardware that plugs directly to the 16 pin connectors found on most post 1996 vehicles to read OBD2 / EOBD and other Serial Data / Dealership Level diagnostic codes.

The Automatic UniPlug Code Reading option will always be selected by default if the option is available.

If the option to select Automatic UniPlug Code Reading is grayed out then please use the Manual Code Reading option.

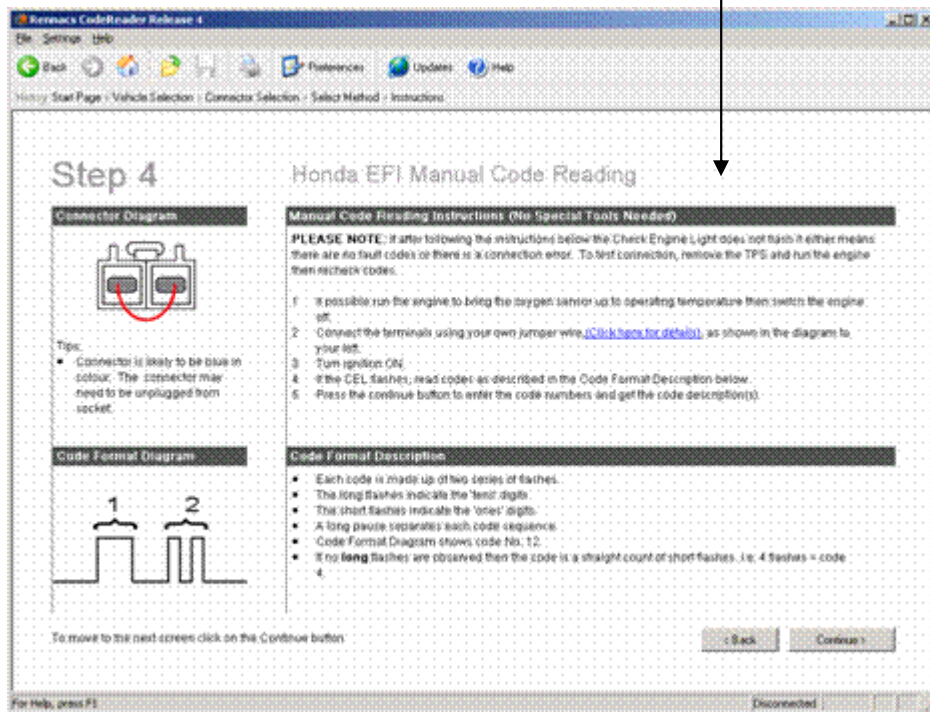
3.5 Manual Fault Code Reading

The instructions for Manual Code Reading are shown below. Manual fault code reading requires some simple tools such as a jumper wire and LED tester or Voltmeter.

3.5.1 Manual Fault Code Reading Instruction Page

Once the car is displaying the fault codes it is recommended to write them onto paper. Most cars repeat the code sequence. Recheck the codes until you are confident that the correct codes have been recorded. Once this has been achieved, press "Continue" to move to the final screen.

Follow these simple instructions to output any stored fault codes.

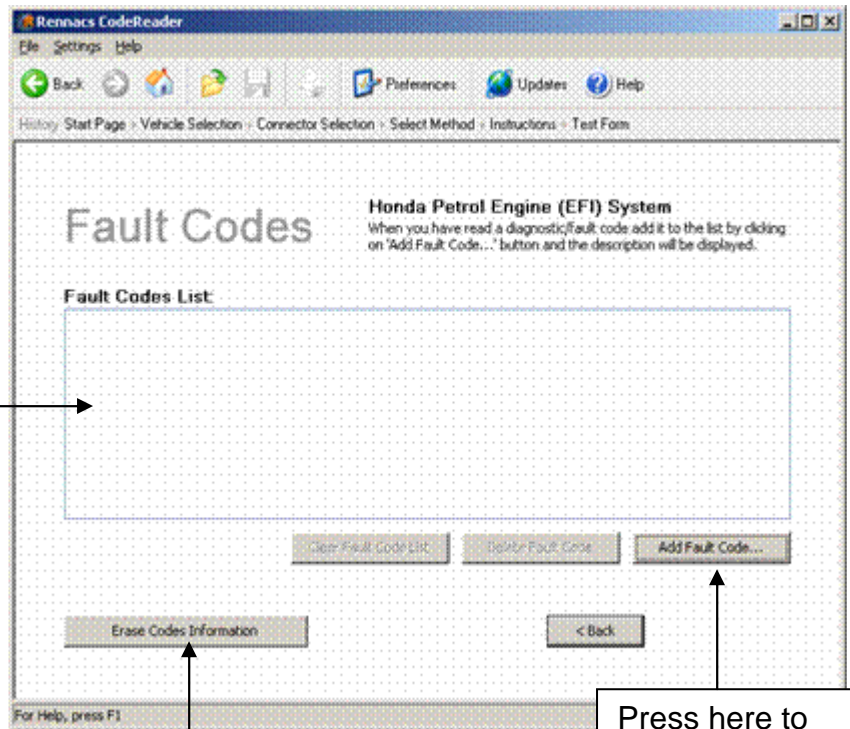


The Manual Code Reading Instructions above give you all the details you need to:

1. Put the vehicle safely into diagnostic mode using a jumper wire.
2. The timing of the code output for the vehicle is shown in the left hand bottom corner of the above screen. This timing shows you how to interpret the flashes of on the dash, LED tester, or Voltmeter, to ensure that you can read the codes. The text describes how to read the codes with relation to the timing.

3.6 Manual Fault Code Reading Entry Page

Once the code numbers have been obtained they need to be entered to find the manufacturer code descriptions. To do this, click on the Add Fault Code button and enter the recorded code number into the box and press Add Code to Table. This enters the code into the Fault Codes List. Additional information on how to erase codes from the cars ECU memory is found by clicking on the Erase Codes Information button.



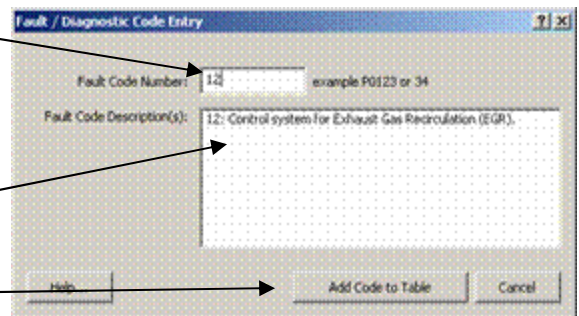
Press here to view information on how to erase codes

Press here to enter the code number

After you click on “Add Fault Code...” the box to the right will appear, and allow you to enter your code(s).

As you enter the code, the code description will automatically be displayed

Once you have entered a code, click on Add to Table.

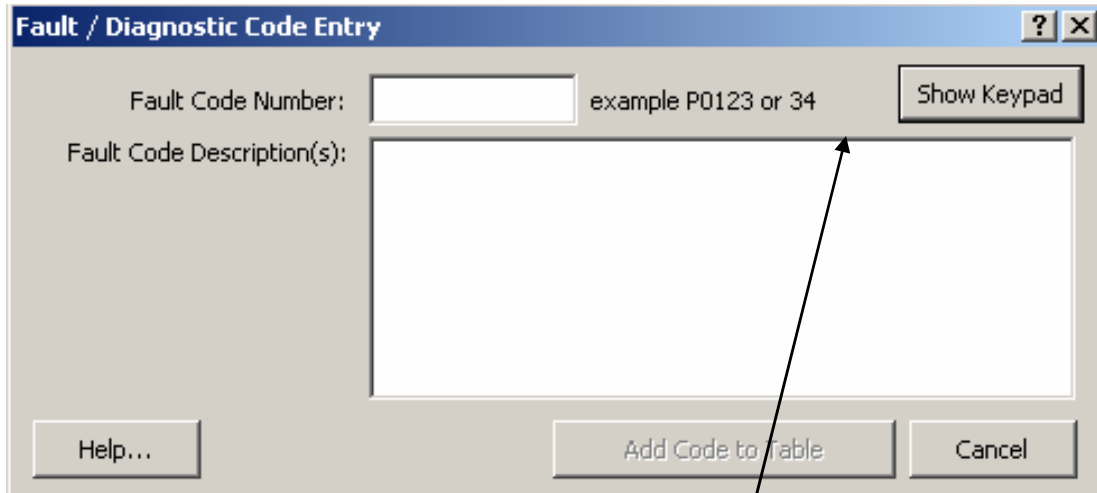


Your code number and description will then be added to the Fault Codes List.

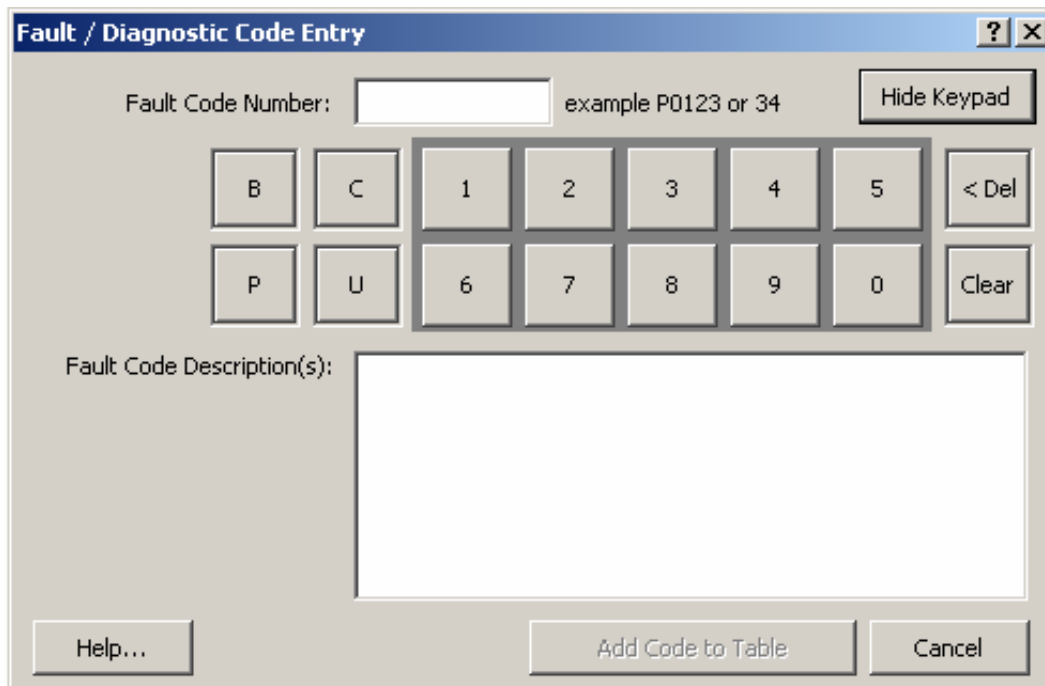
3.7 On-Screen Keypad for Manual Codes Entry

If you have a touch screen computer / laptop you can enter codes by tapping in the code number via your touch screen.

In the manual code entry page, when you click “Add Fault Code...” the dialog windows pops up like the one shown below:



Click “Show Keypad” will expand out the numeric keypad on screen:



The functions for each key are straightforward from their appearances. Numeric keys are used to enter numbers. 'B'/'C'/'P'/'U' keys are used to enter OBD-II / EOBD type codes. 'Del' is used to remove the last digit of the code. 'Clear' is used to clear current code in the code entry box.

4. Using the Uniplug

The Universal Plug (UniPlug) system allows you to "plug into" the On Board Diagnostics 2 (OBD2) or European On Board Diagnostics (EOBD) style 16 pin diagnostic connector found on all later model vehicles.

The UniPlug reads OBD2 / EOBD, and Serial Data (Fast) Codes.

If you are unsure if the vehicle has a serial data system that the UniPlug can talk to, it will not do any harm to plug the UniPlug into the vehicle and attempt to complete a test. If the CodeReader cannot talk to the vehicle it will simply not communicate.

4.1 Connecting the UniPlug

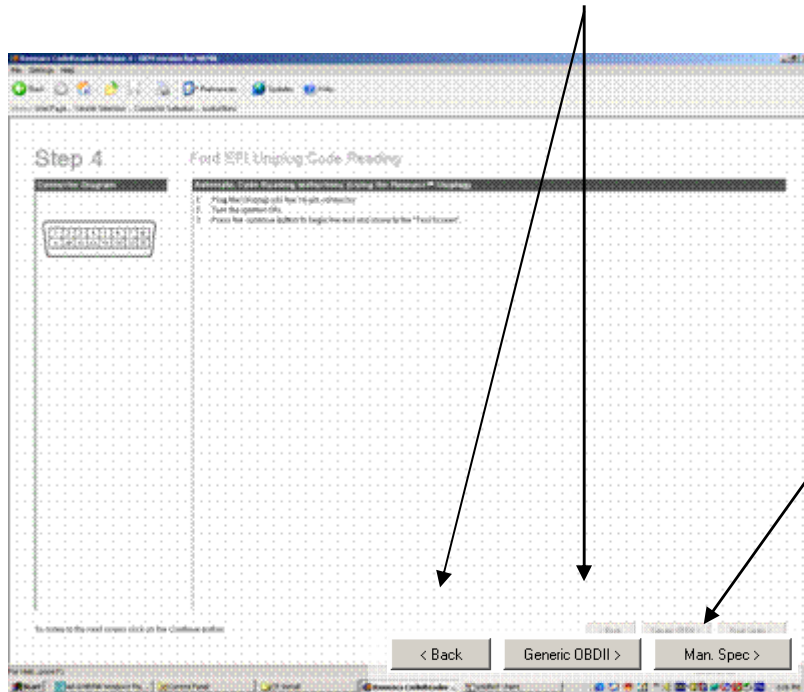


The UniPlug connects directly to 16-pin connector found in most post 1996 vehicles to read Serial (fast) codes.

5. Reading Generic OBD2 / EOBD and Dealership Level, Manufacturer Specific Codes

Any vehicle make (with Engine or Transmission options) after 1996 has the Generic OBD2 / EOBD option available. If there is no Manual Code Reading option available for the vehicle chosen, the CodeReader program will jump directly from step 3 to step 4, bypassing step 3a (the Select Method page).

If there is a UniPlug specific software module written for the vehicle selected, then you will get the following screen options.



When there is a specific UniPlug software module written for the vehicle, then the "Man. Spec" button will be present.

The "Man. Spec" button allows you to read a different set of Manufacturer Specific codes than the Generic OBD2 / EOBD (with its own set of Manufacturer Specific Codes).

PLEASE NOTE:

Even though a vehicle has the OBD2 / EOBD 16 pin style connector it DOES NOT necessarily mean the vehicle is OBD2 / EOBD compatible.

Due to the high number of vehicle variations (outside of the USA), it is very difficult to compile a list of all vehicles that are OBD2 / EOBD compatible.

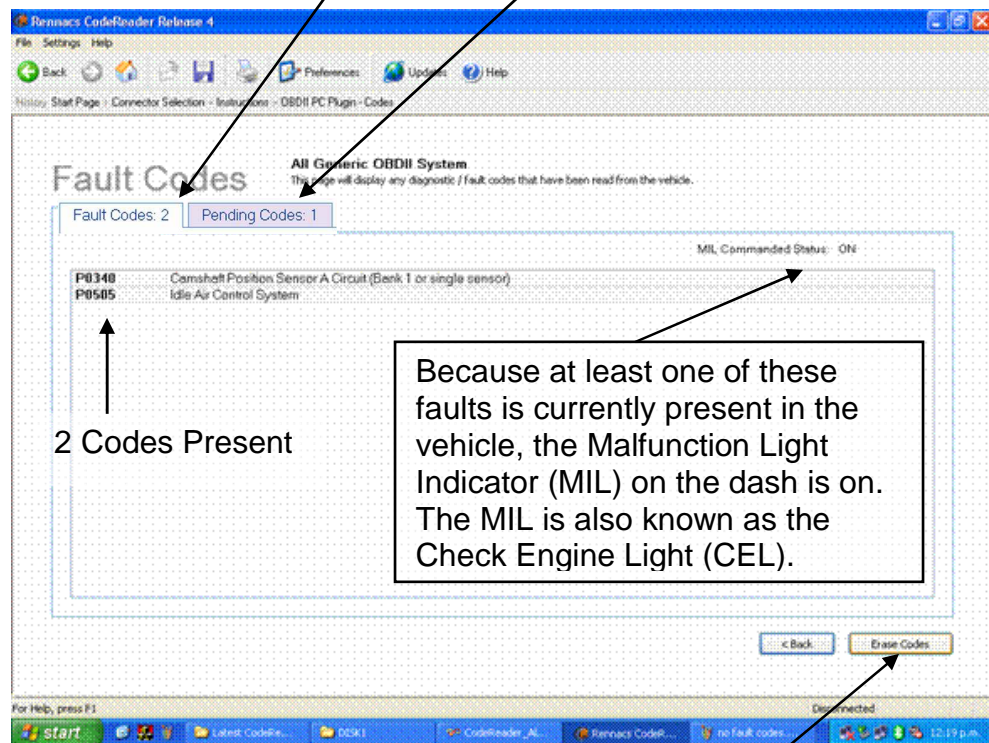
If you are unsure if the vehicle has an OBD2 / EOBD system, it will not do any harm to plug the UniPlug into the vehicle and attempt to complete a test. If the vehicle is not OBD2 / EOBD it will simply not communicate.

OBD2 / EOBD Style Manufacturer Specific Codes

Because you have already selected the Make, System and Year for the vehicle under test, the CodeReader program will automatically display Manufacturer Specific fault

codes as well as Generic OBD2 / EOBD codes.

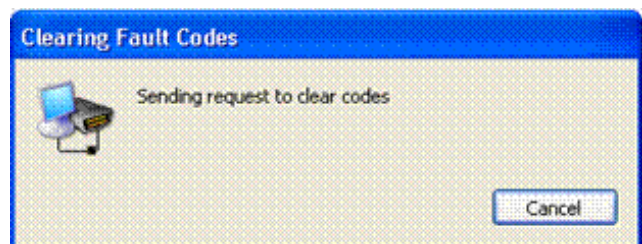
The screen shot below shows two fault codes being read from the vehicle. The number beside the Fault Codes and Pending Codes shows how many codes are present.



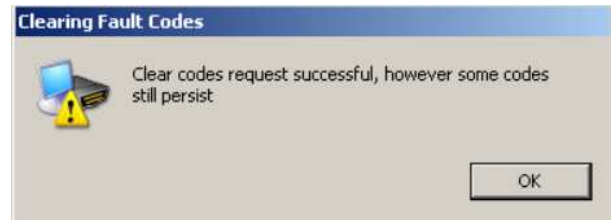
5.1 Erasing the Codes

To Erase the codes, click on the “Erase Codes” button.

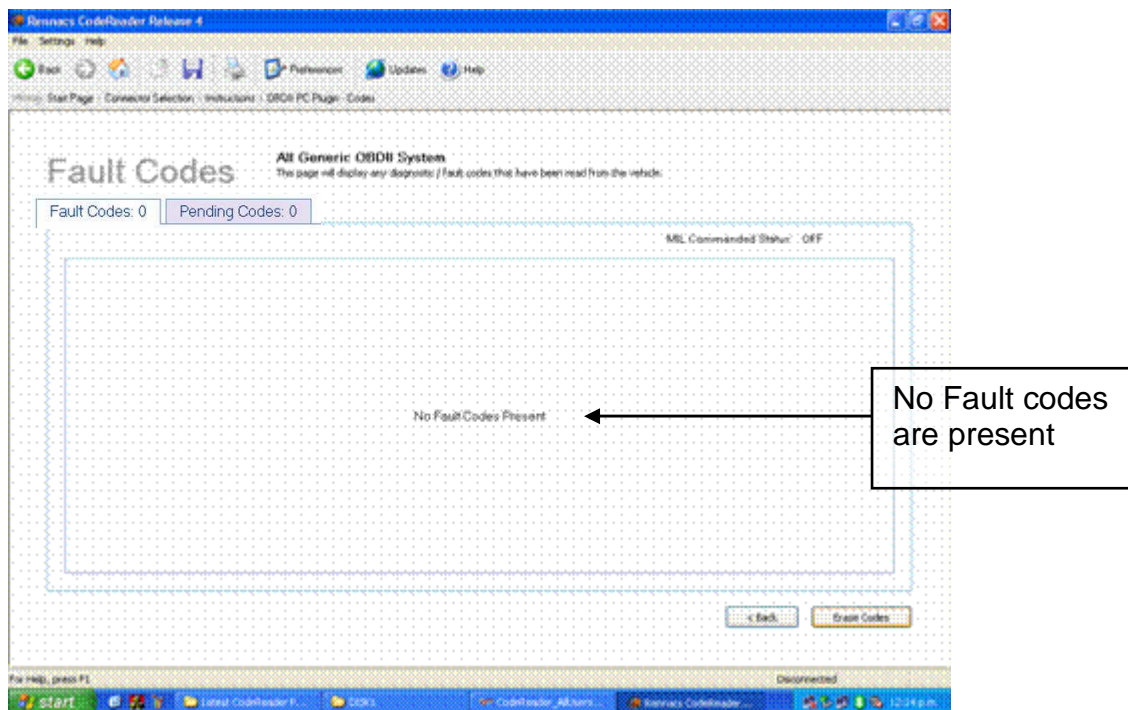
The following message will appear
And the code clearing progress begins. When it is done it will recheck for present codes and display a result



There are 2 possible results. 1) All faults are successfully cleared or 2) The clear was successful but some fault codes are still present. This is caused by hard faults. These faults will need to be repaired before they can be cleared.

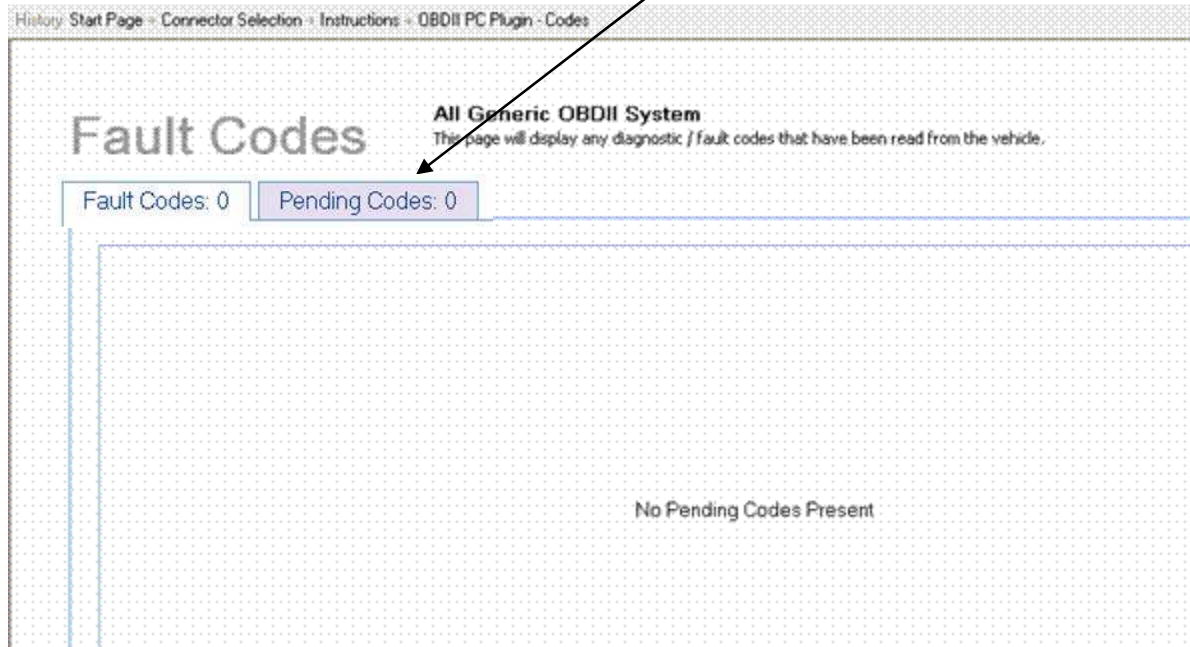


If the codes have all been erased the screen should look like this.



5.2 Pending Codes

To check for "Pending Codes" click on this tag



Pending Codes generally need to be recorded during 3 drive cycles before they will appear as Fault Codes. They are useful to understand intermittent and pending vehicle problems.

6. Reading ABS and Airbag (SRS) Generic and Dealership Level (Manufacturer Specific) Codes

The CodeReader program includes Generic and Manufacturer Specific C and B codes for all vehicles after 1996 equipped with Generic OBD2 / EOBD.

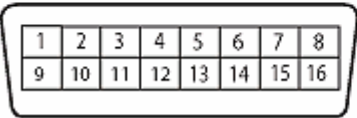
Please Note: even if the vehicle has the OBD2 / EOBD 16 pin style connector, it DOES NOT mean the vehicle will give Generic and Manufacturer Specific C and B codes. Due to large make and model variations it is too difficult to compile an accurate list of which vehicles have Generic and Manufacturer Specific C and B codes.

It is perfectly safe for both the CodeReader and vehicle to try reading Generic and Manufacturer Specific C and B codes from the vehicle.


Step 3a There are up to three different methods for retrieving fault codes from the vehicle. Select one of the options below then click continue. (One wireless adapter might take 10-20 seconds to initialise if you plug it in now)

- Manual Fault Code Entry**
This option gives you the information required to put the vehicle into diagnostic mode and decode the actual fault code numbers. Once you have the fault code numbers, you can enter them manually.
- Automatic Code Reading (Requires USB or Flash Code Adaptor)**
If you have the CodeReader USB Adaptor or the Flash Code Adaptor for UniPlug, this option is preferred over the method above. It allows the computer to read all signals on a diagnostic connector.
- Automatic Generic OBD-II / EOBD Reading**
Select this method if you want to read the Generic OBD-II / EOBD standard part of the fault codes.

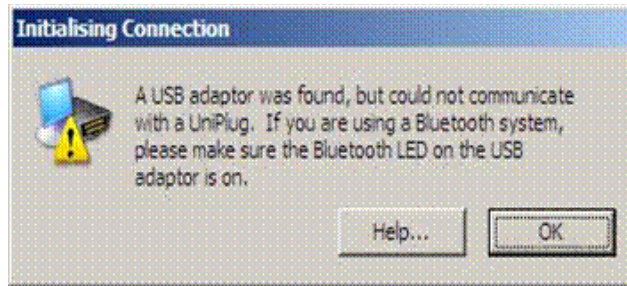
Step 4 Generic OBD2 UniPlug Code Reading

Connector Diagram	Instructions
	<p>Test Description. This module covers vehicles that support OBD2/EOBD.</p> <p>Performing a "Generic OBDII" fault code test does a standard OBDII test OBDII protocol.</p>
<p>ABS codes are part of the chassis (C) codes</p>	<p style="text-align: right;"> < Back Generic OBDII C-Codes > </p>

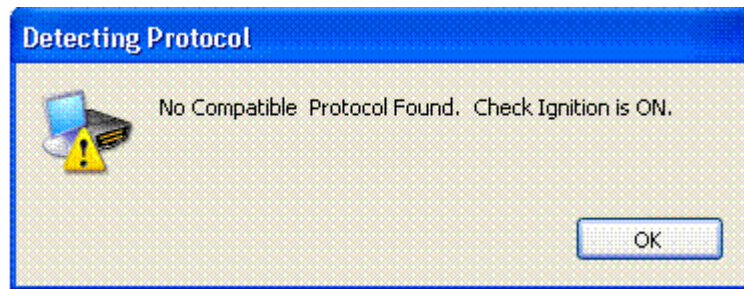
Step 4 Generic OBD2 UniPlug Code Reading

Connector Diagram	Instructions
	<p>Test Description. This module covers vehicles that support OBD2/EOBD.</p> <p>Performing a "Generic OBDII" fault code test does a standard OBDII test OBDII protocol.</p>
<p>Airbag (SRS) codes are part of the Body (B) codes</p>	<p style="text-align: right;"> < Back Generic OBDII B-Codes > </p>

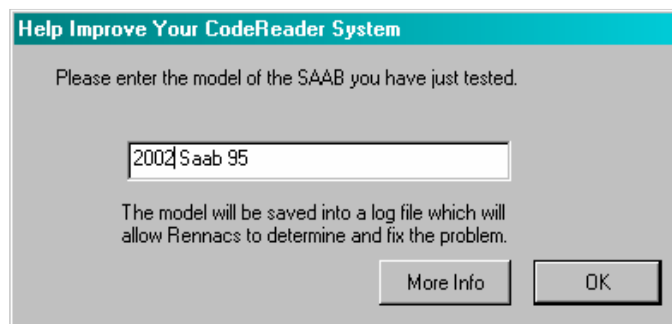
7. Troubleshooting General UniPlug Communication with Vehicle



Please check the UniPlug is plugged in and the GREEN POWER LED is ON, on the UniPlug. If there is not, you may need to plug the UniPlug in again. If you get a message similar to below, after clicking the Man. Spec button, it means that the CodeReader software cannot talk to the vehicle.



This could be because the wrong vehicle or vehicle model has been selected. Please recheck the vehicle selection and change as necessary. It can also be caused by the ignition key being off.



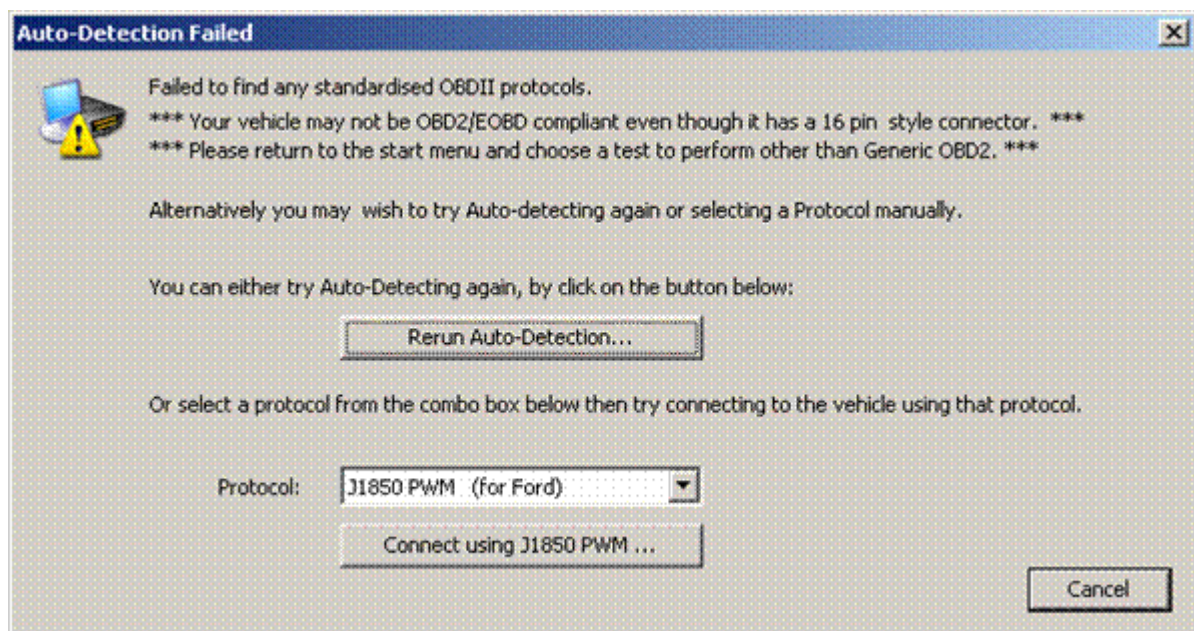
The box above will appear if your CodeReader can't communicate with the vehicle under test. You can click on the "More Info" button for full details, and the email address to send the "Log File" to Rennacs.

8. Trouble Shooting OBD2 / EOBD communications

After clicking on the Generic OBD2 button CodeReader will attempt to communicate to the vehicle via one of 5 OBD2 / EOBD protocols as follows:

1. J1850 PWM for Ford vehicles
2. J1850 VPW for GM vehicles
3. ISO (9141-2 and Keyword 2000) for Asian and European vehicles
4. CAN for ALL late model vehicles. All vehicles sold into the USA and Europe have be CAN compliant in 2008.

This window will also appear if you forgot to turn the ignition key on, or the vehicle is NOT OBD2 / EOBD compliant.

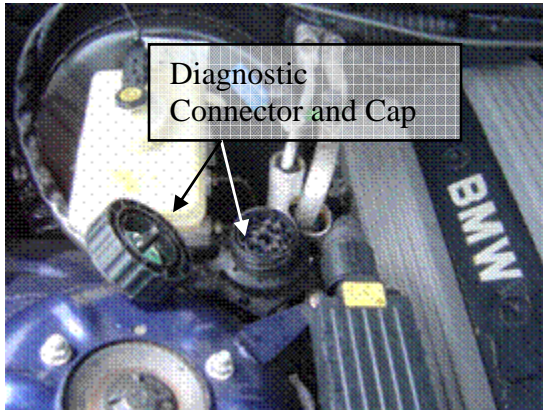


Even though a vehicle has the OBD2 / EOBD style 16 pin plug, it DOES NOT mean that the vehicle is Generic OBD2 / EOBD compliant. You can try manually choosing the correct protocol for the vehicle from the drop down box.

Click “Rerun the Auto-Detection” button to retry the system. You can also select a protocol from the drop down list. This is not normally needed as the Auto Detection is very reliable.

Please also try the “Manual Fault Code Entry” option for the vehicle if it is available.

9. Using the BMW Plug Adapter with the UniPlug



BMW cars after 1988 have a circular 20 pin diagnostic connector under the bonnet. This connector should have a cap covering it. This cap should be on while the vehicle is running.

To read codes on most pre 2000 year BMW's you must connect the circular 20 pin BMW plug adapter as shown.

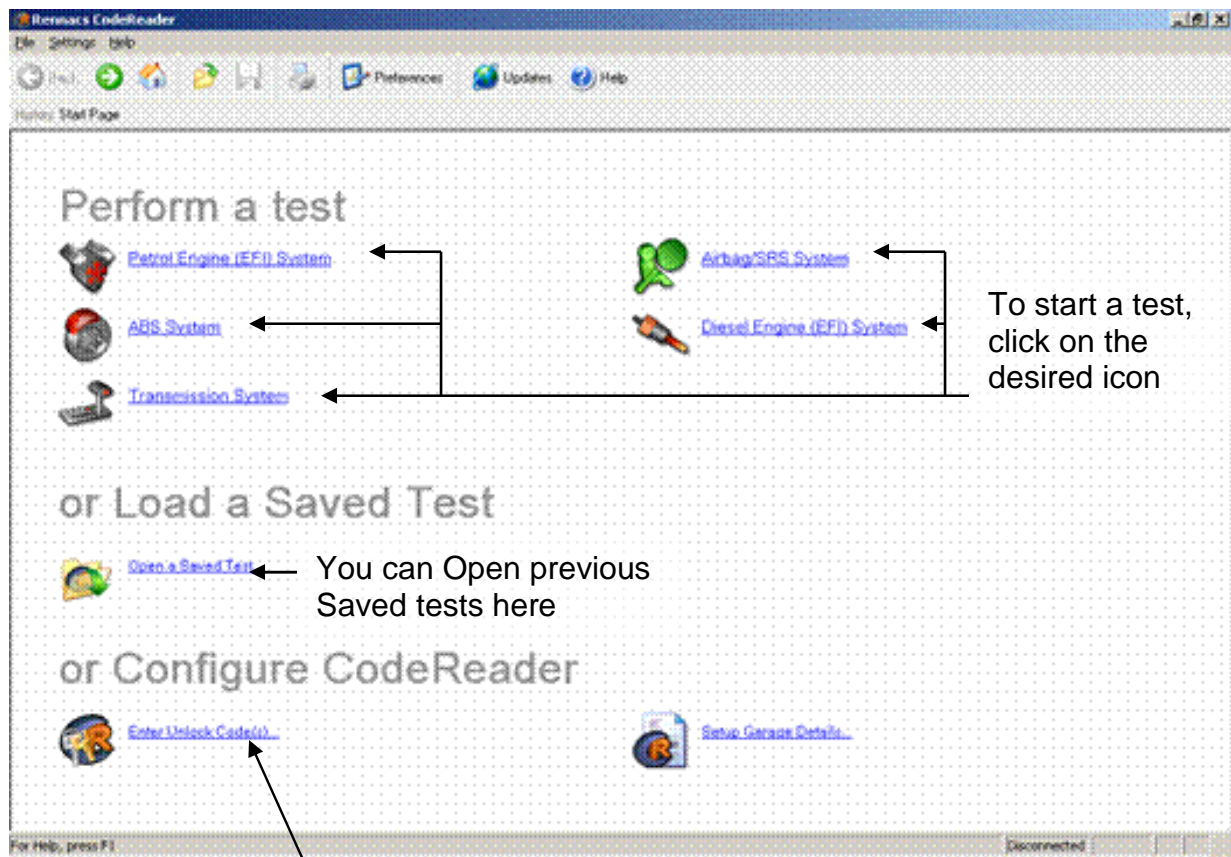
10. Warnings

- Do not have the UniPlug connected while connecting "jumper leads"
- Avoid getting the UniPlug wet
- Avoid leaving in direct sunlight
- Disconnect the UniPlug before operating the vehicle, as the UniPlug may otherwise interfere with the operation of the accelerator, brake or clutch pedals.



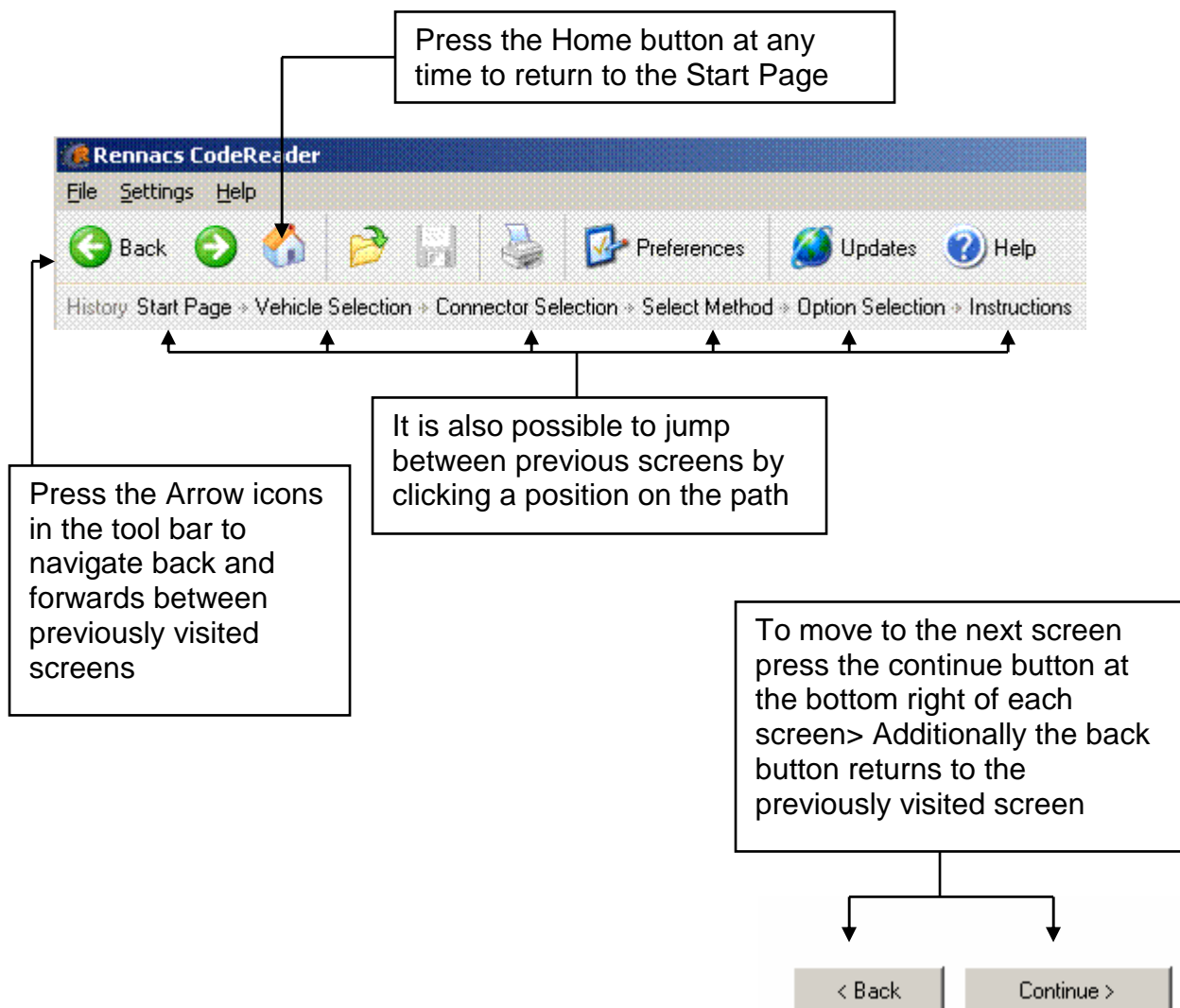
11.1 CodeReader Start Page

Click on the printer icon to print



You can enter your Unlock Codes for each new Software Module here

11.2 Basic Program Navigation



12. Rennacs CodeReader Parts List



- UniPlug - Plugs into the cars OBD2 / EOBD style socket as an interface to your PC / Laptop
- BMW UniPlug Adaptor Allows the UniPlug to connect to pre 2000 year BMW vehicles
- Mercedes UniPlug Adaptor Allows the UniPlug to connect to pre 2000 year Mercedes vehicles
- Early Model VW—Audi Adaptor. Allows the UniPlug to connect to early VW / Audi vehicles