

protech

OBDII Engine Code Reader / Diagnostic Tool

TECHNICIAN



User Manual

PP2147

GENERAL INFORMATION & SAFETY INSTRUCTIONS:

WARNING: The manufacturer is not responsible for any potential injury from misuse.

BOX CONTENTS:

1 x OBDII Engine Code Reader / Diagnostic Tool

BEFORE FIRST USE:

Prior to using your product, please read all the safety and operating instructions thoroughly. Please ensure you follow the steps below before using the product. We recommend you keep the original packaging for storing the product when not in use.

Please pay close attention to the section entitled Important Safety and General Instructions. Find a safe and convenient place to keep this instruction manual for future reference.

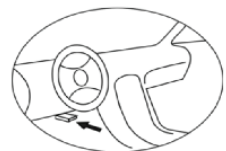
Unpack the product but keep all packaging materials until you have made sure your new product is undamaged and in good working order. Ensure you have all accessories listed in this manual.

OVERVIEW:

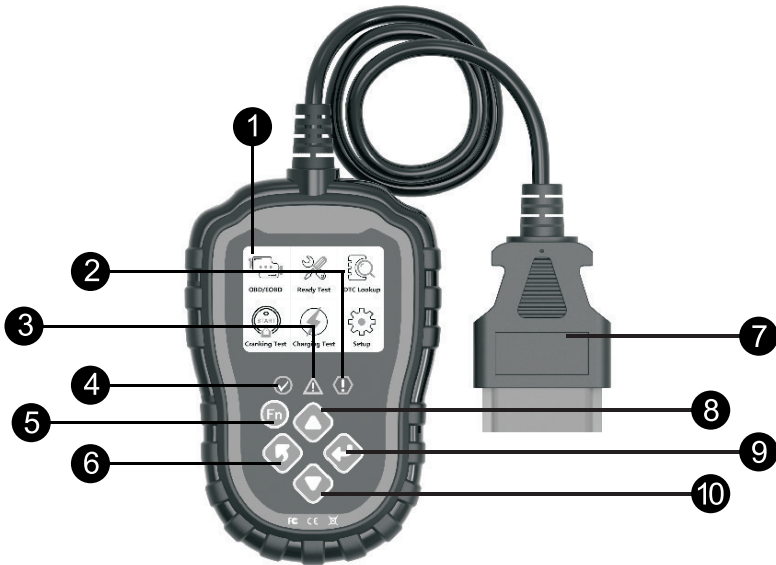
A great way to accurately identify car problems and avoid unnecessary or costly maintenance. This handy diagnostic tool plugs into the OBDII port of your car and displays the data from the engine system directly on the backlit 2.4" colour LCD screen. See engine performance real-time, quickly read and clear engine Diagnostic Trouble Codes (DTC), turn off MIL light, perform an electric cranking or charging test, check state emission monitor status, drive cycle verification, and much more. Works with most OBD2 compliant cars, SUVs and light duty vehicles sold worldwide since 1996.

Location of the Data Link Connector (DLC)

The DLC is usually located 30 cm (12") from the centre of the instrumental panel (dash), above or around the driver's knees for most vehicles.



PRODUCT OVERVIEW:



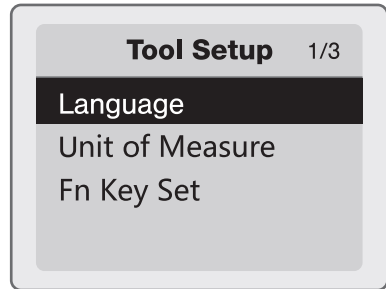
1	LCD Display
2	Red LED: indicates a problem from the engine. The "MIL" (Malfunction Indicator Light) may be on.
3	Yellow LED: indicates a possible problem. Some diagnostics could not be performed and/or a DTC is pending.
4	Green LED: indicates correct engine operation. No diagnostic trouble codes.
5	Fn Button
6	Back or Exit Button
7	OBDII Connector
8	Up Button
9	Enter Button
10	Down Button

PRODUCT FEATURES:

1. Dual-system diagnostic, optional engine and transmission.
2. Quickly indicate engine fault codes, with green / yellow / red LED indicators as fault lights.
3. To read or clear engine fault codes, 16929 diagnostic trouble code definitions can be inquired.
4. Dynamic display of sensor data stream information, supporting 249 types of sensors.
5. View freeze frame data and I/M status information.
6. Read vehicle information: vehicle identification number (VIN), calibration identification number (CIN), calibration verification number (CVN).
7. Test cranking and charging system of the vehicle.
8. Multi-language support.

TOOL SETUP:

1. **Language:**
The factory default in English, other languages can be selected manually.
2. **Unit of Measure:**
Supports metric and imperial units. Factory default is metric.
3. **Fn Key Set:**
Set up Fn key as one-click quick test among "Usual Datastream", "All Datastream", "I/M Readiness", "Read Codes".



DIAGNOSTICS:

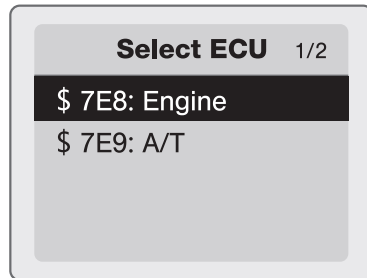
Dual-system Selection

Start the car's engine and plug the OBDII connector into the car's OBDII interface.

Enter the main interface, click the Enter key to start scanning the vehicle's (DLC) system, if only a single (engine) system is detected it will automatically provide options for the engine system.

If dual-systems are detected, it will allow you to select which system to diagnose.

1. \$7E8: Engine - Engine System
2. \$7E9: A/T - Transmission system



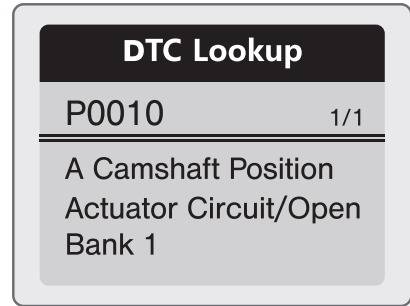
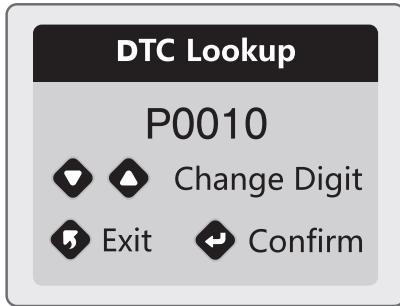
Diagnostic Menu

1. **Read codes:** Read the Diagnostic Trouble Code (DTC) in the engine or transmission system and display the standard definition.
2. **Erase Codes:** Clear all DTCs in the system.
3. **Data Stream:** Read and display all supported sensor data, up to 249 type of sensor.
4. **Freeze Frame:** The freeze frame data records the vehicle operating status information (fault code, vehicle speed, water temperature, etc.) at the moment when an emission-related fault occurs.
5. **I/M Readiness:** I/M Readiness function is used to check the operations of the Emission System on OBDII compliant vehicles. Some latest vehicle models may support two types of I/M Readiness tests:
 - A. **Since DTCs Cleared** - indicates status of the monitors since the DTCs are erased.
 - B. **This Drive Cycle** - indicates status of monitors since the beginning of the current drive cycle.
 - "OK" : completed diagnostic testing
 - "INC" : diagnostic testing is incomplete
 - "N/A" : not supported
6. **Vehicle Information:** Review vehicle identification number (VIN) / calibration identification number (CIN) / calibration verification number (CVN)

DTC LOOKUP:

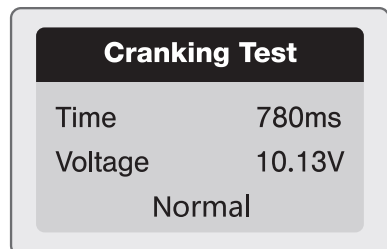
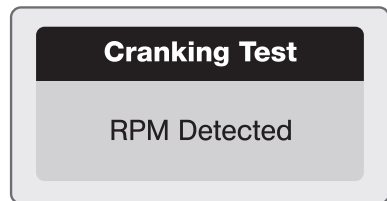
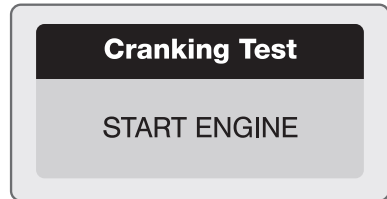
There are 16929 DTC definitions in the database, input DTC and press Enter key.

Displays detailed fault code definition for maintenance reference.



CRANKING SYSTEM TEST:

1. Select "Cranking Test" and press the Enter key to start.
2. Start the engine when prompted, the tester will automatically complete the cranking test and display the result.
3. When the RPM is detected this will be displayed on the screen.
4. Normally a cranking voltage value lower than 9.6V is regarded as abnormal.
5. The test results will include actual cranking voltage and actual cranking duration.
6. This is for the convenience of the maintenance personnel to quickly know the whole state of the cranking system according to data.



CHARGING SYSTEM TEST:

1. Select "Charging Test" and press enter key to start.

Note: Do not shut down the engine during this test. Follow the steps according to the screen instructions.

2. After the test has finished, the tester displays the loaded and unloaded charging voltages, ripple voltage and charging test result.

Note: "NO OUTPUT" means there is no output coming from the Charging system. The vehicle will stop working when the battery is exhausted. Please check the alternator or contact the maintenance service centre immediately.

Ripple Test

Turn off headlights and air conditioner, keep 10 seconds.
Press ENTER continue

Unloaded Test

Turn off all devices, increase RPM to 2500-3000r/min and keep 10 seconds
Press ENTER continue

loaded Test

Turn on headlights and air conditioner to the maximum, keep RPM idle for 10 seconds
Press ENTER continue

Charging Test

Unloaded	14.39V
Loaded	14.16V
Ripple	15mV
	Normal

TROUBLESHOOTING:

Problem	Solution
<p>OBDII reader does not communicate with the vehicles ECU after being connected.</p>	<p>Most likely causes are:</p> <ul style="list-style-type: none"> • Operation error • The OBDII used in non-compatible vehicles (non OBD2 compliant) <p>Follow steps below to troubleshoot if the OBD2 reader fails to communicate with the vehicle's ECU (Engine Control Unit).</p> <ol style="list-style-type: none"> 1. Check if the OBD II reader is connected properly to the vehicle's OBD socket 2. Verify that the ignition is on. Please note, some vehicles may need to be running for the OBD port to function. 3. Verify that the vehicle is OBD II compliant; <p>Generally, the OBD2 compliant vehicles include:</p> <ul style="list-style-type: none"> • Vehicles made in USA from year 1996 on • Petrol vehicles made in Europe from year 2001 on, diesel vehicles made in Europe from year 2004 on • Vehicles made in Australia or New Zealand from year 2006 on <p>If the vehicle does not meet the above car list, we recommend checking with the vehicle manufacturer to confirm it's OBD2 compliant. The reference found on the next page can be used as a guide.</p> <p>Please Note: This product is not suitable for electric vehicles.</p>
<p>The device cannot diagnose or clear the fault codes of other vehicle systems such as airbag, ABS system.</p>	<p>The OBD2 reader is a universal code reader, which is only used to diagnose vehicle engine system and clear codes. It does not support diagnosis or clear fault codes of other systems such as airbags, ABS, etc.</p>

OBDII COMPATIBLE CARS:

AUDI

A1	2008+
A3	2002+
A4	2002+
A4 Turbo	2002+
A5	2007+
A6	2002+
A6 Quattro	2002+
A7	2010+
A8	2003+
TT	2002+
S5	2002+

BMW

E81 1 Series	2004+
E46 3 Series	2001+
E46 3 Series M3	2001+
E90 3 Series	2005+
E90 3 Series M3	2005+
E39 5 Series	2001+
E60 5 Series	2003+
E63 / 64 6 Series	2003+
E65 7 Series	2002+
X1	2010+
X3	2004+
X5	2002+
X5	2003+
X6	2010+
Z3	2002+
Z4	2009+

CHRYSLER

300C	2004+
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Neon	1996+
PT Cruiser	2000+
Voyager	1996+
Dodge Avenger	2007+

FORD

Escape	2007+
Explorer	1996+
Farilane	2005+
Farimont	2003+
Farimont BA	2003+
Falcon BA Series2	2003+
Falcon BA XR6	2005+
Falcon BF XR6	2005+
Falcon BF XR8	2005+
Falcon FG XR6	2008+
Falcon FG XR8	2008+
Fiesta Petrol	2008+
Fiesta Diesel	2010+

Ranger Ute	2007+
Falcon XR6 Turbo	2009+
Falcon XR8	2005+
Ranger 3.2L	2012+
Ranger 3.0L UTE	2007+
Taurus	1996+
Territory	2006+

HOLDEN

Astra	2002+
Barina	2007+
Caprice	2006+
Caprice 5.7L	2006+
Captiva	2007+
Colorado	2008+
Crewman	2007+

Jackaroo	1999+
Commodore VE	2006+
Commodore VE 6.0L	2006+
Commodore VE SIDI	2009+
Commodore VT 5.7L	1999
Commodore VX 5.7L	2001+
Commodore VY 5.7L	2003+
Commodore VZ	2005+
Commodore VZ 6.0L Cruise	2005+ 2008+
Chev Hummer	2007+
Rodeo	2007+

Statesman	2006+
Statesman 6.0L	2006+
Suburban	1998+
Tigra	2005+
Vectra	2001+
Viva	2007+

HONDA

Accord	2007+
Accord	
Euro	2007+
City	2009+
Civic	2007+
CRV	2007+
CRZ	2010+
Jazz	2006+
Odyssey	2006+
S2000	2006+

HYUNDAI

Accent	2006+
Elantra	2006+
Getz	2007+
i20	2007

i30	2007+
ix35	2008+
i45	2010+

Santa Fe 2.4L Petrol	2012+
Santa Fe 3.3L V6	2008+

Diesel Auto Transmission	2010+
Sonata Diesel	2009+
Terracan Diesel	2007+
Terracan Petrol	2004+
iLoad	2008+

ISUZU

Dmax MU-X	2008+
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JAGUAR

S Type	2002+
X Type	2002+
XF	2002+
XJ (X350)	2004+
XJ (X351)	2009+

JEEP

Cherokee	1996+
Grand Cherokee	1996+
Wrangler	1997+

KIA

Carnival	2007+
Cerato	2007+
Rio	2007+
Sorento	2007+
Sportage	2007+

LANDROVER

Defender	2012+
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Discovery 2	1999+
Discovery 3	2005 +
P38 V8	2008+

MAZDA

2	2006+
3	2006+
6	2007+
BT50	2008+
CX7	2007+
CX9	2007+
RX8	2007+
MX5	2007+
BT50	2008+

MERCEDES

A Class	2002+
B Class	2004+
C Class	2001+
E Class	2001+
ML Class	2001+
S Class	2001+
SLK	2002+

MITSUBISHI

380	2005+
ASX	2010+
Challenger	2007+
Colt	2007+
Lancer	2006+
Lancer 2.4L	2010+
Magna	2005+
Outlander	2008+
Pajero NS/NT Diesel	2007+
Pajero	2007+

Triton ML Diesel	2008+
Triton MN Diesel	2009+

NISSAN

350Z	2006+
370Z	2010+
Dualis	2009+
Maxima	2006+
Micra	2007+
Murano	2007+
Navara D40	2007+
Navara D22	2008+
Pathfinder	2007+
Patrol	2007+
Patrol 3.0L	2007+
Tida	2007+
X-Trail Diesel	2009+
X-Trail Petrol	2003+

PEUGEOT

206	2002+
207	2006+
307	2003+
307	2007+
308	2007+
308	2007+
406	2003+
407	2004+
508	2011+
607	2003+
3008	2009+
4007	2010+

SUBARU

Forester Petrol	2004+
Forester Diesel	2010+

Impreza	2005+
Turbo	2007+
Liberty	2007+
Outback	2007+
Tribeca	2009+
Outback H6 3.0L	2002+
Outback	2009+
XT	2005+
WRX STi	2007+

SUZUKI

Alto	2007+
Jimny	2007+
Kizashi	2008+
Swift	2007+
SX4	2008+
Vitara	2007+

TOYOTA

Aurion	2007+
Avalon	2005+
Camry	2007+
Corolla	2007+
Echo	2004+
FJ Cruiser 4.0L	2011+
Hiace	2009
Hilux 2.7L	2009 +
Hilux 3.0L Diesel	2007+
Hilux Petrol	2006+
Kluger	2007+

Landcruiser 7's Series	2008+
Prado	2007+
RAV 4	2007+
Prius	2007+
Tarago	2007+
Yaris 1.5L	2007+

VOLVO

C30	2007+
C70	2002+
S40	2005+
S60	2002+
S80	2002+
V40	2003+
V50	2005+
V60	2008+
V70	2002+
XC60	2008+
XC70	2002+
XC90	2003+

VW

Amarok	2010+
Beetle	2001+
EOS	2007+
Golf	2001+
Golf	
GTI Golf Turbo	2002+
Polo	2001+
Tiguan	2009+
Touareg	2003+
Touareg	2005+
Transporter	2006+

Use this list as a guide only, compatibility may vary.
Check compatibility with vehicle manufacturer.

SPECIFICATIONS:

Operating Voltage:	8V ~ 25V
Operating Current:	52mA
Operating Temperature:	-20°C ~ 70°C (-4°F ~ 158°F)
Storage Temperature:	-30°C ~ 80°C (-22°F ~ 176°F)
LCD Screen:	2.4" TFT Colour Screen
Dimensions:	132 (L) x 85 (W) x 22 (H) mm
Support Data Stream Type:	249
Fault Code Analysis Number:	16929

WARRANTY:

Our product is guaranteed to be free from quality and manufacturing defects for a period of 12 Months.

If your product becomes defective during this period, Electus Distribution will repair, replace, or refund where a product is faulty; or not fit for intended purpose.

This warranty will not cover modified product; misuse or abuse of the product contrary to user instructions or packaging label; change of mind and normal wear and tear.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and failure does not amount to a major failure.

To claim warranty, please contact the place of purchase. You will need to show receipt or other proof of purchase. Additional information may be required to process your claim. Should you not be able to provide proof of purchase with a receipt or bank statement, identification showing name, address and signature may be required to process your claim.

Any expenses relating to the return of your product to the store will normally have to be paid by you.

The benefits to the customer given by this warranty are in addition to other rights and remedies of the Australian Consumer Law in relation to the goods or services to which this warranty relates.

This warranty is provided by:

Electus Distribution
46 Eastern Creek Drive,
Eastern Creek NSW 2766
Ph. 1300 738 555