

# Vetronix Mastertech Asian Software

Planned obsolescence was once a fact of life in dealer showrooms. Last year's models automatically looked outdated and tired, just as soon as the new models and the new advertising were released. Those who bought into the 'newer is better' sales pitch replaced their cars every two or three years. This was probably a good thing for more reasons that might be immediately apparent. Sure, it helped the manufacturers and their dealers sell millions of cars each year. But it also covered up the fact that some of those old cars just weren't built to last very long anyway.

Automotive change continues unabated to the present day, but now it's technology rather than styling that sets the pace. Each new model year brings additional complexity and new features, as well as modifications to existing vehicle systems. When they need diagnosis or repair, many new vehicles require specialized equipment of one sort or another.

If you're planning the purchase of diagnostic equipment to deal with this unending technology escalation, one of the first questions you'll ask is "How long before this piece of equipment becomes obsolete and is of no further use to my business?" While that's a difficult question for any diagnostic equipment manufacturer, it nevertheless deserves an answer. Nobody wants to lay out hard-earned money for equipment that will be gathering dust in the corner of the shop before the last payment has been made or before the equipment pays for itself in use.

To avoid product obsolescence, Vetronix has followed a path of steady development with its handheld Mastertech MFT (Multi Function Tool). While you may think of the Mastertech as a scanner, it has many other features. The Mastertech also includes an automotive oscilloscope and digital meter. The tool can be linked to other Vetronix diagnostic tools, including the Enhanced Diagnostic Lead Set. *Tech View* software allows the user to view and store vehicle data collected by the Mastertech on any Windows-based PC. The Vetronix VP-411 serial graphic printer can be used to print screen and text data directly from the Mastertech.



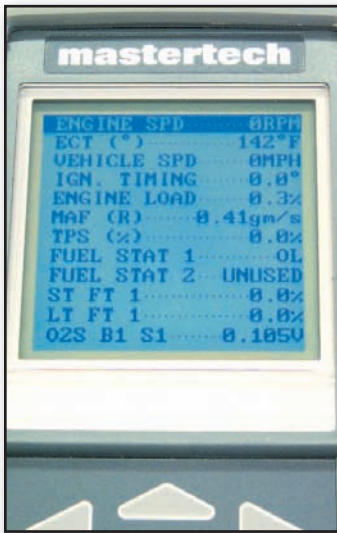
A standard text-based serial printer can also be used for printing text only. The Mastertech is also reprogrammable, so the tool can be upgraded by reprogramming its program cards as new capabilities are added.

A recent Mastertech upgrade is the 1999 Asian Imports Diagnostic Software Kit. If you already own a Mastertech, the Asian Kit can be purchased separately. The Kit provides Scantest capability for 15 Asian vehicle manufacturers: Acura, Chrysler imports, Daihatsu, Honda, Hyundai, Infiniti, Isuzu, Kia, Lexus, Mazda, Mitsubishi, Nissan, Subaru, Suzuki and Toyota. In addition, Vetronix now provides aftermarket OEM software for seven of the 15 Asian vehicle manufacturers. The program card can be used to access information on the following vehicle systems: engine, transmission, antilock brakes, air conditioning, airbag, body, cruise control and more.

The 1999 Asian Imports Software Starter Kit consists of a software cartridge, a software program card and all necessary cables and adapters for the 15 covered vehicle manufacturers. The 1999 Asian Cartridge is compatible with the MTS 3100 Mastertech, Tech 1A and Tech 1 testers. The OEM software for Acura, Honda, Kia, Lexus, and Toyota is contained on a program card that requires the use of an OBD II compliant MTS 3100 Mastertech. The Suzuki and Isuzu OEM software is Tech 1-based and is supported by all Vetronix testers, as are Chrysler imports, Daihatsu, Hyundai, Infiniti, Mazda, Mitsubishi, Nissan, and Subaru.



**1** Two slots are provided for software cartridges and program cards. The options available on the tester menu are automatically adjusted according to the combination of cards and cartridges plugged in when you fire up the Mastertech. We used the 15-in-1 Asian cartridge, combined with the OEM-based MFT Pro-Card 8.



**3** The Mastertech OBD II parameters screen displays 12 lines of data simultaneously. Scroll up or down to reveal additional parameters. Reduce the displayed parameters to speed up the (serial) update rate. Use the OEM and OBD II cartridges together for access to all available diagnostic information.



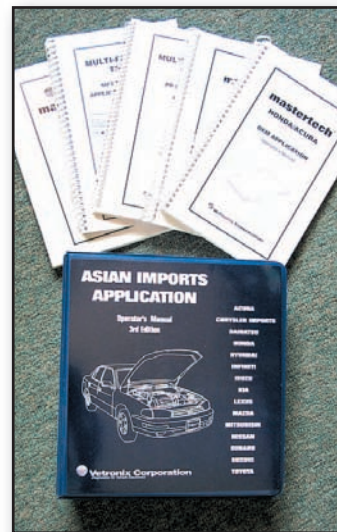
**5** This generic OBD II screen shows the freeze-frame data collected when an oxygen sensor DTC was set. Basic parameter information at the time of the failure may provide valuable troubleshooting clues. The OEM software follows a similar arrangement of parameters, DTC's and freeze-frame data.



**2** The value of the Asian OEM software is really apparent on post-OBD II vehicles. Access to other vehicle systems is available, as well as bi-directional control of some systems from certain manufacturers. Data monitoring is also expanded, with more parameters than required by OBD II regulations.



**4** Diagnostic trouble codes (DTC's) are displayed using OBD II or manufacturer-specific code numbers, depending on the software. A brief description of the DTC follows each number and the total number of DTC is shown. If more than one DTC's has been stored, scroll downward to display all of the information.



**6** Although operation of the Mastertech and its software is largely intuitive, a set of manuals is provided with each software card and cartridge. The manuals cover software navigation, as well as information not found on the software menus (locations of diagnostic connectors, hook-up procedures, etc.).

## Asian Software Update

- For selected vehicles, the 1999 Asian software update allows you to view diagnostic data parameters specific to the vehicle under test.
- It includes instructions and information for reading and clearing DTCs for select Asian import vehicles.
- A Snapshot feature simplifies the task of diagnosing difficult intermittent problems by capturing diagnostic parameters in the service bay or during roadtesting.
- For selected vehicles, the software also lets you control idle speed, control various output actuators and solenoids, or command different ECU operation modes (bi-directional control).
- Many vehicle systems support the use of OBD Controls, which can be used to diagnose certain powertrain control system problems. On select systems, you can monitor the air/fuel ratio, determine the oxygen sensor range of operation and perform switch tests.

## Generic OBD II

Generic OBD II software included with this package increases the Mastertech's functionality by allowing it to interface with *all* OBD II-compliant vehicles. The Mastertech can be purchased with OBD II compatibility already installed, or that can be added to an older Mastertech by installing an OBD II compliant 'daughter-board' and software.

Generic OBD II functions on the Mastertech include:

- Automatically determines the vehicle communication protocol (J1850 or ISO9141-2),
- Displays OBD II system readiness tests status (J1979 Mode 1),
- Displays vehicle current data parameters (J1979 Mode 1),
- Displays freeze frame data saved by the controller (J1979 Mode 2),

- Displays diagnostic trouble codes (DTC's) stored by the controller (J1979 Mode 3),
- Clears emissions-related diagnostic information from the on-board control unit memory (J1979 Mode 4),
- Displays oxygen sensor test results (J1979 Mode 5).

Additional OBD II enhancements include:

- Displays on-board monitoring test results for non-continuously monitored systems (Mode 6) and continuously monitored systems (Mode 7), when supported by vehicle manufacturer,
- Supports manufacturer-specific testing through the use of the Expanded Diagnostic Protocol (J2205),
- Supports vehicles with multiple OBD II ECUs,
- Snapshot function with adjustable trigger point captures data parameters sequences to 5 minutes and supports roadtesting,
- Selectable parameter list enables users to balance the amount of data with the data update rate according to their needs,
- Allows data to be plotted as a function of time,
- Contains extensive HELP functions,
- View and print diagnostic data parameters,
- Upload to a PC when used with the optional *TechView for Windows* PC software.

A further overview of the Asian software's capabilities can be found on page 15. For additional information on the operation and capabilities of the Mastertech, refer to the October 1995 and February 1998 issues of *Import Service*. To receive information about the Mastertech from Vetronix, **Circle Number 121** on the Reader Service Card. ■