



## IT'S A USEFUL TOOL FOR SMOOTHING TRANSITIONS AND SPOTTING ERRORS

editing and scanning capabilities in an affordable package. VCM Suite allows modification and monitoring of these and other parameters within the vehicle's computer to achieve the ultimate solution for the home enthusiast or professional engine builder/tuner. This new package includes these three main components – VCM Flash, VCM Editor and VCM Scanner. The process works like this:

VCM Flash is used to read the current software and calibration settings from the VCM.

VCM Editor is then used to make any changes (for example, to change your fan on and off temperatures).

VCM Flash is then used to write the changes back to the VCM.

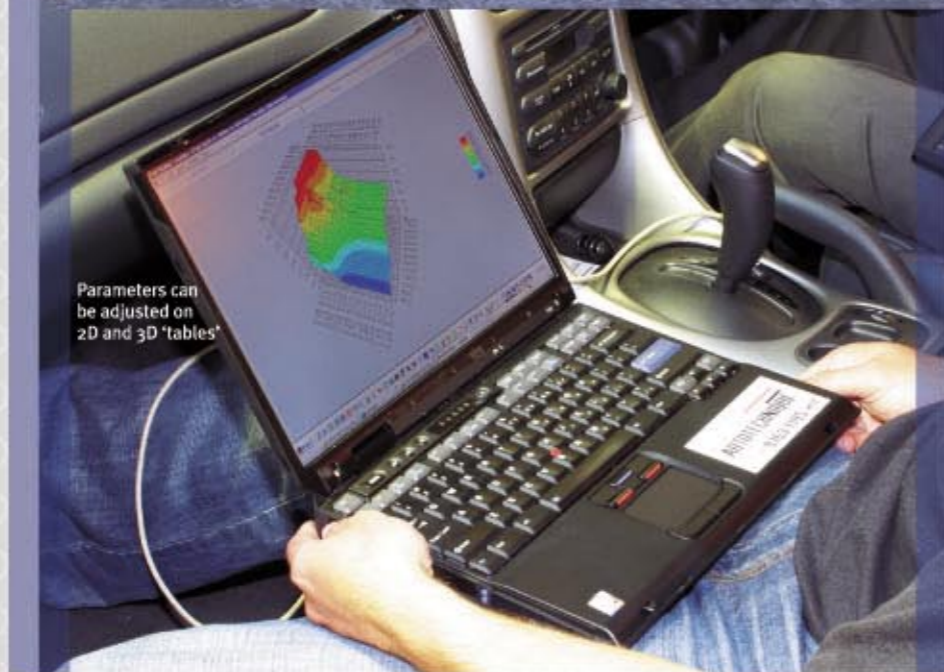
VCM Scanner is used to verify that the changes had the desired effect (start the car up and monitor the temperature at which the fans turn on and off).

While this is a very simple example, the process is basically the same for other changes. Of course, there's no substitute for experience and common sense. The software works on your input and can't think for itself. So be careful what you ask it to do; it'll happily let you set your transmission to shift into fourth gear at 30km/h.

### IN GREATER DETAIL

VCM Flash is the VCM reprogramming system. It reads the current software and calibration settings from the VCM and writes them back once user changes have been made (the design of the GM VCM means making permanent changes in real time is not possible). VCM Flash also incorporates recovery and failsafe mechanisms to dramatically reduce the likelihood of re-flashing problems, so there is no damage if the PC crashes or loses power during a write.

VCM Editor is responsible for making changes to the calibration settings. Changes are made using a graphical user interface by adjusting values in 2D or 3D 'tables'. To assist in parameter manipulation, VCM Editor incorporates 3D graphics that allow graphical modification of large tables (such as spark timing). It's a particularly useful tool in smoothing transitions in the tables and also



Parameters can be adjusted on 2D and 3D 'tables'

spotting any errors that could have been made.

VCM Scanner is the tool used to monitor the operating parameters while the vehicle is running. For example, if you've just changed the transmission shift speeds to suit a specific driving style and added more spark timing to increase torque/power, the VCM has access to all these parameters, and highly accurate sensors around the engine mean these parameters can be monitored and logged during a short drive around town or a stint on the dyno.

The scanner incorporates high-speed logging of a multitude of parameters (most of which the average user needn't worry about), the ability to save and replay logs, a graphical display for those who prefer to see things like they would on the dashboard, or a charting display that displays data as multiple line graphs.

As an extra enhancement, users can upgrade to receive VCM Control functionality that enables temporary real-time changes to be made for troubleshooting and tuning convenience. For example, when tuning idle speed it's handy to

be able to turn on things like the air-conditioning compressor and fans to see what effect these have. Additionally, you can view Diagnostic Trouble Codes (DTCs) and other troubleshooting information as a local dealer would.

Another bonus for the home enthusiast is that the package is not locked to a specific vehicle (VIN). This means if a 2000 Holden package is purchased, you then have the ability to modify mates' vehicles of the same year/model. The VCM Suite also allows one additional year/model to be supported via a simple software upgrade (making it 2000 and 2003 Holden-capable, for example).

HP Tuners' VCM Suite Pro is the next step up, specifically designed for the serious engine builder/tuner. It features:

- Faster reads and writes – common read time is two minutes quicker and write time 30 seconds less.
- Return to in-car flashing thanks to greatly enhanced recovery mechanisms (bench flashing as the exception rather than the rule).

■ Mail order VCM features (ability to completely copy a proven software/calibration to any VCM in its entirety).

■ Unencrypted binaries allow full control over the VCM software environment for the experienced tuner (allows for additional tuner specific custom modifications).

- VCM Scanner.
- Lower upgrade cost for new years/models.
- Bench programming kits available.
- All upgrades are software only.

The VCM Suite seems to have the bases covered and is well supported by the manufacturer. Of course, the system is relatively new, so only time will tell just how good it is and if it's likely to give LS1 a nudge.

For those after more information or just wanting to kick around some questions or views, a public discussion forum is available on HP Tuners' website: [www.hptuners.com](http://www.hptuners.com). You can contact the Australian distributor, Autotechnique, by email via [info@autotechnique.com.au](mailto:info@autotechnique.com.au) or by phone on 03 9763 1195.