

# Piggy-Back Products.

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Piggy-Back systems work with an existing ECU (Engine Control Unit) and therefore do not replace the vehicle's original ECU. Piggy-Back means just that - to "piggy back" or go on top of something else. Other words for piggy-back are "chipping" or "add-on".

# Perfect Power Products.

All products are manufactured by Digital Data Systems (Pty) Ltd in Johannesburg, South Africa. Digital Data Systems is a proudly South African company being the holding company for the Perfect Power brand of products and we have been in business since 1972. With German engineers at the helm, you can expect quality at an affordable price with innovative features.

Perfect Power specializes in the design and manufacture of fuel injection systems for every application from your everyday street car to your high-tech performance car.

All our products are made to the highest international standards with our advanced production facilities. We strive in making our products better and better each time. We do offer our spare production capacity out to our clients and we also offer custom made OEM products that suit our client's requirements and budgets. Please inquire at [info@ddsystems.co.za](mailto:info@ddsystems.co.za) with OEM in the subject for more information.

Brought to you by dds.

The logo features a large, stylized white letter 'P' on a red background. To the right of the 'P', the words 'Perfect' and 'Power' are stacked in a bold, italicized, white sans-serif font.

All our products are assembled by SMT (Surface Mount Technology) machine and then computer tested against a go / fail test procedure. Only once they pass all the tests, then only do they enter into the next phase. All products are then heat soaked for a period of 24 hours and then re-tested to make sure there are no component failures. This process ensures that the product you buy will last forever and give you years of service.

All Perfect Power products are powerful "real time" programmable fuel injection and ignition computer systems. High speed communication is achieved from USB communication. LetRipp II tuning software is used to manage the tuning, in real time, with all of our modern tuning units. The software was designed with tuners in mind and has many features to assist in the chip tuning process. All our products have extensive help documentation, application notes, FAQ and manuals that will answer almost every question you might have. Email [info@perfectpower.com](mailto:info@perfectpower.com) for support.

The Perfect Power range of products falls into three major categories: Stand Alone Systems and "Piggy Back" or Add-on Systems and "Accessories and Peripherals".

# Warranty.

Perfect Power unit(s) come with a 12 month warranty on the electronics, excluding the drivers, from shipment date. The warranty will fall away if:

- The unit(s) has / have been tampered with.
- The unit(s) has / have been abused, misused or incorrectly maintained.
- The unit(s) has / have been incorrectly installed.
- The unit(s) was / were not tested on receipt.

If the unit(s) was / were damaged in transit, then the dealer from whom the unit(s) was / were purchased, will replace it as soon as possible.

Please note that if the unit(s) has / have been working fine for a while and then fails, it could be because of one of the following:

- The unit(s) has / have been damaged in installation (not covered by warranty)
- One of the internal drivers has been destroyed (not covered by warranty)
- Malfunction of electronics (warranty claim)

The damaged unit(s) will need to be sent back to the factory, by your dealer, for inspection and a new unit(s) needs to be purchased to replace it. If the problem is a manufacturing fault, the cost of the unit(s) and shipping fees will be refunded. However, Perfect Power will not be held liable for the cost of removal, reinstallation, dyno time and mapping of the unit(s).

Perfect Power unit(s) need to be returned to your relevant dealer before any claims procedure can begin. PRS and SMT units CANNOT be repaired

## DISCLAIMER

Under no circumstances will Perfect Power be held responsible for any incidental, indirect, specific or consequential damages arising from the use of the unit(s).

## RETURNS

All returns need to be authorized in advance. Please contact us on +27 11 792 9805, or [info@perfectpower.com](mailto:info@perfectpower.com) for authorization.

# Warranty.

Please return the goods to one of the following addresses:

For returns by post :

Digital Data Systems (Pty) Ltd  
P O Box 1577 Bromhof  
2154 South Africa

For returns by shipping company :

Digital Data Systems (Pty) Ltd  
22 Arbeid Avenue  
Strijdom Park, Randburg  
South Africa

All returns must be sent prepaid and no collect shipments will be accepted. Please ensure the parcel for its full value. If we determine that we are at fault for the return, we will refund the shipping costs.

We cannot accept returns on custom ordered parts. We also cannot accept returns on used or installed parts, parts not in their original packaging, parts that are not in a resalable package and parts that have come into contact with oil, coolant or fuel.

# Contact.

Email : [Info@perfectpower.com](mailto:Info@perfectpower.com)  
Tel : +27 11 791 5947  
Fax : +27 11 792 9818  
Physical Address : 22 Arbeid Avenue, Strijdom Park, Randburg, South Africa, 2194  
Postal Address : P.O. Box 35872, Northcliff, Gauteng, South Africa, 2115



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## Smart Tuner 8 Lite

The SMT8-L piggy-back system also follows in the footsteps of the SMT6 and SMT7 products, just like its big brother the SMT8, but with un-paralleled performance and a quantum leap in technical innovation. This is all possible with the latest 16 bit DSP processors. The SMT8-L is the first piggy-back that offers you the capability to do DUAL AFR tuning, as well as ETC (Electronic Throttle Control) tuning.

The SMT8-L has two complete maps. Which means you can switch between two different tuned maps while driving. It is possible to have one map for economy, the other for performance. Or use the maps for different weather conditions. The Maps can be switched from the hardware input. The parameters and calibration are not switched. The maps can be 'locked' into a fixed position from the PC for tuning and downloading.

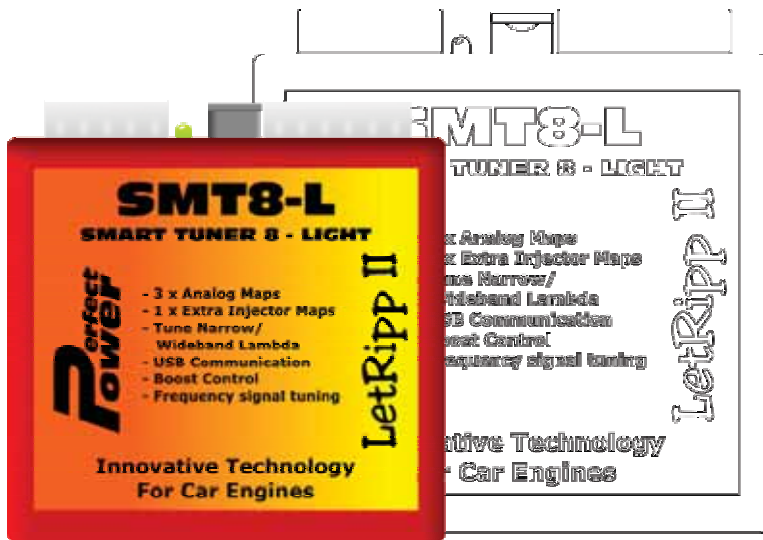
The SMT8-L piggyback is applicable to:

Tuning, Auto tuning, Dyno tuning, Auto tuning, Chip Tuning, Tuning cars, Performance tuning, Chip Performance, Engine performance, Auto performance, Computer Tuning, Piggyback tuning, Vehicle tuning, Computer ECU, Fuel consumption, Increasing Horsepower, Eco tuning, Fuel Injection, Turbo charger, Engine tuning and many more.

The SMT8-L can drive one extra injector (13 ohm) for supplementing fuel at high boost. The extra injector can be controlled via Throttle/RPM, AMP, Engine and Air temperature maps. This allows for precise fuel delivery at boost conditions. This feature is very popular with turbo and supercharger installations.

The SMT8-L is the first Perfect Power piggy-back product to allow ETC modifications. The ETC flap control can be modified (re-mapped) with the SMT8-L. It takes some skill to negate the effect of the ECU traction or launch control, but if you want to spin tyres then this is the way to go!

The SMT8-L product is currently available in two kits: the SMT8-L User Kit and the SMT8-L Kit.



## SMT8-L-UKIT

- 1 x SMT8-L Light Controller
- 1 x SMT8-L Tuning Harness
- 1 x USB Comm Cable
- 1 x CD with LetRipp Software and Manuals

## SMT8-L-KIT

- 1 x SMT8-L Light Controller
- 1 x SMT8-L Tuning Harness

## Features

System Definition  
Ignition advance/retard limits  
Start second specification  
Analogue Upper/Lower Limits  
Frequency Modification  
Frequency Upper/Lower Limit  
Boost Control  
Boost Loop Gain Parameter  
Cut Protection Action  
Retard Protection Action  
Modify Protection Action  
Frequency Protection  
AMP Protection  
Engine Temp. Protection  
Air Temp. Protection

## Benefits

Tailor the unit to your application  
Restricts ignition modification range  
Prevents action after power-up  
Prevents analogue over-ranging  
Tune a frequency airflow meter  
Prevents frequency over-ranging  
Controls the turbo boost  
Set the boost control gain  
Signal cut when protected.  
Retards ignition when protected  
Proportional Protection  
Protects a frequency signal  
Protects an AMP Signal  
Protects the engine temperature  
Protects the air temperature

## Features

- RPM Protection
- Time before protection action
- Ignition Window
- Analog Modification Channels
- Wide Band AFR Modification
- Narrow Band AFR Modification
- External Display Specification
- TPS Calibration
- TPS Direction
- Engine Temp. Calibration
- Air Temp. Calibration
- AMP Calibration
- RPM Calibration
- External Display Testing
- Teeth Per Injection Setting
- Teeth Per Crank Turn
- Edges Per Crank Turn
- Ignition Map with 384 points
- Ignition AMP Map
- Ignition Engine Temp. Map
- Ignition Air Temp. Map
- 7 Steps per degree ignition
- Injection map with 384 points
- Injection AMP Side Map
- Injection Engine Temp. Side map
- Injection Air Temp. Side Map
- Analogue maps with 384 points
- Analogue AMP side map
- Analogue Engine Temp. Side Map

## Benefits

- Protects RPM
- Specify time before action takes place
- For not so perfect crank signals
- Allows you to map three engine signals
- Allows one wideband AFR tuning
- Allows two narrowband AFR tuning
- Tailor your display needs
- Adapt to your TPS sensor
- Specify Up/Down direction
- Two-point adaptation to your engine
- Two-point adaptation to your engine
- Linear adaptation to your engine sensor
- Set the operating range
- Verifies the external display function
- Operates the external injector timing
- Adapt to your crank trigger wheel
- Adapt to your crank trigger wheel
- For three dimensional ignition tuning
- Provides AMP ignition tuning
- Provides engine temperature ignition
- Provides Air temp. Ignition tuning
- Very fine ignition replication
- Two maps for two injection activation
- Provides AMP injection tuning
- Provides engine temp. Injection tuning
- Provides air temp. Injection tuning
- For fine tuning of two analogue signals
- Provides analogue AMP tuning
- Provides analogue Engine temp. tuning