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**DASTEK**   
PERFORMANCE TUNING  
CO.UK

**UNICHIP** 



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## INTRODUCTION

The new series Q Unichip Piggyback ECU is the most significant step forward for Dastek in over a decade of manufacturing world leading after market electronic engine control units.

The new software and hardware design of the Unichip Q, has thrust us ahead of all our competitors, and in many instances put us in better standing than stand alone ECU's costing 5 times more.

I am sure you will agree once we reveal just a snippet of the UniQ features in this document, the value for money given the capabilities and sophistication is truly outstanding. The ability to upgrade the firmware to the very latest spec. makes this a great future proof investment.

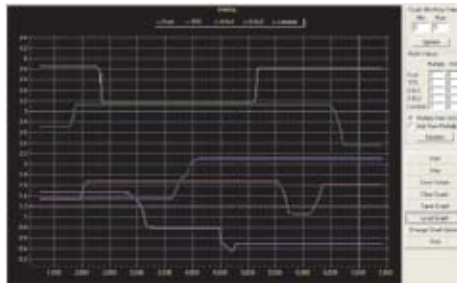
Our background in tuning cars, spans some 30 years with experience gleaned from arenas such as WRC, International touring cars, manufacturer specific projects down to family saloon cars and everything in between.

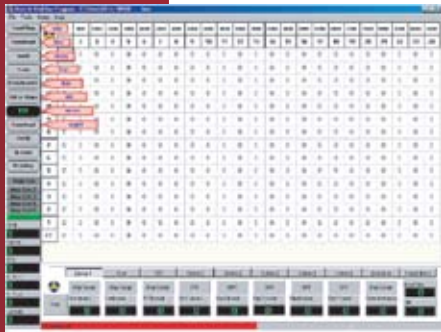
Given our practical knowledge along with continual research and development and tuning cars on a daily basis you can be guaranteed of first hand genuine support.

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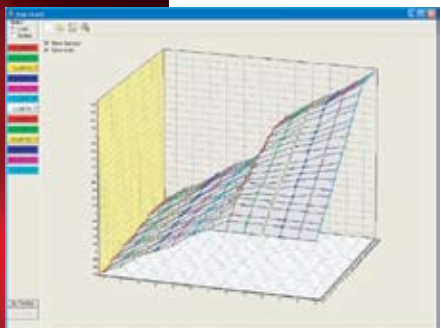




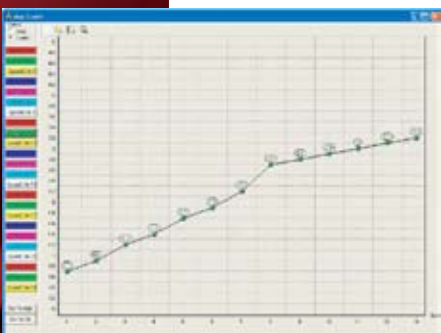
- L : Load map
- D : Download Map
- T : Teach
- U : Tune
- I : Disable Pits
- F : Fill Maps
- E : Edit
- V : Verity
- X: Extras
- A : Datalog
- Ctrl+S : Save
- Ctrl+C : Copy
- Ctrl+V : Paste
- Ctrl+Insert : Fill
- Ctrl+\* : Multiply
- Ctrl+/- : Minus
- Ctrl+=/+ : Plus
- Ctrl+I : Interpolate
- Ctrl+A : Auto Complete
- G : Logging Graph
- C : Clear Graph
- Enter : Save and Exit Map
- Ctrl+G : 3D Graph
- Ctrl+T : Timing Map
- Ctrl+F : Fuel Map
- Ctrl+P : TPS Map
- Ctrl+1 : Option1 Map
- Ctrl+2 : Option 2 Map
- Ctrl+3 : Option 3 Map
- Ctrl+4 : Option 4 Map
- Ctrl+5 : Option 5 Map
- Ctrl+O : Overdrive Map
- Ctrl+B : Target Boost Map
- Shift+T : Timing Setup
- Shift+F : Fuel Setup
- Shift+P : TPS Setup
- Shift+1 : Option 1 Setup
- Shift+2 : Option 2 Setup
- Shift+3 : Option 3 Setup
- Shift+4 : Option 4 Setup
- Shift+5 : Option 5 Setup
- Shift+D : Overdrive Setup
- Spacebar : Freeze
- Esc : Exit without Save

Windows XP™ software that is extremely easy to use but exceptionally comprehensive is the fruit of personally tuning tens of thousands of cars, as well the continual feedback from 1000's of Unichip Dyno Tuners worldwide. The software is designed in a logical fashion so the workflow is simple, methodical, as well as being easy and quick to use, helping you to increase your profits.

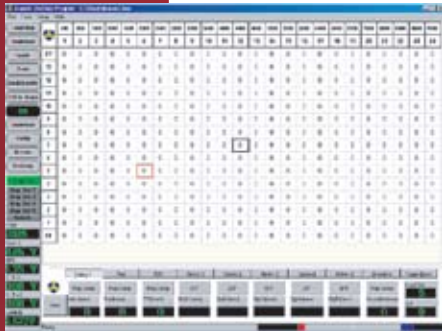
Whilst the operator can control the software using familiar windows procedures & a conventional mouse, almost all the features can be accessed by means of 'hot keys' A simple press of F1, brings up a reminder of these 'hot keys' to enable rapid progression through the software. Everything has been designed by tuners for tuners!



The software has the feel and features of much more expensive 'High End' standalone systems, and map editing can be either 3D, 2D, or tabular. Dragging of cursor points, or inputting from the keyboard allows adjustment of all data in either blocks or single cell mode. Autocompletion of maps, 16 point interpolation between all cells & standard windows functions such as 'copy' & 'paste' make the software extremely powerful, but always Tuner friendly.







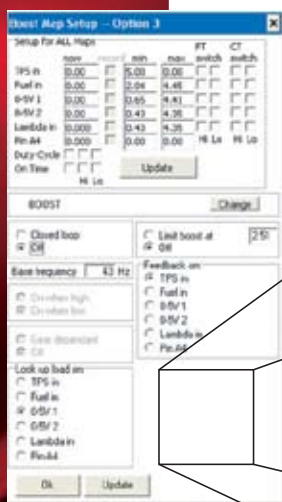
The Unichip is feature packed. It consists of 10 3D maps each with a potential 360 adjustment points (24 speed sites x 15 Load sites).

5 of the 3D 'Option' maps can be user assigned to match the technical requirements of the tuning job at hand.



The Option maps allow the tuner the ability to not only control standard ECU functions, but also add the capability of controlling parameters or components normally associated with aftermarket add-ons or even standalone ECU's.

Just a few of the things available from the drop down are pictured on the left, there are many more menu's where things such as intelligent post-cat O2 simulation linked to engine speed and load can be found, not to mention full throttle gear shifting, launch control or water injection control with ignition timing modification only when the water flows.



Smart menu system. Only when certain parameters are selected, do other sub menu's become visible, this helps the tuner focus on the important parts without getting bogged down or confused with irrelevant data.



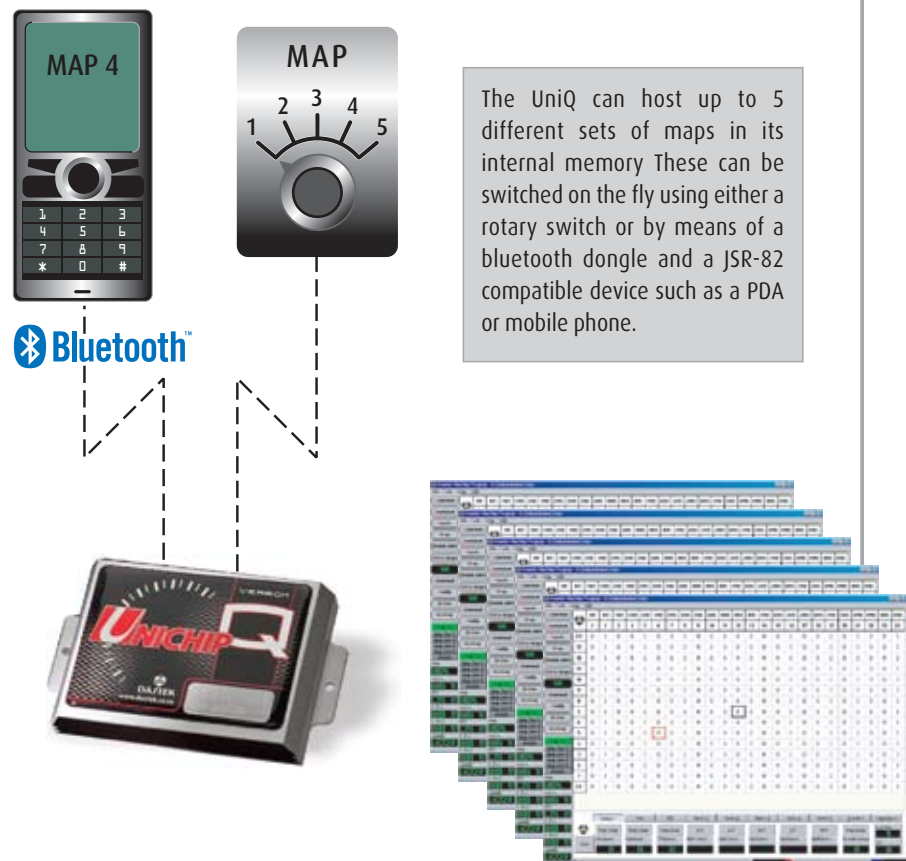
In this instance we have selected 'Boost' for our option 3 map. A further tick then enables 'closed loop' Only then does the closed loop feedback parameters become available. Once these are available we can change how the boost control responds.





The Unichip Q has the ability to hold 5 banks of maps, this is not purely an ignition or fuel trim, but 5 complete sets of every single parameter. This function could be used for things such as normal weekly driving on 95 Ron fuel, spirited weekend country lane excursions on 99 Ron, or trackday work using Race Fuel. Other uses include reduced boost maps for wet weather, reduced power output for a 'guest' driver, or lowered rev limit or speed limitation. It is even possible to have 1 map for your daily driver, then switch to another map for a completely different weekend trackday special. The maps can be switched using either a hard wired switch or a bluetooth device and comms dongle.

No doubt there will be a host of possibilities using some imagination, including automatic map switching combining all the maps to make one huge 'master' map. There are a huge amount of combinations that can be assigned to give the user full control over their cars behaviour.





COMING SOON

Flux is the most comprehensive vehicle interface tool available. Using Bluetooth wireless communication framework, Flux puts unequalled control and interaction at your fingertips. Flux controls your Unichip computer and enables you to measure, record, play, and export vehicle performance calculations, monitor and log engine parameters, scan, read and clear Digital Trouble Codes (DTC's) data from your vehicle's onboard diagnosis system, and adds a Valet mode and anti-theft Immobilizer... wirelessly!

### WHAT IS FLUX?



### FLUX FEATURES

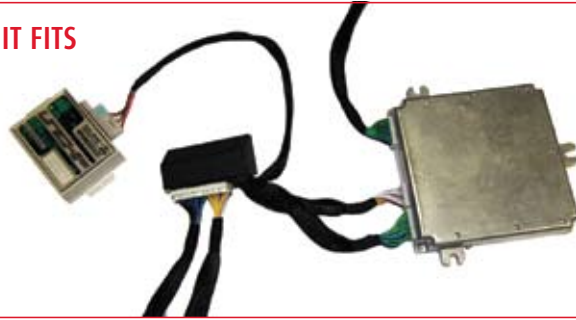
- Display, measure, record and play real-time engine performance data
- Wireless Bluetooth Connectivity
- 5 user-selectable performance calibrations
- Scan, read & clear Diagnostic Trouble Codes
- Valet mode RPM Limiter
- Password protected vehicle immobilizer
- Virtual Dynamometer
- Measure acceleration times
- Drag strip with elapsed time, trap speed
- Lap Timer
- User-selectable shift lights





Dastek also manufacture many original equipment quality Plug & Play loom adapters for a wide range of petrol & diesel vehicles. The original loom is simply unplugged from the standard ECU, the original connectors are plugged in to the Dastek adapter loom, the adapter loom plugs straight in to the original ECU, saving time & preventing potential warranty issues.

### HOW IT FITS



Feature	UniQ	UniQ+
Software	WinXP	WinXP
3D Mapping	10 x tables, 3 fixed & 7 Configurable	10 x tables, 3 fixed & 7 Configurable
Input channels	8	12
Output channels	7	13
Voltage Clamp	Yes - 2 channels have programmable voltage clamps versus RPM	Yes - 2 channels have programmable voltage clamps versus RPM
Frequency Clamp	3 channels have programmable frequency clamps versus RPM	3 channels have programmable frequency clamps versus RPM
Defineable load look ups	Yes - each map can have its own look up & use combination look ups	Yes - each map can have its own look up & use combination look ups
Datalogging	Yes - 5 analogue channels + 1 digital	Yes - 5 analogue channels + 1 digital
Firmware updates for latest features	Yes	Yes
Programmable CAT sensor simulation	Yes, frequency & voltage are adjustable with referenece to RPM & load	Yes, frequency & voltage are adjustable with referenece to RPM & load
High resolution O2 channel	Yes	Yes
Compensation maps	2 comp tables with ability to be applied to any/all of the tables & maps	2 comp tables with ability to be applied to any/all of the tables & maps
CAN BUS Manipulation	Yes	Yes
Accel function	2 Accel tables, can be based on RPM & 6 different inputs, & be applied to 9 x 3D tables	2 Accel tables, can be based on RPM & 6 different inputs, & be applied to 9 x 3D tables
Launch Control	Yes	Yes
Full Throttle Gear Change	Yes - soft & hard rev limit based	Yes - soft & hard rev limit based
Lambda sensor manipulation	Yes	Yes
Injector pulsewidth overdrive	No	Yes
Map protection	Yes via password	Yes via password
Multiple Maps	Yes - 5 maps, selectable via switch or bluetooth	Yes - 5 maps, selectable via switch or bluetooth
Boost Control	Yes, 3D - Duty Cycle V's 24 RPM Ponto V's TPS (or any other input)	Yes, 3D - Duty Cycle V's 24 RPM Ponto V's TPS (or any other input)
Closed Loop Control	Yes, Feedback source & speed user configureable, adj. min & max deviations limits	Yes, Feedback source & speed user configureable, adj. min & max deviations limits
Self learning	Yes	Yes
Nitrous Oxide Control	Yes, RPM & Load based control of Duty Cycle% V's RPM + ignition timing correction	Yes, RPM & Load based control of Duty Cycle% V's RPM + ignition timing correction
Water Injection Control	Yes, RPM & Load based control of Pulsewidth V's RPM timed with each cylinder + ignition timing correction	Yes, RPM & Load based control of Pulsewidth V's RPM timed with each cylinder + ignition timing correction
Cam Control	Yes, On/Off based on RPM & Load, can be linked to temperature and/or road speed	Yes, On/Off based on RPM & Load, can be linked to temperature and/or road speed
Variable Valve Timing Control	Coming soon	Coming soon
Intercooler Spray Control	Yes, RPM & Load or temperature based	Yes, RPM & Load or temperature based
Control additional injectors	Yes, Full 3D table based on RPM & user defined load V's injector on-time	Yes, Full 3D table based on RPM & user defined load V's injector on-time
Road speed functions	Clamp or multiply. Roadspeed based switchable output	Clamp or multiply. Roadspeed based switchable output
Crank trigger compatability	Digital or Inductive. Over 70+ trigger patterns constantly updated, covering 90% of all vehicles from 1990 on	Digital or Inductive. Over 70+ trigger patterns constantly updated, covering 90% of all vehicles from 1990 on
Crank trigger sensitivity adjustment	Yes, 4 adjustable thresholds for starting & running	Yes, 4 adjustable thresholds for starting & running
Fly by Wire compatible	Yes	Yes
Diesel compatible	Yes	Yes