



# Performance Products Catalogue



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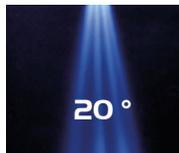
# About ASNU



ASNU are the world leaders in Testing & Servicing gasoline injectors with distribution in over 60 countries and more than 25 years experience in the market. ASNU have experience in every type of gasoline injector from the various injector manufacturers around the world. With tens of thousands of injectors being tested and serviced on ASNU machines in Aftermarket and Motorsport worldwide every year, our experience is unrivalled by anyone, anywhere else in the world. This gave ASNU the greatest experience and understanding when it came to developing a range of Performance Injectors that allow the user to achieve the level of perfection that tuners and owners are looking for.

The ASNU range of Performance Injectors offer a purpose designed and built injector with the ideal spray pattern to match the flow required. Based on ASNU's vast experience, these injectors are designed to meet the varied demands of the Racing & Performance markets.

All ASNU Performance Injectors have a multi-hole orifice cap, cut using the latest Laser technology for great accuracy and repeatability. Using this technology allows ASNU to produce injectors with specific spray patterns and flow rates to meet the performance customers' exact requirements.



All standard ASNU injectors are fitted with easy to see Flow Rate and Spray Pattern Identification Rings. Each spray angle option is matched to the flow rate to ensure optimum usage of the fuel provided. This means that there is no more confusion over which injector you have and exactly what is expected of the selected injectors.

The ASNU website shows details of the colours and specifications and also shows the technical data required by the tuner to accurately map the system known as ASNU Injector DNA.

ASNU's Injector Diagnostic Testing & Servicing System gives the ASNU Injector Distributors and their customers a worldwide guarantee and service that no other can match. Every injector is tested and matched for Fuel Delivery, Fuel Distribution & Atomisation before they are released to the customer. Flow Rates are checked and matched to within 1%, using the ASNU system. No more guess work about the performance of the injectors you are purchasing, you now have ASNU INJECTORS!

## Spray Patterns & Flow Rates

All injectors are fitted with easy to see Flow Rate and Spray Pattern identification rings with the top ring indicating the Spray Angle and the lower ring representing the Flow Rate. The table below shows the varieties of flows and sprays available:

Basic Part No	Spray Pattern	Injector CC
ASNU090/300	10°	300cc
ASNU090/350	10°	350cc
ASNU090/400	20°	400cc
ASNU090/450	20°	450cc
ASNU090/500	20°	500cc
ASNU090/550	20°	550cc
ASNU090/600	20°	600cc
ASNU090/650	20°	650cc
ASNU090/700	20°	700cc
ASNU090/750	30°	750cc
ASNU090/800	30°	800cc
ASNU090/850	30°	850cc
ASNU090/900	30°	900cc
ASNU090/950	30°	950cc
ASNU090/1000	30°	1000cc
ASNU090/1050	30°	1050cc
ASNU090/1100	30°	1100cc
ASNU090/1300	25°	1300cc
ASNU090/2000/1400	25°	1400cc
ASNU090/2000/1500	25°	1500cc

# Injector Ends & Various Manifold Fitments

ASNU performance injectors can be supplied in a large range of different fitments to suit various inlet manifolds from stock to aftermarket and also custom fitments such as various throttle bodies. We offer the most comprehensive range of different flow rates and and fitments in the market and the image below is just a selection of some of the variants we offer:



## Fuel Rail & Manifold Adapters



We offer a selection of various fuel rail couplings and manifold adapters for fitting our performance injectors into various sized fuel rails and inlet manifolds from stock fitment to various aftermarket applications.

ASNU Part No:	Description:	Image:
ASNU090/FRCIOD	14.5mm to 10.5mm Fuel Rail Coupling	
ASNU090/FRCIOH	14.5mm to 11mm Fuel Rail Coupling for Honda/Subaru	
ASNU090/FRCIID	14.5mm to 11mm Fuel Rail Coupling for Toyota/Mitsubishi	
ASNU090/FRCI4G	14.5mm to 14.5mm Fuel Rail Coupling extension	
ASNU090/FRCI4M	14.5mm to 14.5mm Fuel Rail Coupling extension with Methanol compliant o-ring	
ASNU090/FRCI5	14.5mm to 15mm Fuel Rail Coupling	
ASNU092/MAJZ	Manifold Adapter for 1/2JZ Toyota manifolds (for side feed to top feed conversions)	
ASNU092/MA-SR	Manifold Adapter for Nissan SR20/RB25 manifolds (for side feed to top feed conversions)	
ASNU092/MA-EJ	Manifold Adapter for Subaru EJ engines (for side feed to top feed conversions)	

## Harness Adapters & Plugs

Whether you are fitting ASNU performance injectors (or other brands of injectors) to your vehicle, we offer a selection of harness adapters and wireless connectors to suit your application.

ASNU Part No:	Description:	Image:
ASNU090/HA001	Wireless Connector - US Car injector to Bosch loom	
ASNU090/HA002	Wireless Connector - Bosch injector to US Car loom	
ASNU090/HA003	Bosch (with clip) with tails and rubber boot	
ASNU090/HA004	Bosch injector to Denso (Nissan) loom	
ASNU090/HA005	Bosch injector to US Car loom	
ASNU090/HA006	Bosch injector to Honda Kei Hin loom	
ASNU090/HA007	Bosch injector to Sumitomo (Toyota) loom	
ASNU090/HA008	Bosch injector to Bosch loom extension	
ASNU090/HA009	Bosch injector to Denso MK3 (Nissan) loom	
ASNU090/HA010	Bosch (with clip) injector to Denso MK3 (Nissan) loom	
ASNU090/HA011	Wireless Connector - US Car injector to Sumitumo loom	
ASNU090/HA013	Bosch injector (with clip) to Denso (Toyota) loom	
ASNU090/HA014	Bosch injector (with clip) to Jecs (Nissan) loom	
ASNU090/HAPlug	Bosch injector plug with clip, pins and rubber boot	

## ASNU 'A' Cap Injectors

The 'A' cap injector is the base injector that we use for many Nissan, Toyota and Mitsubishi applications due to its narrow manifold end. We can supply a variety of different o-rings on the lower end to seal in the manifolds correctly; replicating the fitment of the OEM injector.



Below are some examples of OEM injectors, with ASNU equivalent injector alongside and the part numbers required to be ordered. These are just some examples of the many different applications we can offer a solution for.



ASNU090/\*\*\*\*A+I04C  
ASNU090/FRCIOD  
ASNU090/HAOIO

ASNU090/\*\*\*\*A+I8  
ASNU090/FRCIID

Some of the many vehicles that use our 'A' cap base injector:  
Mitsubishi Evo 5-9  
Mazda RX8

## ASNU 'B' and 'C' Cap Injectors

The 'B' and 'C' cap injectors that we offer, are based on the same injector end but with the o-ring placed in a different location, meaning you can create either fitment very easily. This fitment is probably the most common fitment of fuel injector that we offer with a 14mm o-ring seal into the inlet manifold.



Below are some examples of OEM injectors, with ASNU equivalent injector alongside and the part numbers required to be ordered. These are just some examples of the many different applications we can offer a solution for.



ASNU090/\*\*\*\*B+60B

ASNU090/\*\*\*\*C  
ASNU090/HAO10

Some of the many vehicles that use our 'B' or 'C' cap injector:

Mini W11  
Nissan R34 Neo  
Nissan R35 GTR

## ASNU 'D' Cap Injectors

The 'A' cap injector is the base injector that we use for many Nissan, Toyota and Mitsubishi applications due to its narrow manifold end. We can supply a variety of different o-rings on the lower end to seal in the manifolds correctly; replicating the fitment of the OEM injector.



Below are some examples of OEM injectors, with ASNU equivalent injector alongside and the part numbers required to be ordered. These are just some examples of the many different applications we can offer a solution for.



ASNU090/\*\*\*\*D+XXXX  
ASNU090/HA010

ASNU090/\*\*\*\*D+18  
ASNU090/HA007

Some of the many vehicles that use our 'D' cap base injector:  
Mitsubishi Evo 10  
Lotus Exige

## ASNU 'E' Cap Injectors

The 'E' cap injector is usually supplied as per the configuration shown below. We can supply a variety of different o-rings on the lower end to seal in the manifolds correctly if required; to replicate the fitment of an OEM injector.



Below is an example of an OEM injector, with ASNU equivalent injector alongside and the part numbers required to be ordered. This is just one example of the various applications we can offer a solution for.



ASNU090/\*\*\*\*E+18  
ASNU090/11mm Top  
ASNU090/HAO10

Some of the vehicles that use our 'E' cap injector:  
Subaru

## ASNU 'SC' Cap Injectors

The ASNU 'SC' range of injectors came about when we were asked to supply a replacement injector for the Subaru BRZ/Toyota GT86/Scion FR-S. This injector has a long nose that protrudes all the way through the inlet so there is no wetting of the walls from the injector spray, delivering an efficient spray directly to where it is needed.



ASNU093/\*\*\*\*SC+I8  
ASNU090/11mm Top  
ASNU090/HAOIO

ASNU093/\*\*\*\*SC  
ASNU092/MAJZ+30B  
ASNU090/FRCIOH

Some of the many vehicles that use our 'SC' cap base injector:

Toyota GT86  
Subaru BRZ  
Honda NSX

## ASNU 'Short SC' Cap Hi Flow Injectors

The ASNU 'Short SC' range are our higher flowing SC fitment injectors. Using our high flow core injector which is a different length, we apply our short SC cap for the narrow fitments required. These injectors are available in 1300, 1400 and 1500cc flow rates.



ASNU093/2000/\*\*\*\*SC  
ASNU090/HA002 or ASNU090/HA005

Some of the many vehicles that use our 'SC' cap base injector:  
GM LS engines

## ASNU '2000 Range' - High Flow Injectors



The ASNU 2000 range of injectors offer 1300, 1400 and 1500cc flows. These are available in all of our standard 'A', 'B', 'C', 'D' and 'E' fitments and along with our various manifold adapter caps, fuel rail adapters and harness adapters, they can be used to supply a high flow replacement injector. They all have multi-hole orifice plates like the rest of our injectors, to offer the best spray and atomisation, whilst delivering a high fuel flow.

All of our fuel injectors are compatible with all gasoline based fuels including race fuels and E85.



## ASNU 'Classic' range of Injectors

The ASNU Classic injector range is designed to replace the older D-Jetronic & L-Jetronic injectors that are no longer available to purchase new.

Our replacement injectors provide a new alternative to the various manufacturers' injectors including Bosch, Marelli, Rochester, Denso, Siemens and more.

We offer our Classic range in various fitments to match the originals; whether this is a standard o-ring injector, or a hose fitment injector. Just a few examples of these are shown below, with many more options available.



## ASNU Fuel Rail Conversions

We offer a range of various fuel rails. The fuel rails below are all fuel rails to convert from the old side feed injectors, to run ASNU performance injectors.



### Subaru

Our Subaru fuel rails are sold as a pair and are designed to convert EJ20 phase 1, I.5 and phase 2 engines to top feed. This fitment can support our ASNU injectors from 300cc up to 1100cc in our standard fitments. The kit comprises of 2 x rails, 4 x spacers, 4 x bolts, 4 x manifold adapters.

Part No: ASNU092/WRX



### Nissan SR20 VVT

Our Nissan SR20 VVT rail is designed to convert the old side feed set-up found in the VVT engine to top feed, without having to remove the idle speed control valve. This fitment can support our ASNU injectors from 300cc up to 1500cc in our standard fitments. The kit comprises of 1 x rail, 3 x fitting bolts, 1 x link pipe and 4 x manifold adapters.

Part No: ASNU092/SR20DET

Please note these fuel rails are usually supplied in blue or black finish depending on our current stock levels. Please check with us before placing any orders.

## ASNU Fuel Rail Conversions



### Nissan RB25

Our Nissan RB25 fuel rail is designed to convert the old side feed set-up found in the RB25DET engine to top feed. This fitment can support our ASNU injectors from 300cc up to 1500cc in our standard fitments. The kit comprises of 1 x rail, 2 x fitting bolts, 2 x spacers, 2 x AN fittings and 6 x manifold adapters.

Part No: ASNU092/RB25

New Fuel Rails coming early 2020:

Toyota 2JZ  
Mitsubishi Evo 5-9

## ASNU Fuel Rails - R35 GTR



The ASNU R35 GTR fuel rails are designed for high performance engines, as our rails have a 17mm internal bore; far larger than the 3/8" OEM fuel rails, allowing a much higher flow of fuel. Our rails allow the retention of the stock rail mounted fuel damper using our spacer plate and are supplied with -8AN Orb fittings at each end.

We also offer some add-ons for the rail kit as follows:

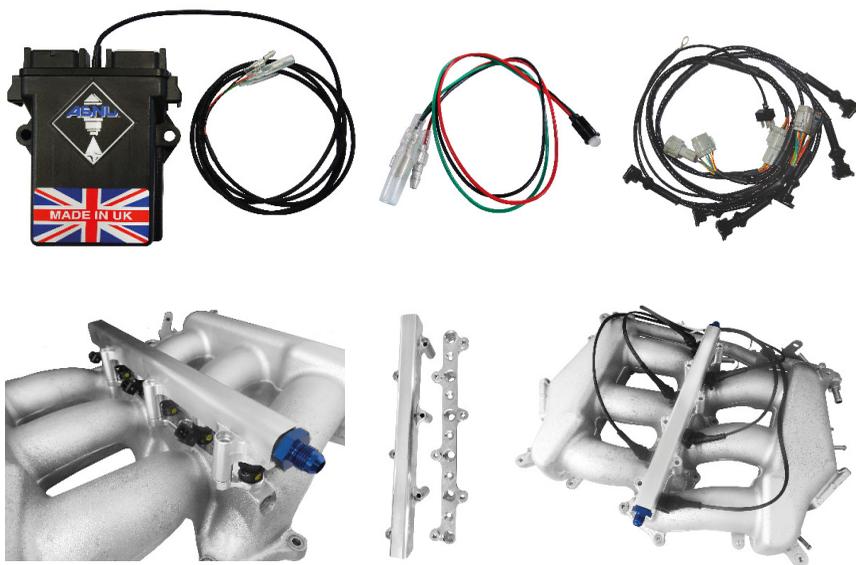
**ASNU092/R35 FPSensor** - A pressure sensor kit is available to replace the stock pressure damper fitted to the rail. This is an ultra fast sensor able to detect pressure drops as fast as 1 millisecond and is able to cope with fuel pressures as high as 10 bar. The sensor is supplied with a plug and play harness and is designed for customers on speed density with MAF delete kits. The sensor unit is designed to clear stock manifolds.



**ASNU092/R35 Regmount** - To allow the factory fuel pressure regulator and damper assembly with its associated flexible pipe work to be retained, we can supply a connector kit that mimics the factory flanges in the back of the rail. These parts replace the rear -8 rail fittings but it does, however, limit the fuel flow to that of the factory regulator and pipe work. **We do not recommend this for high HP applications.**



## ASNU Custom Applications - I2 Injector Kit



The ASNU I2 injector kit allows an additional 6 injectors to be fitted to an R35 GTR with a stock inlet manifold. The new set-up utilises a stock manifold (done on an exchange basis) that is inspected, cleaned and then machined.

The conversion parts are then bolted and bonded in place.

Alongside the fitted rails, we supply the additional driver box to control the additional 6 injectors, the wiring loom for the injectors and a status light that can be dash mounted to keep an eye on the operation of the control box.

The I2 injector kit is designed specifically to suit the ASNU SC range of injectors fitment wise. We usually recommend a 1050 or 1100cc injector for this application.

We can supply just the driver box if a different injector set-up is being used and we offer either Bosch, Denso or US Car fitment injector add-on looms.

Part No: ASNU092/GTR Driver - Driver Box

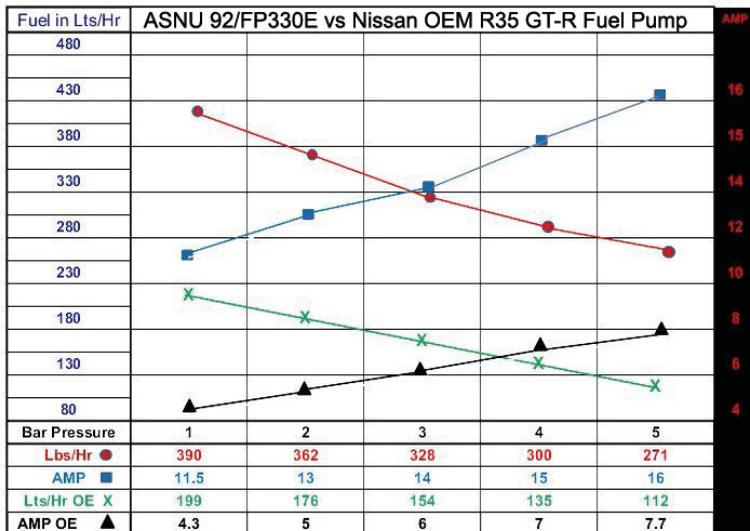
Part No: ASNU092/GTR/3rd Rail - Rail for additional injectors

## ASNU Fuel Pumps - FP330E

We offer a range of Performance Fuel Pumps for various applications including pumps fully compatible with race fuels including E85.

The ASNU FP330E pump is an in-tank pump that is a direct replacement for many vehicles including the R35 GTR (2 required) This pump is compatible with even the harsh race fuels such as E85. We do however, recommend that fuel pump filters are regularly checked, due to the dielectric properties that the alcohol like fuels have.

This pump flows 330Lph @ 3 bar and internally consists of a carbon commutator and carbon graphite brushes, making them a far more durable and long lasting pump in comparison to many other pumps on the market.

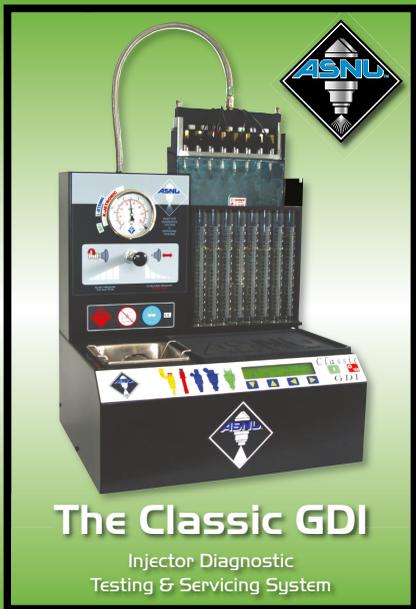


## ASNU Fuel Pumps - FP340

The ASNU 340 series of fuel pumps are a 340Lph in-tank fuel pump. We offer 4 fitments - Centre Inlet, GM Inlet, Inline Inlet, Offset Inlet. These are a direct drop-in fitment for many vehicle applications, with little or no modifications required. We supply these along with a filter sock, small piece of rubber hose with fittings, electrical plug with wire tails and rubber boot (if required).



# ASNU Classic GDI Injector Diagnostics & Servicing Machine



**The Classic GDI**  
Injector Diagnostic  
Testing & Servicing System

## The ASNU Classic GDI

A complete system for the latest generation fuel injection

### What is GDI?

GDI is an abbreviation for Gasoline Direct Injection, a process where the fuel is injected directly into the combustion chamber. There are many variations of this process, with manufacturers preferring their own abbreviation of the system. Here are some of the ones currently in use.

- FSI** = Fuel Stratified Charge Injection
- FSI** = VW Audi (Fuel Stratified Injection)
- SDI** = Ford (Strat Charge Injection)
- IDE** = Renault (Injection Direct Essence)
- JTS** = Alfa Romeo (Jet Thrust Stoichiometric)
- SDI** = Holden (Spark Injection Direct Injection)
- HPDI** = BMW (High Precision Injection)
- MPDI** = Porsche (High Pressure Direct Injection)
- Common Rail** = GM, Vauxhall, Opel
- CRDi** = Mercedes Benz (Charged Gasoline Injection)
- DiDi** = Ford/Mazda (Direct Injection-Spark Injection)
- DiDi** = Mitsubishi Peugeot Citroën, Hyundai, Volvo, (Gasoline Direct Injection)



On a GDI system, the fuel is injected directly into the combustion chamber at a much higher pressure than manifold systems, up to 200 bar.

These systems now require fuel pumps and injectors made of stainless steel and must be capable of performing at a much higher specification than ones seen on previous manifold injection systems.

Both designed to deliver very precise quantities of fuel at extremely high pressures and in short periods of time, in some cases for fractions of a millisecond.

To control these systems, the ECU is also of a higher specification and required to supply a higher current of up to 300A on some systems.

There are many manufacturers of this type of system, but Robert Bosch are recognised as one of the leaders in the development of the GDI Technology.



The GDI System has two running modes: Stratified and Homogeneous.

### Stratified Charge Running Mode.

This mode is the economical combustion cycle, in some systems, the Air to Fuel ratio can be as high as 65 to 1.

In this mode the injector delivers a minimum amount of fuel in to the combustion chamber, just before the piston reaches top and before the plug fires. This mode is used at idle and light throttle settings when the car is driven slowly.

### Homogeneous Running Mode.

This mode is what would be called a normal combustion cycle, with an Air to Fuel ratio of 25 to 1.

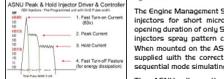
In this mode the injector delivers a normal amount of fuel in to the combustion chamber. This gives the engine the required performance as the car goes faster. The Engine Management System determines when the system needs to switch between the Stratified Charge Mode and the Homogeneous Running Mode.



## Spray Pattern & Flow Rate Analysis

The ASNU system has been designed for comparing injector against injector at a safe operating level and is suitable for use by Apprentice Level Mechanics to Master Level Technicians.

To enable a safe and easy examination of the injector's performance, the ASNU system runs the injectors at a lower and safer operating fuel pressure of up to a maximum of 10 bar. On a vehicle fitted with a GDI system the fuel pressure will operate at a potentially dangerously high level for the inexperienced, reaching anywhere between 70 bar up to 2000 bar on some systems.



The ASNU allows the user to safely examine the injectors spray pattern in greater detail for any discrepancies in the fuel distribution and atomisation.

In some operating modes, the ASNU system opens the injectors for a much longer duration, thus exaggerating the spray pattern and making it easier to examine the spray's performance.

### GDI Injectors & Fuel Trims

The Distribution and Atomisation on a GDI injector are critical to maintaining the correct Performance, Fuel Economy and Exhaust Emissions. They are now even more important than the quantity of fuel being delivered by the injector. The latest Adaptive Engine Management Systems have a Short and Long Term Fuel Trim Adjustment, adjusting the fuel delivery as compensation for any discrepancies in the C/D emissions. An adjustment of up to 10% can be made to the fuel delivery of each injector on some systems, but as there are a number of measurements that contribute to the Fuel Trim Adjustment, these measurements cannot adjust or compensate for poor Fuel Distribution and Atomisation.

**FUEL TRIM ADJUSTMENTS ARE NOT CORRECTING THE PROBLEM, ONLY COMPENSATING FOR IT, DON'T FIND THE PROBLEM, FIND THE CAUSE.**



The ASNU system allows the user to visually examine the injectors on an individual cycle or in sequential mode, where they can compare the injectors performance under a range of simulated Millisecond & RPM driving cycles already programmed in to the ASNU system. The injectors can be operated at various RPM & Millisecond settings, restricted only by the number of injectors being tested in the sequential testing operation.

## The ASNU Classic GDI

### Technical Specifications

Weight & Size: Unpacked: 30kg Size: 125 Wx45 Hx70cm / Packed: 48kg Size: 167 Wx57 Hx83cm Input Voltage: 96V ~ 265V

### The ASNU Classic Features

- Backlit Viewing Window
- Multi Language Selection
- Digital Operational Display
- Membrane Key Pad
- Wide Range of Functions
- Injector Shot Counter Display
- Injector Shot Timer Display
- Duty Cycle Display
- Litre per Hour to Milliliters Calculator
- Manual & Automatic Cleaning Cycles
- Suitable for Injected Motorcycles
- Suitable for Injected Marine Engines
- Suitable for LPG Injection
- For use on EVERY type of Manifold Injector
- Easy to Read LCD Screen

### Classic GDI Standard Equipment

- High Pressure Fuel Pump
- High Pressure Fuel Rail
- Bubble Ultrasonic Cleaning Bath

### Top & Side Feed Service Tools



### Additional GDI Features

- Suitable For All Types GDI Injectors (except Piezo Injectors - see Optional Extras below)
- Sequential and Simultaneous firing option for Standard Manifold Injectors
- Fast injector turn on and turn off circuits giving more repeatable results
- Injector Inductance Test - Checking Injector Electro Magnetic Circuit
- Peak & Hold Current Control with ECU matched current settings
- Single Injector Selection During Multi Injector Operation
- Sequential Injector Firing Operation for GDI Injectors
- Simulates on-car Spray Patterns & Flow Rates
- Tests Up to 8 GDI/FSI Injectors at one time
- 18 Various M/S & RPM Test Settings
- Static and Dynamic Operation

### Optional Extras

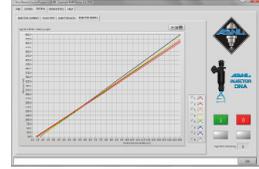
- USB Computer Interface with adjustable settings for simulating ECU Peak & Hold Currents, Millisecond Pulse Widths and Engine RPM
- Piezo Adapter Box - Please contact your local ASNU distributor for more details.



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# ASNU Injector DNA & Remote Control Programme

The Remote Control software is designed to work alongside the ASNU Classic GDI. The Asnu Classic GDI machine is pre-programmed with a limited set of injector testing settings, so running the ASNU Remote Control Software with the machine will allow you to take more control when testing and servicing your injectors and replicate behaviour much closer to on-vehicle performance.



## Features of the ASNU Remote Control Software

### Full control of injector parameters including the following:

- \* Fast Turn On Time (GDI/FSI)
- \* Engine Speed
- \* Peak Current
- \* Pulse Width
- \* Hold Current
- \* Duty
- \* Flow Test Duration (injections or seconds)
- \* 4 or 2 Stroke selection
- \* Injector Voltage (Optional extra in conjunction with the Variable Voltage machines and the USB controlled power supply box)

### Other features include:

- \* Ability to automatically estimate the flow test duration that will be required to fill the flow tubes
- \* Graphical representation of the injector Offset / Dead-time
- \* The ability to generate the Offset / Deadtime data for any injector at different voltages and pressures
- \* Ability to match sets of injectors
- \* Automatic conversion of flow values from volume in (cc) to flow rate (cc/min and lbs/hour)
- \* Flow results and test settings can be saved, viewed and printed (Excel or Excel file compatible reader required)
- \* Automatic conversion of flow values from Asnu FlowRite liquid to Vehicle fuel including user adjustment for different fuels
- \* Graphical representation of the injector Pulse Width and Duty
- \* Graphical representation of the injector current demand
- \* Built in User manual and instruction links
- \* Ability to save configuration settings
- \* Free 10 day trial available



## Contact Details:

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## Worldwide Distributors

See website for further details:

[www.asnu.com/distributors/global/injector](http://www.asnu.com/distributors/global/injector)

