

JIGSAW

ECLIPSE

Real Time Fuel Island Terminal



FUELLING YOUR FUTURE

JIGSAW

Real Time Fuel Management

ABOUT JIGSAW :

OUR MISSION ...

Jigsaw Fuel Management was established in 2007 specifically to develop a new generation of fuel management system. The developers had many years of experience designing what were at the time the best fuel management systems on the market.

The aim was to exploit the convergence of reliable Internet access and low cost, reliable mobile data communications to develop a fuel management system which had not been possible until this time.

The resulting system has changed the face of fuel management. Jigsaw now manage more than a Billion litres of fuel a year with sites not just in the UK, but across the globe.

Jigsaw strive to make the most reliable fuel island equipment anywhere. The terminals use switch mode power supplies to combat mains fluctuations, they are not based around PC's and they do not use membrane keypads to ensure long term reliability. The enclosure is fabricated in stainless steel so that it will stand up to the rigours of any environment.



OUR PARTNERS ...

Jigsaw have developed a network of distributors who not only understand fuel management systems, but can also support your pumps and gauging equipment so that you can be confident that all work is carried out to the latest standards by professionals.

Jigsaw work with a range of suppliers to the Fuel Management Industry so that we don't just supply Fuel Control Terminals, but can also supply and advise on Tank Gauge Equipment, Flow Meters, Pumps, Solenoid Valves, Nozzles, Hoses and the rest of the equipment necessary to install and support a complete fuel management solution.

OUR CUSTOMERS :

Jigsaw supply fuel management systems to a wide range of industries, recognising that a one-size-fits-all approach is not appropriate.

Jigsaw have customers ranging from single sites with just a few vehicles, to large multi-site fleets including Haulage, Rail, Shipping, and Aircraft.

OUR PRODUCTS ...

Jigsaw have developed solutions specific to the various industries we serve with recommendations for each. The Jigsaw Fuel Island Terminals may be configured to your exact requirements and Jigsaw have the widest range of Vehicle ID solutions anywhere.

The Jigsaw **FUEL** Web Software has been designed to require a bare minimum of training. It's on screen page guides help the user through most day to day management tasks. .

The unique Jigsaw Vision TM Tiles show real time information on many aspects of your sites, drivers, fleet and fuel management performance.

The Jigsaw system has many export formats so that data can be passed to other systems easily.

OUR GREEN INITIATIVE ...

Jigsaw are committed to enabling the use of LNG, CNG and Bio Fuels and fully support a range of gas dispensers and have the necessary functionality to support both gas only and dual fuel vehicles without compromise.

JIGSAW ECLIPSE

Fuel Management Terminal

THE FIRST OF A NEW GENERATION OF FUEL MANAGEMENT TERMINALS

The Jigsaw Eclipse has been designed to be the first of a new generation of real time, web based fuel management systems. The Eclipse does not rely on being polled, as with older systems, but automatically connects to a central server in real time. Stock figures are always current and you can see fuellings on the web site as they occur.

Calling on many years experience designing fuel management systems, weaknesses have been designed out, and reliability designed in, resulting in a system which will give a lifetime of dependable service.

The Eclipse uses the mobile Phone Data Network to communicate with a Central web Service in real time removing the requirement for a dedicated phone line or any need for a connection to your internal computer or Wi Fi networks.



JIGSAW ECLIPSE

Fuel Management Terminal

FEATURES ...

- Self Contained Communications, no telephone line required
- Real Time Authorisation to Central Web Server
- Real Time Fuelling Transaction Forwarding
- Switch Mode Power Supply accepts wide voltage range and protects against mains fluctuations.
- 12/24 Volt DC Variant available
- Battery Back Up - System Operates even if Mains Fail
- Manages up to 4 Pumps Simultaneously
- Mechanical or Serial Pump Interfaces available
- Reliable (Non-Membrane) Alphanumeric Keypad
- 4 Line x 20, Large Character, Backlit, LCD Display
- Widest Range of ID Options available
- All Stainless Steel Enclosure with Multi Tumbler Lock
- Interfaces to most Electronic Tank Gauging Systems
- Integrated Local Management Functions

SPECIFICATION ...

- Voltage - 95 to 250 Volts AC / 12 to 24 Volts DC
- Current - AC 25 mA, DC 480 mA @ 12 V (av)
- Eclipse Terminal Dimensions :
W = 300 mm, H = 305 mm (490 mm with aerial), D = 215 mm
- Eclipse Terminal Weight : 6.5 Kg
- Enclosure : Fully Welded Stainless Steel
- Paint Finish : Powder Coated

ID OPTIONS ...

- RFID Tags - Including non-Jigsaw Tags
- Magnetic Cards (eg Fuel Cards)
- Dallas I-Buttons
- Nozzle ID System (EasyFuel)
- Jigsaw Midas - Auto Mileage Capture
- Jigsaw FuelGuard - Auto ID / Auto Mileage
- Jigsaw LaserPlate - Bar Code Reader System
- Jigsaw TeleTag - Long Range Auto ID Reader

MOUNTING OPTIONS ...

- Plinth Mount
- Tank Mount
- Wall Mount
- Pump Top Mount
- Integrated Pump Options - Hytek, Pumptronics, DCD etc.
- Retrofit Options - Triscan, Merridale, TimePlan, FuelTek, etc.

MID APPROVAL

The Eclipse is fully MID (Weights and Measures) approved so may be used in both commercial and retail environments with equal confidence.

REAL TIME FUEL MANAGEMENT OVERVIEW



1. Fuel Control Terminal is presented with or detects a vehicle ID device (See Options)
2. The Terminal is connected to the Internet using the GSM Data Network
3. The Terminal contacts the web based Fuel Server to validate the ID Device
4. The Fuel Server sends back authorisation along with requests for more information and transaction limits (eg fuel types acceptable, max fuel quantity).
5. The fuelling starts and the fuel quantity is monitored.
6. At the end of the delivery, the fuelling details are stored locally and also forwarded to the Fuel Server in real time.
7. As the fuellings are received at the server, the transactions appear on the "Sites" screen and tank stocks are updated and also displayed so that the user has a real time view of all on site fuelling activity and stock levels.
8. If Required, E-Mails and Texts may be raised automatically to warn of low stocks, lost or stolen tag use, fuel theft etc.

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FUEL

Fuel Management Software

- Simple to Understand - Minimum Training
- True Real Time system - No polling required
- Unique Vision Tiles allow at-a-glance management
- Web Based (View Anywhere)
- Real Time View across all sites and assets
- No Dedicated On-Site Software
- Only a Browser is Required for access
- Desktop, Laptop, Tablet and Phone Sensitive site
- Real Time Stock Management
- E-Mail and Text Prompts
- Fully Automated Reports Generation



FUELLING YOUR FUTURE

JIGSAW FUEL

Fuel Management Software

GROUND BREAKING SOFTWARE ...

The Jigsaw Fuel Software has been designed specifically to reflect the benefits of Real Time Fuel Management. The colour coded user interface highlights any issues as they occur, and allows the causes to be investigated easily. The unique user interface is very simple and intuitive to use requiring only minimal training and little in the way of IT experience.

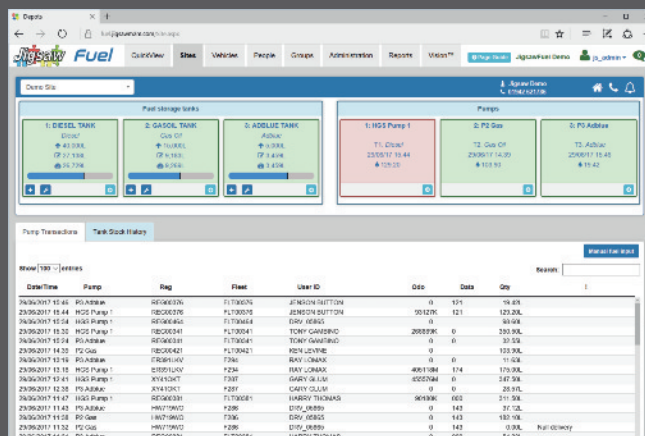
The software has been designed so that most functions can be accessed by no more than two mouse clicks.

UNIQUE FEATURES :

- Fully Centralised System - No on site server to manage.
- Software Updates Managed Centrally
- No Limit on Sites, Pumps, Tanks, Users or transactions - Large or small networks accommodated
- Configurable Report Templates that can be periodically auto e-mailed
- Graphical Gauge and Book Stock Comparison
- Unique Vision Tiles - Configure the site with information relevant to your business.
- Server to Sever Data Links - Where compatible, Auto Mileage Update from your vehicle tracking system.

CLEAR USER INTERFACE...

Above all other factors, Jigsaw have designed the user interface to be as clear and simple as possible. The site is consistent so that if you see something in red, you know there is an issue - click that warning and you see the details. The site screen is the heart of the user interface. This shows the status of all pumps and tanks on the site along with a list of all the latest fuelling events.



Whether you have one fuelling site or fifty, the data is shown in the same clear format. On larger networks, the QuickView page comes in to its own. This highlights any issues across an entire network of sites all on one page.

REAL TIME STOCK MANAGEMENT :

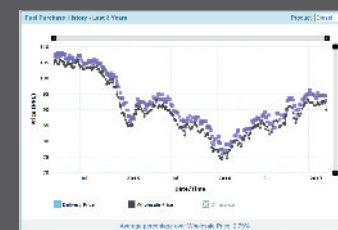
As stock deliveries are entered, and transactions are received from your site, the fuel stock situation is updated on the web service. With a connected tank gauge, you get a real time comparison between book and gauge stock highlighting any issues in real time.

JIGSAW VISION™ TILES :

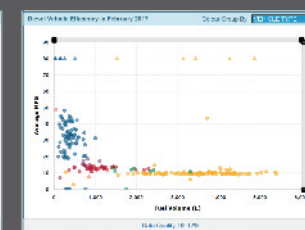
The Jigsaw Fuel system has the Unique Vision Tiles which show real time information answering specific questions the user may pose about vehicles, people, fuel stocks, efficiency and even CO2 emissions.

Here are a few of an ever growing suite of jigsaw Tiles :

- Unfuelled Vehicle Tile - Updated every Minute - ideal for fuelling shift operations
- CO2 Emissions equivalence Tile
- Annual Fuel Usage Plot - 3 Year Overlay
- Unique Fleet "Swarm" Plot easily highlights badly performing vehicles
- Fleet Highest Fuel Usage
- Fuel Price Plot - Direct Comparison of your purchase price to UK Average Price.



Average UK Fuel Stock Price



Fleet Efficiency "Swarm" Graph

REAL TIME SUPPORT :

As your Support Agent can view the same data as you, at the same time, any issues raised can usually be resolved during a telephone conversation so that support is fast and efficient.

JIGSAW ID OPTIONS



RFID TAGS

Most common form of ID, easily fitted to vehicles key ring, very robust.

- Simple to use
- Low Cost
- Use for Vehicle, Fueller or Driver ID
- Existing Third Party Tags may be used



FUEL CARDS

Although not as reliable as RFID tags, if vehicle already issued with fuel card then may be used.

- No additional per vehicle cost
- All major card types accepted (mag only)



DALLAS KEYS

Used in several older systems, these may still be used when upgrading to Jigsaw.

- Robust Design
- Fit to vehicles key ring



MIDAS

Jigsaw Midas gives Auto Vehicle ID and Auto Mileage Capture just a touch of the Midas key.

- Miles or hours Run vehicle unit
- Fueller and Vehicle identified and mileage transferred



EASYFUEL

Nozzle Based ID system - simply insert nozzle and fuel. ID Tag fitted to vehicles filler neck.

- No wires down fuel hose
- Optional OBD for auto mileage capture



FUELGUARD

Fitted to vehicle and converts pulse train to mileage. Radio linked to Fuel Island Terminal.

- Auto Mileage or Hours Run capture
- Verifies vehicle present before fuelling.



FUEL WAND

Mainly used in mobile refuelling - tag fitted to vehicle/plant read by hand held FuelWand scanner.

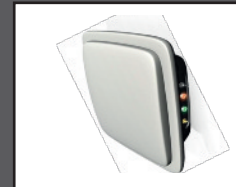
- Ideal for Mobile refuelling Operations
- Simple to operate
- Identifies Fueller and Vehicle.



LASER PLATE

Radio Linked rechargeable bar code scanner reads ID and data bar codes

- Bar code can be used to limit fuelling quantity
- Low cost ID



TELETAG

Originally developed to optimise Bus Refuelling operations. Auto ID's fueller and vehicle.

- Speeds up refuelling operations
- Use with FuelGuard for a complete Auto ID/Auto Miles capture system.

JIGSAW SYSTEM OPTIONS

DATA IMPORT

If you use Fuel Cards offsite, then the Jigsaw Web Service can read a file from your card provider so that these are listed along with your on site fuellings. A full picture of all vehicle fuellings is essential in order to calculate MPG figures, and to spot poor vehicle performance or fuel theft.

DATA EXPORT

It is sometimes necessary for fuelling data to be exported to other software systems such as fleet management packages, SAP, accounting packages and the like. The Jigsaw system can export data in many formats from simple text files such as CSV through Scheduled FTP transfer to Direct, real time Web Service data transfers.

TELEMATICS INTERFACES

The Jigsaw system has been linked, server to server with several telematics (Vehicle Tracking) servers. When a fuelling transaction is received on the Jigsaw server, it connects to the telematics server to recover the mileage at the time of fuelling.

AUTOMATIC REPORTS

Jigsaw provide a range of basic report styles which can be configured to each users requirements. The resulting template may then be saved and scheduled to automatically run periodically and be e-mailed to the relevant user.

AUTOMATIC STOCK WARNINGS

The jigsaw system may be configured to automatically send e-mails to the relevant users when fuel stocks fall below the tank reorder value.

PUMP TYPES

Normal - Pump started by authorisation, fuel drawn decrements from associated tank.

Debowser - Pump started by Auth, but fuel drawn adds to tank stock.

Integrated - FM Display switches to Large Character Fuel delivery Display during transaction.

Delivery - Forms stock delivery transaction - used to automatically monitor tank inlet.

ID OPTIONS :

- RFID Tags - Including non-Jigsaw Tags
- Magnetic Cards (eg Fuel Cards)
- Jigsaw EasyFuel - Nozzle based ID System
- Jigsaw Midas - Auto Mleage Capture
- Jigsaw FuelGuard - Auto ID/ Auto Mileage
- Jigsaw LaserPlate - Bar Code Reader
- Jigsaw Fuel Wand - Remote Tag Reader
- Jigsaw TeleTag - Auto ID/Mileage Capture

ACCESS OPTIONS :

- Logged Fueller Mode - Fueller logs on once at start of fuelling shift - types in vehicle ID before each fuelling
- UnLogged Fueller Mode - As Logged fueller, but Fueller ID presented at each fuelling.
- Data Entry - Two unchecked data prompts - eg "Enter Fleet", "Enter Collar Number", "Enter Job Number" etc.
- Odometer entry - Miles, Km or Hours - No check, Under Check or Range Checking (Mileage must be larger than last but not too large)
- Fuel Limits - By Transaction, by Day, by Week or by Month.
- Driver ID using second tag or typed ID entry.

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