



Functions and Guidelines

Liquitrack SM3.5 v1.13

The SM3.5 is a programmable logic controller, that will provide a secure paper free digital ledger of fuel transactions performed on site. It will provide a secure method of dispensing fuel. All fuel dispensed will be allocated to a specific vehicle and accountable to specific user. It will not be possible for any unauthorised person to use the pump. If for any reason the system is modified in such a way pumping occurs without authorization a record will be made of the transaction. The reports are transmitted via a 2G, 128 bit encrypted VPN tunnel, ensuring safety.

N.B If the main MCB circuit breaker is off, power will not be supplied to the router which means it will not be able to upload the daily reports to the server. Only switch the main circuit breaker off in an emergency or if the system requires resting for some reason. If the system is fitted with a power back -up battery this will also require dis-connection to reset. To do this the flap in the booth stem, must be opened and the red and black connector must be parted. After reset it must then be reconnected. The battery back up will enable the user to complete the last transaction if there is a power failure.

Functions

Date/Time Setting
Bulk Tank Level (Sensor or Ledger type)
Datatable of 120 records
Accumulated flow total with reset
3G/2G Wireless connection with remote diagnosis
Battery backup system
Daily report delivered by email
Bulk tank level alert by email
Bulk tank upfill record facility.
Kilometer and fuel efficiency calculation
Register of Vehicle tags
Fuel attendant PIN security
Easy use touch screen

Note:

Please use a pencil with a rubber end to interact with the PLC. (no steel or sharp objects) or a touch screen stylus
Please use a damp cloth with mild soap to wash the screen.
Please ensure the date and time are correct.
Please note there may be a minor difference between digital and analogue flow meter recordings
Please note that the bulk fuel level is best used as a guideline. (Those with a level installed)
Please keep authorisation Pins in a private and secure location.
Please note Liquitrack cannot be responsible for any loss of data due to connection failure resulting from inadequate G2/G3 signal.
Please note Liquitrack cannot be responsible for damage to equipment if tampered with.
Please note that the list of recorded transactions will also be available for reading on the PLC until such time that a further 120 transactions have occurred.
Please note that the fuel efficiency calculation requires that the vehicle is filled to the same fill level each refill.

Note on the reading of an ibutton.

To read the ibutton, contact must be made with both the positive and negative sections of the ibutton.
The ibutton and socket must be clean and free of grease and debris. The surfaces must not be dented or mis-shaped in order to provide a good contact.
The reader scans every 2msec , and may be mis-read if the ibutton is removed too quickly in which case a second reading can be attempted after 5 seconds.
If the reader green light flashes, please wait for the reader to reset. The ibutton can be removed once the green light is activated or after aprox 2 seconds.
The red light indicates a mis-read and a second reading should be attempted. (Wait 5 seconds)
If a successful read has been made do not continue to press the button into the socket.

Information Required to program;

1. Names of vehicles
2. Names of Users
3. Opening Bulk tank level
4. Size and dimensions of tank
5. Email address for alert notification
6. All daily reports will be dispatched at midnight unless otherwise specified

The system cannot be used without a PIN number and a vehicle tag.

Please keep the user pin numbers in a secure and safe location.

Override Switch.

In case the system fails, normal pumping can commence by switching the system back to manual by turning the changeover switch located in the pump enclosure above the regulated 1.2m fume zone. N.B Systems using the ledger system will need to redip the bulk tank if pumping is performed at some stage on the manual system.

DO NOT PRESS THE TOUCH SCREEN WITH SHARP OBJECTS!



Options

The display can be in 3 different sized formats.

- 3.5 inch touchscreen,
- 4.5 inch touchscreen,
- 7.0 inch touchscreen.

Other options are available for larger processing and memory, multiple pump systems and remote operation with RFID and thermal printing.

1.Reports Live or updated at midnight

The Live system is dependent on cell phone signal which can be intermittent meaning if a connection cannot be established, a transaction will not confirm disabling the user to dispense until such time as a reliable connection is established.

2.The midnight report upload.

Reports

Reports compiled with fleet card data will require a proxy from the specific 3rd party, and should comply to certain criteria to match database use.

Entries with [UNAUTH] represent illegal use of pump

Entries with [UPFILL} represent fuel entering the bulk tank

Screensaver / Power Saver and Light

The screen will automatically switch to a screensaver after 25 minutes. This will continue for a further 5 minutes after which the screen will turn off to save power. The screen can be activated again by touching it, causing a return to the menu screen. The booth light will also be activated on screen touch for the 30 minutes.

Electrical Enclosure

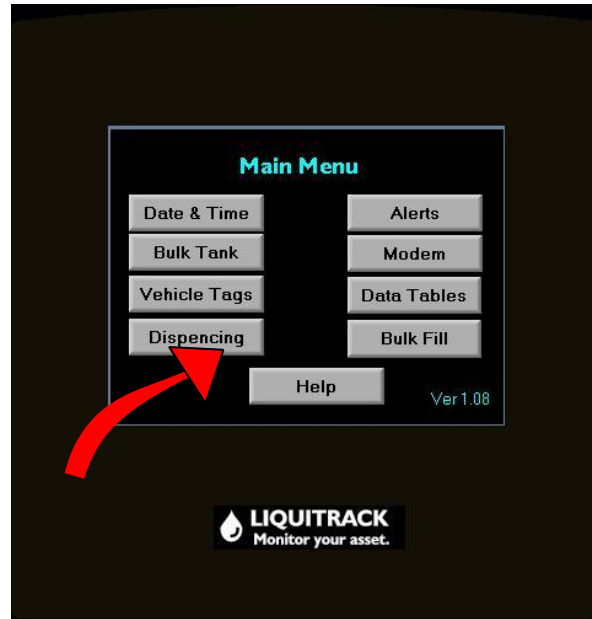
The electrical enclosure front panel should be closed after use to protect the internal electrics that are sensitive to moisture.

Instructions

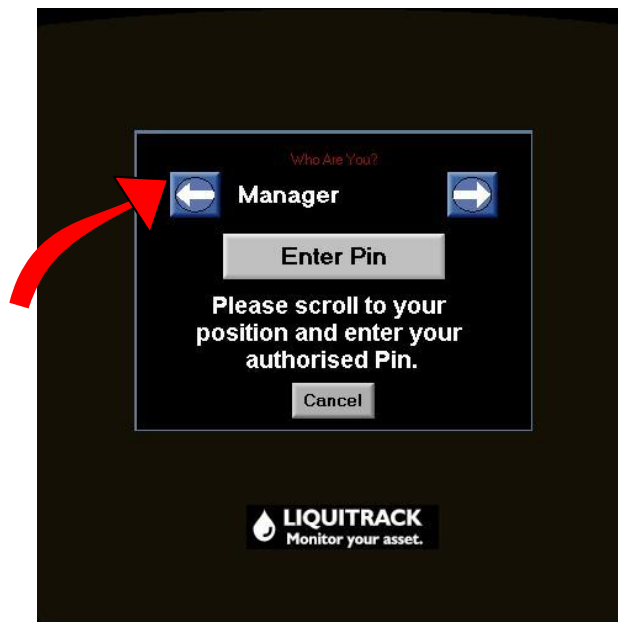


LIQUITRACK
Monitor your asset.

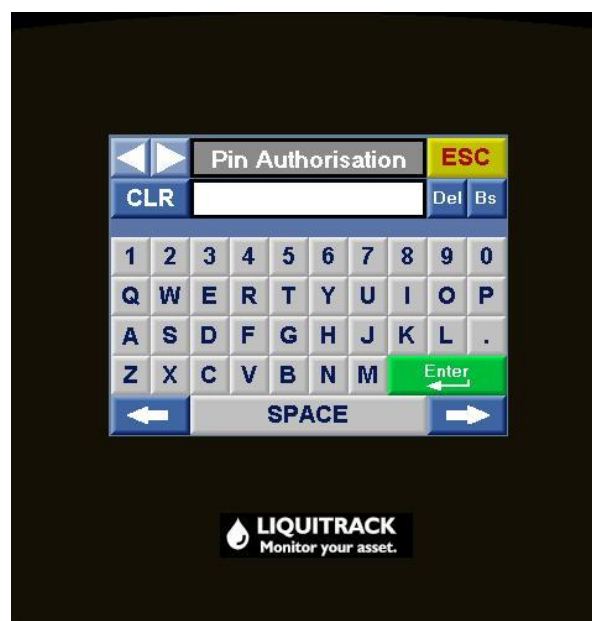
1. Dispensing



To dispence fuel, simply press the [Dispensing] on the main menu.



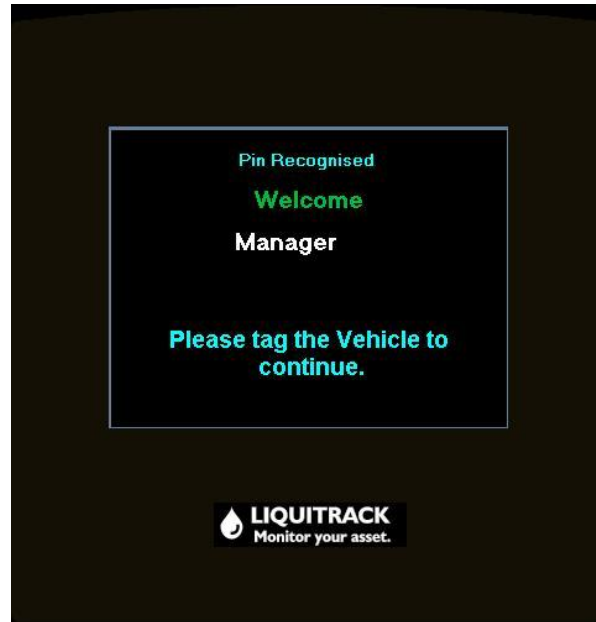
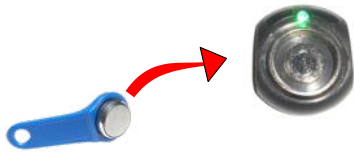
You will then need to scroll using the arrows to select your user preference. Ounce you have the correct user name displayed, press the [Enter Pin] button to proceed.



You will then need to enter your specific 4 digit pin number, and press the [Enter] key.

If the pin number entered is correct, you will proceed to the next screen. If the number is incorrect you will be provided a chance to enter the pin again. You may use the delete and clear buttons if an incorrect key is pressed.

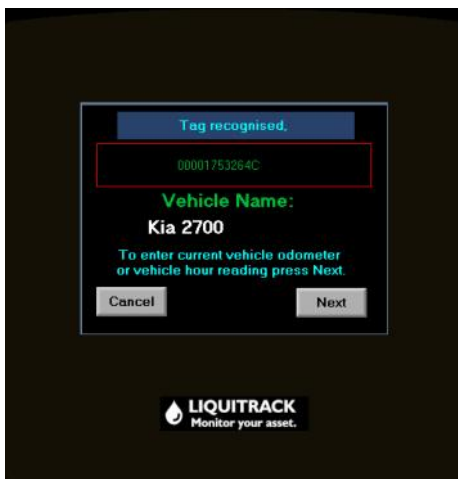
NB. Use the Bs button to delete backwards and the Del button to delete forwards.



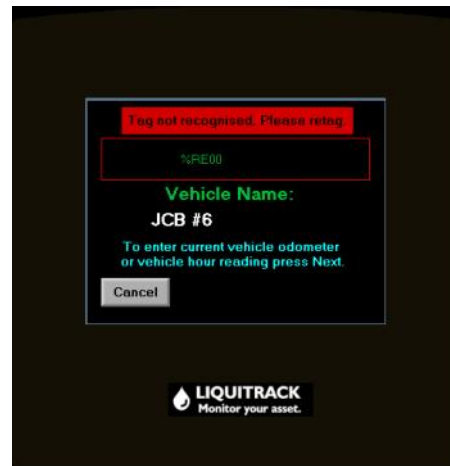
When the correct pin is entered, your user name will be displayed.

You will then need to tag the specific vehicle you wish to fill by pressing the tag, (ibutton) into the socket reader.

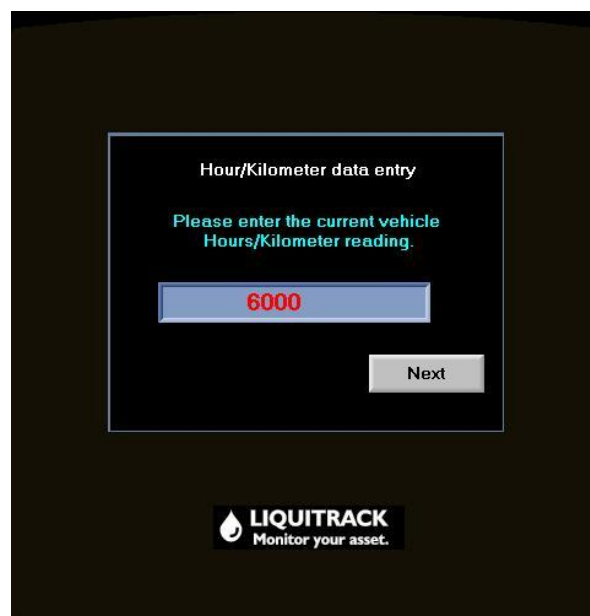
The green light will show on a successful read, approx 1.5 sec, Once the green light shows, the ibutton can be removed from the socket. do not proceed to hold the button in the socket for too long, as this may result in a mis-read, whereby the red light will flash.



Tag recognised showing the vehicle name. Press [Enter] to proceed.



Tag not recognised. This indicates the ibutton is not programmed on the system or the tag reading process experienced a problem. To re-tag, please wait 5 seconds.

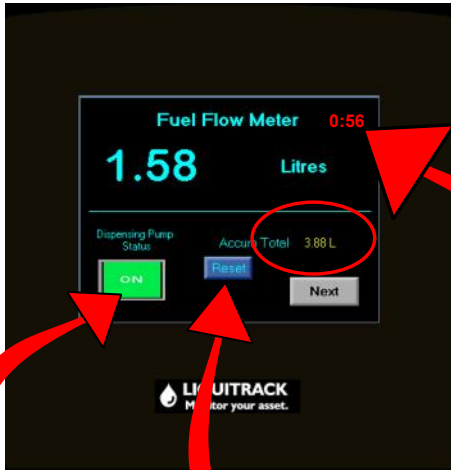


Once the vehicle is correctly recognised. You can enter the vehicle odometer/hour reading by pressing the blue press block. You can then enter the reading by using the provided keypad on screen.

Press [Next] when complete.

The flow screen will then be shown. The pump will start automatically and the readout will show the volume of fuel dispensed. If your pump is fitted with a nozzle switch this will need to be activated as per normal.

PUMP ON

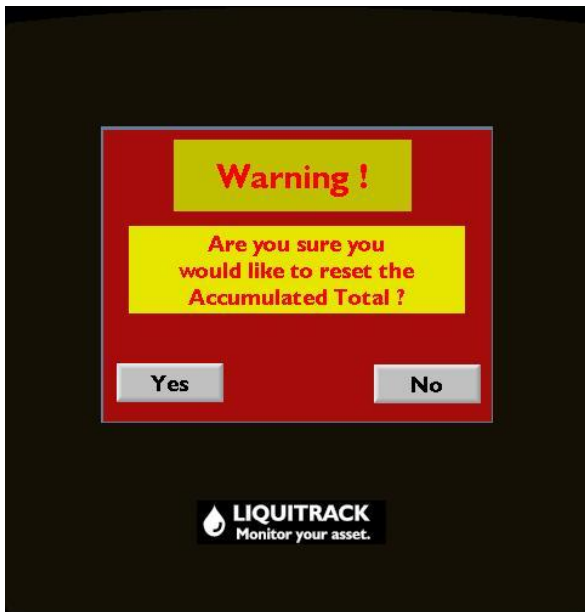
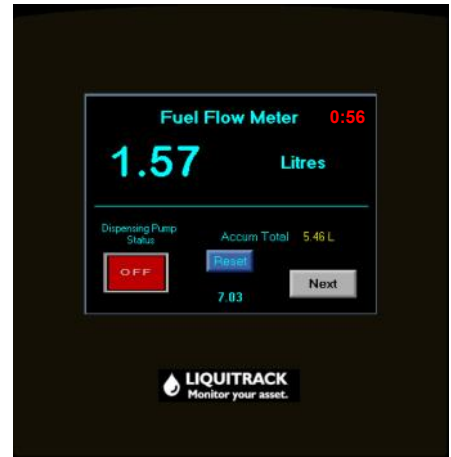


The green light indicates that the pump is on, while the red light indicates the pump is off. This light also acts as a toggle switch to turn on the pump by pressing.

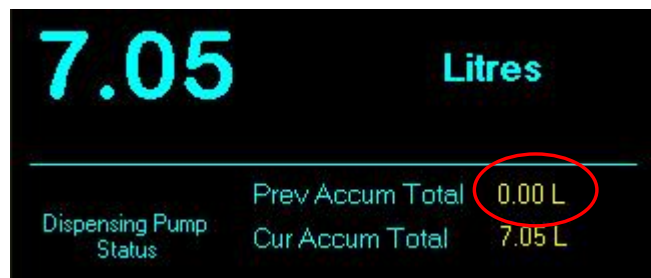
This figure represents an accumulated timer. The pumping operation must be completed in 3 minutes, otherwise the transaction will automatically be logged. This function is a safety function if the process is abandoned during the process. This timer will only activate if the flow rate is iddle.

This reset button will only reset the accumulated bulk tank total, circled.

PUMP OFF



As of update 1.15, only certain authorised users will see the accumulated total reset button.



Once the pumping is complete, press the [Next] button to proceed to the confirmation screen. All the information regarding the last transaction will be shown. This information must be confirmed to proceed further. The [Confirmation] button must be pressed to log the data.

Once the data is logged you will be returned back to main menu.

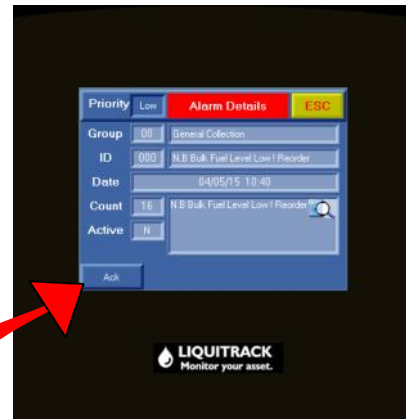
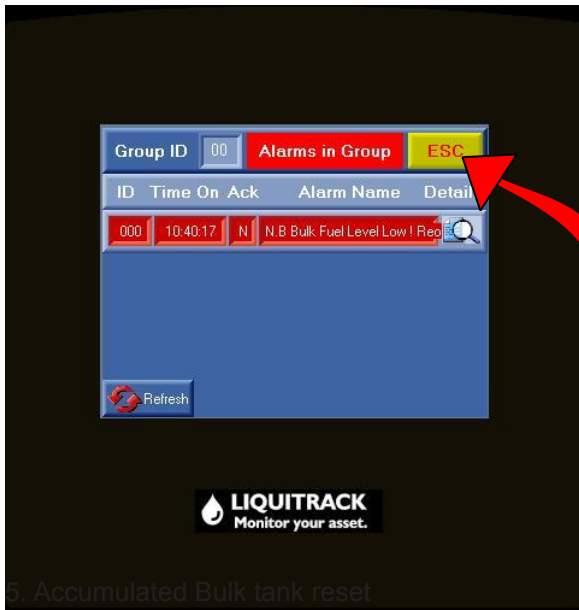
Again this screen will display for 1 minute before the transaction will automatically be logged.

If the information displayed is incorrect. It must be reported to the Administrator.

3. Alarms

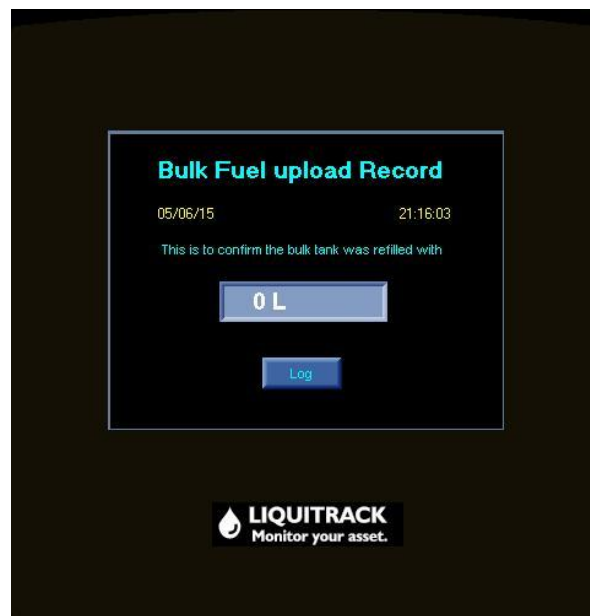
An alarm screen will be shown when an alarm trigger has been activated. To proceed to the previous screen, simply press the [ESC] button or press the magnifying glass to establish more detail. The [Acknowledge] button can then be pressed.

By pressing the magnifying glass you will be provided with more information regarding the specific alarm.



The alarm history will remain in memory for upto 12 records. these records can also be viewed by proceeding to the [Alerts] icon on the main menu. The records can then be scrolled through by using the on screen arrows.

4. Bulk Tank upload.

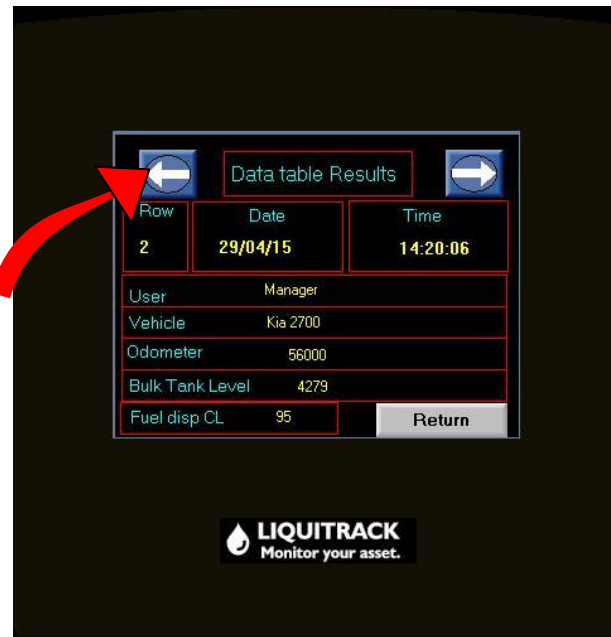


To upload fuel into the system, press [Bulk tank upfill] button on the main menu. Enter the value of the fuel volume uploaded in the blue indented bar by touching. You can then enter the volume by using the keypad provided and pressing the [Enter] key. Once entered you may proceed by pressing the [Log] button.

The data will then be loaded into the datatable.

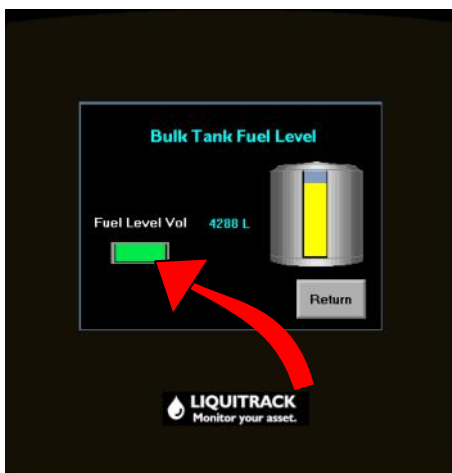
5. Reading Datatables

Use arrows to scroll between transactions.



To view previous transactions, press the [Datatable] button on the main menu. the blue arrows will allow you to scroll through the previous 120 transactions.

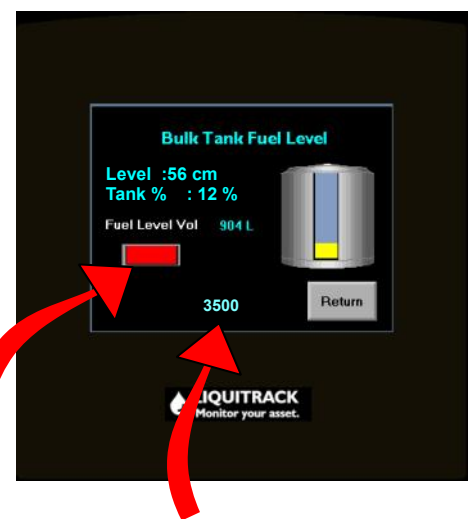
6. Bulk Tank View and Alarm status



To view the bulk tank level, proceed to the [Bulk Tank] button on the main menu.

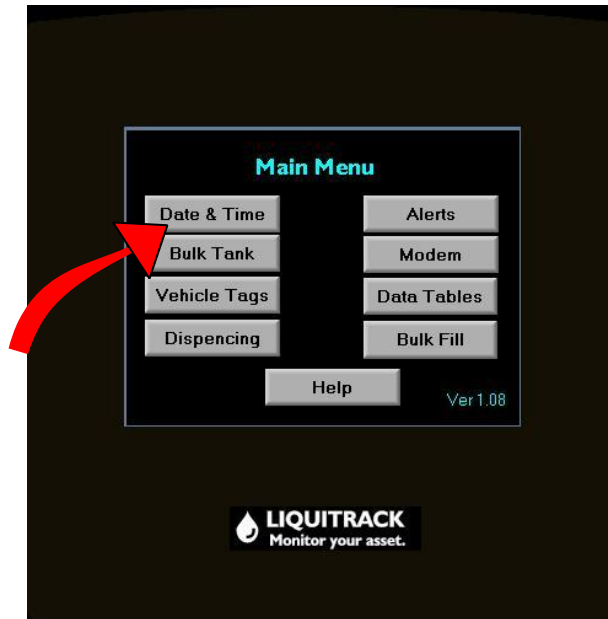
The green light shows the level is above the active alert level. If the level drops below the alert level the light turns red, an alarm will be activated and an email will be sent.

Systems fitted with a level sensor will show the dip level in cm and the tank %.



Active Low Level alarm trigger level. Used to send an email alert.

6. Setting the time and Date

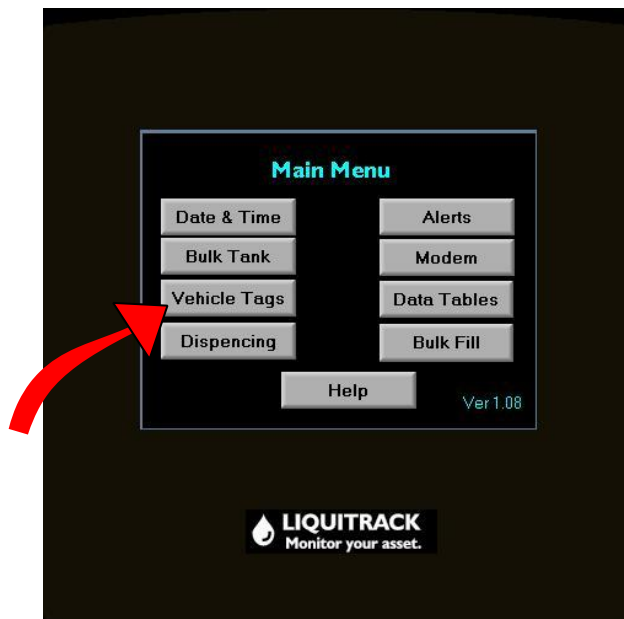


To change the date and time, select the [Date & Time] button.

Enter the correct time using the on screen keypad and press the enter key and then {Next} to return back to the main menu.



7. Viewing vehicle tag numbers, names and fleet

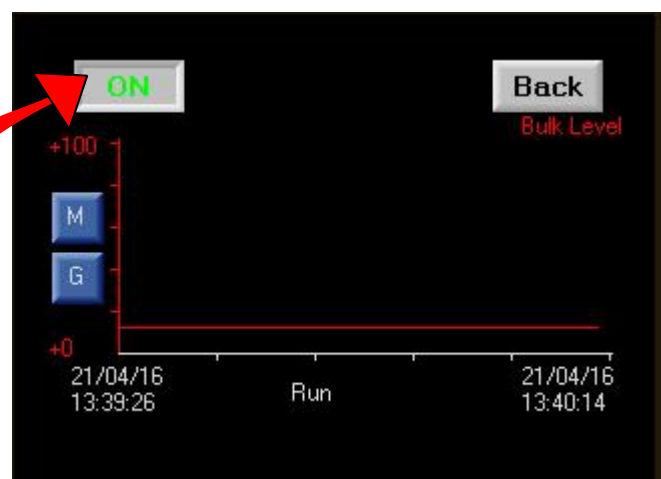


To view the fleet name or serial number of the tag, press the [Vehicle tags] button. Use the blue arrows to scroll between vehicles. Press cancel to return back to the main menu.

8. Bulk Tank Trend over time ,(Tank Sensor)



Used to start trend monitoring.



9. Verification of Odometer/Hour meter input (Fuel Efficiency Application only)

To reduce errors in the input of odometer/hour readings for vehicles on the manual system, there is a verification process which compares the previous odometer/hour of the identified vehicle with that of the current inputted odometer/hour reading. If it is found to be less than the previous odometer/hour, the value will be rejected and the system will request a correction. Values of zero will also be rejected. It will only be possible to proceed once an odometer/hour reading greater than the previous is entered.

