Compact Oilwatch

System Manager Manual

Compact Oilwatch

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Manager Manual

Introduction To Permex Oilwatch Systems

Permex Ltd is a UK company who have designed and manufactured state of the art fluid handling equipment for use in hazardous and non-hazardous areas for over 30 years. Based in the UK Permex Ltd. has combined its extensive knowledge and experience of workshop and production line lubrication equipment to develop a range of uniquely upgradeable oil monitoring systems. Oilwatch is the most flexible electronic oil dispensing and recording system available.

Oilwatch systems are installed in garage workshops throughout the world gaining a reputation for quality and reliability. With the launch of the Oilwatch II keypads our product has the flexibility to offer production line manufactures a cost effective solution to their requirements, at the same time we have ensured that the Oilwatch II keypad has enhanced features to remain the system of choice for most workshops.

Oilwatch operates with pulser meters and solenoid valves fitted into the fluid delivery lines. With these Oilwatch both controls and monitors fluid dispensing. The volume dispensed is measured by the Oilwatch keypad from a digital signal returned by the meter, Oilwatch can close down a dispense once the volume required is reached. Some Oilwatch systems can monitor tank levels in much the same way, using a sensor to calculate the volume.

In recent years it has become increasingly important because of legislation and for cost and environmental reasons that all businesses are able to accurately trace where, how and what has happened to all fluids purchased. The Oilwatch systems accurate dispensing makes monitoring a cost efficient solution for either large or small companies bulk liquids.

Companies wishing to improve their bulk oil installations and reduce losses from unrecorded deliveries will find the Oilwatch Systems reporting capability comprehensive and easy to use. The reporting packages capabilities vary between each of our systems. The customers reporting requirements should be taken into account before a system is recommended.

The flexibility and quality of the Oilwatch system design has made it an essential modern management tool reducing waste, controlling cost and increasing profits. With either Pc Oilwatch or the stand alone Oilwatch system, users can retrieve a list of transactions to ensure that an accurate and traceable environment is maintained.

Compact Oilwatch

Introduction To Compact Oilwatch

Compact Oilwatch II has been designed for the smaller workshop or production line.

Flexibility:

Compact Oilwatch II makes oil monitoring feasible and affordable for all potential users, without the need for large investments.

Control:

Compact Oilwatch II has one control unit that can monitor up to 8 different outlets each can dispense simultaneously from any one of the outlets regardless of the product to be monitored. Other fluids including antifreeze and brake fluids can operate on this system. Large digital displays can be installed to show volume dispensed if required.

Waste product can be theoretically calculated into up to 8 tanks to give site owners early warning that there waste oil tanks need emptying. The Compact system can be fitted with a printer to expand the systems reporting capability. Print out hard copy. include prompt details, Date and Time, Oil grade, Reel No., Job No., Name of operator, Quantity , Sales value.

Ease of Use:

For the operator the Compact Oilwatch II is easy to use without the need for extensive training or manuals. To activate dispensing all the operator has to do is tap in the entry information on a simple question and answer basis. The operator is promoted at every stage for Pin No., Job No., and Reel No. before oil can be delivered. The prompted instructions ensure quick system usage and trouble free operation. Operators can be allowed access to a specific outlet only should this be required.

Upgrade Path:

Compact Oilwatch II sites operators can expand their system, installing a Pc Oilwatch II interface card into the Power supply and expanding there system into the Pc Oilwatch II allowing the newly required number of keypads to be upgraded into a network.

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System Specifications

- Pin Code security.   [5000 users]
- Controls up to 8 different grades of new oil & 8 waste oil tanks
- Controls up to 8 outlets.
- Simultaneous dispensing of outlets.
- Setup for timed use of each outlet.
- Maximum Delivery quantity per outlet.
- Operator restriction of outlet use.
- Independent calibration of all outlets pulse inputs.
- Maximum flow rate single outlet dispensing 750L /min. reading from 100 ppl meter.
- Maximum flow rate multiple outlet dispensing 100L /min. reading from 100 ppl meter.
- Flow rate multiple or single outlet dispensing using Oilwatch OW405M standard meters is 35L maximum.
- Preset simultaneous outlet dispensing.
- Display of tank volumes.
- Display of re-order level warnings.
- Tank shutdown level control.
- Free flow metering or preset quantity-metering options.
- Bar code reader / external data entry devise option.
- Set up for use as industrial batching system.
- Large digital display option.
- Measuring in Litres or Gallons Quarts and Pints.
- Standalone or configuration through Pc programming lead.
- Input of special characters.
- Upgradeable to Pc Oilwatch system keypad.
- 1,000-transaction storage capacity.
- Up to four manager specified custom input prompts.
- Setup for system use without printer.
- Printing via ticket printer or any RS232 compatible printer.

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Printed Specifications

Printed transaction information:

- Transaction Numbering.
- Date.
- Time.
- Oil Grade.
- Outlet No.
- Custom Prompts.
- Operator Name.
- Quantity dispensed.
- Selling Price.
- Low level warning.

Management printouts include:

- Printed period usage totals
  - By grade.
  - By outlet.
  - By operators name.

- Current tank stock levels
- Modification of stock levels
- Set up of tanks
- Unauthorised access attempt
- Setup for industrial batching

Power:

- Power to control unit is 24v DC.
- Power to solenoids is 24v DC.
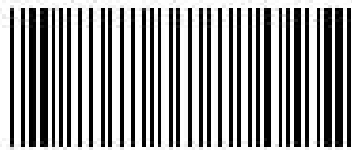- Printer operates from 240v AC

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Oilwatch Keypad to Bar Code Scanner

The optional scanner interface unit comes with approximately 9 metres of four core screened cable which should not be extended. The enclosure is a standard UK 40mm deep surface mount box as used for power outlets, light switches etc.
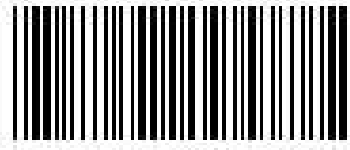
Barcode Scanner set up

Plug the power supply's DC connector into the scanner socket at the end of its cable. Plug the power supply into a 230v power source, the scanner should beep. Scan the following codes in sequence to make the scanner compatible.
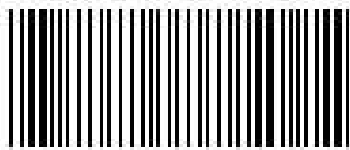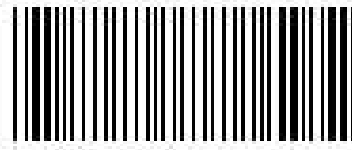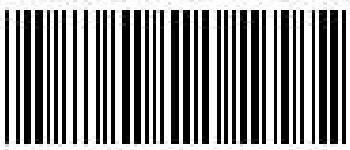
Barcode 1

%$+/2

Barcode 4

%7S1+

Barcode 2

%$+/3

Barcode 5
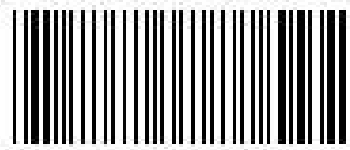
%$+/0

Barcode 3

%00U8

Barcode 6

%$+/4

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Oilwatch Keypad to Bar Code Scanner

Enabling the scanner

The Scanner must be setup on installation by your systems installer.

Entering barcodes into the keypad database

With the unit operating normally, press the "Oilwatch" button and enter the manager's PIN (1234 by default). Press "Enter".

Using the arrow keys select the "SYSTEM SETUP" entry,

Press "Enter".

next select the "EDIT BARCODES" entry then select the "ADD BAR-CODE" entry.

Press "Enter".

At the "SCAN NOW" prompt,

Press "Enter".

Scan the desired barcode then use the arrow keys to select the required outlet and press "Enter" next enter the amount to deliver and press "Enter" again, finally use the arrow keys to select yes or no to the "IMMEDIATE START" prompt and press "Enter".

If Immediate Start is set to NO the operator will have to press the "START" button on the keypad before delivery commences.

You can continue adding up to 100 barcodes this way.

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System Configuration & Usage

Menu Use

The Oilwatch button is used to access the Oilwatch systems manager menu.

On the top line of the keypad you should now see the words <u>MANAGER MENU</u> this denotes that we are at the first level of the systems manager menus. The bottom line will show the sub directories off this menu. To move between sub directories simply use the right and left arrows to scroll to desired option.

Level 1 Manager Menu

> ➢ **Bulk Transfer**
>
> ➢ **Clear Totals**
>
> ➢ **Erase Records**
>
> ➢ **Tank Setup**
>
> ➢ **Outlet Setup**
>
> ➢ **System Setup**

The manager menu lookup is designed to make it easier for the manager to find the place within the menus where information input is excepted. The following options list is colour coded to allow the manager to see which level of the menu he is and the ⇲ symbol has been added to show when the menu level changes.

Each of the headings above have sub headings which are accessed as show below, these headings allow alterations to the system settings which control the operation of the system. Each of the headings have a run through table and are individually described showing how the setup can be altered. The systems command prompts are highlighted by colors showing the descending levels of access with the input responses highlighted in black.

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System Configuration & Usage

➢ **Bulk Transfer**

The Bulk Transfer menu command is used to transfer product to or from the systems feed or waste product tanks. The system either adds the input amount to feed tanks or subtracts it from waste tanks. If the tanks have not been assigned a description in the tank setup menu they are identified by tank numbers 1 to 8 for either feed product or waste product.

> ➫ **Select Tank Type**
> ➫ **Feed Tank > < Waste Tank**
> ➫ **Select Tank**
> ➫ **Tanks 1 to 8**
> ➫ **Enter Amount**
> ➫ **00000000.00**

➢ **Clear Totals**

The Clear Totals menu command is used to reset Feed Tanks, Outlet and User Usage totals. The systems manager goes into the Manager menu and selects the clear totals command prompt this allows access to clear all three total options, each option also allows individual reset or group   resetting. This would be done when the manager wished to start a new reporting period i.e. at the start of the week or month after he has produced his printed reports.

> ➫ **Feed Tanks >< Outlets >< Users**
> ➫ **Outlets**
> ➫ **Select All >< Select Single**
> ➫ **Select Single**
> ➫ **Outlets 1 to 8**
> ➫ **2**

➢ **Erase Records**

The Erase Records menu command is used to erase the transaction database.

> ➫ **Are You Sure**
> ➫ **No >< Yes**
> ➫ **No**

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System Configuration & Usage

➢ **Tank Setup**

The Tank Setup menu command is used to setup and alter the parameters of the feed and waste tanks. The systems manager is able to setup or alter the following feed tank settings:- Description, Current Level, Alert Level, Shut Off Level, Cost Price and Sales Price. The systems manager can turn on and off the Alert Level warning, This warning is a low level for Feed Tanks.

The systems manager is able to setup or alter the following waste tank settings:- Description, Current Level, Alert Level, Shut Off Level, Cost Price, Sales Price and Waste Tank Capacity. The   systems manager is also able to turn on and off the Alert Level warning. This warning is a high level for Waste Tanks.

> ⇨ **Tank Setup**
> ⇨ **Feed Tanks >< Waste Tank**
> ⇨ **Feed Tanks**
> ⇨ **Select Tank 1 to 8**
> ⇨ **1**
> ⇨ **Tank 1**   **Select setup option to be altered.**
> **DESCRIPTION><CURRENT LEVEL><ALERT LEVEL><LEVEL WARNING>**
> **<SHUT-OFF LEVEL><COST PRICE><SALES PRICE**
> ⇨ **DESCRIPTION**
> ⇨ **Feed Tank 1**
> ⇨ **Feed Tank 1**   **To change the description simply overwrite the displayed**
>   **characters.**

Each of the 7 tank setup options can be viewed and altered by overwriting the displayed characters except the Level warning which acts as a switch which will turn on and off the low alert level   warning. When the level warning is chosen and shown on the top line of the display No > or < YES will be displayed below use the arrow keys to change from one command to the other pressing the enter key saves the change.

> ⇨ **Tank Setup**
> ⇨ **Feed Tanks >< Waste Tank**
> ⇨ **Waste Tanks**
> ⇨ **Select Waste Tank 1 to 8**
> ⇨ **1**

System Configuration & Usage

➯ **Waste Tank 1** Select setup option to be altered.
DESCRIPTION><CURRENT LEVEL><ALERT LEVEL><LEVEL WARNING>
<SHUT-OFF LEVEL><COST PRICE><SALES PRICE><CAPACITY

➯ <u>**DESCRIPTION**</u>

➯ <u>Waste Tank 1</u>

➯ <u>**Waste Tank 1**</u> To change the description simply overwrite the displayed characters.

Each of the 8 waste tank setup options can be viewed and altered by overwriting the displayed characters except the Level warning which acts as a switch which will turn on and off the high alert level warning. When the level warning is chosen and shown on the top line of the display No > or < YES will be displayed below use the arrow keys to change from one command to the other pressing the enter key saves the change.

➢ **Outlet Setup**

The Outlet Setup menu command is used to setup and alter the parameters of the outlets. The systems manager is able to setup or alter the following outlet settings:-
Location, Waste Tank, Delivery Limit, No Flow Timeout, Available From, Available To, Preset Qty. If the system is setup for dispensing in Gallons the outlet setup menu also allows the manager to set the default unit of measure to be setup for each outlet either Gallons Quarts or Pints can be chosen. The systems manager is also able to view the outlets Feed Tank and Scale Factor which are both setup within the Installer menu.

➯ **Outlet Setup**

➯ **Select Outlet**
     1 to 8

➯   **1**

➯ **Reel 1** Select setup option to be altered.

➯ **LOCATION><VIEW FEED TANK><WASTE TANK><DELIVERY LIMIT><VIEW SCALE><NOFLOW TIMEOUT><AVAILABLE FROM> <AVAILABLE TO>< PRESET QTY. >< DEFAULT UNITS**

➯ **LOCATION**

➯ **Reel 1** To change the description of the location simply overwrite the displayed characters with the preferred location description.

Each of the menus above can be altered by overwriting the displayed details except headings that are designed for viewing fields only.

System Configuration & Usage

➢ **System Setup**

The System Setup menu command is used to setup and alter the parameters of the systems setup. The systems setup is able to setup or alter the following settings:- Set Clock, Use Pins, Edit Prompts, Edit Users and Edit Barcodes.

> ⇨ **System Setup** **Select setup option to be altered.**
> ⇨ **SET CLOCK><USE PINS><EDIT PROMPTS><EDIT USERS><EDIT BARCODES>**
> ⇨ **SET CLOCK**
> ⇨ **DATE><TIME**
> ⇨ **DATE**
> ⇨ **18/01/1980** **To change the date simply overwrite the displayed characters with the preferred date description.**

The four remaining system setup menu commands are described below.

> ⇨ **USE PINS**
> ⇨ **Enable no> <Enable yes** **This command prompt is designed to allow the manager to turn on and off the systems pin number entry system.**
>
> ⇨ **EDIT PROMPTS**
> ⇨ **Prompt 1><Prompt 2><Prompt 3><Prompt 4**
> ⇨ **Prompt 1**
> ⇨ **Edit Prompt**
> ⇨ **Prompt 1 Text** **To change the prompt description to the required text overwrite the displayed characters.**
>
> ⇨ **EDIT USERS**
> ⇨ **Add user> <Edit user> <Erase User> <Erase all> < Print List**
> ⇨ **Add user**
> ⇨ **New User** **To change the user name overwrite the displayed characters.**
> ⇨ **Enter Pin** **Enter four figure pin number.**
> ⇨ **ACCESS RIGHTS**
> ⇨ **<Mgr menu> <Reports menu> <Bulk Transfer >< Delivery> <Outlet Access**
> **Each pin number can be assigned different levels of access rights to the system features, setup as required by the customer.**

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System Configuration & Usage

- **EDIT BARCODES**
- **Add Barcode >< Edit Barcode >< Erase Barcode >< Erase All >< List Barcode**
- **Add Barcode**
- **Add Barcode**
- **Scan Now**   **To add a barcode the scanner must be setup to the correct scanning mode and connected to the Aux. port of the Compact unit. The Scan Now prompt must be showing on the display, simply scan the required barcode.**
- **Select Outlet**   **After scanning the barcode we add the outlet number which is to**
      1 to 8   **dispense the required product.**
- **Outlet 1**
- **Quantity**   **The final step in setting up a barcode is to add the dispense quantity.**
-    **3.2**
- **Edit Barcode**
- **Scan Now**   **To edit a barcode the scanner must be setup to the correct scanning mode and connected to the Aux. port of the Compact unit. The Scan Now prompt must be showing on the display, simply scan the barcode to be altered.**
- **Select Outlet**   **After scanning the barcode we either except or alter the outlet**
      1 to 8   **Number that is to dispense the required product.**
- **Outlet 2**
- **Quantity**   **The final step is to alter or except the dispense quantity.**
-    **3.2**
- **Erase Barcode**
- **Scan Now**   **To erase a barcode enter the erase barcode menu command and scan the barcodes that have been marked for deletion.**
- **Erase All**   **To erase all barcodes in the system except the erase all command prompt.**
- **List Barcode** **To view the barcode list except the list barcode menu command.**

The system setup should now be complete with all setup information added into the Compact Oilwatch systems control keypad software, if you have followed your   written configuration.

Compact Oilwatch

System Configuration & Usage

Reports Menu Usage

The printer button is used to access the Oilwatch systems reports menu.

On the top line of the keypad you should now see the words <u>REPORTS MENU</u> this denotes that we are at the first level of the reports menus. The bottom line will show the sub directories off this menu. To move between sub directories simply use the right and left arrows to scroll to desired option.

Level 1 Reports Menu

➢ **Stock Levels**

➢ **Waste Levels**

➢ **Grade Usage**

➢ **Outlet Usage**

➢ **Operator Usage**

The reports menu offers the option to view or printout product tank levels and usage figures. To view information simply press enter at the required command prompt. To view specific information use the left and right scroll keys to scroll to the required information.

To printout required information simply press the print button.

Usage information can be reset to zero at the start of a reporting period from the management menus Clear Totals command prompt.

A Compact Menu Mapping XL or PDF file is available to help guide you through the Manager and Reports Menu's.

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4 Service Information

➤ System In Service Troubleshooting Chart

Trouble Found	Possible Problems	Solutions
The system will not dispense fluid after correct input of data.	No air to Pump. Oil isolation valve turned off. Not enough oil in tank.	Get air back on pump. Turn fluid valves on. Refill tank and prime pump.
My Pin No. does not allow me access to dispensing.	Pin No. not authorised to dispense product.	Ask manager to grant access to dispensing for this pin No.
My Pin No. does not allow access to reports.	Pin No. not authorised to use reports functions.	Ask manager to grant access to reports functions.
My Pin No. does not allow access to management menu.	Pin No. not authorised to use management menu.	Ask manager to grant access to management menu.
When I put in a reel number that normally works the keypad will not allow me to use it.	Tank level below tank shutdown limit.	Order a new delivery or input a received delivery quantity.
The system is not giving an accurate quantity reading.	Flow rate above maximum Flow rate below minimum	1. Decrease flow rate 2. Increase flow rate 3. Service pulse meter
Displaying accurate quantity reading. Dispense wrong.	Imperial G,Q,P system Chosen wrong U. of M. setting.	Chose correct setting for next dispense.
Pulse meter indicates reduced or zero flow.	Electrical connection failure Switch module defective	Check wiring Replace switch module
Fluid flow reduced or zero	Foreign material in valve Flow rate below minimum Damaged coil Damaged Keypad relay due to connector diode failing in the open position.	Locate and eliminate source of foreign material. Increase flow rate Replace coil Replace Keypad Controller circuit board and Connector
Transactions fail to print	Paper or printer ribbon empty Memory corruption in transaction database.	Change paper or ribbon. Reset transaction database use Erase Records in the manager menu.

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4 Service Information

➢ **Service Notes**

》》PERMEX》》

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