

(1940, 1958, 1967, 2017,
2176 2437, 2486, 2536,
2619, 2780)



National
Measurement
Office

III(5)a

SUPPLEMENT TO CERTIFICATE

Series S011 Revision 6

Certificate No.	Supplement No.	Certificate No.	Supplement No.
1940	78	2437/38*	47
1958/53*	77	2486/54*	70
1967/66*	81	2536	63
2017	80	2619/43*	48
2176	84	2780	12

(*) Refers to the dispenser only, the self service device described in these certificates is not part of this approval.

Submitted by: Tokheim UK Ltd.
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Authorisation is hereby given by the Secretary of State for Business, Innovations and Skills for the following Certificate of approval relating to a pattern of a liquid flowmeter to be modified as described below. As described in the following Certificate but modified to have an alternative self service device, as detailed in the descriptive annex, and having the following characteristics:-

DISPENSER: Dispensers described in Certification Nos 1940, 1958, 1967, 2017, 2176, 2437, 2486, 2536, 2619 and 2780

COMBINED KIOSK CONTROL UNIT AND POINT OF SALE TERMINAL: Tokheim Omega-FuelPOS combined kiosk control and point of sale equipment as described in the descriptive annex

ALTERNATIVE SITE CONTROLLER: DOMS PSS5000 or PSS2000 as described in the descriptive annex.

Note: This certificate relates to the suitability of the equipment for use for trade only in respect of its metrological characteristics. It does not constitute or imply any guarantee as to the safety of the equipment in use for trade or otherwise.

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United Kingdom

Reference No: T1118/0007
Date: 09 February 2015

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Descriptive Annex

1 INTRODUCTION

The dispenser as described in the Certificate is connected to the Tokheim Omega-FuelPOS combined kiosk and point of sale equipment. The Omega-FuelPOS system consists of combinations of work-stations named 'central information system' (CIS) and 'point of sale' (POS) and combined CIS/POS. Typical workstations comprise:

POS (Figure 1)

Standard equipment:

- (a) Uninterruptible power supply
- (b) Fuel POS terminal
- (c) Operator display
- (d) Operator keyboard
- (e) Customer display
- (f) Receipt printer

Additional equipment:

- (g) Payment terminal
- (h) Cash drawer
- (i) Hand scanner
- (j) Pump controller

CIS (Figure 2)

Standard equipment:

- (a) Uninterruptible power supply
- (b) Central information system

Additional equipment:

- (c) Report printer
- (d) Local back office computer
- (e) Tank level system
- (f) Pump controller

CIS/POS (Figure 3)

Standard equipment:

- (a) Uninterruptible power supply
- (b) Central information system/fuel POS terminal
- (c) Operator display
- (d) Operator keyboard
- (e) Customer display
- (f) Receipt printer

Additional equipment:

- (g) Report printer
- (h) Payment terminal
- (i) Hand scanner
- (j) Cash drawer
- (k) Tank level system
- (l) Local back office computer
- (m) Pump controller

Omega-FuelPOS Systems can be assembled, from these workstations, into two separate types of system:

CIS System (Figure 4)

This comprises a CIS connected to one or more POS's. The workstations are connected via a LAN, with one or more communicating with the forecourt equipment.

CIS/POS System (Figure 5)

This system comprises a CIS/POS, optionally, connected to a single POS. The workstations are connected via a LAN, with one or more communicating with the forecourt equipment.

Approved software for the Fuel POS Terminal

Fuel POS: 02PCC11.XX DD-MM-YY
Fuel POS: 02PCC12.XX DD-MM-YY

Approved software for the Central Information System:

Central Inf. System: 02CIS11.XX DD-MM-YY
Central Inf. System: 02CIS12.XX DD-MM-YY

Approved software for the Pump Controller:

PCU POS N: UK LON 1.7.X YYMMDD

Where: XX is the minor revision number
DD-MM-YY is the day, month and year of the revision
YYMMDD is the year, month and day of the revision
N is the number of the workstation

Note: (a) The menu will show a PCU POS entry for each workstation, which has a pump controller. The number of entries, therefore will vary between none and the number of workstations. There can also be different software in each pump controller.

(b) There will be only one software entry for both the POS and CIS.

(c) The software is routinely revised and updated in the field and subsequently reissued with a new version number.

2 CONSTRUCTION

2.1 Uninterruptible power supply (Figure 6)

All workstations and the standard equipment are connected to these units, one unit per workstation, to provide power in the absence of mains input. The units are manufactured by 'Fiskars' and are of the 'PowerRite' range.

2.2 Central information system/fuel POS terminal (Figure 7)

The unit is an Intel Pentium II ATX personal computer with 'application specific' modules, namely forecourt control board (COB), and forecourt interface board (FIB), and is programmed by Tokheim for all forecourt functions. The computer monitors and controls all forecourt operations and kiosk transactions and has an optional capability of site management. The workstation personal computer contains the following major components.

2.2.1 Power supply

The power supply provides DC power for the internal logic boards and some of the attached peripherals.

2.2.2 Motherboard

Pentium II motherboard containing Intel Pentium II processor and memory components.

2.2.3 Local area network (LAN)

The computer contains an Ethernet card for connecting other workstations. The LAN uses Thin Net (10-base-2) coaxial cable connections via BNC connectors.

2.2.4 Forecourt control board (COB)

If the workstation has a pump controller then a Tokheim COB, model COB-KSS COB-KFF, controls forecourt activity.

2.2.5 Forecourt interface board (FIB)

The workstation pump controller is FIB-L (IFSF), which interfaces between Quantum ATM and the Omega-FuelPOS controller.

2.2.6 Disk drives

The computer contains a hard drive. Optionally, a pair of hard drives may be fitted for mirrored operation.

2.2.7 Serial communications board

The computer contains a serial communications board, manufactured by 'Digi International' and provides serial interfaces to certain external peripheral components up to a maximum of eight.

2.2.8 Video board

The computer contains a video board installed in the AGP slot.

2.2.9 Modem card

The CIS and CIS/POS workstations contain a modem card to allow remote diagnostics and credit card polling.

2.3 Operator display (Figure 8)

The operator display is a cathode ray tube colour monitor, which provides the operator with forecourt status information, transaction data for each fuel dispenser, gives a visual display of all the operator's commands and instructions and all retail transactions. A diagram showing the layout of the operator display monitor is shown in Figure 9.

2.4 Qwerty operator keyboard (Figure 10)

The operator keyboard is manufactured by Preh, and is designated 'Preh Commander PC-POS'. A diagram showing the layout of the keyboard is shown in Figure 11. On the top left of the keyboard is a row of keys used to directly access articles. Below this is a standard Qwerty layout for alpha data entry. To the top right are transaction control keys. Below this is a trackpad, numeric keypad and payment keys.

There are three keys above the numeric keypad, marked 'Stop', 'Display', and 'Release'. These keys are used in combination with the numeric keypad to control the forecourt filling positions.

The keyboard has a card reader built into the top right hand corner.

2.5 Customer display (Figure 12)

The customer display is manufactured by Epson and is designated DM-202 and consists of two rows of green fluorescent 12 mm high digits for displaying the identity of filling position, volume dispensed, sale amount and whether the transaction is a current or a stored sale. A diagram showing the layout of the customer display is shown in Figure 13. The display measures approximately 260 mm x 780 mm and is pedestal mounted to a height of 400 mm. Power is supplied by an Epson 24 V power supply module, which is connected to the UPS.

2.6 Receipt printer (Figure 14)

The receipt printer is manufactured by Epson and is designated TM-88 and consists of a single thermal print roll with tear-off strip for credit card vouchers and customer receipts. Power is supplied by an Epson 24 V power supply module, which is connected to the UPS.

3 OPERATION

3.1 Dispenser monitoring (Figure 9)

The dispensers' status is displayed on the operator display. The screen is divided into six windows, namely: operator message window, FIP status window, fuel sale display window, transaction builder window, operator entry window, and sub-total window.

3.1.1 Operator message window

This window is used to inform the operator of status and error conditions. The status and error messages are visible for a short time with an audible signal before the window reverts to the standard title display.

3.1.2 FIP status window

The window will permanently display between 1 and 28 rectangles, the lower half of each rectangle displaying a number which represents the forecourt filling position (FIP). The FIP rectangles show the current status of each dispenser on the forecourt as follows:

BLANK rectangle (IDLE)	FIP not in use, not authorised
RED rectangle (REQUEST)	Nozzle removed, awaiting authorisation
HALF GREEN rectangle (AUTHORISED)	FIP authorised
GREEN rectangle (FILLING)	Dispensing fuel

BLANK rectangle (IDLE) with bar beneath Nozzle stowed, transaction awaiting payment.

Normally the rectangle outline is a solid line. If the rectangle outline consists of a broken line, then this indicates that the system has lost communication with the pump.

3.1.3 Fuel sale display window

When the operator selects a FIP using the 'display' key, the details of unpaid fuel sales associated with that dispenser are displayed in this window. In the case that two fuel sales are unpaid the operator can switch between the sales using the cursor keys. When the correct sale is selected it can be transferred to the transaction builder window for payment.

3.1.4 Transaction builder window

This window displays all the items in a transaction, fuel and shop sales, listing each item with a short descriptive text, quantity, unit price.

3.1.5 Operator entry window

This window displays the operator's typed command such as a bar code item number as an alternative to using the bar code scanner. A typed entry is transferred to the transaction builder window using the enter key.

3.1.6 Subtotal window

This window displays the running total of items listed in the transaction builder window.

3.2 Authorising the dispensers

When a purchaser removes the nozzle on a dispenser the appropriate FIP rectangle changes from blank to red and a short audible beep sounds.

The operator can then authorise the dispenser by entering the FIP number on the numeric pad then pressing the 'Release' key. The FIP rectangle will change from red to half green.

When the purchaser starts dispensing fuel, the FIP rectangle changes from half green to green.

The pump can be stopped at any time by entering the FIP number and pressing the 'Stop' key.

All pumps can be stopped at any time by pressing the `00' (double zero) key, and pressing the `Stop' key.

3.3 Outstanding transactions

When the purchaser returns the nozzle, the appropriate FIP rectangle changes from green to blank, and a transaction bar appears under the rectangle. This indicates that the transaction is outstanding and awaiting payment.

If a second purchaser removes the nozzle the FIP rectangle changes from blank with a transaction bar to red with a transaction bar and the sequence then continues as in Section 3.2 for the second purchaser. When the second purchaser returns the nozzle a second transaction bar will be displayed below the first bar.

It is not possible to authorise a third purchaser until one of the outstanding transactions has been paid for.

3.4 Viewing a transaction

To view a transaction, the operator enters the appropriate FIP number using the numeric keypad and presses the `Display' key. Any outstanding transactions on that FIP are displayed in the fuel display window. If there is only one transaction, then this is highlighted. If there are two transactions, the first transaction is highlighted, but the operator can highlight either transaction using the cursor keys. The highlighted transaction is displayed to the purchaser on the customer display.

3.5 Agreeing at transaction

If the purchaser agrees with the highlighted fuel transaction details then the sale can be transferred to the transaction builder window by pressing the `Enter' key. At this point the transaction bar becomes a transparent rectangle, indicating that the transaction has been claimed by a POS. Further items may be added to the sale in the transaction builder window before completing the transaction with a payment.

If the purchaser does not intend to add further items and is paying cash, then the fuel transaction may be 'cashed out' directly from the fuel display window by pressing the 'Cash' key.

3.6 Voiding a transaction

The customer has the opportunity to agree the transaction details whilst they are highlighted in the fuel sale display window. However, if the wrong sale is transferred to the transaction builder window, then voiding the fuel sale prior to payment, using the 'Corr' or 'Void' keys, will return the transaction to the FIP display. The transaction bar will become solid and the sale will again be available to all POSs. Check if this is possible only if another transaction has not been added.

3.7 Adding a second fuel transaction

A second fuel transaction may be added to the receipt by following the same procedure as in Sections 3.4 and 3.5.

3.8 Adding dry goods

Any shop item may be added to the transaction (receipt) using one of the following methods.

3.8.1 Using a direct article access key

Pressing one of the direct article access keys will add the associated article to the transaction builder window.

3.8.2 Price look-up number (PLU)

Entering a code number associated with the article and pressing the 'PLU' key will add the associated article to the transaction builder window.

3.8.3 Barcode scanner

The barcode product label on the product may be scanned or manually entered to add the associated article to the transaction builder window.

3.9 Method of payment

3.9.1 Cash sales

When the purchaser requests to pay by cash and presents the exact money to settle, the operator presses the 'Cash' key and the cash drawer opens. Closing the cash drawer completes the transaction and the customer display reverts to the welcome message.

If the purchaser presents a higher amount than that required to settle, the operator keys in the amount on the numeric keypad then presses the 'Cash' key. The customer display then displays the change to be returned and the cash drawer opens. Closing the cash drawer completes the transaction and the customer display reverts to the welcome message.

3.9.2 Card sales

When the purchaser requests to pay by card the operator accepts the customer's card, presses the `Card' key, and passes the card through the card reader.

If card handling is performed by an external terminal, the details are passed to the terminal and the operator display shows `transaction sent to terminal'. The transaction is completed on the terminal as required and the result is returned to the POS. If the card was rejected, then the POS will prompt for an alternative payment method. If the card was accepted then the transaction is completed and a receipt can be printed by pressing the `Ticket' key.

If card handling is performed directly by the POS, then the POS will prompt the operator for any additional information required. A ticket will be printed for the customer to sign and the operator is prompted `signature OK?'. If the signature is rejected, then the POS will prompt for an alternative payment method. If the signature is accepted, then the transaction is completed and a receipt is printed.

3.9.3 Cheque/other sales

Various other methods of payment, such as cheque, manual card voucher, local account, foreign currency, can be registered by pressing one of the payment keys on the right hand side of the operator keyboard. The transaction is completed and a receipt can be printed by pressing the `Ticket' key.

3.10 Interlocks and security features

3.10.1 Third purchaser

A third transaction cannot be authorised for a particular filling position until at least one of the preceding transactions has been completed.

3.10.2 Manual fuel sale

It is not possible to enter a manual fuel sale.

3.10.3 Duplicate receipts

It is not possible to duplicate the same fuel transaction on a receipt. If additional receipts are produced they are clearly marked `COPY' or `DUPLICATE'

3.10.4 Power failure

In the event of a mains power failure, the system operates on back-up power for at least 15 minutes during which time transactions can be paid for.

If there are transactions unpaid after this time, the system will automatically 'cash-out' the transactions and produce a printed record of the transaction details on the receipt printer of the first POS before shutting down.

3.10.5 Customer display

The customer display has the capability of displaying either of the two transactions held as FIP transaction bars (stored and current sales), for the purchaser agreement and payment, using a manual method.

3.10.6 Multiple POS transaction selection

Where there are two or more POS terminals a transaction cannot be 'claimed' by more than one POS terminal at the same time. However, a current transaction may be claimed by one POS and the stored transaction claimed by another, at the same time.

4 AUTHORISED ALTERNATIVES

4.1 Barcode scanner

Any CE marked barcode scanner may be connected to the operator keyboard or between the operator keyboard and the workstation.

4.2 Preh operator keyboard

An alternative keyboard manufactured by Preh, designated Commander M128X (Figure 15). A layout of the 16 FIP version of this keyboard is shown in Figure 16. Across the top of the keyboard is a row of 16 dispenser release keys, with a further 16 dispenser claim keys directly underneath. The 16 release and claim keys relate to the numbered rectangles 1 to 16 in the pump control window of the operator display monitor. Pressing the relevant release or claim key is equivalent to entering the FIP number and pressing the 'Release' or 'Display' key of the standard keyboard.

The Preh keyboard has a socket to the rear for connection of a barcode scanner, and a socket to the right hand side for connection of a CE marked Qwerty keyboard for maintenance purposes.

The Preh keyboard may be fitted with a CE marked card reader which fixes to the uppermost edge.

The 16 FIP version may be replaced with a 28 FIP version, a layout is shown in Figure 17. In this case the top two rows contain the dispenser claim keys.

4.3 Management printer

Any CE marked printer may be connected to a workstation for non-trade and management purposes.

4.4 Modem

A BABT approved and CE marked modem may be fitted in a workstation. Also any BABT approved and CE marked modem may be connected, using serial communications, to a port on the serial communications board of the workstation.

4.5 Operator display (LCD)

A CE marked LCD flatscreen monitor may be used instead of the CRT monitor. The layout and functionality is the same as described for the CRT monitor.

4.6 Tank level gauge

Any CE marked tank level gauge detecting system may be connected, using serial communications, to a port on the serial communications board of a workstation.

4.7 Price sign

The pole sign fuel price display may be connected, using serial communications, to a port on the Forecourt Interface Board (FIB) of a workstation.

4.8 Local back office computer

A CE marked personal computer may be connected, using serial communications, to a port on the serial communications board of the a workstation, or by Ethernet connection to the kiosk LAN, for external site management purposes.

4.9 Car wash

A car wash controller may be connected, using serial communications, to a port on the serial communications board of a workstation.

4.10 Shop version POS

One or more the POS terminals connected to the kiosk LAN may be configured in shop mode. In this case the shop POS does not have any pump control functions and is used for sales of shop articles and access to management functions only.

On a standard Qwerty operator keyboard, the Stop, Release, and Display keys are inactive. On a Preh keyboard, the 16 release and 16 claim keys are replaced by an additional 32 direct article access keys.

4.11 LPG

Any CE marked LPG dispenser may be connected via a connection to the forecourt interface board (FIB).

4.12 Payment terminal

Any CE marked indoor payment terminal may be connected, using serial communications, to a port on the serial communications board of a workstation.

4.13 Cash drawer

Any CE marked cash drawer may be connected, using serial communications, to a port on the serial communications board of a workstation.

4.14 Loyalty card terminal

Any CE marked loyalty card terminal may be connected, using serial communications, to a port on the serial communications board of a workstation.

4.15 Microsoft NT 2000 operating system

The software and data within FuelPOS is protected against 'Intentional Changes with Common Software Tools' by restricting access to the Operating System. Access is only possible by using a Security Card and PIN number. These cards and PIN numbers are only issued to Tokheim Authorised personnel.

The FuelPOS is not installed with a Floppy Disk drive and is configured to 'boot' off the installed hard-drive only. On power-up, the FuelPOS will also lock the CD-ROM drive and render it inoperable. It can only be unlocked by access at the Operating System level. With the up-dated software the layout of the operator display has been changed to that shown in Figure 18. The software is now designated as: -

Fuel POS:	EUR	ZZ.X	DD-MM-YY
Central Inf. System:	EUR	ZZ.X	DD-MM-YY
PCU POS N:	UK LON	Z.Z.X	YYMMDD
PCU POS N:	UK M6	Z.Z.X	YYMMDD
PCU POS N:	UK GB2W	Z.Z.X	YYMMDD
PCU POS N:	EUR	ZZXX GB ALL	YYMMDD

Where:	Z/ZZ	is the major revision number
	X	is the minor revision number
	DD-MM-YY	is the day, month and year of the revision
	YYMMDD	is the year, month and day of the revision
	N	is the number of the workstation
	GB ALL	country specific to all versions

Note: The software is routinely revised and updated in the field and subsequently reissued with a new version number.

4.15.1 Microsoft Windows XP

The system may use XP Pro as an alternative operating system.

4.16 Extended interface capability

This enhanced capability is implemented by use of software programming and by the use of a range of plug-in modules and interface assemblies. These systems and devices may be optionally installed and are as detailed below.

4.16.1 ELO Touchscreen

The VDU described in the certificate may optionally be replaced with an ELO USB touch screen with integrated card swipe, or with any suitable CE marked touchscreen. Figure 19 shows the ELO VDU.

4.16.2 Digiboard Card and Connection Box

The Digiboard comms. port expansion unit comprises a full size PC card with a multi connector to an external box with 8, 25 pin 'D' connectors as shown in Figure 20.

4.16.3 LON Forecourt Interface

An Easylon PCI-Bus card with FFT-10 transceiver (Figure 21) and MIP/P50 firmware from Gesytec may be fitted to provide the IFSF forecourt interface. This protocol supports any IFSF based calculator systems including the following:

- Coca LON
- Dresser-Wayne X2003 IFSF
- EIN calculator JKR IFSF
- EuroLan IFSF gateway
- Gilbarco IFSF (Epsilon and SK700)
- Salzkotten EC2000 IFSF
- TOKHEIM UDC-VE IFSF
- TOKHEIM WWC IFSF

4.16.4 Gilbarco (PC-DISPENSING)

As described in the certificate, but having the following (optional) specific arrangements for Gilbarco dispensers.

4.16.4.1

Connection to Gilbarco dispensers utilises the existing Gilbarco protocols via a D-box interface provided by Gilbarco for multiple pumps, or direct connection for a single pump. The functionality of this device is shown schematically in Figure 22.

4.16.4.2

An RS422/435 to RS232 converter as shown in figure 23 is utilised between the FuelPOS serial port and an individual dispenser or the Gilbarco D-box for multiple dispensers to provide RS422/435 to RS232 conversion.

4.16.5 FuelPOS Schematic

A schematic showing all the optional connections detailed above is shown in Figure 25. The legend key for Figure 25 is shown in Figure 24.

Note: The software is routinely revised and updated in the field and subsequently reissued with a new version number.

4.17 Alternative tower PC

As described in the certificate but having the PC workstation replaced with a PC tower format as shown in Figure 26. The tower may, optionally be fitted with a DVD drive.

The legally relevant hardware is identified in the table below:

Module	Manufacturer	Model Number	Tokheim Part Number
PC Tower	Tokheim Ltd		
Pentium 4 and Pentium 4 M Celeron PC	IPOX	IP-4GV163	9210013964
Pentium 4 and Celeron	IPOX	IP-4GV183	9210014084
Uninterruptible power supply	Any CE marked UPS of sufficient capacity to maintain operation of the POS in excess of 15 minutes during power failure.		

IP-4GV163 board is fitted with ISA support and operates with the COB pump interface connections.

IP-4GV183 board is fitted with PCI support and operates with PCI LON (IFSF) PC dispensing boards.

Figure 27 shows a typical kiosk installation with touch screen operator display

An alternative conventional QWERTY operator keyboard may be supplied fitted with pump control keys as shown in Figure 28.

Forecourt operations and kiosk transactions may be controlled by the operator on the touchscreen LCD monitor, keyboard or a combination of both.

4.17.1 Alternative hardware - Dell 390 PC

4.17.2 Alternative hardware - Mitac 'Mini FuelPOS-PC'

4.18 Alternative Keyboard

Any CE approved standard keyboard may be used where site operation is run by touchscreen only.

4.19 Alternative System Configuration using DOMS PSS5000 site controller

4.19.1 Description

The DOMS Petro Site System (PSS) 5000 is a direct replacement for the PSS 2000. The PSS 5000 reflects recent changes in technology; the Central Processing Board (CPB) includes a WEB Server.

Support previously provided by the Main Protocol Converter (MPC) and Tiny Protocol Converter (TPC) has been integrated into the CPB. The type of Hardware Interface Module (HIM) used to interface to the various supported Pump and Tank manufacturers are the same as those previously used in the PSS 2000.

4.19.2 Construction

The DOMS PSS5000 forecourt controller comprises a metal rectangular box (Figure 29) housing the following main components.

- A power supply
- A Central Processing Board (CPU) with 8 serial ports (CPB508). This has an LCD 16x2 character alphanumeric display and a keyboard comprising 5 keys for navigating the menu options, an adjacent legend describes the key functions as shown in Figure 16.
- Hardware interface modules.
Dispensers are connected to the CPU board via an appropriate hardware interface module compatible with the communication protocol of the dispenser.

4.19.2.1 Software

The DOMS PSS5000 has a legal authority module (LAM) for the UK containing specific parameter values and functions. The LAM version number is 498-06-100 and the checksum number is 0D6C. These can be viewed by selecting the appropriate menu heading using the operator keys on the CPU. The LAM version number and checksum are accessed as follows. When the PSS is powered on, the first line displays the application software version and the current time. The second line displays the W&M Service menu. Pressing the Down Arrow once, displays the W & M menu which comprises 7 sub-menus, W.1 to W.7. Press the right button once to obtain W.1 – LAM INFO and press again to display Version and Checksum information.

4.20 Alternative System Configuration using DOMS PSS2000 site controller

4.20.1 Description

The DOMS PSS2000 is housed in a metal rectangular box. It controls the interaction between the POSs and the dispensers (Figure 30).

4.20.2 Construction

Internally, there are three main sub-assemblies: the power supply unit, the processor unit, and the interface boards. Interconnection between these units is via ribbon cables. There may be a number of interface boards depending on the number of dispensers connected to the system and whether a tank gauge is connected to it or not. The connections to the KCU, tank gauge and dispensers are made on the appropriate interface boards. The processor unit is a PROM/EPROM based unit and handles the control signal from the dispensers to the KCU. The sub-assemblies and interface boards are all mounted onto a DIN rail inside the housing. A mains supply is made to the unit via a fused assembly within the housing. The DOMS PSS2000 is powered through the main pump Emergency Stop button.

4.21 Alternative Hardware Configuration - In-Tech Solutions IPOS Point of Sale System

4.21.1 Description

Upon completion of the delivery, the operator selects the fuel transaction via the In-Tech IPOS or Tokheim FuelPOS. When selected using the In-Tech IPOS, the FuelPOS transmits the real time transactions to the In-Tech IPOS. The Tokheim FuelPOS has full control of the pumps, and it is only once the sale is been completed and authorised that the transaction is transferred to the In-Tech IPOS. If the transaction is cashed on the Tokeim FuelPOS it cannot be transferred to the In-Tech IPOS.

After the transaction is transferred to the In-Tech IPOS the fuel payment, along with any other items purchased, is completed on the In-Tech POS.

4.21.2 In-Tech IPOS Hardware

Till configuration #1

PC base unit	DigiPos Retail Active 8000
Operator display	DigiPos touch screen
Receipt printer	Epson TM-T88
Barcode scanner	Metrologic Quantum
Customer display	2 line

Till configuration #2

PC base unit	Hewlett Packard RP5700
Operator display	MultiQ touch screen
Receipt printer	Star TSP100
Barcode scanner	Metrologic Quantum
Customer display	2 line

These configurations may include other ancillary devices such as a cash drawer, Avery FX110/120 scales and Verifone, Dione Secura or Ingenico iPP350 PIN Pads.

4.21.3 In-Tech IPOS Software

The software had been segregated so that the fuel aspects of the program are contained within a standalone component (i.e. FuelPos.DLL), and the operational and management functions have been written into both IPOS.EXE and SETUP.EXE. The operational and management software versions can change, but have no effect on the standalone fuel component.

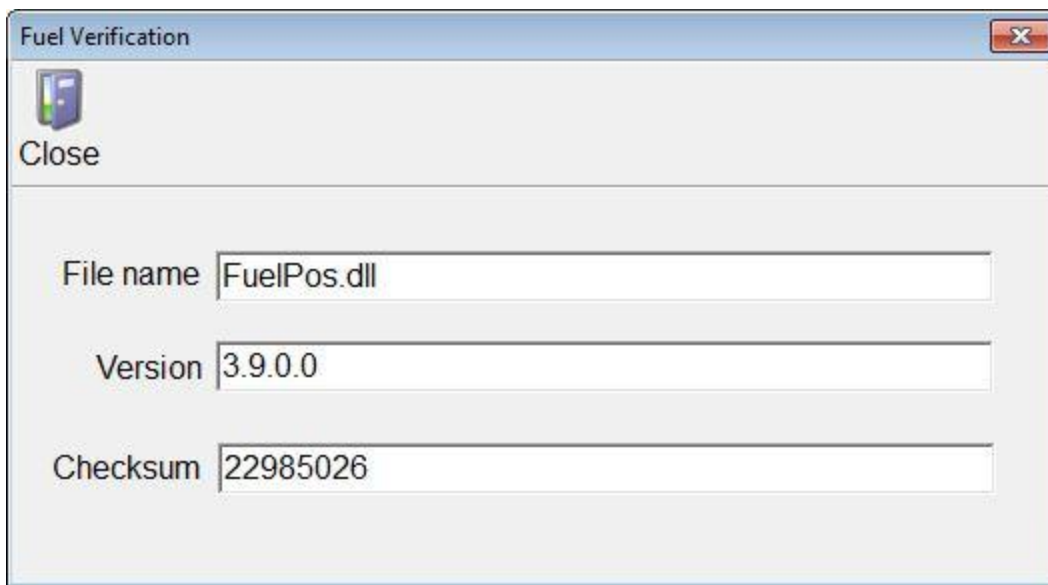
4.21.3.1 The standalone fuel component is protected from user tampering by use of CRC checking which is activated at every power-on of the system or may be re-checked by following this procedure:

- At the sign-on screen enter the cashier code of 8145 and press the ENTER button.
- Enter the same number (8145) as the cashier password and press the ENTER button.
- On the main operating screen, press the management menu button. This button is usually labelled “Mgr Menu” or “Manager Menu”.

- To access the set-up screen press the dedicated button. This is usually labelled “Progam Mode” or “Set-up”.
- Press the “Fuel” button. This opens the fuel menu.
- Press the “Fuel Verification” button to launch the show the verification screen.

4.21.3.2 The legally relevant part of the software is shown as follows for verification:

Name of software	IPOS
Name of software module	FuelPos.DLL
Application checksum	22985026
Application version number	3.9.0.0
Application function	Interface between the FuelPos pump controller and the EPoS



4.21.3.3 The non-legally relevant part of the software is shown as follows for verification:

Name of software modules	IPOS.EXE	SETUP.EXE
Application version number	X.X.X.X	
Application function	Operational and management profiles	

4.22 Alternative Hardware Configuration – I.T. Retail POS

4.22.1 Description

Upon completion of the delivery, the operator selects the fuel transaction via the I.T. Retail POS or Tokheim FuelPOS. When selected using the I.T. Retail POS, the FuelPOS transmits the real time transactions to the I.T. Retail POS. The Tokheim FuelPOS has full control of the pumps, and it is only once the sale is been completed and authorised that the transaction is transferred to the I.T. Retail POS. If the transaction is cashed on the Tokeim FuelPOS it cannot be transferred to the I.T. Retail POS.

After the transaction is transferred to the I.T. Retail POS the fuel payment, along with any other items purchased, is completed on the I.T. Retail POS

4.22.2 I.T. Retail Hardware

The I.T. Retail POS software may be installed on Toshiba A10 and A20 Hardware platforms, or Posilflex 6700 Series / 7200 Series POS.

4.22.3 I.T. Retail IPOS Software

The fuel pos interface is identical to that as described in section 4.21.

I.T. Retail POS software: WinPos Version 2.55 or later, executable program is POS.EXE File Version 2.5.5.0 or later.

4.23 CE Marked Ancillary Devices

Any of the POS hardware described in this certificate, which has the metrological software installed, may utilise any CE marked hardware, this includes the back-office PC, receipt printers, UPS, customer display, card readers, keyboards and cash drawers.

4.24 Alternative Hardware Configuration – Celtech “ab-initio” EPoS software

4.24.1 Description

The ab-initio POS software is a Java based application which interacts with physical devices (printer, scanner, scales etc.) via the industry standard JavaPOS API. It also interacts with a Tokheim FuelPOS unit via a TCP based application layer protocol in order to provide fuel related functionality. Specifically, it allows the ab-initio POS to:

- Release a pump
- Stop a pump
- Stop all pumps
- Claim a sale
- Unclaim a sale
- Forcibly unclaim a sale

After the transaction is transferred to the ab-initio POS the fuel payment, along with any other items purchased, is completed on the ab-initio POS

4.24.2 Hardware Requirements

This software is installed on a Toshiba Surepos 350 base unit Point of Sale hardware that meets the following minimum requirements:

Customer display	Line Display (2x20 chars)
Optional customer facing display	1024x768 14" LCD Panel
Operating system	Microsoft Windows 7 32 or 64 bit (including Microsoft Windows Embedded POSReady 7)
RAM	2GB
Processor	Intel Celeron T3100
Hard disk capacity	100GB
Screen resolutions	1024x768
Number of USB or RS232 ports	2xRS232, 2xUSB

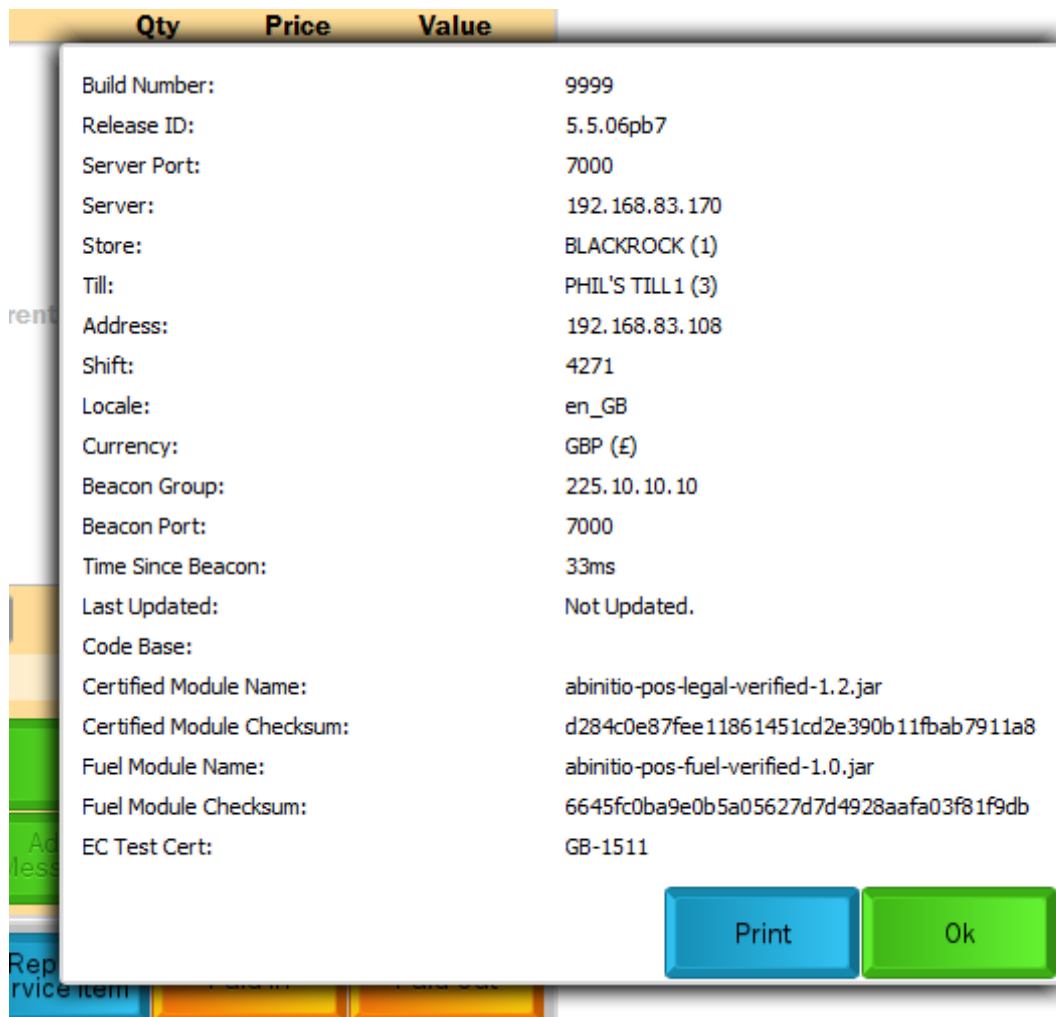
4.24.3 Ab-initio Software

The fuel pos interface is identical to that as described in section 4.21.

Fuel Module Name: abinitio-pos-fuel-verified-1.0.jar

Fuel Module Checksum: 6645fc0ba9e0b5a05627d7d4928aafa03f81f9db

The ab-initio software version and the checksum value is displayed using the company information button, as shown below. The print button sends this information to the receipt printer for audit purposes.



5 RECOMMENDED TESTS

The following tests may be carried out in addition to those specified in the Regulations to determine conformity to the approval pattern.

5.1 Software verification

Check that correct software versions, as detailed in Section 1, are installed in the workstations. These can be accessed from the CIS menu, from any POS, and going to the sub-menu 'SW version' from the menu 'System'.

Note: The equipment supplier operates a system whereby software updates are implemented on a regular basis. These changes will not affect the metrological programming, but will cause the software references DD MM YY to change depending on the date of amendment. Inspectors requiring confirmation of current software status should contact the equipment supplier, or NMO.

6 CERTIFICATE HISTORY

ISSUE NO.	DATE	DESCRIPTION
Series S011	11 October 2007	Certificate first issued as a supplement.
Series S011 Revision 1	25 March 2009	14.15 Alternative operating system: Microsoft Windows NT VScom 8 port serial
Series S011 Revision 2	14 March 2012	Front page Fuel dispenser 1958 added 4.15.1 Alternative operating system: Microsoft Windows XP Alternative hardware: 4.17.1 Dell 390 4.17.2 Mitac 'Mini FuelPOS-PC' 4.19 and 4.20 Doms site controllers added
Series S011 Revision 3	30 January 2013	Section 4.21 Alternative hardware configuration In-Tech IPOS added
Series S011 Revision 4	08 May 2014	Section 4.22 Alternative hardware configuration I.T. Retail Pos added Section 4.23 CE marked ancillary devices added
Series S011 Revision 5	30 September 2014	Section: 4.15: PCU POS N, EUR version added, key updated 5.1 (Note) reference to NWML changed to NMO
Series S011 Revision 6	9 February 2014	Section: 4.24 Alternative hardware configuration, Celtech "ab-initio" EPoS software added, front page 2619 cert reference updated

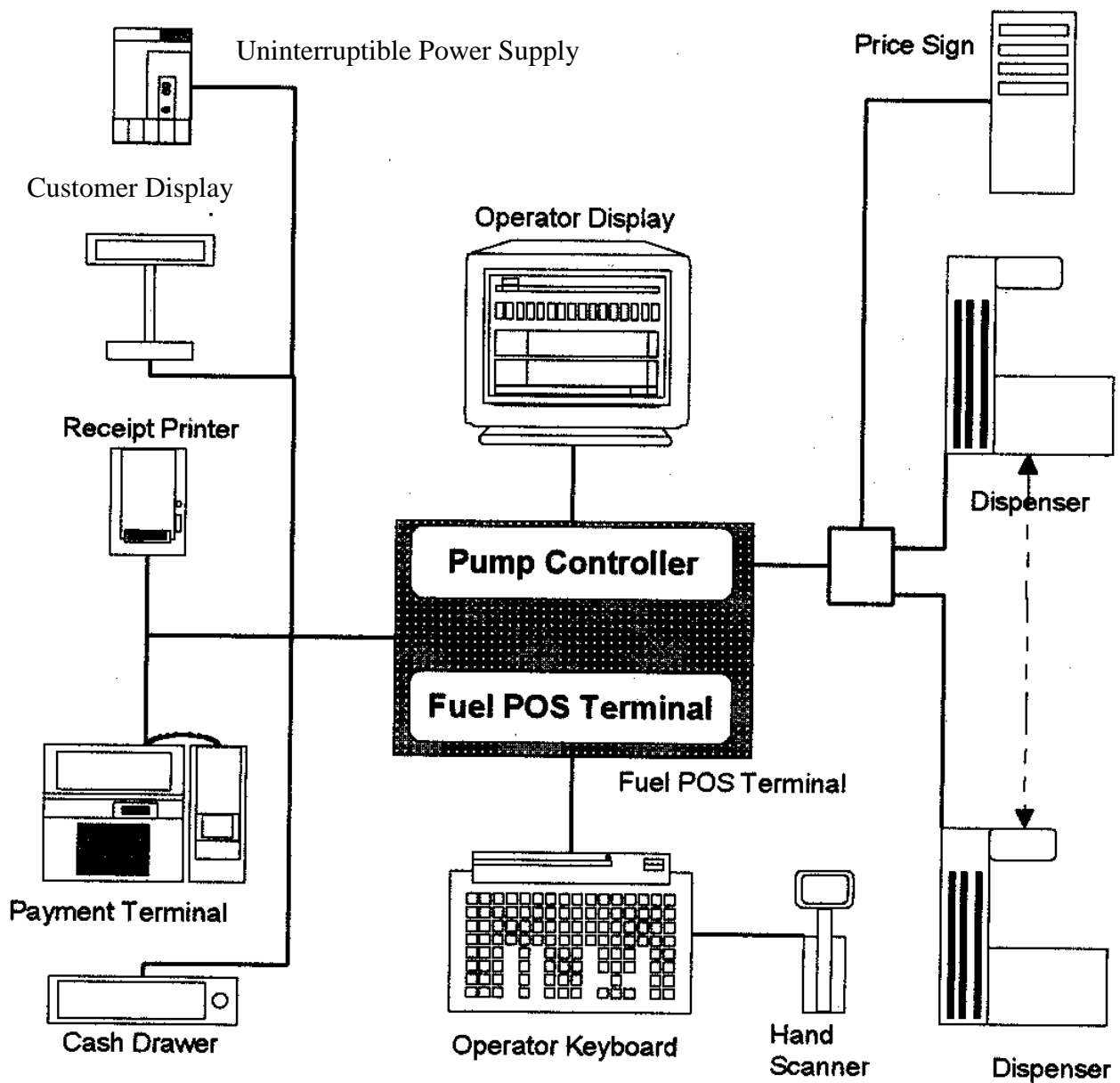


Figure 1 Schematic of POS workstation

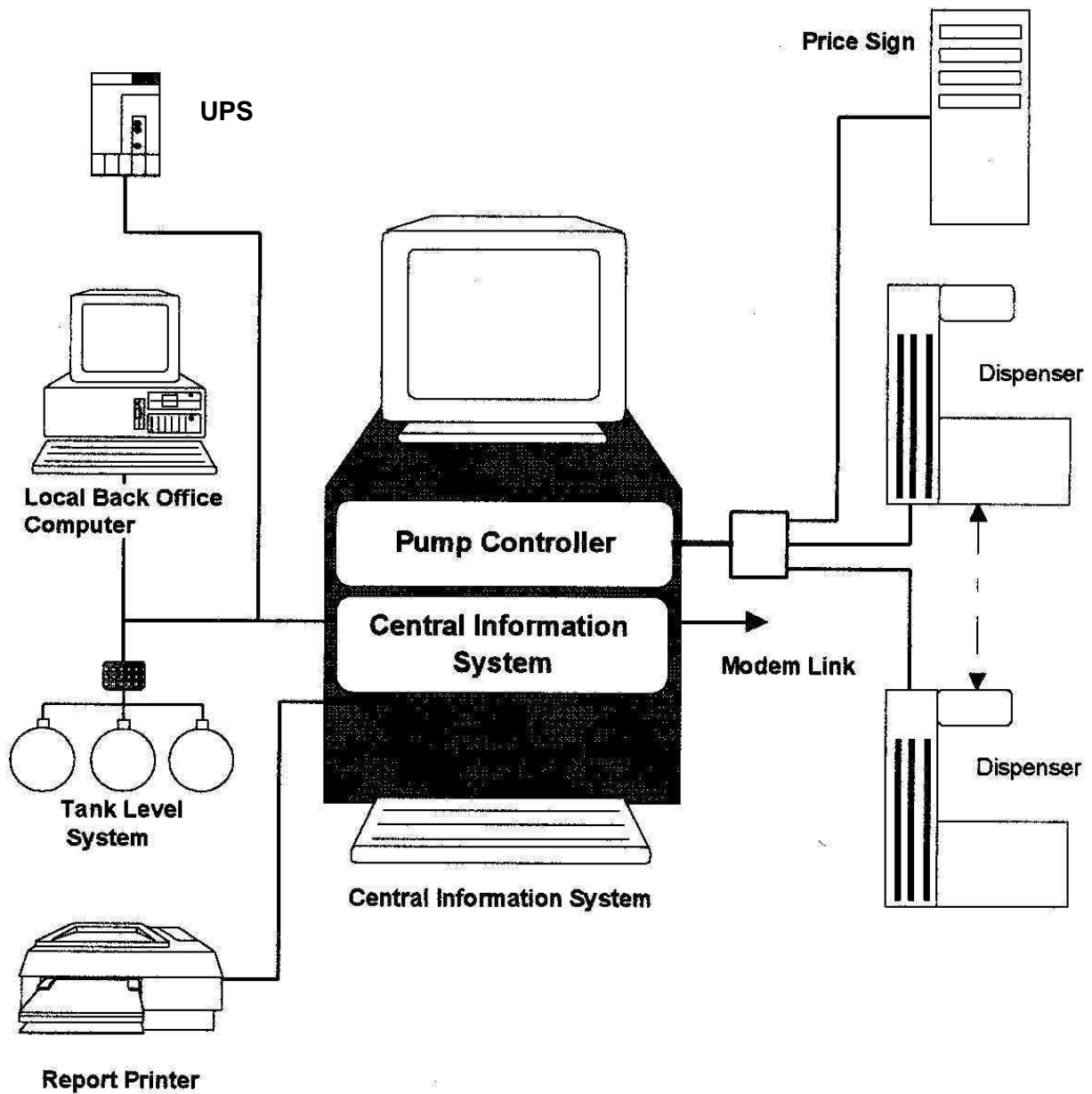


Figure 2 Schematic of CIS workstation

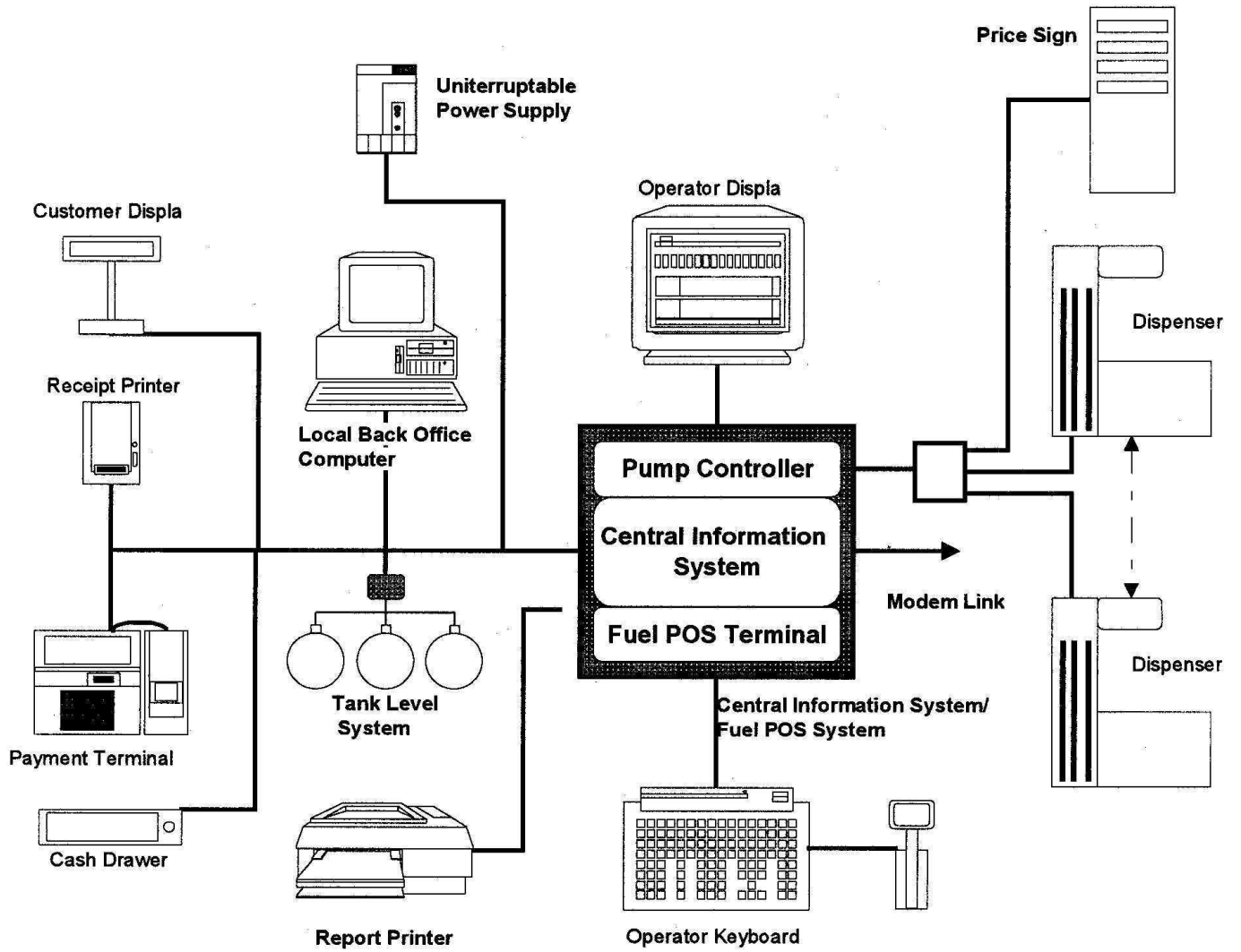


Figure 3 Schematic of CIS/POS workstation

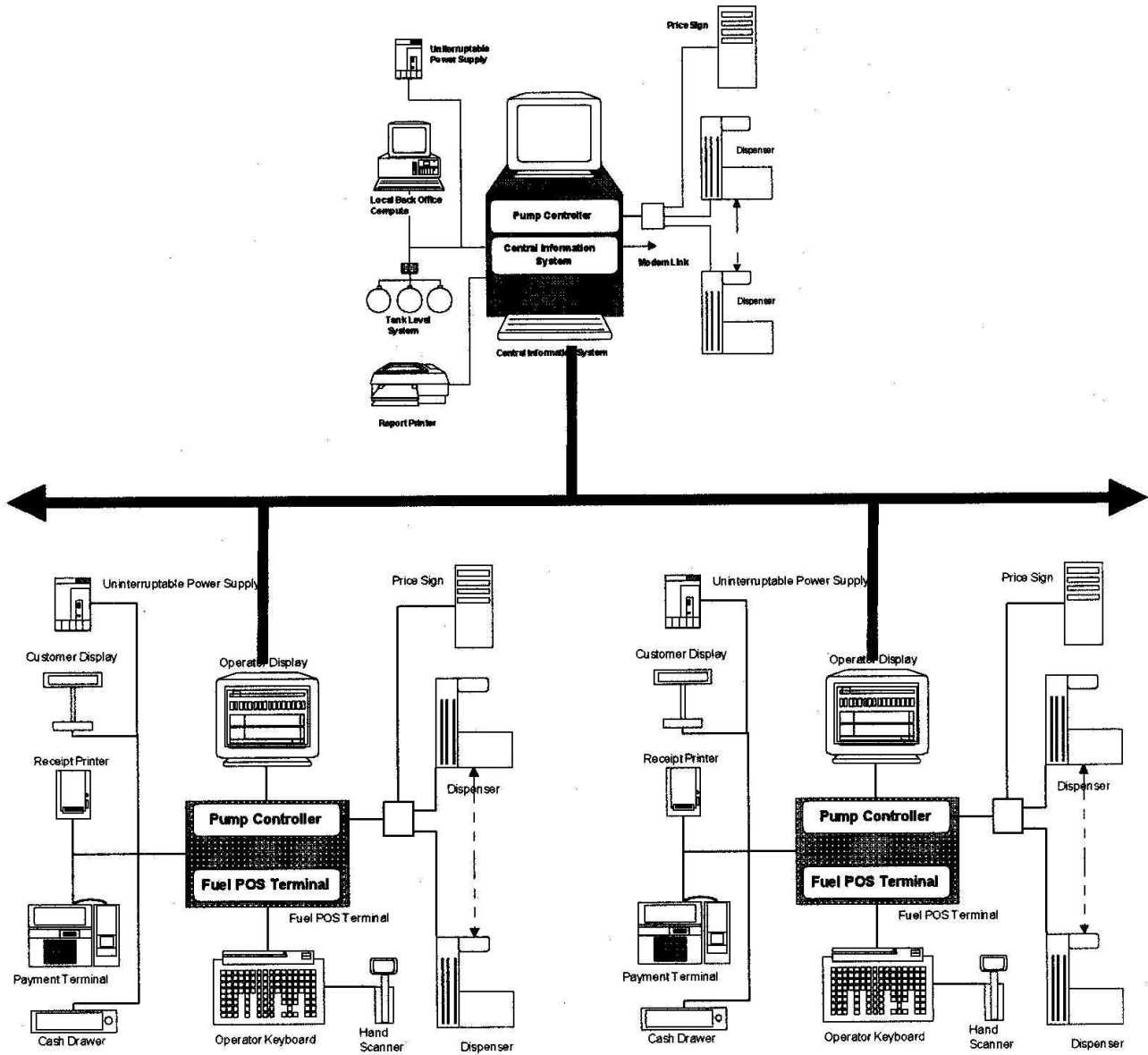


Figure 4 Schematic of CIS/POS and POS workstations

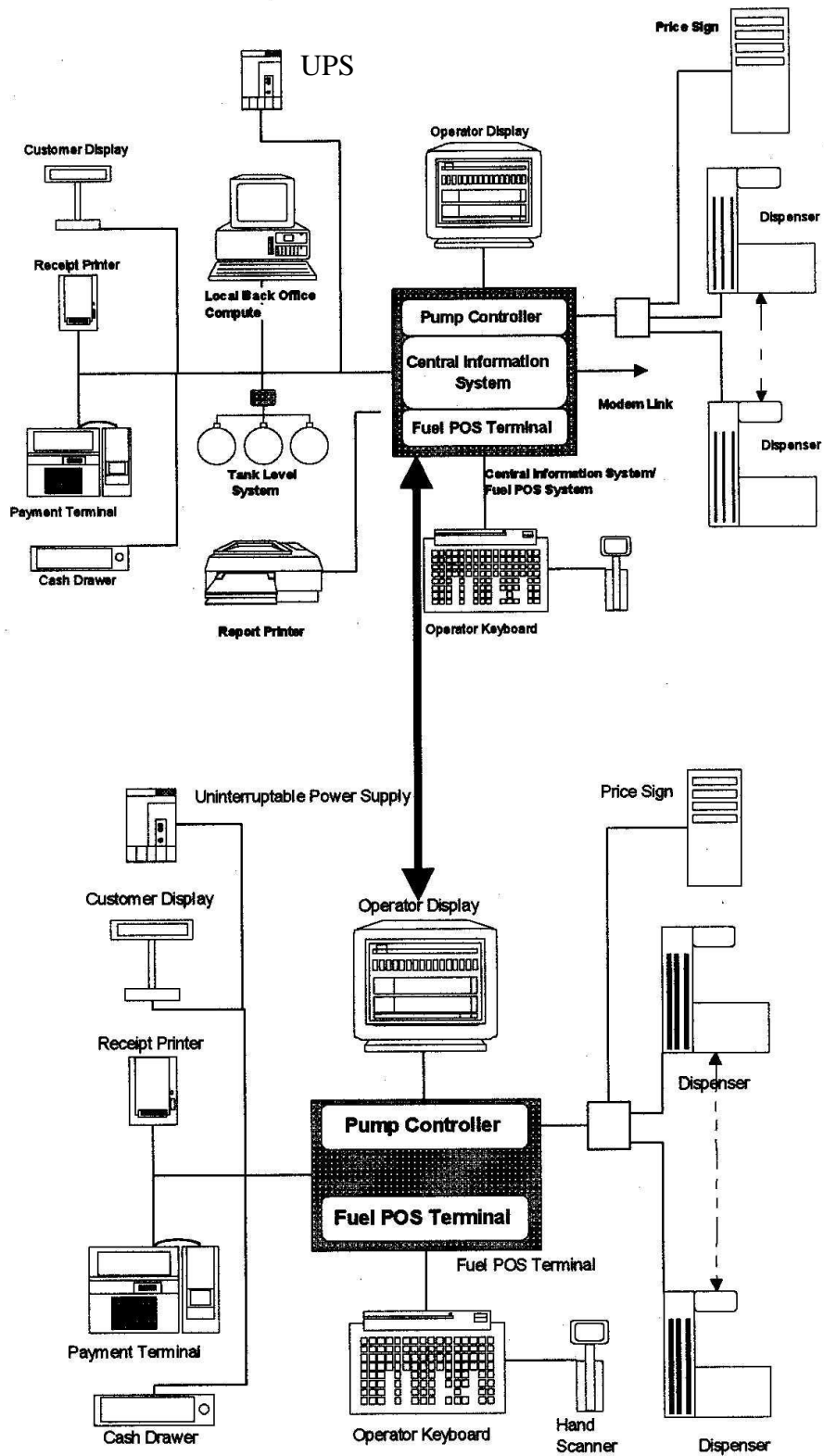


Figure 5 Schematic of CIS/POS and POS Workstations



Figure 6 Uninterruptible power supply



Figure 7 Workstation personal computer (Laser)



Figure 8 Operator screen

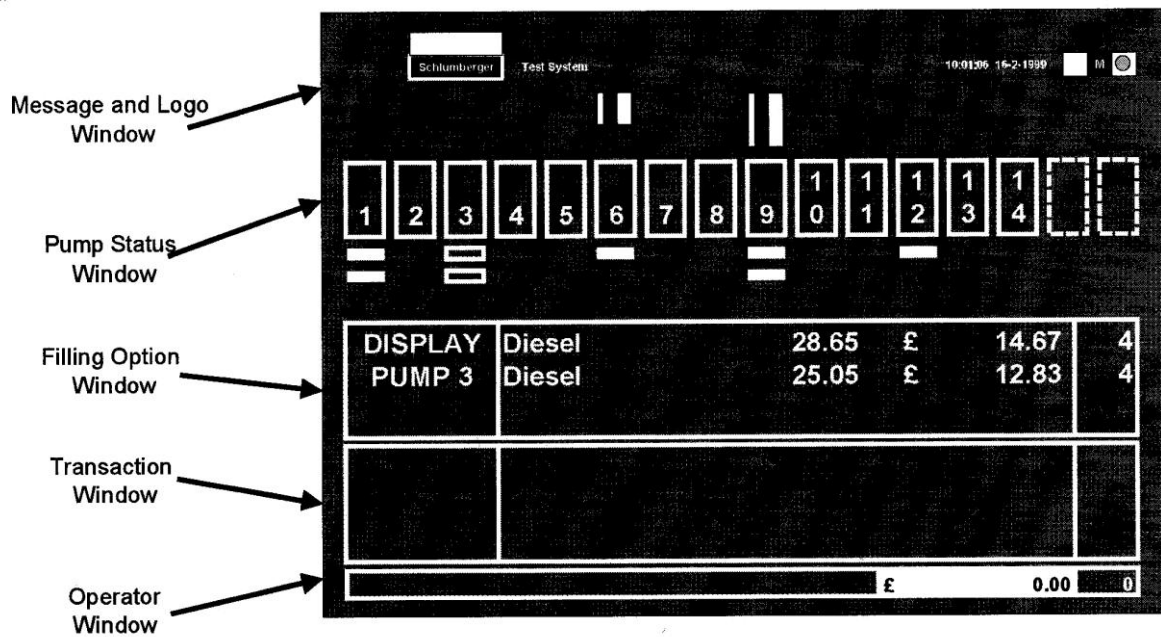


Figure 9 Layout of operator monitor screen



Figure 10 Qwerty operator keyboard

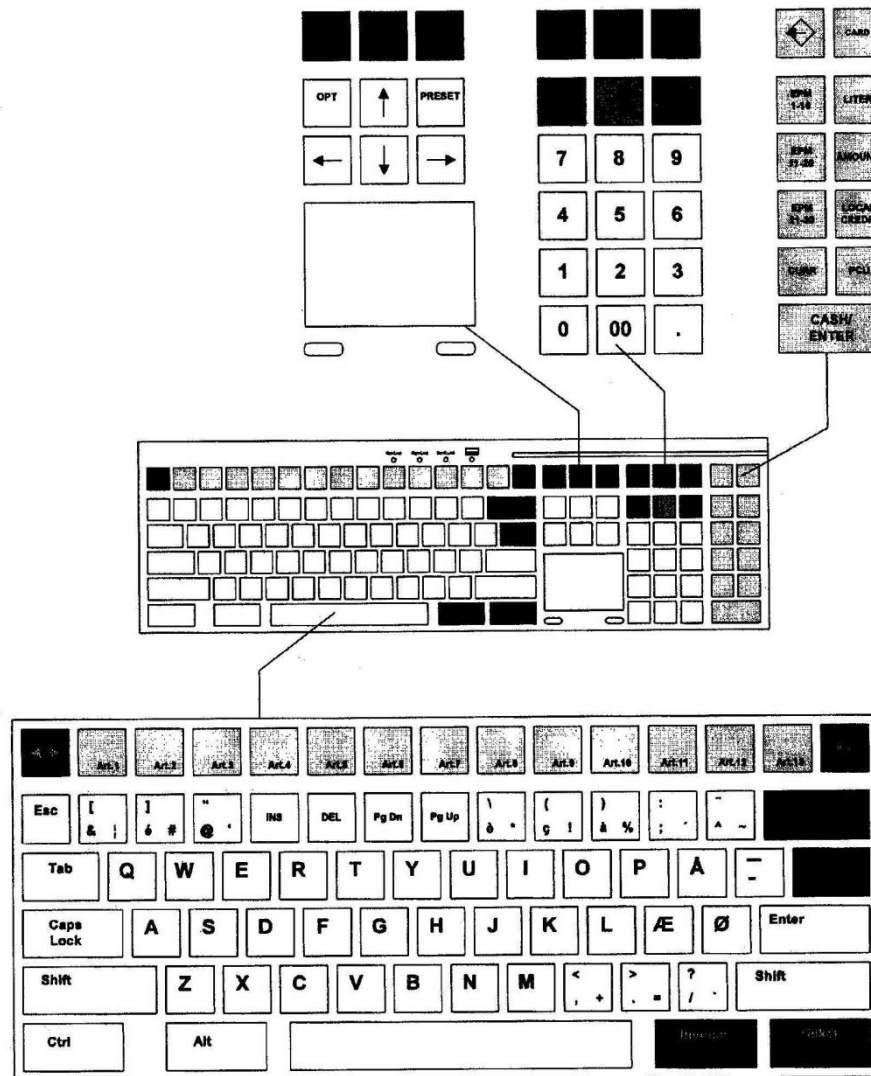


Figure 11 Layout of Qwerty operator keyboard



Figure 12 Customer display

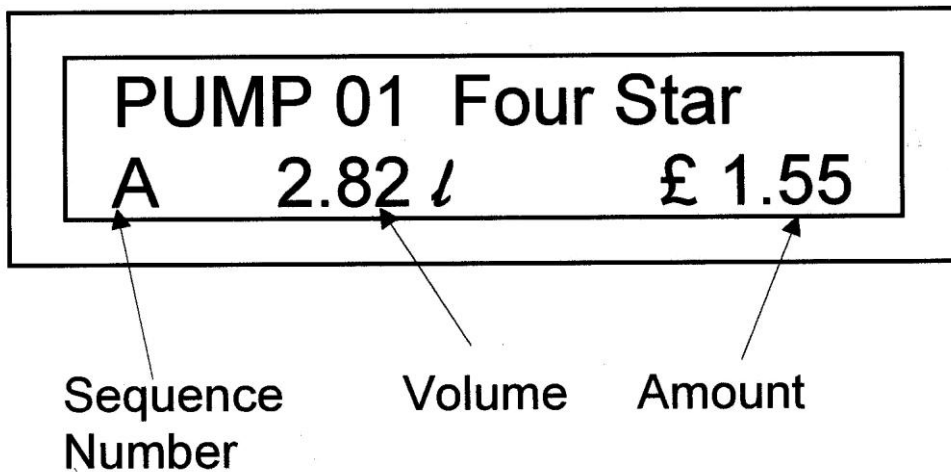


Figure 13 Layout of customer display



Figure 14 Receipt printer



Figure 15 Preh operator keyboard

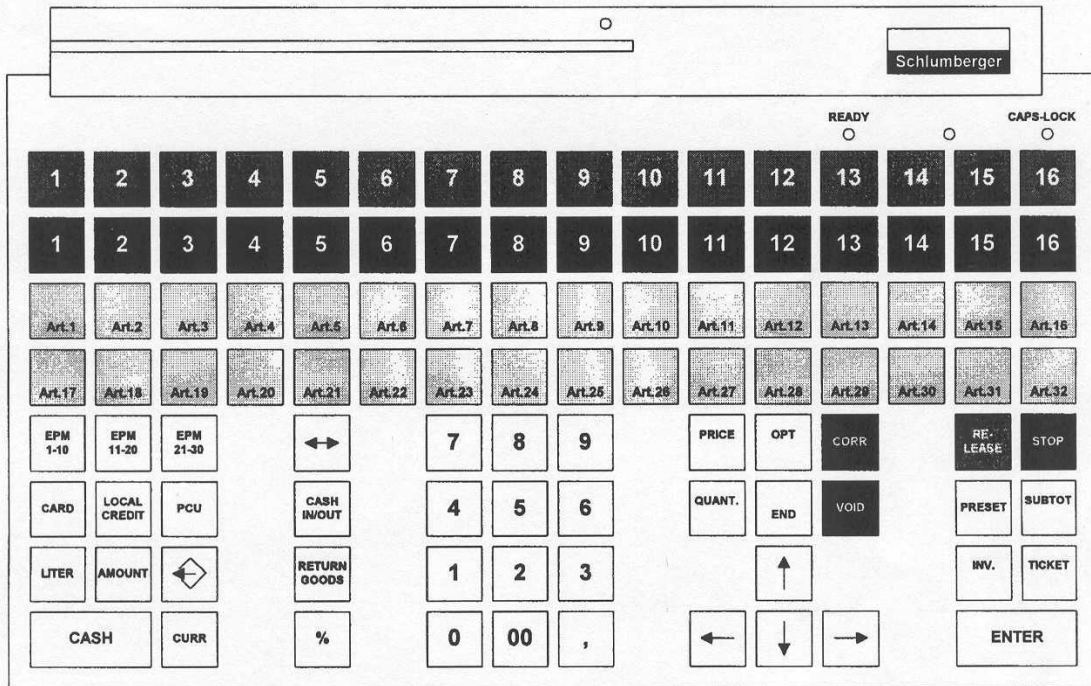


Figure 16 Layout of Preh operator keyboard (16-FIPs)

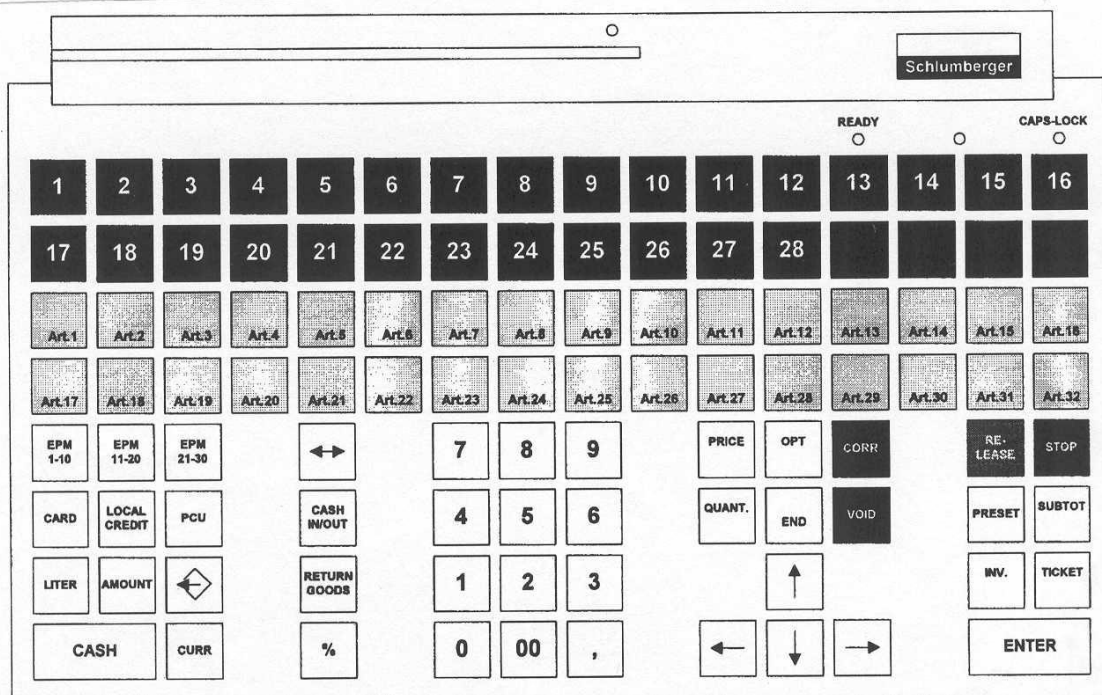


Figure 17 Layout of Preh operator keyboard (28-FIPs)

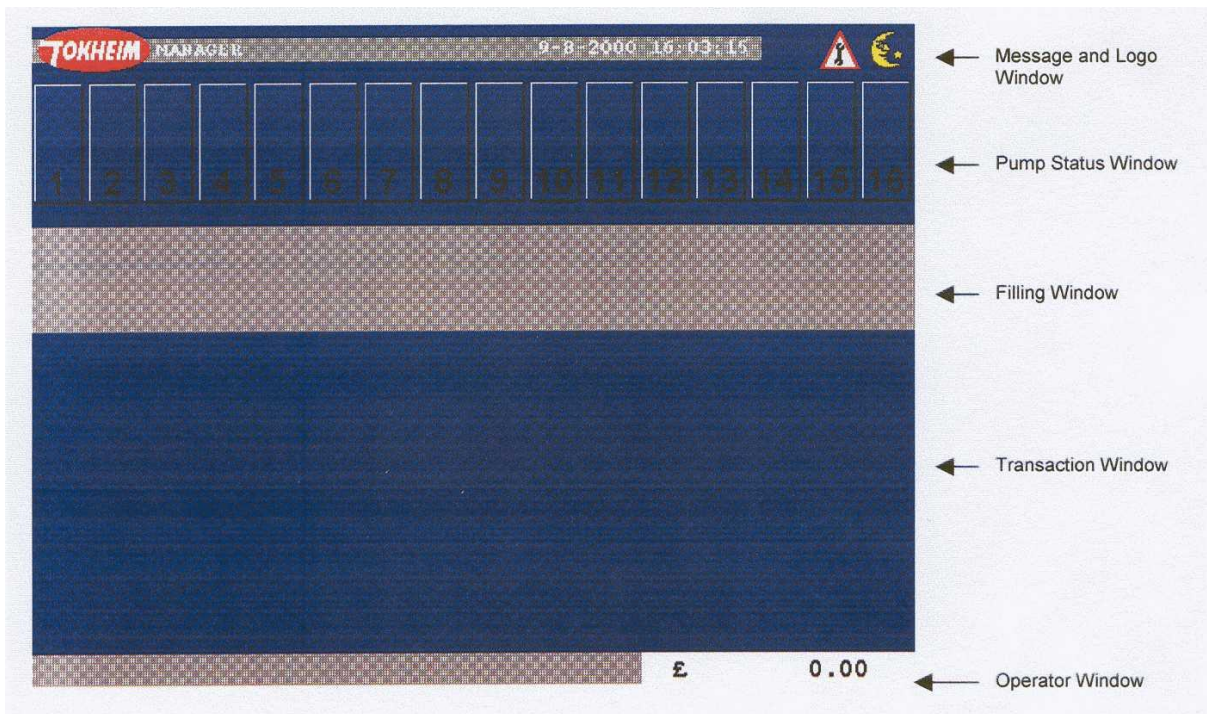


Figure 18 Layout of operator monitor screen using Windows 2000 NT



Figure 19 ELO 1525L Touchscreen (USB)



Figure 20 8 Port Digiport connection box



Figure 21 Gesytex LON Card

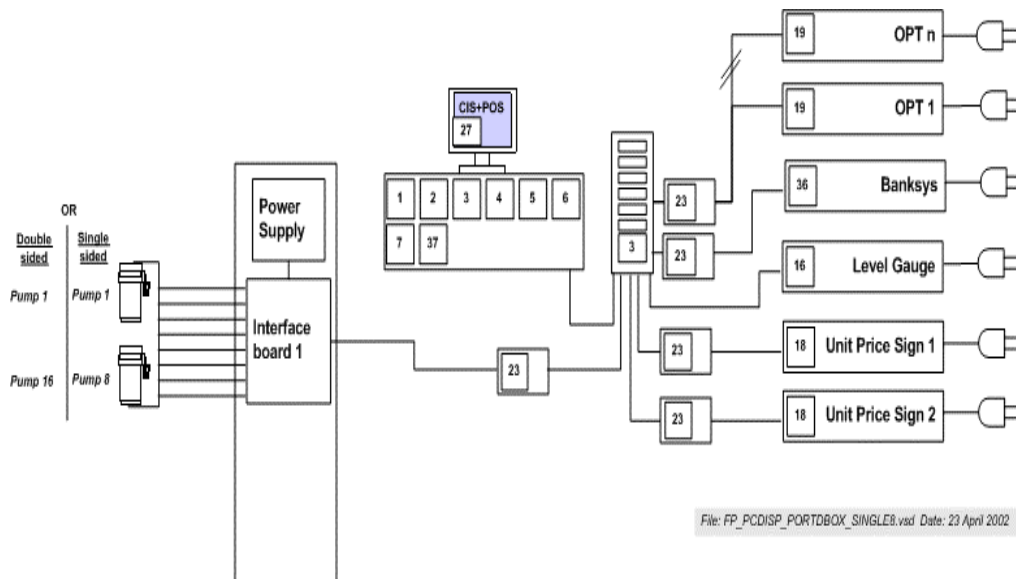


Figure 22 Gilbarco D-Box to Digiboard functionality

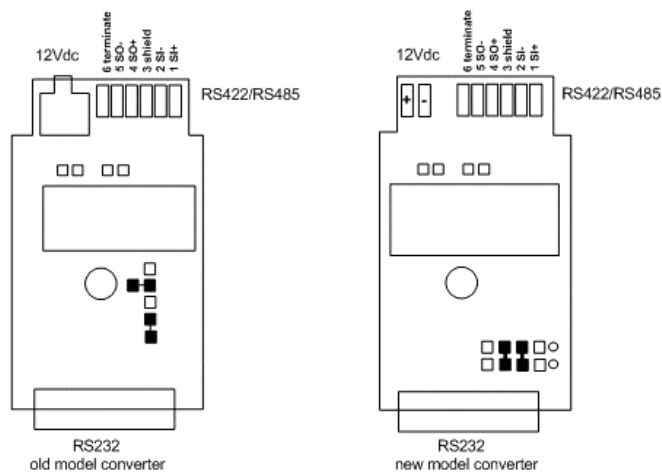






Figure 23 RS422/345 to RS232 converter boards

-  **COMPONENT & CABLING**
-  **MAINS (220V), connection described with component description**
-  **220V adapter**
-  **Connection dependant on component type**

File: FP_Legend.vsd Date: 19 February 2003

Figure 24 Schematic Legends (for Figure 25)

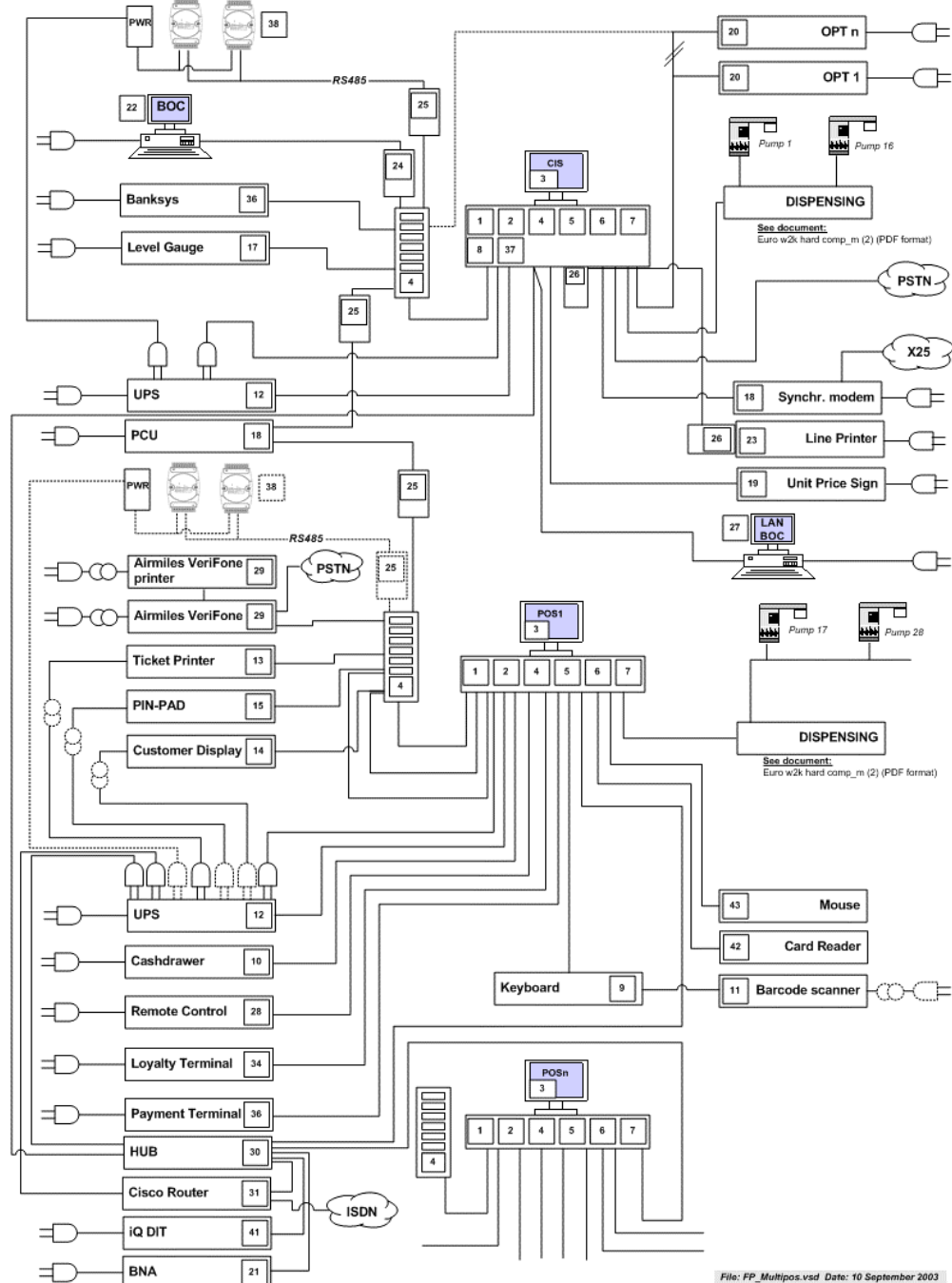


Figure 25 Schematic showing interconnections (see Figure 24 for key)



Figure 26 Typical PC tower



Figure 27 Typical kiosk installation with touchscreen operator display

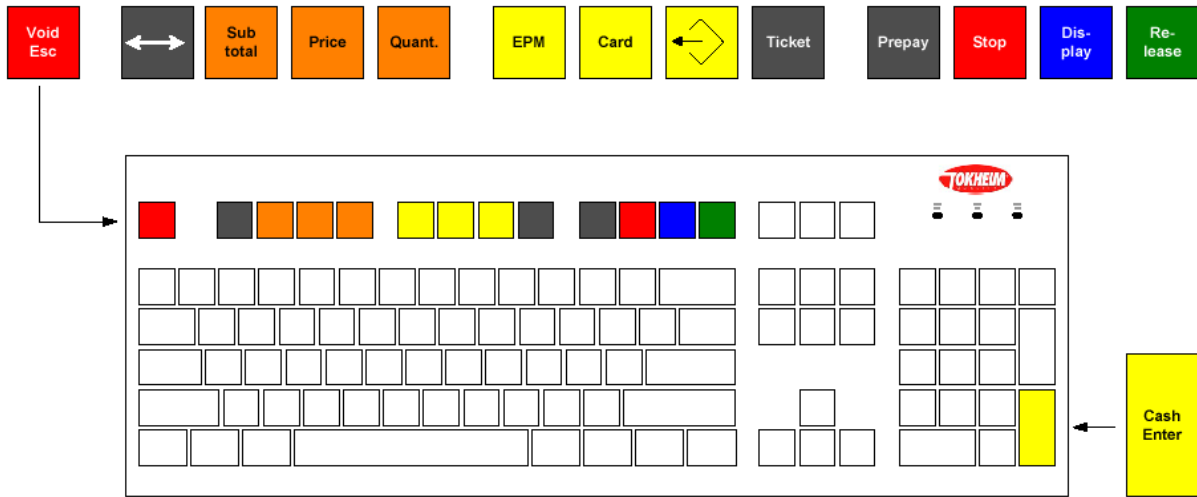


Figure 28 Optional operator keyboard



Figure 29 DOMS PSS 5000

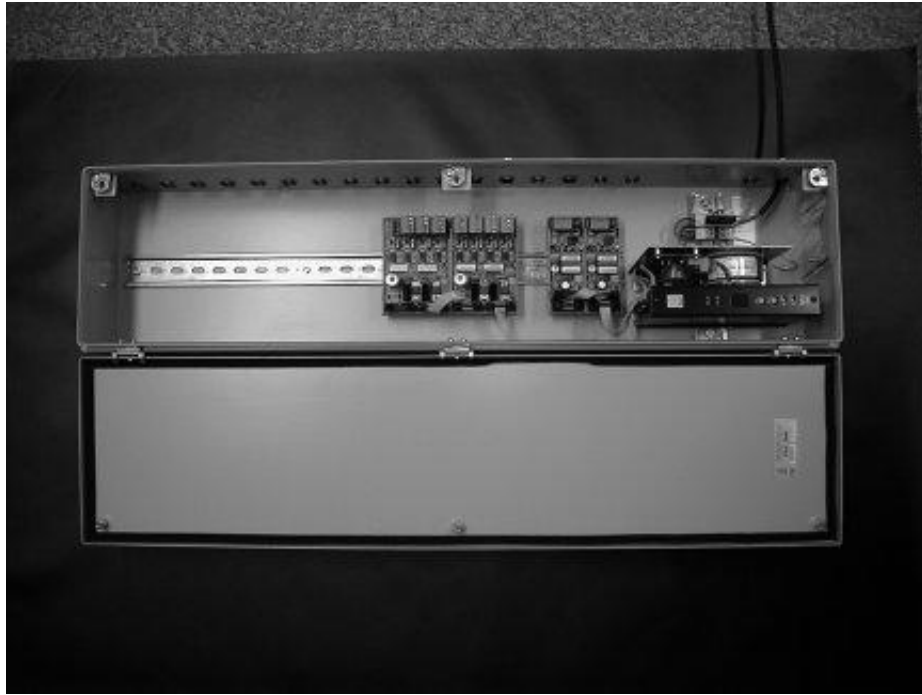


Figure 30 **DOMS PSS 2000**