

(1828/38, 1918/62, 1940/59,
1958/52, 2017/56, 2162/75,
2176/62, 2223/18, 2286/41,
2437/24, 2486/43, 2536/40,
2650/42)



III(5)a

National Measurement Office

Certificate Pursuant to section 12 of the Weights and Measures Act 1985 Series V005 Revision 4

Certification No.	Valid Until	Certification No.	Valid Until
1828/38 Revision 5	19 May 2013	2223/18 Revision 5	5 December 2013
1918/62 Revision 5	26 September 2015	2286/41 Revision 5	2 November 2013
1940/59 Revision 5	5 May 2016	2437/24 Revision 1	17 October 2006
1958/52 Revision 1	17 August 2006	2486/43 Revision 5	29 November 2013
2017/56 Revision 5	4 September 2016	2536/40 Revision 5	26 October 2016
2162/75 Revision 4	2 September 2011	2650/42 Revision 4	30 December 2012
2176/62 Revision 4	13 January 2012		

In accordance with the provisions of section 12 of the Weights and Measures Act 1985, the Secretary of State for Business, Innovation & Skills hereby certifies as suitable for use for trade a pattern of a liquid flowmeter, as described in the descriptive annex to this Certificate, and having the following characteristics:-

DISPENSER: Dispensers described in certification numbers: 1828, 1918, 1940, 1958, 2017, 2162, 2176, 2223, 2286, 2437, 2486, 2536 and 2650.

FORECOURT CONTROL UNIT: DOMS PSS 5000 as described in the descriptive annex.

COMBINED KIOSK CONTROL & POINT OF SALE SYSTEM: SDL Retail POS as described in the descriptive annex.

Under the provisions of section 12(6) of the said Act, the validity of this certificate is limited as shown above. This revision replaces previous versions of the certificate.

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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Descriptive Annex

1 INTRODUCTION

This certificate describes the SDL Retail point of sale (POS) connected to fuel dispensers described in the certificate.

In addition any compatible CE marked LPG dispensers may be connected to the SDL Retail point of sale (POS). The dispenser head electronics are compatible, but the dispenser hydraulics are replaced with types suitable for LPG. **(Amendment 1, see 1828/1 Amendment No 45)**

SDL Retail POS is a computerised point of sale system designed to control and process sales transactions of both fuel and shop goods in a retail environment. The system can be configured with up to five POS tills, each with integrated pump control, barcode scanning, and EFT (electronic funds transfer) card swipe capability, and can link to various back office management systems for sales reconciliation, stock control, and accounting purposes. The schematic in Figure 1 shows how the main elements of system hardware are connected together.

All POS tills are connected to the LAN (local area network) by means of category 5 cabling to the main LAN switch. Also connected to the LAN switch is the Forecourt Controller. This provides pump control and tank gauge access to all POS tills on the LAN. The back office PC connected to the LAN switch is used to send product and price updates to the POS tills and collect sales transaction data from them.

External uninterruptible power supply units protect all connected POS tills, the LAN switch, and Forecourt Controller by maintaining power for at least 15 minutes after a power failure.

2 CONSTRUCTION

2.1 Forecourt controller DOMS PSS 5000

The DOMS PSS5000 forecourt controller comprises a metal rectangular box (Figure 2) housing the following main components. The general arrangement is shown in Figure 3.

- A power supply
- A Central Processing Board (CPU) with 8 serial ports (CPB508).
This has an LCD 16x2 character alphanumerical display and a keyboard comprising 5 keys for navigating the menu options, an adjacent legend describes the key functions as shown in Figure 4.
- Hardware interface modules.
Dispensers are connected to the CPU board via an appropriate hardware interface module compatible with the communication protocol of the dispenser.

2.1.1 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.

2.1.2 DOMS PSS5000 Compact site controller

As described in section 2.1.1, but in a more compact metal box, with less spaces for hardware interface modules. The LAM version number is 498-06-101, checksum number is 0D6C

2.2 Kiosk control and point of sale PC

The POS tills are touch-screen PC devices that are equipped with integrated magnetic card readers and two-line customer displays. Each POS till has its own thermal receipt printer and laser barcode scanner.

2.2.1 Epson IM-310 incorporating DM-D106 customer display and TM-88II printer (Figure 8)

Alternatively the Epson TM-H6000 printer may be fitted instead if cheque printing is required. All cable connections are made at the rear of the unit, with the exception of the laser scanner, which is plugged into the keyboard port on the right hand side. The hard power switch is located on the right hand side, and the soft power switch is on the front underneath the touch panel. The floppy drive is hidden away behind the lockable front access cover, also located below the touch panel. The printer and customer display are connected internally to the unit on COM3.

The equipment is identified as follows:

Equipment	Manufacturer	Model No
Epson IM-310 POS PC	Epson	M156A
Mother board	Epson	IM-310 MAIN 2034124-02 / 2034698-02
Power supply	Epson	APS-138
Customer display	Epson	M58DA

2.2.2 Epson IM600 incorporating DM-D110 customer display (Figure 9)

This POS till uses an external printer. This can be either the standard TM-88II, or the TM-H6000 if cheque printing is required. All cable connections are made at the rear or underneath the unit, with the exception of the laser scanner, which is plugged into the keyboard port on the front below the touch panel. The hard power switch is located on the rear of the unit inside the plastic casing panel, and the soft power switch is on the front underneath the touch panel. There is a port to connect an external floppy drive inside the lockable front access panel, also located below the touch panel. The printer is connected to the COM3 port found underneath the base of the unit, but the customer display is connected into the customer display port on the external printer.

The equipment is identified as follows:

Equipment	Manufacturer	Model No
Epson IM-600 POS PC	Epson	M164A
Mother board	Epson	IM-310 MAIN 2036544-03 / 2036545-03
Power supply	Epson	130 D 601
Customer display	Epson	M58DB

2.3 LAN Switch

One of two models manufactured by Netgear may be connected to the LAN, the Fast Ethernet Switch FS308-8 Port 10/100 (Figure 10) or the Fast Ethernet Switch FS516-16 Port 10/100 (Figure 11).

2.4 Software

2.4.1 Operating System

The SDL Retail POS may run any of the following Microsoft 32bit operating systems:

Windows 95, Windows 98, Windows ME, Windows NT4.0, Windows 2000, Windows XP

2.4.2 Controlled software version number

The software version information is displayed in two parts in a window (Figure 5) which is accessed in the engineer menu under 'S/W Version'. The larger bold caption indicates the overall software version, incorporating both legally relevant and non-legally relevant parts. The version number of the legally relevant part is 1.0 and is shown separately underneath.

An error in the price calculation software described in Section 2.4.2 has been corrected which has resulted in Version 1.0 and 2.0 of the "SDL Fuel Dispensing Self-serve System" software becoming obsolete and therefore should not be in use for trade.

The corrected software is now identified as "SDL Fuel Dispensing Self-serve System Version 3.0" as shown in the amended Figure 5. (**Amendment 9, see 1828/38 Amendment No 9**)

3. OPERATION

3.1 Application start up

The installed applications on the POS tills have been configured to automatically launch from the Programs\Start-Up folder whenever the POS tills are switched on. the first screen from which a user can enter data is the user login screen. The application is displayed full screen, so that the Windows task bar is not visible to the normal user and cannot gain access to the Windows task manager.

3.1.1 Password Access

Access to the application is only allowed by entry of a valid user name and password. Access rights are allocated to users authorised for engineering and management functions. Passwords

for normal users, managers and engineers and their associated access rights can only be configured from the Retail Controller back office application.

3.2 Sales Functions

Figure 6 shows the main sales screen in its 'summary view' mode. A detailed view of transactions relating to a specific pump can be obtained by pressing the desired pump number button to obtain 'detailed view' mode (Figure 7).

3.2.2 Starting a Pump

When a customer on the forecourt pulls a pump's nozzle out of its holster, the POS till operator is advised of the customer's request for authorisation to fuel by means of an audible warning, and the associated pump number button flashing green. If the operator was in 'detail view' mode of any other pump, the green VIEW PUMPS button would advise that another pump was requesting authorisation.

The pump is authorised by pressing the START button, followed by the pump number button if in the 'summary view' mode or pressing the START button only if in 'detail view' mode. The customer can then draw fuel, and the progress is displayed on the POS till's pump control display.

3.2.3 Stopping a Pump

An operator may at any time during the fuelling process temporarily stop a dispenser by pressing the STOP button, followed by the pump number if in 'summary view' mode or by pressing the STOP button only if in 'detail view' mode for a specific pump. The STOP button would then change to a START button. To allow fuelling to continue the operator presses the START button, followed by the pump number button if in the 'summary view' mode or presses the START button only if in 'detail view' mode.

3.2.4 Completing a fuel transaction

When the customer has finished fuelling, and placed the nozzle back in the pump's holster, the POS till will advise the operator that the transaction is complete by an audible tone.

Viewed from the summary mode, the outstanding transaction values will then flash yellow. In the detail view mode the status will flash in yellow the words TO PAY along with the SELECT button. If transactions are outstanding on other pumps, the VIEW PUMPS button will also flash yellow.

Note that a maximum of only two fuel transactions can be outstanding against any particular pump, and until one or both of them are cleared, no further fuelling can commence on that pump.

When in the summary view mode, the operator selects a particular transaction for processing by pressing either the current or stored button of the chosen pump on the pump controller. This will cause the selected transaction button to be highlighted in a turquoise blue colour, and the FUEL button at the bottom of the pump controller will flash yellow:

Alternatively, the operator can press the pump number button to view the pump transaction details by pressing either of the SELECT buttons. This will highlight the chosen transaction in a turquoise blue colour, and the FUEL button will start to flash yellow. In either case, the

selected transaction details will also be shown on the customer display at the same time. The transaction data layout is shown in Figure 12.

Note that on the right-hand end of the top line of the customer display there is a single digit number. This indicates whether it is the current (most recent) transaction on the pump in which case the value would be 1, or the stored (oldest) transaction on the pump, in which case the value would be 2.

Pressing the flashing yellow FUEL button will transfer the selected fuel transaction over to the POS operator display and add it to the sales transaction currently being compiled for payment.

3.2.5 Voiding a Selected Fuel Transaction

If a fuel transaction item has been mistakenly passed across to the sales transaction, pressing the VOID POS function button permits the fuel transaction to be passed back to the pump controller. The operator may void either a specific item in the sales transaction, or all items in the sales transaction.

Voiding a fuel transaction item clears it from the operator display, and unlocks the fuel transaction on the pump controllers of all POS tills on the system. This enables the transaction to be selected by any POS till.

3.2.6 Printing a Receipt

The operator can print a VAT receipt for any sales transaction that has occurred within the past twenty shifts. To print a receipt for a transaction that has just been completed, the operator can press the RECEIPT POS function button. A typical receipt is shown in Figure 13.

3.3 Interlocks and Security features

3.3.1 In the event of a mains power failure the UPS will provide power for a period of no less than 15 minutes to allow all transactions to be paid off.

3.3.2 Duplicate transaction receipts are clearly marked “COPY RECEIPT”

3.3.3 With both current and stored sales for a pump in the **not paid** status, no further Sales may be authorised on that pump until either of the sales for that pump has been paid.

3.3.4 Grade prices cannot be changed while any sales are currently active on pumps.

4 AUTHORISED ALTERNATIVES

4.1 Printer

Any compatible CE marked printer may be connected to the POS till.

4.2 Barcode scanner

Any compatible CE marked scanner may be used.

4.3 Cash drawer

This may be any CE marked simple cash drawer with a solenoid release. It is triggered from the back of the POS if an internal printer is used, or from the back of the external printer.

4.4 Back Office System

Any CE marked PC used for management purposes only may be connected to the LAN switch.

4.5 Alternative POS PC - Epson IR-320 Model no. M156X (Figure 14) (Amendment 2, see 1828/38 Amendment No 2)

The existing POS PC and associated operator display and customer display unit may be replaced with the Epson IR320 POS PC.

A protective plastic cover is fitted on the rear of the unit covering the external connection ports and must not be removed during normal use.

The equipment is identified as follows:

Epson IR-320 PC unit, model number M156X
Epson DM-110 Customer Display Units (CDUs): M58DB or M129C
Note: Any suitable CE marked CDUs may be used.

4.6 Alternative POS PC - Epson IM-800 Model no. M183A (Amendment 3, see 1828/38 Amendment No 3)

The existing POS PC and associated operator display and customer display unit may be replaced with the Epson IM 800 POS PC (Figure 15).

A protective plastic cover is fitted on the rear of the unit covering the external connection ports and must not be removed during normal use.

The equipment is identified as follows:

Epson IM-800 PC unit, model number M183A
Epson DM-M820-024 touch screen panel with card swipe, model number S1201D.
Epson DM-110 Customer Display Units (CDUs): M580B or M129C

Note: Any suitable CE marked CDUs and touch screen panel with card swipe may be used.

4.6.1 Alternative PSU with 24 V dc output (Amendment 5, see 1828/28 Amendment No 9)

4.6.1.1 Epson MR 800 (IM-800, M183A) as described in the certification, but having fitted an alternative Power Supply Unit (PSU) providing a 24 Vdc output suitable for supplying printers and/or till units, or any device requiring 24 Vdc.

4.6.1.2 The modified power supply unit has the part number Delta Electronics INC DPS-180MB-2 XX (where XX=0-9, A-Z or blank). A view of the back panel (cover shown removed) is shown in Figure 25.

4.7 Alternative POS PC - Epson IR 700, Model number M215A (Amendment 7, see 1828/38 Amendment No 7)

The existing POS PC and associated operator display and customer display unit may be replaced with the Epson IR 700 POS PC as shown in Figures 26 and 27.

The equipment is identified as follows:

Epson IR 700 PC unit, model number M215A

Epson DM-LX121SV touch screen panel model number M217A.

Epson 3 track magnetic stripe reader (MSR).

Epson DM-D210 Customer Display Unit (CDU): M59DB

Epson printer TM-T88III, model M216A

Note: Any suitable CE marked CDUs and serial port printer may be used.

4.8 Alternative POS PC – Radiant Systems P1220 (Amendment 8, see 1828/38 Amendment No 8)

The existing POS PC and associated operator display and customer display unit may be replaced with the Radiant Systems P1220 POS PC as shown in Figures 18, 19 and 20. It has an Intel Celeron M processor and 852 chipset and up to 2 GB of memory. The storage device may be a hard drive, CF Card, or uDOC

4.9 Alternative POS PC – Radiant Systems P1520 (Amendment 8, see 1828/38 Amendment No 8)

The existing POS PC and associated operator display and customer display unit may be replaced with the Radiant Systems P1520 POS PC (Figure 21). This is similar to the P1220 but has a 15" LCD operator display. The Port layout is shown in Figure 22.

4.10 WEIGHING INSTRUMENT (Amendment 4, see 1828/38 Amendment No 4)

Any weighing instrument having a type approval certificate in accordance with The Council Directive 90/384/EEC on Non-Automatic Weighing Instruments may be connected to the store controller serial port. The software controlling the operation of the weighing instrument is described in NWML Test Certificate GB-1156. Figure 5 shows software issue status.

4.11 PRE-PAY FACILITY (Amendment 4, see 1828/38 Amendment No 4)

4.11.1 Introduction

In the pre-payment method, fuel is paid for before it has been drawn.

Note: The pre-pay option is only suitable for introduction where the associated dispensers are equipped with two stage solenoid valves or similar arrangements whereby the dispenser can stop at a precise volume or monetary value. It is also only suitable for use with manned kiosks (not suitable for unmanned sites).

4.11.2 Construction

Implementation is by software. Issue status is “SDL Fuel Dispensing Self-Serve System Version 2.0”.

Note: Now Version 3.0 as described in section 2.4.2 (Figure 5)

4.11.3 OPERATION

4.11.3.1 When the pre-payment method is in operation, the PRE button will become available on the pump controller side of the main sales screen. See Figure 23.

4.11.3.2 To prepare a pre-payment transaction, press the PRE button to display the Fuel Pre-Payment screen:

Using the PUMP NUMBER button, the hose list, SALE AMOUNT button, and numeric keypad, enter the necessary information about the proposed transaction. Pressing the ACCEPT button will then check the availability of the pump for this sale, and if it can proceed, will create an entry for the sale of this product on the Operator Display of the main sales screen. This can then be paid for by any available payment method the system is configured to accept. A receipt ticket will be issued to the customer indicating the amount paid. See Figure 24

Note: Only one pre-paid transaction can be set up on any dispenser at any one time. It is not possible to stack pre-payments on the same dispenser. In order to protect the transaction for the duration of its cycle, the dispenser is locked to the specific till that is processing the transaction. This prevents other tills on the system accessing the dispenser until it becomes idle again.

4.11.3.3 After the transaction has been paid for (and receipt generated if required), the customer can then go back out to the dispenser and perform the fuelling process. Note that the pump will still call for authorisation when the selected nozzle is removed, but that only the controlling till is able to release the pump.

4.11.3.4 If the customer draws the full amount to which he is entitled, then upon replacement of the nozzle in the dispenser’s holster, the sale will complete on the pump controller display of all kiosk tills (indicated by the audible tone), and automatically clear from the screen.

4.11.3.5 If the customer draws less than the full amount paid for, the sale will complete with the audible tone as above, but will remain on the pump controller displays of the kiosk tills. This is so that a refund can be made for the un-drawn element of the pre-paid transaction.

Note: The refund procedure can only be carried out on the controlling till, and so if any other till tries to access this transaction they will be unable to access this data, and a REFUND message is flashed up over the sale amount displayed.

4.11.3.6 When the controlling till accesses the transaction and presses the FUEL button to transfer it to the Operator Display a refund entry for the un-drawn amount will automatically be displayed. This refund can then be completed by the operator by means of

any of the payment methods configured on the system. The refund receipt then generated would appear as in shown in Figure 24.

4.12 Optional alternative fuel POS unit: Epson IR 700 (Amendment 6, see 1828/28 Amendment No 12)

As described in the certification, but having the option to use the Epson IR 700 POS unit as described below and as shown in Figures 21 and 22.

Alternative PC Assembly (Epson IR 700)

A POS system comprising:

- Epson IR 700 PC unit, model number M215A
- Epson DM-LX121SV touch screen panel model number M217A.
- Epson 3 track magnetic stripe reader (MSR).
- Epson DM-D210 Customer Display Units (CDUs): M59DB
- Note: Any suitable CE marked CDUs may be used.
- Epson printer TM-T88IIIX, model M216A
- Note: Any suitable CE marked serial port printer may be used.

4.13 Alternative POS PC - Toshiba TEC ST-71 (Figure 28)

The Toshiba TEC ST-71 is a POS unit integrating a PC, a touch screen display with card swipe, and a customer display unit (CDU). The port layout is shown in Figure 29. The system comprises:

- Toshiba TEC ST-71 PC unit, model number ST-71
- Toshiba TEC 12 V power supply unit, model number EA10953A1
- Note: optionally, any suitable CE marked power supply unit may be used
- Toshiba TEC ST-71 touch screen panel with card swipe
- Toshiba TEC ST-71 integrated customer display units (CDUs)
- Toshiba TEC receipt printer TRST-56-S-1G-QM
- Note: Optionally, any suitable CE marked serial port printer may be used

4.14 Alternative POS PC - TEC ST-6501

The Toshiba TEC ST-6501 is a PC based electronic till having an LCD touch screen operator display with a built-in card swipe as shown in Figures 30 and 31.

4.15 Alternative POS PC - Toshiba TEC ST A-10

As described in the certificate but having the alternative POS PC designated **TEC ST A-10** manufactured by Toshiba. The PC may have any peripheral equipment connected identified in the certificate.

This is a PC based electronic till having an LCD touch screen operator display with a built-in card swipe as shown in Figure 32.

4.16 Alternative POS PC – Panasonic JS-790WS (Figure 33)

This is a PC based electronic till having an LCD touch screen operator display, it may have any peripheral equipment connected to it as identified in the certificate, **however the receipt printer and customer display must be connected using screened RS232 serial cables.**

4.17 Alternative POS PC – IBM SurePos 500

This is a PC based electronic till having an LCD touch screen operator display with a built-in card swipe as shown in Figure 34. The PC may have any peripheral equipment connected identified in the certificate.

4.18 Alternative POS PCs: Toshiba models ST-A10 and ST-A20

These are PC based electronic tills having an LCD touch screen operator display with a built-in card swipe.

4.19 Alternative POS PC: Odysse manufactured by AURES Technologies Ltd

As described in the certificate but having the alternative POS PC designated Odysse manufactured by AURES Technologies Ltd.

4.20 Alternative POS PC: ELO Model 15D1

This is a PC based electronic till having an LCD touch screen operator display with a built-in card swipe and integrated customer display.

4.21 Alternative POS PC: Galeo manufactured by AURES Technologies Ltd

As described in the certificate but having the alternative POS PC designated Galeo manufactured by AURES Technologies Ltd.

This is a PC based electronic till having an LCD touch screen operator display with a built-in card swipe.

5 RECOMMENDED TESTS

5.1 Check that the UPS maintains power to the system allowing operation to continue for 15 minutes after the power is switched off.

5.2 If a Panasonic JS-790WS POS PC is installed check to ensure that the receipt printer and customer display are connected using screened RS232 serial cables.

6 CERTIFICATE HISTORY

ISSUE NO.	DATE	DESCRIPTION
Certification No 1828/38	8 th March 2002	Type examination certificate first issued.
Certification No 1918/62	8 th March 2002	Type examination certificate first issued.
Certification No 1940/59	8 th March 2002	Type examination certificate first issued.
Certification No 1958/52	8 th March 2002	Type examination certificate first issued.
Certification No 2017/56	8 th March 2002	Type examination certificate first issued.
Certification No 2162/75	8 th March 2002	Type examination certificate first issued.
Certification No 2176/62	8 th March 2002	Type examination certificate first issued.
Certification No 2223/18	8 th March 2002	Type examination certificate first issued.
Certification No 2286/41	8 th March 2002	Type examination certificate first issued.
Certification No 2437/24	8 th March 2002	Type examination certificate first issued.
Certification No 2486/43	8 th March 2002	Type examination certificate first issued.
Certification No 2536/40	8 th March 2002	Type examination certificate first issued.
Certification No 2650/42	31 st December 2002	Type examination certificate first issued.
Series V005 Revision 1 of certificates above	9 th January 2009	Amendments 1 to 9 and variants consolidated into one document.
Series V005 Revision 1 Revision 2 of valid certificates above	9 th January 2009	Section 4.6, any suitable CE marked touch screen panel with card swipe may be used.
Series V005 Revision 2 Revision 3 of valid certificates above	5 th October 2009	Section 4.11, Alternative POS PC - Toshiba TEC ST-71 Section 4.12, Alternative POS PC - TEC ST-6501 Section 4.13, Alternative POS PC - Toshiba TEC ST A-10
Series V005 Revision 3 Revision 4 of valid certificates above	01 May 2012	Section 4.14, Alternative POS PC – Panasonic JS-790WS Section 4.15, Alternative POS PC - IBM SurePos 500 Section 5.2 added
Series V005 Revision 4 Revision 5 of valid certificates above	11 February 2013	Section 2.1.2 DOMS PSS5000 Compact site controller Sections 4.18 to 4.21 - alternative Pos added

Note: Expired certificates are included for completeness. Further revisions only apply to valid certificates.

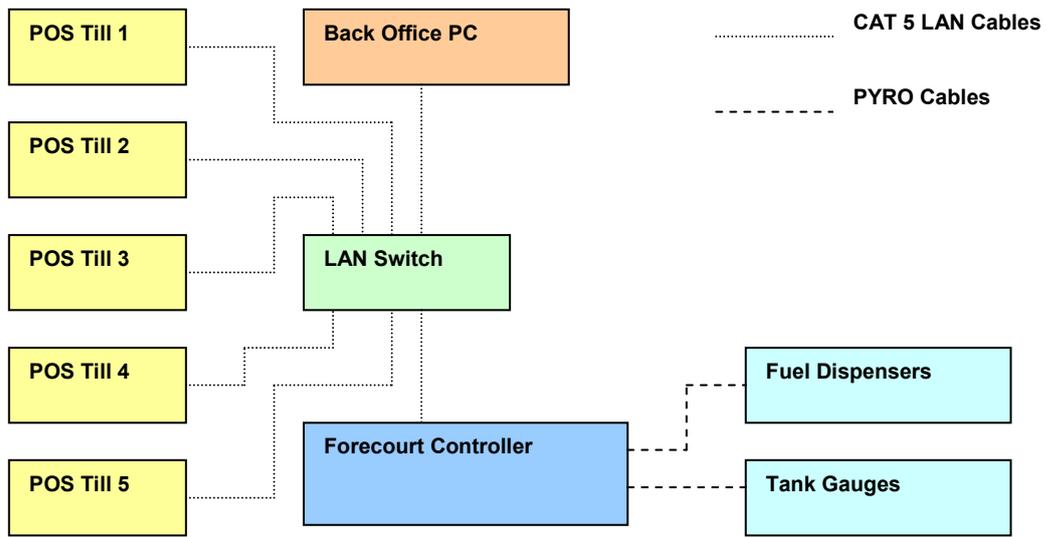


Figure 1 SDL POS System Schematic

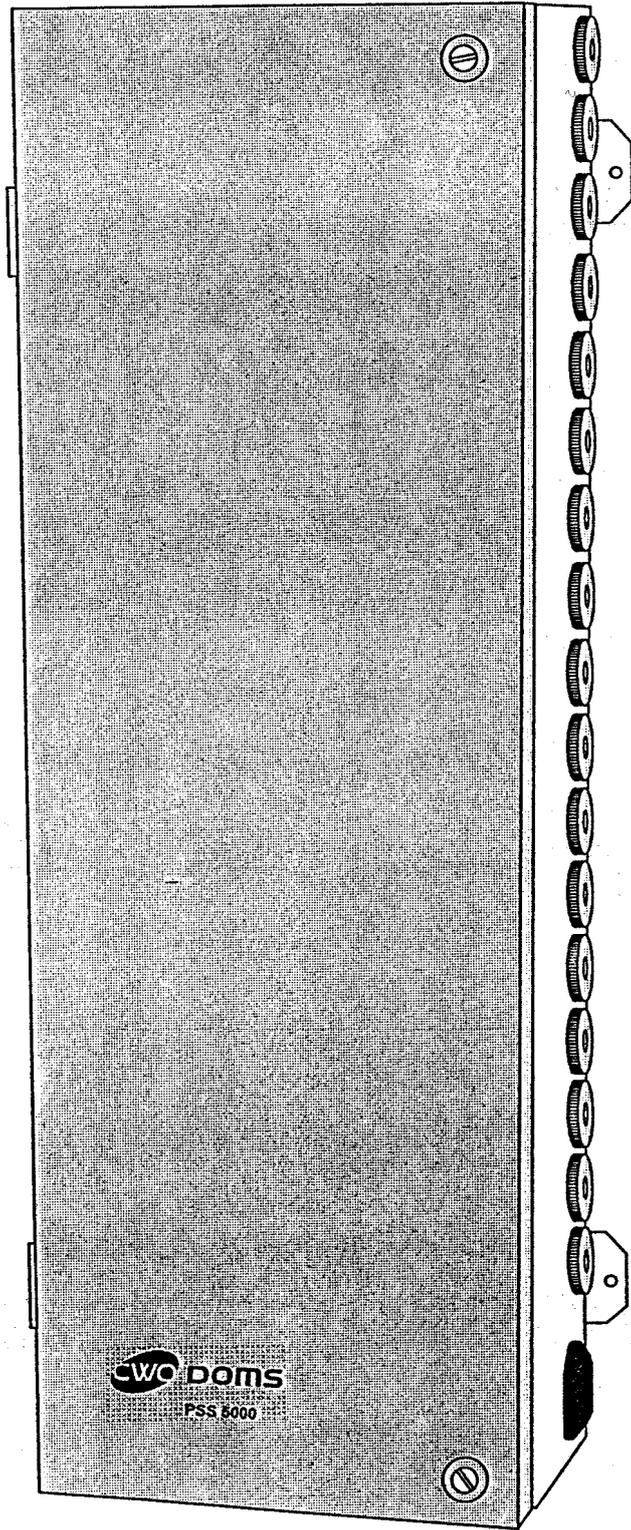


Figure 2 **DOMS PSS 5000 enclosure**

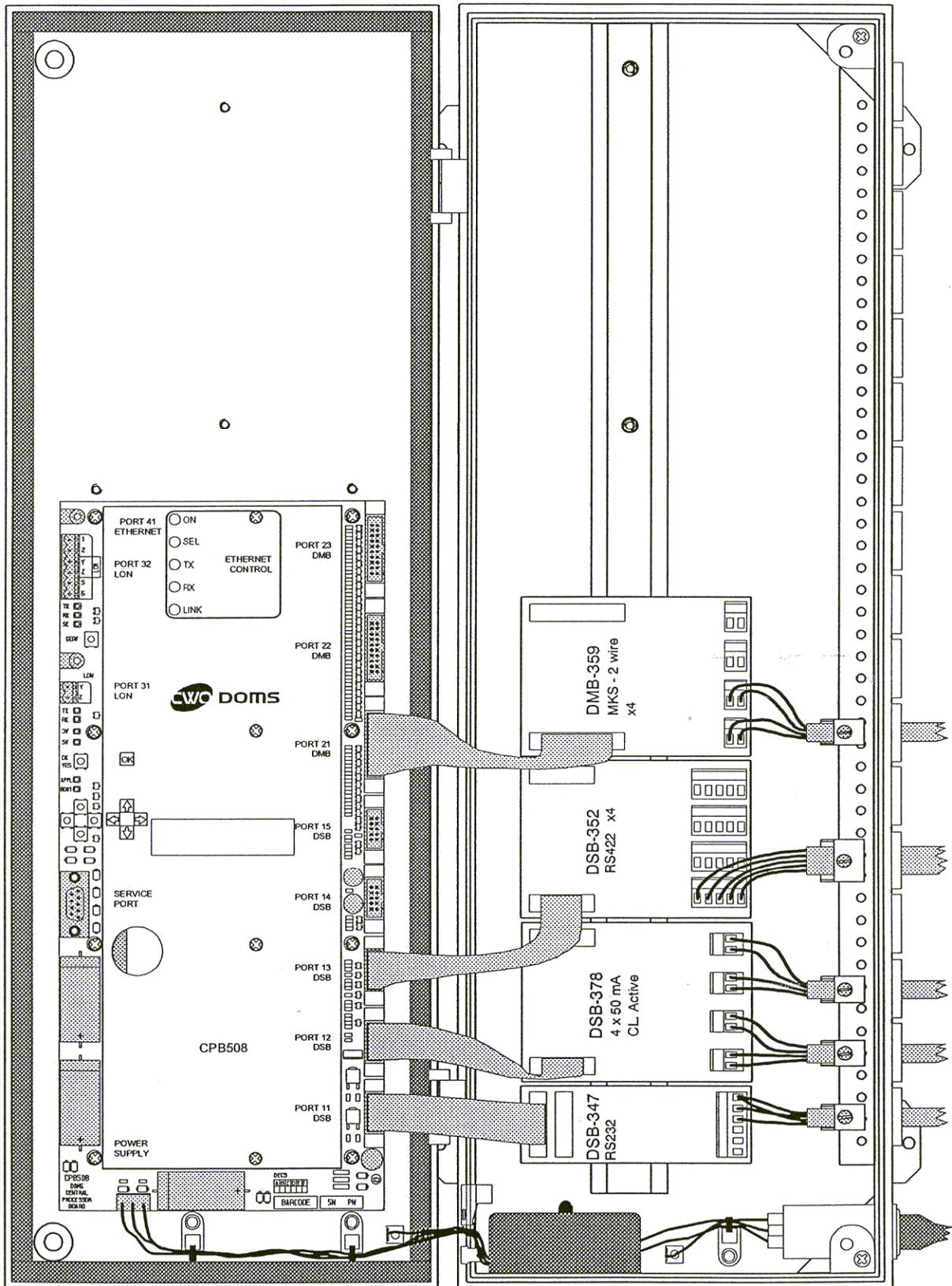


Figure 3 DOMS PSS 5000 typical electronic component layout



Figure 4 Central Processing Board (CPB508) display and menu navigation keys



Figure 5 Software version number

Pump	Current	Stored	Stuart Forrister		5:06pm Thu 27 Dec 2001		
1	13.29	10.59	<div style="background-color: blue; height: 100px; width: 100%;"></div> <div style="background-color: yellow; padding: 5px; text-align: right;">TO PAY 0.00</div> <div style="background-color: yellow; padding: 5px;">SALE:</div>				
2	12.88						
3	11.07	13.45					
4							
5	13.95						
6	6.25						
7							
8	11.12	14.08					
10							
1-10	11-20	21-30	MENU	LOCK	SUSPEND	SAFE	
START	STOP	FUEL	KEY	ENQ	DISC	PAID OUT	
			1	2	3	CLEAR	CREDIT
			4	5	6	VOID	PAN-KEY
			7	8	9	REFUND	MANUAL
			0	00	X	PRE-PAY	CHEQUE
			ENTER		RECEIPT	CASH	

Figure 6 Operator display 'summary view'

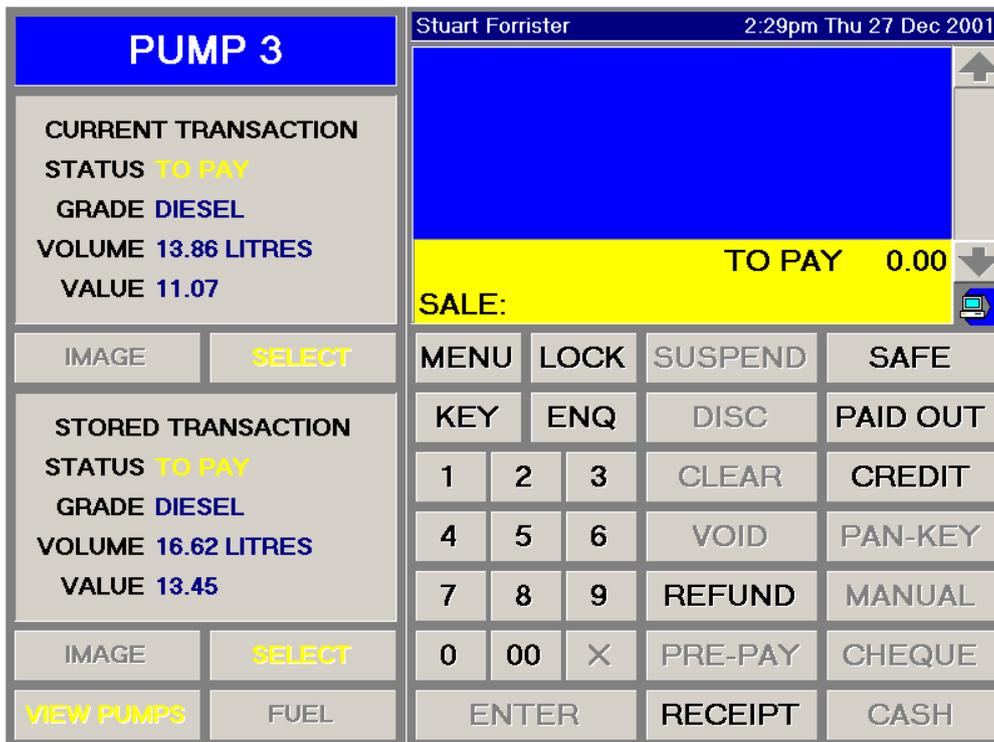


Figure 7 Operator display 'detailed view'



Figure 8 Epson IM-310 incorporating DM-D106 customer display and TM-88II printer



Figure 9 Epson IM600 incorporating DM-D110 customer display



Figure 10 Netgear Fast Ethernet Switch FS308-8 Port 10/100



Figure 11 Netgear Fast Ethernet Switch FS516-16 Port 10/100

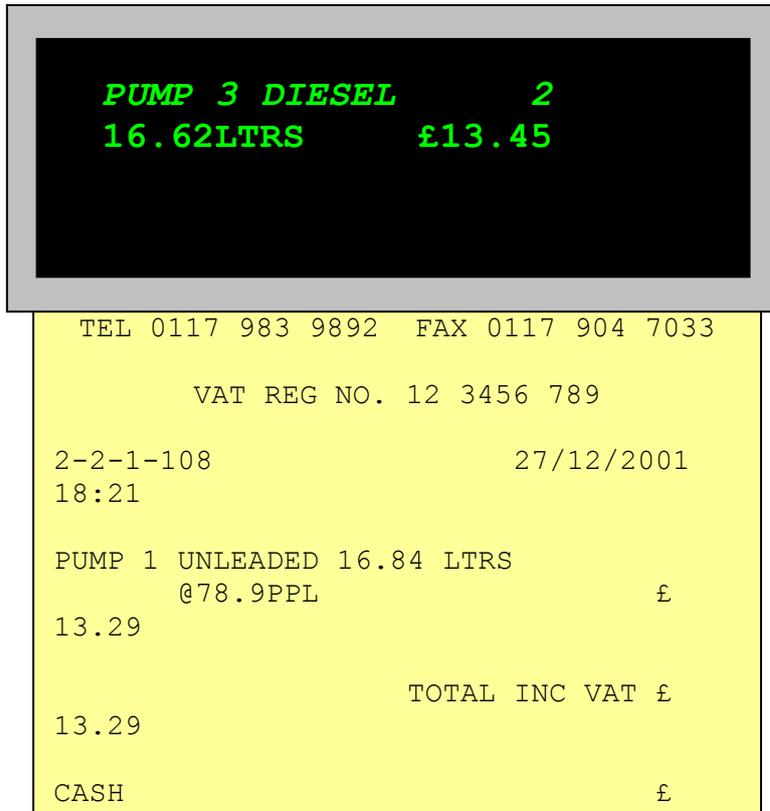


Figure 13 Typical customer receipt



Figure 14 Epson IR-320 Model no. M156X



Figure 15 Rear of Epson IR-800 Model no. M183A with cover removed



Figure 16 Epson IR 700 – front view



Figure 17 Epson IR 700 – showing rear connections with protective cover removed



Figure 18 P1220 terminal



Figure 19 Port layout of P1220 with integral power supply



Figure 20 Port layout of P1220 with external power supply



Figure 21 P1520 terminal

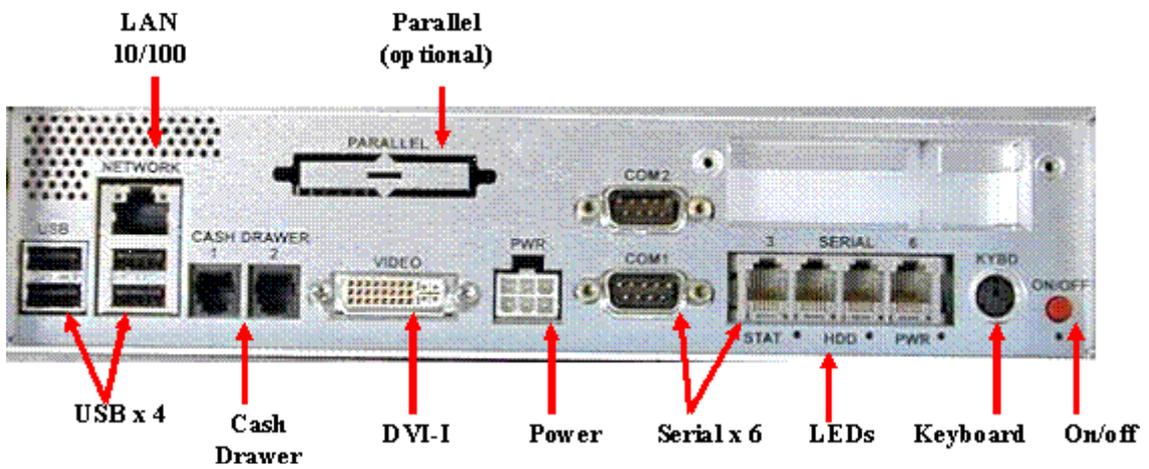


Figure 22 Port layout of P1520

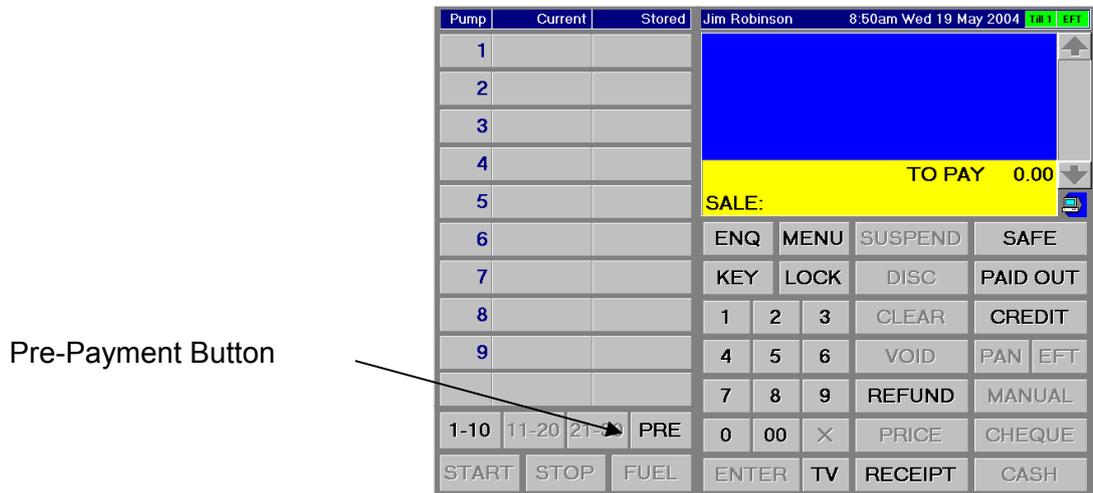


Figure 23 operators display showing pre-payment button



Figure 24 payment receipt ticket and subsequent refund receipt ticket



Figure 25 View of back panel – cover removed - showing 24 V outlet



Figure 26 Epson IR 700 – front view



Figure 27 Epson IR 700 – showing rear connections with protective cover removed



Figure 28 Toshiba ST-71 with integrated customer display unit



Figure 29 Port layout of ST-71 terminal



Figure 30
Toshiba TEC ST-6501 - showing integrated card swipe

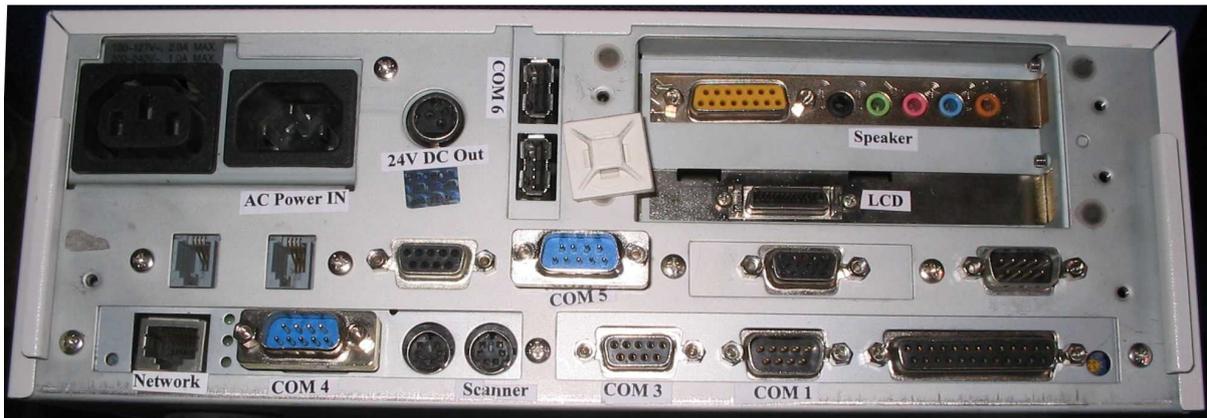


Figure 31
Toshiba TEC ST-6501, schematic view showing ports and connections - cover removed



Figure 32 **Toshiba TEC ST A-10**



Figure 33 **Panasonic JS-790WS**



Figure 34 IBM SurePos 500