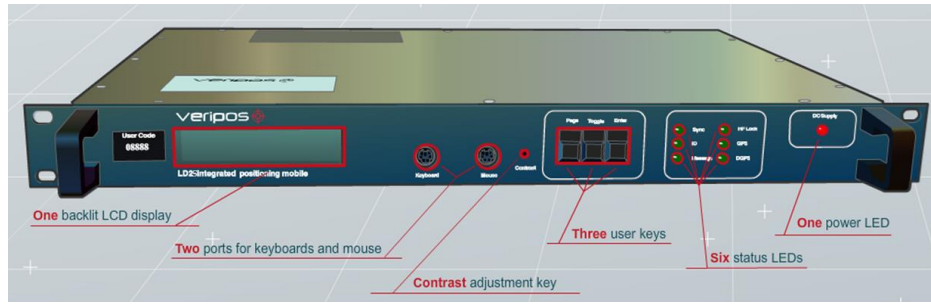


VERIPOS LD2 Quick guide



VOSS: <http://help.veripos.com>



1. Use cables & adaptors supplied:

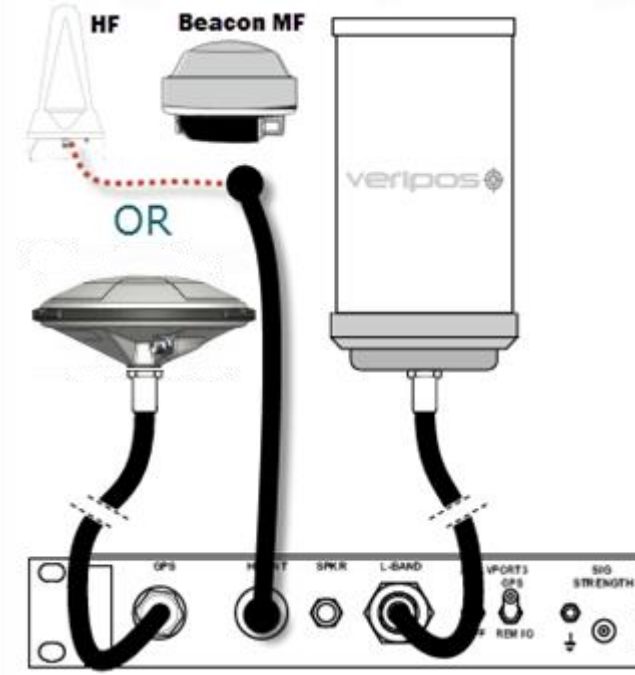
- Antenna tails (L-band N-Type /GNSS TNC) to suit
- 1 x AC power lead
- Optional - DB9- DB9 serial output cables to suit configuration



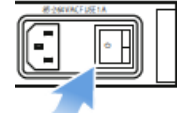
2. Antennas: - see LD2 Installation manual for more information.

GNSS	e.g. V460, GA530 AD491	
L-Band	e.g. 90984, V86	
MF Marine Beacon (Optional)	e.g. CDA-3, A31	
HF (Optional)	DHM 5000	

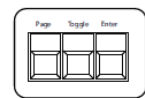
3. Connecting the LD2 - make connections to the LD2 as shown;



4. Turn on LD2 power at rear and wait until unit has initialized;



Use the front panel keys to navigate and set up the LD2 screen:



- Page key:** Advances the display through the options in a menu level. After the last menu option in the current menu level, the display moves back to the entry point of that menu.
- Toggle key:** Shows the range of data entries available in a menu
- Enter key:** Displays the selected menu option, accepts a data entry and advances the display to the next data entry field.

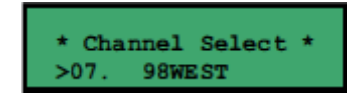
5. Beam Selection

To use Veripos corrections the LD2 must be synced to a geostationary satellite beam. A more detailed description is in the LD2 Operations Manual.

Select a Veripos correction satellite beam for your vessel work area:

Beam	Coverage
143.5E	Asia, Australasia, Indian Ocean
POR	East Asia, Australasia, Alaska
IOR	Asia, Indian Ocean, East Africa, Persian Gulf, Caspian Sea
25E	North Sea, Mediterranean Sea, Africa, Persian Gulf, Caspian Sea
AORW	North America, Gulf of Mexico, South America
98W	North America, Gulf of Mexico, South America
AORE	North Sea, Mediterranean Sea, Africa

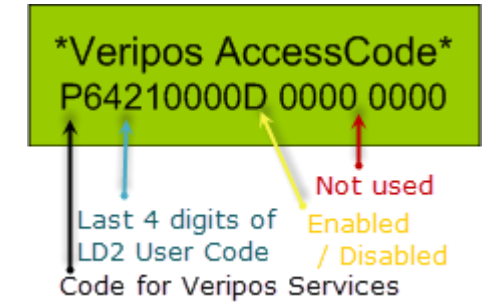
Press **Page** until **Main Menu / Configuration**
 Enter 1x to **Configuration / Demodulator**
 Enter 1x to **Channel Select**. Enter.
Toggle until beam required is shown, **Enter**.
Toggle from N to Y, **Enter**.
 > chevron shows beam in use.



6. Enable for Veripos Corrections

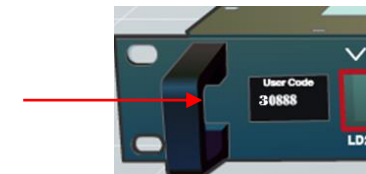
The LD2 needs to be synced to a regional beam before enabling.

Press **Page** until **Access Code** shows, then **Enter** to view current status:



- Service Access Licence number (**SAL**). This is the contract number for augmentation services provided by Veripos to you / your client and must be provided when requesting service activation / deactivations.
- User Code** for the IMU – this is the unique 5 code number printed on the IMU chassis.
- The Veripos Augmentation Service(s) required – advise the Helpdesk of the name / type of service appropriate to your requirements and IMU.

Once you have this information contact the Veripos Helpdesk to request unit activation, quoting your User Code and Service Access Licence (SAL) number.



Provide the unique 5 digit User Code shown on the LD2 front panel (above).

You can download a Service Notification Form from <http://help.veripos.com> to use when contacting the Veripos Helpdesk. Provide the details requested and type of Service(s) you require, e.g. Veripos **Ultra** with **Verify DP**.

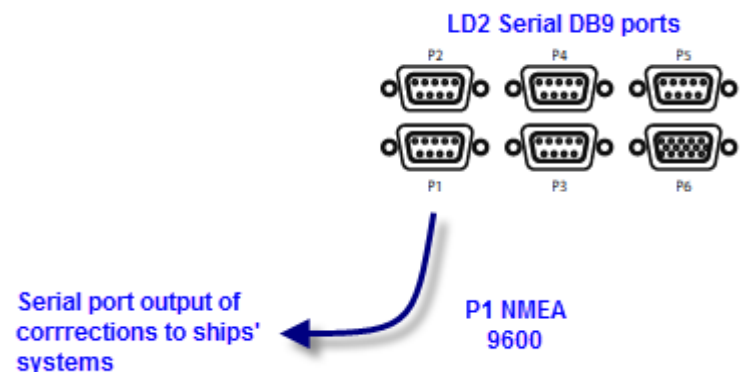
Tel. +44 1224 965900

email: helpdesk@veripos.com

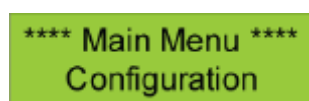


VOSS: <http://help.veripos.com>

Internal Solution output



To output NMEA data on P1:



Go to Main **Menu/Configuration** and access the **Serial Ports** configuration menus by pressing **Enter** then **Page** twice.

Set P1 to **Local** (using **Toggle** then **Enter**) - the P1 output will be generated by the LD2 processor and algorithms (as GGA).

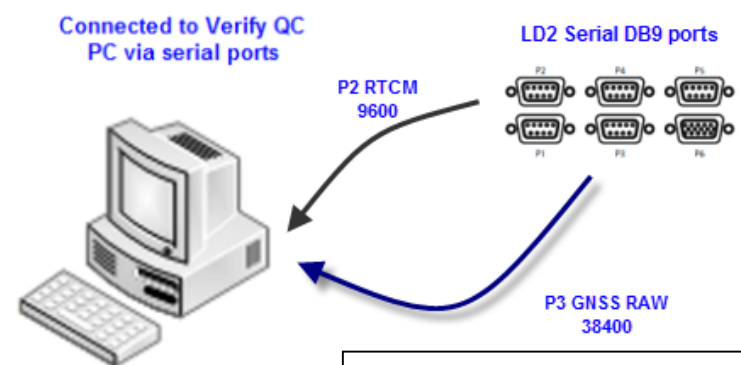
If P1 is set to **GPS Rx** - the P1 output is generated by the GNSS card and will be a ZDA message, usually used in conjunction with a 1 PPS output harness.

To amend Messages output from P1 (Local):

Configuration/GPS Receiver/ Port A Settings then toggle to show message options and use **Enter/Toggle/Enter** to add message strings required to the **P1 Local** output.

7. Verify QC Serial Port Solution output (Typical)

On the rear of the LD3 set P3 switch to **GPS** and set the PC port baud rates.



For LD2 units with rear P3 switch (units with no switch use P5 for RTCM out)

N.B. If your LD2 has **no rear P3 switch**, set P5 to Remote (see later in this section)

Serial ports

Serial ports are used to make connections to ships systems or Verify QC.

You can view and amend baud rates, outputs or inputs, etc. by navigating to **Main menu / Configuration** screen & access the **Serial Ports** configuration menu by pressing the **Enter** key followed by the **Page** key twice.

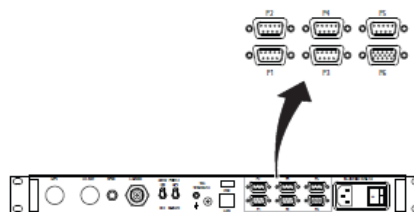
This provides access to the six sub menus which allow the user to set the parameters and options for all Port outputs.

- Qualifiers:
- Where P3 is set to **"Remote"** (not to **"GPS"**)
 - P2 and P4 used for output of RTCM messages

DB9 EIA232 Pin out

- 2 Received Data
- 3 Transmitted Data
- 5 Signal Ground

There are five RS-232 ports, one VGA output, one USB and a LAN port.



Port 1 – D9

When set to "LOCAL", port 1 is the primary NMEA output for position from the processor algorithm. When set to "GPS RX", port 1 outputs a ZDA time message. A 1 PPS output can also be taken from P1 to use in conjunction with the ZDA message.

Port 2 – D9

Port 2 is the primary RTCM output and is used for internal corrections by the processor algorithms. The processor card is capable of utilizing 4 stations in this way.

Port 3 – D9

Port P3 is used for the remote control of the GPS Receiver and the Demodulator Board.

GPS Gives Raw GPS out, when the Port 3 switch on the back panel of the LD2 is in the **GPS** (up) position.

DEM (Demodulator) gives access to the Demodulator for Firmware upgrades when the switch on the back panel of the LD2 is in the **REM I/O** position.

SKT (socket) allows for NMEA type messages to be output, when port B on the GPS LD2 has been configured to output such messages. It also is

Port 4 – D9

used for input of data of GYRO and xRTCM messages.

OFF No data is input or output from the port.

Port 4 is the secondary RTCM output. N.B. By default all stations set to **OFF**.

Port 5 – D9

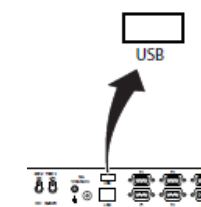
Port 5 is the GPS I/O port. It is internally connected to Port A of the GNSS card. When the Port 5 setting is switched to "Remote", raw GNSS measurements are available on Port 5 for use with external positioning software such as Veripos' Verify QC.

In this mode the GPS menu system becomes disabled and the LD2 processor stops calculating a position. When the Port 5 setting is switched to "Off", the GPS configuration menu's become active again and Port 5 becomes disabled.

This is the VGA port, used to connect an external monitor to the LD2. Only used when Verify DP is activated and in use.

The **USB** port can be used to set inputs for **xRTCM** corrections or a **GYRO** compass heading input for display (using on-board Verify DP software)

Port 6 – HD15



8. Check LD2 Status

For the LD2 to provide a differential position and RTCM outputs, it must be locked to the correct communications satellite ("beam" or "channel") for the current vessel location.

To display which beam is selected, the strength of signal and the lock status.

Press **Page** until screen displays **Main Menu/Status**
Press ***Enter*** and screen will display:

Status /Demodulator
Press **Enter/Page/Enter** to access the **Signal Status** page

9. Beam Table updates

Veripos beam tables are updated for users over the air.

Where a unit has not been used for an extended period, customers may request a refresh for the LD2 from the Helpdesk or see the LD2 Operation Manual for **Channel 16 Edit** details.