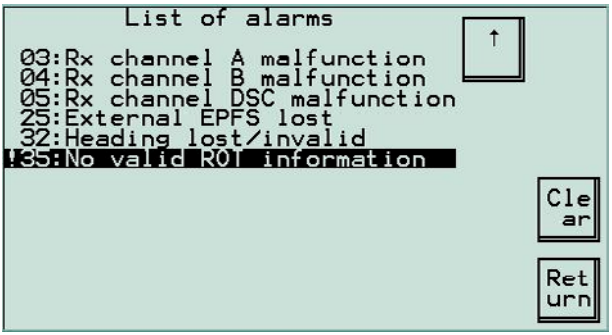
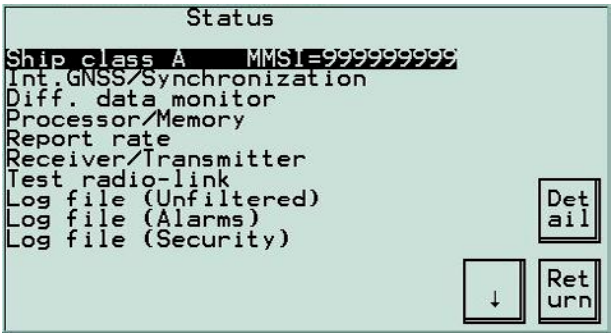
All active alarms will be displayed along with an exclamation mark (**!**) next to the alarm number. To clear the alarm, select that alarm and press CLEAR, the exclamation mark will disappear. When all alarm conditions have no exclamation mark (**!**) the BIIT relay will deactivate.

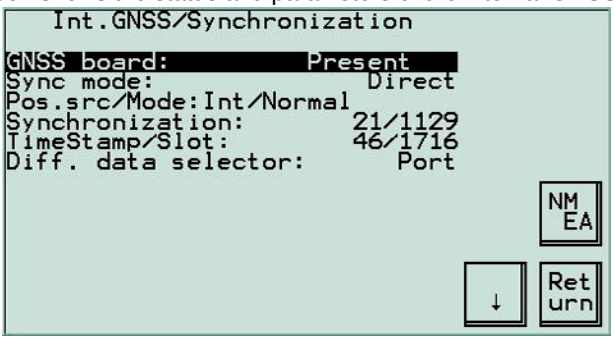


3.26 Show Status Menu

These screens relate to the performance of the Transponder.
The first screen shows the Purpose (SOLAS ships must show Class A) and the MMSI number. Refer to sections 4.4 and 4.3 for further details.



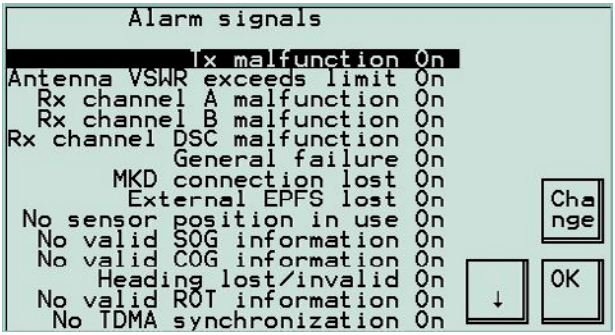
The next screen shows the status and parameters of the internal GNSS

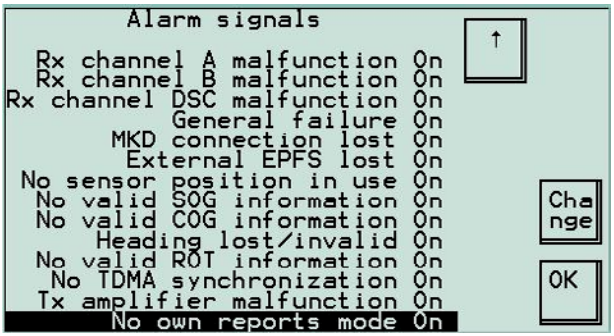


4.18 Alarm Signals Menu

(Default = On)

In this menu, the status of different alarm signals can be viewed and enabled or disabled. The alarm signals will give validity information to the operator in case a fault occurs. Therefore it is recommended to keep all the alarm signals set to 'On' which is the default setting.





The transponder contains a Built-In-Integrity-Test (BIIT) that continuously monitors the standard functions of the equipment. This relay facility should be connected to the ship's main alarm panel. If any failure or malfunction is detected that will significantly reduce the integrity or stop operation of the UAIS, a single alarm message is displayed on the VDU touch-screen and the BIIT alarm relay activated. If the alarm status continues the appropriate alarm message is repeated every 30 seconds on both the MAIN and AUX ports for display on other connected equipment.

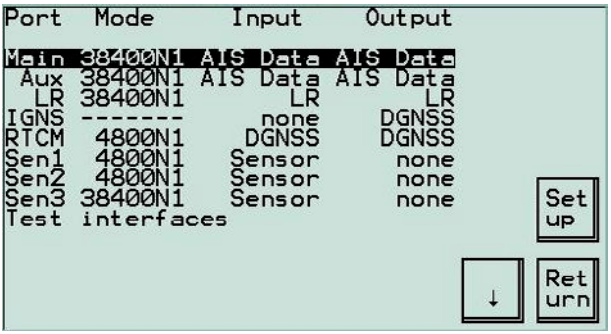
Alarm Text	System Reaction
Tx malfunction	Stops transmission
Antenna VSWR exceeds limit	Continues operation
Rx channel A malfunction	Stops transmission on affected channel
Rx channel B malfunction	Stops transmission on affected channel
Rx channel DSC malfunction	Stops transmission on affected channel
General failure	Stops transmission
MKD connection lost	Continues operation with DTE set to 1
External EPFS lost	Continues operation
No sensor position in use	Continues operation
No valid SOG information	Continues operation using default data
No valid COG information	Continues operation using default data
Heading lost/invalid	Continues operation using default data
No valid ROT information	Continues operation using default data
No TDMA synchronisation	Stops transmission
Tx amplifier malfunction	Stops transmission
No own reports mode	Continues operation

4.19 RS-422 Set-up Menu

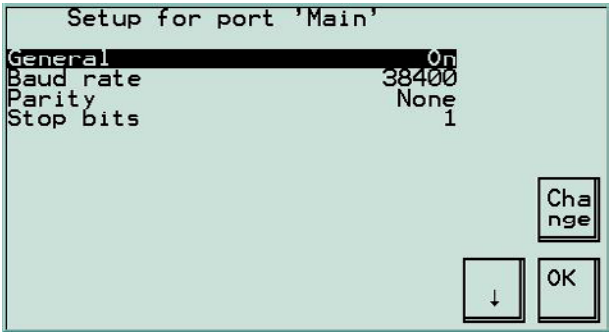
(Default = On)

The **RS-422 set-up** menu is used to configure the mode of the serial connection to the interface ports. The default parameters can be changed to enable correct communication to or from the external equipment connected to the specific port.

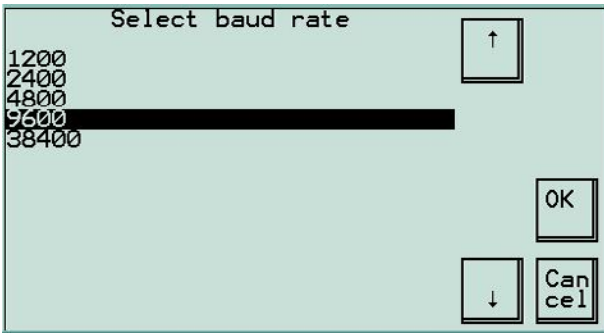
Select the port to setup



Activate port



Select port baud rate



Select port parity

Select port stop bits

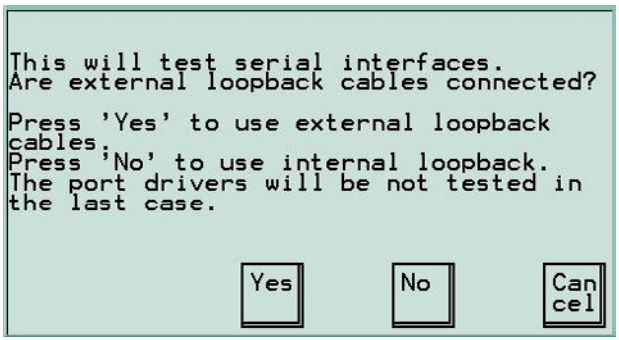
The table shows the parameters that can be set for each port.

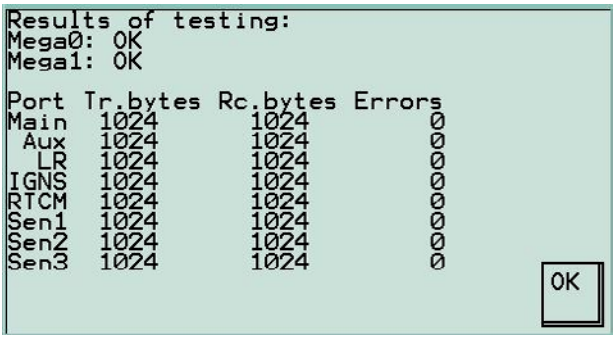
RS-422 Set-up Table

Port	Baud rate	Parity	Stop bits
Main	1200	None	
Aux/Pilot	2400		1
IGNS	4800	Odd	
Long Range	9600		2
RTCM	38400	Even	
Sen1/2/3			

4.20 Test Interfaces

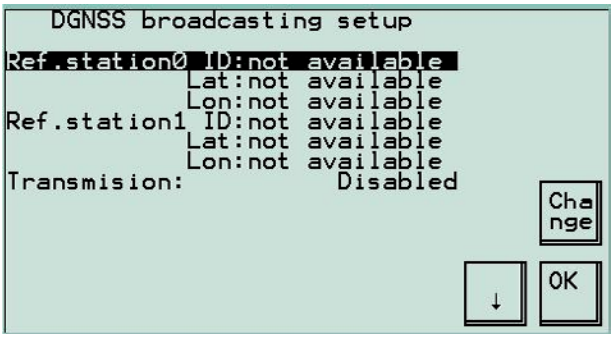
Allows checking of the interfaces for faults, using external or internal loopback. A more detailed description is given in the Service Manual.





4.21 DGNSS Set-up Menu

UAIS can transfer differential data corrections via the AIS channels (message 17). Data received via the RTCM input port may be sent to 2 reference stations whose geographical co-ordinates are known and which have been manually set up. If the reference station is transmitting RTCM message 3, it is showing its own co-ordinates that UAIS can store. No more than 4 reference stations can be stored at any one time.



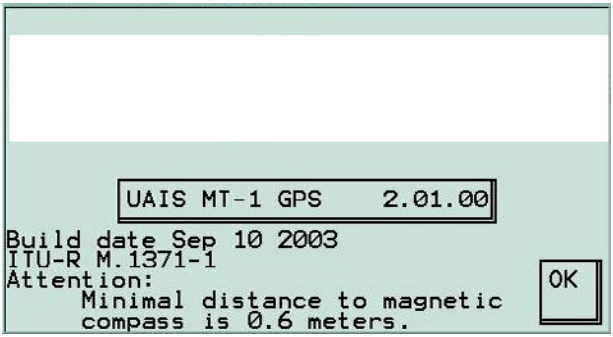
4.22 Engineering Mode

Engineering mode option in the **Main setup** menu is designed for testing and setting up an UAIS at the factory, it is protected by a password known only by authorised personnel. **Users must not activate Engineering mode**.

4.23 Other Options

Other options in the **Main set-up** menu is designed for setting up an UAIS at the factory; this feature is protected by a password known only by authorised personnel.

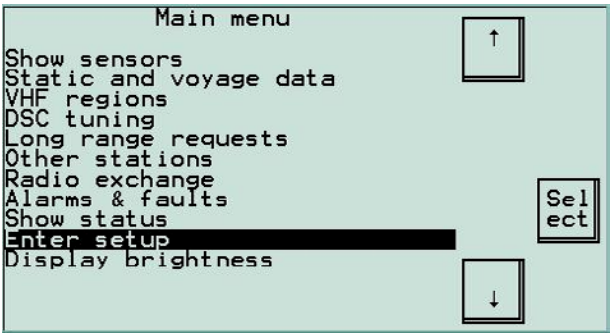
After successful completion of the self-test and communication between the VDU and the transponder has been established the following screen will appear.

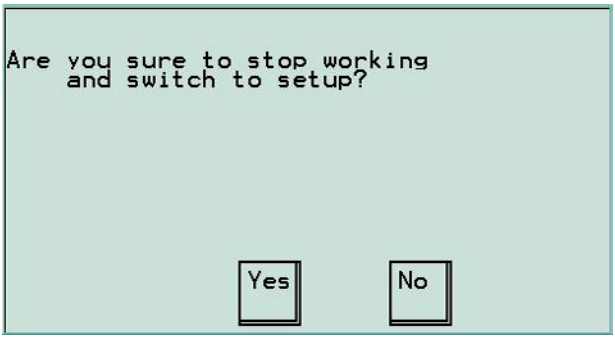


The welcome screen giving the GNSS type (GPS or GLONASS), software version, and software build date then appears, which confirms that the VDU is ready for operation.

Press OK to enter the Main Menu.

SELECT - Enter set-up from the menu.



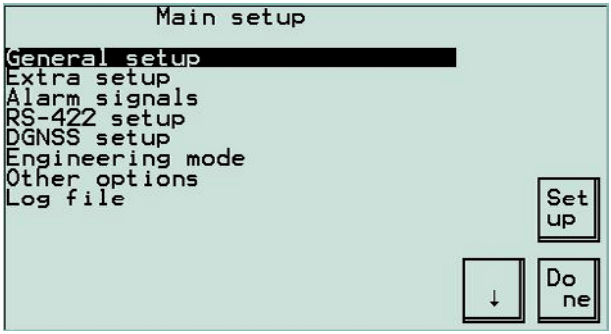


Press Yes to stop data transmission.

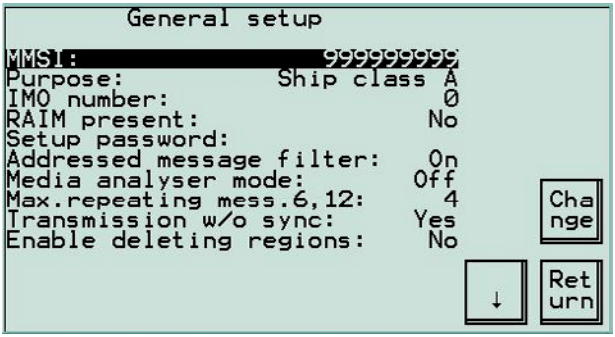
At this point a system password has to be entered. If no previous password has been entered, pressing OK will by-pass this request. A password should be entered to prevent accidental or malicious changing of stored data. THIS PASSWORD SHOULD BE RECORDED IN A SECURE PLACE.

⚠ **WARNING: It is not possible to access Main Setup without entering the correct password. Only authorised service personnel can restore access.**

4.2 Main Set-up Menu



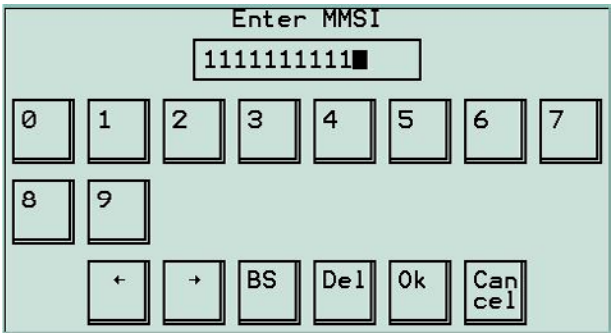
4.3 General Set-up Menu



The **General set-up** menu allows the following parameters to be set up: -

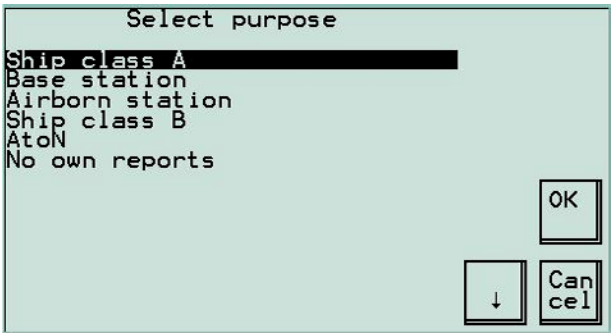
4.4 MMSI

The Maritime Mobile Service Identity (MMSI) number must be entered.



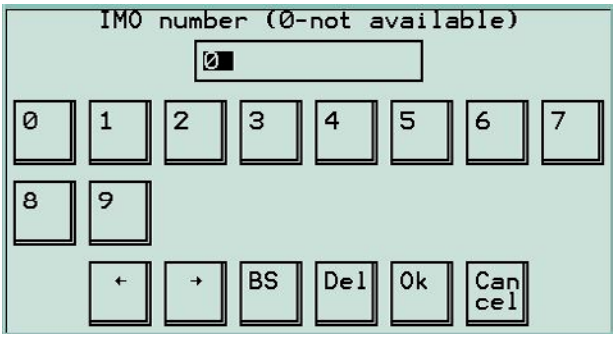
4.5 Purpose

Select purpose of the UAIS station. (SOLAS ships must be set to Ship class A)



4.6 IMO Number

The assigned ship's IMO number has to be entered.



4.7 RAIM Present

(Automatically selected)

The station will automatically check for RAIM presence in working mode – by $--GBS sentences on Sens1, Sens2 or Sens3 inputs. The operator can manually override the automatic selection by highlighting the RAIM line and selecting **Change**. In normal circumstances this function is not used.

4.8 Setup System Password

For safety reasons some data is protected by a system password (maximum 8 characters). When the system is initially switched on, no password exists. Pressing OK allows the user to enter the desired password. We strongly recommend that during commissioning a password is entered to prevent the transmitted data from being erased or amended either accidentally or maliciously. A record of this password must be kept in a safe location as only authorised service personnel can by-pass this system password.

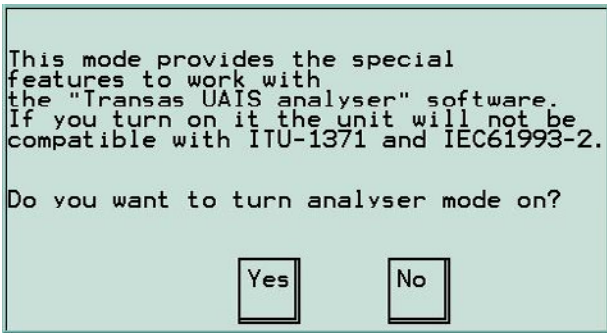
4.9 Addressed Message Filter

(Automatically selected)

Enables filtering of addressed UAIS messages. When addressed message filter is “on” the station does not display messages addressed to other AIS stations, when “off” all received addressed messages will be displayed.

4.10 Media Analyser Mode

Designed to work with the proprietary Transas media analyser software. This option should be set to “No”.



4.11 Max. Repeating Message 6, 12

(Default = 4)

This is the maximum number of times message 6 (addressed) and 12 (addressed safety) are repeated if no acknowledgement is received.

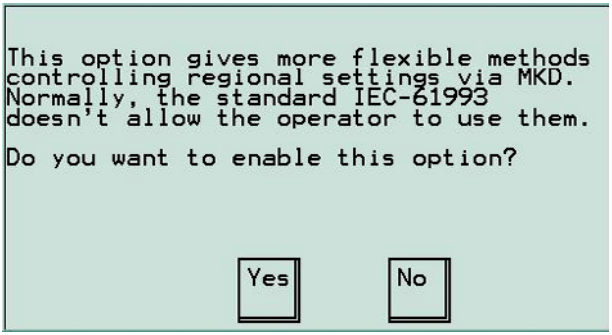
4.12 Transmission w/o Sync

(Default = Yes)

The built-in GNSS unit will under normal conditions only be used for TDMA slot timing. However if no data are received from the external sensors, the built-in GNSS unit can be set to take over automatically and supply navigational information for the VHF data link transmission. The changeover between internal GNSS information use and external sensor information use happens automatically, information received from the external sensors has priority and will always be used when available. If no time slot synchronisation is available from either of these sources and cannot be obtained from another station then this feature allows transmission without TDMA synchronisation.

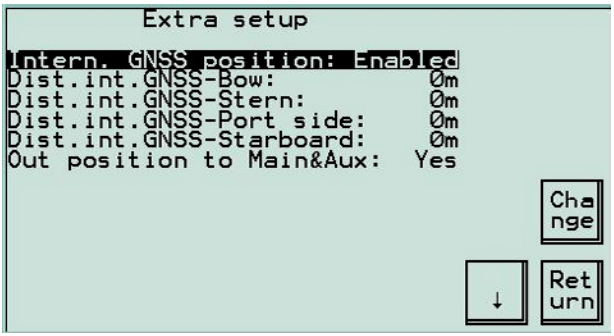
4.13 Enable Deleting Regions

Recommendation: leave at the default = No



Press Return to exit **General set-up** and return to **Main set-up** menu.

4.14 Extra Setup Menu

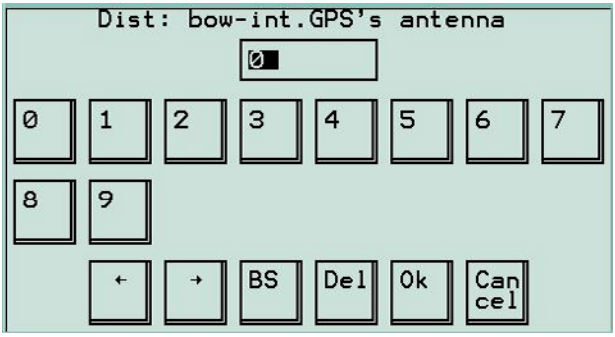


From the **Main set-up** menu, select **Extra set-up** that has the following options :-

4.15 Intern. GNSS Position

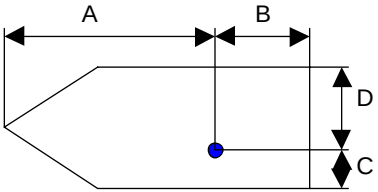
The internal GNSS is used for TDMA synchronisation. However, if the navigational information is not supplied from the main external GNSS, the internal GNSS unit may be utilised to supply the navigational information. The recommended setting for this parameter is 'Enable'.

4.16 Dist.Int.GNSS-Bow
Dist.int.GNSS-Stern
Dist.int.GNSS-Port
Dist.int.GNSS-Starboard



If the internal GNSS is enabled to supply navigational information it is necessary to set up the relative position of the GNSS antenna as illustrated below. This should be carried out during commissioning.

The distances marked as A, B, C and D on the illustration below are the distances from the internal TDMA synchronisation GNSS antenna to the ship's bow, stern, port side and starboard. Distances are in meters, see below table for maximum values.



	Distance (mtrs)
A	0-511 = 511m or greater
B	0-511 = 511m or greater
C	0-63 = 63m or greater
D	0-63 = 63m or greater

In the rare case of a GNSS antenna installed in the portside corner of a rectangular bow, the values A and C would both be zero. Should this be the case, either A or C should be set to 1 to avoid misinterpretation, because A=C=0 is used to signify "not available".

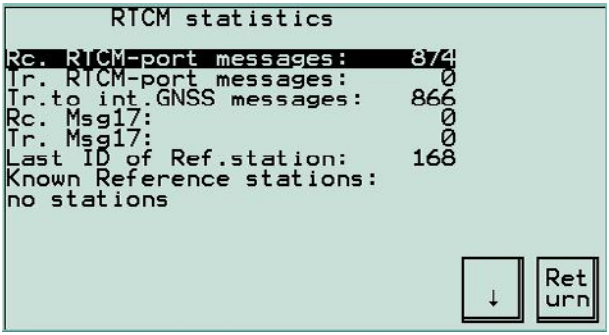
4.17 Out Position to MAIN & AUX

(Default = Yes)
If own ship's position information is required as an output from the Transponder to another device i.e ECDIS or ARPA.

Press 

to exit **Extra set-up** and return to **Main set-up** menu.

This screen, the Differential Data Monitor, shows the statistics of the differential GPS, input through the RTCM port



3.27 Processor Memory

Only to be used by authorised service personnel

3.28 Report Rate

Only to be used by authorised service personnel

3.29 Receiver / Transmitter

Only to be used by authorised service personnel

3.30 Test Radio-Link

Only to be used by authorised service personnel

3.31 Log File

The Transponder logs all major events which occur during its operation. These may be viewed as Unfiltered (all events), Alarms (alarm conditions only) or Security (events directly affecting operation). Each screen will only display the latest 40 events in its category;.

The three digits are a running counter of the events, which wraps round (from 999 to 000). The characters following indicate the type of event, and a brief description. When the log becomes full the oldest items are overwritten.

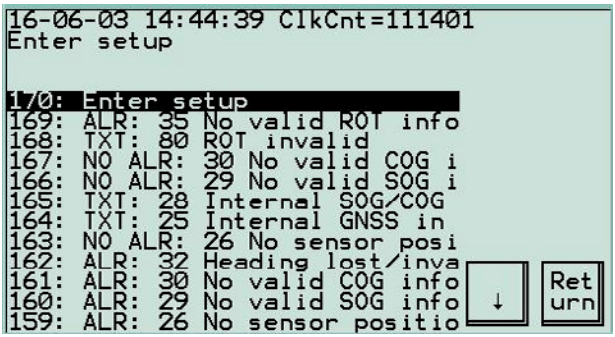
Use the up and down keys to highlight a particular log entry. The top line of the display shows the timestamp for the selected log entry as date (DD-MM-YY), time (HH:MM:SS) and elapsed time since power on (ClkCnt = D/HH:MM:SS.SS Note: This count is incremental, eg hours and days only appear after appropriate periods of time). The second line of the display shows the full text for the highlighted log entry.

When the highlighted log entry is 'Last power down' the timestamp for the power down event is contained within the full text of the highlighted log entry and not at the top of the screen. For this special case the top line will be a null timestamp.

Note that after power up approximately 2 minutes elapses before the UTC is available (log entry 'UTC clock found'). During this time period, and for about 30 seconds after, any entries to the log file will have a null timestamp (00-00-00 24:60:60). The elapsed time from power up will be valid. Approximately 2.5 minutes after power up log entries will be both timestamped and show an elapsed time since power on.

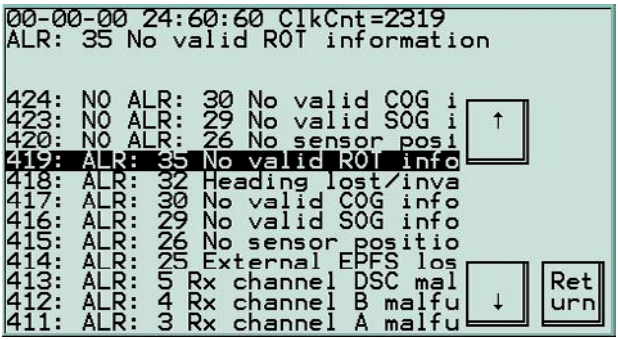
To determine the actual timestamp of a log entry that shows null time, calculate by finding the time at which the UTC is detected and subtracting the difference in elapsed times from the UTC.

3.32 Log File (Unfiltered)



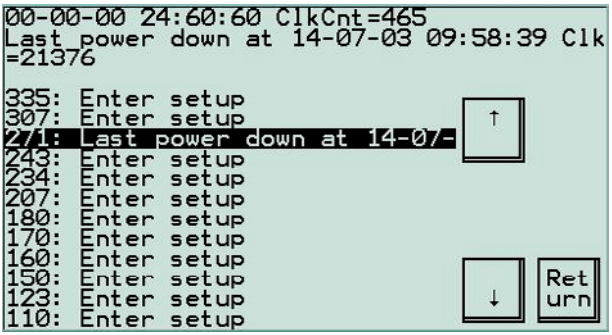
3.33 Log File (Alarms)

On selecting this display there will be a delay whilst the security log records are filtered from the complete log file.



3.34 Log File (Security)

On selecting this display there will be a delay whilst the security log records are filtered from the complete log file.

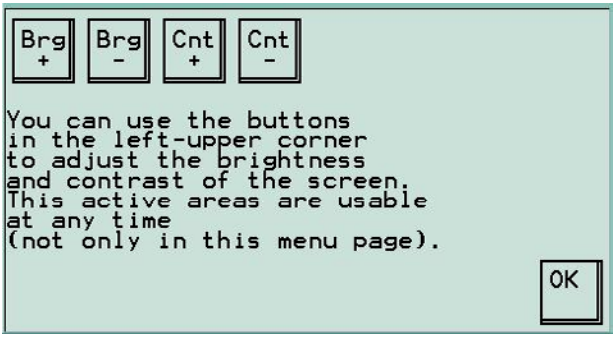


3.35 Enter Setup Menu

For safety reasons this menu is protected by a system password which is normally entered during commissioning. (See section 4.8 **Setup System Password** on page 36).

3.36 Display Brightness Menu

To adjust the touch-screen LCD to suit ambient light conditions, select **Display Brightness** from the **Main menu**. Both LCD brightness and contrast can be changed from this menu. Although not apparent, the buttons remain on, available at all times in ghost format. This means that when the area where the button is located is pressed the LCD backlight brightness and contrast can be changed from any menu screen without the need to enter the **Display Brightness** menu.



4 Commissioning

⚠ WARNING: ENSURE THAT THE UAIS HAS BEEN CORRECTLY INSTALLED IN ACCORDANCE WITH IMO GUIDELINES AND INSTALLATION MANUAL BEFORE SWITCHING ON

Please read all the warning notices at the front of this manual before turning on the Transponder.

Before switching on the power supply for the first time, conduct a thorough visual inspection of all cabling and connections to determine that they are terminated correctly and that the 24VDC power supply has been connected appropriately.

After installation, it is necessary to carry out an initial set-up procedure. This procedure is carried out using the VDU and selecting the **Enter setup** menu. It is now safe to switch on the system for the first time.

NOTE: If the display is not easy to read, refer to section 3.35 which details how to adjust the display.

For a complete overview of the commissioning menu structure, please refer to Appendix 2 “UAIS Commissioning Menu Hierarchy” at the back of this Manual.

The static data related to the vessel, such as Name and MMSI number, must be entered via the VDU as well as configuring all input and output data interface ports.

It is very important that a record of the installation related parameters is kept on board the ship, as these parameters may need to be changed. A record of these parameters can be entered into the Warranty Registration & Acceptance Record found in the Installation Manual. A copy of the completed record should be faxed to the manufacturer in order to validate the 24-month warranty period.

4.1 Initial Start-up

Ensure that power is available to the Transponder unit and that the main power on/off switch, located to the left side of the cable entry of the Transponder, is switched to the “on” position (green LED illuminated). At this point the Transponder is active and will wait for 1 minute before entering the network and starting transmission as it is listening to other stations to determine its own transmission time slot sequence schedule.

Press  to switch on VDU. To switch off, press and hold for 2 seconds.

NOTE: When re-starting the VDU, the screen displayed will be that when the VDU was switched off.

For a complete overview of the operating menu structure, please refer to Appendix 1 “UAIS Operating Menu Hierarchy” at the back of this Manual.

At power-up the system conducts a series of self-tests and the results are displayed on-screen as follows:-