Nav6 User Guide

MAN 3008.03
Issue 1.2

Important Information

This equipment is not approved for use by SOLAS convention vessels within the Global Maritime Distress and Safety System (GMDSS)

It is intended for use by leisure craft and other non-SOLAS vessels wishing to participate within GMDSS

Safety Warnings

Do not use the sensor as a grab-handle

This instrument is for use as an aid to sailors and should not lead to a reduction in the level of good seamanship required at all times

Reception of messages cannot always be guaranteed as this depends on local radio propagation

Contents

Congratulations on purchasing this superb **ICS Electronics Ltd** product. We hope that it gives you many years of reliable and trustworthy service. Please take the time to read this manual carefully as it contains some essential information regarding the operation and maintenance of the product and a useful background to the NAVTEX system.

We recommend that you regularly visit the ICS website www.icselectronics.co.uk for information on updates, the availability of software enhancements, further options and support. The support pages contain frequently asked questions about the Nav6 that you may find useful. There is also a NAVTEX database providing a list of operational NAVTEX stations and their details.

The IMO and various national coastguards also operate informative websites that you may wish to visit; see www.icselectronics.co.uk/links.

QUICK START

You will find this product extremely easy to operate. Please don't be intimidated by the comprehensive nature of this manual. In reality, receiving your first NAVTEX messages just could not be simpler.

- Follow the installation guidelines that begin on page 20
- Re-check the cable connections
- Apply power
- If you have not connected a GPS navigation receiver, make sure that you set the date and time on the start up screen which will appear
- Sit back and wait for your first NAVTEX message! If you are within range of a NAVTEX transmitter, you should not need to wait for more than four hours.
- Refer to "**Error! Reference source not found.**" for a quick overview of the menu structure.
- If you then want to get the best from the system: Read the rest of the manual!

INTRODUCTION

What Is NAVTEX?

NAVTEX is a worldwide system for the broadcast and automatic reception of maritime safety information (MSI) in English by means of a narrow-band direct-printing telegraphy. NAVTEX provides shipping with navigational and meteorological warnings and urgent information automatically from a dedicated receiver.

NAVTEX is a component of the IMO/IHO worldwide Navigational Warning Service (WWNWS) as defined by IMO Assembly resolution A.706(17). It is included within the Global Maritime Distress and Safety System (GMDSS). Since 1 August 1993, NAVTEX receiving capability has become mandatory equipment for certain vessels under the provisions of the International Convention for the Safety of Life at Sea (SOLAS).

NAVTEX broadcast information is available to all seafarers, free of charge.

How Does NAVTEX Work?

NAVTEX transmissions can be sent on several frequencies from stations situated worldwide. The power of each transmission is regulated so as to avoid the possibility of interference between transmitters. Each station is allocated a 10-minute time slot every 4 hours so that many stations can share the same frequency.

The Nav6 receiver stores all messages received from all stations. Nav6 users can set-up filtering to display only specific message types from selected stations. Users can choose to display information from just the single station that serves the sea area around their position, or from a number of stations.

Display Unit Features

- The Display Unit uses a high resolution (480 x 320 pixels) backlit LCD designed to display NAVTEX messages in a choice of text sizes.

- The display unit contains a large non-volatile memory used to store NAVTEX messages, the NAVTEX station database, all of the user settings, filter options and LCD contrast and backlight levels. All messages and settings are retained during power down.

- Several messages can be displayed at once (depending upon the length of the message) and messages can be scrolled up and down the screen with a single keypress.

- Messages can be filtered and sorted using a number of user selectable criteria.

- Audible and visible alarms can be set up to indicate reception of SAR and/or New Messages.

- A sleep mode allows long standby periods with minimum power consumption, such as when the vessel is left in a marina with main batteries being trickle charged from the shore.

Sensor Unit Features

- The Sensor Unit contains a short whip antenna and switchable receiver that can receive on either 490kHz or 518kHz.

- The sensor communicates with the display unit via a serial interface. Multiple sensors and displays can be connected together should an extended system be required.

What Can My Nav6 Do?

- The Nav6 stores all correctly framed NAVTEX messages that it receives in non-volatile memory, regardless of station, message type or error rate. The messages to be displayed on the LCD can be selected from the total set of stored messages by applying various filter settings.

- Station filters can be setup to display messages from preferred stations.

- Message type filters can be setup to display only messages of selected types.

- All messages are retained during power down and are still available next time the unit is powered up.

How Do I Get The Most Out Of My Nav6?

- Use the filter settings to display only the stations and message types of interest. There are five filter presets that you can configure to switch the display quickly between different sets of filtered information; for example: Weather, Navigational Warnings, New Messages, Selected Stations. Remember that you can change the presets at any time.

- Set the LCD contrast and brightness. There are three built in preset values for 'day', 'night' and 'sleep' operations. The day and night presets are user adjustable.

- Set the text size in NAVTEX mode to suit your needs. Three sizes are available; small, medium and large, the larger the text the fewer the number of NAVTEX message lines that can be displayed.

- Always mark messages as 'read' when you have read them; this way new messages are easily spotted when received (the 'NEW' icon will be showing at the top of the screen). You can also set the display to produce an audible alarm and/or flash the red LED to indicate when a new message is received.

- Change the function of the LED to suit your needs.

- Change the function of the buzzer to suit your needs

- Set up the time and date after power on. When NMEA date / time data is available this is done automatically.

- Keep the station database up to date by using the built-in editing facility.

- Set the menu language. Note that this only changes the menu,

options and soft-key text – it does not translate the NAVTEX messages!

HOW TO OPERATE YOUR NAV6

Throughout this document, softkey presses shall be indicated by:

PAGE   VIEW   MODE

And the four dedicated movement keys indicated by:

UP   DOWN   LEFT   RIGHT

Keyboard Layout

Softkeys   Softkeys

Left   Down   Up   Right
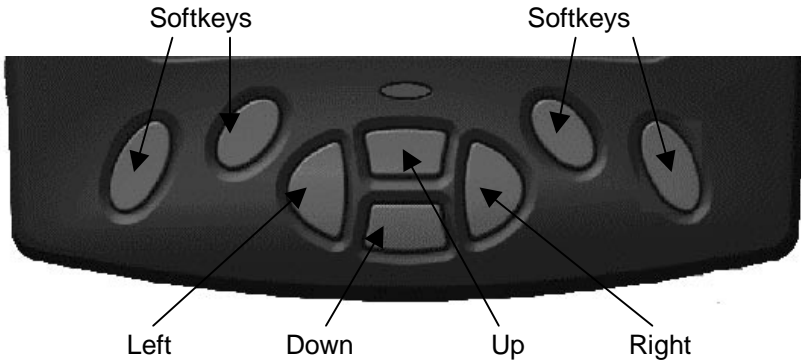
The Nav6 has eight keys. The centre four of these are a 'screen navigation' pad (left, right, up and down). The four keys situated on either side of the navigation pad are soft-keys. Their function is context sensitive. The current function of each of the four soft-keys is shown on the soft-key menu area at the bottom of the display.

LED and Buzzer

The function of the red LED and buzzer can be changed to suit your needs – see the general setup pages.

Softkey Menu Area

Mark Read	Next New	Message View	Navtex Mode	Current State / Action
Function Softkey	Page or Function Softkey	View Softkey	Mode Softkey	
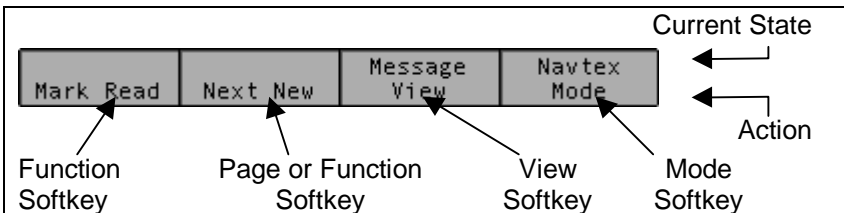
The operation of the Softkeys is indicated in the Softkey Menu Area at the bottom of the display

The upper line of text shows the current softkey setting and the lower line of text shows the softkey action.

The MODE softkey switches between the two operating modes of the Nav6: In addition, holding down the MODE softkey for longer than 2 seconds resets the LCD contrast and backlight to 50% and selects the LCD setup page. This is useful where contrast and backlight adjustments have made the screen unreadable.

NAVTEX Mode allows the display of NAVTEX messages and associated NAVTEX status information. This is only available if a sensor is (or has been) connected to the display and the NAVTEX frequency setting on the NAVTEX options page is set to 518 kHz, 490 kHz or Both.

Setup Mode allows various changes to be made to the operation of the unit in NAVTEX Mode, as well as controlling the LCD, operation of the LED and audible alarms etc.

NAVTEX MODE

In NAVTEX mode, the display consists of a large area dedicated to displaying NAVTEX messages, with a status bar at the top, and descriptions of the softkey functions at the bottom.

It is possible to scroll up and down the messages line by line, using the UP and DOWN keys. Additionally, you can step through the display, message by message using the LEFT and RIGHT keys.
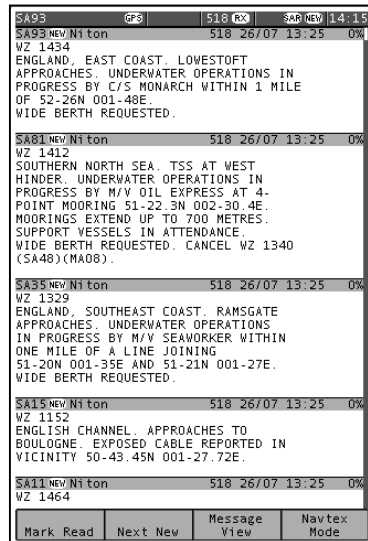
At the top of the display is a status bar:

The status information is displayed as a series of icons. The meaning of the icons is as follows:

`IA39`	Message at the top of the display
🔔	An alarm is active
`GPS`	NMEA time and date data active
`490`	490 kHz reception available
`518`	518 kHz reception available
`RX`	Receiving message now
`SIG`	Signal Carrier, but no message
`ERR`	Sensor communication fault
`SAR`	SAR message received
`NEW`	NEW message received
`14:50`	UTC Time

At the bottom of the screen is the soft-key menu area:

Mark Read	Next New	Message View	Navtex Mode

Three different 'views' can be selected by pressing the VIEW softkey:

> **Message View**
> **Sort View**
> **Filter View**

NAVTEX Mode, Message View

The NEXT NEW softkey can be used to move the next new message to the top of the NAVTEX display where it can be marked as read by pressing MARK READ. Note that the message that will be marked as read is shown in the top left of the status bar. This is particularly useful when the message's header has scrolled off the top of the display area.

NAVTEX Mode, Sort View

The NAVTEX message display can be sorted in one of three ways by pressing the CRITERIA softkey:

> **Sort by Station**
> **Sort by Type**
> **Sort by Date**

The sort can be further organised in ascending or descending order by pressing the ORDER softkey.

Sort by Station orders the messages by NAVTEX frequency and the alphabetical order of their station letters.

Sort by Type orders the messages in the alphabetical order of their message identifier letter.

Sort by Date orders the messages by the date and time that they were first received. For sort by date to work properly, the correct time and date must be set using general setup page at start-up or GPS time data must be available on the NMEA input

NAVTEX Mode, Filter View

Use the filter view to select which message types from which stations you wish to see displayed on the NAVTEX display.

(Tip: even if you have de-selected messages from a particular station and/or message type, the system will still receive and store those messages. You will be able to view those messages by re-selecting them in Filter View.).

5 different sets of filter settings can be programmed into the unit. Using the filter presets allows quick selection of 5 different filter settings. Once a preset is selected, the filter settings for that preset may be changed as required. The filter settings for the current selected preset will be applied when NAVTEX messages are next viewed. Press the PRESET softkey to select a preset.

(Tip: Set up the 5 filter presets for the stations and message types that you use most. For example:
Preset 1 - all message types from all stations;
Preset 2 - meteorological warnings from all stations,
Preset 3 - navigational warnings from all stations;
Preset 4 - new messages of all message types from all stations;
Preset 5 - new messages of all message types from selected stations)

There is a stations and types filter page for the selected receive frequency. Use the PAGE softkey to select the filter page: 518 Stations, 518 Types, 490 Stations, or 490 Types. Only the pages for the selected frequency are displayed.
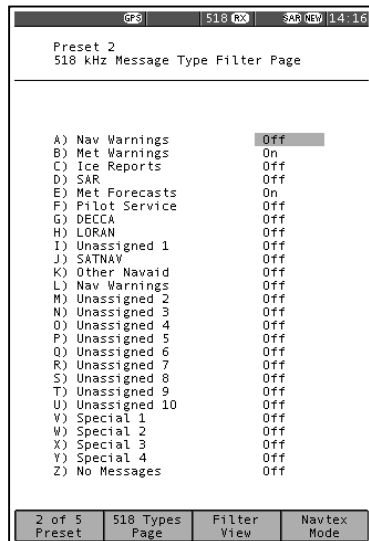
The picture shows the 518 Types filter page; the 490 Types filter page is similar.

Each of the message types can be selected as either ON, OFF or NEW.

Use the UP and DOWN keys to select the message type setting that you wish to edit. Use the LEFT and RIGHT keys to change the setting.

Set each message type filter to one of the following:

Setting	Notes
On	Message type always displayed
Off	Message type never displayed
New	Message type only displayed when new. Messages marked as read will not appear.

The picture shows the 518 Stations filter page; the 490 Stations filter page is similar. Use the UP and DOWN keys to select the station filter setting that you wish to edit. Use the LEFT and RIGHT keys to change the setting.

Set the filter for each station to one of the following:

```
                          518 RX      SAR NEW 14:20

    Preset 1
    518 kHz Station Filter Page


A) Corsen                      On      *
B)                             On      *
C)                             On      *
D) Coruna                      On      *
E)                             On      *
F)                             On      *
G) Cullercoats                 On      *
H)                             On      *
I)                             On      *
J) Gislovshammer               On      *
K) Niton (N.France)            On      *
L) Rogaland                    On      *
M) Oostende (Thames)           On      *
N) Orlandet                    On      *
O) Portpatrick                 On      *
P) Ijmuiden                    On      *
Q) Malin Head                  On      *
R) Roma                        On      *
S) Niton                       On      *
T) Oostende                    On      *
U) Trieste                     On      *
V)                             On      *
W) Valentia (Dublin)           On      *
X) Valencia                    On      *



  1 of 5    518 Stns    Filter    Navtex
  Preset      Page       View      Mode
```

Setting	Notes
On	Messages from station always displayed
Off	Messages from station never displayed

An asterisk appears next to all stations for which messages will be displayed.

SETUP MODE

Setup Mode consists of 2 'Views' that can be selected with the VIEW softkey. Each View has a number of 'Pages' that can be selected with the PAGE softkey.

General View	NAVTEX View
LCD Page	Options Page
Options Page	490 Names Page
	518 Names Page
	Monitor Page

Setup Mode, General View, LCD Page

The General View LCD Page shows a checker board pattern that can be used to set up the LCD.

LCD contrast is adjusted with the LEFT and RIGHT keys.

LCD brightness is adjusted with the UP and DOWN keys.

There is a readout of the LCD backlight temperature towards the bottom of the display. This is internal case temperature, and gives only an approximation to ambient temperature.

Tip: If the LCD is unreadable due to poor contrast, hold down the MODE softkey for more than 2 seconds (in any screen) to display the LCD page and reset the LCD contrast and backlight to 50%. The LCD should now be readable. Adjust the contrast as required.
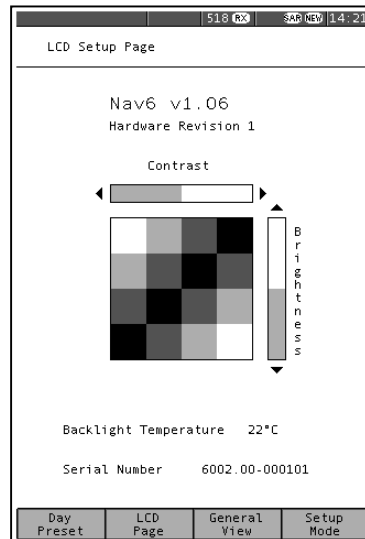
Setup Mode, General View, Options Page

The General View Options Page shows general settings for the display such as Date, Time, Sound and Miscellaneous settings.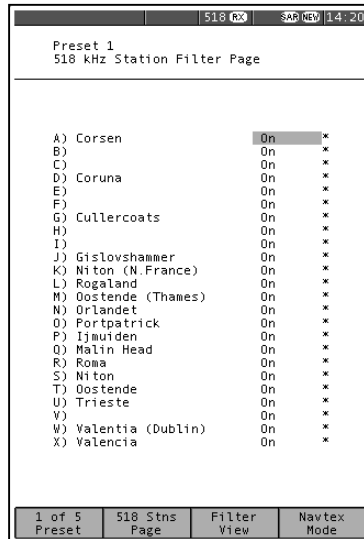 Use the UP and DOWN keys to select the setting that you wish to edit. Use the LEFT and RIGHT keys to change the setting.

Notes:

- Date and time will be taken from NMEA input data if available.

- There is no battery backup so date and time will be incorrect when power is switched on unless NMEA data is available or the date and time are manually set. The date and time is used to time stamp all incoming NAVTEX messages so that they can be sorted by date and time.

```
                          518 RX      SAR NEW 14:22

           General Options Page


           Date
           Year                        2001
           Month                       07
           Day                         26


           Time
           Hour                        14
           Minute                      22


           Sound Settings
           Keyclick                    On
           New Message Alert           On
           Antenna Alarm               Repeat
           SAR Alarm                   Timed


           Miscellaneous Settings
           Language                    English
           LED Function                RX




          Factory    Options    General    Setup
          Reset       Page        View      Mode
```
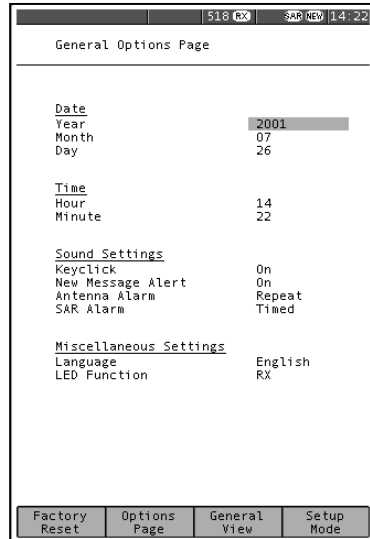
Option	*Setting*	*Notes*
Year	YYYY	Year, e.g. 2001
Month	MM	Month, e.g. 03
Day	DD	Day, e.g. 15
Hour	HH	24 hour clock
Minute	mm	Minutes
Keyclick	OFF	No beep on key press
	ON	Beep on key press
New Message Alert	OFF	New message alert off
	ON	Audible alarm for new messages
Antenna Alarm	OFF	Antenna alarm off
	Timed	Antenna alarms repeated 5 times, unless cancelled
	Repeated	Antenna alarms repeated until cancelled
SAR Alarm	OFF	SAR alarm off
	Timed	SAR alarms repeated 5 times, unless cancelled
	Repeat	SAR alarms repeated until cancelled
Language	**English**	English language menus
	French	French language menus
LED Function	OFF	LED always off
	ON	LED as power indicator
	RX	LED as receive indicator
	SAR	LED as SAR indicator
	NEW	LED as New Message indicator

Defaults shown in BOLD

Setup Mode, NAVTEX View, Options Page

The NAVTEX View Options Page shows general settings for NAVTEX operation such as Antenna, Display and Sound settings. Use the UP and DOWN keys to select the setting that you wish to edit. Use the LEFT and RIGHT keys to change the setting

```
                          518 RX          NEW 08:12
            Navtex Options Page


         Display Settings
         Font                        Large
         Error Threshold             33 %
         Age Limit                   None
         Alphabet                    Latin
         Navtex Frequency            518 kHz

         Alarm Settings
         New Message Alert           On
         Antenna Alarm               Timed
         SAR Alarm                   Timed

         Advanced Settings
         Display Mode *              Master




       * Consult manual before changing

         Antenna Type                Switchable
         Firmware Version            1.0
         Hardware Revision           1
          Options    Navtex    Setup
           Page       View      Mode
```
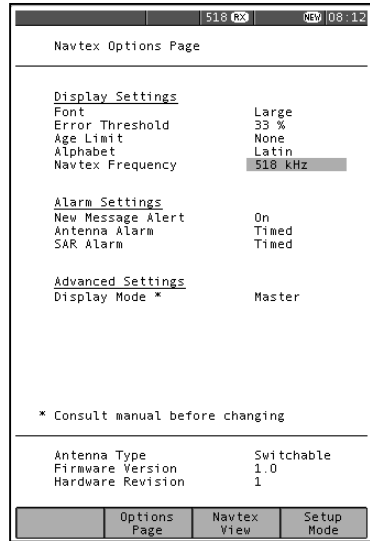
Option	Setting	Notes
Font	**Small**	Display NAVTEX messages using small font
	Medium	Display NAVTEX messages using medium font
	Large	Display NAVTEX messages using large font
Error Threshold	XX %	Percentage character error rate above which messages are not displayed. Note that this setting does not stop messages with an error rate above the threshold from being stored in memory
Alphabet	**Latin**	Latin alphabet used for NAVTEX messages.
	Cyrillic	Latin alphabet with third shift Cyrillic used for NAVTEX messages
Age Limit	**None**, 1, 2, 3, 5 Days, 1, 2, 3, 4, 8, 12 Weeks	Maximum age of NAVTEX messages to be displayed. NAVTEX messages older than the age limit are not displayed
NAVTEX Frequency	None	No receiver selected.
	490 kHz	490 kHz only operation
	518 kHz	518 kHz only operation
New Message Alert	Off	New message alert off
	On	Audible alarm for new messages

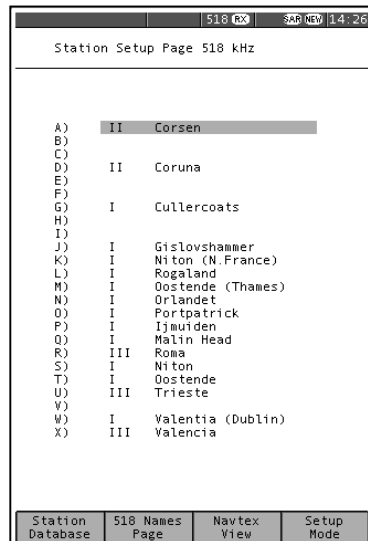| Option	Setting	Notes
Antenna Alarm	Off	Antenna alarm off
	Timed	Antenna alarms repeated 5 times, unless cancelled
	Repeat	Antenna alarms repeated until cancelled
SAR Alarm	Off	SAR alarm off
	Timed	SAR alarms repeated 5 times, unless cancelled
	Repeat	SAR alarms repeated until cancelled
Display Mode	**Master**	Set to master if this is the main display. This display will control the sensor over the sensor data link. Only one display may be set to master.
	Slave	Set to slave if this is a repeater unit. Slave units do not control the sensor and can only monitor the sensor data link. There can be multiple slave displays in a system
Antenna Type	Switchable	Reported by sensor, cannot be changed
	Dual	
Firmware Version	X.X	Reported by sensor, cannot be changed
Hardware Revision	X	Reported by sensor, cannot be changed

Defaults shown in BOLD

Setup Mode, NAVTEX View, 518 and 490 Names Pages

The station names setup pages determine the names of stations displayed on station filter pages and in NAVTEX message headers.

The picture shows the '518 Names' page; the '490 Names' page is similar.

Use the UP and DOWN keys to select the setting that you wish to edit. Use the LEFT and RIGHT keys to change the setting.

(Tip : You may be sailing in Nav Area II and therefore will pick station names from Nav Area II. However it is important to realise that the corresponding station letter in the adjacent Nav Areas may be closer. For example, the 'S' station that you

```
                      518 RX    SAR NEW 14:26
        Station Setup Page 518 kHz


    A)      II     Corsen
    B)
    C)
    D)      II     Coruna
    E)
    F)
    G)      I      Cullercoats
    H)
    I)
    J)      I      Gislovshammer
    K)      I      Niton (N.France)
    L)      I      Rogaland
    M)      I      Oostende (Thames)
    N)      I      Orlandet
    O)      I      Portpatrick
    P)      I      Ijmuiden
    Q)      I      Malin Head
    R)      III    Roma
    S)      I      Niton
    T)      I      Oostende
    U)      III    Trieste
    V)
    W)      I      Valentia (Dublin)
    X)      III    Valencia



    Station    518 Names    Navtex    Setup
    Database     Page        View     Mode
```

are receiving is the 'S' station in an adjacent Nav Area).

Setup Mode, NAVTEX View, 518 and 490 Names, Station Database Setup

Press the STATION DATABASE softkey from within the Setup Mode, NAVTEX View, 518 or 490 Names Page to display the station database setup page for 518 or 490 kHz. Press the EXIT softkey to leave the station database setup.

The station database page is divided into two halves. The top half shows a scrolling list of all stations in the database. The bottom half shows details of the current station selected in the station list.

To edit an existing station entry:

Use the UP and DOWN keys to select the station you wish to edit.

Use the LEFT and RIGHT keys to jump to the next or previous station letter in the database.

Press the EDIT softkey to edit the station details at the bottom of the display.
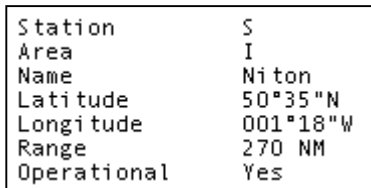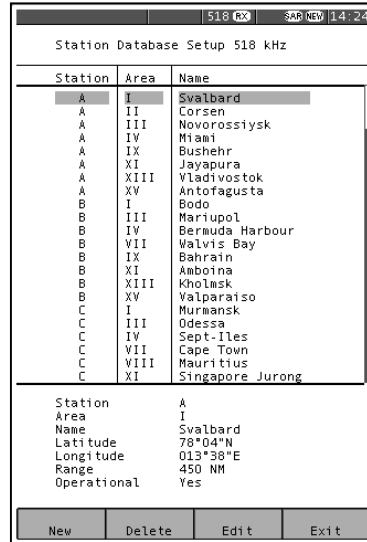
The database entry for a typical station (i.e. 'Niton') is shown left.

Data items are selected using UP and DOWN keys. Data items are changed using LEFT and RIGHT keys.

When editing the station name, use the LEFT and RIGHT keys to change the letters. Use the NEXT softkey to accept the current letter and move the cursor to the right. Use the BACKSPACE softkey to delete the current letter and move the cursor to the left
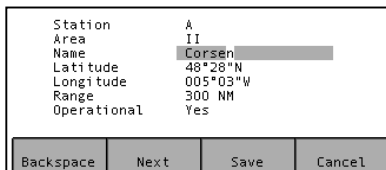
When editing the latitude and longitude fields, use the NEXT softkey to select the Degrees, Minutes or Cardinal part of the

position. Use the LEFT and RIGHT keys to change the selected item.

When you have finished entering the data, press the SAVE softkey to save and update the database or CANCEL softkey to abort the change.

Field	Notes
Station	The station letter: A to X
Area	The Nav-Area: I to XVI
Name	The station name as displayed on NAVTEX messages. Up to 17 characters.
Latitude Longitude	The transmitter position.
Range	The stated coverage range of the station in NM. Used to determine in range stations.
Operational	Set to YES when the station becomes operational. Set to NO when the station is declared but not yet operational.

To enter a new station:

Press the NEW softkey to create a new database entry. The rules for entering a new station are identical to those described above for editing an existing station. When you have finished entering the data, press the SAVE or CANCEL softkey as required.

To delete a station :

Use the UP, DOWN, LEFT and RIGHT keys to select the station in the station list that you wish to delete. Press the DELETE softkey.

Confirm or cancel the deletion by pressing the CONFIRM or CANCEL softkeys.

Setup Mode, NAVTEX View, Monitor Page

The monitor page shows a split screen view of live 490 and 518 kHz transmissions as they are received. None of the filtering selected in the various setup pages is applied.

The monitor page displays ALL incoming data regardless of error
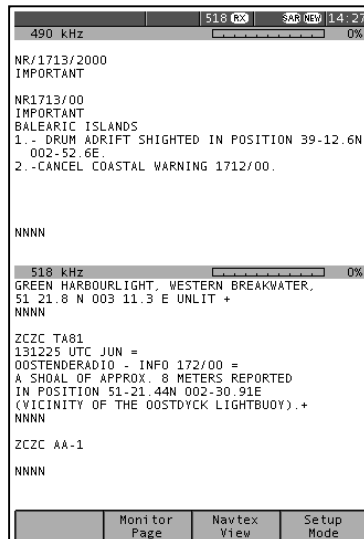
rate. The monitor page also shows the low level phasing characters contained within transmissions (shown as ⊘ characters) and transmission errors (shown as * characters).

ALARM OPERATION

The Nav6 display contains a buzzer that can generate audible alarms for the following conditions:

Option	Notes
New Message Alert	Short beep beep. Not repeated. Indicates reception of a new NAVTEX message.
SAR Alarm	Morse code: Dot dot dot, dash dash dash, dot dot dot.. Repeated every ten seconds. Indicates reception of a message type D, Search And Rescue NAVTEX message.
Antenna Alarm	Short dah dee, dah dee. Repeated every eight seconds. Indicates that there is a fault in the NAVTEX antenna or the cabling; see the Fault Finding section for more details.

The alarms can be enabled or disabled via the Setup Mode, General View Options Page. When enabled, the SAR Alarm and Antenna Alarm can be set to repeat 5 times or to repeat continuously.

Tip: When an alarm is active, pressing any of the softkeys will cancel the alarm. The normal softkey action will not occur.

Tip: When an alarm is active, an alarm bell icon will flash on the status bar.

The red LED found above the softkeys, can be setup (on the Setup Mode, General View Options Page) to flash when there are unread new messages or SAR messages. This can be useful in a noisy environment where audible alarms cannot be easily heard.

INSTALLATION OF SENSOR UNIT

The Sensor Unit is a rugged waterproof unit, but care should be taken during installation to prevent damage that may lead to subsequent water ingress of water.

- The Sensor Unit should be mounted so that the whip is approximately vertical.
- The Sensor Unit can be screwed into a standard marine antenna rail mount (1" 14 tpi thread or ICS part number 903.03).
- The mounting position should avoid any adjacent obstructions caused by the superstructure etc.
- The Sensor Unit should be located at least 0.5metres away from any other electronic equipment including GPS antennas, Radar etc.
- On a yacht, pushpit mounting is permissible.

Note: due to the variety of possible mounting methods (horizontal rail, vertical rail, deck, etc) ICS do not supply the antenna mounting bracket as standard. They are readily available from most marine electronics stores.

Mounting the Sensor Unit

- First, fix the antenna mount in the desired location.
- If required, thread the sensor cable through the antenna mount (if the antenna mount thread has a slot to accept the sensor cable mount this may not be necessary).
- Now fit the Sensor Unit on top of the antenna mount.
- Holding the top of the Sensor Unit, rotate the large plastic nut on the bottom in order to engage the thread of the antenna mount.
- Continue to tighten the nut until the Sensor Unit is locked.
- Note that it is possible to position the Sensor Unit to face whichever way the user desires.
- Do not use a wrench to tighten the nut – hand-tighten only.

Mounting the 45cm Extension Whip

- Remove the red plastic plug on the top of the Sensor Unit.
- Screw in the Extension Whip.
- It is advisable to apply a smear of grease to the thread to ensure

that salt deposits do not cause the thread to seize up.

Connections to the Sensor Unit

The sensor cable should be routed back to the intended location of the Display Unit. We do not recommend cutting the cable, but this may be done if, necessary, without effecting the performance of the product.

Note that the sensor cable consists of two twisted pairs, one for power and one for serial data communications.

Twisted Pair	Core Colour	Signal description
YELLOW twisted with	YELLOW	POWER from display
BLACK	BLACK	GND from display
WHITE twisted with BLACK	WHITE	DATA A from display
	BLACK	DATA B from display
Screen	Silver	Screen (nominally 0V)

Some cables have two black & white pairs. In this case, a yellow sleeve and the word "one" printed along the cable identify the power signal. If these cables are shortened then the pairs can be identified by the 'one' and 'two' printed on the white cables - care should be taken to ensure that the two pairs are not mixed up.

Routing of the Sensor Cable

The Sensor Cable should be connected to the Display Unit via the terminal strip supplied.

- The Sensor Cable should be routed to the Display Unit taking care that potential tripping hazards are avoided.

- The Sensor Cable should be tied at regular intervals to ensure that the cable is not crushed or able to vibrate as this may affect its performance.

- The Sensor Cable should not be bent through tight radii (less than 4cm).

- Where the Sensor Cable passes through bulkheads or decking, rubber grommets or the optional deck gland (ICS part number 2520.08) should be used to prevent chaffing.

INSTALLATION OF DISPLAY UNIT

Choose a location that is flat, free from excessive heat and vibration, and which is convenient for routing the Display Cable. The display is

best viewed when the screen is mounted square on.

The Display Unit has been designed for above or below decks mounting. It can be panel mounted onto a bulkhead, mounted via a U-bracket (purchased separately as an option) or mounted on a conversion plate (purchased separately as an option and intended for use when replacing an existing Nav4 with a Nav6).

Avoid direct sunlight. If this cannot be avoided then protect the unit when not in use by purchasing and fitting the optional suncover.

Surface Mounting the Display Unit

You will need:

- 104mm (4") hole saw, or other means of cutting a round hole.
- 3mm drill for fixing screws.
- Phillips head screwdriver.

Follow the instructions:

- Choose a flat surface on which to mount the Display Unit.
- Use the drilling template supplied to mark out the centres for the 104mm hole and the two 3mm holes.
- Drill the holes.
- Remove the two screw covers from the Display Unit.
- Apply a releasing agent (grease or petroleum jelly) to the rubber seal around the back of the Nav6. This will prevent the seal from sticking to the bulkhead surface over time.
- Position the Nav6 over the holes and insert the screws.
- Do not over-tighten the screws.
- Clip the screw covers in place.

U-bracket Mounting

Please follow the fitting instructions contained within the optional U-bracket mounting kit.

Nav4 to Nav6 Conversion Mounting Plate

Please follow the fitting instructions contained within the optional Nav4 to Nav6 Conversion Mounting Plate kit.

Connections to the Display

The display cable consists of six twisted pairs:

Twisted Pair	Core Colour	Signal description
RED twisted with BLACK	RED	12V input
	BLACK	GND input
BLUE twisted with BLACK	BLUE	NMEA A input
	BLACK	NMEA B input
BROWN twisted with BLACK	BROWN	RS232 TX output
	BLACK	RS232 RX input
WHITE twisted with BLACK	WHITE	sensor DATA A
	BLACK	sensor DATA B
YELLOW twisted with BLACK	YELLOW	sensor POWER o/p
	BLACK	sensor GND o/p
GREEN twisted with BLACK	GREEN	programming signal
	BLACK	spare
Screen	Silver	Nominally 0V

The following diagram shows a typical Nav6 system.
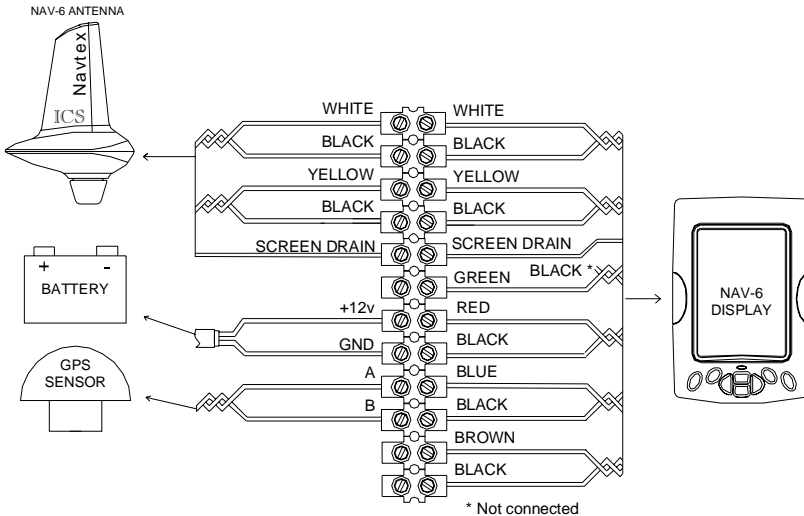
Connecting Power

The Nav6 NAVTEX System should be powered from a nominal 12Vdc switched supply, capable of providing a continuous 350mA.

- To allow the unit to be isolated for service, a 1.5A circuit breaker or a 1.5A fuse and switch should switch the power supply.

- Use the RED and BLACK twisted pair for connection to the boat's power supply.

- Connect the RED wire to boat's positive (12V) supply.

- Connect the BLACK wire to negative (0V) supply.

- Note that vessels that require isolation may need to install a DC to DC converter (ICS part number 500.09) – if in doubt ask your dealer.

- 24V vessels should install the 24V / 12V DC to DC converter (ICS part number 500.10).

Connecting the Sensor

- Connect the sensor power. Connect the YELLOW and BLACK twisted pair from the display to the YELLOW and BLACK twisted pair of the sensor; YELLOW to YELLOW, BLACK to BLACK.

- Connect the sensor data. Connect the WHITE and BLACK twisted pair from the display to the WHITE and BLACK twisted pair of the sensor; WHITE to WHITE, BLACK to BLACK.

- Connect the screen. Connect the silver screen wires of the display and sensor. Do not connect these to the negative supply.

Connecting a NMEA Source

- Use the BLUE and BLACK twisted pair for connection to the NMEA data source.

- Connect the BLUE wire to the NMEA A signal.

- Connect the BLACK wire to the NMEA B signal.

(Trouble shooting: Note that NMEA signal terminology can vary between manufacturers – try swapping the BLUE and BLACK wires if the NMEA input does not work initially – no damage will be done)

The Nav6 is compatible with most sources of NMEA 0183 data such as a GPS receiver or adapter boxes supplied for use with networked instrument systems. Please note that you may need to program the source of NMEA data to send the correct sentences in the correct format. You may also need to purchase an NMEA adapter box for your instrument system. Should you be uncertain of your abilities in this area, you are strongly advised to seek the services of a qualified marine electronics installer.

Note: We do not guarantee compatibility with all GPS receivers or all

instrument systems. However, this can normally be achieved for most systems by a skilled installer. For notes on achieving compatibility with various systems, see the Nav6 FAQ section on our web site: www.icselectronics.co.uk

The Nav6 uses NMEA data to synchronise its internal clock with UTC time.

Connecting RS232

The RS232 signals (BROWN and BLACK twisted pair) are used only for programming the firmware. They are not used for normal operation and should be left unconnected.

Connecting The Programming Signal

The programming signal (GREEN and BLACK twisted pair) is not required for normal operation and should be left unconnected.

Connecting Multiple Display Units

Where multiple displays are required, these may be purchased as an option (ICS part number 6003.00). In addition, a Nav6 hub is required to interconnect the equipment (ICS part number 919.00).
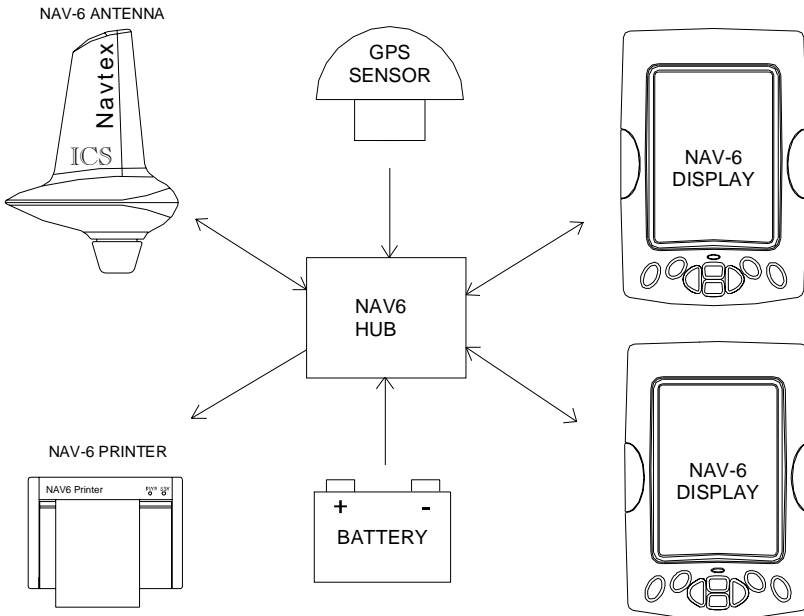
Follow the installation instructions supplied with the Nav6 hub.

Note: When multiple displays are used, only the main display must be set to master 'Display Mode' and all other displays must be set to slave 'Display Mode' ; see Set-up Mode, NAVTEX View, Options Page.

TESTING THE NAV6 AFTER INSTALLATION

- Carefully check all connections before applying power.

- Switch on the power supply by closing the 1.5A circuit breaker or power panel switch.

- Check that the red LED illuminates for approximately 8 seconds and then goes out and the start-up page appears on the Nav6 display. The start-up progress bar at the bottom of the page will disappear when the system is ready to use. Press any key to show the next screen.

- Check that the sensor is working. Check that either the '490' or the '518' icon appear on the status line at the top of the NAVTEX display.
If the icon does not appear, then switch off the power supply and check the sensor data and power connections; check that you have not swapped the sensor DATA A and DATA B wires.

- Check that the NMEA input is working. When the display is receiving GPS data the 'GPS' icon will appear on the status line at the top of the NAVTEX display. If the icon does not appear, ensure that the NMEA source is operating and check the NMEA data connections; you may have to swap the NMEA DATA A and DATA B wires.
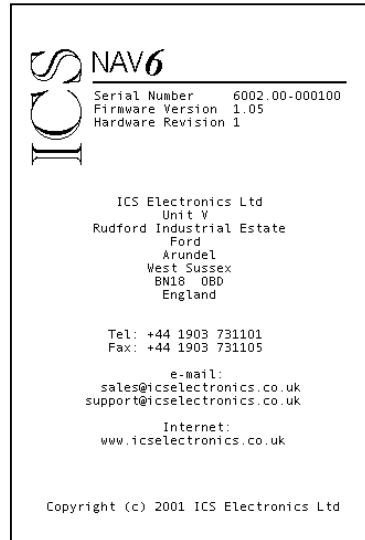
MAINTENANCE AND TROUBLE SHOOTING

Cleaning

The Nav6 NAVTEX System may be cleaned when necessary by

wiping with a cloth dampened with fresh water. Do not use solvents.

Fault Finding

Fault	Possible cause
LCD blank, RED LED On	Green wire connected to 12V *Disconnect green wire – it should not be connected other than for programming*
LCD blank, RED LED off	No power *Check that 12V is connected to RED wire and 0V to its BLACK pair*
No GPS indicator on status line	No NMEA data on NMEA input. *Check the NMEA data connections.* *Check that the GPS unit is switched on.* *Check that the GPS unit is set to output compatible NMEA sentences (see* Appendix III: NMEA Sentences Supported).
RED LED flashing with a period of 2 seconds. Display not operating.	Low voltage *There is insufficient voltage supplying the display*
RED LED flashing with a period of 15 seconds. Display not operating.	Sleep Mode *Press any key to activate the display*
No NAVTEX messages received	*Check for SIG or ERR on status line; see below. Check siting of sensor.*
SIG on status line (signal fault)	• If this symbol appears for short periods – don't worry – it's caused by one or more NAVTEX stations transmitting carrier but no modulation, or by local interference. • If this symbol persists then you may have a receiver error or interference from nearby equipment. *Check for possible causes. Identify the local source of interference by turning off items of equipment (e.g. battery charger) until the SIG indicator is cleared*
ERR on status line (communications error)	• No power to Sensor • No communications to Sensor *Check connections to sensor. Check for 12V between YELLOW wire and its BLACK pair* • Display Mode set to "Slave" Always set the 'Display Mode' to "Master" in single display systems. • Two or more master displays connected to a sensor *Set the 'Display Mode' on one display to master and set all other displays to slave*

Software Upgrade

The Nav6 has FLASH memory based software. This allows the Nav6 to be upgraded when new software releases are developed. Please check our website for information on new releases.

Input Fuse

The Nav6 has a built-in resettable fuse on its 12V input. This fuse will trip if the unit due to a fault condition draws excessive currents. Power must be disconnected from the unit for 10 seconds in order for the fuse to reset.

Sensor Output Fuse

The Nav6 has a built-in resettable fuse on its sensor output power connector. This fuse will trip if a fault condition on the sensor unit draws excessive currents. The sensor unit power must be disconnected for 10 seconds in order for the fuse to reset.

GLOSSARY

GMDSS	Global Maritime Distress and Safety System
IMO	International Maritime Organisation
NMEA	National Marine Electronics Association
RS485	Serial data communication interface
RS232	Serial data communication interface
SAR	Search and Rescue
SOLAS	Safety of Life at Sea

WARRANTY

ICS Electronics Ltd warrants to the original end-user that this product will be free from defects in materials and workmanship for a period of one year from the date of purchase. During the warranty period, and upon proof of purchase, the product will be repaired or replaced (with the same or a similar model, which may be a refurbished model) at ICS Electronics' option, without charge for either parts or labour. For warranty repair, the unit must be returned, carriage pre-paid, to the ICS Electronics Ltd. dealer from whom it was first purchased. This limited warranty shall not apply if the product is modified, tampered with, misused, subjected to abnormal working conditions (including, but not limited to lightning and immersion in water) and use with power supplies and other options not specifically recommended by ICS Electronics Ltd.

Please contact us for further details of our warranty repair procedure.

PACKING LIST AND OPTIONS

Packing List

For the Nav6 System contents – please see the packing list enclosed.

Options

The following Nav6 ancillary parts can be purchased:

Option	ICS Part Number
U-bracket mounting kit	6020.00
Nav4 to Nav6 conversion mounting kit	6020.17
Display unit suncover	6020.03
Cable deck gland	2520.08
Sensor Rail mount	903.03
12V / 12V DC to DC converter	500.02
24V / 12V DC to DC converter	500.13
NAV6 PC serial interface cable	6020.09
Nav6 hub	919.00
Additional Nav6 plus display unit	6003.00
5m NAVTEX sensor cable extension kit	6020.19
30m NAVTEX sensor cable extension kit	6020.18

SPECIFICATION

Approval Standards

    Meets the EMC requirements of IEC 60945

Power

Voltage range	10.8V to 15.6V
Consumption (Typical)	
Backlight full	310 mA (3.8 W at 12V)
Backlight off	165 mA (2.0 W at 12V)
Sleep mode	115 mA (1.4 W at 12V)

Display Unit

Operating Temperature Range	0 to +50degC
Storage Temperature Range	-20 to +55degC
Humidity	0 to 95%
Mounting	Above or below decks
Weight (without cable)	445 g (approx.)
Power	10.8V to 15.6V
Splash-proof	

Sensor Unit

Operating Temperature Range	-10 to +50degC
Storage Temperature Range	-20 to +55degC
Humidity	0 to 95% non-condensing
Mounting	Above decks
Weight (without cable)	420 g (approx.)
Power	Provided by Display Unit
Waterproof to IEC 60945	
Extension Whip (length)	45 cm
Extension Whip (screw thread)	3/8", 24 tpi

Receive Frequency

    490kHz or 518kHz

Message Storage

    Sufficient non-volatile storage for 3 days transmissions under normal operating conditions. Normally much longer than 3 days worth of storage will be achieved

NMEA Input Interface Specification

    The unit meets the electrical requirements of NMEA 0183

Display Unit Features

1/2vga (480x320 pixels) monochrome LCD with 4 grey levels

32 step CCFL backlighting of LCD

128 step contrast adjustment of LCD

LED backlighting for keyboard

RS485 serial I/O port to sensor

NMEA input

Piezo buzzer for audible alarms

Internal temperature sensor

Non volatile memory

APPENDIX I: NAVTEX STATION DATABASE

518kHz NAVTEX Stations

Id	Area	Country	Name	Latitude	Longitude	Range (NM)	Op
A	01	Norway	Svalbard	78°4'N	13°38'E	450	Yes
A	02	France	Corsen	48°28'N	5°3'W	300	Yes
A	03	Russia	Novorossiysk	44°43'N	37°47'E	300	Yes
A	04	USA	Miami	25°30'N	80°23'W	240	Yes
A	09	Iran	Bushehr	28°58'N	50°50'E	300	Yes
A	11	Indonesia	Jayapura	2°31'S	140°43'E	300	Yes
A	13	Russia	Vladivostok	43°7'N	131°53'E	280	No
A	15	Chile	Antofagusta	23°40'S	70°25'W	300	Yes
B	01	Norway	Bodo	67°16'N	14°23'E	450	Yes
B	03	Ukraine	Mariupol	47°6'N	37°33'E	280	Yes
B	04	Bermuda	Bermuda Harbour	32°23'N	64°41'W	280	Yes
B	07	Namibia	Walvis Bay	23°3'S	14°37'E	380	Yes
B	09	Bahrain	Bahrain	26°9'N	50°28'E	300	Yes
B	11	Indonesia	Amboina	3°42'S	128°12'E	300	Yes
B	13	Russia	Kholmsk	47°2'N	142°3'E	300	Yes
B	15	Chile	Valparaiso	32°48'S	71°29'W	300	Yes
C	01	Russia	Murmansk	68°58'N	33°5'E	140	Yes
C	03	Ukraine	Odessa	46°29'N	30°44'E	280	Yes
C	04	Canada	Sept -Iles	50°11'N	66°7'W	300	Yes
C	07	South Africa	Cape Town	33°41'S	18°43'E	500	Yes
C	08	Mauritius	Mauritius	20°10'S	57°28'E	400	Yes
C	11	Singapore	Singapore (Jurong	1°20'N	103°42'E	400	Yes
C	12	USA	San Francisco	37°55'N	122°42'W	350	Yes
C	13	Russia	Petropavlosk	53°0'N	158°40'E	280	No
C	15	Chile	Talcahuano	36°42'S	73°6'W	300	Yes
D	01	Sweden	Grimeton	57°6'N	12°23'E	299	Yes
D	02	Spain	Coruna	43°22'N	8°27'W	400	Yes
D	03	Turkey	Istanbul	41°4'N	28°57'E	300	Yes
D	04	Canada	Sept -Iles (D)	50°11'N	66°7'W	300	Yes
D	11	Indonesia	Ujungpandang	5°6'S	119°26'E	300	Yes
D	12	Canada	Prince Rupert	54°18'N	130°25'W	300	Yes
D	13	Russia	Magadan	59°40'N	151°1'E	000	No
D	15	Chile	Puerto Montt	41°29'S	72°57'W	300	Yes
E	03	Turkey	Samsun	41°17'N	36°20'E	300	Yes
E	11	Indonesia	Jakarta	6°7'S	106°52'E	300	Yes
E	12	USA	Savannah	32°8'N	81°42'W	200	Yes
E	13	Russia	Beringovskiy	0°0'N	0°0'W	000	No
E	15	Chile	Magallanes(Cbm) P	52°56'S	70°54'W	300	Yes
F	01	Russia	Arkhangelsk	64°33'N	40°32'E	300	Yes
F	02	Acores	Horta	38°32'N	28°38'W	640	Yes
F	03	Turkey	Antalya	36°53'N	30°42'E	300	Yes
F	04	USA	Boston (Ice Rep)	41°43'N	70°31'W	200	Yes
F	06	Uruguay	La Paloma	34°40'S	54°9'W	280	Yes
F	09	Iran	Bandar Abbas	27°8'N	57°4'E	300	Yes
F	11	Thailand	Krung Thep	13°44'N	100°34'E	200	Yes
F	13	Russia	Providenia Bukhta	64°10'N	173°10'W	000	No
F	15	Chile	Isla De Pascua(F)	27°9'S	109°25'W	300	Yes
G	01	UK	Cullercoats	55°4'N	1°28'W	270	Yes
G	02	Spain	Tarifa	36°1'N	5°34'W	400	Yes
G	04	USA	New Orleans	29°53'N	89°55'W	200	Yes
G	08	India	Mumbai	19°5'N	72°50'E	299	Yes
G	09	Saudi Arabia	Damman	26°26'N	50°6'E	390	Yes
G	11	Japan	Naha	26°9'N	127°46'E	400	Yes
G	15	Chile	Isla De Pascua(G)	27°9'S	109°25'W	300	Yes
H	01	Sweden	Bjuroklubb	64°28'N	21°36'E	300	Yes
H	03	Greece	Iraklion	35°20'N	25°7'E	280	Yes
H	04	Canada	Prescott	44°20'N	81°10'W	300	Yes
H	06	Dutch Antilles	Curacao	12°10'N	68°52'W	250	Yes
H	09	Saudi Arabia	Jeddah	21°23'N	39°11'E	390	Yes
H	11	Japan	Moji	33°52'N	130°36'E	400	Yes
H	12	Canada	Tofino	48°56'N	125°32'W	300	Yes
H	15	Chile	Antofagusta (H)	23°40'S	70°25'W	300	Yes
I	02	Islas Canarias	Las Palmas	28°9'N	15°25'W	400	Yes
I	03	Turkey	Izmir	38°21'N	26°35'E	300	Yes

Id	Area	Country	Name	Latitude	Longitude	Range (NM)	Op
I	07	South Africa	Port Elizabeth	33°57'S	25°31'E	500	Yes
I	11	Japan	Yokohama	35°22'N	139°36'E	400	Yes
I	15	Chile	Valparaiso (I)	32°48'S	71°29'W	300	Yes
J	01	Sweden	Gislovshammer	55°29'N	14°19'E	300	Yes
J	03	Bulgaria	Varna	43°4'N	27°46'E	350	Yes
J	04	Canada	Sydney(Canada)(J)	46°11'N	59°54'W	300	Yes
J	11	Japan	Otaru	43°12'N	141°0'E	400	Yes
J	12	Alaska	Kodiak	57°46'N	152°34'W	200	Yes
J	15	Chile	Talcahuano (J)	36°42'S	73°6'W	300	Yes
K	01	UK	Niton (N.France)	50°35'N	1°18'W	270	Yes
K	03	Greece	Kerkyra	39°45'N	19°52'E	280	Yes
K	11	Japan	Kushiro	42°59'N	144°23'E	400	Yes
L	01	Norway	Rogaland	58°39'N	5°36'E	450	Yes
L	03	Greece	Limnos	39°52'N	25°4'E	280	Yes
L	11	Hong Kong	Hong Kong	22°13'N	114°15'E	299	Yes
L	15	Chile	Magallanes(Cbm)(L	52°56'S	70°54'W	300	Yes
M	01	Belgium	Oostende (Thames)	51°11'N	2°48'E	150	Yes
M	02	Morocco	Casablanca	33°36'N	7°38'W	180	No
M	03	Cyprus	Cyprus	35°10'N	33°26'E	200	Yes
M	06	Argentina	Ushuaia Prefectur	54°48'S	68°18'W	280	Yes
M	09	Oman	Muscat	23°37'N	58°31'E	270	Yes
M	11	China	Sanya	18°14'N	109°30'E	250	Yes
N	01	Norway	Orlandet	63°40'N	9°33'E	450	Yes
N	03	Egypt	El Iskandariya	31°12'N	29°52'E	350	Yes
N	04	USA	Portsmouth(Usa)	36°44'N	76°1'W	280	Yes
N	06	Argentina	Rio Gallegos	51°37'S	69°3'W	280	Yes
N	11	China	Guangzhou	23°9'N	113°29'E	250	Yes
O	01	UK	Portpatrick	54°51'N	5°7'W	270	Yes
O	03	Malta	Malta	35°49'N	14°32'E	400	Yes
O	04	Canada	St Johns	47°37'N	52°40'W	300	Yes
O	06	Argentina	Comodoro Rivadavi	45°51'S	67°25'W	280	Yes
O	07	South Africa	Durban	29°48'S	30°49'E	500	Yes
O	11	China	Fuzhou	26°2'N	119°18'E	250	Yes
O	12	Hawaiian Islands	Honolulu	21°22'N	158°9'W	350	Yes
P	01	Netherlands	Ijmuiden	52°27'N	4°35'E	110	Yes
P	03	Israel	Hefa	32°49'N	35°0'E	200	Yes
P	04	Canada	Thunder Bay	48°26'N	89°13'W	300	Yes
P	06	Argentina	Bahia Blanca	38°43'S	62°6'W	280	Yes
P	08	India	Madras	13°8'N	80°17'E	299	Yes
P	09	Pakistan	Karachi	24°51'N	67°3'E	400	Yes
P	11	Taiwan	Meilung	23°59'N	121°37'E	350	Yes
P	11	Taiwan	Lintou	23°33'N	119°38'E	350	Yes
P	11	Taiwan	Linyuan	22°29'N	120°25'E	540	Yes
P	11	Taiwan	Keelung	25°8'N	121°45'E	540	Yes
P	11	Vietnam	Hai Phong	20°43'N	106°44'E	400	No
Q	01	Ireland	Malin Head	55°22'N	7°21'W	400	Yes
Q	03	Croatia	Split	43°30'N	16°29'E	085	Yes
Q	04	Canada	Sydney(Canada)	46°11'N	59°54'W	300	Yes
Q	06	Argentina	Mar Del Plata	38°3'S	57°32'W	280	Yes
Q	11	China	Shanghai	31°7'N	121°33'E	250	Yes
Q	12	USA	Long Beach (Cambr	35°31'N	121°3'W	350	Yes
R	01	Iceland	Reykjavik	64°5'N	21°51'W	550	Yes
R	02	Portugal	Monsanto	38°44'N	9°11'W	530	Yes
R	03	Italy	Roma	41°48'N	12°31'E	320	Yes
R	04	Greenland	Reykjavik	64°5'N	21°51'W	550	Yes
R	06	Argentina	Buenos Aires	34°27'S	58°37'W	560	Yes
R	11	China	Dalian	38°52'N	121°31'E	250	Yes
R	12	Puerto Rico	San Juan	18°28'N	67°4'W	200	Yes
S	01	UK	Niton	50°35'N	1°18'W	270	Yes
S	04	Canada	Iqaluit	63°44'N	68°33'W	200	No
S	11	Malaysia	Labuan	5°54'N	118°0'E	350	Yes
S	16	Peru	Paita	5°5'S	81°7'W	200	Yes
T	01	Belgium	Oostende	51°11'N	2°48'E	050	Yes
T	03	Italy	Cagliari	39°14'N	9°14'E	320	Yes
T	04	Canada	Iqaluit	63°44'N	68°33'W	200	No
T	11	Malaysia	Kuching	4°27'N	114°1'E	350	Yes
U	01	Estonia	Tallinn	59°30'N	24°30'E	300	Yes
U	03	Italy	Trieste	45°41'N	13°46'E	320	Yes
U	04	Canada	Fundy	43°45'N	66°10'W	300	Yes
U	11	Malaysia	Port Kelang	5°25'N	100°24'E	350	Yes
U	16	Peru	Calleo	12°3'S	77°9'W	200	Yes
V	01	Norway	Vardo	70°22'N	31°6'E	450	Yes

Id	Area	Country	Name	Latitude	Longitude	Range (NM)	Op
V	03	Italy	Augusta	37°14'N	15°14'E	320	Yes
V	04	Canada	Fundy (V)	43°45'N	66°10'W	300	Yes
V	11	South Korea	Chukpyon	37°3'N	129°26'E	200	Yes
V	11	Mariana Islands	Guam	13°34'N	144°50'E	100	Yes
W	01	Ireland	Valentia (Dublin)	51°27'N	9°49'W	400	Yes
W	03	France	La Garde	43°6'N	5°59'E	250	Yes
W	04	Greenland	Kook Islands	64°4'N	52°1'W	400	No
W	11	Vietnam	Da Nang	16°5'N	108°13'E	400	Yes
W	11	South Korea	Pyonsan	35°36'N	126°29'E	200	Yes
W	12	USA	Astoria	46°10'N	123°49'W	216	Yes
W	16	Peru	Mollendo	17°1'S	72°1'W	200	Yes
X	03	Spain	Valencia	38°43'N	0°9'E	300	Yes
X	04	Canada	Labrador	53°18'N	60°33'W	300	Yes
X	09	Egypt	Serapeum	30°28'N	32°22'E	200	Yes
X	11	Vietnam	Ho Chi Minh-City	10°47'N	106°40'E	400	Yes
X	12	Alaska	Kodiak (X)	57°47'N	152°32'W	200	Yes

490kHz NAVTEX Stations

Id	Area	Country	Name	Latitude	Longitude	Range (NM)	Op
A	06	Uruguay	La Paloma	34°40'S	54°9'W	280	Yes
C	01	UK	Portpatrick	54°51'N	5°7'W	270	Yes
E	02	France	Corsen	48°28'N	5°3'W	300	Yes
G	02	Portugal	Monsanto	38°44'N	9°11'W	530	Yes
I	01	UK	Niton	50°35'N	1°18'W	270	Yes
J	02	Acores	Horta	38°32'N	28°38'W	640	Yes
J	11	South Korea	Chukpyon	37°3'N	129°26'E	200	Yes
K	11	South Korea	Pyonsan	35°36'N	126°29'E	200	Yes
S	03	France	La Garde	43°6'N	5°59'E	250	Yes
S	04	Canada	Iqaluit	63°44'N	68°33'W	200	No
U	01	UK	Cullercoats	55°4'N	1°28'W	270	Yes
W	11	Vietnam	Hai Phong	20°43'N	106°44'E	400	No

Note: all NAVTEX station database information was correct on the date of publication.

APPENDIX II: MESSAGE TYPE INDICATORS

NAVTEX broadcasts use following message type letter:

A	Navigational warnings
B	Meteorological warnings
C	Ice reports
D	Search and rescue information, and pirate warnings
E	Meteorological forecasts
F	Pilot service messages
G	DECCA messages
H	LORAN messages
I	OMEGA messages (Note: OMEGA has been discontinued)
J	SATNAV messages (i.e. GPS or GLONASS)
L	Navigational warnings - additional to letter A
V	Notice to Fishermen (U.S. only)
W	Environmental (U.S. only)
X	Special services - allocation by IMO NAVTEX Panel
Y	Special services - allocation by IMO NAVTEX Panel
Z	No message on hand

APPENDIX III: NMEA SENTENCES SUPPORTED

Data Item	Taken from NMEA Sentences
Time	RMC GGA GLL ZDA
Date	RMC ZDA

Note that the if a data item is present in more than one sentence, then it is taken from the leftmost sentence in the table entry above.

I.e. if Date is available in RMC and ZDA, it will be taken from RMC.

APPENDIX IV: NAV6 MENU STRUCTURE

NAVTEX - Mode[1]
- Message - View
  - Next New
  - Mark read
- Sort - View
  - Order
    - Ascending
    - Descending
  - Criteria
    - Date
    - Station
    - Type
- Filter - View
  - Pre-set 1,2,3,4,5
    - 490 Types - Page[1]
    - 490 Stns – Page[1]
    - 518 Types – Page[1]
    - 518 Stns - Page[1]

Set-up - Mode
- General - View
  - Options - Page
    - Factory reset
      - Confirm
      - Cancel
  - LCD - Page
    - Pre-set
      - Day
      - Night
      - Sleep
- NAVTEX - View
  - Options - Page
  - 490, 518 Names – Pages[1]
    - Station database
      - New
        - Save
        - Cancel
        - Purge[2]
          - Confirm
          - Cancel
      - Edit
        - Save
        - Cancel
        - Purge[2]
          - Confirm
          - Cancel
      - Delete
        - Confirm
        - Cancel
      - Exit
  - Monitor - Page

Notes:

1. Receiver type selection, controls whether this option is displayed. Only the pages for the selected frequency are displayed

2. Only displayed if the station database memory is full

DECLARATION OF CONFORMITY

ICS Electronics Limited declares herewith that the following equipment

NAV6/NAV6plus NAVTEX Receiver System

is in conformity with

89/336/EC Directive

Standards to which conformity is declared:

EN301843-1 : 1996   Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC) standard for Marine radio equipment and services; Part 1 : common technical requirements

EN301843-2 : 1996   Electromagnetic compatibility and Radio spectrum Matters (ERM); Part 2 : Specific conditions for maritime radiotelephone transmitters and receivers

EN301843-4 : 1996   Electromagnetic compatibility and Radio spectrum Matters (ERM); Part 4 : Specific conditions for Narrow-Band Direct-Printing (NBDP) NAVTEX receivers

Date: 25/6/01   Signature:

Marc Palmano
Technical Director

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Member of the British Marine INDUSTRIES FEDERATION

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