

SAILOR_®

SAILOR 55 Fleet+ USER GUIDE



Thrane & Thrane

OPERATION FROM PC..... 5

Starting Up5

Phone Book.....7

- capacity.....7

- abbreviated dialing7

- adding or editing entries.....7

- saving entries to/from PC 8

Traffic Log9

Traffic Log Settings.....11

Traffic Log Printout Viewer - Normal calls (Cct).....13

Traffic Log Printout Viewer - Mobile Packet Data Service (MPDS) calls 14

Traffic Log Output to Serial Printer 15

CONFIGURATION FROM PC 16

Menu Functions.....16

Function reference list17

Access Level.....18

- changing the PIN code18

- functions requiring owner level.....19

- shifting to owner level.....19

- changing owner level password19

Selecting Default Net Service Provider20

Phone Setup22

- setting call duration limit22

- setting date and time22

- message indication23

AdvancedFunctions.....24

Advanced functions.....24

Access Control.....25

- restricted dialing25

- checking the dialing setup25

- restricted dialing setup26

- access code27

- restricted SIM usage.....28

- setting SIM restrictions.....28

Configuration Menu29

- ISDN protocol configuration.....29

- net service providers30

- spot beam report method 31

- set diagnostics 31

- charge tone setup 32

Information Available33

- miscellaneous version Id information33

- network status information 33

Customize Menu34

- paid functions34

- phone name setup34

Routing of Incoming Calls.....35

- routing of incoming calls (examples)36

MSN Configuration 37

- ISDN Handset.....38

- Deleting an ISDN Handset39

- ISDN port (*selection example: 4.8 speech*).....40

- ISDN port (*selection example: 64 kbps data service*).....41

- RS-232 port42

- USB port43

Saving and Reloading Configurations44

Print Handling Setup46

Mobile Packet Data Service 47

SYSTEM DESCRIPTION..... 48

Inmarsat Fleet System.....48

System Satellites.....49

Antenna Search Pattern50

Communication services 51

Net Service Provider.....53

Calls from Mobiles53

Calls to Mobiles55

Starting Up

- Switch ON SAILOR 55 Fleet+, see figure *Location of SIM Card* and *ON/OFF Switch* in the *Getting Started* manual.
- Turn ON the PC and click **Start>Programs>SAILOR VtLite**.

Note!

SAILOR VtLite can only be used on one PC at a time.

1. The satellite search program is initialized.
See also *Satellite Search* in the *Getting Started* manual.
2. SAILOR 55 Fleet+ starts searching for **last known satellite** (Ocean Region) as default.

On a PC with sound ability, beep tones will be heard when clicking **Tone** (text changes to **Mute**). More rapid intermittent tones are heard when closing in on a specific satellite

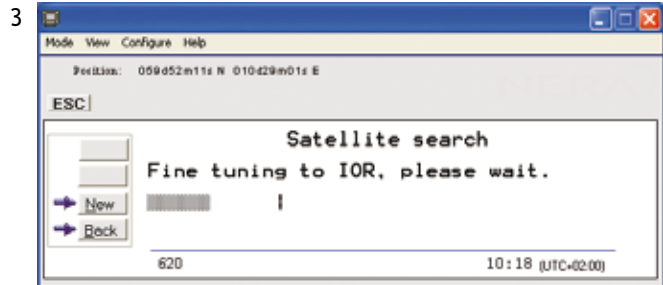
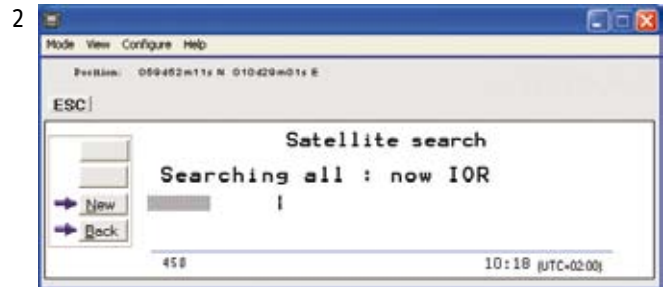
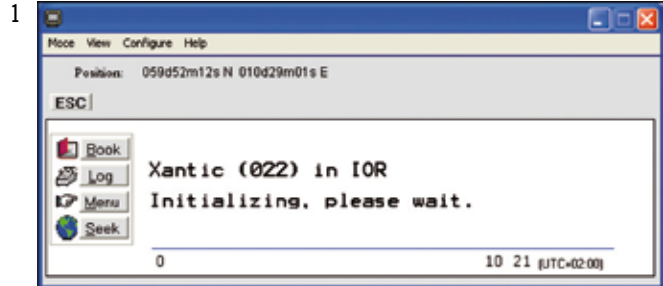
3. When receiving a satellite signal, a signal strength bar will appear in the search window.

The longer signal bar or higher signal strength value, the better signal quality.

The maximum marker indicates the highest signal strength achieved during the current search.

Note!

It is recommended that the signal strength reading ($S/N = \text{Signal/Noise ratio}$) should be at least 550, typically 600. The antenna will automatically fine-tune to the best signal and accept it.

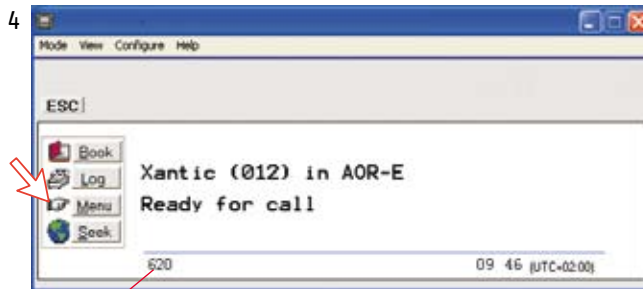


Clicking **Seek** starts the search again.
If required, select a specific satellite by clicking **New**.
See also *Selecting Default Net Service Provider* in the CONFIGURATION FROM PC section.

4. The equipment is ready for use when the **Main window** appears.

When pointing at the bottom of the window, additional information such as year and date pops up.

To make a connection, see *Make a Call* in the *Getting Started* manual.



S/N=Signal/Noise ratio

Phone Book



Adding and editing entries can also be done from the handset, see *Phone Book* in the *Getting Started* manual.

Phone book capacity

	BDU	SIM card (Data vary with card type)
Phone numbers:	100 entries	100 entries
Number length:	19 digits	19 digits
Name length:	29 characters	12 characters
Entry numbers:	0 - 99	100 and up

The SIM card entries and "BDU" entries merge when the card is inserted. The list is sorted by name.

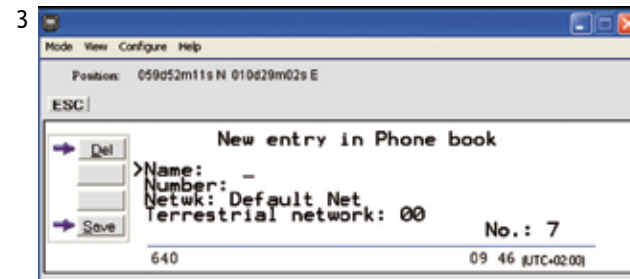
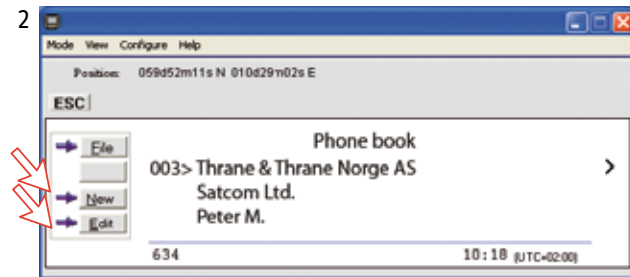
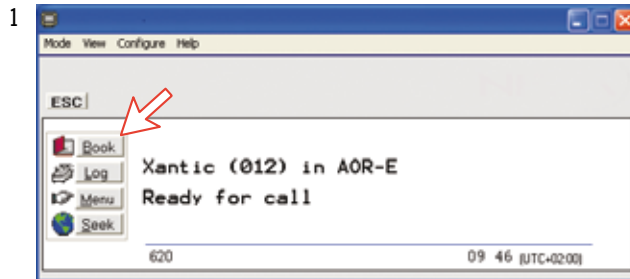
Abbreviated dialing (prefix 23)

1. Clicking **Book** opens the **Phone book**.
2. Scroll through list   to wanted entry.

Example: dialing **2315*** on the analogue telephone or ISDN keypad fetches and sends the telephone number stored under short number entry 15.

Adding or editing entries

3. Clicking **New** (window 2) opens the window used to add an entry to the book.
Use **Del** to modify. **Save** stores the new entry.



4. Clicking **Edit** (window 2 on previous page) opens the window allowing changes to be made in the Phone book. Use **Del** to modify and **Save** to store the changes. **Remov** erases the entry.

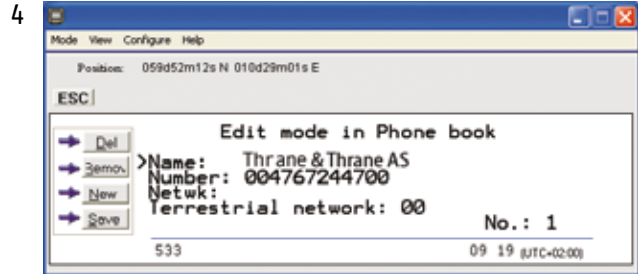
Note! The book is also used with the restriction “Dial from book only”, see Access Code > Restricted dialing setup.

Netwk = Net provider

Another Net provider may be selected when dialing this number from the phone book. If no selection, the system uses the default one.

Terrestrial network

It is possible to change Terrestrial network for the selected Net provider (00 is most common). Call your Net provider for more information.



Traffic Log

This function logs all outgoing and incoming calls both with and without SIM card inserted. Incoming calls may be logged as well.

Up to 100 calls can be logged:

Circuit switched calls (Cct) including:

- Voice calls
- Mobile Data Service calls

Packet switched data calls (Mpds) including:

- Mobile Packet Data Service calls

The SAILOR 55 Fleet+ owner may set the log output mode as follows (see *Traffic Log Settings*):

- paused
- cleared (stops logging and clears the log)
- enabled
- automatic printout to RS-232A
- automatic printout to RS-232B

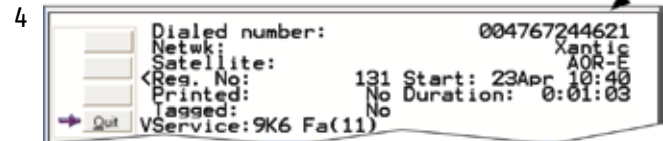
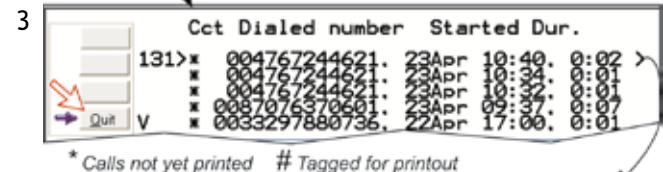
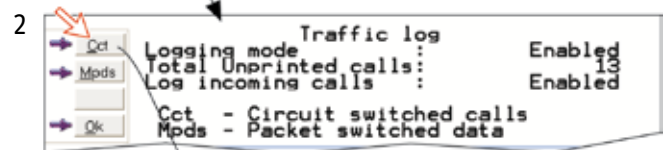
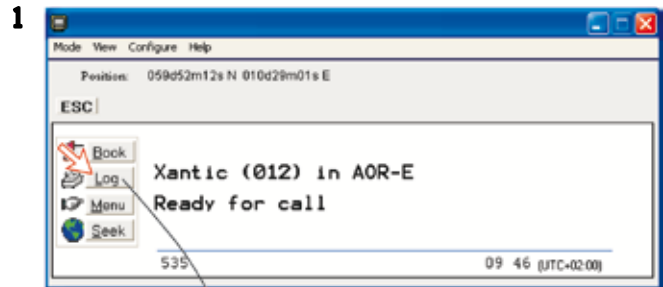
Traffic log readout

1. Clicking **Log** opens the Traffic log window.
2. The Traffic log window shows whether the logging is enabled, whether incoming calls are logged, and the total number of unprinted calls (MPDS and Cct calls).

Circuit switched calls:

Clicking **Cct** displays the list of calls.

3. Scroll (↑/↓) to wanted call record and press (→) to display details of the selected call.



4. The call details include data such as dialed number, start of the call, duration, service and terminal Id.

Quit reverts to main window.

Mobile Packet Data Service calls:

5. Clicking **Mpds** displays the list of Mobile Packet Data Service calls.
6. The call list include data such as Net provider, start of the call and duration.
Scroll **↑**/**↓** to wanted call record and press **→** to display details of the selected call.
7. The call details include data such as Rx/Tx in bytes, forward frames received, etc.
Quit reverts to main window.

5

```

    Cct - Circuit switched calls
    Mpds - Packet switched data

    >Logging mode:      Traffic log      Enabled >
    Total Unprinted calls:      0
    Log incoming calls:      Enabled
  
```

MPDS network used (HomeLes)

6

```

    ^ MPDS Netwkr:  Started  Dur.
    038> #telenor  09Aug 13:52  0:07
    #telenor  09Aug 10:59  2:44
    telenor  09Aug 10:50  0:06
    telenor  09Aug 10:49  0:01
    telenor  09Aug 10:46  0:01
    telenor  09Aug 10:45  0:01
  
```

Tagged for printout

7

```

    ^Port bytes Tx/Rx: 2.2KB/1.5KB
    Rx Crc: 0/654 Sre.iS Tx/Rx: 0/0
    <Pk/Av users: 6/376 Connections: 1/0
    Clear Codes: 4/0 Tim Init/Cor: 1/0
    Accum TimAdj: 457 SyncLost: 0/500
  
```


Annotations:




- No. of 5 and 20ms slots used (points to 6/376)
- Forward errors in the MPDS system (points to 0/654)
- Forward frames received (points to 4/0)
- Tx/Rx in Bytes (points to 2.2KB/1.5KB)
- Error in frames Tx/Rx direction (points to 0/0)
- Peak and average number of users on the same channel. Example: 4 active users. (points to 6/376)
- Time adjustment of slot due to location on earth (points to 457)
- Lost synchronisation (points to 0/500)
- Clear cause level1/level2 (0/500=normal clear) (points to 0/500)




Traffic Log Settings

(Owner level only, see *Access Level > Shifting to owner level.*)

1. In the Main window, clicking **Log** opens the Traffic log window, which displays the current log mode, number of unprinted calls, and whether logging of incoming calls is enabled/disabled.

- Click **Edit** or  to open **Logging mode** window:
- **Paused:** any logging is off.
- **Cleared:** all log entries are deleted (incoming and outgoing).
- **Enabled:** outgoing logging is on.
- **Automatic printing to RS-232 A:** output to local printer
- **Automatic printing to RS-232 B:** output to local printer

Scroll / to wanted mode, and click or press  to select.

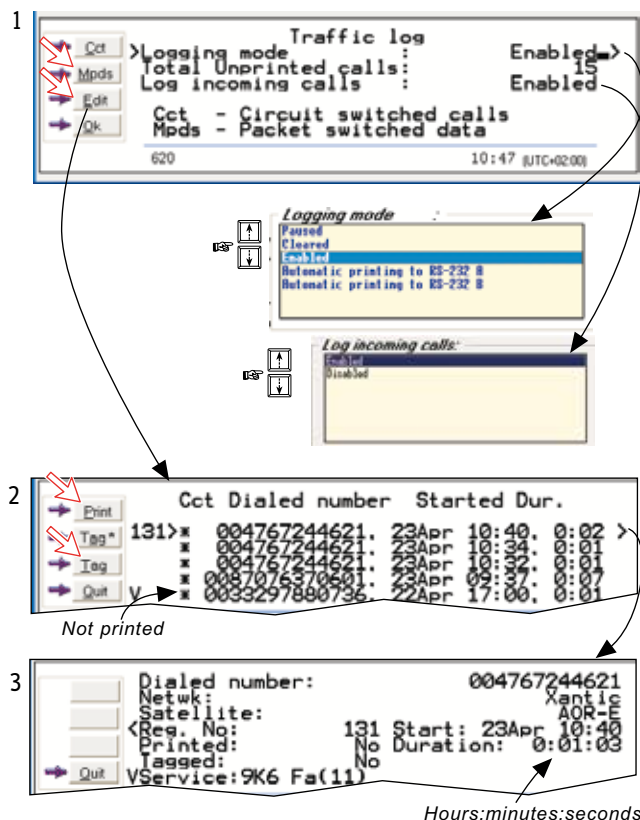
- Scroll down  to **Log incoming calls** and click **Edit** or  to enable or disable logging of incoming calls. Press  to select.

Circuit switched calls:

2. Clicking **Cct** in the Traffic log window (1) opens the list of all call records except MPDS calls.

Print outputs all unprinted calls (marked with a star):

- Clicking **Tag*** marks all calls with a hash, which adds the records to the printout file.
- Clicking **Tag** marks the selected call with a hash, which adds the record to the printout file.



1

```

Traffic log
Logging mode      : Enabled
Total Unprinted calls : 15
Log incoming calls : Enabled

Cct - Circuit switched calls
Mpbs - Packet switched data

620                                     10:47 (UTC+02:00)
  
```

Logging mode

```

Paused
Cleared
Enabled
Automatic printing to RS-232 A
Automatic printing to RS-232 B
  
```

Log incoming calls:

```

Enabled
Disabled
  
```

2

```

Cct Dialed number Started Dur.
131>* 004767244621. 23Apr 10:40: 0:02
      * 004767244621. 23Apr 10:34: 0:01
      * 004767244621. 23Apr 10:32: 0:01
      * 0087076370501. 23Apr 09:37: 0:07
      * 0033297880736. 22Apr 17:00: 0:01
  
```


Not printed

3

```

Dialed number:      004767244621
Netwk:              Xantia
Satellite:          AOR-E
<Reg. No:           131 Start: 23Apr 10:40
Printed:             No Duration: 0:01:03
Tagged:              No
VService:9K6 Fa(11)
  
```

Hours:minutes:seconds

- Clicking **Tag** again untags a selected record.
3. Pressing  at a record when in window (2) displays detailed call data.

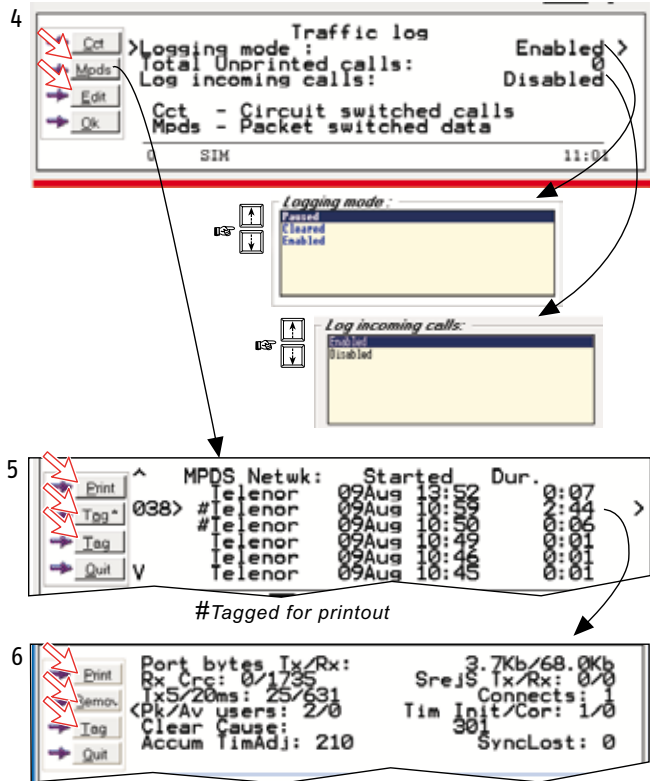
Mobile Packet Data Service calls:

4. Clicking **[Mpd]** in the Traffic log window (1) opens the list of Mobile Packet Data Service call records.

5. *Print outputs all unprinted calls (tagged with a hash):*

- Clicking **[Tag*]** marks all calls with a hash, which adds the records to the printout file.
- Clicking **[Tag]** marks the selected call with a hash, which adds the record to the printout file.
- Clicking **[Tag]** again untags a selected record.

6. Pressing **[>]** at a record when in window (2) displays detailed call data.



Traffic Log Printout Viewer - Normal calls (Cct)

The viewer lists tagged call records.

Records that have been printed out previously are marked with a hash.

The record file can be printed out or saved to disk. For default setup, see *Print Handling Setup* in the CONFIGURATION FROM PC section.

Click to save record file Click for printout Subscriber number Type of service Start date and time Call duration in minutes and seconds Terminal Id MSN number Net service provider User name if access code is activated

Click to delete record file

Ref. no.

#: record printed previously. "No hash" when printed first time.

Number of records

Duration in seconds per service

Accumulated time in minutes and 1/100 of a minute

Ref	Dialed number	Service	Started	Duration	Term.	MSN	Net	User
027 #	004791381198	Speech	030716 11:54	0:07 02	21	012	Xantic	captain
028 #	004791381198	Speech	030716 11:59	0:21 01	20	012	Xantic	captain
029 #	Incoming call	Speech	030716 11:59	0:13 01	20	004	Telenor	
030 #	004791381198	Speech	030716 12:00	1:42 01	20	012	Xantic	
031 #	004791381198	Speech	030716 12:03	0:40 01	20	012	Xantic	
032 #	004791381198	64K Speech	030716 12:04	0:08 91	30	012	Xantic	
033 #	004766981978	9K6 Fax	030716 12:05	0:53 11	40	012	Xantic	
034 #	004766981978	9K6 Fax	030716 12:08	0:53 11	40	004	Telenor	
035 #	004722225220	64K Data	030716 12:18	6:13 52	61	012	Xantic	
037 #	004766981978	9K6 Fax	030716 12:33	0:57 11	40	012	Xantic	
038 #	004766981978	9K6 Fax	030716 12:35	0:51 11	40	012	Xantic	
039 #	Incoming call	9K6 Fax	030716 12:48	1:10 11	40	012	Xantic	
040 #	004766981978	9K6 Fax	030716 12:55	0:52 11	40	012	Xantic	
041 #	004791381198	64K Speech	030717 10:20	0:15 91	30	012	Xantic	
042 #	004767244679	3.1KHz Audio	030717 10:23	0:43 62	42	012	Xantic	
15 records printed 03.07.17 10:28 (UTC+02:00)								
Outgoing calls summary:								
Speech	:	170 s (	2.83 minutes)					
64K Speech	:	23 s (	0.38 minutes)					
3.1KHz Audio	:	43 s (	0.72 minutes)					
64K Data	:	373 s (	6.22 minutes)					
9K6 Fax	:	266 s (	4.43 minutes)					

Traffic Log Printout Viewer - Mobile Packet Data Service (MPDS) calls

The viewer lists tagged call records.

Records that have been printed out previously are marked with a hash.

The record file can be printed out or saved to disk. For default setup, see *Print Handling Setup* in the CONFIGURATION FROM PC section.

Click to delete record file

Click to save record file

Click for printout

Start date and time

Call duration in minutes and seconds

Net service provider

Transmitted data in Bytes

Received data in Bytes

Retransmitted frames

Ref. no.

Ref	Started	Dur.	Net	Tx	Rx	RxSreg	TxSreg	CRC	Clr
002#	020813 12:26	0:44	Telenor	2.2KB	1.5KB	0	0	0	000
003	020813 12:27	3:05	Telenor	4.8KB	107.9KB	0	0	0	000
013#	020813 13:02	0:16	Telenor	115	36	0	0	0	000
014	020813 14:25	0:23	Telenor	385	166	0	0	0	000

#: record printed previously.
"No hash" when printed first time.

MPDS traffic summary:
Total MPDS Tx: 507KB Total MPDS Rx: 312.4 Sum MPDS:819.4KB

Total transmitted KiloBytes

Total received KiloBytes

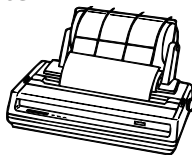
Sum of Rx+Tx KiloBytes

Forward errors in the MPDS system

Clear cause codes. 000=normal clearing of connection

Traffic Log Output to Serial Printer

When connected, traffic log details are automatically output as indicated below. One line is printed out after each call. To dump the traffic log, select Menu>Information>Traffic log in the ISDN



Handset.

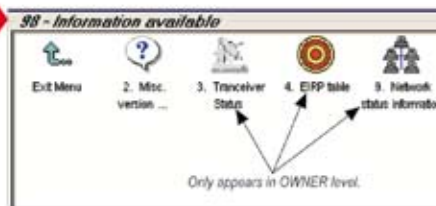
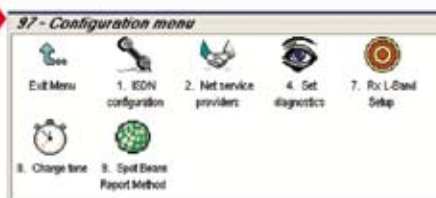
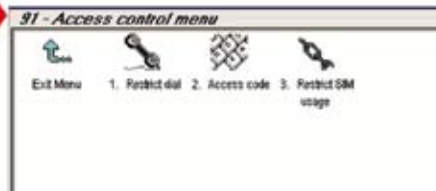
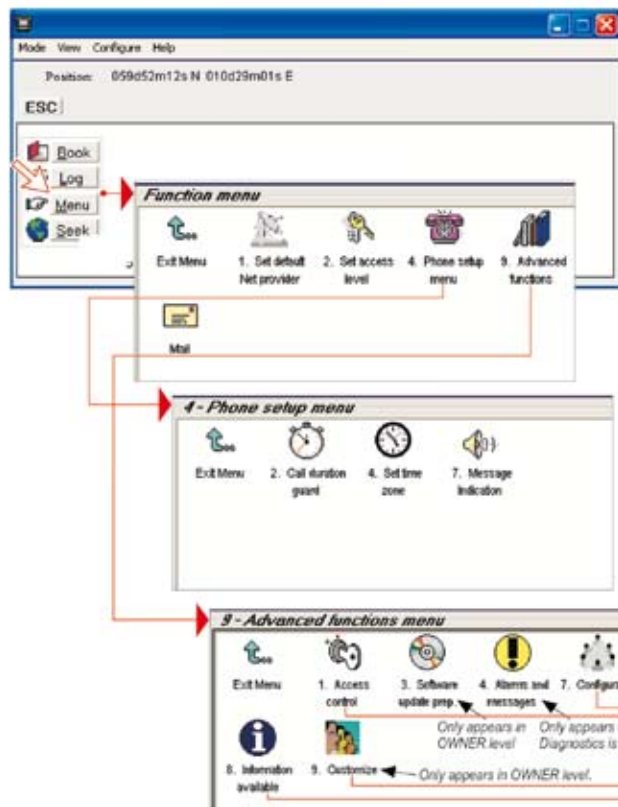
For setting up, see *Serial Printer Settings* in the Installation Manual.

Select logging mode in SAILOR VtLite Traffic log to: Automatic printing to RS232A or RS232B, see *Traffic Log Settings* earlier in this manual.


Reference number	Subscriber number	Type of service	Start date and time	Call duration in minutes and 1/100 of a minute	Transmitted & received data in kilobytes	MSN number	Net service provider	User name if access code is activated
Ref	Dialed number	Service	Started	Duration	Tx+Rx	MSN	Net	User
001	004791381198	Speech	030616 07:10	0:19		20	004Tel	
002	004722225220	64K Dat	030616 07:14	1:26		60	004Tel	
003	004766981978	3.1 Aud	030616 07:23	0:52		42	004Tel	captain
004	0047911381198	Speech	030616 07:26	0:06		21	004Tel	
005	Incoming call	Speech	030616 07:27	1:03		20	004Tel	
006	MPDS	MPDS	030616 07:45		1407KB		004Tel	
007	004722225220	64K Dat	030616 07:47	3:14		63	004Tel	
008	004766981978	9K6 Fax	030616 09:30	0:54		40	004Tel	
009	004791381198	64K Spe	030616 09:45	0:20		30	004Tel	
010	MPDS	MPDS	030616 11:26		112.5		004Xan	
10 records printed 03.06.16 11:26 (UTC+02:00)								
Outgoing calls and MPDS traffic summary:								
Speech	:	83 s	(	1.38 minutes)				
64K Speech	:	12 s	(	0.20 minutes)				
3.1KHz Audio	:	31 s	(	0.52 minutes)				
64K Data	:	270 s	(	4.50 minutes)				
9K6 Fax	:	32 s	(	0.54 minutes)				
Total MPDS Tx:	521.5KB							
Total MPDS Rx:	997.0KB							
Sum MPDS:	1632.0KB							

Menu Functions

Point at icons and double-click the mouse to open menus and functions.



Function reference list

 Reference number for direct selection. Click menu in main window and then key in the number.

Ref.	Function	Features
1	Set default Net provider	Allows changing Net service provider (and terrestrial network). See <i>Selecting Default Net Service Provider</i> .
2	Set access level	Allows shifting between user level and owner level, changing PIN code and owner password. See <i>Access Level</i> .
4	Phone setup menu	See <i>Advanced Functions</i> .
42	Call duration guard	Sets maximum call duration for 64 kbps calls.
44	Set time zone	Sets BDU Time Zone (UTC and date are set automatically).
47	Message indication	Switches indication of received fax and data calls on/off.
9	Advanced functions menu	
91	Access control menu	
911	Restrict dial	Only allows calls from Phone Book. List of barred numbers may be established.
912	Access code	Sets personal codes for using SAILOR 55 Fleet+
913	Restrict SIM usage	Only allows calls with specific card, no card or any card.
93	Software update prep	Prepares BDU for software update.
94	Alarms and messages	See information on CD
97	Configuration menu	
971	ISDN configuration	Chooses between ISDN protocols.
972	Net service providers	Changing Net service provider data.
974	Set diagnostics	Allows additional system information to be displayed
976	USB	Chooses between single and dual USB port
977	Rx L-Band setup	Not in use.
978	Charge tone	Setup and enabling/disabling charge tone.
979	Spot beam report method	Sending spot ID or position
98	Information available	See <i>Advanced Functions</i> .
982	Misc.version Id information	Displays a series of version information windows and FWD ID.
983	Transceiver status	Displays max/min voltages and temperatures in RF
984	EIRP table	Carrier status (not in use)
989	Network status information	Displays various network status information.
99	Customization menu	See <i>Advanced Functions</i> .
991	Paid functions	Installs additional functions, if any.
992	Phone name setup	Allows altering the factory and phone name.

Access Level

The SAILOR 55 Fleet+ user program (SAILOR VtLite) is accessible from two levels:

- **USER LEVEL** (default, accessed by phone PIN code)
- **OWNER LEVEL** (accessed by owner level password)

Warning! To prevent misuse, passwords other than default must be entered before putting the SAILOR 55 Fleet+ in operation.

Activating/changing phone PIN code

- 1 Double-click the **Set access level** icon on the **Function menu**.
- 2 Click **Edit** to enter/modify the PIN code.
- 3 Key in:
 - Old PIN code (*default phone PIN: 1234*)
 - New PIN code (*4- 10 digits possible*)
 - Retype to confirm

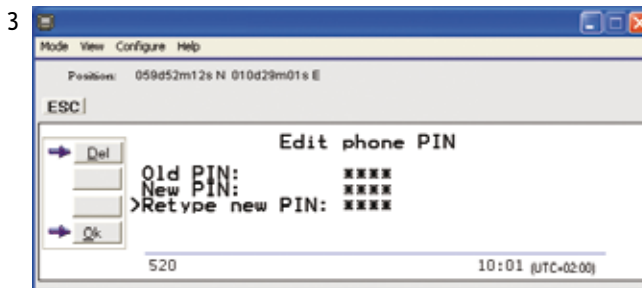
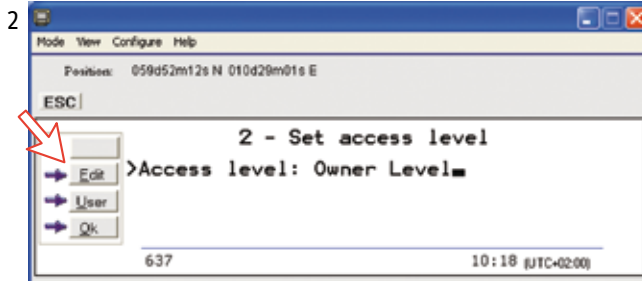
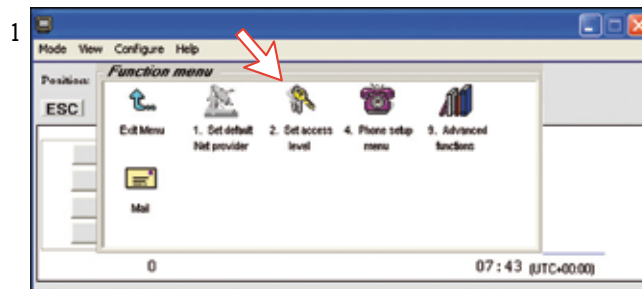
Click **Ok** for each entry and to store the new code.

Note! Clicking **Ok** without entering any numbers for **New PIN** and **Retype new PIN** disables the PIN code.

NB! The **Old PIN** code must be entered to reactivate the previous PIN code.

*If the **PIN** is accidentally lost, it is possible to reset the user's password to default (1234) by logging in as owner:*

"* + owner's password"
(Resetting is not possible on the SIM card.)



Functions requiring owner level

Programming of the functions below requires that the user access is set to **OWNER LEVEL**:

- Traffic log settings/printouts
- Modifying owner password
- Net Service provider names
- Restricted dial
- Restricted SIM usage
- ISDN configuration (except data/time element)
- Access code
- Paid functions
- Phone name setup
- Spot beam report method

Shifting to owner level

1. Click **Owner** in **Set access level** window.
2. Key in the password.

Note! The *default password* is: **1 2 3 4 5 6 7 8 9 0**

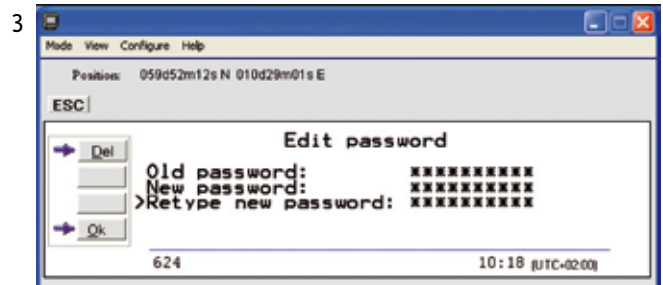
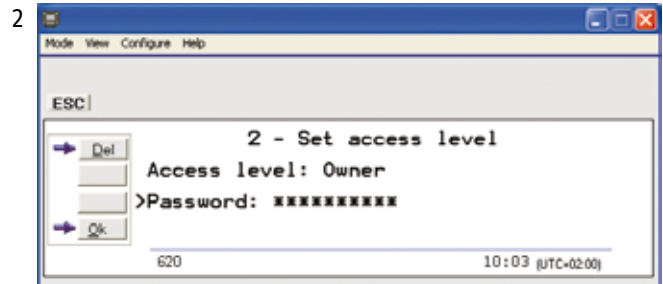
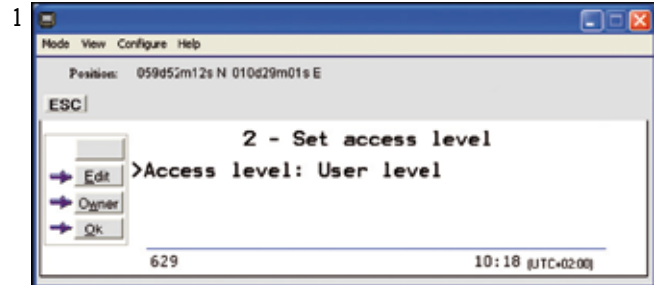
Clicking **Ok** activates the **Owner level**.

Changing owner level password

3. Click **Owner** in the **Set access level** window again, and click **Edit** to modify the owner password. Key in:
 - Current password
 - New password (10 – 12 digits)
 - Retype to confirm

Click **Ok** for each entry and to store new password.

To revert to **User level**, open the "Set access level" window and click **User**.



Selecting Default Net Service Provider

The default Inmarsat Net service provider for a satellite (Ocean Region) is automatically used if the user does not select another one when making a call.




Make sure that you choose the Net service provider who commissioned the equipment. You will otherwise be barred or charged additional rate.

In this menu default Net service provider can be pre-programmed for the Ocean Regions.

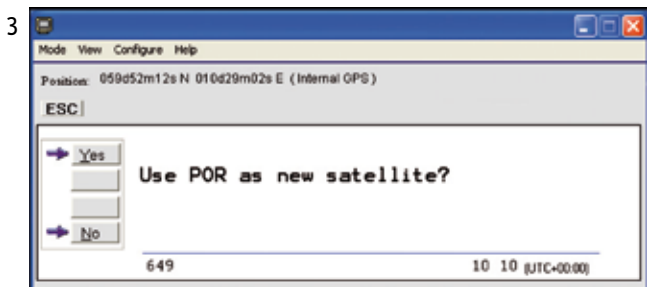
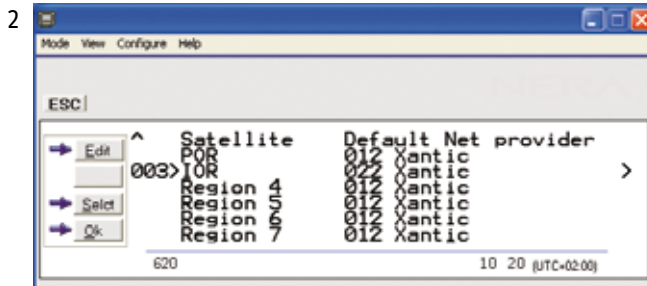
Note!


When using SIM card, selection is automatically restricted to one of the allowed Net service providers and does not need to be programmed.

Procedure:

1. On the **Function menu**, double-click the **Set default Net provider** icon to display the current selections.
2. Scroll up/down to change satellite: /.
3. Clicking **Select** or pressing  opens the window prompting you to confirm the choice of satellite with the current default Net service provider.




To change default Net service provider for a satellite region, see next page.

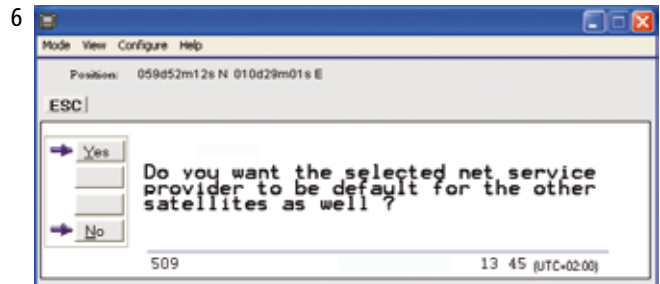
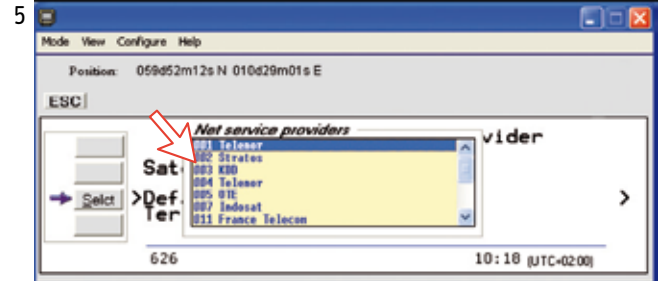
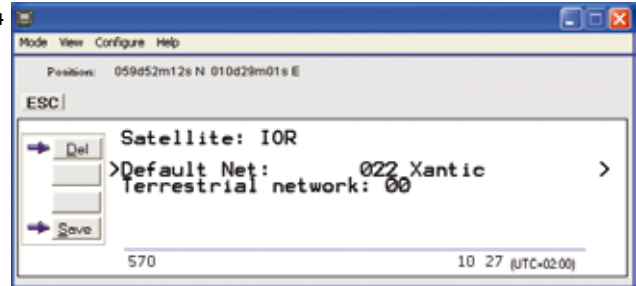


4. Clicking **Edit** or pressing  at the satellite region selected in step 2, displays the list of available Net service providers.

Terrestrial network

It is possible to select different terrestrial network. If no selection, the system uses the default net: 00.

5. Scroll to required Net provider: /, and press /R to enter chosen Net as default. **Save** stores the selected Net provider for this satellite (Ocean Region).
6. Clicking **Yes** sets Net service provider for all satellites (Ocean Regions).



Phone Setup

This phone setup menu includes the functions:



- Limitation of call duration.
- Setting timezone
- Indication of received calls, see *next page*.

Double-click the **Phone setup menu** icon in the **Function menu** to access the above functions:

Call duration limit



The call duration guard prevents accidental transmission of prolonged 64 kbps calls.

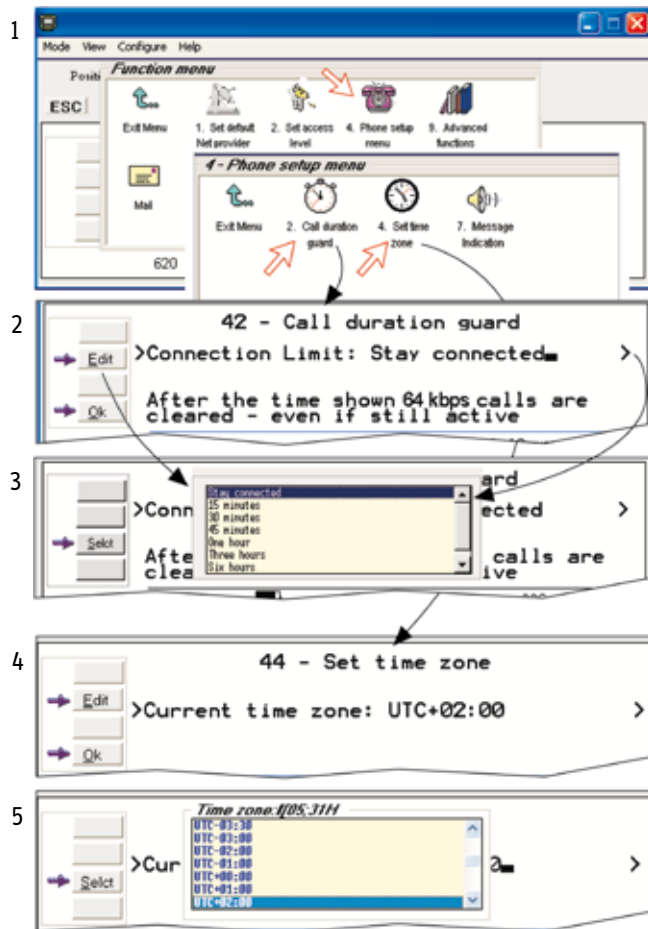
The timer sets the point at which the call is automatically cleared:

1. Double-click the **Call duration guard** icon.
2. Click **Edit** to set the timer.
3. Scroll / to select the required limit (either “Stay connected” or in steps between 15 minutes and 12 hours), and click **Select** to store the setting.

Setting time zone

The function sets the time displayed in the window:


1. Double-click **Set time zone** to change zone.
4. Clicking **Edit** opens the list.
5. Scroll / to select the required zone. Click **Select** to store the selected zone.



Message indication

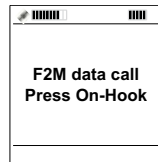
When the Message Indication function is set On, a received data and/or fax call is signalled in all ISDN Handsets:



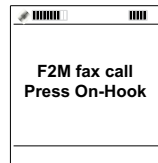
The ringing stops when pressing , or when the call is finished.

Data call:

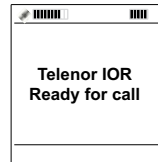
(F2M = Fixed-to-Mobile)



Fax call:

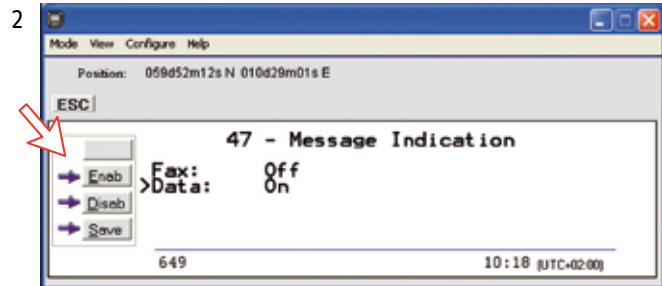
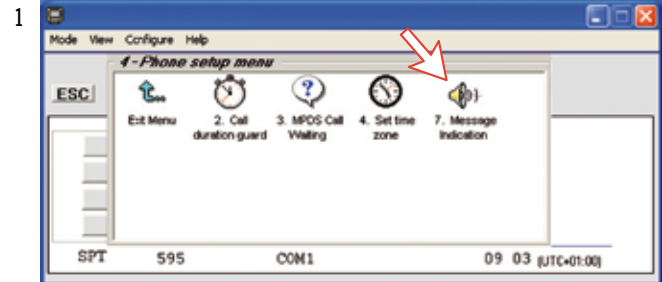


When the call is finished, the display reverts to idle.



Setup:

1. Double-click the **Message Indication** icon in the **Phone setup menu**.
2. Select **Fax** or **Data** and **Enable** or **Disable** indication of received messages, as required. Press **Save** to store the settings.



(Default G3 fax connection is configured on TEL2 on TA (MSN40).

Fax = 9.6 kbps fax or 3.1kHz Audio

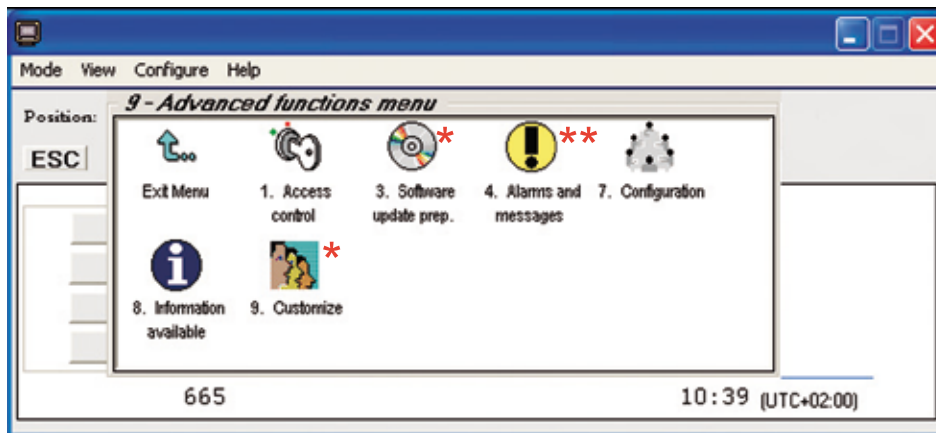
Data = 64 kbps data

Advanced Functions

* Some Advanced functions are accessible from **owner level** only.

The **owner level** is protected by password. For shifting to owner level and assignment of password, see *Access Level > Shifting to owner level*.

** Other Advanced functions are accessible when *Diagnostics* is turned ON, see *Configuration Menu > Set diagnostics*.



The Advanced functions include the following menus:

- *Access control:*
 - Restrict dial
 - Access code
 - Restrict SIM usage
- *Software update prep:*
 - Prepare for updating of SAILOR 55 Fleet+ software
- *Configuration:*
 - ISDN configuration
 - Net service provider names
 - Set diagnostics
 - USB port setup
 - Charge tone setup
 - Spot Beam Report Method
- *Information available:*
 - Misc. version Id information
 - Network status information (when Diagnostics is ON)
- *Customize:*
 - (owner level)
 - Paid functions
 - Phone name setup (owner level)

Access Control

Restricted dialing

The restricted dialing function allows the owner to establish a Barred list of subscriber numbers that cannot be called; or set SAILOR 55 Fleet+ for dialing from Phone Book only. The restricted dialing modes prevent misuse of SAILOR 55 Fleet+:

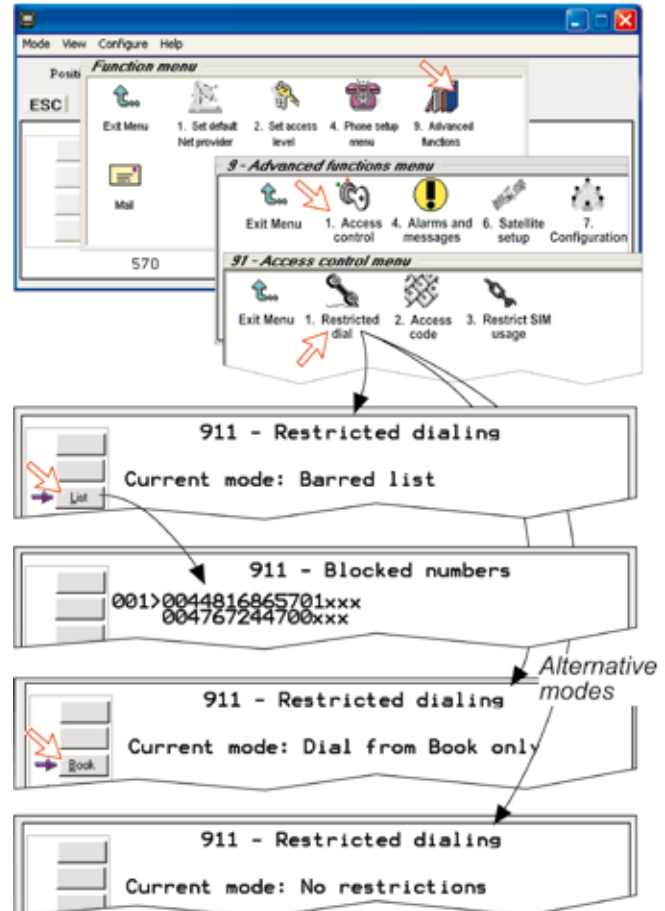
- **Barred list**, which may contain up to 10 phone numbers or part of numbers that can not be called. E.g. the entry "0087" in the barred list prevents all mobile-to-mobile calls
- **Dial from Book only**, which restricts calls to the numbers in SAILOR 55 Fleet+ Phone Book. It is still possible to append: an entry with number field "0047" means that it is possible to dial all Norwegian numbers. When a SIM card is inserted, the SIM entries will not be merged with the "phone" entries. The function is active for non-SIM operation and for one specific SIM card, see *Restricted SIM usage*.
- **No restrictions (default)**

Only one mode can be active at one time, as selected by the owner, see *next page*.

Checking the dialing setup

Via the **Function menu > Advanced functions menu**, double-clicking the **Restrict dial** icon on the **Access control menu** shows the active mode:

- Barred list
- Dial from Book only
- No restrictions



Restricted dialing setup (owner level only)

"Barred list" and phone book are established as follows:

1. Open the **Restricted dial** window as shown on the previous page.
2. The **Restricted dialing** window shows which list is currently active.

Edit allows selection of restriction mode.

Scroll up/down to select:

(**Selct** enters the chosen mode)

3. Clicking **List** displays the blocked phone numbers. The **List** key only appears when Current mode is **Barred list**.
4. Clicking **Edit** allows the barred number to be modified:

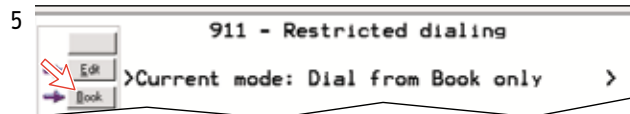
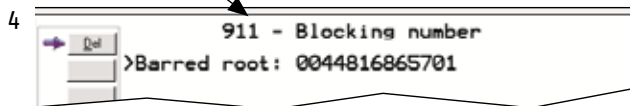
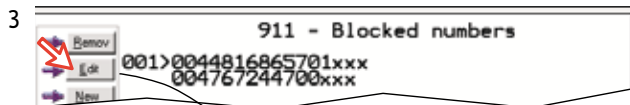
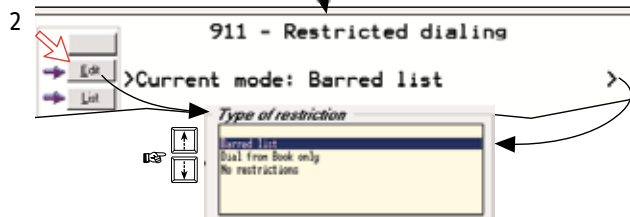
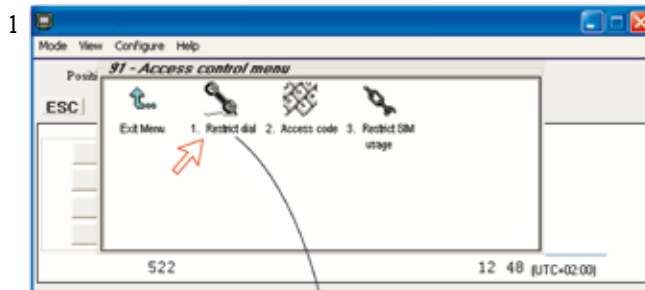
The field is empty when clicking **New** to add a phone number to the list.

Remov deletes number.

Save stores the changes.

5. When the restriction mode "Dial from Book only" is active, clicking **Book** allows data to be entered.

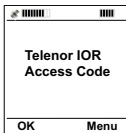
Warning! Remember to revert to user level, see Access Level



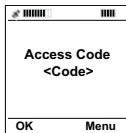
Access Code (owner level only)

Access code can be activated for up to 25 users (for 4.8k speech and 64k speech only). When the access code function is activated, the user is always prompted for a 1 - 8 digit personal code when making a call. All telephones are activated. To release a telephone for use without access code, see *MSN Configuration*. Entering the personal code allows the subscriber number to be dialed, e.g.:

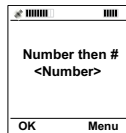
ISDN Handset:



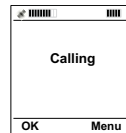
Press . The display above appears.



Enter code and press .



When accepted, enter number and press .



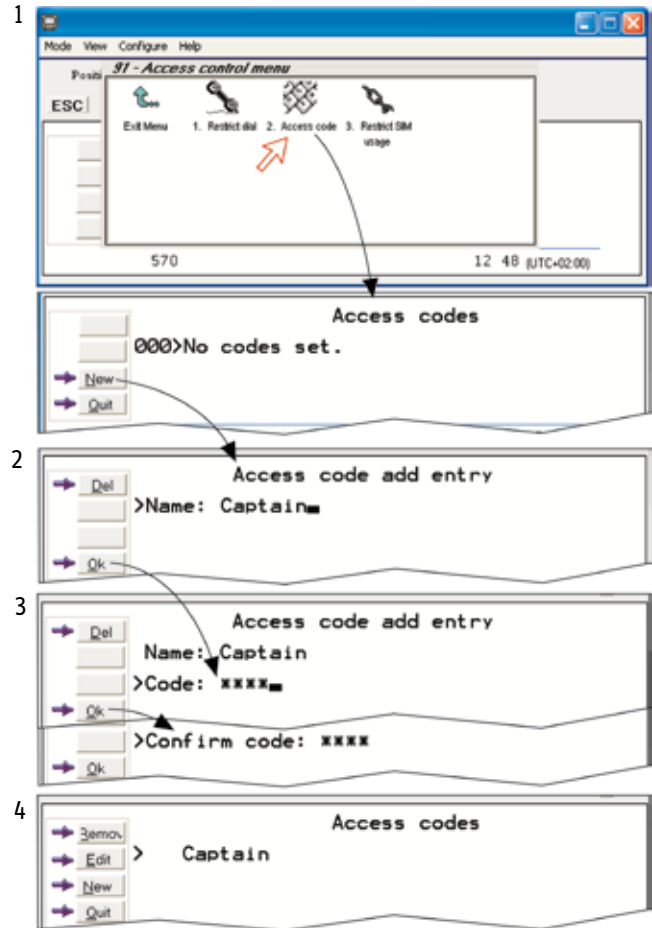
The call is set up.

Analogue telephone:



Setup:

1. Double-click the **Access code** icon in the **Access control menu**.
2. Pressing **New** opens the **Access code entry window**, allowing a name associated with the particular code to be entered.
3. Pressing **Ok** allows entering the personal code. Pressing **Ok** again prompts you to confirm the entry.
4. When pressing the **Access code** icon the next time (1), the window displays a list of the names associated with the programmed access codes.



Restricted SIM usage

Allowed SIM

SAILOR 55 Fleet+ can be set to operate from:

- Lock SIM, locked to one specific SIM card. Any other SIM user will be rejected.
- No SIM card. All SIM users will be rejected.
- Any SIM card (*default*).

Setting SIM restrictions

(owner level only)

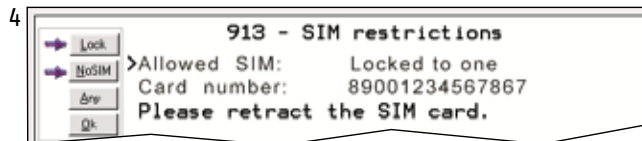
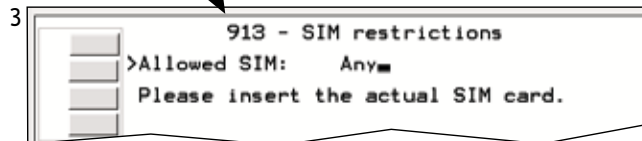
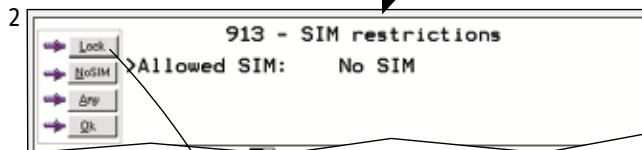
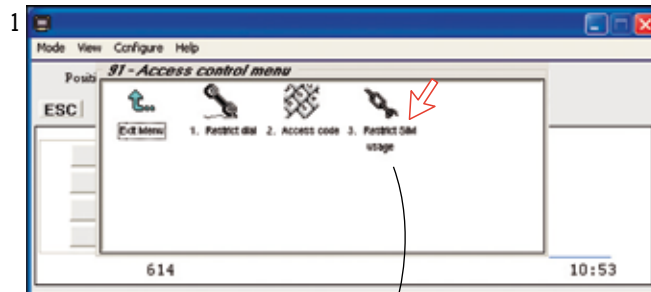
1. Double-click the **Restrict SIM usage** icon.
2. The SIM restrictions window shows an example with the setting **Allowed SIM: No SIM**.

Click **Any** (default) to set SAILOR 55 Fleet+ for operation from any SIM card.

Lock SIM:

3. Click **Lock** and insert the actual SIM card. SAILOR 55 Fleet+ can now be operated with that specific card only.
4. When retracting the card, the Id of the SIM provider is displayed.

Ok stores the settings.



Configuration Menu

ISDN protocol configuration

1. Open the **Configuration** menu via the **Function menu** > **Advanced functions menu**.

2. Double-clicking the **ISDN configuration** displays the ISDN configurations implemented in SAILOR 55 Fleet+.

Switch to **owner level** to edit the entries:

• Protocol

Select Euro ISDN for connection of equipment conforming to the European ISDN standard.

Select NI-1 protocol for equipment conforming to the NI-1 standard (National ISDN-1).

• Date/time element

When enabled, date and time is sent to the connected Terminal Equipment during call establishment. Some ISDN devices do not survive this message. The date and time transmission may then be disabled.

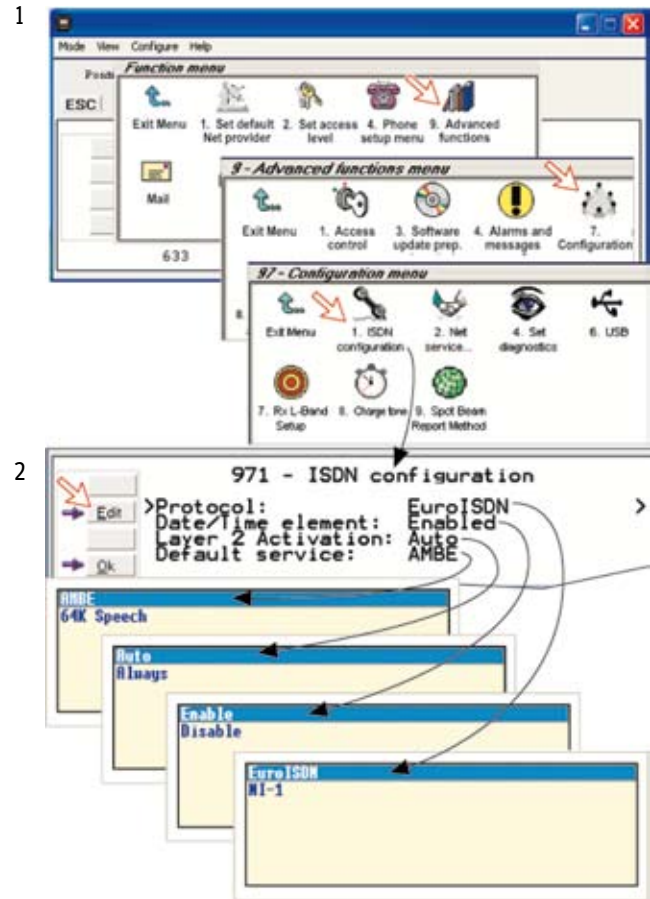
• Layer 2 Activation

The layer 2 connection is deactivated after some idle time as default. Some ISDN devices interpret this as an alarm situation. Layer 2 deactivation can then be disabled. When the ISDN protocol is set to NI-1, this option is on as default.

• Default service



Some ISDN devices can not signal their own MSN number. Such a phone will not be able to use the 64 kbps service since all "unknown" speech devices are required to use the 4.8 speech service. The user can set SAILOR 55 Fleet+ to map all "unknown" devices to 64 kbps speech service.

*NB! Remember to revert to **user** level.*



Net service providers (owner level only)

Adding, editing, or removing entries in the list of Net service providers:

1. Via the **Function menu > Advanced functions menu**, double-clicking the **Net service providers** icon in the **Configuration menu** displays the list of Net service providers including their station codes.
2. Scroll to required Net service provider, /. Clicking **Ok** returns you to the Configuration window. **Remov** deletes entry. Clicking **Edit** opens the window allowing the station code and provider name to be modified (window 3).
4. Clicking **New** (window 2) opens the window allowing station code and provider name to be added. Use **Del** to modify. **Save** stores the changes.

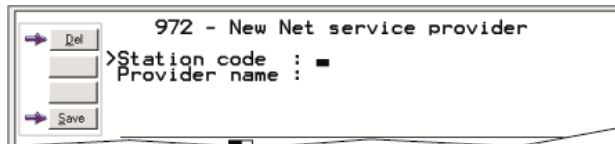
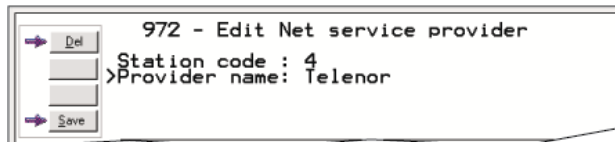
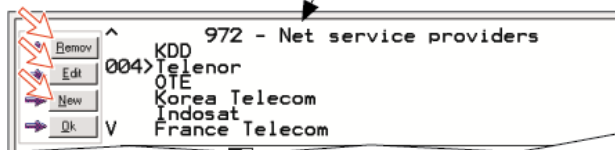
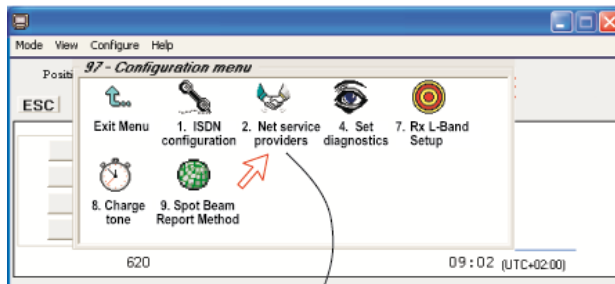
*NB! Remember to revert to **user** level.*

USB port setup

It is possible to select single or dual USB port. Dual USB port gives access to two USB ports on the Terminal. One for data connection and DUN (Dial Up Networking) and one for SAILOR VtLite connection via the same USB cable.

USB profiles:

- Single Port (default)
- Dual port (WDM), used on Windows operating systems
- Dual port (composite), used on other operating systems



Spot beam report method

1. Double-click the **Spot beam report method** icon via the **Function menu > Advanced functions menu > Configuration menu**.
2. Two selections are provided:
 - **Do not transmit my position**
 - **May send position** (default)

*May be changed in **owner level** only.*

Set diagnostics

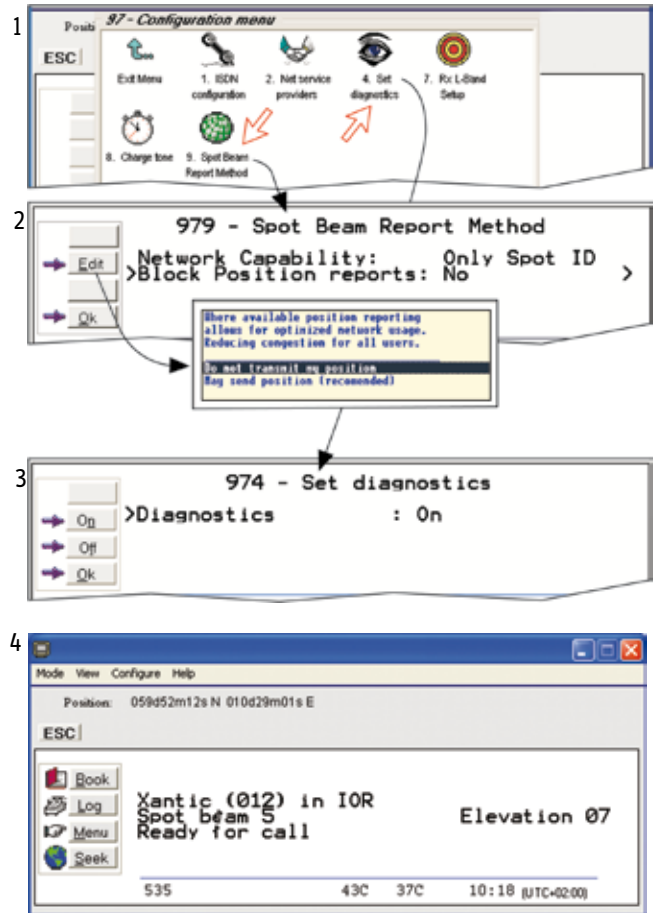
Additional system information is displayed when Diagnostics is turned **On**.

See also *Menu Functions* in the OPERATION FROM PC section.

1. Double-click **Set diagnostics** icon via the **Function menu > Advanced functions menu > Configuration menu**.
3. Click **On** or **Off** as required.
4. Shows idle window with Diagnostics **On**.

Note!

When pointing at the bottom of the window, additional information such as year and date pops up.



Charge tone setup (owner level only)

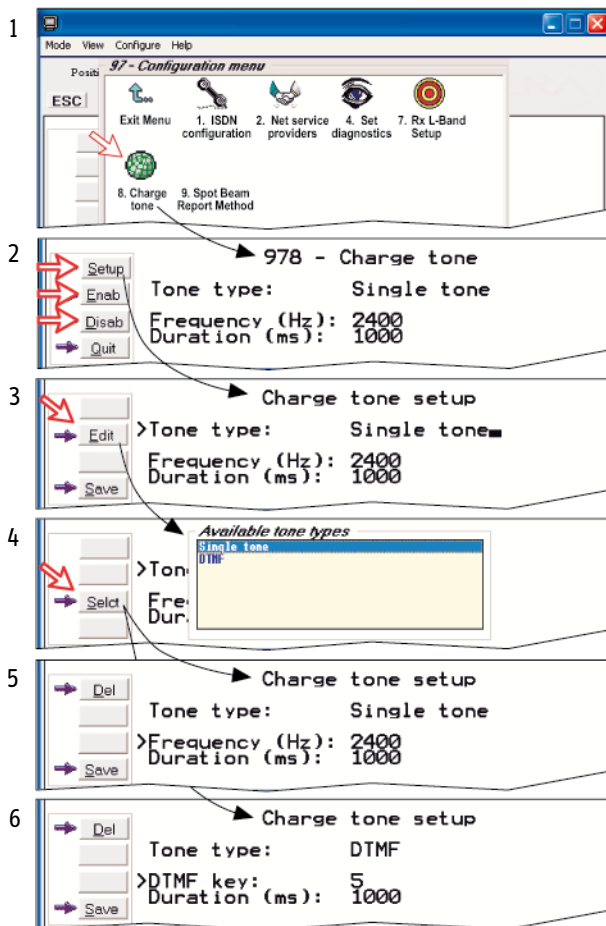
When the charge tone function has been enabled, a single frequency tone or DTMF is transmitted once the call has been established. The tone informs an external debiting system, e.g. a pay phone connected to the BDU that charging can start.

Procedure:

1. Double-click the **Charge tone** icon via the **Function menu** > **Advanced functions menu** > **Configuration menu**.
2. The **Charge tone** window appears. The example indicates that a single 2400 Hz with a duration of 1000 ms will be emitted. The window provides buttons for enabling/disabling the charge tone function.
3. Clicking **Setup** allows selecting a single charge tone or DTMF.
4. Clicking **Edit** allows selection between **Single tone** and **DTMF** tone emission.
5. Clicking **Selct** with the **Single tone** activated allows entering the required tone frequency.
6. Clicking **Selct** with the **DTMF** tone activated allows entering the DTMF key and duration.

Valid settings:


Frequency: 400 - 3400 Hz
 Duration: 10 - 5000 ms
 DTMF key: 0 - 15



Information Available

Miscellaneous version Id information

The **Information available** function displays the terminal forward Id and system versions.

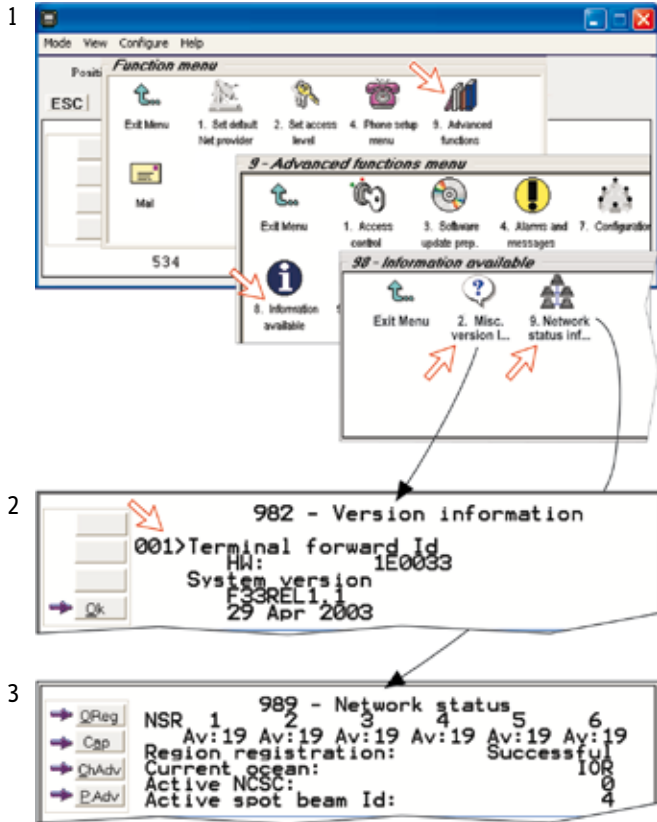
1. Via the **Function menu > Advanced functions menu**, double-clicking the **Miscellaneous version Id information** icon in the **Information available** menu displays the available data (window 2).
 2. With **Diagnostics On**, pressing  opens a series of version information windows.
- Clicking **Print** outputs a system report in the printout viewer.

Network status information (owner level only)

This function displays various network status information.

3. Double-click the **Network status information** icon in the **Information available** menu for readout.

*NB! Remember to revert to **user** level.*



Customize Menu *(owner level only)*

1. Open the **Customization menu** via the **Function menu** > **Advanced functions menu**.

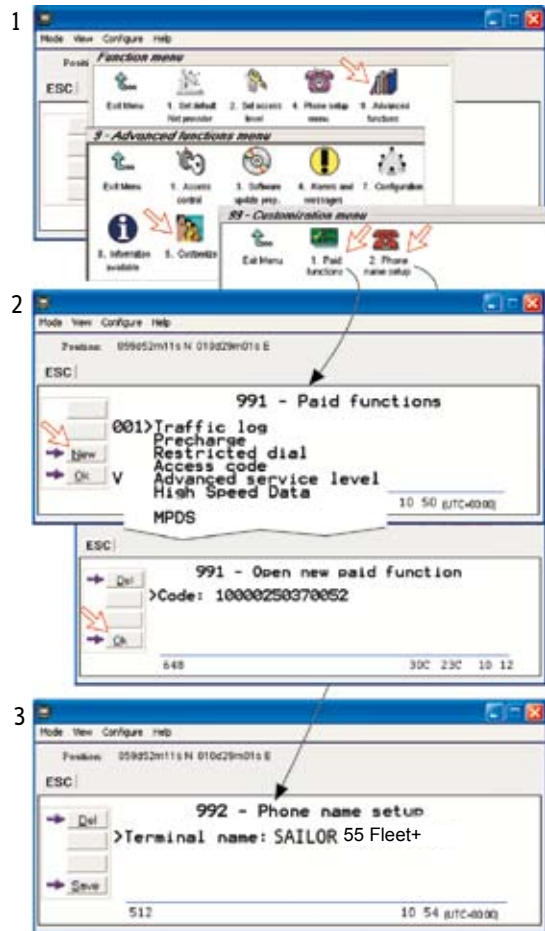
Paid functions

2. A paid function is activated by entering an "Opening key" provided when purchasing the function.
Double-clicking the **Paid functions** icon in the **Customization menu** displays the list of available functions.
Clicking **New** opens the **Open new paid functions** menu.
Enter the "Opening key" and click **Ok**.

Phone name setup

3. Double-clicking the **Phone name setup** icon in the **Customization menu** displays the Phone name, i.e. SAILOR 55 Fleet+. To change, key in uppercase/lowercase letters as required.
Use **Del** to modify.
Save stores the changes.

*NB! Remember to revert to **user** level.*























Routing of incoming calls (examples)

The table below illustrates the use of appropriate Terminal Ids for the various services combined with examples of incoming IMN numbers.

* Preprogrammed, see table on previous page.

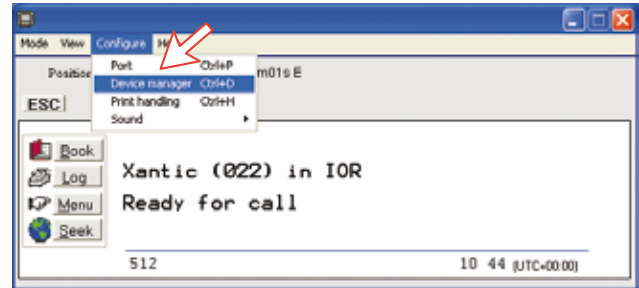
Note! If the Net service provider does not specify which Terminal Id should be used with the various IMN numbers, select Term. Id no.1 for the first 4.8 kbps telephone, then no. 2 for the second phone. Use the same principle for the other type services. It is advisable to note down the selections.

Name		Service	BDU ports	Provided by ISP:	
				Term. Id	IMN
Bridge	MSN20*	 4.8kbps speech		01*	762420510 ←
Saloon	MSN 21*	 4.8speech	TA - TEL1 	02*	762420511 ←
Radio room	MSN22	 4.8kbps speech	ISDN 	03	762420512 ←
SAILOR TA	MSN40*	 9.6kbps fax	TA - TEL2 	11*	762420513 ←
FaxGr.4	MSN60*	 64 kbps data	ISDN 	51*	600020521 ←
Data	MSN61*	 64 kbps data		52*	600020522 ←
Data	MSN62*	 64 kbps data		53*	600020523 ←
Router	MSN63*	 64 kbps data		54*	600020524 ←
Bridge	MSN30*	 64 kbps speech	ISDN 	91*	600020525 ←
Captain	MSN31	 64 kbps speech	ISDN 	92	600020526 ←

* Preprogrammed

MSN Configuration

You are prompted to enter the owner level password (default: 1234567890). For security, the password should be changed before or after configuration of a device. See ACCESS LEVEL > Changing owner level password.



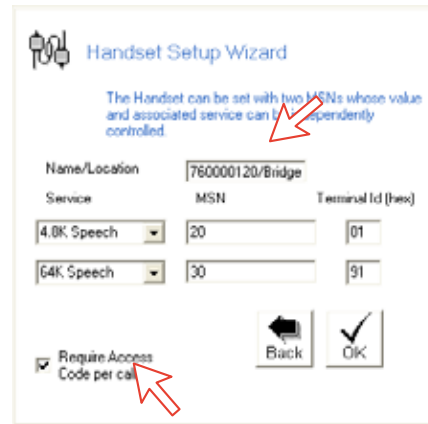
**Click to open Device Manager for configuration of ISDN/
RS-232/RS-422/USB > > > > >**

ISDN Handset

- ISDN Handsets will automatically be configured with Handset MSNs in the Device Manager.
- The first ISDN Handset connected will be given MSN20 and MSN30. A new handset will thus respond to both these MSNs.
- The next ISDN Handset will be given the next available MSNs.
- All ISDN Handsets are given two MSN numbers, one for 4.8 kbps speech and one for 64 kbps speech.
- The MSN numbers will follow the handset.

- The MSNs can be controlled independently, e.g. if two handsets are given the same MSN, they will both respond to an incoming call to that MSN.
- To verify selected MSNs of a handset, check in the Device Manager or select **Menu > Phone setup > Active MSN** on the handset.


Open the device manager, see previous page.
 Right-clicking a Dedicated Handset and then clicking **Handset Configuration** starts the Handset Setup Wizard.
 Enter **Name/Location** of the installed handset, as required.




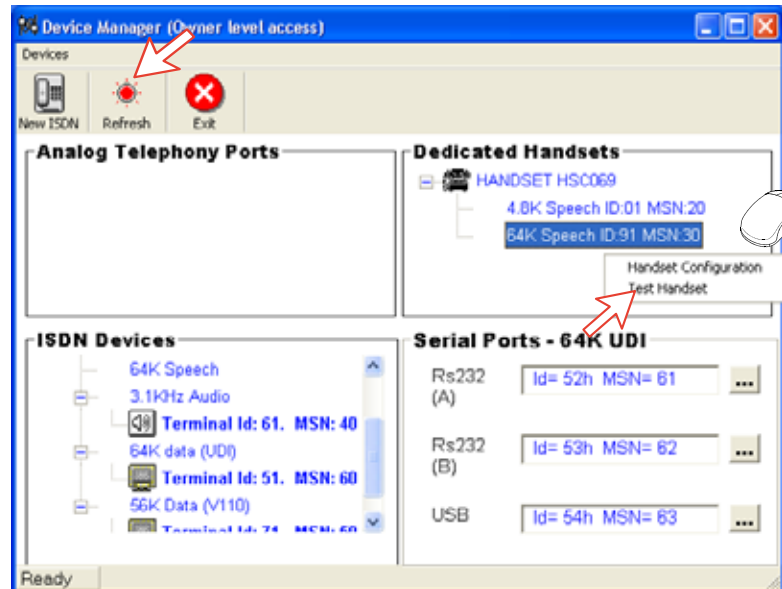
Require Access Code must be unchecked to allow this handset to be used without entering a code.

Deleting an ISDN Handset

Unplug the ISDN Handset to be deleted and rightclick the same in the **Dedicated Handset** list. Clicking **Test Handset** removes its data, leaving the Terminal Id and MSN number vacant for another Display Handset (click Test Handset on 4.8k speech as well).

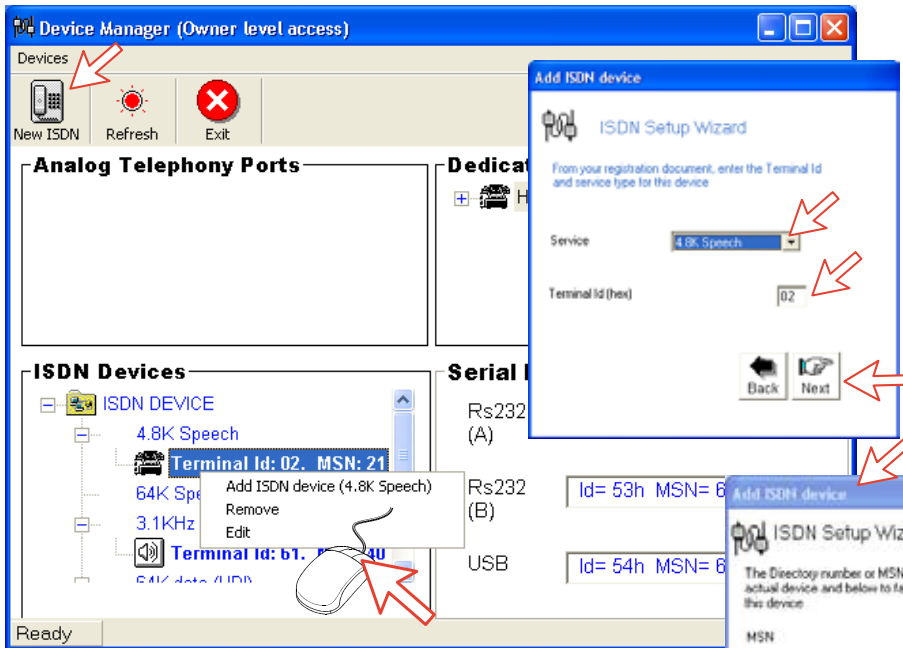
If necessary, click refresh:  and repeat clicking **Test Handset**. The Main Communication Unit will remember the handset connection data. All handsets are given a unique name.

Note! A triangle symbol  in the Device Manager appears when a Display Handset is missing.



ISDN port (selection example: 4.8 speech)

Open device manager and right-click to open ISDN Setup Wizard.



- Select the required service:
- 4.8 kbps standard speech service
 - 64 kbps speech service
 - 3.1 kHz Audio
 - 56 kbps data service (V110)
 - 64 kbps data service (UDI)
 - Fax (9.6 kbps fax)

Click to continue. The system selects the next available Terminal Id. Check with Terminal Id received from Net provider.

Require Access Code is checked when used for 4.8 speech and 64 kbps speech. Apply charge tone is used when connecting pay phone.

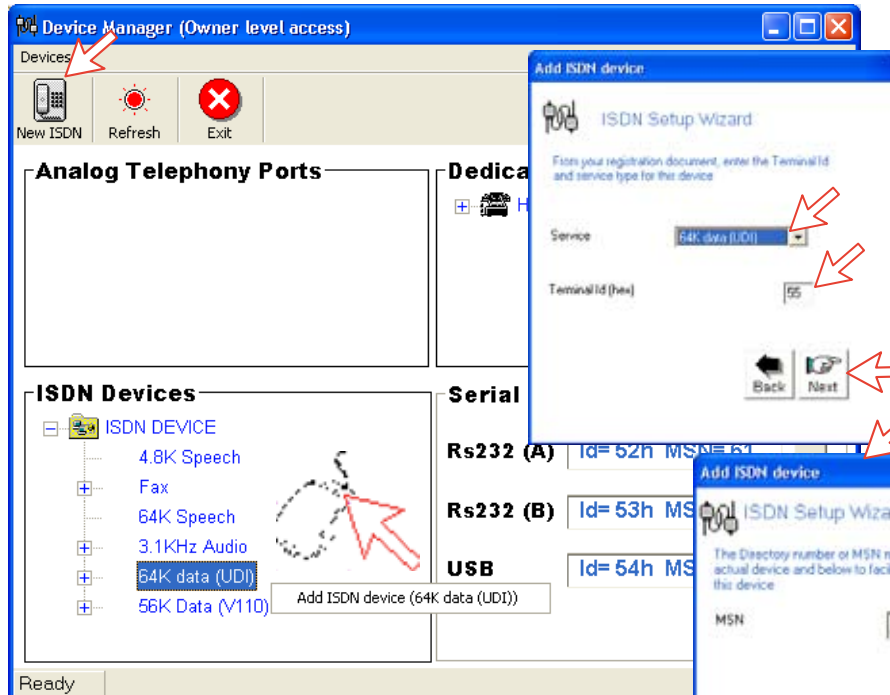


Key in MSN number if not using the recommended one. Access code is not used for ISDN data.

Click to enter number.

ISDN port (selection example: 64 kbps data service)

Open device manager and right-click to open ISDN Setup Wizard.

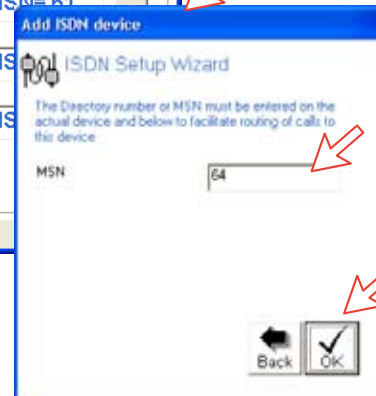


Select the required service:

- 4.8 kbps standard speech service
- 64 kbps speech service
- 3.1 kHz Audio
- 56 kbps data service (V110)
- 64 kbps data service (UDI)
- fax (9.6 kbps fax)

Click to continue.

The system selects the Next available Terminal Id. Check with Terminal Id received from Net provider.



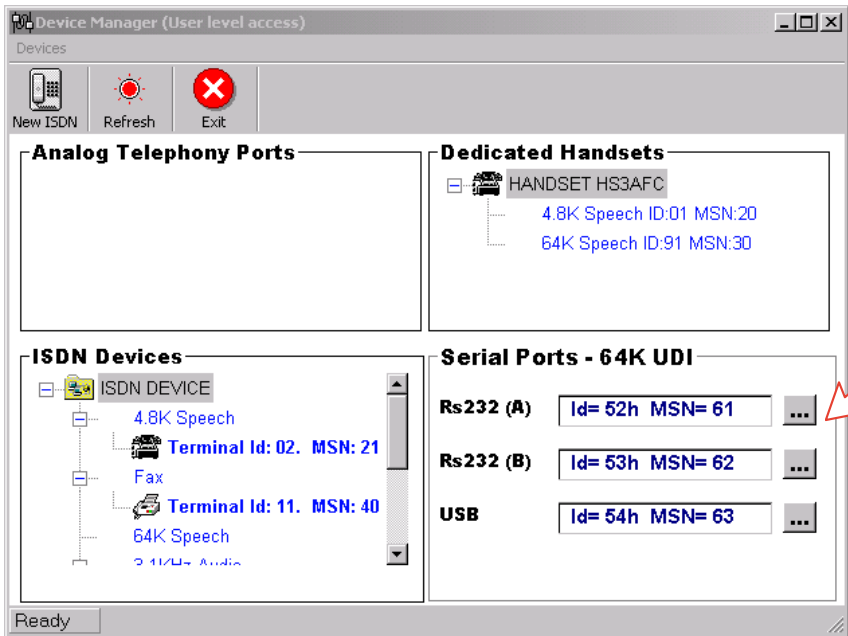
Key in MSN number if not using the recommended one.

Access Code is not used for ISDN data.

Click to enter number.

RS-232 port

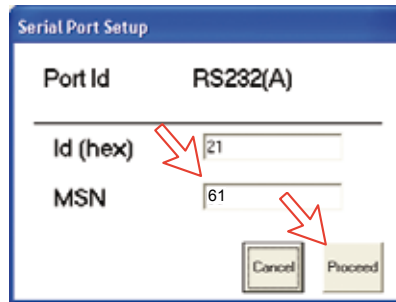
Open device manager and right-click to open setup editor.



Click to open **Serial Port Setup (RS232)**.

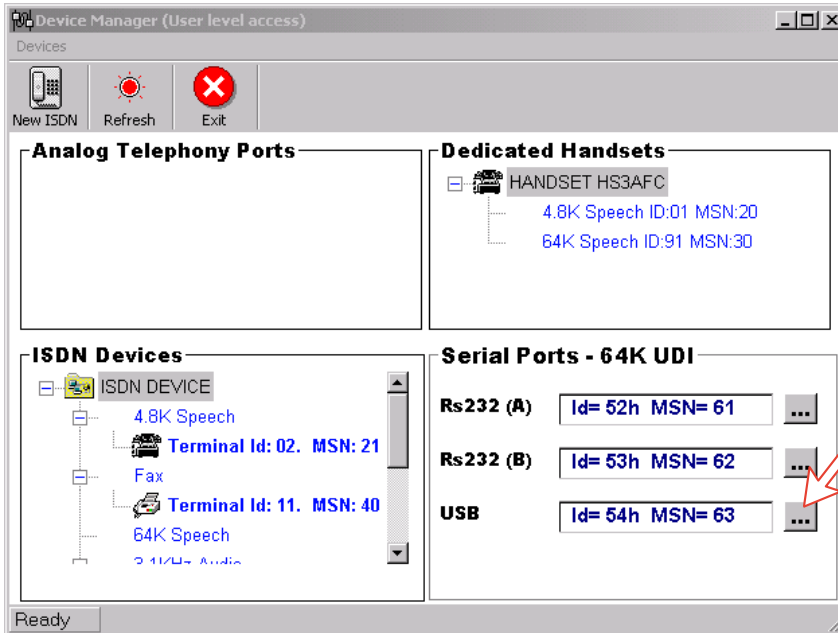
Key in MSN number if not using the recommended one.

Click **Proceed** to enter number.



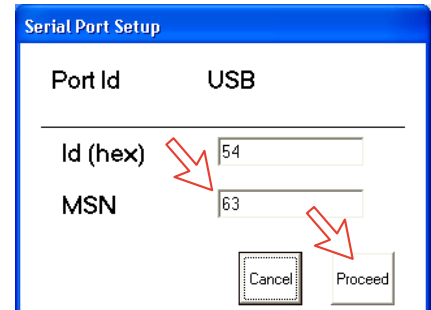
USB port

Open device manager and right-click to open setup editor.



Click to open **Serial Port Setup**(USB).

Key in MSN number if not using the recommended one. Click **Proceed** to enter number.



Saving and Reloading Configurations

The SAILOR 55 Fleet+ configuration settings may be stored on the PC harddisk, e.g. prior to replacing software.

Procedure:

1. Open the Device Manager window as indicated
2. Clicking **Devices > Save config to a file** automatically stores the data in a "Config.cgf" file in the SAILOR VtLite directory **c:/program files/SAILOR VtLite**.
3. After installing the software, the settings may be transferred back to SAILOR 55 Fleet+ by pressing **Load**.
4. Clicking **Restore Factory Defaults** loads default SAILOR 55 Fleet+ configurations.

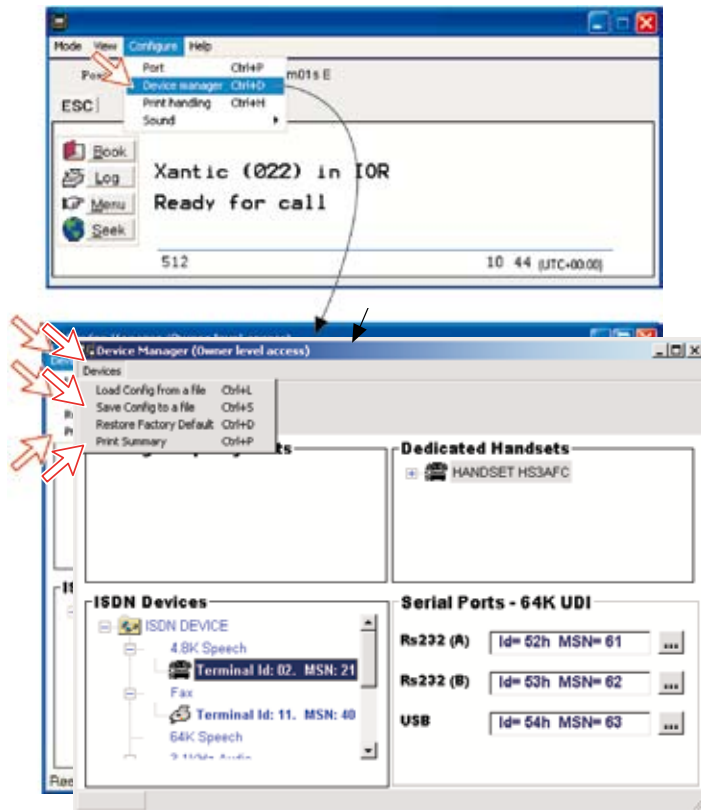
Printout/storing a configuration summary:

5. Clicking **Print Summary** opens the **Printout Viewer** (see next page) which lists the settings of the end user equipment, and allows filing and/or printout.

Note!

Save config to a file only saves the **Device Manager settings**. Settings such as Net provider / Access codes / ISDN protocol/ output are not saved.

Phone book data and traffic log must be saved in the **Book** and **Log** menus.



Configuration printout viewer

The list is sorted by Terminal Id.

Print to local printer

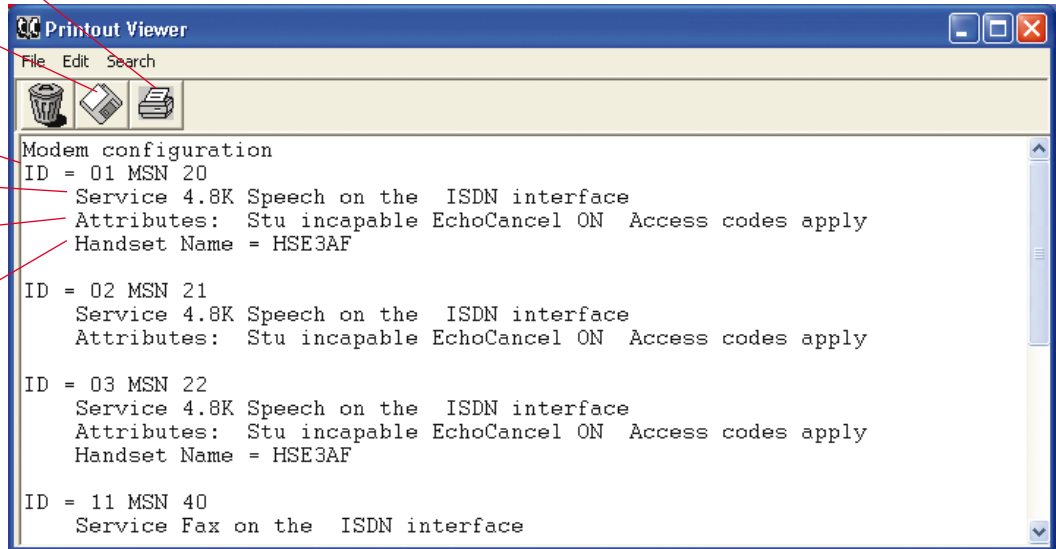
Save to disk

Terminal Id and
MSN number

Type of service

Individual device
settings

Name/location,
if entered



Print Handling Setup

The **Printout from modem** window is used for setting of default output of Traffic log, Modem configuration etc.



Clicking **Configure > Print handling** opens the **Printout from modem** window. The following settings are selectable:

Default print action:

Normally, choose **Print to screen** which causes the file to be output via the Printout viewer. For an example, see *Traffic Log Printout Viewer*.

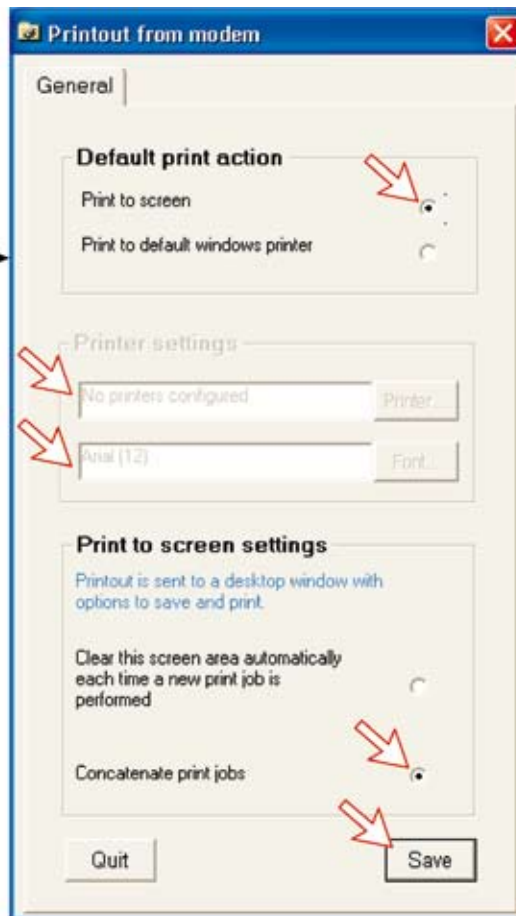
For direct printout, choose **Print to default windows printer**.

Print to screen settings:

Determines the output of records via the Printout viewer. Normally, use **Concatenate print jobs** which “chains” the jobs to be printed or saved to file. The alternative choice clears the screen after each printout.

Printer settings:

For hardcopy printout, make sure that the appropriate printer and font are selected.



Mobile Packet Data Service

The MPDS service can be efficient for applications such as:

- E-mail
- Internet/intranet
- Navigational updates
- Vessel telemetry transmission
- Database queries
- E-commerce

The user only pays for the amount of data sent over the network, and not for the time connected.

Ports supporting MPDS:

- RS232A
- RS232B / RS422
- USB

No configuration is needed!

Dial number **94# to set up an MPDS call.

See the MPDS application on the *SAILOR 55 Fleet+ CD*:

.

Inmarsat Fleet System

The Inmarsat Global Area Network service (GAN) provides 4.8 kbps voice communications service and 64 kbps data transmission to and from mobile/fixed subscribers anywhere within the worldwide coverage of the Inmarsat 3 Spot Beam system, see *Satellite Coverage Map* in the *Getting Started* manual.

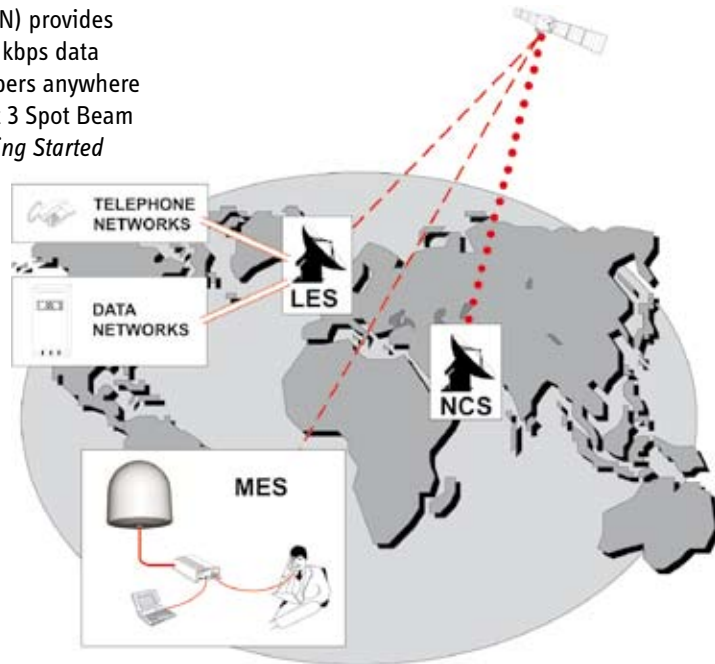
The benefit of the INMARSAT system is its high capacity, and the rapid and reliable connection between the land based (fixed) users and the **Mobile Earth Stations (MESs)**.

Each satellite region is under the control of a **Network Coordinating Station (NCS)**, which controls and monitors the traffic between the MESs and the LESs.

NCS: *Network Coordinating Station, one in each Ocean Region (supervises all messages and signals sent in the Inmarsat system).*

LES: *Land Earth Station w/Net service providers (interconnects fixed telecommunication networks with the Inmarsat system).*

MES: *Mobile Earth Station (SAILOR 55 Fleet+, a user terminal for the Inmarsat system).*



Overview of the Inmarsat Fleet System.

System Satellites

The satellites are positioned in a geostationary orbit above the equator at approximately 35700 km altitude.

See figure *Satellite Positions*.

In geostationary orbit, each satellite moves at the same rate as the earth, and so remains in the same relative position to the earth.

The satellites provide 99% landmass coverage.

SAILOR 55 Fleet+ can communicate via the four satellite Ocean Regions:

- AOR-W** Atlantic Ocean West Region
- AOR-E** Atlantic Ocean East Region
- IOR** Indian Ocean Region
- POR** Pacific Ocean Region

For coverage area of the satellites for SAILOR 55 Fleet+, see *Satellite Coverage Map* in the *Getting Started* manual.

Transmission frequencies

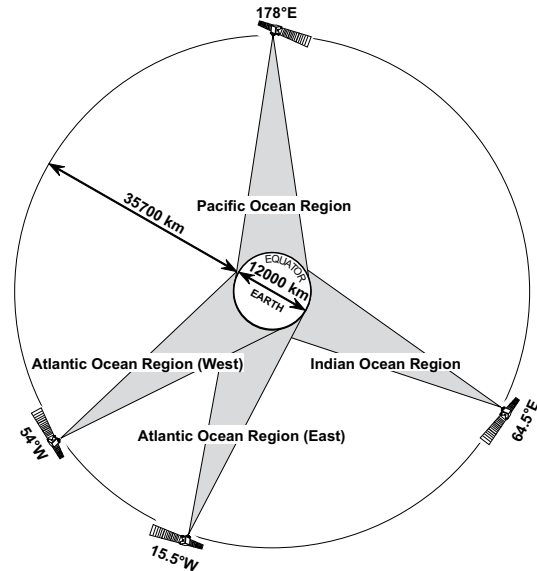
The Inmarsat terminals operate in the following frequency bands:

MES *transmission* frequencies:

1626.5 MHz - 1646.5 MHz

MES *receiving* frequencies:

1530.0 MHz - 1559.0 MHz



Satellite Positions.

A large number of channels are available (20 kHz channel separation), offering 4.8 kbps voice communication, as well as 9.6 kbps fax or 64 kbps data communication.

Duplex communication uses two channel frequencies, one in each direction.

The LESs provide interface to the international networks for telephony and data: PSTN (Public Switched Telephone Networks) and PSDN (Packet Switched Data Networks).

Antenna Search Pattern

Azimuth sweep

A 360° rotation of the antenna in azimuth at a fixed elevation angle.

Hemispheric search

A hemispheric search is constituted by azimuth sweeps at elevation angles 5°, 25°, 45°, 65° and 85°.

The antenna searches on the NCS Common TDM channel frequency (NCSC), initiated by the SAILOR 55 Fleet+ Below Deck Unit (BDU).

When finding the satellite signal, it completes the hemispheric search and moves to the position where the strongest signal was detected.

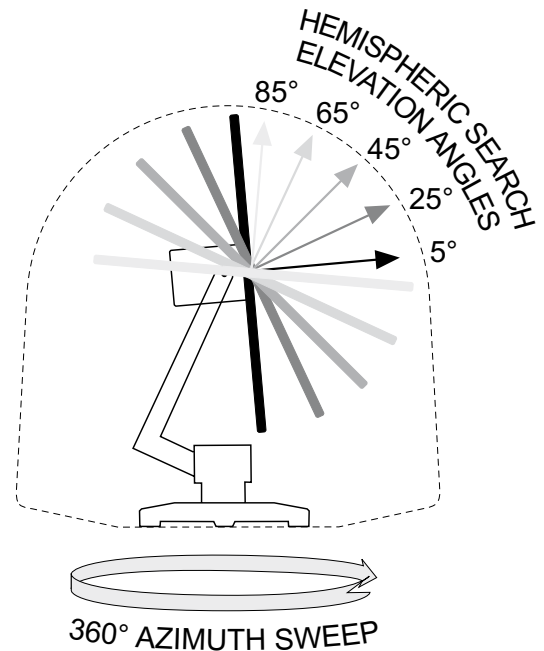
The Antenna reports back to the BDU for verification of valid NCSC.

If no valid signal is detected, no further automatic action occurs until the BDU initiates a new search.

A search request from the BDU may contain channel frequency and an order to make a full 360° *search at a specific elevation*, calculated from map and GPS information. If no satellite is found, a *hemispheric search* will be performed.

Tracking

At the end of a search, SAILOR 55 Fleet+ performs a fine-tuning of the antenna position around the strongest detected signal. The fine-tuning is obtained by a squinting function based on satellite signal quality.



Note! SAILOR 55 Fleet+ remembers the last used Ocean Region when switching the terminal off/on.

Communication services

Global beam service

- **Speech:** - 4.8 kbps

Spot beam services

- **Speech:** - 64 kbps / 4.8 kbps
- **Data:** - 56/64 kbps
- **MPDS** - Mobile Packet Data Service
FWD = 64 kbps, RTN = 64 kbps
Shared channel
- **Telefax:** - 64 kbps Group 4
9.6 kbps Group 3 via
Terminal Adapter (TA)
- **Audio:** - 3.1 kHz (Audio)

The SAILOR 55 Fleet+ BDU has following ports (see figure):

- ISDN ports for connection of ISDN telephones or Terminal Adapter; a total of 8 devices.
- RS-232/RS422 and USB ports for connection of data equipment.

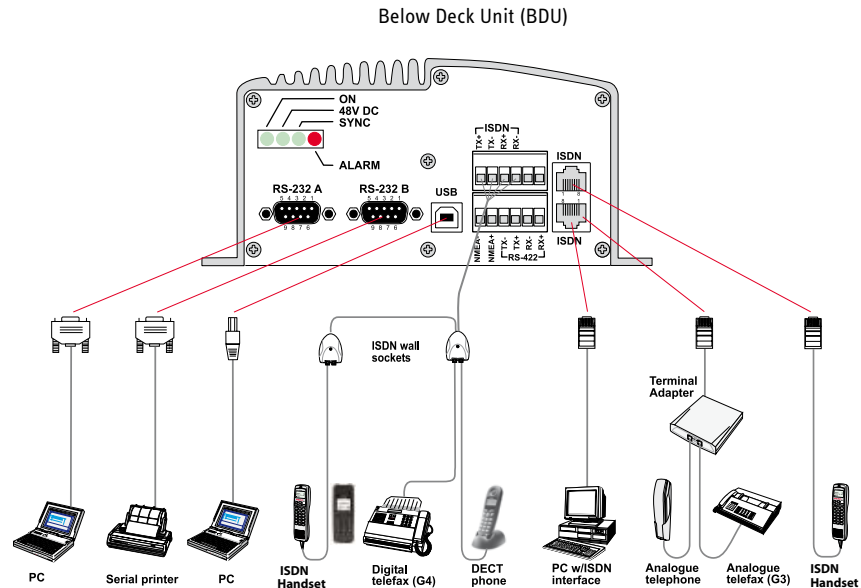
Internal communication

Equipment connected to the various interfaces may communicate with each other via an internal MSN (Mobile Subscriber Number) assigned to each unit.

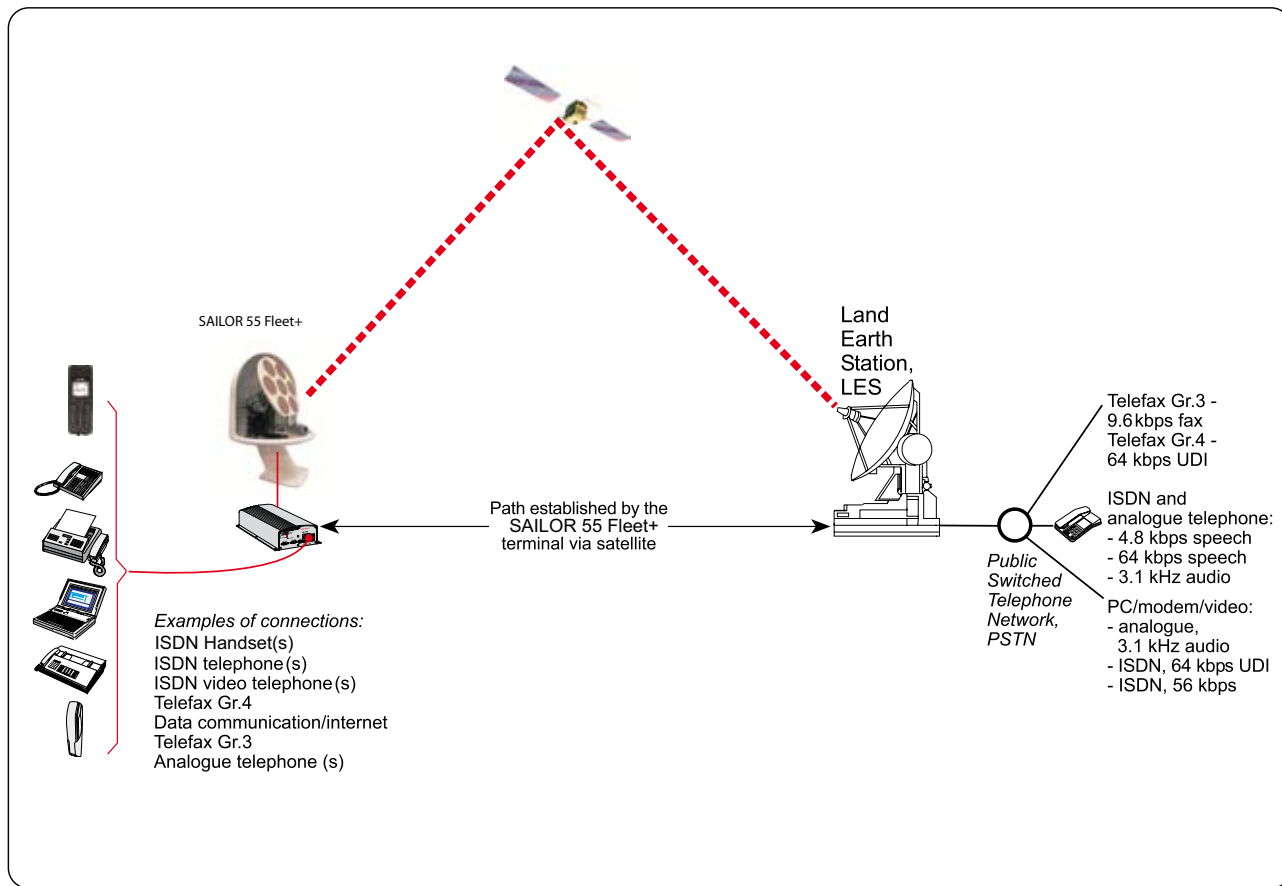
Control interface

The **RS-232** or **USB** port allows connection of a PC for configuration of SAILOR 55 Fleet+.

A PC program (SAILOR VtLite) that provides the software to operate and configure SAILOR 55 Fleet+ terminal is supplied on the enclosed CD (requires at least Windows 98).



SAILOR 55 Fleet+ Ports



Communication Path.

Net Service Provider

The Net service provider issues your user licence and IMN (Inmarsat Mobile Number) phone numbers. It is also responsible for the billing of calls (charges).

The SAILOR 55 Fleet+ may respond to individual IMN numbers, giving the possibility to transfer a call directly to each device attached to it.

Note!

TermID is a term that includes both Originating Identity (OID) and Destination Identity (DID).

The DID is used from LES to MES to identify the service, whereas OID is used from MES to LES to identify the service. TermID is used in this manual because the DID and OID have the same value.

Calls from Mobiles

See figur on next page.

To make an outgoing call, you use a standard international telephone number with the 00 prefix. The MES automatically includes information to identify itself and the particular device that originates.

System signalling

The LES uses the identifying information of the attached device for billing purposes.

The MES transmits the dialing information on a channel specially assigned by the NCS to the LES. LES routes the call over the public telecommunications networks to the intended destination. When the called party responds, the call proceeds.

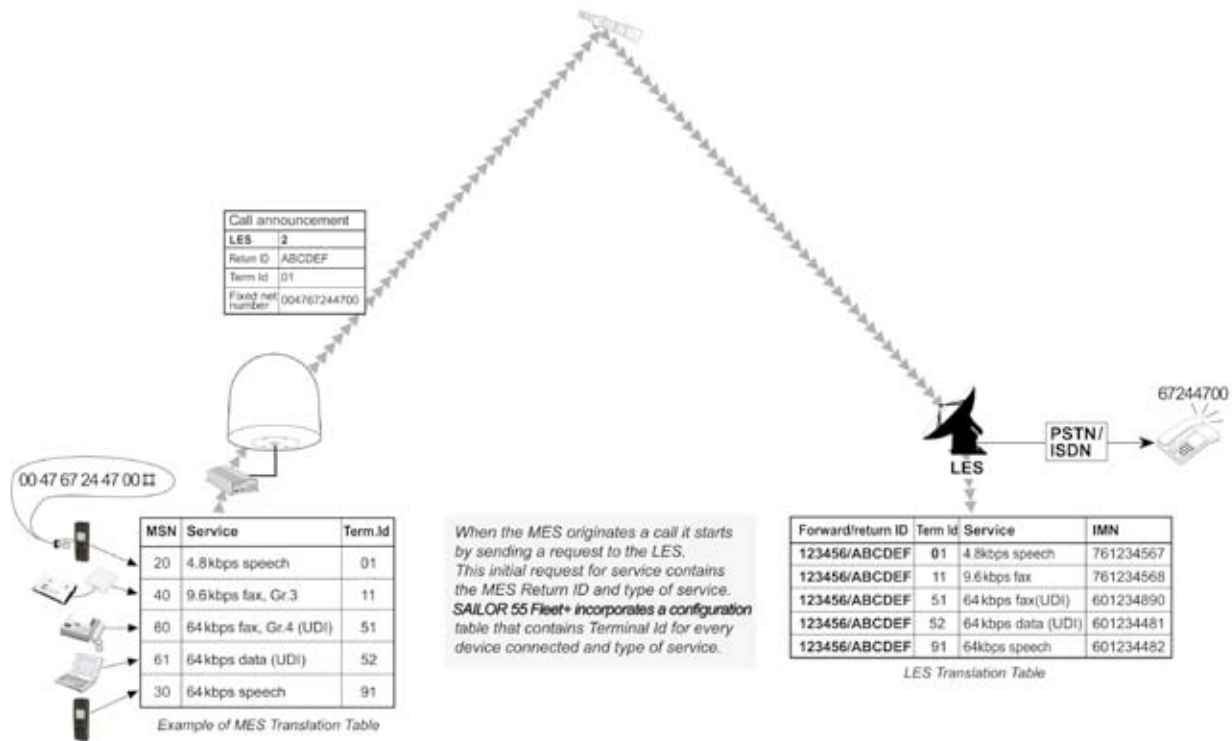
Call announcement from mobile to fixed:

The MES uses the Return Identity (RTNID) to communicate with the LES. It uses the TermID to identify its **IMN** number and the service in use.

The attached equipment dials the number and transmits its **MSN** number to the **MES**. The MES routes the MSN to a TermID.

LES checks that the RTNID is commissioned before connecting the call to the fixed net.

Calls from Mobiles



Calls to Mobiles

See figur on next page.

The SAILOR 55 Fleet+ terminal receives incoming calls via the IMN phone numbers. IMN numbers are assigned to the following ports by the user:

- ISDN ports
- RS-232 serial data ports
- RS-422 serial data port
- USB serial data port

Calls are made as ordinary international (Satellite) calls by dialing the international prefix (normally 00) followed by **870** and the IMN number, e.g.:
00 **870** 762420510.

*The common Ocean Region access no. **870** connects the call to the dialed SAILOR 55 Fleet+ regardless of the Ocean Region the user currently communicates through.*

*If the Net service provider does not support access no. **870**, call the Ocean Region directly:*

871 – AOR-E	(Atlantic Ocean Region East)
872 – POR	(Pacific Ocean Region)
873 – IOR	(Indian Ocean Region)
874 – AOR-W	(Atlantic Ocean Region West)

Call announcement from fixed to mobile:

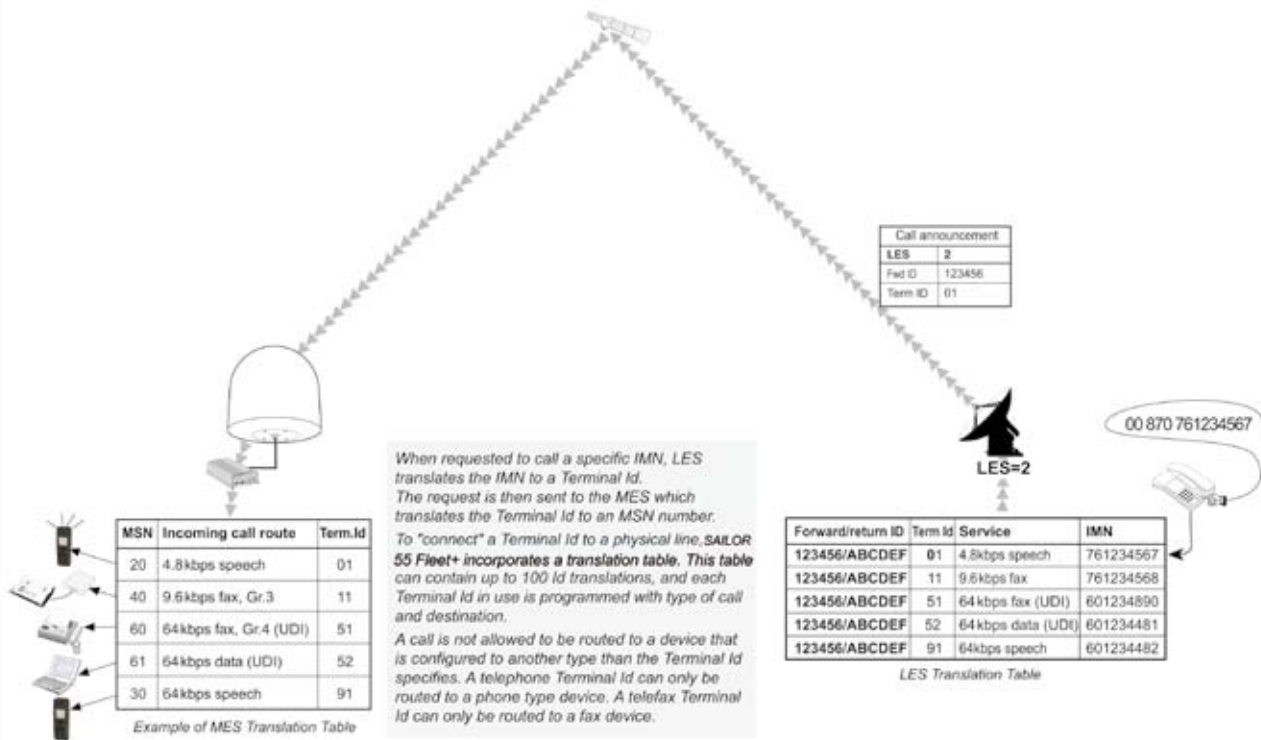
The LES uses the MES's Forward Identity (FWID) to communicate with the MES, and the Terminal Identity (TermID) to identify the IMN number and the service in use.

The FWID together with the TermID replaces the need of the IMN number to be transmitted through the Inmarsat system in order to identify the MES and the specific equipment attached to it. This means that LES routes an IMN number received from the fixed net to the specific FWID and TermID identifying the MES.

The MES identifies the FWID and the TermID and routes it to a Mobile Subscriber Number (MSN) which is programmed in the attached equipment.

Thrane provides a table to identify which TermID is routed to an MSN.

Calls to Mobiles



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