USER MANUAL

SAILOR®

SAILOR RT2048 VHF

Thrane & Thrane

INTRODUCTION

The SAILOR RT2048 VHF radiotelephone has been designed to comply with the increasing demands of a highly technological product, which means high quality, small size, etc.

The SAILOR RT2048 has furthermore been designed to fit into the SAILOR Compact 2000 module programme.

The SAILOR RT2048 can either be installed and operated as an independent unit, or in combination with other elements of the Compact 2000 programme. These include a duplex VHF radiotelephone, a coast telephony station with a 400W PEP SSB transmitter, and an SSB receiver with built-in FM and AM bands, and a scrambler which ensures complete communication secrecy.

The SAILOR VHF RT2048 has, by means of the latest technology in casting technique, been constructed to withstand the most extreme conditions experienced in small, semi-open boats. Its compact, weatherproof construction ensures a degree of resistance to sea spray.

The printed circuits inside have been designed with a high degree of compactness and exceptional performance.

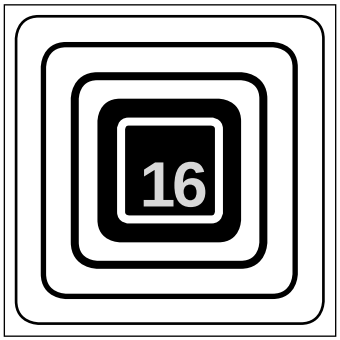
For more than half a century, SAILOR has been synonymous with state-of-the-art, high-quality maritime communications equipment - known for sturdiness, ease of operation and compact design.

SAILOR is a world leader in the technologically advanced field of maritime communications. A wide range of products from GMDSS equipment, UAIS, and satellite communications equipment to simple VHF radios ensures the safety at sea and the daily communication around the world.

In the design of this VHF RT2048 radiotelephone, SAILOR has taken into account all the circumstances it will be exposed to in day-to-day operation. However, even a product of this high quality requires regular servicing and maintenance, and we recommend a close observance of the directions contained in the instruction manual.

Fast and professional service is one of our main concerns. SAILOR has a world-wide net of authorized distributors in more than 90 countries - and on top of that the SAILOR Certified Service Centre concept. In this way we are able to service you in the best way possible all over the world.

DISCLAIMER



DISTRESS CALL PROCEDURE

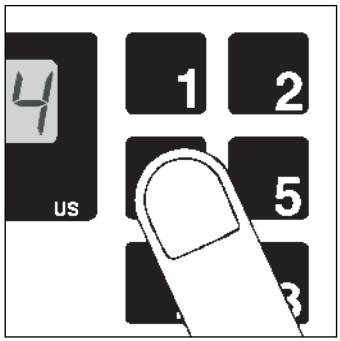
Transmit on channel 16:
MAYDAY MAYDAY MAYDAY
This is:
NAME OF SHIP, call sign or other identification (THREE TIMES), followed by:
MAYDAY - NAME OF SHIP - Position, type of emergency, help required and other information which may help rescue operations.

For clarity when SPELLING OUT words, the following alphabet should be used:

A - **Al**fa	N - No**vem**ber
B - **Bra**vo	O - **Os**kar
C - **Cha**rlie	P - Pa**pa**
D - **Del**ta	Q - Que**bec**
E - **Ec**ho	R - **Ro**meo
F - **Fox**trot	S - Si**er**ra
G - Golf	T - **Tan**go
H - Ho**tel**	U - **U**niform
I - **In**dia	V - **Vic**tor
J - **Ju**liett	W - **Whis**key
K - **Ki**lo	X - **X** - ray
L - **Li**ma	Y - **Yan**kee
M - Mike	Z - **Zu**lu

NOTE:

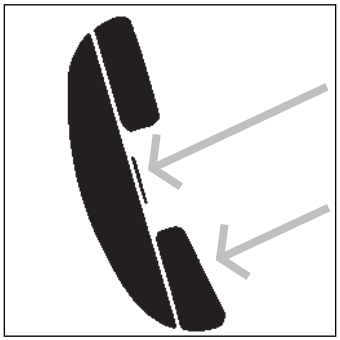
1. The distress call should be repeated from time-to-time until an answer is heard.
2. If no reply is heard on channel 16, the call should be repeated on any other available channel.
3. Speak slowly, pronouncing each word distinctly.



OPERATING

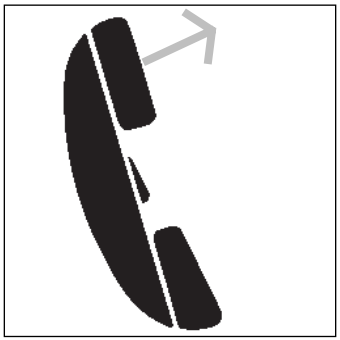
The operating panel is provided with a really high quality pushbutton keyboard, offering an attractive solid feel. Furthermore, keyed operations are instantly confirmed by means of the display read-out.

To ensure safe operation under all conditions, the keyboard is fitted with night-time illumination.



SIMPLEX/SEMI-DUPLEX COMMUNICATION

All the communication, that means ship/ship, ship/port, and ship/coast station, is carried out in the simplex or semi-duplex mode. This means that the handset key switch is depressed while the message is delivered, ending with the word "over". The switch is now released, allowing the other party to reply.



PRIVATE CHANNELS

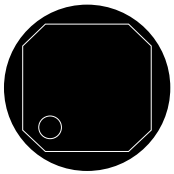
There is standard provision for the programming of up to 10 private channels. However, it is possible to increase the total to 40 private channels if the scanning facilities are not required.

A private channel is indicated with a prefix and a single digit. For the 10 standard channels the prefix is a “P”, if increased to 40 private channels the prefix will be “A”, “E” and “F”.

Private channels include fishing and leisure channels as well as the special channels allocated by post and telegraph authorities.

CONTROLS

VOL
OFF



Indication of ON/OFF/VOL turn-style knob operation.

SQ

Squelch sensitivity control knob with turn-style operation.

16

Quick select of the call and distress channel 16.

1

Digits from 1 to 0.

SHIFT

Activates the functions marked in orange on the keyboard. Whenever the keyboard is in “shift-mode” it will be indicated by “cornerbars” in the display.

SCAN

Selects scanning programme.

SCAN ADD

Adds a channel to the scanning table.

SCAN DELETE

Deletes a channel from the scanning table.

SCAN TIME

Selects the scan time from 1 to 99 seconds. The time chosen will be used to listen on one of the secondary channels receiving a signal.

D.W.

Selects the dual watch facility.

1W

Selects 1W reduced power output.

U.S.

Selects the VHF channels used in the USA.

DIM

The intensity of the LED-indicators can be controlled in four steps. The keyboard illumination is switched on and off.

SELCALL T/ R

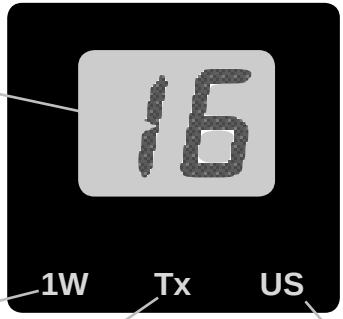
Tests the selcall decoder and resets the selcall decoder after a call.

P

Selects the standard private channels.

READ-OUT

CHANNEL READ-OUT
All international maritime channels are shown by the two digits, when the channel has been keyed in. Selection of a standard private channel will be indicated with a P-.



REDUCED POWER
In harbour areas, or in the close vicinity of another vessel, transmissions should be with reduced power. When the display shows 1W, the transmitter power output is reduced from 25W to 1W. Where two stations are close together, this reduction can improve communication quality.

TRANSMITTING
Whenever the handset switch is depressed, and the transmitter output power level has reached an appropriate level, the "TX" will appear.

If the transmitter time-out timer is enabled, and an automatic termination of a transmission has occurred, this indicator will be flashing.

US-CHANNELS
In the USA a number of the international duplex channels are used as simplex channels. Ships sailing in American waters must, therefore, be able to select these channels as simplex channels. The appearance of "US" on the display indicates that this mode of operation is in use.

OPERATION

The VHF radiotelephone is operated by means of two turn-style knobs and a push-button keyboard. This combination ensures a high continuous resolution on squelch and AF-level, and an easy selection of channels etc in all situations.

The highly efficient LED-display shows the operating channel both under normal use and in dual watch mode. The display also indicates when the set is scanning or a call has been detected by the selcall decoder. The functions 1W, TX, and US are indicated by means of LED-illumination.

When the station is switched off, the necessary settings will be stored in the built-in-memory, and as soon as the station is switched on again, it will start up on the same channel etc.

How to Select the Distress and Call Channel 16

Press:

Read-out:

How to Select a Private Channel

E.g. channel P3. Press:

Read-out:

How to Select a Channel

E.g. channel 23. Press:

Read-out:

How to Select Reduced Output Power

Press:

Read-out:

How to Return to 25W Output Power

Press:

Read-out:

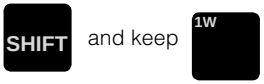
How to Select Channels Used in the USA

Press:

Read-Out

How to Raise Output Power to 25W on Channels 13 or 67 in US-Mode

Press:



depressed simultaneously with the handset key.

Read-out:

How to Return to International Channels

Press:

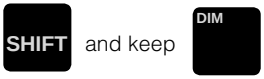
Read-out:

How to Change Display Light Intensity

Press:

For single step change

or



depressed for multiple step change. Totally 4 steps in the cycle. In the step before extinction, the keyboard will be illuminated.

SELECTIVE CALLING
(If built-in)

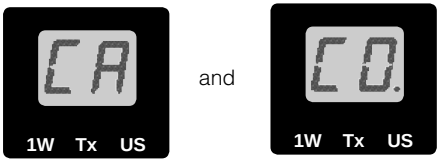
When a selective call is received from a coast station, the read-out will alternatively show **CA**, and the actual selected channel and the acoustic alarm will sound for 10 seconds.

When an "all ships call" containing distress messages, gale warnings, navigational warnings, etc, is received from a coast station, the read-out will alternatively show **C0**, and the actual selected channel and the acoustic alarm will sound until the selcall is reset.

How to Test the Selcall Decoder

Press:

The read-out will alternate between:



The acoustic alarm will sound.

This read-out indicates that the test has been correctly carried out.

Now press:

to reset the selcall decoder.

How to Reset the Selcall Decoder

After an individual call or an "all ships call" has been received, press:

DUAL WATCH OPERATION

In addition to the selected channel, which is shown on the display, the VHF station will listen on channel 16 for 0.1 second every 1.2 second.

If there is a signal on channel 11, the dual watch sequence will be as follows:

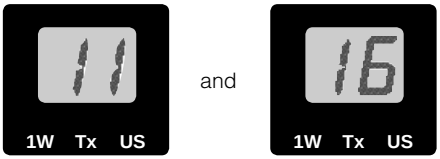
Any signal received on channel 16 will be heard continuously and the read-out will show "16" until the signal ceases.

If the transmitter is keyed, the dual watch function will be switched off and the read-out will show the channel selected.

How to Select Dual Watch

Press:

Read-out:

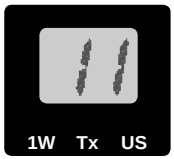


alternatively.

How to Switch Off Dual Watch

Press:

Read-out:



SCANNING OPERATION
(If scanning is enabled)

The VHF radiotelephone is provided with a flexible scanning facility.

The scanning programme is fully user programmable, and can include all the international channels and the ten private channels PO -P 9.

When a scanning programme is created by the operator, the programme will be stored in a memory which retains the scanning programme even when the station is switched off.

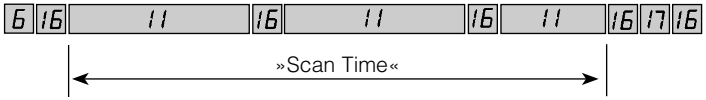
The scanning programme can be changed during operation by pressing "ADD" or "DELETE".

SCANNING

In principle, scanning is an advanced form of the dual watch system in which the secondary channel selected changes constantly whilst the distress and call channel 16 is listened to simultaneously

If, for example, a scanning programme consists of channels 6, 11, 17, and 70, the scanning sequence will look like this:

If there is a signal on channel 11, the sequence will be:



The "Scan Time" is the time during which the scanner listens on channel 11 whilst at the same time watching out on channel 16 - exactly as it happens on the dual watch system. The "Scan Time" can be programmed by the operator
To obtain a continuous listening to the signal being received on channel 11, the scanning is stopped by simply pressing "SHIFT" "SCAN".

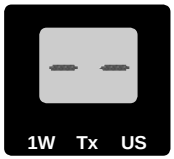
The scanning can be started again by pressing "SHIFT" "SCAN".

How to Start the Scanner

Press:

SHIFT SCAN

Read-out:



How to Stop the Scanner

Press any of the buttons:

0 ► 9 or 16

Read-out e.g.:

The channel number corresponding to the activated push-button.

How to Return to the Last Channel with Signal

Press:

SHIFT SCAN

How to Check the Channels Contained in the Scanning Programme

Press:

SHIFT and a long press on SCAN

and the channels in the programme will slowly be shown in the display.

How to Add a Channel to the Scanning Programme

E.g. to add channel 69, press:

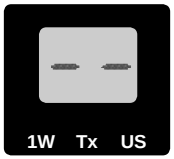
6 9 SHIFT SCAN ADD

Read-out:

To restart the scanning programme, press:

SHIFT SCAN

Read-out:



How to Delete a Channel from the Scanning Programme

E.g. to delete channel 69, press:

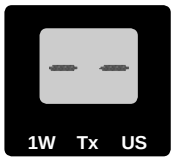
6 9 SHIFT SCAN DELETE

The read-out shows the next channel in the programme, e.g.:

The revised scanning programme becomes operative by pressing:

SHIFT SCAN

Read-out:



How to Read the Programmed "Scan Time"

Press:

SHIFT SCAN TIME

and the actual "Scan Time" will be read out in the next 2.5 seconds, e. g. scan time = 5 seconds:

followed by the selected channel.

How to Programme/Change the "Scan Time"

To set the "Scan Time" to 10 seconds press:

Note! After "SHIFT" "Scan Time" has been keyed in. The maximum time between the following entries must be 2.5 seconds, or the input sequence will be ignored.

The read-out will be the entered digits, followed by the selected channel after a period of 2.5 seconds.

Empty Scanning Programme

If the scanning programme is empty, or attempt has been made to add a new channel to a »full« scanning programme (which means that the existing programme includes the maximum number of channels permitted), the read-out will show:

for a period of 2.5 seconds, followed by the selected channel.

CHANNEL APPLICATION AND FREQUENCY TABLE

CHANNELS	SIMPLEX: INTER SHIP	SIMPLEX: PORT	DUPLEX: PORT	DUPLEX: PUBLIC	FREQUENCIES	USA-SIMPLEX CHANNELS	USA-DUPLEX CHANNELS	FREQUENCIES
1			●	●	Tx: 156.050 MHz Rx: 160.650 MHz	○		Tx: 156.050 MHz Rx: 160.650 MHz
2			●	●	Tx: 156.100 MHz Rx: 160.700 MHz		○	Tx: 156.100 MHz Rx: 160.700 MHz
3			●	●	Tx: 156.150 MHz Rx: 160.750 MHz		○	Tx: 156.150 MHz Rx: 160.750 MHz
4			●	●	Tx: 156.200 MHz Rx: 160.800 MHz		○	Tx: 156.200 MHz Rx: 160.800 MHz
5			●	●	Tx: 156.250 MHz Rx: 160.850 MHz	○		Tx: 156.250 MHz Rx: 160.850 MHz
6	●				Tx: 156.300 MHz Rx: 156.300 MHz	○		Tx: 156.300 MHz Rx: 156.300 MHz
7			●	●	Tx: 156.350 MHz Rx: 160.950 MHz	○		Tx: 156.350 MHz Rx: 156.350 MHz
8	●				Tx: 156.400 MHz Rx: 156.400 MHz	○		Tx: 156.400 MHz Rx: 156.400 MHz
9	●	●			Tx: 156.450 MHz Rx: 156.450 MHz	○		Tx: 156.450 MHz Rx: 156.450 MHz
10	●	●			Tx: 156.500 MHz Rx: 156.500 MHz	○		Tx: 156.500 MHz Rx: 156.500 MHz
11		●			Tx: 156.550 MHz Rx: 156.550 MHz	○		Tx: 156.550 MHz Rx: 156.550 MHz
12		●			Tx: 156.600 MHz Rx: 156.600 MHz	○		Tx: 156.600 MHz Rx: 156.600 MHz
13	●	●			Tx: 156 650 MHz Rx: 156.650 MHz	○		Tx: 156 650 MHz Rx: 156.650 MHz
14		●			Tx: 156.700 MHz Rx: 156.700 MHz	○		Tx: 156.700 MHz Rx: 156.700 MHz
15	●	●			Tx: 156.750 MHz Rx: 156.750 MHz	○		Tx: 156.750 MHz Rx: 156.750 MHz
16	Distress and Calling				Tx: 156.800 MHz Rx: 156 800 MHz	○		Tx: 156.800 MHz Rx: 156 800 MHz
17	●	●			Tx: 156.850 MHz Rx: 156.850 MHz	○		Tx: 156.850 MHz Rx: 156.850 MHz
18			●		Tx: 156.900 MHz Rx: 161.500 MHz	○		Tx: 156.900 MHz Rx: 156.900 MHz
19			●		Tx: 156.950 MHz Rx: 161.550 MHz	○		Tx: 156.950 MHz Rx: 156.950 MHz
20			●		Tx: 157.000 MHz Rx: 161.600 MHz		○	Tx: 157.000 MHz Rx: 161.600 MHz
21			●		Tx: 157.050 MHz Rx: 161.650 MHz	○		Tx: 157.050 MHz Rx: 157.050 MHz
22			●		Tx: 157.100 MHz Rx: 161.700 MHz	○		Tx: 157.100 MHz Rx: 157.100 MHz
23				●	Tx: 157.150 MHz Rx: 161.750 MHz	○		Tx: 157.150 MHz Rx: 157.150 MHz
24				●	Tx: 157.200 MHz Rx: 161.800 MHz		○	Tx: 157.200 MHz Rx: 161.800 MHz
25				●	Tx: 157.250 MHz Rx: 161.850 MHz		○	Tx: 157.250 MHz Rx: 161.850 MHz
26				●	Tx: 157.300 MHz Rx: 161.900 MHz		○	Tx: 157.300 MHz Rx: 161.900 MHz
27				●	Tx: 157.350 MHz Rx: 161.950 MHz		○	Tx: 157.350 MHz Rx: 161.950 MHz
28				●	Tx: 157.400 MHz Rx: 162.000 MHz		○	Tx: 157.400 MHz Rx: 162.000 MHz
P								
P								
P								
P								
P								

CHANNELS	SIMPLEX: INTER SHIP	SIMPLEX: PORT	DUPLEX: PORT	DUPLEX: PUBLIC	FREQUENCIES	USA-SIMPLEX CHANNELS	USA-DUPLEX CHANNELS	FREQUENCIES
60			●	●	Tx: 156.025 MHz Rx: 160.625 MHz		○	Tx: 156.025 MHz Rx: 160.625 MHz
61			●	●	Tx: 156.075 MHz Rx: 160.675 MHz		○	Tx: 156.075 MHz Rx: 160.675 MHz
62			●	●	Tx: 156.125 MHz Rx: 160.725 MHz		○	Tx: 156.125 MHz Rx: 160.725 MHz
63			●	●	Tx: 156.175 MHz Rx: 160.775 MHz	○		Tx: 156.175 MHz Rx: 156.775 MHz
64			●	●	Tx: 156.225 MHz Rx: 160.825 MHz		○	Tx: 156.225 MHz Rx: 160.825 MHz
65			●	●	Tx: 156.275 MHz Rx: 160.875 MHz	○		Tx: 156.275 MHz Rx: 156.275 MHz
66			●	●	Tx: 156.325 MHz Rx: 160.925 MHz	○		Tx: 156.325 MHz Rx: 156.325 MHz
67	●	●			Tx: 156.375 MHz Rx: 156.375 MHz	○		Tx: 156.375 MHz Rx: 156.375 MHz
68		●			Tx: 156.425 MHz Rx: 156.425 MHz	○		Tx: 156.425 MHz Rx: 156.425 MHz
69	●	●			Tx: 156.475 MHz Rx: 156.475 MHz	○		Tx: 156.475 MHz Rx: 156.475 MHz
70	DSC				Tx: 156.525 MHz Rx: 156.525 MHz	○		Tx: 156.525 MHz Rx: 156.525 MHz
71		●			Tx: 156.575 MHz Rx: 156.575 MHz	○		Tx: 156.575 MHz Rx: 156.575 MHz
72	●				Tx: 156.625 MHz Rx: 156.625 MHz	○		Tx: 156.625 MHz Rx: 156.625 MHz
73	●	●			Tx: 156.675 MHz Rx: 156.675 MHz	○		Tx: 156.675 MHz Rx: 156.675 MHz
74		●			Tx: 156.725 MHz Rx: 156.725 MHz	○		Tx: 156.725 MHz Rx: 156.725 MHz
75	●				Tx: 156.775 MHz Rx: 156 775 MHz			Tx: 156.775 MHz Rx: 156 775 MHz
76	●				Tx: 156.825 MHz Rx: 156.825 MHz			Tx: 156.825 MHz Rx: 156.825 MHz
77	●				Tx: 156.875 MHz Rx: 156.875 MHz	○		Tx: 156.875 MHz Rx: 156.875 MHz
78			●	●	Tx: 156.925 MHz Rx: 161.525 MHz	○		Tx: 156.925 MHz Rx: 156.925 MHz
79			●		Tx: 156.975 MHz Rx: 161.575 MHz	○		Tx: 156.975 MHz Rx: 156.975 MHz
80			●		Tx: 157.025 MHz Rx: 161.625 MHz	○		Tx: 157.025 MHz Rx: 157.025 MHz
81			●	●	Tx: 157.075 MHz Rx: 161.675 MHz	○		Tx: 157.075 MHz Rx: 157.075 MHz
82			●	●	Tx: 157.125 MHz Rx: 161.725 MHz	○		Tx: 157.125 MHz Rx: 157.125 MHz
83				●	Tx: 157.175 MHz Rx: 161.775 MHz	○		Tx: 157.175 MHz Rx: 157.175 MHz
84			●	●	Tx: 157.225 MHz Rx: 161.825 MHz		○	Tx: 157.225 MHz Rx: 161.825 MHz
85				●	Tx: 157.275 MHz Rx: 161.875 MHz		○	Tx: 157.275 MHz Rx: 161.875 MHz
86				●	Tx: 157.325 MHz Rx: 161.925 MHz		○	Tx: 157.325 MHz Rx: 161.925 MHz
87	●				Tx: 157.375 MHz Rx: 157.375 MHz	○		Tx: 157.375 MHz Rx: 157.375 MHz
88	●				Tx: 157.425 MHz Rx: 157.425 MHz	○		Tx: 157.425 MHz Rx: 157.425 MHz
P								
P								
P								
P								

0548

QUICK SELECT CHART

Distress and Call Channel	
Channel Selection	
US-mode (Channel Required in the USA)	
Reduced Power	
Dual Watch	
Start Scanning	
Add a Channel to Scanning Programme	
Delete a Channel from Scanning Programme	
Set of ”Scan Time” to 10 Seconds	

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