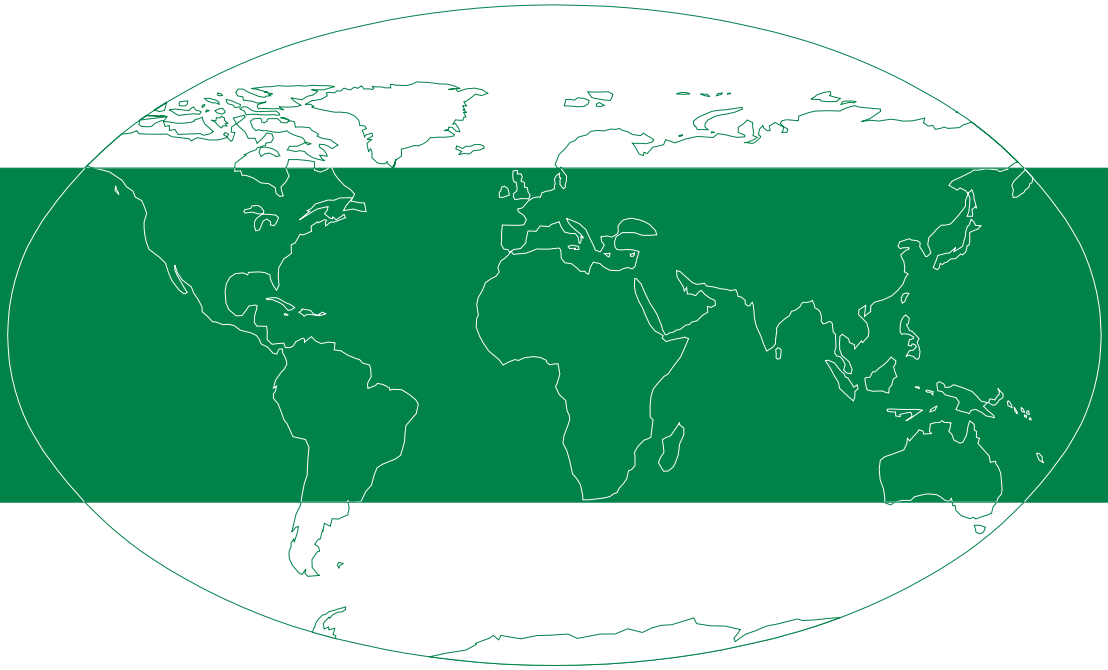
SAILOR



Service and Identity manual
for RM2150/51

S.P. RADIO A/S · AALBORG · DENMARK

CONTENTS

CONTENTS

1 SERVICE AND IDENTITY PROGRAMMING FOR RM2150

1.1 IDENTITY of RM2150

Turn on the Watch receiver and control that the displaymenu after the initializing menu show the following menu.

```
RM 2150
DSC Watch Receiver
```

If you get the displaymenu indicating that the receiver is a Radio telex modem RM2151, you have to change the internal setting of the switch **S2-2**.

Remove the back plate and cabinet, set switch **S2-2** in on position (please see chapter 6 component location main processor module). Turn on the Watch Receiver RM2150 and check that the display menu now show the above menu. Mount the cabinet and the backplate again.

1.2 SP-BUS PROGRAMMING of RM2150

Check of right setting of control interface **(SP-BUS)** on the watch Receiver RM2150.

Turn on the RM2150 and wait until the displaymenu show the scan running menu.

Activate **FUNC**: and the displaymenu change to.

```
Display:Pos:Stns:Time
Test:Options:Print:Sun
```

Chose the Options menu and activate the **NEXT** key, the displaymenu change to.

```
Options:
MID numbers
```

Use the up/down arrow key until the displaymenu show.

```
Options:
Control interface
```

Activate the **NEXT** key, the displaymenu change to.

```
Type:
T-Bus: SP-Bus: Non
```

The SP-Bus is chosen for serial communication activate the **NEXT** key, the displaymenu change to.

```
Bus address:
2-3-4-5-6
```

The bus address number 2 is blinking, indicating that Bus address 2 is chosen.
Is one of the other bus addresses blinking it is necessary to change it to number 2.
Change of Control interface type or address can not be done unless the function switch **S2-4** is in on position. To set the function switch **S2-4** in on position it is necessary to dismount the backplate and the cabinet, set the switch **S2-4** on (please see chapter 6 component location main processor module). Turn the watch receiver RM2150 on and wait until the displaymenu show the scan running menu.
Activate **FUNC**: and the displaymenu change to the function menu again, find the **Options** menu, and go to the **control interface** menu. Correct the type and the Bus address and.

Activate the **NEXT** key, the displaymenu change again to.

```
Options:
Control interface
```

Turn the RM2150 off, and if the function switch has been set in on position change the switch **S2-4** to off and mount the cabinet and the backplate again.

IT IS VERY IMPORTANT TO SET THE SWITCH S2_4 OFF.

1.3 PROGRAMMING of SELF-IDENTIFICATION NUMBER

The Self-identification number **(MID)** has to be programmed into the watch receiver RM2150.

Remove the back plate and cabinet, set switch **S2-4** on (please see chapter 6 component location main processor module). Turn on the RM2150 and wait until the display menu show the scan running menu.

Activate **FUNC**: and the displaymenu change to.

```
Display:Pos:Stns:Time
Test:Options:Print:Sun
```

Chose the Options menu and activate the **NEXT** key, the displaymenu change to.

```
Options:
MID numbers
```

Activate the **NEXT** key, the displaymenu change to.

```
Ship MID: <219416841>
```

Key in the ships own MID number activate the **NEXT** key, the displaymenu change to.

```
Press ENT to store
```

Activate **ENT** until the displaymenu change to.

```
Grp1 MID: <012345678>
```

The ships group number can be keyed in, activate the **NEXT** key the displaymenu change to a menu where the second group number can be keyed in.
The ship can have up to four group numbers and you can key this numbers into the next three menus, before the displaymenu again change to

```
Options:
MID numbers
```

Turn the Watch receiver RM2150 off, change the switch **S2-4** to off and mount the cabinet and the backplate again.

IT IS VERY IMPORTANT TO RESET THE SWITCH S2-4.

CONTENTS

2 SERVICE AND IDENTITY PROGRAMMING FOR RM2151

2.1 IDENTITY PROGRAMMING of RM2151

Turn on the DSC/Radiotelex modem on and control that the displaymenu after the initializing menu show the following menu.

```
      RM 2151
DSC Telex Receiver
```

If you get the displaymenu indicating that the receiver is a DSC Watch receiver RM2150, you have to change the internal setting of the switch **S2-2**.

Remove the back plate and cabinet, set switch **S2-2** in off position (please see chapter 6 and 8-9). Turn on the DSC/Radiotelex modem RM2151 and check that the display menu now show the above menu. Mount the cabinet and the backplate again.

2.2 SP-BUS PROGRAMMING of RM2151

SPBUS programming using the Terminal mode on the message terminal.

To get into terminal mode activate

F3 - Options - Terminal Mode

Write **set -a** and activate the **Enter** key. The screen will show all the settings (please see page 17).

The showed settings include the settings of the connected radio modem RM2151. Find the parameter „SPADDRESS“, check whether this is set to the same as programmed into RE2100. If not, the value in „SPADDRESS“ is changed in the following way:

Write **set SPADDRESS X** and activate the **Enter** key, where X is the new value (2-6). The SPADDRESS shall in this case be set to 3.

Then check the parameter „SPBUS“, this must be set to „S“. In case the parameter has another value than „S“, this is changed in the following way:

Write **set SPBUS S** and activate the **Enter** key.

2.3 PROGRAMMING of SELF-IDENTIFICATION NUMBER

The Self-identification number **(MID)** as well as the telex numbers has to be programmed into the DSC/ Radiotelex modem RM2151.

The programming of the DSC and telex number of the station using the terminal mode on the message terminal.

To get into the terminal mode.

F3 - Options - Terminal mode

Activate the **Enter** key a couple of times to make sure that the cursor **>** appear.

Write **st -operator** and activate the **Enter** key. A new cursor **th>** appear.The DSC and the Telex numbers can now be entered.

Nine digit DSC and Telex number.

Write: **set sel9 xxxxxxxxx** activate **Enter**.

Wait until a new cursor „th>“ appears on the screen.

Nine digit Telex Fec group call number. This number is normally set to the same number as the nine digit DSC and Telex number.

Write: **set fec9 xxxxxxxxx** activate **Enter**.

Five digit Telex number.

Write: **set sel4 yyyyy** activate **Enter**.

Five digit Telex Fec group call number. This number is normally set to the same number as the five digit Telex number.

Write: **set fec4 yyyyy** activate **Enter**.

The DSC group call numbers can be programmed in the same way.

Write: **set grp1 012345678** activate **Enter**.

The other 3 group call numbers (grp2, grp3, grp4) can be set with the same command.

When the Stations MID numbers has been set the menu st -operator can be left.

Write **exit** and activate the **Enter** key the cursor change to **>** and you are now in the normal operation mode.

2.4 PROGRAMMING of ANSWERBACK

Programming of the answerback of the station is done from the Message Terminal. The message terminal is still in terminal mode.

To programme the stations answerback write

Write **set answerback XX-XX-XX-XX-XX-XX-XX .....** where XX is the ACIII-code for max. 20 characters in the answerback text line (please see chapter 7).

The stations answerback can be programmed as illustrated below.

The five digit telex number is : 12345
The Ships call sign : OXJZ X

1 2 3 4 5 O X J Z X

Set answerback 7E-0D-0A-31-32-33-34-35-7F-20-6F-78-6A-7A-20-7E-78-0A-0D

2.5 GENERAL VIEW of SETTINGS for RADIOTELEX MODEM RM2151

To control that the setting of the radiotelex modem is done correct.

To get into terminal mode activate

F3 - Options - Terminal Mode

Write **set -a** and activate the **Enter** key, the CRT show now the settings of the radiotelex modem.

Terminal

```
ALARM          = 1        ALPHA          = 0        ANGLE          = 3
ANSWERBACK     = 7E-0D-0A-31-32-33-34-35-7F-20-6F-78-6A-7A-20-7E-36-0A-0D
ARQERROR       = 2        BAUDRATE       = 4800     CAPTURE        = 0
DATABITS       = 8        DELAY          = 3        DIVERSITY      = 2
DWELL          = 3000     ECHO           = 1        ERROR          = 30
FEC4           = 07700    FEC9           = 219000015
FINITE_START   = 0        GRP1           = 000000000
GRP2           = 0        GRP3           = 0        GRP4           = 0
HARDFLOW       = 1        LIGHT          = 3        LINEFEED       = 1
LOG            = 0        MODE           = 111      PARITY         = NO
POLL           = 1        POSITION       = 57N01,009E53
POSTKEY        = 3        POSTMUTE       = 3        PREKEY         = 1
PRINTER        = LPT:     QMIN           = 3        RESTART        = FINITE
RETRY          = 5        RXADDRESS      = 2        RXENABLE       = 1
RXFREQ         = 1700     SEL4           = 07700
SEL9           = 219000015
SOFTFLOW       = 0        SPADDRESS      = 2        SPBUS          = S
STOPBITS       = 1        SUNSPOT        = 120      TERM           = T+T
TIMEZONE       = -1       TRACK          = 1        TXADDRESS      = 3
TXENABLE       = 1        TXFREQ         = 1700
>
```

CONTENTS

3 GOOD ADVICE AND HELP

3.1 GENERAL INFORMATION

In brief the difference between RM2150 and RM2151, is that RM2150 only has one scanning programme where distress and calling frequencies are normally programmed. The RM2150 is not used for telex and therefore no address book is included.

NO CONNECTION BETWEEN RADIOTELEX MODEM AND MESSAGE TERMINAL:

The connection is an ordinary RS232 serial communication line.
IF there is no communication between the two stations, the following can be tested.

On the message terminal activate the system menu by keying **F9 - Option - Serial**.
The settings of the serial communication line in the message Terminal is opened.

Normal setting: Com1 - 4800 - N - 8 - 1.

On the radiotelex modem RM2150/51 the programming of the serial communication can be tested in the **FUNC.** menu.

FUNC - OPTIONS

With the up/down arrows find the menu **Terminal port settings** and check that.
Baudrate:4800 / Parity:NON / Databits:8 / Stopbits:1 / Softflow:off / Hardflow:on.

Check whether the terminal cable is connected to the Com1 gate at the back of the message terminal.

3.2 NO PRINTER RESPONSE

The printer can be installed on the radiotelex modem or on the message Terminal.
Therefore is necessary to tell the system where the printer is placed and this is done in the radiotelex option menu on the message terminal.
Normally the printer is installed on the message terminal.

F3 - Option - Printer

The printer setting menu is displayed highlight **Message Terminal** or **Modem**, all depending on where the printer is installed activate the enter key. The cursor **>>** in front of a word indicates that the word has been chosen.

In order to get all telexes sent and received printed out, **Save to printer** must be chosen.

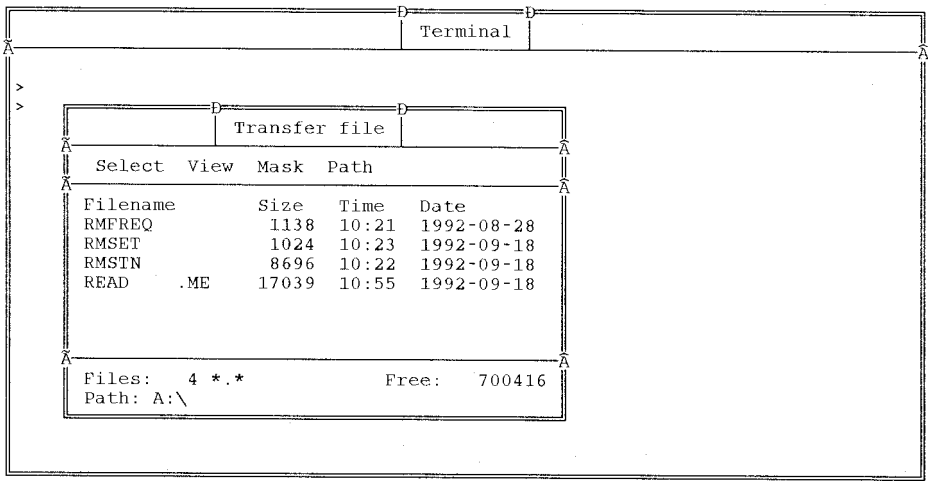
F3 - Directcall - Commands

Highlight save to printer and activate the enter key. The cursor **>>** in front of „Save to printer“ indicates that save to printer is activated.

CONTENTS

13. Activate **Shift** and **F9** simultaneously. The monitor menu change to the Transfer file menu.

    Is a PC. with a radiotelex programme used it can be necessary to define the path. Highlight **Path** and activate the **Enter** key, you will now be asked to define the new path, write **A:** and activate the **Enter** key.



14. Highlight **Select** and the file **RMSET** and activate the **Enter** key two times.
    The file RMSET will now be transferred from the message terminal to the radiotelex modem.

    Wait until the sign **WORKING** has disappeared and you get a new cursor.**>**

15. Write **Batch RMSET** and activate the **Enter** key.

    The file RMSET is now transferred from the RAM memory to the EEprom memory in the radiotelex modem.

    While this file transfer is going on the file contents is seen on the monitor. Wait 30 sec after the cursor **>** has appear again to make sure that the file transfer has stopped.

NOTE: the stations MID numbers shall be set up after the transfer of the file RMSET

16. Activate **Shift** and **F9** simultaneously. The monitor menu change to the Transfer file menu.

17. Highlight **Select** and the file **RMFREQ** and activate the **Enter** key two times.
    The file RMFREQ will now be transferred from the message terminal to the radiotelex modem.

    Wait until the sign **WORKING** has disappeared and you get a new cursor.

18. Write **Batch RMFREQ** and activate the **Enter** key.

    The file RMFREQ is now transferred from the RAM memory to the EEprom memory in the radiotelex modem.

    While this file transfer is going on the file contents is seen on the monitor. Wait 30 sec after the cursor **>** has appear again to make sure that the file transfer has stopped.

CONTENTS

SOFTWARE AND PC BOARD SUMMARY FROM RADIOTELEX/DSC TO DUPLEX AND CW.

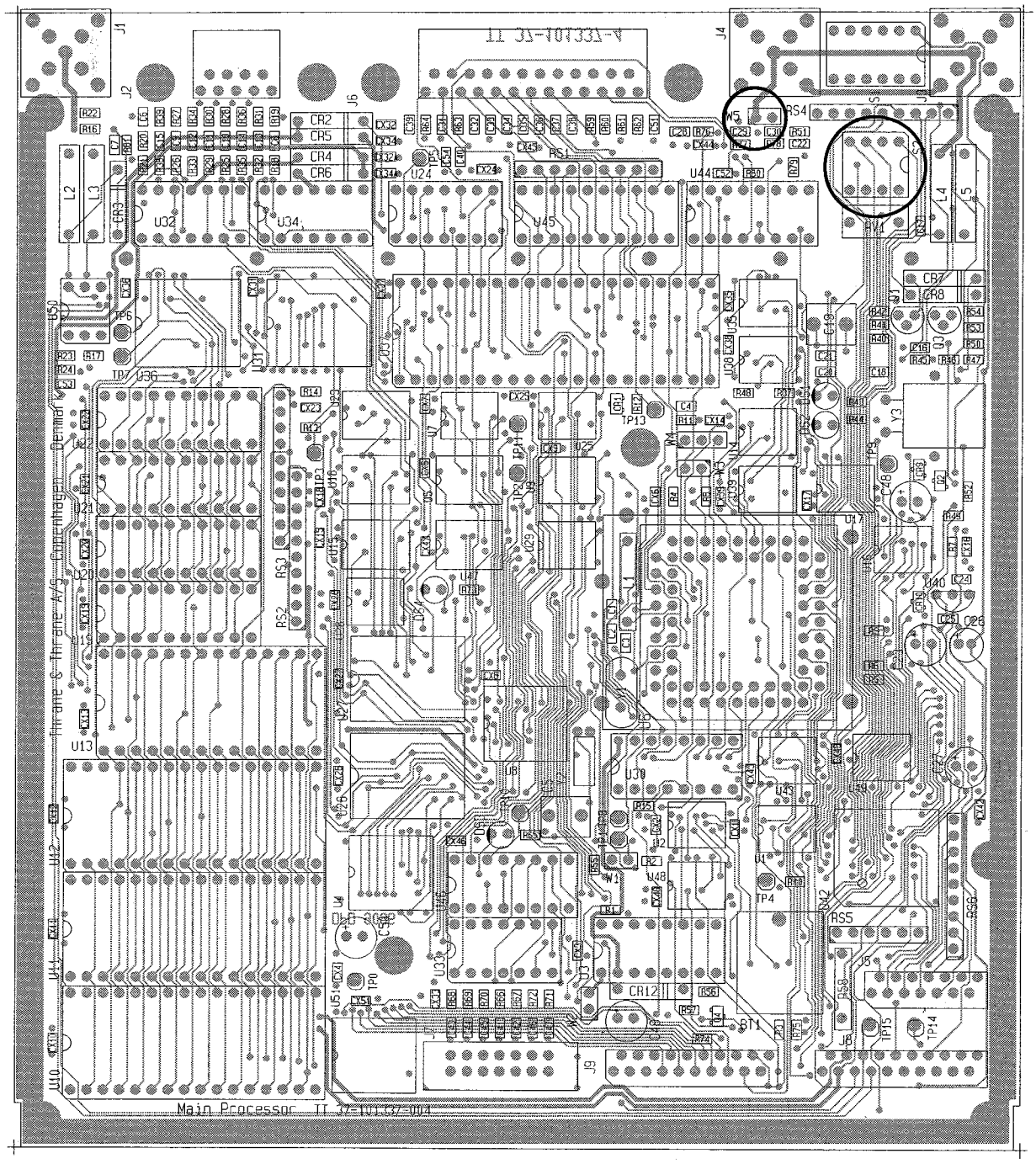
	RE2100 UPDATE FROM EARLIER VERSION, KIT NO. 726655					T2130 UPDATE FROM EARLIER VERSION, KIT NO. 726665			AT2110	T2131/T2135	C2140	RM2150/RM2151	H2098A/B	C2149	R2120	
	RECEIVER MODULE 625631	EXCITER MODULE 625634	MAIN CABLE 56.033	PROCESSOR MODULE 625635	SOFTWARE 726166	CONNECTION BOARD 625646	SOFTWARE 726103	TX-PROCESSOR 625643	REC. LABEL	SOFTWARE 727203	SOFTWARE 726545	SOFTWARE 727841	SOFTWARE 55.085	SOFTWARE 727497	SOFTWARE 728548	
															R2120	R2120/T
RADIO-TELEX	VERSION G&H OR HIGHER	VERSION A,B&C WITHOUT R10	WIRE NO. 1 BETWEEN RECEIVER AND EXITER MODULES MUST BE CUT.	VERSION J,K,L&M OR HIGHER	1086I 1086L 1086N 1086O 1086P	VERSION G OR HIGHER	1083N 1083O	NO JUMPER	NO LABEL	1096 1096A 1096B 1096C 1096D 1096E 1096F 1096G 1096H	1090A 1090B 1090C	1.04 1.07 1.08	1.15	1100E 1100F 1100G 1100H 1100I		
								JUMPER IN PO2 POS. 2	REC. LABEL A OR HIGHER			1.09 1.11 1.12	1.17 1.18 1.19			
												1.13 1.14	1.22			
												1.30	1.30			
												1.31 1.32 1.33 1.34	1.31 1.32			
DUPLEX					1086R						1090D				1114	
CW		VERSION E&F OR HIGHER			1086S 1086T		1083P 1083R 1083S 1083U 1083-2 1083-3 1083-4			1096I 1096O					1114A 1114B 1114C 1114D 1114E 1114F 1114G	

33446 04.11.97

IT IS ALWAYS RECOMMENDED TO UPDATE ALL SOFTWARE VERSIONS, WHEN INSTALLING ADDITIONAL EQUIPMENT.

CONTENTS

6 COMPONENT LOCATION MAIN PROCESSOR MODULE.



CONTENTS

7 ANSWERBACK CHARACTER SETTING

The character codes used when entering the answerback sequence are based on the ASCII-code and CCITT rec. F.130.

Each character is represented by a 2-digit/letter code as follows:

Digits

Char	ASCII	Char	ASCII
0	30	5	35
1	31	6	36
2	32	7	37
3	33	8	38
4	34	9	39

Letters

Char	ASCII	Char	ASCII
A	61	N	6E
B	62	O	6F
C	63	P	70
D	64	Q	71
E	65	R	72
F	66	S	73
G	67	T	74
H	68	U	75
I	69	V	76
J	6A	W	77
K	6B	X	78
L	6C	Y	79
M	6D	Z	7A

Special characters

Char	ASCII
Carriage return	0D
Line feed	0A
Figure shift	7E
Letter shift	7F
Space	20

CONTENTS

8 MAIN PROCESSOR MODULE VERSION 4 DIP SWITCHES

S1 VERSION 4

No	OFF	ON
1	Use of SP-BUS	Use of T-BUS
2	Use of SP-BUS	Use of T-BUS
3	Not used	
4	Dont't initialize EEPROM	Initialize EEPROM
5	Scan all distress frequencies when in Watch Receiver mode (RM2150)	Scan only 2187.5 kHz when in Watch Receiver mode. (RM2150)
6	Not used	

S2

No	OFF	ON
1	Only for factory test	Normaly used
2	DSC/Radio Telex modem (RM2151)	DSC Watch Receiver (RM2150)
3	Only for factory test	Normaly used
4	Function mode off	Function mode on

CONTENTS

9 MAIN PROCESSOR MODULE VERSION 3 DIP SWITCHES

S1 VERSION 3

No	OFF	ON
1	Not used	
2	Dont't initialize EEPROM	Initialize EEPROM
3	Scan all distress frequencies when in Watch Receiver mode (RM2150)	Scan only 2187.5 kHz when in Watch Receiver mode. (RM2150)
4	Not used	

S2

No	OFF	ON
1	Only for factory test	Normaly used
2	DSC/Radio Telex modem (RM2151)	DSC Watch Receiver (RM2150)
3	Only for factory test	Normaly used
4	Function mode off	Function mode on