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SAILOR 6222/6248/6249 VHF and SAILOR 6300 MF/HF Service Tool User manual



SAILOR 6222/6248/6249 VHF and SAILOR 6300 MF/HF Service Tool

User manual

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1 Introduction

The S6000 radio series¹ has a built-in web server with a web interface to set up the radio and channel settings. This web server constitutes the service tool and is intended for use by authorized personnel only. The web interface is accessed from a computer connected to the LAN and is displayed in an Internet browser. Currently only Mozilla Firefox is supported. No additional installation of software is needed.

2 Connecting the radio to the service tool

2.1 Connecting to a radio without a network

The radio can be accessed using a standard PC with automatic network configuration. Connect the radio to the computer using a LAN cable and the Ethernet interface. After startup of the radio, the radio's current IP address will be visible in the **SYSTEM SETUP** menu on the radio. For installed control units, the IP can be found in the menu **CONTROLLER SETUP**. In these menus the item **IP**: appears with the radio's IP-address.

Use Mozilla Firefox 3.6 and type the radio's IP address in the address line of the browser.

EXAMPLE: http://169.254.70.103

This will open the default configuration page of the radio. Now you can configure the radio.

2.2 Connecting to a radio using a network

As soon as the radio is connected to the network and switched on, it attempts to require an available IP address from the network. If this process is successful, then the radio has received a network IP address. This address can be read out in the **SYSTEM SETUP** menu of the radio or it can be found in the configuration of the network's DHCP server. For installed control units, the IP can be found in the menu **CONTROLLER SETUP**. If you want to see the IP address in the DHCP server configuration, see the manual for the DHCP providing equipment.

Use Mozilla Firefox 3.6 and type the radio's IP address in the address line of the browser.

EXAMPLE: http:// 169.254.70.103

This will open the default configuration page of the radio. Now you can configure the radio.

¹ Exception: SAILOR 621x VHF radios.

2.3 Precautions using the service tool

- **WARNING**: While using the service tool the network cable must not be removed or disconnected from neither the PC nor the radio.
- WARNING: Do not operate the radio while using the service tool.
- **WARNING:** While using the service tool power to the radio may not be switched off. Violation of the precautions above can result in a defect radio, which only can be repaired by the manufacturer.
- **WARNING:** When the changes are applied in the service tool, reboot the radio before usage.
- **WARNING:** Changes made with the service tool are the service agents' responsibility. Changes must be in conformance with radio specifications and regulations.
- WARNING: Power cycle the radio before use of radio after end use of the service tool.

3 Using the service tool

The service tool in the radio is used to perform changes to settings and enable new features such as adding channels or updating the radio.

The following sections of the service tool are described in detail:

- Getting access to the radio
- Status of the device
- Configuration of the radio
- Software Upload
- Troubleshooting

3.1 Getting access to the radio

In order to protect the radio from inadvertent configuration by the ordinary user, you need a password to enter the service tool and get access to the radio configuration. Password can be entered in the **ADMINISTRATION** menu.

Click the **ADMINISTRATION** page to display the following view:

Thrane & Thran	e
HOME	Administration
ADMINISTRATION	
DEVICE STATUS	ADMINISTRATOR LOGON
CHANNEL TABLES	Username:
CONFIGURATION	Password:
SOFTWARE UPLOAD	Logon Cancel

Figure 1: ADMINISTRATION page for a VHF.

To login and use the service tool you must fill in these two fields with the following information:

- Username: admin
- Password: sailorsailor

After correct entry of the username and password, the service tool displays:

User is now logged in as Administrator

Now the radio is ready for configuration. You can configure channel tables, change the configuration and upload new software to the radio.

3.2 Status of the device

Thrane & Thran	e	
НОМЕ	Dovice status	
ADMINISTRATION	Device status	
DEVICE STATUS		
CHANNEL TABLES	Type of platform:	TT-6222 A
CONFIGURATION	Firmware version:	57 420466-04224562700-0 04
SOFTWARE UPLOAD	Hardware tracking ID:	57-130106:0123456789:8.01
		ST-130100.012.3430103.n.01
		Apply factory reset

Figure 2: DEVICE STATUS page for a VHF.

The Device Status page is an information page that is used to show the current platform and hardware configuration in the radio.

The field Current HD Tracking ID can be used in terms of service, when the hardware in the radio is updated, then a new serial number can be applied here.

The "Apply factory reset" button can be used if the operator wants to return to the default configuration of the radio. This means removing all settings in the channel tables, configurations, MMSI etc.

3.3 Working with channel tables

Use this menu to configure the radio channel setting. Press the **CHANNEL TABLES** menu to display a submenu with the different modes or areas of the radio.

- For VHF: INT, BI, CA, US, ALT, Private, CA WX, US WX
- For **MF/HF**: ITU Channels 2MHz, ITU Channels 4MHz, ITU Channels 6MHz, ITU Channels 8MHz, ITU Channels 12MHz, ITU Channels 16MHz, ITU Channels 18MHz, ITU Channels 22MHz, ITU Channels 25MHz, Private channels.

The method how to configure the channel tables is the same for VHF and MF/HF, though the menus on the pages will appear differently.

3.3.1 Channel tables for VHF

For the VHF radio, the INT, BI, CA and US page will look almost as the international channel table as shown below in Figure 3:

Thrane & Thran	e												
HOME	INT T	able											
ADMINISTRATION													
		Destaurtes	NI	TV F	DVE	D	Hi	TX	Wide	C	A 776	DSC	U f
	SAVE	Designator		1.560.50000	160650000	Duplex	шоwеа	Бюск	oana V	Scan		гтор.	A I
CHANNEL TABLES	SAVE	2	PORT-PUBLIC	156100000	160700000	N N	N N		V				ľ
INT	SAVE	3	PORT-PUBLIC	156150000	160750000	V	N.		V				
BI	SAVE	4	PORT-PUBLIC	156200000	160800000	V	V		V	Г		Γ	
CA	SAVE	5	PORT-PUBLIC	156250000	160850000		V						
US	SAVE	б	INTERSHIP	156300000	156300000	Г			V			•	
ALT	SAVE	7	PORT-PUBLIC	156350000	160950000	1	V		V				
Private	SAVE	8	INTERSHIP	156400000	156400000				\checkmark				
CA WY	SAVE	9	INTERSHIP/POF	156450000	156450000		◄		V			•	
	SAVE	10	INTERSHIP/POF	156500000	156500000	Γ	V		\checkmark				
USWX	SAVE	11	SIMPLEX-PORT	156550000	156550000		V		V			~	
CONFIGURATION	SAVE	12	SIMPLEX-PORT	156600000	156600000				\checkmark				
SOFTWARE UPLOAD	SAVE	13	INTERSHIP/POF	156650000	156650000				\checkmark			~	
	SAVE	14	SIMPLEX-PORT	156700000	156700000	Γ	▼		\checkmark				
	SAVE	15	INTERSHIP/POF	156750000	156750000		V		\checkmark				ſ
	SAVE	16	DISTRESS/CALL	156800000	156800000	Γ			$\overline{\mathbf{v}}$				ſ
	SAVE	17	INTERSHIP/POF	156850000	156850000				V			•	ſ
	SAVE	18	PORT-PUBLIC	156900000	161500000	V			V				I

Figure 3: Service tool: CHANNEL TABLES: INT for VHF (6222).

Thrane & Thrane												
Номе	INT T	able										
ADMINISTRATION DEVICE STATUS		Designator	Name	TX Frequency	RX Frequency	Duplex	Hi allowed	TX Block	Wide band	Scan	ATIS	Used for AUX
CHANNEL TABLES	SAVE	1	PORT-PUBLIC	156050000	160650000	V	•		V			
INT	SAVE	2	PORT-PUBLIC	156100000	160700000	V	•		\checkmark			
BI	SAVE	3	PORT-PUBLIC	156150000	160750000	\checkmark	•		\checkmark			
CA	SAVE	4	PORT-PUBLIC	156200000	160800000	V			V			
	SAVE	5	PORT-PUBLIC	156250000	160850000	V	~		V			
US	SAVE	6	INTERSHIP	156300000	156300000				V			
ALT	SAVE	7	PORT-PUBLIC	156350000	160950000	1	✓		1			
Private	SAVE	8	INTERSHIP	156400000	156400000	Г	✓		\checkmark			
CA WX	SAVE	9	INTERSHIP/POF	156450000	156450000		•		1			
	SAVE	10	INTERSHIP/POF	156500000	156500000	Γ	◄		V			
05 WX	SAVE	11	SIMPLEX-PORT	156550000	156550000		~		\checkmark			
CONFIGURATION	SAVE	12	SIMPLEX-PORT	156600000	156600000	Γ	V		V			
SOFTWARE UPLOAD	SAVE	13	INTERSHIP/POF	156650000	156650000		•		V			
	SAVE	14	SIMPLEX-PORT	156700000	156700000	Γ	•		V			

Figure 4: Service tool: CHANNEL TABLES: INT for VHF (6248).

Thrane & Thran	e									
НОМЕ	INT Ta	ble								
ADMINISTRATION								173.Z		Us
DEVICE STATUS		Designator	Name	TX Frequency	RX Frequency	Duplex	H1 allowed	Block	Scan	fe Al
CHANNEL TABLES	SAVE	6	INTERSHIP	156300000	156300000	Γ	•			Ε
INT	SAVE	8	INTERSHIP	156400000	156400000	Γ	\checkmark			Γ
Private	SAVE	9	INTERSHIP/POF	156450000	156450000	Γ	•			Γ
CONFICURATION	SAVE	10	INTERSHIP/POF	156500000	156500000	Γ	▼			Γ
CONFIGURATION	SAVE	11	SIMPLEX-PORT	156550000	156550000	Γ	•			Ē
SOFTWARE UPLOAD	SAVE	12	SIMPLEX-PORT	156600000	156600000					Γ
	SAVE	13	INTERSHIP/POF	156650000	156650000					Е
	SAVE	14	SIMPLEX-PORT	156700000	1 <i>5</i> 6700000	Г	V			Γ
	SAVE	15	INTERSHIP/POF	156750000	156750000		•			Γ
	SAVE	16	DISTRESS/CALL	156800000	1 <i>5</i> 6800000	Γ	$\mathbf{\overline{v}}$			F
	SAVE	17	INTERSHIP/POF	156850000	156850000		•			Γ
	SAVE	67	INTERSHIP/POF	156375000	156375000	Γ	•			Γ
	SAVE	68	SIMPLEX-PORT	156425000	156425000					Г

Figure 5: Service tool: CHANNEL TABLES: INT for VHF (6249).

VHF CHANNEL	Description
TABLES	
Name	The Name field is used as the channel descriptor, which is the text present below the channel designator. Name lengths up to 13 characters are possible.
Duplex	Indicates that the channel is a duplex channel. This tag can not be removed by operator.
Hi allowed	This channel may transmit with high power.
TX Block	Select this tag in order to block transmitting on this channel.
Wideband	This tag indicates that the channel is a channel with 25 kHz channel spacing. If the tag is not present the channel spacing is 12.5 kHz. This tag can not be removed by operator.
Scan	Select this tag to include this specific channel in the scanning table. Note that tagging all channels to be scanned will increase the time between scanning each separate channel.
ATIS	Select the ATIS tag on this channel in order to transmit ATIS at the end of every voice transmission. This means that the ATIS code inserted under CONFIGURATION will be transmitted before shutting down the transmitter.
DSC Prop.	Select the DSC propose tag in order to propose using this channel when using DSC cell calls. The channel that can be selected for DSC sub-communication is restricted to channels tagged with DSC Prop.

Fill in the respective fields and click the button **SAVE** for each channel.

Used for AUX	This column is used to select a channel, which is used for AUX settings.
	Only a single channel can be selected. Configuration of the AUX port is
	set under CONFIGURATION.

3.3.2 Channel tables for MF/HF

For the MF/HF radio the ITU channel pages looks almost like the 2MHz band as shown in the following figure.

Thrane & Thrane	e												
HOME	Chan	nel Tabl	le										
ADMINISTRATION							TY		Telex	Telex	WP		
CHANNEL TABLES		Designator	Allowed	Name	TX frequency	Rx frequency	block	Scan	coast	Int	On	Is SSB	6 1
ITU Channels 2MHz	SAVE	241	V		2060000	1635000							
ITII Channels 4MHz	SAVE	242	v		2063000	1638000							
ITU Channels (MHz	SAVE	243	•		2066000	1641000						V	
TTU Unanneis 6MHz	SAVE	244	V		2069000	1644000						V	
ITU Channels 8MHz	SAVE	245	•		2072000	1647000							
ITU Channels 12MHz	SAVE	246	v		2075000	1650000						•	
ITU Channels 16MHz	SAVE	247	•		2078000	1653000						V	
ITU Channels 18MHz	SAVE	248	v		2081000	1656000							
ITII Channels 22MHz	SAVE	249	•		2084000	1659000							
	SAVE	250	~		2087000	1662000							
TTU Channels 25MHz	SAVE	251	~		2090000	1665000							
Private channels	SAVE	252	v		2093000	1668000							
CONFIGURATION	SAVE	253	~		2096000	1671000						\checkmark	
SOFTWARE UPLOAD	SAVE	254	V		2099000	1674000						V	
	SAVE	255	•		2102000	1677000						•	
	SAVE	256	v		2105000	1680000						V	
	SAVE	257	¥		2108000	1683000						V	

Figure 6: Service tool: CHANNEL TABLES: ITU Channels 2MHz on a MF/HF

Fill in the respective fields and click the button **SAVE** for each channel.

MF/HF CHANNEL TABLES	Description
Allowed	Select this tag to indicate if a given channel is present in the radio or not. Removing a tag removes the channel from the channel table in the radio even though the channel is normally present in a given mode.
TX Block	Select this tag in order to block transmitting on this channel.
Scan	Select this tag to include this specific channel in the scanning table. Note that tagging all channels to be scanned will increase the time between scanning each separate channel.
Telex coast	Select this tag to mark the channel for Telex coast station. It is <i>not</i> recommended to change this setting.
Telex Int.	Select this tag to mark Telex used intership. This is preprogrammed as an ITU setting. It is <i>not</i> recommended to change this setting.

WR On	Select this tag to use watch receiver on this channel. It is <i>not</i> recommended to change this setting.
Is SSB	Select this tag to identify the channel as an SSB channel.
Is AM	Select this tag to identify the channel as an AM channel.

3.3.3 Private channels for VHF

For private channels in the VHF radio the **CHANNEL TABLES** page looks as follows:

Thrane & Thrane																	
НОМЕ	Priva	ate Cha	anne	l T	able	,											
ADMINISTRATION				A 11-1													
DEVICE STATUS	-	Decignet	INT&		rcu		Nomo	TV Emerand	v DV Freeman	Dup-	Hi	TX	Wide	Sam	ATTS	DSC	1
CHANNEL TABLES	SAVE	POO				ÌΓ	Ivaine		0								• A
INT	SAVE	P01						0	0								
DI	SAVE	P02						0	0								
BI	SAVE	P03						0	0								
CA	SAVE	P04						0	0								
US	SAVE	P05						0	0								
ALT	SAVE	P06						0	0								
Private	SAVE	P07						0	0								
CA WX	SAVE	P08						0	0								
US WX	SAVE	P09						0	0								
CONFICURATION	SAVE	P10						0	0								
	SAVE	P11						0	0								
SUFTWARE UPLUAD	SAVE	P12						0	0								
	SAVE	P13						0	0								
	SAVE	P14						0									_
	SAVE	P15]0 [0								
	SAVE	P16						0									1
	SAVE	P17						10	10								

Figure 7: Service tool: CHANNEL TABLES: Private for VHF (6222).

Thrane & Thrane	•														
	Priv	ate Cha	nne	І Тя	ble										
HUME			mie												
ADMINISTRATION			ŀ	llowe	1				n		TR.				Used
DEVICE STATUS		Designator	INT& ALT	BI US	CA	Name	TX Frequency	RX Frequency	lex	allowe	I Block	vviae band	Scan	ATIS	for AUX
CHANNEL TABLES	SAVE	P00					0	0							
INT	SAVE	P01					0	0							
BI	SAVE	P02					0	0							
	SAVE	P03					0	0							
LA	SAVE	P04					0	0	\Box						
US	SAVE	P05					0	0							
ALT	SAVE	P06					0	0							
Private	SAVE	P07					0	0							
CA WX	SAVE	P08					0	0	\Box						
	SAVE	P09					0	0							
03 #x	SAVE	P10					0	0							
CONFIGURATION	SAVE	P11					0	0							
SOFTWARE UPLOAD	SAVE	P12					0	0							
	SAVE	P13					0	0							

Figure 8: Service tool: CHANNEL TABLES: Private for VHF (6248).

hrane & Thran	e									
IOME	Private Ch	annel Ta	ble							
ADMINISTRATION		Allowed				Dım.	Hi	TX	Wide	Used
DEVICE STATUS	Designat	or _{INT}	Name	TX Frequen	cy RX Frequency	y lex	allowed	Block	hand Scar	for I AUX
HANNEL TABLES	SAVE P00			0	0					
INT	SAVE P01			0	0					
Deliverte	SAVE P02			0	0					
Private	SAVE P03			0	0					
CONFIGURATION	SAVE P04			0	0					
SOFTWARE UPLOAD	SAVE P05			0	0					
	SAVE P06			0	0					
	SAVE P07				0	П	Γ	Γ	ПП	П
	SAVE POS			0						
				1°			-	-		-

Figure 9: Service tool: CHANNEL TABLES: Private for VHF (6249).

In the page **Private** you can add private channels. These channels will be visible in the respective channel modes (INT/ALT, BI, US, CA) in the radio if they are selected under **Allowed** section.

VUE	Description
CHANNEL TABLES	Description
Designator	The designator is the number or text shown as the large text in the radio's display when selecting this channel.
Allowed	Select this tag for the channel to be visible in the respective channel modes (INT/ALT, BI, US, CA) in the radio. Private channels allowed for INT are also available in ALT mode and visa versa.
Name	Enter a suitable name for the channel. This text will be shown below the designator in the display of the radio.
TX frequency	Enter the TX frequency for this channel.
RX frequency	Enter the RX frequency for this channel.
Duplex	Select this tag if the channel is a duplex channel. The channel spacing must be 4.6 MHz.
Hi allowed	Select this tag if this channel as allowed to transmit at high power.
TX Block	Select this tag in order to block transmitting on this channel.
Wideband	Select this tag to mark the channel as a channel with 25 kHz channel spacing. Removing this tag makes the channel spacing 12.5 kHz.
Scan	Select this tag to include this specific channel in the scanning table. Note that tagging all channels to be scanned will increase the time between scanning each separate channel.
ATIS	Select the ATIS tag on this channel in order to transmit ATIS as the end of every voice transmission. This means that the ATIS code inserted under CONFIGURATION will be transmitted before shutting down the transmitter.
DSC Prop.	Select the DSC propose tag in order to propose using this channel when using DSC cell calls. The channel that can be selected for DSC sub-communication is restricted to channels tagged with DSC Prop.
Used for AUX	This column is used to select a channel, which is used for AUX settings. Only a single channel can be selected. Configuration of the AUX port is set under CONFIGURATION.

Fill in the respective fields and click the button **SAVE** for each channel.

3.3.4 Private channels for MF/HF

The private channels in the MF/HF radio the **CHANNEL TABLES** page looks as follows:

Thrane & Thrane													
	Chan	nel Tab	le										
HOME							ту						
ADMINISTRATION		Designator	Allowed	Name	TX frequency	Rx frequency	block	Scan	Telex coast	Telex Int	WR On	Is SSB	
CHANNEL TABLES													
ITU Channels 2MHz	SAVE	1		Private Ch	0	0							
ITU Channels 4MHz	SAVE	2		Private Ch	0	0						Г	
ITU Channels 6MHz													
ITU Channels 8MHz	SAVE	3		Private Ch	0	0							
ITU Channels 12MHz	SAVE	4		Private Ch	0	0						Г	
ITU Channels 16MHz						1.							
ITU Channels 18MHz	SAVE	5		Private Ch	0	0							
ITU Channels 22MHz			_				_	-	_	_	_	-	
ITU Channels 25MHz	SAVE	6		Private Ch	lo	lo							
Private channels	SAVE	7		Private Ch	0	0							
CONFIGURATION													
SOFTWARE UPLOAD	SAVE	8		Private Ch	0	0							
	SAVE	9		Private Ch	0	0							

Figure 10: Service tool: CHANNEL TABLES: Private channels for MF/HF.

Fill in the respective fields and click the button **SAVE** for each channel.

MF/HF CHANNEL TABLES	Description
Designator	The designator is the number or text shown as the large text in the radio's display when selecting this channel.
Allowed	Select this tag for the channel to be visible in the respective ITU channel mode.
Name	Enter a suitable name for the channel. This text will be shown below the designator in the display of the radio.
TX block	Select this tag in order to block transmitting on this channel.
Scan	Select this tag to include this specific channel in the scanning table. Note that tagging all channels to be scanned will increase the time between scanning each separate channel.
Telex coast	Select this tag to mark the channel for Telex coast station. It is <i>not</i> recommended to change this setting.
Telex Int.	Select this tag to mark Telex used intership. This is preprogrammed as an ITU setting. It is <i>not</i> recommended to change this setting.
WR On	Select this tag to use watch receiver on this channel. It is <i>not</i> recommended to change this setting.
Is SSB	Select this tag to identify the channel as an SSB channel.
Is AM	Select this tag to identify the channel as an AM channel.

3.4 Configuration of the radio

Choosing **CONFIGURATION** in the menu makes it possible to set several radio parameters, like MMSI number, and primary vs. duplicate installation and other parameters are available.

3.4.1 Configuring the VHF radio

The following figure shows the **CONFIGURATION** page for VHF radio.

Thrane & Thrane	
НОМЕ	Configuration
ADMINISTRATION	General
DEVICE STATUS	Band C 12500Hz © 25000Hz
CHANNEL TABLES	ATIS code
CONFIGURATION	MMSI
SOFTWARE UPLOAD	Primary station?
	Watch / Scan
	Watch mode C Dual scan C Triple scan
	Priority C OFF
	Scan Hang Time 0 🔽
	AUX
	Configuration for channel: 16 Squelch Open 💌
	Permissions
	INT BI US CA ALT
	modes
	Apply Cancel

Figure 11: CONFIGURATION page for a VHF (6222).

Thrane & Thrane	
HOME	Configuration
ADMINISTRATION	General
DEVICE STATUS	Band C 12500Hz © 25000Hz
CHANNEL TABLES	ATIS code
CONFIGURATION	Set type of NON-CLASS © 6248 NON-CLASS © 6249 Survival craft
SOFTWARE UPLOAD	
	Watch / Scan
	Watch mode 📀 Dual scan 🔍 Triple scan
	Priority C ON © OFF
	Scan Hang Time 0 💌
	AUX
	Configuration for channel: 16 Squelch Open •
	Permissions
	Allowed scan modes 🔽 🗖 🔽 🔽
	Allowed narrow 🔽 🔽 🔽 🔽 modes
	Apply Cancel



Thrane & Thran	e		
НОМЕ	Configuration		
ADMINISTRATION	General		
DEVICE STATUS	Set type of NON-CLASS	C 6248 NON-CLASS	€ 6249 Survival craft
CHANNEL TABLES			
CONFIGURATION	Watch / Scan		
SOFTWARE UPLOAD	Priority Scan Hang Time	O ON	© OFF
	AUX		
	Configuration for channel:	16	Squelch Open
	Apply Cancel		

Figure 13: CONFIGURATION page for a VHF (6249).

CONFIGURATION - VHF	Description
Band	Select between 12.5 kHz and 25 kHz channel spacing.
ATIS code	Enter or change the ATIS code. The ATIS code will be transmitted in the end of each voice transmission. The ATIS code format is 9 digits like the MMSI.
MMSI	Enter or change the MMSI number of the radio. The format of MMSI is 9 digits.
Primary station?	Select this tag if you want this radio to have priority over a duplicate VHF installation.
Watch mode	Select whether you want the dual (current channel and DSC) or triple watch mode (current channel, DSC and one more channel).
Priority	Priority mark is to enable priority scanning which means scanning the priority channel between every working channel scan. ON : W1 -> prio -> W2 -> prio -> W3 -> prio -> OFF : W1 -> W2 -> W3 ->
Scan hang time	Scan hang time, in seconds on an active receiving working channel. The time is measured from the signal is detected. The radio remains on the channel for the set time interval, if a signal was detected.
AUX	The channel selected for AUX (Used for AUX) will be present in bold, and the configuration – options on what the AUX port is to do, can be configured in the dropdown list. Default AUX channel is channel 16. Options are: OFF, Squelch open, On channel. If Squelch open is selected, the AUX port is activated when the squelch opens on the selected channel. If On channel the port is activated when the radio is on the selected AUX channel.
Permissions	Select the channel tables allowed for scanning and narrow modes.
Set Type of NON- CLASS	This is only present on S6248 and S6249, and is used to configure the radio as a 6248 or a 6249 radio.

Fill in the respective fields and click the button **APPLY**.

3.4.2 Configuring the MF/HF radio

The following figure shows the **CONFIGURATION** page for the MF/HF radio.

Thrane & Thrar	ie	
	General	
HOME	MMSI	
	Call ID or MMSI	
	Abbreviated ID	
	Slave delay	10 •
CUNFIGURATION	ATU available?	
SOFTWARE UPLOAD	PSU monitor enabled?	
	Primary station?	R
	Scan configuration	
	Scan Hang Time	0 •
	Scan Resume Time	20 •
	Apply Cancel	

Figure 14: CONFIGURATION page from a MF/HF.

Fill in the respective fields and click the button **APPLY**.

CONFIGURATION - MF/HF	Description
MMSI	Enter or change the MMSI number of the radio.
Call ID or MMSI	This is the 5-digit Telex call id. If there is no 5-digit call id allocated you can use the 9-digit MMSI or leave the field empty.
Abbreviated ID	This is used for Telex identification and is part of the answer back string. The abbreviated ID is usually 4 ASCII letters, e.g. 'abcd'.
Slave delay	This is the slave frame delay used during Telex ARQ calls. 10 msec should be adequate for most installations.
ATU available?	Select this tag if the system has an ATU (Antenna Tuning Unit) connected. This enables the setup of the ATU.
	Note: Wrong selection may damage the Antenna Tuning Unit.
PSU Monitor enabled	If the radio's power supply is a SAILOR 6081 you can enable the Power Supply Monitor in the radio.
Primary station	Select this tag if you want this radio to have priority over a duplicate MF/HF installation.
Watch mode	Here you can select whether you want the dual (current channel and DSC) or triple watch mode (current channel, DSC and one more channel).
Scan hang time	Scan hang time, in seconds on an active receiving working channel. The time is measured from the signal is detected. The radio remains on the channel for the set time interval, if a signal was detected.

Scan resume time	Scan resume time, in seconds. When the programmed time of inactivity has elapsed, and when watch/scan has been aborted using a press on PTT, or after power-up, scan or watch is resumed.

The MMSI, Call-id and abbreviated ID are used to construct the telex answer back string. The rules for creating a valid answerback string are:

- Figure shift
- Carriage return
- Line feed
- 9-digit MMSI (or 5-digit call ID)
- Letter shift
- Space
- Abbreviated ID
- Space
- Letter shifts to bring the total length up to 20 characters
- X

The service tool will automatically add the figure shifts, letter shifts, spaces and the letter 'x' where appropriate. It is strongly recommended to check the telex settings on the SAILOR 6006 Message Terminal (Telex) when the settings above have been modified and the radio has been power cycled.

3.5 Software Upload

The software upload is a stepwise process. First the operator has to force the radio into safe mode and then upload the file.

To upload software to the radio, do as follows:

- 1. Go to the menu SOFTWARE UPLOAD.
- 2. Press the **Enter safemode** button (see Figure 15). This displays a new page asking the operator to wait.
- 3. Wait approximately 10 seconds until the page reloads, see Figure 16.
- 4. Upload the new firmware file using the browse functionality or type in the location of the file. The file to upload is a file with the extension .tgz, which can be downloaded from the Thrane & Thrane extranet. Upload file images are specific for the unit you want to update (VHF, MF/HF CU, MF/HF TU). See Figure 17.
- 5. Press **Upload** and wait until the radio reboots.
- **IMPORTANT**:Do not press any key on the radio while updating or attempt to operate the service tool. Wait until the radio reboots, allow wait time up to 6 minutes. Do not power cycle, press any key or button in the browser, operate the radio, remove network cables or perform any actions on the PC while uploading.

IMPORTANT: When updating a MF/HF system you must always start by updating the CU, then update the TU. Remember to update all CU(s) and the TU.

IMPORTANT: Do not use a network with a DHCP server that assigns a new IP address each time network equipment is switched on. If the router assigns a new IP address each time, you can see it in the router. It is recommended to connect the radio as described in section 2.1, Connecting to a radio without a network.

The menu system in the browser does not work when safemode has been entered, because the radio is in a mode for software upload only.

Thrane & Thrane		
HOME ADMINISTRATION CHANNEL TABLES CONFIGURATION SOFTWARE UPLOAD	UPLOAD SOFTWARE TO RADIO Enter safemode Radio is to be forced into safemode before update is possible.	

Figure 15: Step 1 of software upload.

Pressing the Enter safemode button displays the following:

Please wait, and allow the radio to enter safemode.

Figure 16: Step 2 of software upload.

Thrane & Thrane		
	RADIO RUNNING IN SAFE MODE !!!	
НОМЕ	UPLOAD SOFTWARE TO RADIO	
ADMINISTRATION	Browse	
CHANNEL TABLES		
CONFIGURATION	Upload	
SOFTWARE UPLOAD	WARNING: Upload time can take up to 6 minutes!	

Figure 17: Step 3 of software upload.

Pressing the Upload button displays the following:

Please wait, and allow the radio to reboot.

Figure 18: Step 4 of software upload.

When the process is done, and the radio reboots, safemode is exited and the upgrade is complete. The browser stays on the page shown in Figure 18. Shutdown the browser session and reconnect to the radio.

3.5.1 Troubleshooting

If the product is not restarting up until 6 minutes after the upload process was initiated – or if e.g. a power outage occurs during upload, then the product enters a **rescue mode** next time it is repowered.

In rescue mode there are no visible indications on the product.

In order to firmware update a product in rescue mode, perform the following steps:

- 1. Connect the product directly to a PC with an Ethernet cable.
- 2. Configure the PC with a static IP address: 192.168.0.10 and netmask: 255.255.255.0
- 3. Install a **tftp server** on the PC e.g. **OpenTftpServer**
 - a. OpenTftpServer can be downloaded from: <u>http://sourceforge.net/projects/tftp-server/</u>
 - b. During installation, uncheck request to start the server as a windows service
 - c. Open a windows command shell, then enter the installation directory
 - d. Execute the RunStandAloneMT.bat file
- 4. From the software release package rename the supplied xxx.tiif file to s6000.tiif
- 5. Place the **s6000.tiif** file in the root directory of the tftp server
- 6. Power-cycle the product. The product will automatically assign itself the IP address 192.168.0.20 and then immediately request the s6000.tiif file from the PC.
- 7. Allow the product to complete the file transfer and flash programming process, which is expected to be less than 3 minutes
- 8. The product automatically reboots and enters normal behavior after successfully completing flash programming.

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