SAILOR 6300B MF/HF Service Interface

User Manual

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1 Introduction

The service tool for the S6000 radio series MF/HF devices is made available by a built-in web server in the radio. The service tool can be accessed from a computer connected to a LAN shared with the device and is displayed in an internet browser with no additional installation of software required. Currently we do not guarantee full support for Microsoft Internet Explorer, but most HTML5 enabled browsers are supported.

Screenshots in this manual were done using Google Chrome.

1.1 Precautions using the service tool

- **WARNING**: While using the service tool the network cable should not be removed or disconnected from neither the PC nor the radio.
- **WARNING:** While using the service tool, power to the radio should not be switched off. Violation of the precautions above can result in a defect radio, which only can be repaired by the manufacturer.
- **WARNING:** The Service agent is responsible for all changes made with the service tool. Changes must be in conformance with radio specifications and regulations.

2 Connecting to the service tool

2.1 Connecting to the service without a network

The service tool for the radio can be accessed directly without use of a network, by use of a PC with automatic network configuration and an internet browser. Connect the radio to the computer using the Ethernet interface and type the IP address of the radio in the address field of an internet browser to access the service tool. This will open the radio status page of the service tool and the radio can now be configured. The radio's current IP address is visible in the **SYSTEM SETUP** menu on the radio control unit or in the radio's entry in the TMA tool as seen in **Figure 1** below.

2.2 Connecting to the service tool through a network

The service tool can be accessed through a LAN from a PC with an internet browser. Type the IP address of the radio in the address field of an internet browser to access the service tool. This will open the radio status page of the service tool and the radio can now be configured. The radio's current IP address is visible in the **SYSTEM SETUP** menu on the radio control unit or in the radio's entry in the TMA tool as seen in **Figure 1** below.



Figure 1: TMA tool page for the radio displaying IP address, etc.

3 Overview of functionality

The service tool is used to perform updates to the firmware and various settings of the radio. This section describes each feature of the service tool in turn. The tool will show information about firmware, status of the radio and data from the logs for all users without administrator rights, covered in section 3.1. For administrators the service tool provides functionality for configuration of radio settings and tools for administration of firmware, covered in section 3.2.

3.1 Open access functionality

The open access information of the service tool is divided into three tab pages, described in the following three subsections.

3.1.1 STATUS

The **STATUS** tab page can be seen below in **Figure 2**.

	STATUS	LOGS	CHANNELS	CONFIG	TOOLS	
Statu	IS					
Type of	platform					6368
Firmwar	re version					2.05
Hardwa	re tracking ID)				57-139984:1126580009:A.11
Current	serial					80216874
STATUS						
COB	Jam			© 2	014 Cobham SATCO	M

Figure 2: Status tab.

The status tab is used to show the current platform and hardware configuration of the radio. The field **Hardware tracking ID** is used in service of the transceiver unit.

If the main board of the radio is replaced, a new serial number can be applied in the **Current serial** field. When no serial number is programmed, the 'current serial' field will display a 10-digit tracking number. This means that it is possible to input the serial number of the system.

Status Type of platform 6368 Firmware version 2.05 Hardware tracking ID 57-139984:1126580009:A.11 Current serial 1126580009 Submit	STATUS LOGS CH.	ANNELS CONFIG TOOLS	
Type of platform 6368 Firmware version 2.05 Hardware tracking ID 57-139984:1126580009;A.11 Current serial 1126580009 Lurent serial 1126580009 Submit 5000000000000000000000000000000000000	Status		
Firmware version 2.05 Hardware tracking ID 57-139984:1126580009:A.11 Current serial 1126580009	Type of platform		6368
Hardware tracking ID 57-139984:1126580009:A.11 Current serial 1126580009 Submit	Firmware version		2.05
Current serial 1126580009	Hardware tracking ID		57-139984:1126580009:A.11
Submit	Current serial	11265800	09
Submit			
Submit			
STATUS O 2014 Cohbarn SATCOM		Submit	
	STATUS	Submit	

Note: updating the serial number can only performed one time and that updating the field requires logging in (described in section 3.2).

3.1.2 LOGS

The LOGS tab can be seen in Figure 3 below.



Figure 3: LOGS tab.

This tab includes four side-bar buttons, where each displays the respective logs over **Received Distress Calls, Received DSC Calls, Transmitted DSC Calls** and one button for the **System Log**. Each log can be downloaded as a .tar.gz file.

3.1.3 NMEA

The **NMEA** tab pane displays a stream of NMEA data collected over **SERIAL** and/or **LAN**. The data can be downloaded as a compressed file of the format .tar.gz and will contain more lines than displayed on the screen. See example printout in **Figure 4** below.

STATUS	5 LOGS I	NMEA			
Source	NMEA Trace	SERIAL	S	LAN	
Navd Mult In	UdPbC\s:GN0000,	n:65*3B\\$GPGNS,080727.50,5	, 00 א, 12 - 8061 א, 00	941.1887, E, DN, 08, 1.0,	12.1,42.3,
Navd Mult In	UdPbC\s:GP0666,	n:249*1F\\$GPDTM,W84,,0.000	0,S,0.0000,E,	0.0000, W84 *42	
Prop Multi In	UdPbC\s:AI9511,	n:105*01\\$PTHRSNR,02,00,03	,00,05,00,06,	00,07,00,08,00,09,00,	10,00,16,0
		Download			

Figure 4: NMEA tab.

Note: Several tools are capable of unpacking tar.gz files, including 7zip, Winrar, Winzip, etc.

3.2 Protected access functionality

Protected administrator access to the service tool is obtained by logging in using the button in the upper right corner of the service tool (see **Figure 5** below).



Figure 5: Login button.

By pressing the **LOGIN** button a pop-up will show.

Please authenticate	Cancel Login
Username	4
Password	



To get administrator access enter the following into the two fields:

- Username: admin
- Password: sailorsailor

When logged in to the protected part of the service tool the radio is disabled and the tab pages **CHANNELS**, **CONFIG** and **TOOLS** become accessible. These tabs are described in the following sub sections.

3.2.1 CHANNELS

An example of the **CHANNELS** tab can be seen in **Figure 7** below.

STATUS LOGS CH/	ANNELS CO	NFIG TO	DOLS			
ITU Channels 2MHz	Channel	Allow?	Rx Freq	Tx Freq	Tx Block	Scan
ITU Channels 4MHz	241		1.635 kHz	2.060 kHz		\sim
ITU Channels 6MHz	242		1.638 kHz	2.063 kHz		I.
ITU Channels 8MHz	243		1.641 kHz	2.066 kHz		Ż
ITU Channels 12MHz	244		1.644 kHz	2.069 kHz		Ì
	245		1.647 kHz	2.072 kHz		0
ITU Channels 16MHz	246		1.650 kHz	2.075 kHz		\checkmark
ITU Channels 18MHz	247		1.653 kHz	2.078 kHz		I all
ITU Channels 22MHz	248		1.656 kHz	2.081 kHz		I I I I I I I I I I I I I I I I I I I
ITU Channels 25MHz	249		1.659 kHz	2.084 kHz		I.
Private Channels	250		1.662 kHz	2.087 kHz		1
	251		1.665 kHz	2.090 kHz		2
						_

Figure 7: CHANNELS tab.

This tab has a side-bar button for various ITU channel bands and for private channels. The user must click on a channel row on the page to select a channel for configuration. When selecting channel **241** the following configuration page for the channel appears (**Figure 8**):

STATUS LOGS CH/	ANNELS CONFIG TOOLS	
ITU Channels 2MHz	Channel 241	
ITU Channels 4MHz	Allowed?	
ITU Channels 6MHz	Rx frequency	1.635 kHz
ITU Channels 8MHz	Tx frequency	2.060 kHz
ITU Channels 12MHz	Tx Block	
ITU Channels 16MHz	Scan	
ITU Channels 18MHz	Submit	

Figure 8: Configuration of Channel 241.

Channel settings	Description
Allowed?	Select this tag to show the channel in the channel table and make it available via the control unit.
	Remove the tag to remove the channel from the channel table and from the control unit. This can also be done for channels which are normally included from the factory (ITU channels).
RX frequency	Specify receive frequency.
TX frequency	Specify transmission frequency.
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.

To configure the channel fill in the respective fields and click the **Submit** button.

3.2.2 CONFIG

The **CONFIG** tab contains two side-bar buttons and each are described in turn:

STATUS LOGS CHA	NNELS CONFIG TOOLS	
Configuration	General	
Watch Keeping Receiver	MMSI	219380099
	Call ID or MMSI	219380099
	Abbreviated ID	
	Slave delay	10
	ATU available?	
	PSU monitor enabled?	
	Primary station?	
	Su	bmit

Figure 9: CONFIG tab – Configuration side-bar page.

Configuration	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 delay used during Telex ARQ calls. Default value is 10.
ATU available?	Deselect this tag if the system does not have an ATU (Antenna Tuning Unit) connected. The option is used for dedicated antenna on specific frequency or dummy load. Note: Wrong selection may damage the ATU .
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.

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

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

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.

STATUS LOGS CHA	ANNELS CONFIG TOOLS	
Configuration	Options	*
Conngulation	Enter code to enable telex	
Watch Keeping Receiver	D6 option Warning: if disabled, re-enabling will require an option code!	
	Low Power Mode Only	
	External modem enabled	
	Enable active antenna	
	Scan Configuration	
	Scan Hang Time 0	
	AUX Pin Settings	
	Frequency [Hz] 2182000	
	Mode Squelch open	
	Coast Station Mode	
	Switch RX and TX freq?	•
	Submit	

Figure 10: CONFIG tab – Configuration side-bar page continued.

Options	Description			
Enter code to enable telex	Enter the option code to enable telex. After entering, the option can be removed again by de-checking the check box			
D6 option	De-select check box to disable D6 (6 channel watch keeping receiver). To re-enable, input the option code.			
Low Power Mode Only	Transmit is only allowed at low output power.			
External modem enabled	If the radio is used in connection with external modem, enable this option to achieve correct power output.			
Enable active antenna	Check this option to enable supply current for active antenna (12VDC max 6omA).			
Scan hang time	Hang time, in seconds, to wait on a channel with signal, before resuming the scan.			

*) As for telex, the user must enter the code delivered with the system to enable D6. The field D6 option in Figure 10 above depicts how the field appears when the activation code has already been entered to the field. Before deselecting options, the service tool issues a warning (see Figure 10, D6 option for example).

AUX Pin Settings:

Frequency [Hz]	Select the frequency for which the AUX pin is active.
Mode	Choose between Off, Squelch open (as in Figure 10) or On Channel.

Coast Station Mode:

Switch RX and TX freq?	Swaps duplex frequencies when used as a ship counterpart. Also GPS alarms and leading oo in MMSI are allowed.

When all desired configurations are entered to the fields, click **Submit**.

STATUS LOGS CHA	NNELS CONFIG TOOLS		
Configuration Watch Keeping Receiver	WARNING: Frequencies programmed on the current page impacts DSC reception and transmission. Distress capability is degraded to 2Mhz only, unless 8MHz and at least one other band is programmed to its default value. DO NOT CHANGE if not aware of all consequences!		
	Watch Receivers 2MHz frequency (default 2187500 Hz) *	2187500	
	4MHz frequency (default 4207500 Hz)	Enable 4207500	
	6MHz frequency (default 6312000 Hz)	Enable 6312000	
	8MHz frequency (default 8414500 Hz)	Enable 8414500	
	12MHz frequency (default 12577000 Hz)	Enable 12577000	
	16MHz frequency (default 16804500 Hz)	Enable 16804500	
	Use enabled frequencies for private distress, urgency and safety network *		
	*) Enter special key to modify values		
	Sub	mit	

Figure 11: CONFIG tab – Watch Keeping Receiver side-bar button.

On the **Watch Keeping Receiver** page it is possible to program 6 DSC frequencies into the watch receiver or disable frequencies. These custom frequencies will also be available for routine DSC transmissions. If the programmed frequencies are required for a custom distress network (for distress, safety and urgency calls), the following option key is required: **ABCD-1234-COBH-2014**

WARNING: changing these frequencies WILL alter the ability to send and receive distress to/from established GMDSS coast stations. Non-default programming of the 2MHz frequency also needs the special options key as this will void MF-DSC capability.

WARNING: HF DSC functionality requires watch receiver option, enabled scanning on at least 2MHz band, 8MHz band and at least one other band.

Click **Submit** when desired configuration has been reached.

3.2.3 TOOLS

	STATUS	LOGS	CHANNELS	CONFIG	TOOLS	
FW Update						
Factory Reset						
Save Configuration						
Load Configuration						



- The **FW Update** button lets the operator upload new firmware to the radio. Only files issued by Cobham shall be used in the .tiif format.
- The **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. Option codes for radio telex and watch keeping receiver will not be affected.
- **Save Configuration** downloads a .tar.gz file with all configurations done to the radio through the service tool.
- Load Configuration is used to load configurations from a .tar.gz file made previously on the current radio or another similar radio.

3.3 Logout

Access the option menu in the upper right corner and choose to log out to do so. Upon logging out, the radio will reboot utilizing the new settings and be ready for normal operation.