SAILOR 6300B MF/HF Service Interface

User Manual

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Record of revisions

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A	Initial	August 2015	JTR
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Table of contents

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.
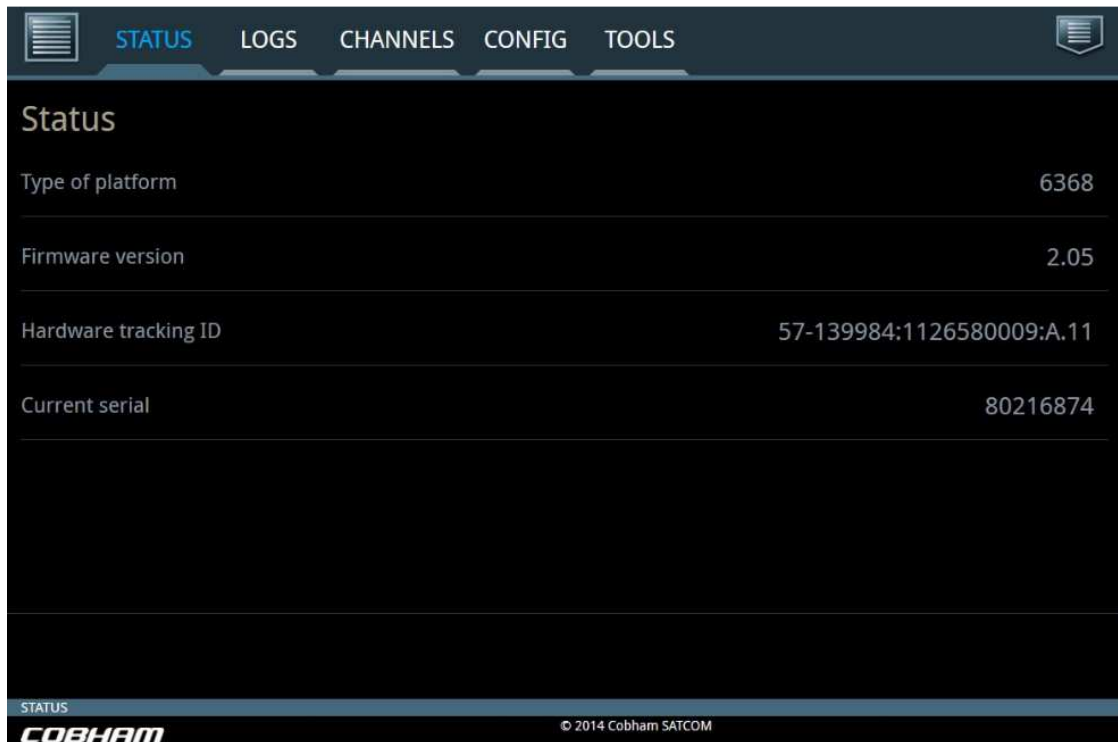
3 Overview of functionality

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**.

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 .

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.
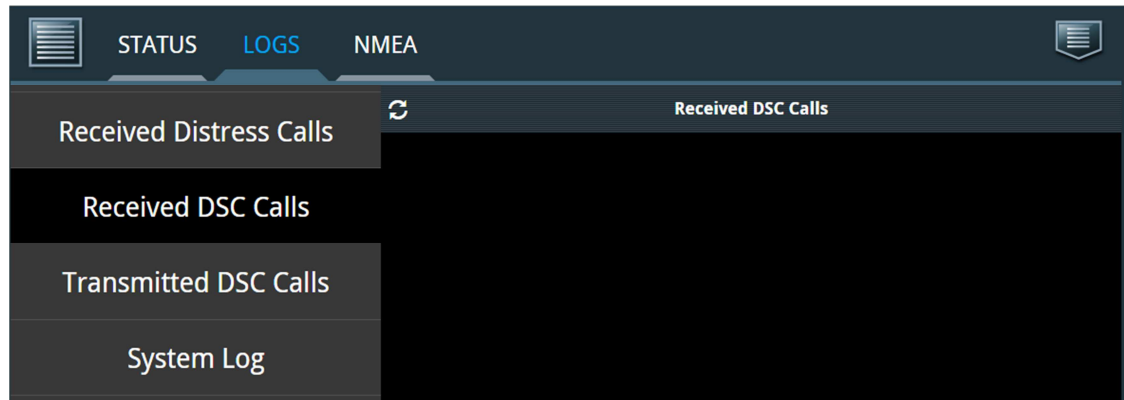
Figure 3: LOGS tab.

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.
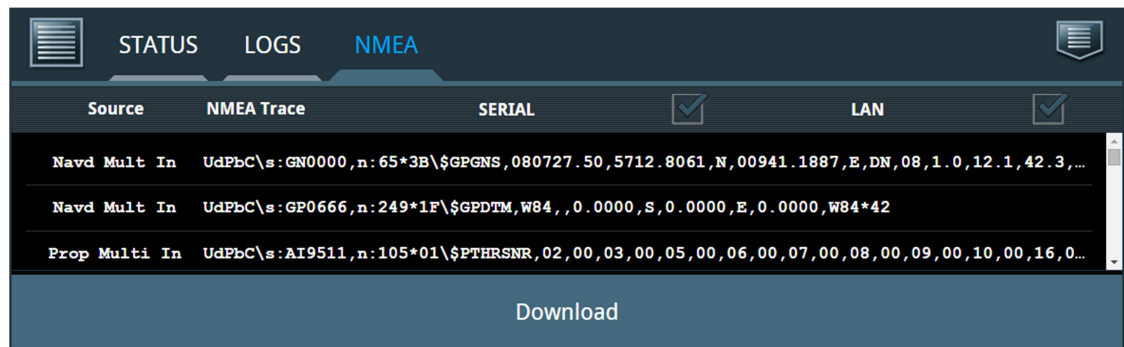
Figure 4: NMEA tab.

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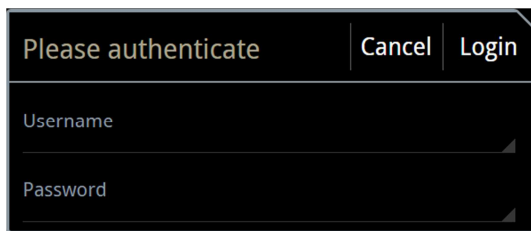
3.2 Protected access functionality

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.

Figure 6: Login pop-up.

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.

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):**

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

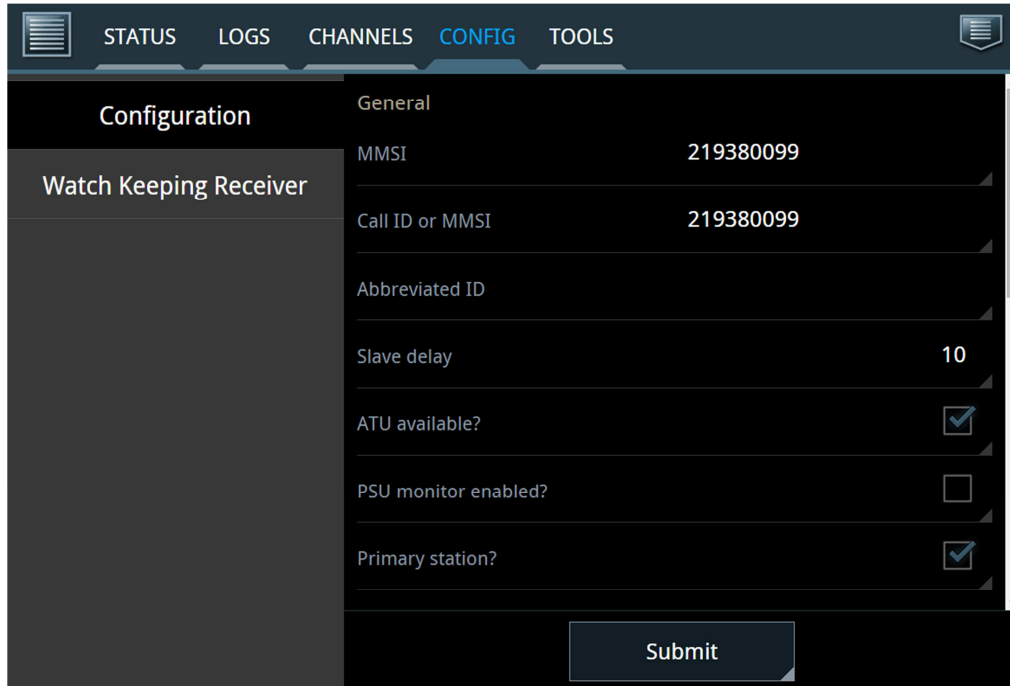The **CONFIG** tab contains two side-bar buttons and each are described in turn:

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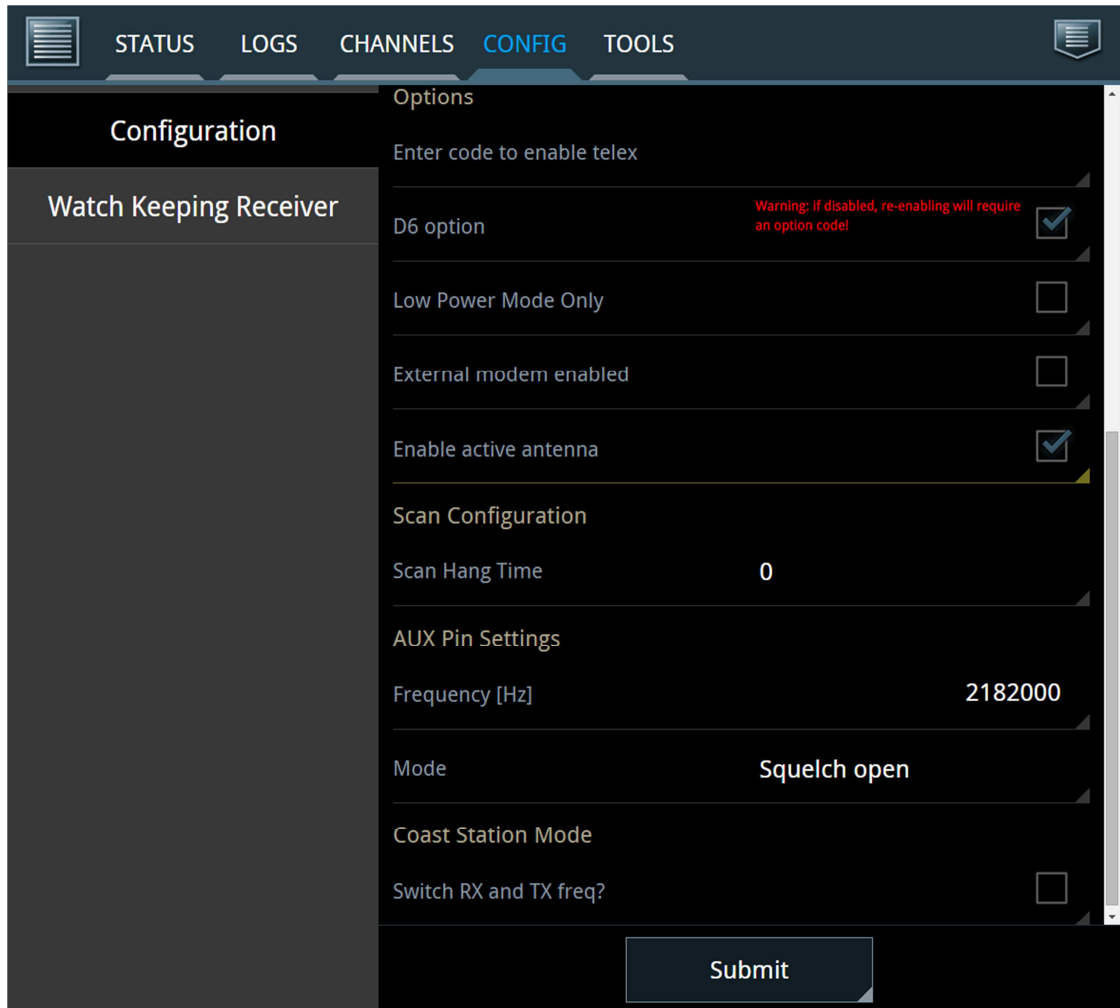
Figure 10: CONFIG tab – Configuration side-bar page continued.

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 60mA).
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 00 in MMSI are allowed.

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

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.

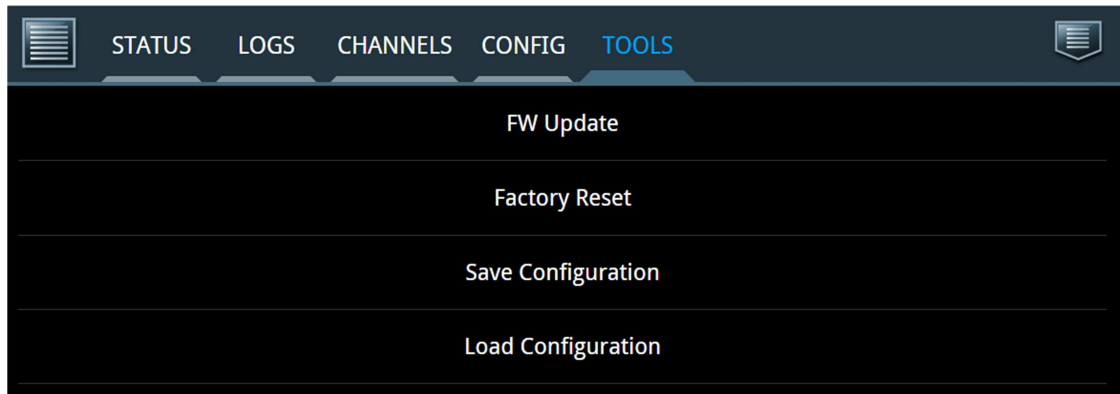Click **Submit** when desired configuration has been reached.

3.2.3 TOOLS

Figure 12: TOOLS tab.

- 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.