

Futronic MKII MANAGER (PC SOFTWARE) User Manual

Version 18 August 2020

This manual supports software version
610.0019.003



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INTRODUCTION

Futronic MKII manager allows you to:

- Conduct all tests on the PC with remote control
- View all test results and save them to a PC
- Compose custom-made DSC messages
- Compose custom-made AIS messages
- Perform test box settings that cannot all be done on the test box itself
- Perform PC-controlled EPIRB tests and generate complete finished EPIRB Test Reports
- Monitor NMEA messages to detect suspected errors on the NMEA 0183 version 2.
- Determine the VHF channels to be tested for sensitivity
- Upgrade your test box with new facilities purchased from Danphone
- Send and receive TELEX messages.

How to download and install

- 1) Download Futronic MKII manager from Danphones' website:
<https://www.danphone.com/downloads/futronic-mkii/>
- 2) Open the zipped file.
- 3) Double click on the file **Installation guide** and follow the instructions.



- 4) Once installed, the PC program will open a 6-tabbed dialogue box on your PC screen:

Test Results - DSC Composer - AIS Composer - Settings - EPIRB - NMEA - Upgrade - Sensitivity - TELEX

The tabs are explained on the following pages.

REMOTE CONTROL

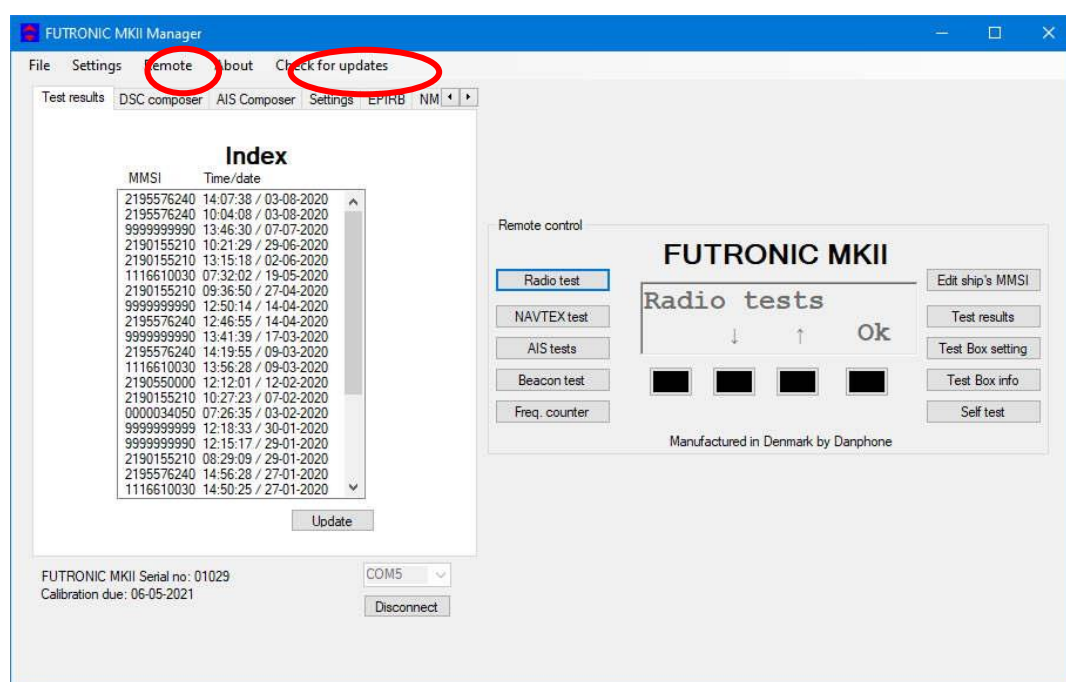
The test box can be remote controlled from a PC.

Download the Futronic MKII manager PC software (remote control is supported from version 610.0019.002) Connect the test box to the PC via USB cable (standard accessory).

Remote control is supported on the test box from software versions (Master) 682.0001.036 (Application) 682.0002.032. See "Test Box info".

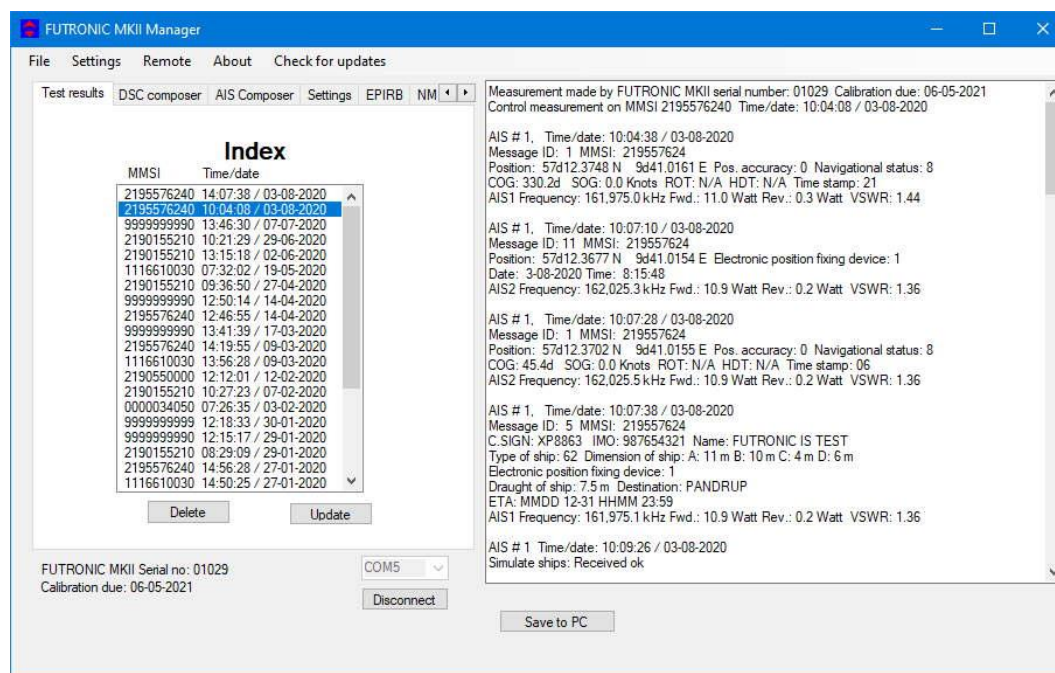
All test box functions are available for remote control.

Online software update is available on www.danphone.com/service-support/software-update/
Click on "Check for updates".



TEST RESULTS

The *Test Results* tab provides access to all the tests and test results stored in the test box.



Tests are organized with a header in the Index window to the left, under which the individual test results are displayed in the window at the right-hand side.

Headers are indexed in time order with the latest test on top.

Please note: In order to view a test result, you must select its header first.

Press **Save to PC** in order to save the test results on your PC and to bring them into your own test report format, if so wished.

Press **Update** to update the Index list with new tests performed after you opened the PC program.

Press **Delete** to delete a test from the Index list.

Press **Disconnect** to disconnect the test box from your PC.

DSC COMPOSER

Under the *DSC Composer* tab you can compose your own custom-made DSC messages and transfer them to the test box accordingly.

The screenshot shows the 'FUTRONIC MKII Manager' application window. The 'DSC composer' tab is active. The interface includes a menu bar with 'File', 'Settings', 'Remote', 'About', and 'Check for updates'. Below the menu bar is a tab bar with 'Test results', 'DSC composer', 'AIS Composer', 'Settings', 'EPIRB', and 'NM'. The main workspace contains the following elements:

- Load message from PC:** A button labeled 'Load'.
- Edit DSC message:** A section with several input fields and checkboxes:
 - Format:** A dropdown menu showing '120'.
 - RX MMSI:** A text input field containing '1234567890'.
 - Category:** A dropdown menu showing '100'.
 - TX MMSI:** A text input field containing '9999999990'.
 - 1. telecmd.:** A dropdown menu showing '100'.
 - 2. telecmd.:** A dropdown menu showing '126'.
 - Message:** A text input field containing '900006900006'.
 - End sequence:** A dropdown menu showing '127'.
 - Position ack.:** A checkbox.
 - No info.:** A checkbox.
- Save message to PC:** A button labeled 'Save'.
- Transfer message to Test Box:** Three buttons labeled 'VHF', 'TFC', and 'MF/HF'.
- Clear message in Test Box:** Three buttons labeled 'VHF', 'TFC', and 'MF/HF'.
- Footer:** Displays 'FUTRONIC MKII Serial no: 01029', 'Calibration due: 06-05-2021', a 'COM5' dropdown menu, and a 'Disconnect' button.

Please refer to ITU-R M.493 for composing of DSC messages.

The test box can contain one DSC message for VHF, TFC and MF/HF respectively.

Custom-made DSC messages can also be saved on your PC for later use.

AIS COMPOSER

Under the *AIS Composer* tab you can compose and save your own custom-made AIS messages.

The screenshot shows the 'FUTRONIC MKII Manager' application window. The 'AIS Composer' tab is selected. The interface includes a menu bar (File, Settings, Remote, About, Check for updates) and a tab bar (Test results, DSC composer, AIS Composer, Settings, EPIRB, NM). The main area contains the following controls:

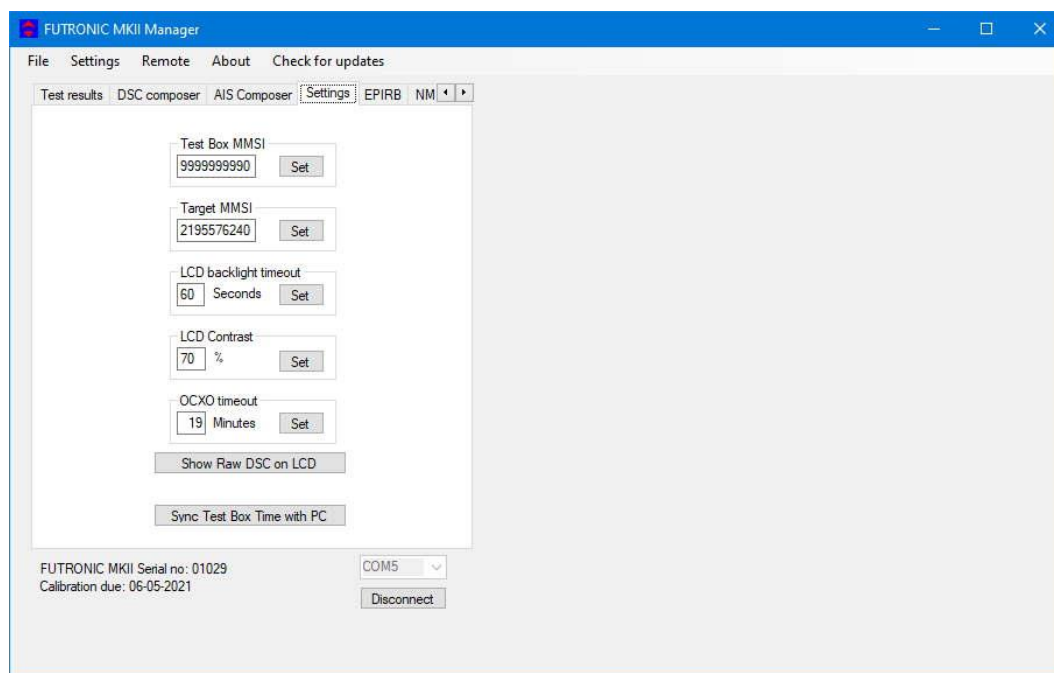
- Load message from PC:** A button labeled 'Load'.
- Edit AIS message:** A section with input fields for Message ID (1), MMSI (999999999), NavS (15), ROT (0), SOG (1023), COG (3600), HDG (511), and Time (60). It also includes a 'Position' section with radio buttons for North, South, East, and West (West is selected), and input fields for Latitude (45° 0' 0000") and Longitude (45° 0' 0000").
- Save message to PC:** A button labeled 'Save'.
- Transfer message to Test Box:** A button labeled 'Transfer and transmit'.
- Clear message in Test Box:** A button labeled 'Return to default message'.

At the bottom, the status bar displays 'FUTRONIC MKII Serial no: 01029', 'Calibration due: 06-05-2021', a 'COM5' dropdown menu, and a 'Disconnect' button.

When transferred to the test box, the AIS message will be transmitted on both AIS channels, AIS1 and AIS2.

SETTINGS

The *Settings* tab allows you to change the test box settings.



Test box MMSI: Write and set new MMSI number for the test box here.

Target MMSI: Write and set MMSI number of the device to be tested here.

LCD backlight time out: Write and set backlight time out between 0 and 200 seconds here.

LCD contrast: Write and set contrast between 0 and 100% here.

OCXD time out: Write and set OCXO time out between 0 and 99 minutes here.

Show raw DSC on LCD: Click here to have raw DSC data presented in the display along with clear text.

Sync Test Box Time with PC: Click here to synchronize the current date and time in the test box with the date and time in your PC.

EPIRB TEST REPORT GENERATOR

The *EPIRB* tab offers two options:

1. Generation of complete EPIRB test reports out of test results from the test box,
2. PC-controlled EPIRB testing and simultaneous generation of test reports.

1. Generating reports out of stored test results

The screenshot shows the 'FUTRONIC MKII Manager' application window with the 'EPIRB' tab selected. The interface is divided into several sections:

- Frequency tolerance:** A dropdown menu set to '+/- 5 KHz' and a 'Level limit' set to '130'.
- Beacon information:** Fields for 'Beacon name' (McMurdo), 'Beacon model' (SmartFindG8), 'Beacon manufacturer' (McMurdo), 'Beacon serial number' (701-000455), 'Bracket type' (Manuel), 'Bracket serial number' (N/A), 'Attached lanyard test' (N/A), 'Hydrostatic release expiry' (N/A), 'Battery expiry' (08/2028), 'Vessel name' (Danphone), and 'Danphone'.
- Test Performed By:** Fields for 'Name' (Hans Hansen) and 'Company' (Danphone).
- Next shore-based maintenance:** A date field set to '11/2021'.
- Test Report Template:** A text field showing 'c:\EPIRB\DP_EPIRB_Template.html' and a 'Get template' button.
- Buttons:** 'Generate Report' and 'Start PC-controlled Test'.
- Test Results List:** A list of EPIRB test results on the right side of the window. The selected entry is 'EPIRB 406.040 MHz #1 08:09:08 03-08-2020'.
- Footer:** 'FUTRONIC MKII Serial no: 01029', 'Calibration due: 06-05-2021', a 'COM5' dropdown, and a 'Disconnect' button.

This feature allows you to generate complete EPIRB test reports out of the test results stored in the test box.



- 1) Select the EPIRB test from the list at the right-hand side. If there is no list, go to the "Test results" tab and select from the Index a header that contains the relevant EPIRB test. Then return to the "EPIRB" tab.
- 2) Fill in the beacon information form in the EPIRB dialogue box at the left-hand side.
- 3) Press "Generate Report" to create the EPIRB Test Report (HTML format).

See example of an EPIRB Test report on the next page.

During the installation of the Futronic MKII manager, a default report template has been placed in C:\EPIRB\ on your PC. Feel free to use this HTML document as the basis for creating your own layout or design, if so wished. Then, press "Get template" and select the new one from your file system instead of the default template.

Please note: Default limits of the frequency tolerance and minimum signal level are +/- 5 kHz and 190 respectively. Other limits may be inserted in accordance with specifications. Should the limits be exceeded during test, the report will write "Failed" in the status line.

Example of Test Report based on the default HTML design:

EPIRB Test Report	
Beacon Data	
Beacon manufacturer:	Litebeacon Ltd.
Beacon name:	Litebeacon
Beacon model:	L-987
Beacon serial number:	123456
Beacon frequency:	406.028 MHz
Bracket type:	Fix
Bracket serial number:	6789
Hydrostatic release expiry:	13 June 2014
Battery expiry:	26 August 2015
Attached lanyard test	ok
Beacon Location	
Vessel name:	Mary Celeste
Test Results	
Frequency measured:	406.027,4 MHz
RF level measured:	202
Status:	Passed
Message decoding:	BCH code check ok
Hex message:	FF FED04DB418618618668CD35900
Message format:	Short format
Protocol:	Maritime User Protocol
Country code:	219
Unique ID:	9B6830C30C30CD1
Decoded message:	MID: 999999 Specific beacon: 0 Aux. device type: 121.5 MHz
Test Instrument	
Serial number:	Futronic MKII Test Box 01029
Calibration due:	19-03-2013
Test Performed	
Time / Date:	13:44:23 08-10-2012
Company:	Testco
Test responsible:	Martin Smith
Signature:	
Futronic MKII Maritime Communications Test Box manufactured by 	

2. PC-controlled EPIRB tests

In addition to generating test reports from EPIRB tests stored in the memory, the EPIRB tab also enables you to perform PC-controlled EPIRB tests generating test reports automatically. With this, the system will not transfer the test results to the test box, but still generate finished test reports that can be stored in your PC.

The screenshot shows the 'FUTRONIC MKII Manager' application window. The 'EPIRB' tab is selected in the top menu. The interface includes the following fields and buttons:

- Beacon frequency and tolerance:** 406.040 MHz (dropdown), +/- 5 KHz, Level limit 130.
- Beacon information:**
 - Beacon name: McMurdo
 - Beacon manufacturer: McMurdo
 - Bracket type: Manuel
 - Attached lanyard test: N/A
 - Battery expiry: 018/2028
- Beacon model:** SmartFindG8
- Beacon serial number:** 701-000455
- Bracket serial number:** N/A
- Hydrostatic release expiry:** N/A
- Vessel name:** Danphone
- Danphone:** (empty field)

Below these fields, there is a section for 'Test Performed By' with fields for Name (Hans Hansen) and Company (Danphone), and a 'Next shore-based maintenance' date of 08/2021.

A 'Test Report Template' section shows a file path: c:\EPIRB\DP_EPIRB_Template.html, with a 'Get template' button.

A prominent blue button labeled 'Start PC-controlled Test' is located below the template section.

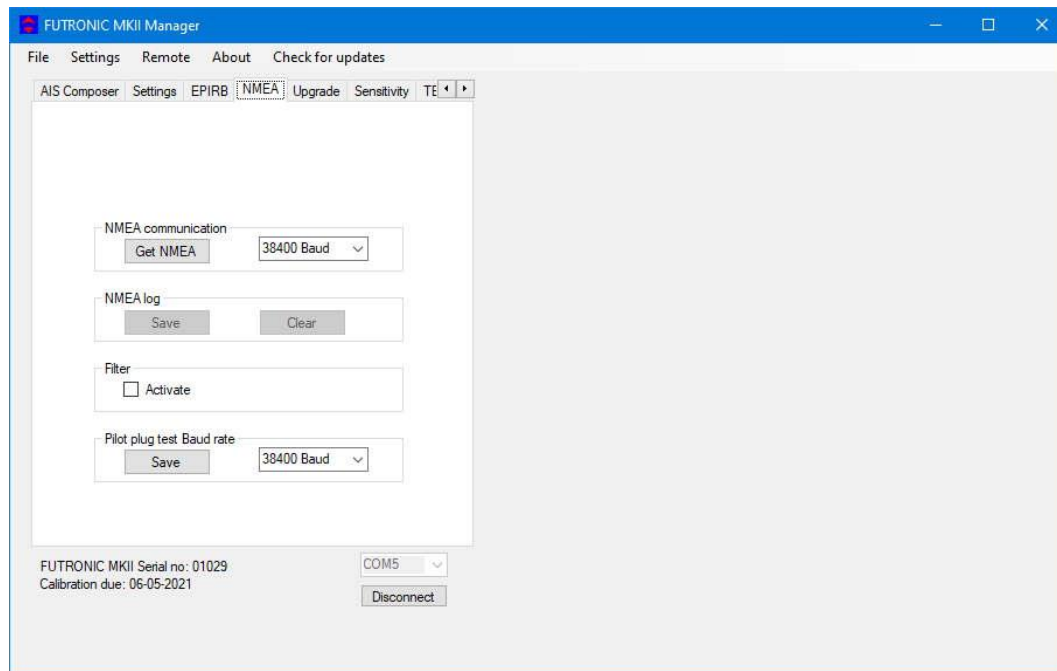
At the bottom left, it displays 'FUTRONIC MKII Serial no: 01029' and 'Calibration due: 06-05-2021'. At the bottom right, there is a 'COM5' dropdown menu and a 'Disconnect' button.

- 1) Turn the test box on. No need to select EPIRB tests, your PC will take control.
- 2) Deselect all tests from the header list at the right-hand side, if any.
- 3) Select frequency in the EPIRB dialogue box at the left-hand side and fill in the beacon information form.
- 4) Press "Start PC-controlled Test" and then activate the EPIRB.
- 5) Wait for the EPIRB Test Report to be automatically generated (HTML format).

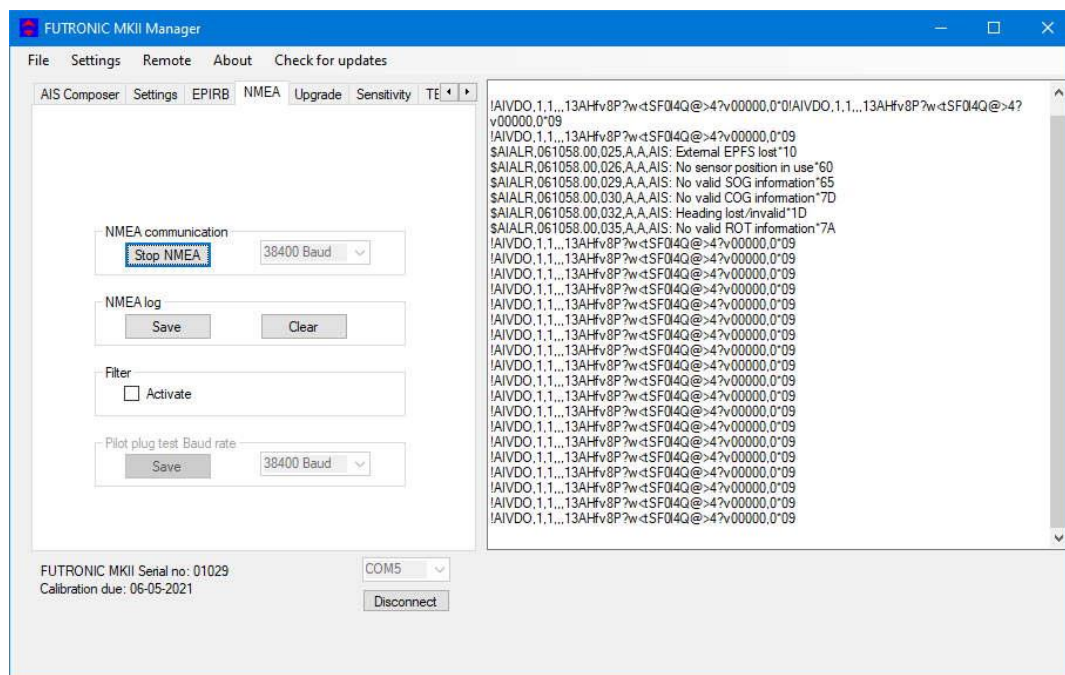
See example of an EPIRB Test report on the previous page.

NATIONAL MARINE ELECTRONIC ASSOCIATION (NMEA)

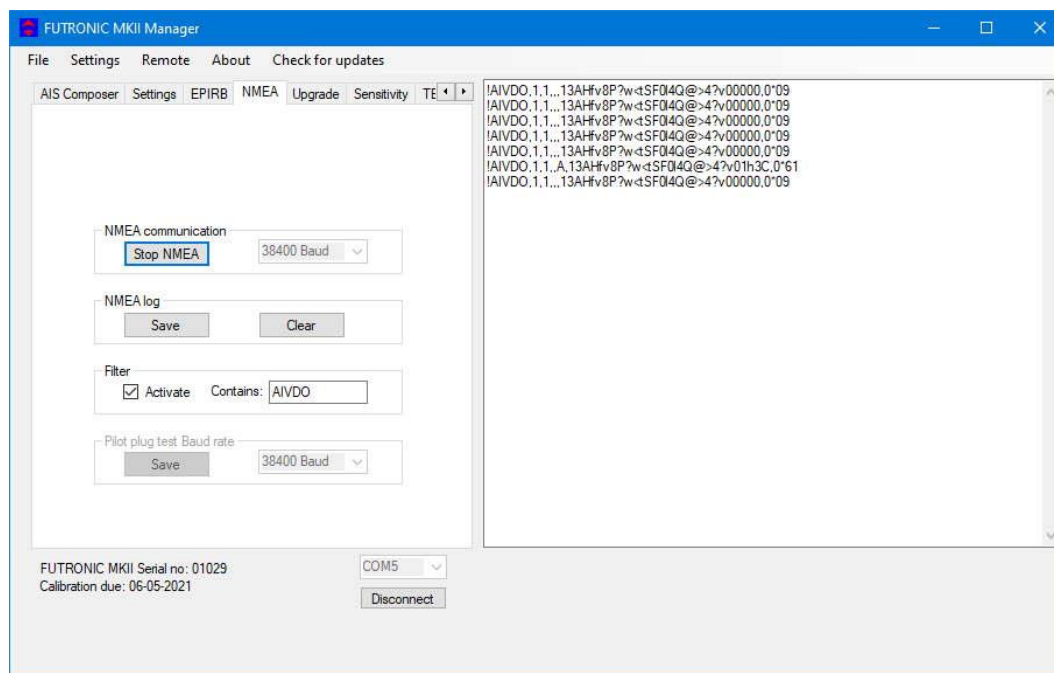
The *NMEA* tab enables monitoring of NMEA 0183 version 2 messages.



This feature enables monitoring of NMEA supporting units by retrieving NMEA messages via the pilot plug. Connect the NMEA bus to the pilot plug on the Futronic test box and press **“Get NMEA”**. The test box automatically transfers the requested messages to the PC. All messages can be saved as text files.

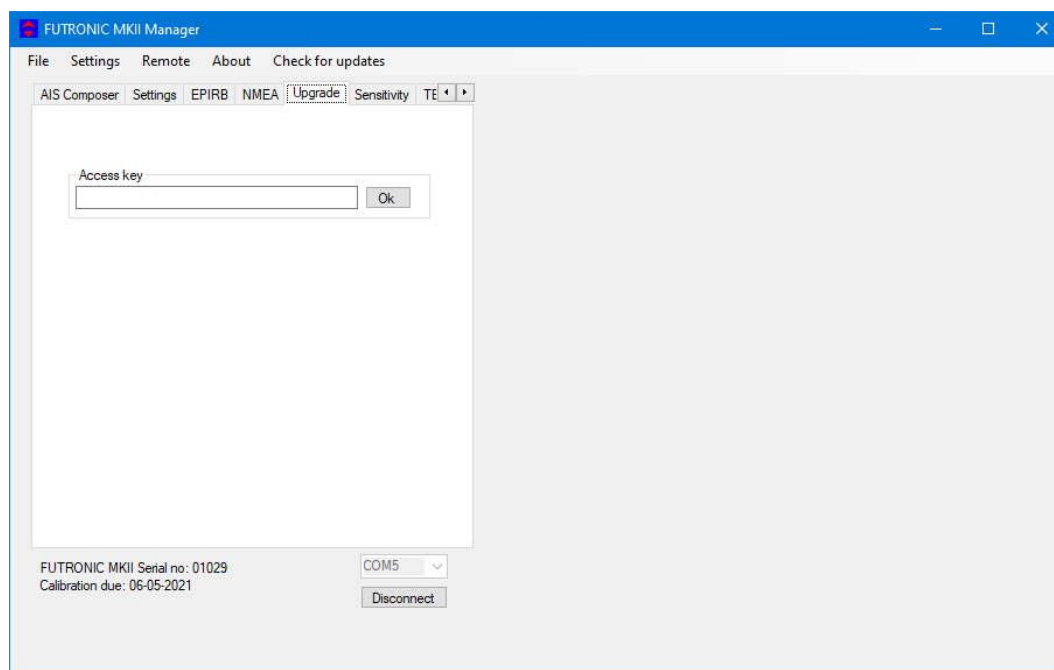


Activate filter to restrain the messages to one type.



UPGRADE

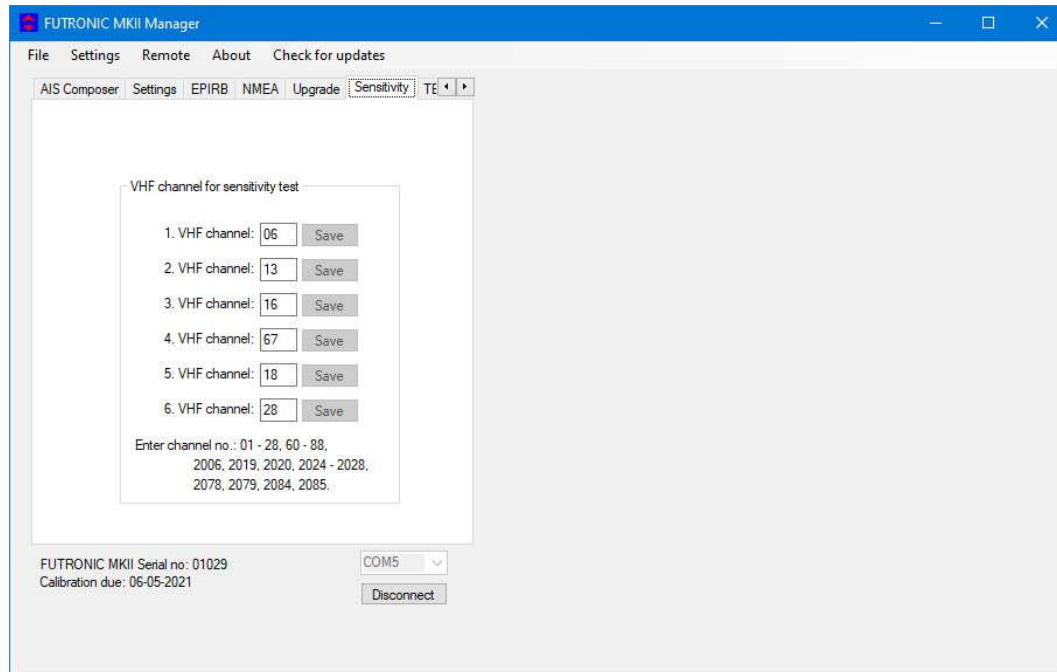
The *Upgrade* tab is for upgrading the Futronic test box model.



If your test box is a GMDSS-only model and you have purchased the additional AIS test facility from Danphone, you will be given an access key to be entered, and the new facility will work immediately.

VHF SENSITIVITY TEST

The *Sensitivity* tab enables determination of the VHF channels to be tested for sensitivity.



Futronic MKII manager allows you to configure the Futronic test box on 6 selected VHF channels. Set the VHF channel between 01 – 28 or 60 – 88 and press **“Save”**. The channel is hereby visible on the test box and ready for testing. Press ↑ and ↓ on the test box to choose between the predefined channels.

TELEX

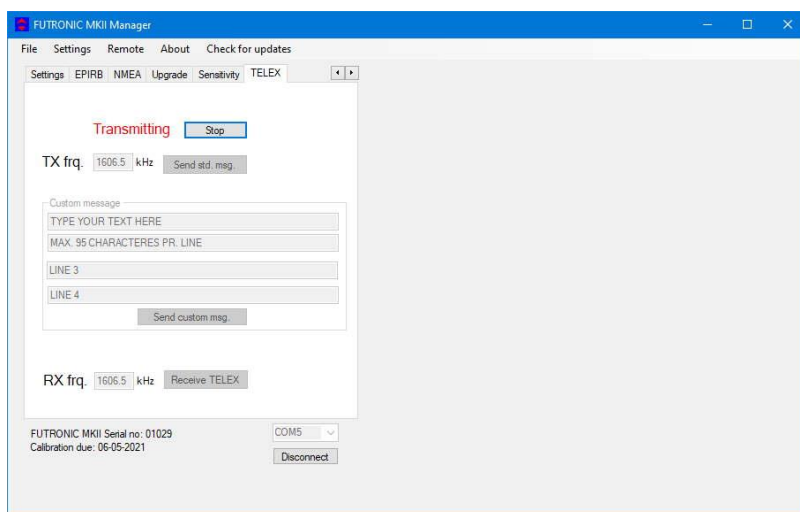
Connect your test box to the PC via the USB cable supplied.

Connect the wire antenna to RF OUT.

“Send std. Msg.” Transmit standard TELEX message on the chosen TX frequency.

“Send custom msg.” Transmit the 4 Line custom message on the chosen TX frequency.

The “Stop” button cancels the Transmission of data.



Connect the wire antenna to RF IN

“Receive TELEX” on the chosen RX frequency.

The received message is shown in the “Received message” window.

** indicates noise or faulty characters.

The “Stop” button stops the reception of data.

