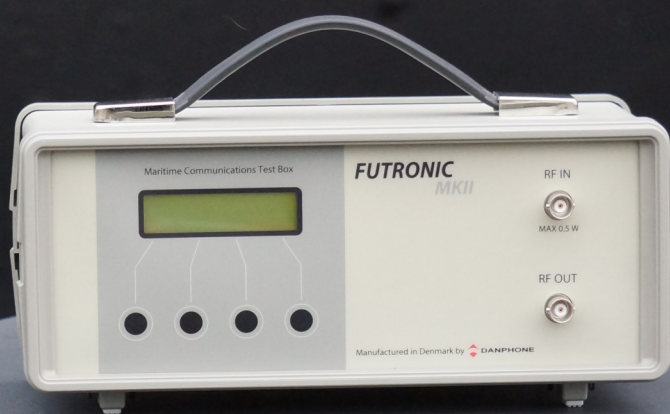


MARITIME RADIO TEST BOX FUTRONIC MKII

The world's leading multi-functional test equipment for maritime radio surveys



MADE IN DENMARK

WE ENSURE SAFE MARITIME COMMUNICATION WORLDWIDE

THE NEW GENERATION OF **TEST EQUIPMENT**

The Futronic test box is the result of a development project with the national telecom authorities in 1995. The test box fulfilled the increasing need for test and verification of various maritime radio and safety equipment.

The fundamental design requirement was to develop a device that held all functions in one single unit.

Since then, Danphone has continually developed the Futronic platform to meet the latest IMO requirements and improve test efficiency.

The workmanship and profound knowledge that went in to the original design is preserved in the new generation.



DANPHONE'S ALL-IN-ONE MARITIME RADIO TEST BOX

For more than 25 years, Danphone has developed and manufactured radio communication equipment. Today, Danphone supplies radio surveyors all over the world with the only test box on the market capable of multiple test functions and a proven operational lifetime of more than 20 years —

FUTRONIC MKII



ALL-IN-ONE TESTING AND MEASURING

Futronic MKII brings fast and simple testing of communication and safety equipment to radio inspectors all over the world.

Based on the ALL-IN-ONE concept, Futronic MKII is capable of testing all radio and safety equipment obligated by IMO to undergo mandatory inspections. Test result conform to the survey reports for easy reporting with the easy-to-use Futronic MKII PC software.

MANDATORY RADIO INSPECTIONS

Futronic MKII enables testing of all communication and safety devices required onboard vessels.

TEST

VESSEL RADIO EQUIPMENT



VHF radio



NAVTEX



AIS



TELEX



MF/HF radio



GMDSS



Pilot plug



RADIO INSPECTIONS TODAY

"Telenor Coastal Radio, Radio Inspection department, have 11 radio surveyors in Norway. Myself, being a user of the Futronic Box for more than 7 years. I started in this job with the previous Futronic model - and the new one since it's first release. The Futronic MK II is performing flawlessly every day! - It is very comfortable to have everything I need to perform the complete radio survey in such a small box. The Futronic MK II has a user-friendly interface and is very easy to use. In my daily work I perform radio surveys on behalf of the Norwegian Maritime Authority and all the different Class societies (i.e. DNV-GL, BV, RINA, ABS, Lloyds, NK Class and more)"

Lars A. Røksund, Radio surveyor, Telenor



SCOPE

VESSEL SAFETY DEVICES



EPIRB



RADAR SART



AIS SART



Personal Locator
Beacon



Man over Board



TEST SPECIFICATIONS

Faster testing is achieved through simultaneous AIS-SART tests, where all eight AIS-bursts are measured in one single test. Faster testing is also achieved through simultaneous test of frequency, data and power in AIS and VHF tests. The Futronic test box is available in three models: GMDSS, GMDSS-AIS and GMDSS-AIS-SART.

AIS Transponders

Measuring AIS data, frequency, power and VSWR simultaneously on:

- Class A & B transponders
- AIS base stations
- Aircraft Search and Rescue transponders
- Aids to Navigation devices (AtoN)

Search and Rescue transponders

Measuring data & frequency simultaneously on:

- EPIRB
- Man over Board (MoB) devices
- AIS SART beacon data & frequency
- Radar SART beacon level & frequency

VHF radios

DSC data, ATIS, frequency, power, VSWR and deviation. Measuring frequency and power simultaneously

MF/HF radios

DSC data, frequency, power and VSWR. Measuring DSC data and frequency simultaneously

NAVTEX receivers

Reception of transmitted NAVTEX messages

TELEX

Send and Receive TELEX messages on all frequencies between 1.6065 MHz and 26.175 MHz.

FUTRONIC MKII OPTIC



FUTRONIC BACKPACK

The waterproof backpack protects the test box and all accessories. It contains two cases made of Polyethylene Foam precisely cut out to support and secure the test box and accessories. The backpack fits all the necessary equipment to perform a complete radio survey. There are 3 large spaces with much room for test box, accessories, laptop, manuals, papers and tools.

- Waterproof material
- Waterproof plastic bottom
- Ergonomic support to back and shoulders
- Padded shoulderstraps for heavy load carriage
- Quick access via large dual zipper

WATERTIGHT AND CRUSHPROOF CASE

The watertight and crushproof case keeps the test equipment safe and secure. The inside of the case is made by protective foam precisely cut to support the test box and the accessories. The case makes it easy to transport and travel with all the test equipment.

- Waterproof material
- Crushproof
- The contents are protected by Polyethylene Foam
- Easy and handy to transport

OPTIONAL ACCESSORIES



RF AMPLIFIER

The RF amplifier enhances NAVTEX and MF/HF radio tests under difficult environmental conditions.



PILOT PLUG CABLE

The Pilot Plug cable is used to test the connection of the pilot plug on the ships bridge.



SET OF ATTENUATORS

The set of three attenuators are used for VHF, MF/HF, AIS and EPIRB tests.

The set consists of: 10 db, 20 db and 30 db.

STANDARD ACCESSORIES

- | | |
|---|--------------------------------------|
| 1 - Power adaptor 100-240 VAC / 12VDC | 1 - Audio Reference |
| 1 - Cable for external DC power with lighter plug | 1 - Telescopic antenna for VHF/AIS |
| 1 - USB cable for connection to PC | 1 - Wire antenna for MF/HF/Navtex |
| 1 - Coax cable, 25 cm, with BNC | 2 - UHF plug to BNC socket adapter |
| 2 - Coax cable, 150 cm, with BNC | 1 - UHF socket to BNC socket adapter |
| 1 - Coax cable, 500 cm, with BNC | 1 - BNC socket to BNC socket adapter |
| 1 - AIS signal combiner / dummy load | 1 - User Manual in English |
| | 1 - Calibration Certificate |



HIGH PERFORMANCE MEASUREMENT

Maritime safety has been an international focal point since 1912. Since then, the marine industry has focused on developing a uniform standard of safety equipment to avoid delay in distress situations. Danphone is a key partner for all certified surveyors.

DIGITAL MANAGEMENT OF TEST RESULTS

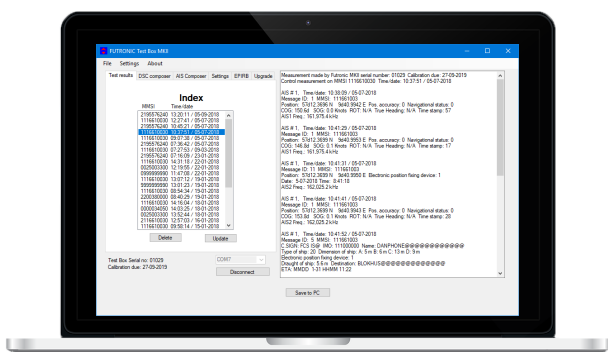
Futronic MKII test box comes with a PC software that allows the user to view and save all test results collected by the test box during inspection. The software imports all test and measurement data from the test box by USB connection. The intuitive design ensures excellent user experience and enables upgrades of the latest facilities straight from Danphone's factory in Denmark.

Test results and data analysis

Futronic's test box generates exact test results providing technical insight into the unit under test. A comparison of results will determine the unit's condition. If certain results are aggravating the unit can be repaired or replaced before failing. Stored results can be reclaimed for further analysis.

Fast and easy reporting

The classification societies issue the official survey reports for inspections. The Futronic all-in-one concept provides a complete set of test results alligned with the survey reports for faster reporting. AIS & EPIRB reports are generated automatically by the PC software, ready for sign-off. The PC software is continually updated in relation to the latest IMO requirements and is always available for download at www.danphone.com.



```
TextBoxDump16032018 - Notepad
Filer Redigerer Formater Vis Hjaelp
Measurement made by Futronic MKII serial number: 01003 Calibration due: 27-02-2020
Control measurement on MMSI 0999999999

AIS # 1, Time/date: 12:03:40 / 22-0
Message ID: 21 MMSI: 3405
Position: 63025.6830 N 10d06.4266
Name of AtoN: ATON_TEST0000000000
Type of AtoN: 7 Type of position fix
AIS1 Freq.: 161,974.9 kHz Fwd.: 10.6

AIS # 1, Time/date: 12:19:36 / 22-0
Message ID: 4 MMSI: 2500330
Position: No position info Electronic
No UTC date info No UTC time info
AIS1 Freq.: 161,974.6 kHz Fwd.: 11.6

AIS # 1, Time/date: 12:28:34 / 22-0
Message ID: 4 MMSI: 2500330
Position: 57d12.3379 N 9d40.7059
Date: 8-06-2098 Time: 11:28:39
AIS1 Freq.: 161,974.6 kHz Fwd.: 12.0

AIS # 1, Time/date: 12:36:32 / 22-0
Message ID: 1 MMSI: 219557624
Position: 57d12.3712 N 9d40.9938
COG: 109.7d SOG: 0.1 knots ROT: N/
AIS1 Freq.: 161,975.3 kHz Fwd.: 9.7 W

AIS # 1, Time/date: 12:46:43 / 22-0
Message ID: 5 MMSI: 219557624
C.SIGN: XP8863 IMO: 987654321 Name
Type of ship: 20 Dimension of ship:
Electronic position fixing device: 1
Draft of ship: 7.5 m Destination:
ETA: MDD 12-31 HHMM 23:59
AIS1 Freq.: 161,975.0 kHz Fwd.: 9.6 W

NAVTEX # 1 Time/date: 13:27:27 / 22-
Send 490 kHz Received ok

NAVTEX # 1 Time/date: 13:28:35 / 22-
Send 518 kHz Received ok
```

Particulars of Ship	
Name of Ship:	.....
Call sign:	.....
Port of Registry:	.....
Maritime Mobile Service Identity:	.....
IMO Number:	.....
Subject:	.....
1. Installation	
1.1 AIS transponder type	.....
1.2 AIS Type approval certificate. Rectifying the following: Performance standard: IEC 61092	.....
1.3 Coverage provided (Performance, AIS-arrangement and block diagram)	.....
1.4 Main source of electrical power:	.....
1.5 Emergency source of electrical power: (110/220VAC / 24VDC)	.....
1.6 Capacity: Is calculated if battery is emergency source of electrical power (ref. SOLAS II-1 Reg.4/2, 3.2 or Reg.4/3, 3.2)	.....
1.7 Pilot ship to be installed near the pilots operating position.	.....
1.8 Panama Canal and St. Lawrence require a receptacle for 120VAC power supply (emergency) close to the pilot ship.	.....
2. AIS programming - Static information	
2.1 Name of Ship	.....
2.2 IMO number	.....
2.3 Maritime Mobile Service Identity (MMSI)	.....
2.4 Radio call sign	.....
2.5 Ship length	.....
2.6 Ship beam	.....
2.7 Type of ship	.....
2.8 Location of position fixing antenna on the ship. Aft of bow, port or starboard (centerline).	.....
3. AIS programming - Dynamic information	
3.1 Ship position with accuracy and integrity status. Chart datum WGS84. (Source: .....	.....
3.2 Time in UTC. (Source: GNSS)	.....
3.3 Course over ground. (will fluctuate at dockside) (Source: GNSS)	.....
3.4 Speed over ground. (zero at dockside) (Source: GNSS)	.....
3.5 Heading. (Source: Gyro)	.....
3.6 Navigational status. - Manual input	.....
3.7 Rate of turn. -Where available.	.....
3.8 Angle of heel, pitch and roll. -Where available.	.....
4. AIS programming - Voyage related information	
4.1 Ship draught.	.....

Futronic AIS test results

Example of survey report

Delivery **WORLDWIDE**

Danphone supplies radio surveyors all over the world with Futronic test boxes and we have been doing so since 1996.



2000+ test boxes sold in **84** countries

CONTACT DANPHONE

✉ danphone@danphone.com

☎ +45 96 44 44 44

🌐 www.danphone.com

ABOUT DANPHONE

Danphone is a global partner and supplier within the maritime sector providing coastal radio, NAVTEX, AIS systems and test equipment for radio inspections.

Since 1990 the development and manufacturing of Danphone products and systems have been located under the same roof in Northern Denmark.

Danphone A/S
Klokkestoerbovej 4
DK-9490 Pandrup
Denmark

