

Tron 45S/SX

JOTRON Electronics a.s

P.O.Box 54, NO-3280 Tjodalyng, Norway
Tel: +47 33 13 97 00, Fax: +47 33 12 67 80
www.jotron.com

your safety – our concern

OPERATORS MANUAL

SERVICE AGENTS



EC Declaration of Conformity, available at www.jotron.com

The equipment complies with the following Directives:

Tron 45S:
R&TTE 1999/5/EC
EMC 89/336/EEC

TRON 45SX:
MED 96/98/EC
EMC 89/336/EEC

Harmonized Standards applied in order to verify compliance with the Directive(s):

Tron 45S:
ETS 300 066:1966
EN 50081-2:1992
EN 50082-2:1992
TRON 45SX:
ETS 300 066:1996
EN60945:1997

The information in this book has been carefully checked and is believed to be accurate. However, no responsibility is assumed for inaccuracies.



CAUTION!

This equipment contains CMOS integrated circuits. Observe handling precautions to avoid static discharges which may damage these devices.

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Jotron Electronics a.s. is a prime manufacturer of safety equipment designed for rescue of human lives and their property. For safety equipment to be effective in line with the design parameters it is important that they are handled, stowed and maintained in compliance with the manufacturers instructions. Jotron Electronics a.s. can not be held responsible for any damage caused due to incorrect use of the equipment or breach of laid down procedures or for failure of any specific component or other parts of the equipment.

The chapter covering battery replacement (5.1) is added for information only. Jotron Electronics a.s. does not take any responsibility for improper disassembling/assembling of the beacon. We strongly recommend all service to be done by authorized Jotron agents. In addition to normal service, Jotron agents have the necessary equipment and education to test the operational functions of the beacon. Non-original maintenance and/or service parts may destroy the equipment function and performance.

WARNING / IMPORTANT

REVISION HISTORY

CHANGES	RECORD NO.	CHAPTER	VERSION
NEW MANUAL	EM3829	-	A
NEW MANUAL	EM3903	CAP. 4	B



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GLOSSARY

COSPAS

Cosmicheskaya Sistyema Poiska Avariynich Sudov
(Space System for the Search of Vessels in Distress)

SARSAT

Search and Rescue Satellite-Aided Tracking System

EPIRB Emergency Position Indicating Radio Beacon

LUT Local User Terminal (Ground Station)

MCC Mission Control Center

RCC Rescue Coordination Center

km kilometer

MHz Mega-Hertz (10⁶ Hertz)

GPS Global Position System



BATTERY SAFETY DATA SHEET

(Form: EEC directive 91/155)

(2) SAFETY ADVICE

- S2 Keep out of reach from children.
S8 Keep container dry.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S43 In case of fire, use D type extinguishers. Never use water.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

(3) FIRST AID MEASURES

In case of contact of cell contents with eyes, flush immediately with water for 15 min. With skin, wash with plenty of water and take off contaminated clothes. If inhalation, remove from exposure, give oxygen, seek medical advice.

(4) FIRE-FIGHTING MEASURES

Extinguishing media

Suitable: Type D fire extinguishers
Not to be used: Water - CO² - Halon, dry chemical or foam extinguishers

Special exposure hazards

Generation of chlorine, sulfur dioxide, disulfur dichloride during thermal decomposition.

Special protective equipment

Use protective working boots, rubber apron and safety glasses with side shields.



Instructions for keeping the Radio Log and the radio operators obligation according to national and international regulation.

1. The radio log shall be kept in accordance with requirements in the Radio Regulations, SOLAS Convention, national regulations regarding radio installations and the STCW Convention (STCW 95 including the STCW Code) including relevant regulation regarding watchkeeping on board passenger- and cargo ships.
2. Unauthorized transmissions and incidents of harmful interference should, if possible, be identified, recorded in the radio log and brought to the attention of the Administration in compliance with the Radio Regulations, together with an appropriate extract from the radio log. (STCW Code B-VIII/2 No. 32).

Test of radio equipment and reserve source of energy.

Weekly:

GMDSS handheld VHF transceivers to be tested without using the mandatory required emergency batteries.

Monthly:

Float-free and manual EPIRB's to be checked using the means provided for testing on the equipment. Check data for periodical maintenance requirement for float-free EPIRB.*
Search and-rescue radar transponders (SART) to be checked against 9 GHz radar.

False alerts transmitted by EPIRB

False alerts are a serious problem for the rescue service. Nearly 90% of EPIRB initiated distress alerts turn out to be false alarms.

If for any reason, your EPIRB should cause false alarm, it is most important that you contact the nearest search and rescue authority and tell them it was false alarm. They can then stand down any rescue service (coast radio station or appropriate CES or RCC). Use any mean at your disposal to make contact.

Switch off the distress alarm by de-activating your EPIRB, as soon as possible.

* Float-free EPIRB's are required to go through a periodical maintenance every 24-months. (Only for NOR/NIS flag vessels).

TEST AND MAINTENANCE RECORD

DATE	N/T/B	SIGN	INSP

N=NEW EPIRB INSTALLED, T=TEST, B=NEW BATTERY

Fig. 1

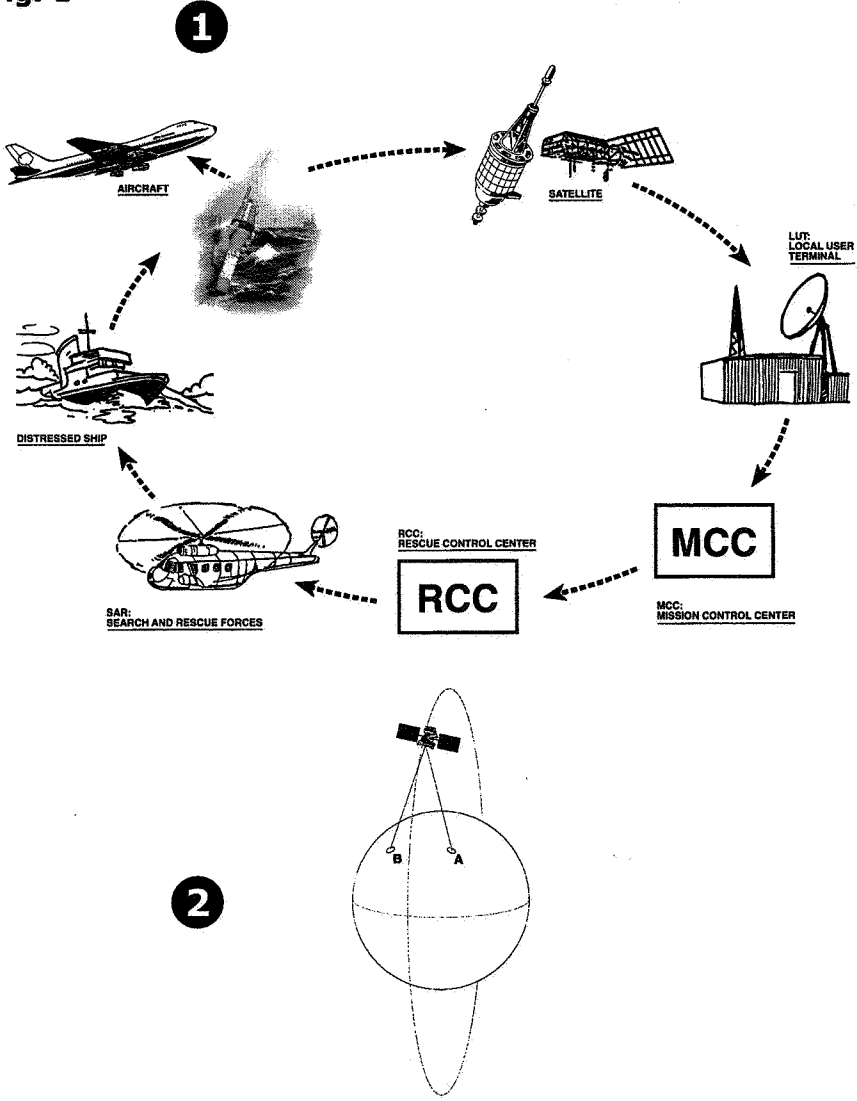


FIG. 2 MANUAL OPERATION

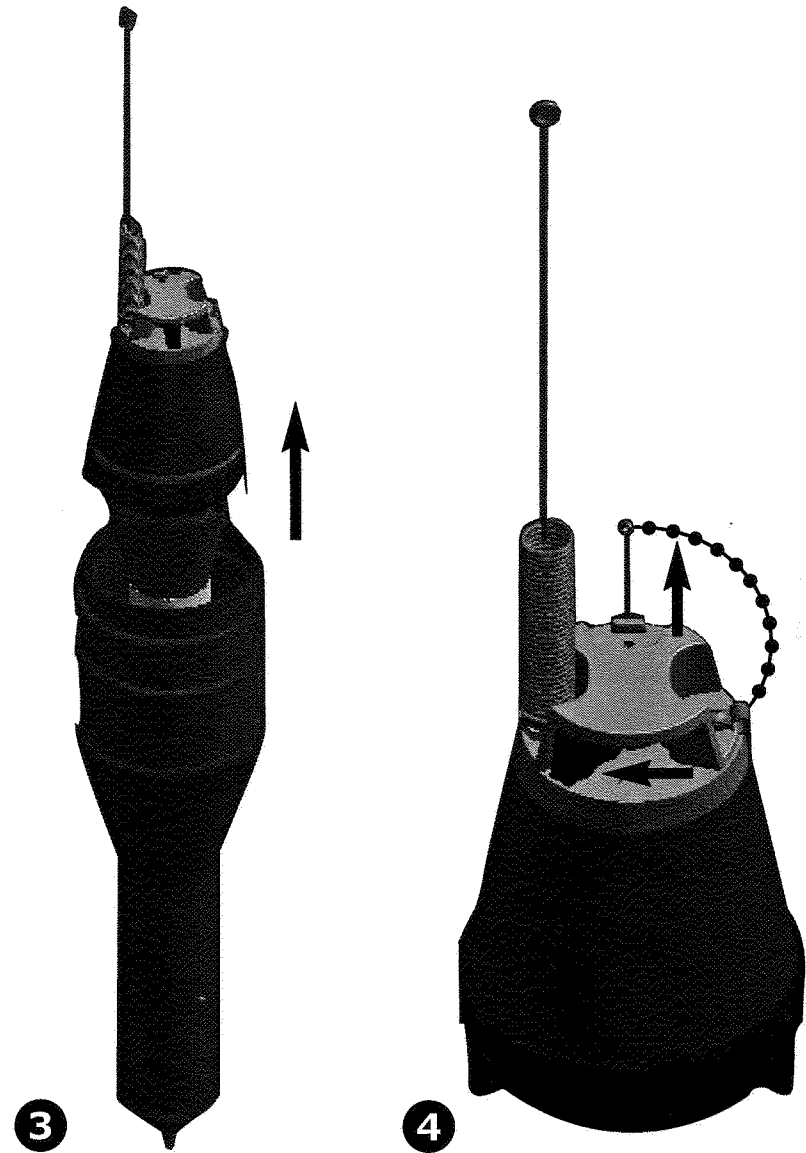




FIG. 3 TRON 45S, BULKHEAD BRACKET

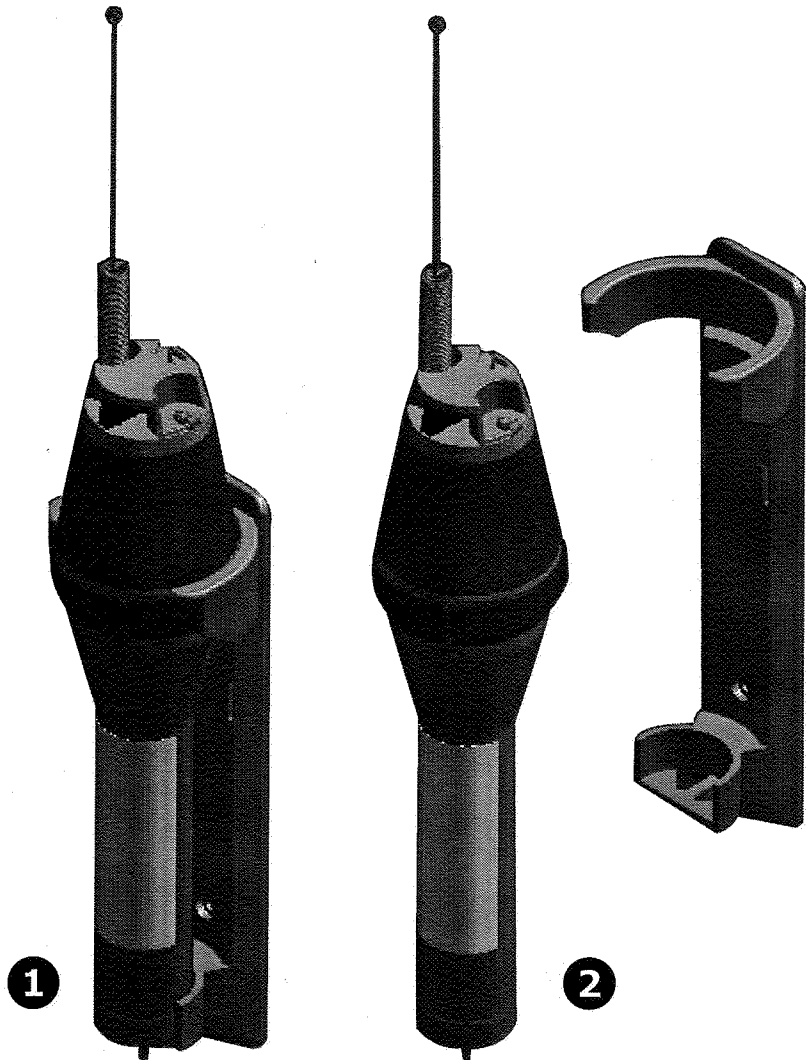


FIG. 4 SELFTEST





FIG. 5 REPLACING THE BATTERY UNIT

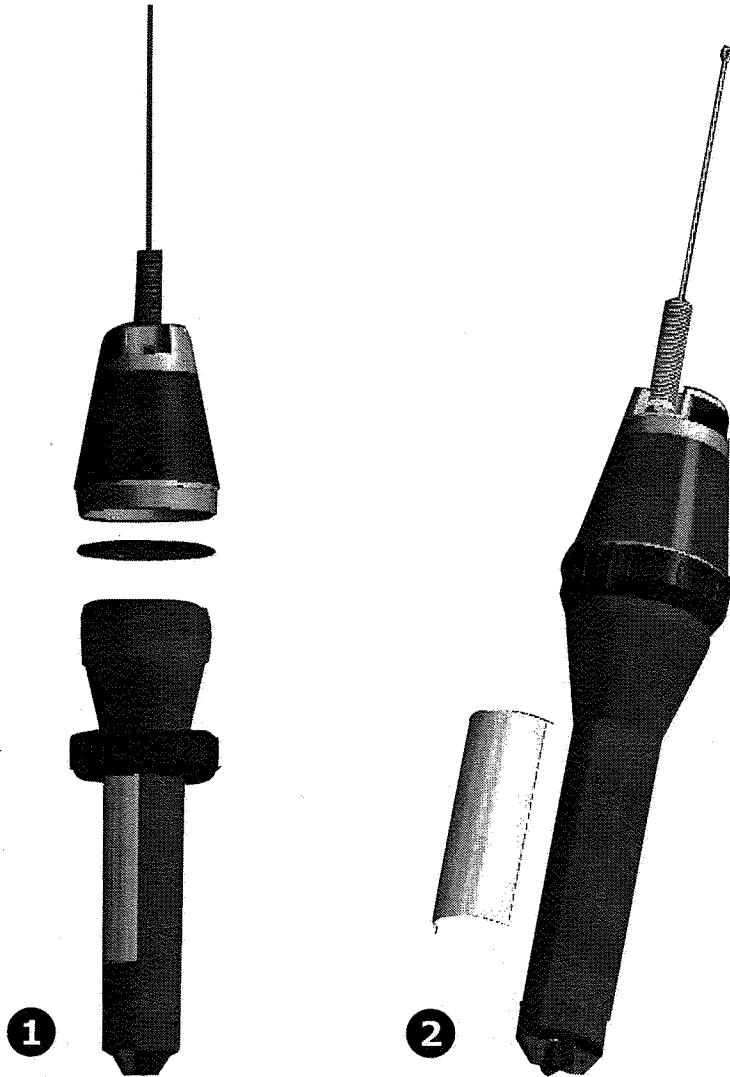
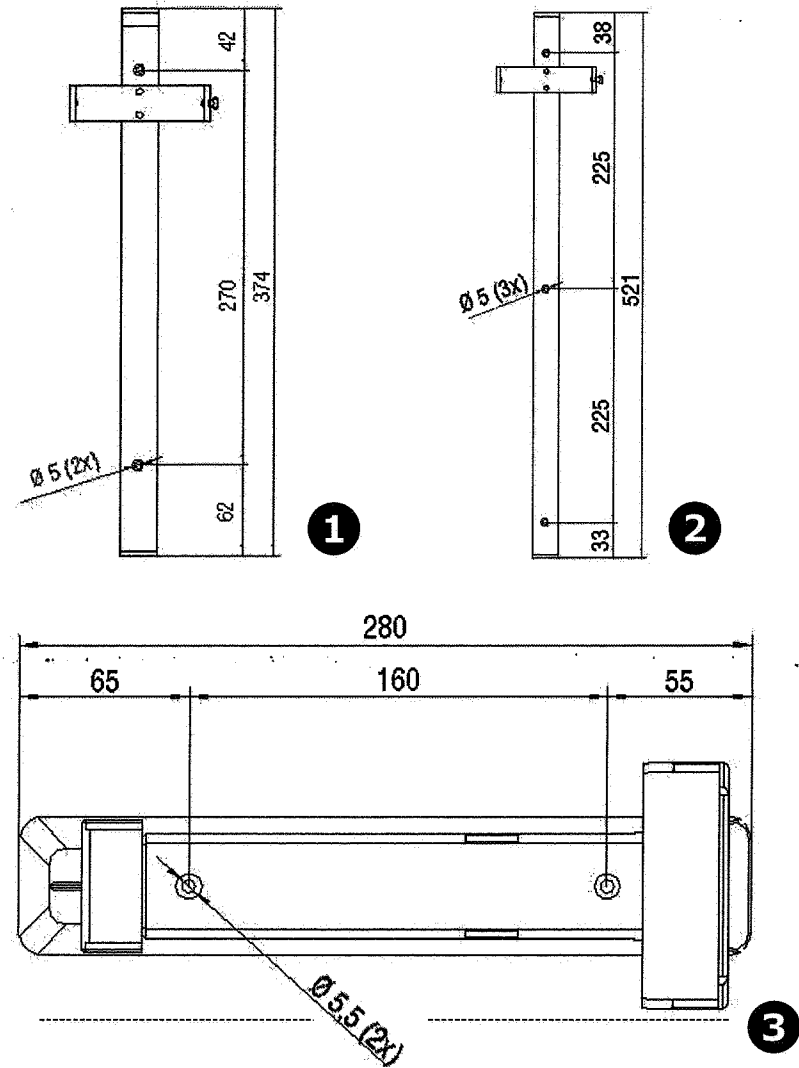


FIG. 6





TECHNICAL SPECIFICATIONS

General

Battery:	Lithium, 4 years service life.		
Housing:	Polycarbonate w/ 10% fibreglass		
Dimensions: Tron45S	Height:	380 mm	
	+ Antenna	180 mm	
	Max diameter:	85 mm	
	Weight:	approx 0.7 kg	
Dimensions: Tron45SX	Height:	495 mm	
	+ Antenna	180 mm	
	Max diameter:	85 mm	
	Weight:	approx 0.9 kg	
Compass safety distance:	1.5 m		
Temperature range:	-20°C to + 55°C		
Operating life: Tron45S Tron45SX	Minimum 24 hours at -20°C		
	Minimum 48 hours at -20°C		



SARSAT/COSPAS TRANSMITTER

Frequency:	406.025 MHz \pm 2 ppm
Output power:	5W \pm 2 dB
Protocols:	Maritime, Serialised, Radio Callsign
Modulation:	Phase modulation 1.1 \pm 0.1 rad
Data encoding:	Bi Phase L
Stability:	Short term \pm 10 ⁻⁹
	Medium term \pm 10 ⁻⁹
	Residual noise \pm 3x10 ⁻⁹
Bitrate:	400 b/s
Antenna:	Omnidirectional.

HOMING TRANSMITTER

Frequency:	121.500 MHz
Output power:	Up to 100 mW.
Modulation:	A9,AM sweep tone from max. 1600 Hz downto min. 300 MHz. Range 700 Hz. Sweep rate 2.5 Hz.
Stability:	10 ppm over temperature range.
Antenna:	Omnidirectional.



BRACKETS

Tron 45S w/container:

Materials:	Aluminium.
Dimensions:	Length : 380 mm
	Width: 100 mm
	Depth w/Beacon intalled:110 mm
	Weight: 0.15 kg

Tron 45S Bulkhead bracket

Material:	POM
Dimentions:	Length: 280 mm
	Width: 92 mm
	Weight: 0.1 kg

Tron 45SX w/container:

Materials:	Aluminium.
Dimensions:	Length : 520 mm
	Width: 100 mm
	Depth w/Beacon intalled:110 mm
	Weight: 0.22 kg

Container

Tron 45S:

Materials:	ABS.
Dimensions:	Length : 370 mm
	Width: 95 mm
	Weight: 0.23 kg

Tron 45SX :

Materials:	ABS.
Dimensions:	Length : 521 mm
	Width: 95 mm
	Weight: 0.30 kg



1 INTRODUCTION

1.1 GENERAL

The Tron 45S is an emergency equipment consisting of:

- Tron 45S COSPAS/SARSAT emergency EPIRB
- Container (optional)
- Bracket (optional)

Tron 45 comes in two different versions:

- Tron45S Short version, 24 hours operation
- Tron45SX Long version, 48 hours operation

The only difference is the battery pack's size. When this manual refers to Tron45S this applies to both versions.

The JOTRON Tron 45S EPIRB is developed to meet the regulations and rules for use on vessels and life rafts in the maritime service. Tron 45S meets the following specifications for 406 MHz EPIRB's for use in search and rescue operations at sea:

- ETS 300 066 (SX)
- MPT 1259 (SX)
- C/S T.001

The Tron 45S is a manually activated EPIRB. It can be used hand held, or floating in the sea.

The purpose of the Tron 45S is to give a primary alarm to the search and rescue authorities. The EPIRB gives an immediate alarm when activated, transmitting the ID of the ship in distress.

Care must be taken not to activate the EPIRB unless in an emergency situation, in such cases the user will be held responsible.



For periodic testing a test function is implemented. During the test cycle the EPIRB does a selftest on the transmitters and on the battery status. No emergency signal is transmitted during the selftest.

The battery of the EPIRB will last for at least 24 hours (SX : 48hours) from activation of the EPIRB.

1.2 SYSTEM DESCRIPTION

The COSPAS/SARSAT system was introduced in 1982 as a world-wide search and rescue system with the help of satellites covering the earth's surface. Since the introduction of the system more than 5500 persons have been rescued by the COSPAS/SARSAT system (June 1995).

Currently the system consists of 6 different satellites in a polar orbit constellation, these satellites cover the entire earth's surface and receive the emergency signal from the 406 MHz transmitter within the Tron 45S, more polar orbiting satellites will be available in the future, giving a faster location and rescue time.

In addition several geostationary satellites are equipped with a 406 MHz transponder, these satellites are not able to locate the Tron 45S but will give an early warning to the rescue forces, minimising the time from an emergency occurring till the rescue forces are at the site.

Each emergency EPIRB in the system is programmed with its own unique code, therefore it is vital that the ships data that is given to the dealer you obtained your Tron 45S, is correct. It is also important that your EPIRB is registered in the database for each country. This database is normally located in the same country that the ship is registered.



1.3 SIGNAL DETECTION [FIG.1]

When the Tron 45S is activated it transmits on the frequencies 121.5 MHz and 406.025 MHz. An analogue signal is emitted on 121.5 MHz and a digital signal is transmitted on 406.025 MHz.

After the Tron 45S is activated, the next passing satellite will detect the transmitted signal and relay it to an antenna at a ground station, called a LUT.

For the 121.5 MHz signal the satellite must be within line of sight of both the Tron 45S and a ground station. The ground station or LUT has a 2500 km satellite reception radius centred at the LUT. In areas without LUT coverage (mostly less populated areas in the southern hemisphere), signals from the 121.5 MHz transmitter will not be detected by the satellites, only by passing aircraft's. This is not the case with the 406 MHz transmitter, because the satellites have a memory unit which stores the signals for relay to the next available LUT giving it a truly global coverage.

Once the signal is received by the LUT, it is processed for location and sent to a Mission Control Centre (MCC). The MCC sorts the alert data according to geographic search and rescue regions and distributes the information to the appropriate Rescue Co-ordination Centre (RCC), or if outside the national search and rescue area, to the appropriate MCC that covers the area that the distress signal was detected. The RCC in turn takes the necessary action to initiate search and rescue activities.

1.4 DISTRESS LOCATION DETERMINATION

The location of the distress signal is determined by taking measurements of the doppler shift of the EPIRB frequency when the satellite first approach and then pass the EPIRB.

The actual frequency is heard at the time of closest approach (TCA). Knowing the position of the satellite and using the received doppler signal information, it is



possible to determine the location of the Tron 45S from the satellite at the TCA. At the LUT, actually two positions are calculated. One is the actual position (A) and the other is the mirror image (B) position [FIG.1.2]. A second satellite pass confirms the correct location (A). With the 406 system the real position can be determined on the first pass with a reliability of nearly 90% and down to an accuracy of less than 5 km (3.1 miles).

1.5 EPIRB REGISTRATION

Normally the MCC will contact the vessel or the contact person registered in a shipping register and/or an EPIRB register (Ships owner, family member etc.) before alerting the RCC. This is to determine if the alarm from the EPIRB for some reason is a false alarm, and an expensive rescue operation can be avoided. Because of this it is important that the ships data is correct in the shipping register or in the EPIRB database.

Tron 45S purchased in some countries will have a registration form attached to it, it is important that this registration form is completed by the owner and returned to the place the EPIRB was purchased or to the address specified on the registration form.

Other countries use the already available shipping register to obtain the necessary information for a vessel in distress, in these countries the ship is already registered and no registration form is necessary, however it is vital that the coding of the Tron 45S is kept up to date with data on the ship (nationality, call.sign, etc.), to minimise the time from an alarm to the start of the search and rescue operation.

Reprogramming the Tron 45S can be done at authorised JOTRON agents in more than 80 different places throughout the world.



2 EPIRB Tron 45S

2.1 FEATURES

- **Watertight:**
Tron 45S is watertight to a depth of minimum 10 meters.
- **Buoyant:**
Tron 45S is buoyant.
- **Rugged design:**
The Tron 45S will withstand a drop from 30 meters into the water. It is resistant to seawater, oil and sunlight.
- **Handling:**
The Tron 45S is made for easy operation, with a brief operating instruction printed on the unit.
- **Indicators:**
The Tron 45S are equipped with a LED and a built in strobe light to show operation of the EPIRB. The strobe light and LED will normally flash with a frequency of 20 per minute to show that the EPIRB is activated.
- **Battery unit.**
The battery unit consists of the complete lower half of the Tron 45S and is to be replaced every 4. years. The marking on the battery unit shows the expiry date A new battery comes complete with new O-ring, and are easily replaced by unscrewing the screw ring between the top and bottom of the EPIRB.

2.2 STORAGE

The EPIRB is normally stored in its bracket. The bracket contains means to prevent accidental activation of the EPIRB. The bracket should be mounted in a place that is easily available for periodic testing, and a place which is easily accessible in case an emergency situation occurs.



3 OPERATING INSTRUCTIONS

The Tron 45S is designed to be operated manually. In the bottom of the battery compartment there is an automatic safety switch. This switch prevents activation while the EPIRB is inside the container, or placed in the bracket.

3.1 OPERATION [FIG.2]

The beacon must be removed from the bracket or container before it can be activated.

1. Release the beacon from the bracket. Pull it out of the container. The antenna will automatically unfold.
2. To activate:
Break the seal and pull the locking pin on the main activator switch. The switch is spring loaded and will automatically go to the EMERGENCY position.
Or: Deploy the beacon into the water. The beacon will start to transmit automatically through connection of the seawater contacts.
3. The LED indicator, located at the top of the EPIRB, will start "flashing" indicating that the EPIRB is operating. In addition the strobe light will start to operate.
4. If possible keep the EPIRB in an open area, away from any metal objects (ship construction etc.) that may limit the satellite coverage.
5. Transmission can be stopped by turning the switch to OFF position and remounting the locking pin on the switch, removing from water and drying off or replacing the beacon in its bracket or container.



3.2 TESTING THE TRON 45S [FIG.4]

To test the functions of the Tron 45S, it has to be removed from its bracket and container.

1. Press the spring-loaded switch on top of the EPIRB to the TEST position. Keep hands and other objects away from the antenna.
2. A successful test will consist of a series of flashes on the LED test-indicator, followed by a continuous light and a strobe flash after app. 15 seconds.
3. If the EPIRB does not come up with a continuous light, this indicates a fault in the EPIRB.
4. Release the switch and put the EPIRB back into the container/bracket.

What the self test actually does is first check the integrity of the non volatile memory, then wait app. 15 seconds to allow the reference oscillator inside the EPIRB to warm up. Then a short burst is transmitted by the 121.5 MHz transmitter, while the output level of the transmitter is checked. Finally, a test signal is transmitted by the 406 transmitter. During this test signal the battery voltage, output power and phase lock is checked.

While testing the 406 MHz transmitter a test message is transmitted, this test message is coded with a special synchronisation code and will not be detected by the COSPAS/SARSAT satellites. The purpose of this test message is to control the actual coding of the EPIRB. This can be done with the JOTRON test unit TronDEC or another EPIRB checker.



4 MAINTENANCE AND SERVICE

4.1 MAINTENANCE OF JOTRON EPIRBs

Every Month:

Perform EPIRB self-test. (See chapter 3.2.).

What the self test actually does is to send out a short test signal on 121,5 and 406,025 Mhz, testing the output of the transmitter. While transmitting the test signal, the battery voltage, output power and phase lock is tested. During the test of the 406Mhz transmitter a test message is transmitted, this test message is coded with a special synchronisation code and will not be recognized as real alert by the COS-PAS/SARSAT satellites.

Carry out visual inspection for defects on both the EPIRB and Bracket.

The EPIRB should be easily removed and replaced in the Bracket. Make sure that the EPIRB and Bracket is not painted or otherwise covered with chemicals, oil, etc.

Check the expiry date of the EPIRB Battery and the Hydrostatic Release Mechanism.

Check the presence of a firmly attached lanyard in good condition and that it is neatly stowed and is not tied to the vessel or the mounting bracket.

Every 12th Month:

Perform extended annual test according to IMO's MSC/Circ.1040 (Annual testing of 406 MHz satellite EPIRBs) as required by SOLAS IV/15.9. This test can be carried out by one of Jotron's authorised representatives or any other service provider in possession of a Tron UNIDEC, Tron DEC or any other Cospas-Sarsat EPIRB tester/decoder.

The test ensures that the EPIRB is within its specifications and complies with IMO and the COSPAS/SARSAT system. Documented proof of test or Test Certificate containing test results and EPIRB data issued by service provider must be kept on board for future inspections the next 12 months.

Every 4th Year:

The EPIRB Battery must be replaced every 4th year, unless otherwise instructed by the vessel flag state or local authorities.(Check expiry date on label).

NOR/NIS flag vessels are required to go through periodical maintenance every 24 months by replacing the complete EPIRB.



4.2 SERVICE

Warranty Service.

The warranty of the equipment is not valid if the customer has tried to repair, modify or rebuild the unit, deliberate or accidental damage, failure to follow JOTRON's instructions with respect to approved service agents or if the unit has been exposed to environmental conditions outside the specifications for the unit.

As a standard Jotron Electronics AS warrants that this product will be free from defects in materials and workmanship for a period of 12 months from the date received by end user, limited to 18 months from purchase from Jotron.

If necessary to have the unit repaired, please return it carriage pre-paid to the agent where you did your purchase. Provided that the unit(s) returned for repair is found to be under warranty, man-hour cost and material cost will be covered by Jotron. Additional costs not related to repair/replacement of the unit will not be covered.

Out of Warranty Service.

For defects arising from normal wear and tear after 12 months of operation, limited to 18 months from purchase from Jotron, normal service conditions will apply.

For details see:

4.3 REPLACING THE BATTERY UNIT [FIG.5]

Replacing the battery unit should be done by skilled technicians only - preferable by a JOTRON agent. Your closest JOTRON agent with TronSTAT facilities has been specially trained to perform the necessary operation and is also able to do an extended test of the EPIRB, ensuring that the EPIRB operates within the specifications.

1. Remove the EPIRB from its bracket (fig. 4 and fig. 5).
2. Unscrew the screw ring.
3. Separate the two halves of the EPIRB housing.
4. Unplug the 3 pin connector that comes from the lower EPIRB housing.
5. Ensure that the new battery unit is marked with :
X-97769 (S) or X-97770 (SX) and has a new expiration date approximately 4 years from purchase.

**Iceland**

*Radlomidun Ltd.
Reykjavik
Tel +354 511 1010
Fax +354 511 1020
office@radlomidun.is
www.radlomidun.is

India

*Elektronik Lab
Mumbai
Tel +91 22 24715115
Fax +91 22 24710444
gmelab@boms3.vsnl.net.in

India

Elektronik Lab
Chennai (Madras)
Tel +91 44 24342839
Fax +91 44 24325264
navtek@vsnl.com

India

Elektronik Lab
Port Blair
Tel +91 31 29232308
Fax +91 31 29230896

Indonesia

*PT Panorama Timur Jaya
Jakarta
Tel +62 21 475 6788
Fax +62 21 475 1688
sales@panorama.co.id
www.panorama.co.id

Ireland

Navcom Electronics Ltd.
Cork
Tel +353 214 354 334
Fax +353 214 354 431
navcom@eircom.net

Ireland

Union Chandlery Ltd.
Cork
Tel +353 21271643
Fax +353 21273426

Italy

*Compagnia Generale Telemar
Roma
Tel +39 063 221800
Fax +39 063 240148
sales@cgtelemar.com

Italy

*Telecom Italia S.p.A.
Roma
Tel +39 06 36881
Fax +39 06 6540 0100
www.telecomitalia.it

Italy

Compagnia Generale Telemar
Genova
Tel +39 010 592641
Fax +39 010 5704026

Italy

Compagnia Generale Telemar
Napoli
Tel +39 081 5525901
Fax +39 081 5514601

Italy

Compagnia Generale Telemar
Venezia
Tel +39 041 5227351
Fax +39 041 5210689

Italy

Telecom Italia S.p.A.
Augusta (Sicily)
Tel +39 093 170275
Fax +39 093 1991277

Italy

Telecom Italia S.p.A.
Bari
Tel +39 080 5084602
Fax +39 080 5722303

Italy

Telecom Italia S.p.A.
Genova
Tel +39 010 5973320
Fax +39 010 265097

Italy

Telecom Italia S.p.A.
Napoli
Tel +39 081 7225268
Fax +39 081 7225333

Italy

Telecom Italia S.p.A.
Palermo
Tel +39 091 7508269
Fax +39 091 7508270

Italy

Telecom Italia S.p.A.
Taranto
Tel +39 099 4527813
Fax +39 099 4594296

Italy

Telecom Italia S.p.A.
Trieste
Tel +39 040 7788945
Fax +39 040 308375

Italy

Telecom Italia S.p.A.
Venezia
Tel +39 041 5224758
Fax +39 041 5230931

Israel

*Haifa Marine Electronics Ltd
Haifa
Tel +972 4 8507935
Fax +972 4 8510691
eldar@haifamarine.com
www.haifamarine.com

Israel

AlhoutYam
Haifa
Tel +972 4 8605522
Fax +972 4 8627404
m_yules@alhoutyam.co.il

Japan

*Kaigai Gijyutsu K.K.
Yokohama
Tel +81 45 664 7318
Fax +81 45 664 7320
cs@kgkjp.com

Japan

Kaigai Gijyutsu K.K.
Kobe
Tel +81 78 331 2705
Fax +81 78 331 2703
kgkko@po1.dti.ne.jp

Korea

*Hanshin Electronics Industrial Co.
Pusan
Tel +82 51412 5551
Fax +82 51412 6660
hsmall@hanshin-elec.com

Korea

*Jaeun Corporation
Pusan
Tel +82 51 465 8999
Fax +82 51 465 8515
jaeun@jaeun.co.kr
www.jaeun.co.kr

Korea

*Sky Radio Co. Ltd.
Pusan
Tel +82 51 417 9500
Fax +82 51 415 1400
skyradio@kornet.net

Korea

Total Enterprise Co., Ltd.
Busan
Tel +82 51 405 5333
Fax +82 51 405 2992
totalrdo@kornet.net

Kuwait

*Navigator United Group
Darwaza
Tel +965 246 0974
Fax +965 246 0975
apvndn@kems.net

Latvia

*Hanza Elektronika Sia
Riga
Tel +371 7020450
Fax +371 7325352
hanzael@hanzael.lv
www.hanzael.lv

Latvia

*Reids
Riga
Tel +371 780 1159
Fax +371 780 1158
reids@reids.lv

Lithuania

*UAB RSB Novikontas
Klaipeda
Tel +370 46 304030
Fax +370 46 342475
vs@novikontas.lt
www.novikontas.lt

Lithuania

UAB Laivo Radijas
Klaipeda
Tel +370 46 312528
Fax +370 46 218053
lrdo@takas.lt
www.rsb.lt

Malaysia

*Radli Electronics Sdn. Bhd.
Penrose, Selangor Darul Ehsan
Tel +603 33712214
Fax +603 33712893
radli@po.jaring.my

Malta

Medcomms Ltd.
Gzira
Tel +356 335521
Fax +356 310820
admin@medcomms.com.mt

Mexico

Radio Holland Mexico
Veracruz
Tel +52 229 318664
Fax +52 229 310947
rhveracruz@ver.megafed.net.mx

Morocco

*Soremar
Casablanca
Tel +212 22 405050
Fax +212 22 248252
soremar@soremar.co.ma

Netherlands

*Radio Holland Netherlands B.V.
Rotterdam
Tel +31 10 4283 344
Fax +31 10 4281 498
info@radioholland.nl
www.radioholland.nl

Netherlands

*Northrop Grumman Sperry Marine
Vlaardingen
Tel +31 10 4451 600
Fax +31 10 4346 102
www.litton-marine.com

Netherlands

*Sailtron B.V.
Houten
Tel +31 30 2 840 850
Fax +31 30 2 937 642
sailtron@sailtron.com

Netherlands

Radio Holland Netherlands B.V.
Delfzijl
Tel +31 596 633999
Fax +31 596 617995

Netherlands

Radio Holland Netherlands B.V.
Den Helder
Tel +31 223 61 20 98
Fax +31 223 61 53 17

Netherlands

Radio Holland Netherlands B.V.
IJmuiden
Tel +31 255 530844
Fax +31 255 515303

Netherlands

Radio Holland Netherlands B.V.
Vlissingen
Tel +31 118 471655
Fax

**New Zealand**

Crystal Electronics Ltd.
Penrose, Auckland
Tel +64 9 579 3726
Fax +64 9 525 2687
sales@crystal.co.nz
www.crystal.co.nz

Nigeria

*OC International Limited
Port Harcourt
Tel +234 84 23 6508
Fax +234 84 23 8822
ocmarine@ocmarine.com
www.ocmarine.com

Norway

*Navy Lofoten AS
Ballstad
Tel +47 76 05 44 00
Fax +47 76 05 44 05
trond-o@online.no

Norway

*Bergen Maritim Elektro AS
Bergen
Tel +47 55 94 67 00
Fax +47 55 94 67 01
bergen.maritim@navy.no

Norway

*Arne Bjørnvold
Sandnessjøen
Tel +47 75 04 02 18
Fax +47 75 04 06 40
abjoernv@online.no

Norway

*Brommeland Elektronikk A/S
Haugesund
Tel +47 52 70 32 52
Fax +47 52 71 39 23
sklips@brommeland.no

Norway

*AS Elektrisk Mandal
Mandal
Tel +47 38 26 78 10
Fax +47 38 26 78 11

Norway

*Elektro Bodø AS
Bodø
Tel +47 75 50 37 00
Fax +47 75 50 37 40
firmapost@elektro.no
www.elektro.no

Norway

*Elektro Skagerrak
Risør
Tel +47 37 14 39 14
Fax +47 37 14 39 15
post@elektro-skagerrak.no
www.elektro-skagerrak.no

Norway

*Florvaag Elektronikk A/S
Ålesund
Tel +47 70 14 76 06
Fax +47 70 14 76 12
florvaa@online.no
www.florvaag.no

Norway

*Furuno Norge A/S
Ålesund
Tel +47 70 10 29 50
Fax +47 70 12 70 21
furuno@furuno.no
www.furuno.no

Norway

*Basse Gundersen AS
Skien
Tel +47 35 90 04 00
Fax +47 35 52 24 35
postmaster@basse-gundersen.no

Norway

*J.M. Hansen A/S
Tromsø
Tel +47 77 66 55 00
Fax +47 77 66 43 81
tromso@navy.no

Norway

*Harstad Elektronikk AS
Harstad
Tel +47 77 04 02 00
Fax +47 77 04 02 01
post@harstad-elektronikk.no

Norway

*IMES a/s
Tromsø
Tel +47 77 66 46 00
Fax +47 77 66 46 50
imes@imes.no
www.imes.no

Norway

*Johnsen & Co.
Stokmarknes
Tel +47 76 11 75 50
Fax +47 76 11 75 59
stokmarknes@navy.no

Norway

*Kvinnherad Elektro
Rosendal
Tel +47 53 48 28 00
Fax +47 53 48 28 20
post@k-el.no

Norway

*Landsor Larsen Elektronikk A/S
Stavanger
Tel +47 51 89 44 44
Fax +47 51 89 54 64
landor@o2i.net
www.landorlarsen.no

Norway

*Emil Langva A/S
Ålesund
Tel +47 70 10 14 40
Fax +47 70 12 95 96
a.c.langva@emil-langva.no
www.emil-langva.no

Norway

*Maritim Elektro AS
Osnastrand
Tel +47 56 55 05 60
Fax +47 56 55 42 02
maritimelektro@maritimelektro.no

**Norway**

*Myre Elektronikservice A/S
Myre
Tel +47 76 13 31 90
Fax +47 76 13 31 41
kholmer@online.no

Norway

*Måløy Radioforretning A/S
Måløy
Tel +47 57 85 26 00
Fax +47 57 85 26 01
radiofor@online.no

Norway

*NavCom A.S
Bergen
Tel +47 55 50 64 10
Fax +47 55 50 64 11
navcom@navcom.no
www.navcom.no

Norway

*Neratek as
Oslo
Tel +47 22 76 31 10
Fax +47 22 76 31 11
post@neratek.no

Norway

*Nordkontakt AS
Bodø
Tel +47 75 55 05 00
Fax +47 75 54 88 51
firmapost@nordkontakt.no
www.nordkontakt.no

Norway

*NSI Svein Hatvik AS
Bergen
Tel +47 55 21 22 00
Fax +47 55 21 22 01
svein.hatvik@nslas.no
www.nslas.no

Norway

*Sandvik Marine Group
Tønsberg (Tjørne)
Tel +47 33 30 27 80
Fax +47 33 30 27 91
post@osandvik.com
www.sandvikmarine.com

Norway

*Oddstøl Elektronikk A/S
Kristiansund N
Tel +47 71 56 69 30
Fax +47 71 56 69 34
kristiansund@navy.no
www.oddstol.no

Norway

*Radio Holland Norway AS
Oslo
Tel +47 23 33 80 00
Fax +47 23 33 80 01
post@radioholland.no
www.radioholland.no

Norway

*A/S Radioservice
Båtsfjord
Tel +47 78 98 57 00
Fax +47 78 98 57 20
radioservice@online.no

Norway

*A/S Ramek
Bodø
Tel +47 75 50 21 50
Fax +47 75 50 21 70
bodo@mobildata.no

Norway

*Sletten Electronics A/S
Ålesund
Tel +47 70 10 13 90
Fax +47 70 10 13 99
firmapost@sletten-electronics.no

Norway

*Sigurd Solberg
Florø
Tel +47 57 75 13 00
Fax +47 57 75 13 10
skips.service@sigurd-solberg.no

Norway

*Sveggen Elektromer A/S
Averøy
Tel +47 71 56 67 15
Fax +47 71 56 67 20
j.kristiansen@elmarin.no

Norway

*Tel-Rad A/S
Fredrikstad
Tel +47 69 31 56 16
Fax +47 69 31 95 09
fredrikstad@navy.no

Norway

*Total Elektronikk AS
Bodø
Tel +47 75 54 88 88
Fax +47 75 54 88 99
post@total-elektronikk.no
www.total-elektronikk.no

Norway

*Ulstein Elektro A.S
Ulsteinvik
Tel +47 70 01 38 50
Fax +47 70 01 38 70
rolf-petter.almli@ulsteinelektro.com
www.ulsteinelektro.com

Norway

*Unitech Ship Service AS
Porsgrunn
Tel +47 35 56 41 19
Fax +47 35 56 26 13
uni@uss.no
www.uss.no

Norway

*Vico A/S
Haugesund (Avaldsnes)
Tel +47 52 84 66 00
Fax +47 52 84 66 01
vico@vico.no
www.vico.no

Norway

*Arne Wahl Olsen A/S
Rørvik
Tel +47 74 36 09 90
Fax +47 74 36 09 91
rorvik@navy.no

Norway

*Westronic AS
Bergen (Laksevåg)
Tel +47 55 34 90 70
Fax +47 55 34 90 71
mail@westronic.no
www.westronic.no

Norway

*O. Øverland AS
Molde
Tel +71 20 24 00
Fax +71 25 12 14
post@overland.no
www.overland.no

Panama

*Global Marine Electronic
Panama City
Tel +507 2328190
Fax +5072328169
service@globmarel.com
www.globmarel.com

Panama

*Hi Tek Marine, S.A.
Panama City
Tel +507 229 2488
Fax +507 261 5780
hitek@sinfo.net

Panama

Servitronic, S.A.
Panama
Tel +507 261 9703
Fax +507 261 9800
aabreu@sinfo.net

Philippines

*Delnet International
Intramuros, Manila
Tel +63 2 522 3947
Fax +63 2 527 6019
delnet@piddtsl.net

Poland

*PBP ENAMOR Sp. z o.o.
Gdynia
Tel +48 58 69 01 700
Fax +48 58 69 01 701
enamor@enamor.com.pl
www.enamor.com.pl

Poland

EPA Sp. z o.o.
Gdynia
Tel +48 58 781 28 00
Fax +48 58 781 28 28
epa_gdynia@epa.com.pl
www.epa.com.pl

Poland

EPA Sp. z o.o.
Szczecin
Tel +48 91 425 2900
Fax +48 91 425 2999
epa@epa.com.pl
www.epa.com.pl

Portugal

*Radio Holland Portugal S.A.
Lisboa
Tel +351 21 397 6087
Fax +351 21 390 3739
rhplis@radioholland.pt

**Portugal**

Radio Holland Portugal S.A.
Gafanha da Nazare
Tel +351 23 436 6945
Fax +351 23 436 6945
rhpave@radioholland.pt

Portugal

Radio Holland Portugal S.A.
Matosinhos
Tel +351 22 938 0033
Fax +351 22 938 0150
rhpmat@radioholland.pt

Reunion

*Unimar
Le Port
Tel +262 2 62 42 09 45
Fax +262 2 62 43 32 50
unimar.pelloux@wanadoo.fr

Romania

Bams Maritime S.R.L.
Constanta
Tel +40 41 601 822
Fax +40 41 613 517
SMTP.bams.maritime@seanet.ro

Russia

*Era-Service Co. Ltd.
Murmansk
Tel +7 8152 45 13 58
Fax +7 8152 28 66 33
post@eraserv.an.ru
www.eraservice.ru

Russia

*Norwegian Partners Marine A.S
Vladivostok
Tel +4232 460506
Fax +4232 460506
npm@fastmail.vladivostok.ru

Russia

*Rosmar Ltd.
St.Petersburg
Tel +7812 9658559
Fax +7812 1459644
rosmar@spb.cityline.ru
www.rosmar.ru

Russia

Amur Shipping Company
Khabarovsk
Tel +7 4212 398 203
Fax +7 4212 398 632

Russia

Arctic Shipping
Tiksi
Tel +7 41167 52155
Fax +7 41167 52155
Telegraf@arsco.sakha.ru

Russia

BOF Co. Ltd.
Novorossiysk
Tel +7 8617 61 06 01
Fax +7 8617 61 06 01
bof@nvrsk.ru

Russia

Bosco
Vostochnyy
Tel +7 4266 60809
Fax +7 4266 60809
bosco@vrangel.ru

Russia

BRIZ - Marine Co. Ltd.
Murmansk
Tel +7 8152 451111
Fax +7 8152 451633
info@briz-marine.ru

Russia

Dalryba-PSRZ
Vladivostok
Tel +7 4232 272616
Fax +7 4232 277956
radpsrz@mail.ru

Russia

Eltrans Ltd.
Novorossiysk
Tel +7 8617 24 06 50
Fax +7 8617 24 06 50
eltrs@marsat-south.ru

Russia

Fesco Base Radiocommunication
Dept.
Vladivostok
Tel +7 4232 496044
Fax +7 4232 496108

Russia

Gerkon Service
Nakhodka
Tel +7 4266 57576
Fax +7 266 29662
gerkon@online.nakhodka.ru

Russia

JSC "Naviteam"
Vyborg
Tel +7 81278 33116
Fax +7 81278 33116
naviteam@vyborg.ru

Russia

KB Vector
Taganrog
Tel +7 8634 44 48 08
Fax +7 8634 33 39 00

Russia

Marine Bridge & Navigation
Systems
St.Petersburg
Tel +7 812 320 38 40
Fax +7 812 320 38 48
www.mns.spb.ru

Russia

Morsvyazservis
Khabarovsk
Tel +7 42137 20821
Fax +7 42137 22585

Russia

Norfes
Nakhodka
Tel +7 504 91 52125
Fax +7 266 44964
VTS.NHDK@nhk.infosys.ru

Russia

Norfes
Vladivostok
Tel +7 4232 521910
Fax +7 4232 521900
mic@norfes.ru

Russia

Northern River Shipping Lines
Arkhangelsk
Tel +7 8182 41 11 71
Fax +7 8182 41 11 06
nrrad@nrsl.ru

Russia

Novorossiysk Commercial Sea Port
Novorossiysk
Tel +7 8617 29 21 31
Fax +7 8617 61 18 30
mail@ncsp-net.com
www.ncsp.kuban.ru

Russia

Novoship Ship Service Centre
Novorossiysk
Tel +7 8617 60 12 02
Fax +7 8617 25 45 33
novsc@novoship.ru

Russia

Omega-5
Vrangel, Primorskiy
Dept.
Tel +7 4266 60775
Fax +7 4266 60775
omega5@nhk.infosys.ru

Russia

Orient-Electric
Vladivostok
Tel +7 4232 436407
Fax +7 4232 436413
electric@fastmail.vladivostok.ru

Russia

Preobrazhenskaya Base of Trawl
Fleet
Preobrazhenie
Tel +7 42377 94307
Fax +7 42377 91284

Russia

Primorsk Shipping Corporation
Nakhodka
Tel +7 4266 42504
Fax +7 4266 94552
klishin@prisco.ru

Russia

Sudoremkomplekt
Kamchatka
Tel +7 4266 42504
Fax +7 4266 94552
klishin@prisco.ru

Russia

The Astrakhan Centre of Comm.
Astrakhan
Tel +7 8512 26 20 50
Fax +7 8512 22 99 41
era@bignet.ru

Russia

Vedushly Ltd
Rostov-On-Don
Tel +7 8632 442148
Fax +7 8632 442148
vedushly@aaanet.ru

**Saudi Arabia**

*Marine Equipment & Services Est.
Jeddah
Tel +966 2 6360112
Fax +966 2637 4128
baboudsaftmarine@awalnet.net.sa

Saudi Arabia

*Kanoo Marine Services Group
Dammam
Tel +966 3 847 3411
Fax +966 3 847 3423
msg@kanoosa.com

Singapore

*Radio Holland Singapore Pte. Ltd.
Singapore
Tel +65 6862 2218
Fax +65 6862 2430
info@radioholland.com.sg
www.radiohollandingsapore.com

Singapore

*Jason Electronics (Pte) Ltd
Singapore
Tel +65 6872 0211
Fax +65 6872 1800
alantan@jason.com.sg
www.jason.com.sg

Singapore

*Reson-Telenav Electronics Pte.
Ltd.
Singapore
Tel +65 6872 0863
Fax +65 6872 1334
sales@reson-sea.com.sg
www.reson-sea.com.sg

South Africa

*Radio Holland South Africa
Durban
Tel +27 31 2055309
Fax +27 31 2055541
service@rhdbn.co.za
www.radioholland.co.za

South Africa

Radio Holland South Africa
Cape Town
Tel +27 21511 0864
Fax +27 21511 7577
service@rhcpt.co.za
www.radioholland.co.za

Spain

*Aage Hempel Marine Electronics
Algeciras
Tel +34 956 573 276
Fax +34 956602088
service@aagehempel.com

Spain

*CRAME S.A.
Madrid
Tel +34 91 658 65 08
Fax +34 91 658 65 09
crame@crame.es
www.crame.es

Spain

*Lesymar
CRAME, S.A.
Barcelona
Tel +34 93 319 20 02
Fax +34 93 268 46 10
barcelona@crame.es

Spain

CRAME, S.A.
Bilbao
Tel +34 94 438 8565
Fax +34 94 438 8702

Spain

CRAME, S.A.
Gijon
Tel +34 985 36 90 45
Fax +34 985 33 85 02
gijon@crame.es

Spain

CRAME, S.A.
Santander
Tel +34 942 22 73 53
Fax +34 942 22 75 54
santander@crame.es

Spain

CRAME, S.A.
Santa Eugenia de Ribeira
Tel +34 981 871429
Fax +34 981 875296
riveira@crame.es

St. Lucia

Regis Electronics (St Lucia) Ltd.
Castries
Tel +1758 4520205
Fax +1758 4520206
stlucia@regiselectronics.com

Sweden

*C A Clase AB
Göteborg
Tel +46 31 64 72 00
Fax +46 31 53 46 37
info@caclase.se
www.caclase.se

Sweden

Stockholms Fartygselektriska AB
Stockholm
Tel +46 8 54175557
Fax +46 8 54175557
stockholms.fartygsel@mailbox.s

Sweden

Storm & Co AB
Göteborg
Tel +46 31 513510
Fax +46 31 519378
stormco@swipnet.se

Sweden

Vingtor Marine AB
Askim
Tel +46 31 680450
Fax +46 31 683660

Sweden

Väst kustens Elmarin AB
Västra Frölunda
Tel +46 31 7697500
Fax +46 31 7697501
peraxel@vastelmarin.se

Syria

*Lesymar
Tartous
Tel +963 43 324616
Fax +963 43 323563
lesymar@scs-net.org

Taiwan

*Dragon & Elephant Enterprises Co
Kaohsiung
Tel +886 7 227 2887
Fax +886 7 227 2950
dragon43@ms8.hinet.net

Taiwan

*Reson Electronics Int'l Inc.
Kaohsiung
Tel +886 7 815 0036
Fax +886 7 815 1438
reson000@ms16.hinet.net

Thailand

*Natee Corporation (1993) Co.
Bangkok
Tel +662 703 5544
Fax +662 703 5525
info@marinethal.net

Turkey

*Elektro-Deniz Co. Ltd.
Tuzia Istanbul
Tel +90 216 3927729
Fax +90 216 3927733
edel@elektrodeniz.com

Turkey

International Shipping
Group&Trading
Uskudar Istanbul
Tel +90 216 428 55 21
Fax +90 216 428 55 23
intershipping@superonline.com

Ukraine

*ELCOM Ltd.
Mariupol
Tel +38 629 378 035
Fax +38 050 594 83 85
elcom@mariupol.net

Ukraine

*Transas Ukraine
Nikolaev
Tel +380 629 413635
Fax +380 629 413507
tru@transasua.com

United Arab Emirates

*Radio-Holland B.V. Middle East
Sharjah
Tel +971 6 574 4144
Fax +971 6 574 9998
Info@rhme.ae
www.rhme.ae

United Arab Emirates

Saab Marine Middle-East
Sharjah
Tel +971 6 557 0740
Fax +971 6 557 0741
saabme@emirates.net.ae
www.saab.tankradar.com

United Kingdom

*Jotron (UK) Ltd.
Cramlington, Northumberland
Tel +44 1670 712000
Fax +44 1670 590265
sales@jotron.co.uk

United Kingdom

Alexian Electronics Marine Ltd.
Aberburgh
Tel +44 131 5542591
Fax +44 131 5550373

United Kingdom

AND Electronic Ltd.
Aberdeen
Tel +44 870 444 9682
Fax +44 870 444 9680
service@andmss.net
www.and-group.com

United Kingdom

AND Electronic Ltd.
Tilbury, Essex
Tel +44 870 444 9682
Fax +44 870 444 9680
service@andmss.net

United Kingdom

Broadgate Ltd
Almondsbury, Bristol
Tel +44 1454 618585
Fax +44 1454 617310

United Kingdom

Charity & Taylor Ltd
Lowestoft, Suffolk
Tel +44 1502 581529
Fax +44 1502 588463

United Kingdom

Joss Skelton Limited
Belfast, Northern Ireland
Tel +28 9074 0555
Fax +28 9074 0666
joss.skelton@virgin.net

United Kingdom

Marconi International Co Ltd
Aberdeen
Tel +44 1224 585334
Fax +44 1224 575975

United Kingdom

Marconi International Co Ltd
Falmouth, Cornwall
Tel +44 1326 312855
Fax +44 1326 211337

United Kingdom

Marconi International Co Ltd
Hull
Tel +44 1245 353221
Fax +44 1245 275689

United Kingdom

Marconi International Co Ltd
Birkenhead, Liverpool
Tel +44 151 647 6222
Fax +44 151 647 3374

United Kingdom

Marconi International Co Ltd
Newcastle upon Tyne
Tel +44 191 2327381
Fax +44 191 2331943

United Kingdom

Marconi International Co Ltd
Milford Haven, Pembrokeshire
Tel +44 1646 697954
Fax +44 1646 697954

**United Kingdom**

Marconi International Co Ltd
Silverton, London
Tel +44 20 7 5114391
Fax +44 20 7 5114483

United Kingdom

Marconi International Co Ltd
Southampton, Hants
Tel +44 23 80 224767
Fax +44 23 80 333644

United Kingdom

Marconi International Co Ltd
Felxstowe, Suffolk
Tel +44 1394 613138
Fax +44 1394 675247

United Kingdom

Marine Electronic Systems
Southampton, Hants
Tel +44 2380 663316
Fax +44 2380 663241
sales@mesuk.com
www.mesuk.net

United Kingdom

Mark Electronics
Lymington, Hants
Tel +44 1590 671144
Fax +44 1590 679517

United Kingdom

Nationwide Marine Hire
Warrington, Cheshire
Tel +44 1925 245788
Fax +44 1925 245788
nationwide.liferaft@virgin.net

United Kingdom

Premium Liferaft Services
Burnham-on-Crouch, Essex
Tel +44 1621 784858
Fax +44 1621 785934

United Kingdom

Radio Electronic Service Ltd
St. Peters Port, Guernsey
Tel +44 1481 728837
Fax +44 1481 7143794

United Kingdom

Ships Electronic Services
Grangemouth, Stirlingshire
Tel +44 1324 666886
Fax +44 1324 666033

United Kingdom

Ships Electronic Services
Jarrow, Tyne & Wear
Tel +44 191 4832236
Fax +44 191 4832331
name?@ships-electronics.com

United Kingdom

Ships Electronic Services Ltd
Rochester, Kent
Tel +44 1634 295500
Fax +44 1634 295536

United Kingdom

SM Group (Europe) Ltd
Sutton Harbour, Plymouth
Tel +44 1752 66599
Fax +44 1752 222717

United Kingdom

TDC (Aberdeen) Limited
Aberdeen
Tel +44 1224 710077
Fax +44 1224 710077

United Kingdom

T.S.A Communications Limited
Birkenhead, Merseyside
Tel +44 151 6478100
Fax +44 151 6478120

United States

*High Seas Trading Co.
Miami, Florida
Tel +1 305 3587455
Fax +1 305 350 6887
hstmiami@aol.com

United States

*Mackay Marine
Houston, Texas
Tel +1 713 644 9246
Fax +1 713 645 1174
houston@mackaycomm.com
www.mackaycomm.com

United States

*Radio Holland USA Inc.
Houston, Texas
Tel +1 713 378 2100
Fax +1 713 378 2101
rhouston@radiohollandusa.com
www.radiohollandusa.com

United States

Mackay Marine
Edison, NJ
Tel +1 732 225 4089
Fax +1 732 225 4959
edison@mackaymarine.com
www.radiohollandusa.com

United States

Mackay Marine
Harahan, LA
Tel +1 504 733 5824
Fax +1 504 734 8535
nola@mackaymarine.com
www.radiohollandusa.com

United States

Mackay Marine
Miami, FL
Tel +1 305 591 3399
Fax +1 305 591 1879
miami@mackaycomm.com
www.radiohollandusa.com

United States

Mackay Marine
Richmond, CA
Tel +1 510 669 9560
Fax +1 510 669 9562
sf@mackaymarine.com
www.radiohollandusa.com

United States

Mackay Marine
Tacoma, WA
Tel +1 253 922 6260
Fax +1 253 922 6619
seattle@mackaymarine.com
www.mackaycomm.com

**United States**

Mackay Marine
Tampa, FL
Tel +1 813 248 8137
Fax +1 813 267 6082
tampa@mackaymarine.com
www.mackaycomm.com

United States

Mackay Marine
Thunderbolt, GA
Tel +1 912-354-4542
Fax +1 912-356-1249
savannah@mackaymarine.com
www.mackaycomm.com

United States

Mackay Marine
Vancouver, NW
Tel +1 360 573 7991
Fax +1 360 573 5074
portland@mackaymarine.com
www.mackaycomm.com

United States

Radio Holland USA Inc.
Corpus Christi, TX
Tel +1 361 883 5283
Fax +1 361 883 5285
rhcorpuschristi@radiohollandusa.com
www.mackaycomm.com

United States

Radio Holland USA Inc.
Hollywood, FL
Tel +1 954 920 8400
Fax +1 954 920 8455
rhniami@radiohollandusa.com
www.mackaycomm.com

United States

Radio Holland USA Inc.
Kenilworth, NJ
Tel +1 908 298 9100
Fax +1 908 298 9118
rhnewyork@radiohollandusa.com
www.mackaycomm.com

United States

Radio Holland USA Inc.
Long Beach, CA
Tel +1 562 535 0039
Fax +1 562 988 0236
rhlombeach@radiohollandusa.com
www.mackaycomm.com

United States

Radio Holland USA Inc.
Harahan, LA
Tel +1 504 7334024
Fax +1 504 7334027
rhneworleans@radiohollandusa.com
www.radiohollandusa.com

United States

Radio Holland USA Inc.
Seattle, WA
Tel +1 206 768 1601
Fax +1 206 768 1603
rhseattle@radiohollandusa.com
www.radiohollandusa.com

United States

Radio Holland USA Inc.
Chesapeake, VA
Tel +1 757 436 2360
Fax +1 757 436 4809
rhnorfolk@radiohollandusa.com

United States

Radio Holland USA, Inc.
Mobile, AL
Tel +1 334 432 3109
Fax +1 334 433 8223
rhmobile@radiohollandusa.com

Uruguay

*Electromarítima Uruguay Ltada
Montevideo
Tel +598 2 924 7789
Fax +598 2 924 7138
electrom@internet.com.uy

Venezuela

*Radio Marina de Venezuela S.A.
Maracaibo
Tel +58 261 7987811
Fax +58 261 7982596
rhvmbo@telcel.net.ve

Tron45S



Jotron Electronics
Fax: + 47 33 12 67 80
beacon@jotron.com

Programming report

Beacon Serialno: 130AD05427 Bracket type: MB45S
Ex beacon serialno: Bracket Serialno: 00000
Country Code: 257 Battery expiry: 06/2009
Protocol: Maritime User Protocol
406 Hex message: FFFE2F5014E2A802A9A689A5D140

Maritime User Protocol

Protected message: A029C55005534D1
MMSI / RadioCallSign: 257 763560
Beacon number: 0

Vessel information

Radio Call sign: LD8224 (Radiocall is not sent on 121.5 MHz)
ex Call Sign:
Vessel name: Nidaros
ex Vessel name:
IMO number:
Additional information:

Miscellaneous Data

Beacon has been programmed and verified!
Beacon history: Beacon has been programmed: 2 time(s)
mai 2005 [130AD05427]
Programming place: Jotron Electronics as
Programmed by: F. Hjelkrem Date: 30.06.2005



ERLING HAUG AS
SKIPSUTSTYR - INDUSTRIREKVISITA

Kunde
BATLAGET NIDAROS
V/G. AUSTRHEIM
FOSENKAIA SKUR 40 D

7010 TRONDHEIM

Sendes til
BATLAGET NIDAROS
V/G. AUSTRHEIM
FOSENKAIA SKUR 40 D
7010 TRONDHEIM

Sendes med
Hentes

Pakklistennummer
1096732 1

Ordrenummer
1096732

Vår ref
Sverre Skaar

Levert fra....
Erling Haug AS
Kai 24
7010 Trondheim
Norway

Lev.dato
04.07.05

Kunde
BATNID
Utskriftsdato
04.07.05

Ordredato
28.06.05

Deres ref
FRODE FRYDENLUND

Leveringsbetingelse
Ex Works

Varenr	Navn	Enhet	Antall Bestilt	Antall Levert	Antall Restet	Pris
51580	TRON 455 EPIRB NØDPEILESENDER	STK	1.00	1.00		2



BÅTLAGET NIDAROS
FOSENKAIA SKUR 40D
7010 TRONDHEIM

30.06.05
MR.L/397.41/13

Jarl Nygaard
Tlf: 22774352

Stasjonens navn:
NIDAROS

Kallesignal: LD8224
MMSI nr. : 257763560

KONSESJON FOR RADIOANLEGGET

På grunn av forandringer i radioanlegget, oversendes vedlagt nytt konsesjonsdokument.

Vi ber Dem sørge for at dokumentet blir oppbevart om bord.

Stemmer ikke våre opplysninger over radioutstyret med det aktuelle utstyret om bord, ber vi om at vår saksbehandler blir kontaktet snarest mulig.

Med vennlig hilsen
for Telenor Networks

for Wenche B. Lien
Mari Bjerke
seniorkonsulent



Norge

TILLATELSE til å opprette og drive radiostasjon om bord i fartøy/skip/plattform

Norway

LICENCE for the establishment and operation of a ship or offshore radio station

Utstedelsesdato/Date of issue Oslo, 30.06.05	Tillatelse nr./Licence No. 65414	Side/Page 1 AV 1
Tillatelse utstedt til/Name of Licencee BÅTLAGET NIDAROS		AAIC kode/AAIC code NO01
Fartøyets eller plattformens navn/Name of ship or platform NIDAROS	Klasse/Class 4	Korrespondanseart/Correspondence category CR

Identifikasjonssignaler/Identification signals (Se/See Radioregulations, article 19)

Kallesignal/Call sign LD8224	Tonn brutto/Gross tonnage	Selektive kallenr./Selective Call No. SSFC MMSI 257 763 560	IMO nr./No.
--	---------------------------	--	-------------

Inmarsat trafikk nr./Traffic No.

Utstyrskategori/Type of equipment	Ant./No.	Typebetegnelse/Type designation
VHF/UHF TRANSCEIVER	01	RS 8300 SOS
COSPAS-SARSAT EPIRB	01	TRON 45 S

Internasjonal avregningskode (AAIC) må oppgis til alle utenlandske kystradiostasjoner.

Tillatelsen gjelder fra utstedelsesdato og til den blir inndratt eller sagt opp skriftlig.

Tillatelsen er gitt i henhold til kongelig resolusjon av 5. juni 1987 nr. 461, på de vilkår som gjelder til enhver tid.

Tillatelsen skal oppbevares om bord.

The international accounting code (AAIC) must be quoted to all coast stations.

The Licence is valid from the day of issue, and henceforth up to the time of written revocation or cancellation.

The Licence is issued in accordance with Royal Decree of 5 June 1987 subject to the conditions in force at any time.

The Licence shall be kept on board the ship or platform.

Etter fullmakt/By authority

John Johannessen,



Telenor Telecom Solutions AS

Maritim Radio

Lisensavdelingen/Radio Licencing Department

Forskrift om konsesjon til å opprette å drive radioanlegg om bord på norske skip.

§ 1

Konsesjonen gir rett til anlegg og drift av radioutstyr til bruk i den maritime mobile tjeneste og maritime mobile satellitt tjeneste samt radioutstyr for bestemmelse av skipets posisjon.

Konsesjonsdokumentet skal oppbevares i radiostasjonen.

§ 2

Telenor utsteder konsesjoner etter denne forskrift. Konsesjonæren har plikt til å rette seg etter de bestemmelser i det internasjonale radioreglementet (Radioreglementet) som omfatter tjenestene som er nevnt i §1.

Konsesjonæren har også plikt til å rette seg etter de utfyllende forskrifter og retningslinjer som Post og teletilsynet og Telenor fastsetter, og de forskrifter om radioanlegg og radiotjenester om bord i skip som er gitt for sikkerheten til sjøs.

§ 3

Alle utstyrsenheter som inngår i radioanlegget skal være typegodkjent eller tillatt brukt av Post- og teletilsynet.

Endringer i det tekniske utstyret skal meldes til Telenor.

Konsesjonæren plikter til enhver tid å holde anlegget i god driftsmessig stand.

§ 4

Installasjonen av de utstyrsenheter som inngår i radioanlegget skal utføres i samsvar med de retningslinjer som gjelder for de ulike kategorier skip.

§ 5

Kringkastingsvirksomhet (lyd eller fjernsyn) ved bruk av skipets konsesjonerte radioutstyr er forbudt.

Det er videre forbudt å bruke stasjonen til blindsendinger for direkte avlytting av privat addressat i land.

Et skip som er i nød kan imidlertid bruke ethvert middel det rår over til å vekke oppmerksomhet, oppgi sin posisjon og få hjelp.

§ 6

Stasjonen skal være utstyrt med de dokumenter og publikasjoner som Radioreglementet, Den norske skipskontrolls regler og Telenor krever for den type anlegg som konsesjonen omfatter.

§ 7

Til radiotjenesten må brukes radiooperatør med sertifikat som er utferdiget eller godkjent av Telenor, og som viser at vedkommende har de kunnskaper og de ferdigheter som Radioreglementet og den internasjonale standard til opplæring, sertifisering og vakthold for sjøfarende 1978, revidert i 1995 (STCW-konvensjonen) krever.

Andre kan betjene radiotelefonutstyret forutsatt at de er under kontroll av operatør som nevnt ovenfor.

Tjenesten ved stasjonen skal minst være som Radioreglementet fastsetter.

§ 8

Stasjonen har plikt til å ta imot med absolutt prioritet alle de nødkallinger og nødmeldinger som oppfanges, uansett hvor de kommer fra, og straks sette i verk de nødvendige tiltak.

Det er forbudt å sende eller spre falske eller misvisende nødsignaler eller nødkallinger.

Regulations Concerning the Licence to Establish and Operate Radio Installations on Board Norwegian Ships

§ 1

The licence entitles the Licencee to install and operate radio equipment for use in the maritime mobile service and the maritime mobile satellite service as well as radio equipment for determining the ship's position.

The licence document shall be kept in the radio station.

§ 2

Telenor grants licences under these regulations. The Licencee is obliged to abide by the provisions of the International Radio Regulations (the Radio Regulations) that concern the services specified in § 1.

The Licencee is further obliged to abide by the supplementary laid down by the Norwegian Post and Telecommunications Authority and Telenor, and their operation on board ships that have been given as part of the regulations for safety at sea.

§ 3

All equipment units that are part of the radio installation must be type approved or have been approved for use by the Norwegian Post and Telecommunications Administration.

All changes in the technical equipment shall be reported to Telenor.

The Licencee is obliged to maintain the installation in good working condition at all times.

§ 4

Installation of the equipment units that are part of the radio installation shall be carried out in accordance with guidelines that apply for the different categories of ship.

§ 5

Broadcasting (sound or television) by means of the licenced radio equipment of the ship is prohibited.

It is further prohibited to use the station for blind transmissions for direct reception by a private addressee on shore.

However, a ship in distress may use all means as its disposal to attract attention, state its position, and get help.

§ 6

All documents and publications required by the Radio Regulations, the Norwegian Ship Control Legislation, and Telenor for the type of installation covered by the licence, shall be found in the station.

§ 7

The radio service shall be in the charge of a radio operator who holds a certificate issued by or approved by Telenor, certifying that he has the knowledge and skills required by the Radio Regulations and the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers of 1978 as amended 1995 (the STCW Convention)

Other persons may use radio telephone equipment provided that they are under the supervision of an operator satisfying the above requirements.

The service at the stations shall as a minimum be as laid down in the Radio Regulations.

§ 8

The station is obliged to receive and give absolute priority to all distress calls and distress messages that are picked up, irrespective of their place of origin, and to immediately take the measures called for by the situation.

The sending or spreading of false or misleading distress signals or calls are prohibited.

§ 9

Konsesjonæren har plikt til å sørge for at uvedkommende ikke får adgang til radiostasjonen og ikke får noen som helst til kjennskap til radiokorrespondansen.

Det er forbudt å avlytte og ta opp radiokorrespondanse som ikke er rettet til egen stasjon.

Dersom en likevel skulle høre slik korrespondanse, må den ikke gjengis eller brukes på noen som helst måte.

§10

Telenor har rett til å kontrollere at anlegget tilfredstiller konsesjonsvilkårene.

Telenor kan bemyndige andre til å foreta kontrollen.

Stasjonen skal kontrolleres når den installeres, og før den blir tatt i bruk.

Telenor kan kreve at den person som forestår radiotjenesten om bord er tilstede ved slike kontroller.

Konsesjonæren plikter å følge de pålegg som blir gitt, og å sørge for at påviste feil og mangler blir rettet innenfor de fastsatte tidsfrist.

§11

For konsesjonen betales konsesjonsavgifter fastsatt av Post og teletilsynet.

Konsesjonæren er videre ansvarlig for betaling av de trafikkavgifter som påløper for korrespondanse fra stasjonen. Det kan kreves at det stilles sikkerhet for betaling av disse avgifterne.

For kontroll som nevnt i §10 betales en fastsatt avgift. Ved slike kontroller skal konsesjonæren også dekke reise og oppholdsutgifter etter Statens reiseregulativ.

§12

Dersom konsesjonen blir ugyldig, inndratt eller sagt opp skal konsesjonsdokumentet returneres til Telenor.

Ved navn og/eller eierforandring sendes skriftlig melding om forholdet til Telenor.

§13

Når hensynet til Statens sikkerhet, beredskap eller andre almene hensyn krever det, kan bruk av anlegget innskrenkes eller nektes uten at dette for konsesjonæren rett til erstatning.

§14

Telenor kan fravike disse forskriftene dersom særlige grunner gjør dette nødvendig eller rimelig.

§15

Post og teletilsynet er klageinstans ved klage over Telenors enkeltvedtak etter denne forskrift.

§16

En konsesjon kan trekkes tilbake ved alvorlige eller gjentatte brudd som gjelder for virksomheten. Videre kan en konsesjon trekkes tilbake når de forpliktelser som påløper etter § 11 ikke blir betalt i rett tid.

§17

Overtredelse av disse konsesjonsforskriftene er straffbar etter lov av 24. juli 1914 § 3, jfr. lov av 23.06.1995 nr. 39 om telekommunikasjon § 10-4.

§18

Denne forskrift trer i kraft 1 november 1989, med virkning også for nåværende konsesjonærer. Samtidig oppheves konsesjonsvilkår for radiostasjon om bord i skip fastsatt av Samferdselsdepartementet 31. juli 1959 nr. 9947.

§ 9

The Licencee shall ensure that unauthorized persons are prevented from using the radiostation, and that no part of the radio correspondence is made known to such persons.

Monitoring and recording of radio correspondence which is not directed at one's own station is prohibited.

If such correspondence should nevertheless be overheard, it must not be quoted, reproduced or used in any way.

§ 10

Telenor has the right to inspect the installation in order to verify that it satisfies the requirements for the licence.

Telenor may authorize others to carry out the inspection.

The station shall be inspected when it is installed, and before it is put into use.

Telenor has the right to demand that the person in charge of the radio service on board is present at such inspections.

The Licencee is obliged to comply with the directions given at the inspection, and to ensure that any faults and defects that are pointed out are corrected within the given time limits.

§ 11

The Licencee shall pay the licence fees stipulated by the Norwegian Post and Telecommunications Administration.

He is further responsible for paying the traffic charges due for correspondence from the station. Security for the payment for these charges may be demanded.

A fixed charge is payable for the inspections referred to in § 10. In addition the Licencee is obliged to reimburse the travel and subsistence expenses incurred in connection with such inspections in accordance with the tariff for Norwegian state employees (« Statens reiseregulativ»)

§ 12

If the licence becomes invalid or is revoked or relinquished, the licence document shall be returned to Telenor.

In the case of a change of name and/or owners, written notice of the change must be sent to Telenor.

§ 13

If considerations relating to national security or preparedness or the common good dictate that the use of the installation should be curtailed or banned, this may be done without its entitling the Licencee to compensation.

§ 14

Telenor may depart from these regulations if exceptional circumstances necessitate or justify it.

§ 15

The Norwegian Post and Telecommunications Administration is the body of appeal for complaints concerning individual decisions taken by Telenor under these regulations.

Complaints should be sent to Telenor.

§ 16

A licence may be revoked in case of serious or repeated violations of the conditions that apply to the operation of the radio station. It may also be revoked if the Licencee fails to meet his obligations with regard to payment of fees and charges under § 11 within the specified time limits.

§ 17

Violations of these licence regulations are punishable under the Act of 24 Juli 1914 § 3.

§ 18

These regulations take effect on 1 November 1989 and also apply to all present Licencees. At the same time the regulations concerning licence conditions for radio stations on board ships laid down by the Ministry of Communications on 31 July 1959 No. 9947 are abolished.

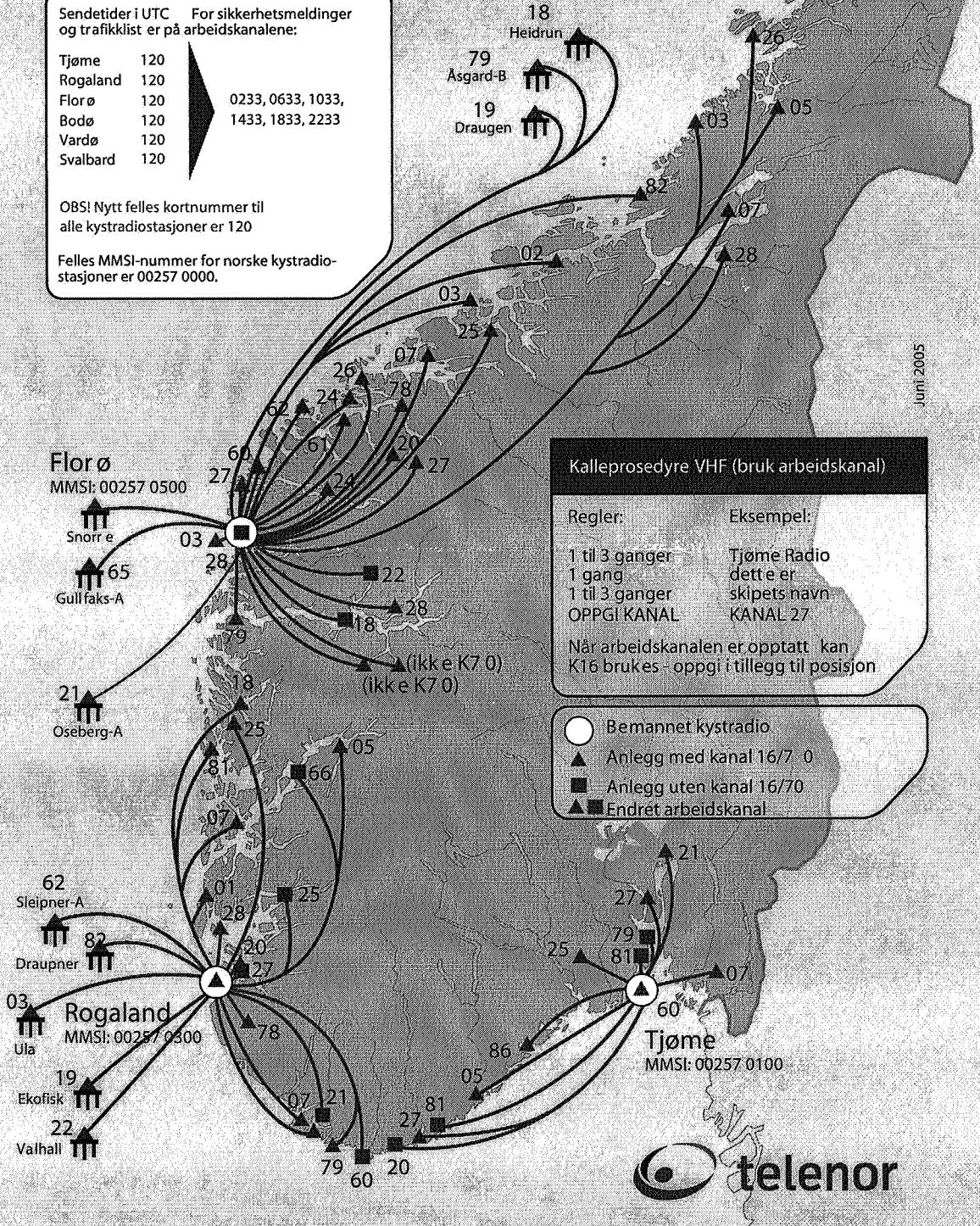
VHF-kanalplan for Sør-Norge

Sendetider i UTC For sikkerhetsmeldinger og trafikklist er på arbeidskanalene:

Tjøme	120	▶	0233, 0633, 1033, 1433, 1833, 2233
Rogaland	120		
Florø	120		
Bodø	120		
Vardø	120		
Svalbard	120		

OBS! Nytt felles kortnummer til alle kystradiostasjoner er 120

Felles MMSI-nummer for norske kystradiostasjoner er 00257 0000.



Kalleprosedyre VHF (bruk arbeidskanal)

Regler:	Eksempel:
1 til 3 ganger 1 gang	Tjøme Radio
1 til 3 ganger	dette er
OPPGI KANAL	skipets navn
	KANAL 27

Når arbeidskanalen er opptatt kan K16 brukes - oppgi i tillegg til posisjon

- Bemannet kystradio
- ▲ Anlegg med kanal 16/70
- Anlegg uten kanal 16/70
- ▲ Endret arbeidskanal

Juni 2005

