



MARTRONICS LIMITED

QUALITY MANUAL

PO Box 34612
Birkenhead
Auckland
Tel: 09 4155679
Fax: 09 4195518
www.martronics.com

N/1, Henry Rose Pl.
Albany
Auckland, 0630
New Zealand

CONTENTS

1. COMPANY STRUCTURE & PERSONNEL
2. RULES AND PUBLICATIONS
3. RECORDS MAINTAINENCE AS PER SOCIETY HEADINGS
4. SOLAS RADIO INSPECTIONS CHECKLIST
5. SURVEY REPORT
6. FORMS AND REPORTING
7. DOCUMENT CONTROL – Publications & Circulars
8. CODE OF CONDUCT
9. COMPLAINT FORM
10. TRAINING
11. TEST EQUIPMENT & CALIBRATION PROCESS



Martronics Limited

PO Box 34612, Birkenhead, Auckland
Phone: + 64 9 419 5518
Fax : + 64 9 419 5517
Email: martronics@martronics.co.nz
www.martronics.co.nz

May 30, 2012

Company Structure

Martronics Limited is a Private organization owned and managed jointly by its two Directors

Mr. Homiar R.Daruwalla
&
Mr. Andrew Gibb.

Mr. Paul Lunny has been employed as a Service Engineer since April 2012.

The company has been incorporated since November 19, 2009 and continues to trade, within the Maritime Electronics Industry, to date.

H.Daruwalla
Director



Martronics Limited

PO Box 34612, Birkenhead, Auckland

Phone: + 64 9 419 5518

Fax : + 64 9 419 5517

Email: martronics@martronics.co.nz

www.martronics.co.nz

May 30, 2012

List of Personnel

For the purposes of Radio Inspections, the following personnel shall be responsible.

- Mr. Homiar Daruwalla.
- Mr. Paul Lunny

Sincerely yours

H.Daruwalla
Director.

RULES AND PUBLICATIONS

The Following publications are available for Inspections and Guidelines.

1. SOLAS 2009 and amendments 2008, 2009, 2010, 2011
2. ITU Radio Regulations
3. Manual for the use by the Maritime Mobile and Maritime Mobile Satellite Services.
4. IMO Performance Standards 2011
5. IMO – Resolutions A7809(19)
6. MSC/Circ 1040 /Rev.1– Guidelines on Annual Testing of 406 MHz Satellite EPIRBs
7. MSC.1/Circ 1252 - Guidelines on Annual Testing of AIS Systems
8. SN/Circ.227 & 245 – Guidelines for Installation of AIS Systems + amendments.
9. MSC.1/Circ.1206 Guidelines on the Survey & COC LRIT Information.
10. MSC/Circ.1072 Guidelines on Provision of SSAS systems

Additionally, regular on-line updates are conducted via the IMO and SOLAS web content.

RECORDS MAINTENANCE FOR CLASSIFICATION SOCIETIES

RECORDS THAT ARE MAINTAINED FOR EACH CLASSIFICATION SOCIETY ARE

1. Rules and Guidelines for Radio Inspections.
2. List of Surveys completed with Vessel Name, date and other relevant information, including Remarks, if any.
3. Survey Report.
4. List of Deficiencies, if any.
5. Completed Classification Society Radio Inspection Forms.
6. Any other forms / correspondence as required.

SOLAS RADIO INSPECTION CHECKLIST.

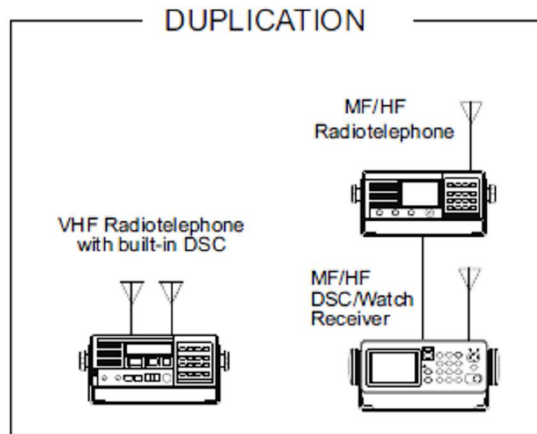
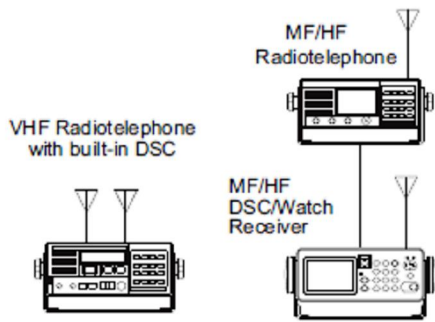
1 Radio equipment installation to fulfill the requirements of SOLAS Chapter IV related to the different GMDSS sea areas

1.1 GMDSS equipment – Sea Area A1

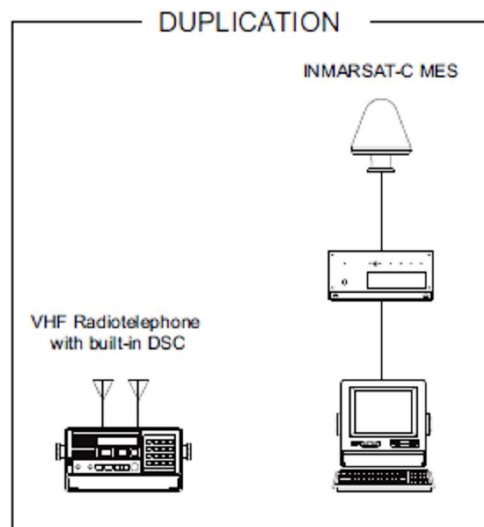
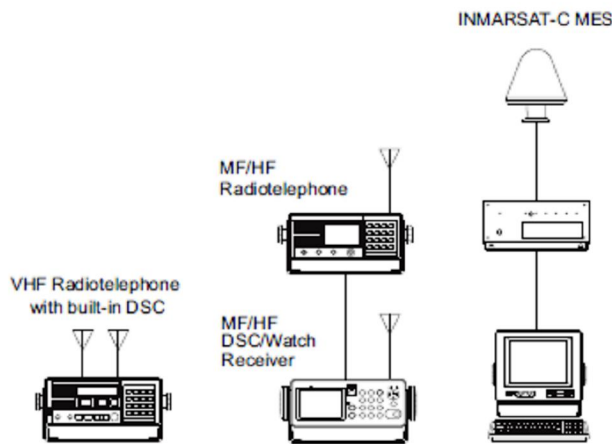
VHF Radiotelephone with built-in DSC



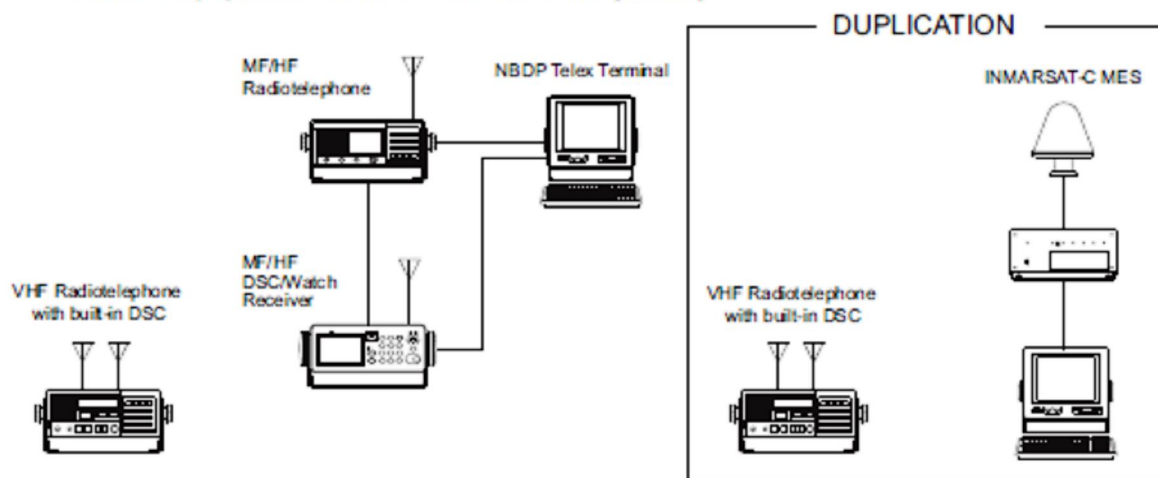
1.2 GMDSS equipment – Sea Area A1 + A2



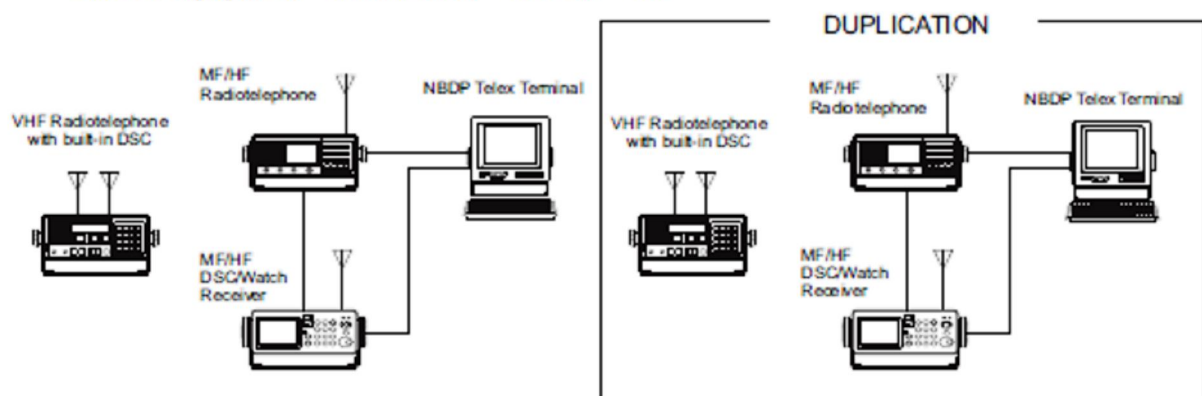
1.3 GMDSS equipment – Sea Area A1 + A2 + A3 (INM)



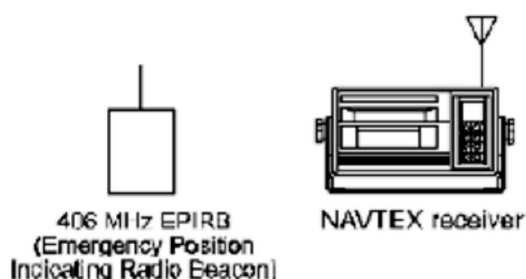
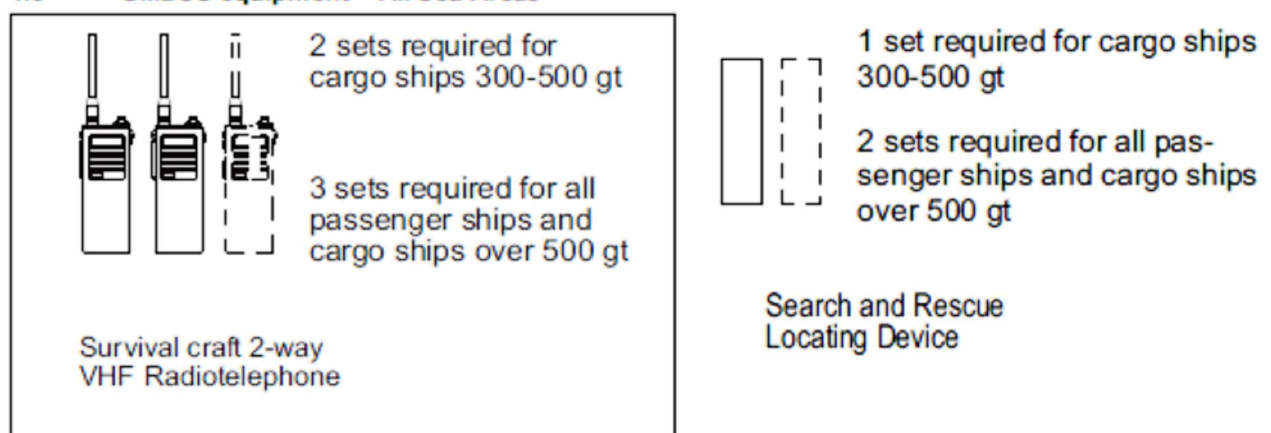
1.4 GMDSS equipment – Sea Area A1 + A2 + A3 (MF/HF)



1.5 GMDSS equipment – Sea Area A1 + A2 + A3 + A4



1.6 GMDSS equipment – All Sea Areas



required to remain operative even if the main source of electrical power fails. Such a network shall have two supply units comprising either:

7.2.1 a power supply unit with a capacity sufficient for all the connected consumers together with a charger which, acting in buffer operation with the back-up battery, is capable of supplying continuously all the connected consumers and maintain the battery in the charged condition or

7.2.2 two chargers, which meet the conditions stated in 7.2.1.

7.3 With regard to residual ripple, the supply facilities specified in 7.2.1 and 7.2.2 shall be designed to ensure trouble-free operation of the connected systems even when the battery is temporarily disconnected.

7.4 One of the power supply units or chargers shall be supplied directly from the main switchboard.

7.5 Failure of the power supply units and chargers shall be signalled visually and audibly.

7.6 Battery chargers with a charging capacity of $P \geq 2$ kW shall be tested at the maker's works in the presence of a Surveyor.

8. Emergency shutdown facilities

Emergency shutdown facilities placed outside the sites at which the equipment is installed are to be provided for the following consumers. The consumers may be arranged in groups, provided that redundant consumers are allocated to at least two electrically independent groups.

Emergency shutdown facilities are to be provided for e.g.

- fuel pumps
- lubrication oil pumps
- oil burner plants
- separators
- fan motors
- boiler blowers
- auxiliary blowers for main engines
- thermal oil pumps

(see the GL Rules for Machinery Installations (I-1-2), Section 12, B.9.)

9. Radio and navigational equipment

9.1 General

The main- and emergency electrical power sources shall at any time maintain a sufficient supply of power to operate the radio equipment and to charge all reserve power sources for the radio equipment.

9.1.1 The radio and navigational equipment shall be directly supplied from both the main source of electrical power and the emergency source of electrical power by separate power supply circuits.

9.1.2 The power distribution for radio equipment shall be independent of that for the navigational equipment. The circuits from both the main and the emergency source of electrical power shall be terminated either in one or two distribution panels. If one distribution panel is used, the two circuits supplying the panel shall be provided with splitter feeding into two separate bus bars, one for the radio equipment and one for the navigational equipment. The panel(s) shall be located at the navigating bridge or other suitable position on the bridge deck.

9.1.3 Facilities shall be provided in each distribution panel for changing over between the main source of electrical power and the emergency source of electrical power. It is preferable that change over be initiated automatically. If a single distribution panel is used for both the radio and the navigational equipment, separate change over switches shall be provided.

9.1.4 Failure of any power supply shall initiate an alarm at the navigational bridge.

9.2 Radio equipment

9.2.1 A reserve source or sources of energy shall be provided to supply radio equipment, for the purpose of conducting distress and safety radio communications, in the event of failure of the ship's main and emergency sources of electrical power.

9.2.2 Further stipulations for the reserve source of energy are to be taken from the SOLAS Convention, Chapter IV and relevant IMO guidelines.

9.3 Navigational equipment

Where radio equipment requires an uninterrupted input of information from the ship's navigational equipment, it will be necessary for the equipment providing the data to be supplied from the same distribution board bus bar serving the radio equipment.

10. Sound signalling system

The ship's sound signalling system shall remain operative if the electrical main power supply fails.

CHECKLIST FOR RADIO INSPECTIONS.

Pre Boarding

- Confirmation of Vessel's ETA
- Flag and Classification Society details
- Owner and Agent information
- Liaising with Society Surveyor
- Check of all Test Equipment and availability
- Check of Rules and Guidelines (Incl. Latest updates)
- Availability of appropriate Inspection Forms.
- Check Flag State specific requirements, via Flag state website.

Upon Boarding

- Report to Master
- Report to Classification Society Surveyor
- EPIRB testing is carried out to the Completion of Survey Report using the Society's Form(s)
- Utilize Martronics Limited Check-List (Following pages)
- Report of deficiencies to Master and Surveyor
- Ensuring no inadvertent initiation of Distress is transmitted.

On Completion of Survey

- Check that all required fields are completed.
- Sign and Stamp forms
- All deficiencies and recommendations are clearly marked.
- Complete Martronics Limited 'Survey Report' with copies to
Master
Owner/Agent
In-House copy
- Retain Signed and Stamped Copy of above report with Master's signature.

On Return to Office

- File copies of Reports and Forms
- Invoice to organization that requisitioned the Survey.

RADIO INSPECTION

- **The Guidelines for Technical Inspections as detailed below, shall not be inferior to and will take into account the Standards described under DNV Statutory Interpretations and Appendix A of DNV AP406.**
- **Unless otherwise stated or necessary, the Technical Inspection shall utilize the following Test Equipment:**
 1. **FUTRONIC GMDSS TESTER (Serial # 01105)**
 2. **BIRD Digital Power Meter Model 5000-XT (Serial # 123600072)**

GENERAL REQUIREMENTS

- All controls operational and illuminated
- Call-Sign, MMSI, SelCall Number and INMARSAT Identities posted and visible.
- Radio Installation protected from adverse environmental conditions
- Suitable location of Radio Installation
- Sea Area of vessels trade
- Method of Duplication and Maintenance facilities
- At least Two independent means of Distress initiation from Navigation Position
- Examination of Antennas, Insulators and stays. (Check for mechanical and Electrical integrity, safety etc.)
- Examination of Reserve Source of Energy (Batteries).
Record of
 1. Specific Gravity of cells
 2. Location
 3. Availability of 1 or 6 Hours
 4. Charging capacity within less than 10 hours
- Main Source of Electrical Power
- Emergency Source of Electrical Power (if applicable)
- Test Equipment and Spares availability (if applicable)
- Emergency Lighting

CERTIFICATES AND DOCUMENTS

- Cargo Ship safety Radio Certificate expiry date
- Record of GMDSS Equipment & Form-R and check for any changes of equipment. Record changes where applicable
- Validity of Ship Radio Station License
- Radio Operators certificates
- Radio Log Book
- Availability of current ITU Publications
- Operators manuals

VHF (PRIMARY)

- Controls and Illumination
- Operation on all Channels
- Power Output and Transmission Line Quality (SWR)
- Frequency tolerance (5 ppm of Carrier frequency)
- Frequency Deviation when modulated with 1 Khz source < 5KHz
- On-Air Voice contact

- Speech Quality
- Operation of DSC control and Ch.70 Watch Keeping receiver.
- On-Air DSC check with another station
- Audible check of Alarm
- Verification of availability vessel's Positional Information
- Verification that equipment operates on Mains and Emergency and Reserve sources of Energy.

VHF (Secondary)

- Controls and Illumination
- Operation on all Channels
- Power Output and Transmission Line Quality (SWR)
- Verification of Frequency tolerance (within 5 ppm)
- On-Air Voice contact
- Speech Quality / modulation (<5KHz)
- Operation of DSC control and Ch.70 Watch Keeping receiver.
- On-Air DSC check with another station
- Audible check of Alarm
- Verification of availability vessel's Positional Information
- Verification that equipment operates on Mains and Emergency and Reserve sources of Energy.

MF / HF INSTALLATION

- General Examination of Equipment
- Power Output and Transmission Line Quality (SWR)
- Verification of Antenna Tuning on all bands and 2182 Khz
- Verification of Frequency Tolerance (10 Hz)
- On Air check to confirm Transmission and Reception – Voice.
- Modulation Quality
- Quality and sensitivity of receiving equipment.
- Verification that DSC Watch Keeping Frequencies are monitored continuously and during transmissions.
- On Air check to confirm Transmission and Reception – DSC
- Verification that Correct MMSI information is transmitted.
- Audible check of Alarm
- Verification of remote units and that Navigation Bridge position has priority.
- Print out of Distress, Urgency and Safety related messages.
- Verification of availability vessel's Positional Information
- General examination of TELEX Equipment.
- On Air test of Radio telex to confirm transmission and reception of all alphanumeric characters and correct Selective Calling Identifications.
- Verification that equipment operates on Mains and Emergency and Reserve sources of Energy.

INMARSAT

- General Examination of INMARSAT Ship earth station
- Where an uninterrupted supply of information from the ship's navigational equipment is required, verification that such information remains available in the event of a failure of the ship's main and emergency source of electrical power.

- Verification of the DISTRESS function by means of approved test procedure
- Verification by means of a Performance Verification Test or a recent hard copy of such test result.
- Verification that equipment operates on Mains and Emergency and Reserve sources of Energy.
- Verification of EGC functionality, with particular reference to amendments as detailed in MSC.306(87) viz ; NAVAREAs, Power sources, Antenna siting, Printing and Alarms.
- Distress Alarm Button(s) Testing
- Received Message Alarm functionality

OTHER GMDSS EQUIPMENT.

EPIRB

- General examination of condition of equipment.
- Visual inspection for any defects
- Suitability of hydrostatic release mechanism mounting and location on board.
- Identification marks are visible
- Expiry dates for battery and HRU
- Decoding of I.D. By approved test procedure using approved equipment. Hard copy of Test Report from the Testing equipment to be attached to report.
- Shore maintenance by approved organization, within 5 years of date of manufacture or previous SBM (where necessary)

TWO WAY VHF RADIOS

(Note: Acceptance criteria similar to Primary & Secondary VHF's)

- General Examination of Equipment
- Operational checks on Channels 6, 13 and 16.
- Verification of battery expiry dates (rechargeable Batteries)
- Verification of battery chargers.
- Verification of unused condition emergency batteries and their expiry dates.

RADAR TRANSPONDERS

- General Examination of Equipment
- Suitability of mounting and storage locations
- Verification of battery expiry dates
- Verification of operation on ship's 9 GHz radar. (For details of the visual representation of the SART signal, please refer to manufacturer specific Radar Operators Manual)

AIS SART

- General Examination of Equipment.
 - Suitability of mounting and storage locations
 - Verification of battery expiry dates
 - Verification of Built-In self-test
- Note: When activated, the AIS SART will transmit 1 x 'Message 14' and 3 x 'Message 1'

NAVTEX RECEIVER

- General examination of condition of equipment.
- Verification of operation or Self-Test or by recent hard copy.
- Using Test set, Transmit a Test message and check for proper reception and printout.

RESERVE SUPPLY (Radio Batteries)

- General Examination of Equipment and Battery compartment. Check for proper protection from external environments. If located inside a battery compartment, ensure adequate lighting and ventilation.
- Confirmation of Capacity (1 or 6 hours of operation)
(Minimum capacity is calculated as: ½ transmitter currents + all receiver currents + emergency light + GNSS receiver + any other devices) times the number of hours necessary to power the station (1 or 6 hours).
- Confirmation that all equipment continue to operate when AC mains supply and Battery Charger are switched off (simulate black-out condition)
- Confirm individual Circuit Breakers (re-settable fuses) are marked correctly and of suitable capacity. In case of doubts regarding the source of the reserve supply to any individual equipments, switch off the Radio Battery supply (either at the breaker or remove the battery fuses) and confirm.
- Confirmation that the Battery Charger is capable of recharging batteries fully within 10 hours. Record Maximum battery charging current.

AUTOMATIC IDENTIFICATION SYSTEM: A. I. S.

(Please refer to DNV AP406 Appendix B, for guidance on testing & acceptance criteria)

- Check if the AIS & ALL its accessories Interface/PSU/etc. are Type Approved
- Check if the Operating Manual is available onboard.
- Check if the AIS antenna, has been marked on the “Antenna Location Plans”
- Check if the AIS is connected to the Main / Emergency Power Source.
- Check if the AIS External Sensors GPS + Gyro + ROT connected.
- Check if the Static Data is correctly entered, and protected by Password.
- Check if the Voyage Data is entered correctly.
- Check for the manufacturers B.I.T.E. Self-Test and Perform the Test.
- Check for the Power Output of the AIS is 12.5 W (8.85W< Po<17.5W)
- Check for Output Frequency to be within $\pm 500\text{Hz}$ (Tolerance = 3 ppm)
- Check Transmission line quality (SWR)
- Check with other vessels in the vicinity that the AIS data is received correctly.
- Check if Pilot Plug is provided, along with an 110V AC International socket.
- Check Frequency of AIS with designated AIS Tester and provide Test Results by hardcopy.
- Check the AIS with the AIS Tester, if all parameters are OK.

SHIP SECURITY ALERT SYSTEMS: S. S. A. S.

- Company’s CSO to be informed that a SSAS Test is being carried out for SRT
- Check if the Equipment is Type Approved.
- Check if the Operators Manual / Test procedure is available onboard.
- Check if there are min 2 Alert activation points, and both buttons to be tested.
- One mandatory on bridge, and 2nd covert point.
- Check if the SSAS equipment is kept in a secure covert position.
- Check if the SSAS Equip can be operated from AC & DC Power Supply's.
- Check if the SSAS works on the Internal back-up Battery supply.
- Check if the SSAS has a TEST position for activation of the Alert.
- Check if the SSAS, is independently operated from the GMDSS Radio station.
- Check if the SSAS continues to be send an Alert until de-activated or re-set

- Check if the SSAS Alert sends the follow info: Name, IMO No, MMSI, Date, UTC Time, Position, ID, & Type Of Message, etc.
- Confirm that the Alert Test was successfully carried out, by a Print Out received from the Company's C.S.O.
- NOTE: SSAS Test to be carried out only if requested by Class, as this is NOT part of the Safety Radio Survey.

VDR / S-VDR Annual Performance Testing

- Request for attendance must be received in writing from owners / representatives.
- Confirm authorization by manufacturer's to carry out APT.
- The Tech / Service manual for the equipment Make/Model/ etc. The software programs for the particular equipment.
- Inform owners that VDR APT will not commence if there are any errors alarms missing inputs from equipment, or battery validity being less than a year from date of current APT.
- Prepare all Test Equipment, Technical / Service Manuals / Laptop, / Checklist / IMO Resolutions A861(20) IEC 61996-1 & 2, Instructions, APT Forms, Cert Of Compliance, etc
- As per the manufacturer's guidelines, for APT carry out all inspections in detail.
- All timings, recorded data, as per check list to be noted, and logged down.
- Any, deficiencies to be reported to Master / Class Surveyor.
- Documentation to be filled in the respective Class Form / manufacturer's form, & handed over to the attending Class Surveyor / Master accordingly.
- After APT, master to be shown that VDR is functioning normally, and ships staff to be briefed about the importance of SAVE function during Emergency manufacturer's to be sent all documentation, as per their guidelines.

V.D.R. RECORDING & INFO PROCEDURES.

- Prior commencing the extraction / recording from the "Capsule "check for any alarms, error indications on the remote alarm unit.
- If any " Error " indications appear, prior extracting the data, The Master to be informed of the same immediately, and not to commence APT
- With the Masters express permission – reset or re-initialize the VDR system. If error disappears after reset, then proceed for extraction from the capsule, if not, then inform Master of the error indications.
- Check the Battery Expiry Dates of Acoustic Beacon, and the UPS Battery. Same should be valid until the next expiry of the VDR inspection.
- Inform Master / Owners that the battery needs immediate replacement.
- Switch OFF the Mains AC power Supply, and check operation on the internal back-up battery, for 1 hr. 55 mins. Check the battery voltage as per manufacturer's instructions.
- As per manufacturer's procedure & guidelines, with the original software, proceed to extract the date from the capsule, and NOT from the HDD storage device.
- After successful completion of extracted data of last 12 hours, replay the recording, via the manufacturer's software, and check that all parameters are recorded as per IMO Reg 861(20).
- Special attention is drawn to the accuracy and synchronization of all input sensors, include date, time and position stamp.
- After above verification, also carry out a LIVE operational check that the data is stored on the external storage device the HDD / CF Card
- Ensure that the Ships Staff is aware of the emergency recording procedures, from the SAVE function.
- Check the Capsule + Acoustic Beacon physically for the following;
 - Physical Damage etc.
 - Florescent High Visibility Coating.
 - Check the battery expiry date.
 - Check the Battery Voltage and replace if necessary
 - With the Ping Tester Check the Acoustic Beacon.

- Verification that Primary Radar equipment is in good working order.
- Verification that Secondary Radar equipment is in good working order.
- Verification of Radar Plotting Aids (ARPA)

- Verification that Depth Sounding equipment is in good working order
- Verification that vessel's AIS is operational.*

(* Classification Society's checklist to be consulted)

SPECIAL MEASURES FOR PASSENGER VESSELS

- Examination of Distress Panel.
- Verification where possible of the transmission of the Distress Alert through the use of a single button.
- Verification that the ship's position is provided to the Radio Equipment used in the initial distress alert.
- Verification that Distress Alarms are audible and visible, where possible.
- Examination of the means of two-way radio communication on the aeronautical frequencies and verification of the operation of the equipment.

ADDITIONAL INFORMATION

- Note additional requirements of the Flag State
- List of any additional radio communication and navigation equipment.

'SURVEY REPORT' FORMS



Martronics Limited

PO Box 34612, Birkenhead, Auckland

Phone: + 64 9 419 5518

Fax : + 64 9 419 5517

Email: martronics@martronics.co.nz

www.martronics.co.nz

Vessel	Call sign	MMSI
Port	Agent	PO ref.
Date		

Report:

Deficiencies / Remarks:

Radio Inspector

Master

Note: A hand written Service report may be provided, in place of this form.



Martronics Limited N/1 Henry Rose Place, Albany, Auckland 0632, New Zealand Ph +64 9 415 5679 www.martronics.com

ANNUAL TESTING OF COSPAS-SARSAT 406 EPIRB

(Ref IMO MSC/Circ 1040 & SOLAS Reg IV/15.9)

1. Vessel Details

Name of Vessel		Type of Ship	
MMSI Number		IMO Number	
Gross Tonnage		Date Keel Laid	
Port of Registry			

2. 406MHz EPIRB

Make		Model	
Serial Number		General Condition of Equipment	
Periodic Maintenance Due Date		Operating Instructions Available	
Battery Expiry Date		ID Labels Intact	
Location		Type of Mounting	

3. Test Results

Self-Test		121.5 MHz Transmission	
Frequency Measured		No Transmission After Re-mounting	
Assigned ID		Decoded ID	
Decoded Hex Decimal Code			

4. Hydrostatic Release Unit

Make		Model	
Expiry Date		General Condition of Equipment	

5. Test Equipment used

Make & Model	Futronics MkII Maritime Communications Test Box	Serial Number	01105
--------------	---	---------------	-------

6. Remarks

--

Place

Date

Tested By



Martronics Limited N/1 Henry Rose Place, Albany, Auckland 0632, New Zealand Ph +64 9 415 5679 www.martronics.com

AUTOMATIC IDENTIFICATION SYSTEM (AIS) FUNCTIONAL TEST REPORT
 MSC.1/Circ.1252, GUIDELINES ON ANNUAL TESTING OF THE AUTOMATIC IDENTIFICATION SYSTEM (AIS).
SOLAS Chapter V Regulation 18.9

1. Vessel Details

Name of Vessel		Type of Ship	
MMSI Number		IMO Number	
Gross Tonnage		Date Keel Laid	
Port of Registry			

2. Installation Details

Make		Model	
Type Approval Certificate Available		Installation Report Available*	
Drawings & Antenna Plan Available		Configuration Report Available*	
Pilot Plug Available		120 VAC Available Near Pilot Plug	
Source of Power	Main	Emergency	Reserve

**For new installations only*

3. AIS Programming – Static Information

MMSI Number		Name of Vessel	
IMO Number		Type of Vessel	
Radio Call Sign		Length	Beam
Location of GNSS Receiver Antenna	A	B	C D

4. AIS Programming – Dynamic Information

Vessel Position with Accuracy & Integrity Status	
Time in UTC (Source: GNSS Rxer)	Navigation Status
Course Over Ground (Source: GNSS Rxer)	Rate of Turn (where available)
Speed Over Ground (Source: GNSS Rxer)	Heel, Pitch & Roll Angle (where available)
Heading	

5. Performance Testing and Measurements

Frequency Measurements:	Ch 1	Ch 2	Ch 3
Power Measurements:	Output	Reflected	
AIS Response to Virtual Vessels	Operation without External GPS Antenna		
Polling Data on Ch 70	Read Data	Send Data	

6. "On Air" Performance Test

Check Reception Performance	Polling by Shore Based AIS Installation
Confirm Reception of Own Signal by Other Vessels / VTS	

7. Remarks

--

The AIS has been tested in accordance with IMO SN/Circ.227 and resolution MSC.74 (69) annexure 3.

CLASSIFICATION SOCIETY SPECIFIC REPORTING FORMS

The most current editions of the Society's Safety Radio Inspection Forms and checklists are available 'on-line' and in electronic media format.

Martronics Limited maintains a library of these documents on CD and USB drives.

Reports are completed on a portable notebook computer and printed copies are handed over prior to departure from the vessel.

A handwritten Service Report may also be issued upon completion of the Radio Inspection.

DOCUMENT CONTROL

A periodical check, at no more than 6 monthly intervals is made to ensure that all relevant publications viz. IMO performance standards, ITU regulations, SOLAS etc. are up to date.

Where necessary, these will be updated or new publications procured.

CODE OF CONDUCT



Martronics Limited

PO Box 34612, Birkenhead, Auckland

Phone: + 64 9 419 5518

Fax : + 64 9 419 5517

Email: martronics@martronics.co.nz

www.martronics.co.nz

May 30, 2009

CODE OF CONDUCT

PREAMBLE:

The Surveyor must be a person of integrity, who shall conduct his business in a professional and ethical manner. Shall not violate or attempt to violate the Code of Ethics and Rules of Practice, or knowingly assist or induce others to do so.

The Surveyor shall be dedicated to the preservation of life and property in the marine environment.

1. STRIVE TO ENHANCE THE PROFESSION

The surveyor shall -

- Be competent, prompt, and diligent and demonstrate respect for the survey profession. Competence requires knowledge, skill, thoughtfulness, and preparation reasonably necessary for the assignment.
- Enjoy a favorable reputation within the local business community.
- Cooperate in developing the profession by:
- Contributing his skills and knowledge to further the profession's commitment to serving the Maritime community.
- Exchanging general information with peers and associates.
- Contributing to the work of technical societies, regulatory agencies, and specialized professional education.

2. MAINTAIN AND ENHANCE THEIR PROFESSIONAL KNOWLEDGE & EXPERTISE

- Participate in continuing education as required by the rules of the Society.

CONDUCT THEIR BUSINESS IN A PROFESSIONAL MANNER

- Accept only assignments that can be completed with professional competence.
- Advertise only in a dignified manner, being careful to avoid misleading statements.
- Respect the confidential nature of marine surveying.

MAINTAIN INDEPENDENCE, INTEGRITY & OBJECTIVITY

- When representing the client, endeavor to present facts and opinions without prejudice.
- Refrain from suppressing, over-emphasizing or manipulating facts.

- ✦ Set fees based on work performed for a client and avoid any form of compensation that could be perceived as corrupting judgment.

5. AVOID PREJUDICE AND CONFLICTS OF INTEREST

- ✦ Avoid assignments that would create a conflict of interest.
- ✦ Inform the client of any business connection, interest or affiliation that might influence judgment or impair the disinterested nature of a survey.
- ✦ Accept compensation from more than one source only with the full knowledge of the interested parties.
- ✦ Not make false, misleading, deceptive or unfair statements concerning member surveyors or the surveyor's services, qualifications or integrity.

COMPLAINT FORM



Martronics Limited
PO Box 34612, Birkenhead, Auckland
Phone: + 64 9 419 5518
Fax : + 64 9 419 5517
Email: martronics@martronics.co.nz
www.martronics.co.nz

CUSTOMER COMPLAINT FORM

Vessel:	Complainants Name:
Port:	Owner/Agent:
Date:	

NATURE OF COMPLAINT:

REMEDIAL ACTION TAKEN:

REMARKS:

Signed on behalf of Martronics Ltd.

TRAINING AND QUALIFICATIONS

GENERAL:

Martronics Ltd requires the minimum qualification of GMDSS GOC in order to conduct Radio Surveys on SOLAS Vessels.

The following procedure shall apply for new employees:

- The candidate shall possess at least 2 years of experience as an Electronics Service Engineer in the Marine / Aviation industry.
- The candidate is internally briefed on the procedures and the contents of this and other relevant documents are made available.
- The candidate will assist, in the performance of Radio Surveys for a period of at least 12 months.
- The candidate is then allowed to perform Radio Surveys under the supervision of the supervising surveyor, until the necessary standard is achieved.
- Upon demonstrating that the candidate has achieved the required standard of performance, application is made to the Class Societies for approval of that candidate, as a Radio inspector.
- Additionally, all “surveyors” within the organization attend manufacturer specific training at regular intervals.

H.R. Daruwalla

1. Record of Qualifications
2. Training records
3. Record of Experience

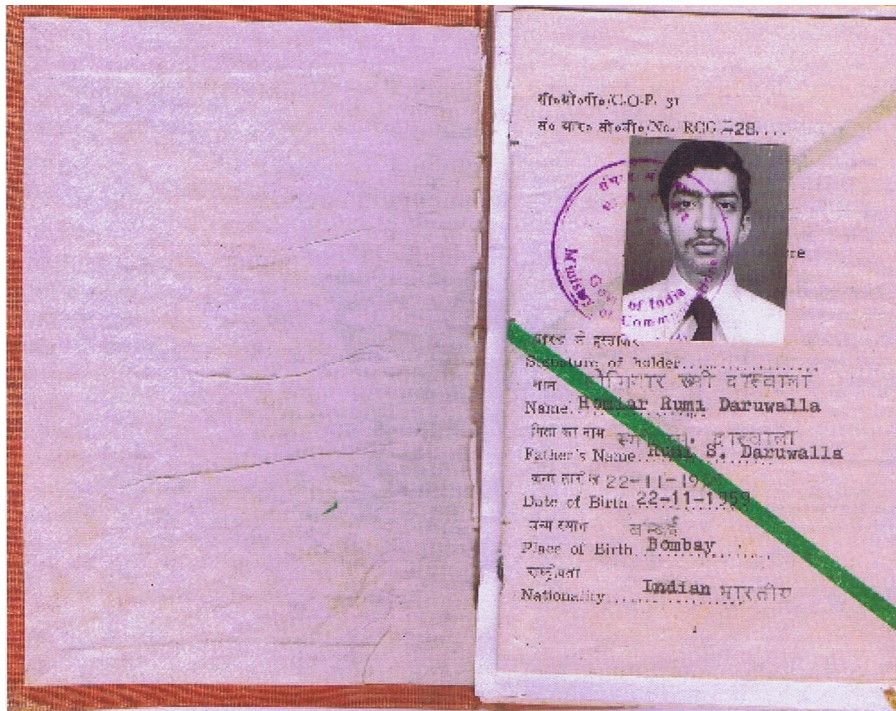
EDUCATIONAL & PROFESSIONAL QUALIFICATIONS

1985	Diploma in Digital Electronics and Microprocessors at St. Xavier's Technical Institute, Bombay, India.
1985	Radio Officers' General Class Certificate (formerly Radio Officers' First Class Certificate) at St. Xavier's Technical Institute, Bombay, India.
1980	Radio Officers' Second Class Certificate at St. Xavier's Technical Institute, Bombay, India.
1979	Diploma in Radio Servicing at St. Xavier's Technical Institute, Bombay, India.
1977	Higher Secondary Certificate in Physics, Chemistry and Mathematics.
1975	Secondary School Certificate.

PROFESSIONAL TRAINING

FURUNO ELECTRIC CO.	GMDSS equipments, INMARSAT, FLEET systems, Radars, Sounder, Sonar, ECDIS systems etc.
GLOBE WIRELESS,USA	Data over HF Radio.
SEATEL	TVRO and VSAT Systems.
SP RADIO, Denmark	GMDSS equipment.
TRANSAS MARINE	ECDIS Systems.
TRIMBLE, USA	Inmarsat C, GPS.
TWIN DISC, USA	Engine Control Systems.
AUT, NZ	Service Management.
Auldhouse , NZ	<ul style="list-style-type: none">• COMPTIA A+ and NETWORK +• Managing and Maintaining Windows 2003 Server
KVH	TVRO systems
C-PLATH, Germany	Gyrocompass, Autopilots and Steering Systems, Electromagnetic and Doppler Logs etc.
BROADGATE, UK	VER 3000 and VER 4000 VDR and S-VDR Systems
KELVIN HUGHES, UK	Manta Digital Radar, ECDIS VDR and S-VDR systems.
SHIPEQUIP, Norway	TVRO and VSAT systems.
MTN Seamobile, USA	VSAT Systems
JRC, JAPAN	S-VDR & VDR Technical Training, incl. APT.
BOSIET & UKOOA	Basic Offshore Safety.

ROGC GMDSS CERTIFICATE



WORK EXPERIENCE

MARTRONICS LIMITED, AUCKLAND:

January 2008 to date. Director.

ELECTRONIC NAVIGATION LTD., AUCKLAND.

September 1997, to October 2000. Senior Service Engineer in charge of Commercial Shipping Sales and Service.

Radio Inspector for Classification Societies

Class NK

BV

DNV

From November 2000 to November 2001 - Commercial Shipping Manager.

From December 2001 – December 2007 - Service Manager.

Responsibilities include

- Managing a team of 6 Service Engineers, 2 Trainees, 1 Service Support person and 1 Technical Manager.
- Supporting In-house R&D projects.
- Project Management

- Training
- QA certification (ISO 9000-2001)
- Departmental Budgets

Classification Surveyor for Germanischer Lloyds, Bureau Veritas, Det Norske Veritas and Class NK.

WRIGHTS LTD., AUCKLAND

October 1995 to September 1997 as Senior Service Engineer.

COMMUNICATIONS DEVELOPMENTS LTD., AUCKLAND

July 1995 to September 1995 as Service Technician.

NEXT ELECTRONICS LTD., AUCKLAND.

June 1995 to July 1995, as Service Technician.

PROCOMM - PROFESSIONAL COMMUNICATIONS, BOMBAY, INDIA

1990 to 1995 as partner.

ELEKTRONIK LAB, BOMBAY, INDIA

1988 to 1989 as Electronics Service Engineer.

UGLAND BROTHERS, ENGLAND

1987 - 1988 Sailed as Radio Officer.

SHIPPING CORPORATION OF INDIA

1980 - 1986 Sailed as Radio Officer.

ADDITIONAL INFORMATION

Student Member of the Institute of Electronics and Telecommunication Engineers.

Currently, completing Microsoft Certified Systems Administrator (MCSA) certification.

Paul James Lunny

EDUCATIONAL, PROFESSIONAL QUALIFICATIONS & TRAINING

2013	GMDSS Operators Training Certificate , Maritime School, Auckland
2002	Royal New Zealand Air Force Avionic Technician Course.
2001	Electrical Workers Registration Board, Electrical Service Technician Part B.
1999	Royal New Zealand Air Force Avionic Mechanic Course.
1999	Royal New Zealand Air Force Basic engineering Course.
1999	Electrical Workers Registration Board, Electrical Service Technician Part A.
1992	Higher School Certificate.

MGOC CERTIFICATE



Certificate Number:NZL8796
Client Number:515912

NEW ZEALAND

Radio Operator Certificate of Competency

(Issued under the authority of section 134 (1)(e) of the Radiocommunications Act 1989 and regulation 24 of the Radiocommunications Regulations 2001 and remains valid unless revoked by the Chief Executive under section 26 of the Radiocommunications Regulations 2001)

Paul James Lunny

This is to certify that the above named person meets the competency requirements for the class of certificate

Maritime General Operator's Certificate

under the authority given by the Ministry of Economic Development.

Personal Details

Date of Birth: 24-Dec-1974
Place of Birth: Auckland
Country of Birth: New Zealand
Height: 1.78 metres
Complexion: Fair
Colour of Eyes: Blue
Colour of Hair: Brown
Address: 28 B Pahi Place
West Harbour
Auckland
New Zealand



The above named person meets the requirements to operate a maritime radio station in accordance with a Radio Licence or a General Radio Licence, issued by the Ministry of Economic Development under regulation 8 or 9 of the Radiocommunications Regulations 2001 for the purposes of maritime communications.

The competency requirements to which this certificate relates are specified in Schedule 4 to the Radiocommunications Regulations 2001.

Thomas Fernandes
Approved Radio Examiner Number: ARX2044
Issued:31-May-2013

Printed:31-May-2013 11:21:53

Radio Surveys Conducted

Date	Vessel	Class	Notes
22/05/2012	Southern Lily 2	ClassNK	Survey carried out by Homi - Paul under instruction.
28/05/2012	Cap Blanche	GL	Survey carried out by Homi - Paul under instruction.
7/06/2012	Spirit of Endurance	GL	Survey carried out by Homi - Paul under instruction.
12/06/2012	Maersk Juan	GL	Survey carried out by Homi - Paul under instruction.
2/07/2012	Pacific Guardian	GL	Survey carried out by Homi - Paul under instruction.
6/07/2012	Cap Vilano	GL	Survey carried out by Homi and Paul.
9/07/2012	Cap Pasado	GL	Survey carried out by Homi and Paul.
9/08/2012	Southern Express	GL	Survey carried out by Homi and Paul.
11/09/2012	MSC Didem	BV	MF/HF testing only. Carried out by Paul.
26/09/2012	Sofrana Tourville	BV	Survey carried out by Homi and Paul
9/10/2012	Reef Express	GL	Survey carried out by Paul - Homi observing.
2/11/2012	Reef Nauru II	GL	Survey carried out by Paul - Homi observing.
20/01/2013	JPO Scorpius	GL	Survey carried out by Paul - Homi observing.
1/02/2013	Southern Reef	GL	Survey carried out by Paul
5/02/2013	Forum Fiji	Class NK	Survey carried out by Paul - Homi assisting
12/02/2013	Sara Theresa	BV	Survey carried out by Paul - Homi assisting
26/02/2013	Southern Fleur	BV	Survey carried out by Paul - Homi assisting
8/03/2013	Buzzard Bay	BV	Survey carried out by Paul - Homi assisting
24/03/2013	Ocean Princess	Flag	Survey carried out by Homi and Paul

TEST EQUIPMENT

TEST EQUIPMENT

1. List of Equipment (attached)
2. Operational Instructions
3. Calibration and maintenance record

LIST OF TEST EQUIPMENT

Type	Manufacturer/Model	Serial Number
406 EPIRB Tester	SARTECH ARG 5410	323
Radiation Proof Enclosure	SARTECH	--
Frequency Counter	Optoelectronics Cub	3296044
Frequency Counter	Kaise SK-6710	1160
Wattmeter	Bird Model43	105932
VHF SWR & Power Meter	Daiwa CN-460M	--
MF/HF SWR & Power Meter	Trio PF-810	0118100
Multimeter	Fluke Model 83	199024
Oscilloscope	Tektronix TDS21	0B032403
Oscilloscope	Siwatsu SS5416A	32341822
VDR Underwater Beacon Tester	Kelvin Hughes CBPG29	--
Insulation Tester	Kaise SK3031	12383
Battery Discharge Tester	Lindford 612BT250	5/91
Hydrometer	--	--
AIS Tester	SQN	10210-0315
Transducer Tester	EDI TT-2D	10-508
Sonic Level Tester	Digitech QM-1589	8101170
Digital Clamp tester	Kyoritsu 2007	1134445
Logic Probe	Kenwood DP-71	--
Futronic GMDSS test Set *	Futronic MkII	01105
BIRD Digital Power Meter *	Model 5000-XT	123600072

* PRIMARY TEST EQUIPMENTS.

- 1 Hard copies of the operator manuals for the above listed equipment can be found at the Martronics office and with the Survey Kit.
- 2 Soft copies can be found on the office server at O:\Surveys&APTs\

CALIBRATION PROCESS

For the purpose of Radio Inspections, all equipment is maintained in good working order.

The following equipment is sent out for calibration to the manufacturer or their recommended calibration service provider, when due.

- “Bird” Model43 THRULINE Power Meter
- “Opto Electronics” Frequency Counter.
- “SQN” AIS / DSC Tester
- “SARTECH” EPIRB Tester
- “FUTRONIC” GMDSS Test Box
- “Bird “Model 5000-XT Digital Power Meter.

Other Equipment, if used for the purposes of Radio Inspections is bench marked against the above and a calibration chart is generated and maintained.

Equipment used for “indicative” purposes only, is marked, accordingly.
Viz: Multimeter, RF ammeters etc.