



## Editorial

Welcome to issue 44 of AMERC News - *which doubles as **Circular 258** and, as such, must be circulated to all GMDSS instructors/examiners by their AMERC centre contact.*

In this issue we have the our usual brief on the most recent **Maritime Consultancy Group** (MCG - Page 2/3) - reflecting relevant items covered in the AMERC Executive Committee (EC) meeting earlier that day and including: upcoming **Executive EC vacancies** and procedure for nominating candidates; other posts coming up for renewal at AGM are **Assistant Chief Examiner (Overseas)** and **AMERC News Editor** - how to apply; and an item explaining how and why the **AMERC Website** has been changed to make it 'mobile friendly'. There's an update on **2013/14 examination papers distribution**; an item on the **requirement for centres to hold cv's for trainers and examiners**; a link to the ITU website, where you can **download a free copy of the latest RRs**; the revised procedure for **cancelling false EPIRB alerts**; an item on **TRANSAS GMDSS simulator v Windows 8**; and an **update on the future of Inmarsat-B, M and mini-M services**. The latest **quarterly examination statistics** are also included here.

We are (again) missing any **Member Profile** and will be happy to hear from any member organisation who'd like their centre profiled in a future issue.

We do have another '**GMDSS Criss-Crossword**' (Page 4) to help stretch candidates knowledge of **international geography** and the use of **Admiralty List of Radio Signals** ALRS) publications. The answers to puzzle 43 are also included (as if you needed me to tell you what they were!).

**Explanation Please?** (page 5/6) continues the discussion on DSC Geographical Area calling – specifically for MF DSC – and how to deal with 'circular' and 'square' area addressing; followed by an item on 'class of emission/mode of emission'.

**Tales from the Key-Side** (Page 7) shows a photograph that was recently discovered in one EC member's ditty-bag – from the AMERC AGM in 1974 - and which 'hit the local press'.

**Maritime Miscellaneous** (page 8/9) features a visit to the museum ship 'Soldek' in Gdansk, Poland, where your editor was delivering CAA (Offshore) Radio Operator training in the shipyard that was home to the Polish non-governmental trade union 'Solidarity'.

Once again, a big thank you to those of you who've provided feedback and questions for the News — *including the information provided in the yellow box at the top of page 3 telling us how we can download a FREE copy of the latest Radio Regulations*. Regarding other questions – if you have a question then it's quite likely that others have issues with the same thing, but may be too shy to ask. Getting this information across can be more helpful than the questioner realises ☺

Sláinte!

*Ian W*

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The **Maritime Consultancy Group (MCG)** meets regularly - currently four times each year – for the AMERC Executive Committee ‘Open Meeting’. MCG membership consists of AMERC Executive Committee (EC) representatives; the AMERC Chief Examiner; the MCA Chief Examiner and/or the MCA Deck & GMDSS Team Leader; and AMERC/industry specialists.

The open meeting can (occasionally) be attended by other invited persons.

The following items reflect discussions at MCG and/or associated items that are of immediate interested to Members and training centres (full minutes will be circulated appropriately).

***Circular 257 – (Distributed to members only) – details Executive Committee (EC) Vacancies, and vacancies for Assistant Chief Examiner, and AMERC News Editor.***

Members should have received Circular 257 from the Secretary, notifying members of the upcoming Annual General Meeting (AGM) - and also detailing which vacancies are coming up, and the procedure for proposing new EC members (who are then chosen as a result of member vote at AGM). A reminder that nominees for the EC must be proposed and seconded, and that (completed) nominations must be with the Secretary by 30<sup>th</sup> April 2013.

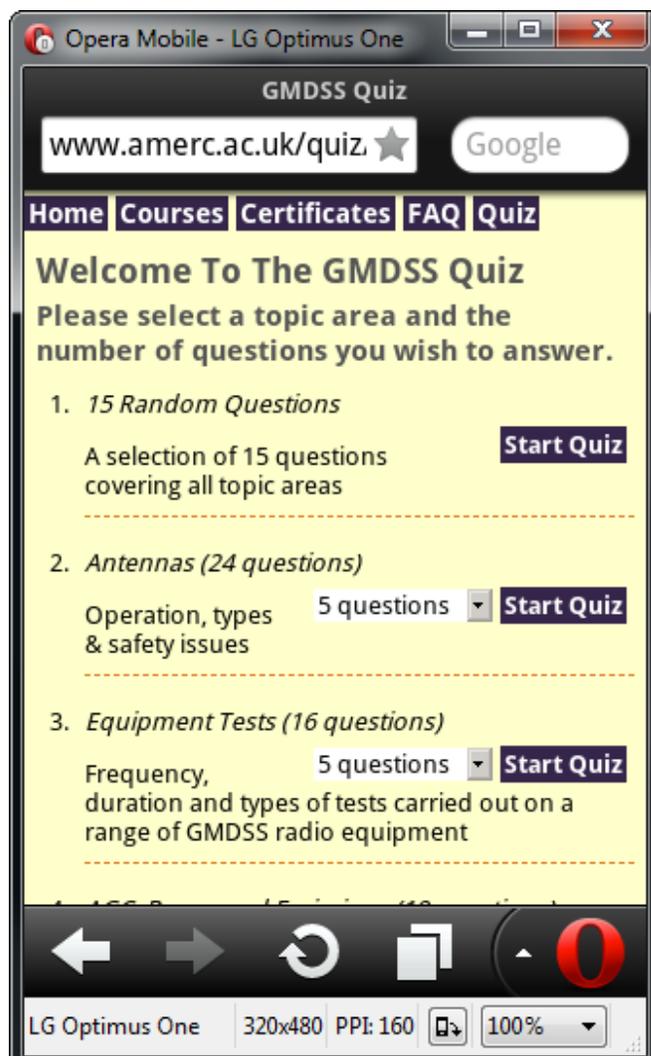
As with EC vacancies, and despite all current incumbents re-applying, a healthy interest will also be welcome for the vacancies at Assistant Chief Examiner (Overseas), and AMERC News Editor – those vacancies being filled by appointment of the EC – and for which applications are made by interested individuals (i.e. not ‘proposed & seconded’ by others). Closing date for applications is also 30<sup>th</sup> April 2013. The vacated post of Deputy Chief Examiner is not being filled at this time.

***Mobile Friendly [AMERC Website](#)***

After years of rapid growth, mobile web browsing is predicted to become more popular than browsing on desktop computers by 2014. To address this growing audience, the AMERC website has recently been made more ‘mobile friendly’ 😊. Mobile users now see a simpler single column design that provides the same content as the desktop version - but in a format which is much easier to view on the small screens typical of most modern mobile internet access devices (‘smartphones’). The site has

been tested on Blackberry, Android and Apple devices and should work well on other ‘smartphones’ – and you don’t even have to install an ‘app’! The screenshot (below) shows a typical mobile phone displaying the [AMERC Quiz](#) area of the website.

***On page 10 of the news you’ll find a classroom/library ‘poster’, which bright guys can scan with their smart-phones and link directly to the (PDG?) Quiz website 😊***



**(Maritime Consultancy Group (MCG)**  
*meeting and related items - continued).*

**GMDSS 2013/14 - GOC, ROC and LRC examination materials.** All examination centres have been informed that examination papers for all three types of exam (GOC, ROC and LRC) are now available for download from the (secure) document section of the AMERC website. Access is restricted to those with the relevant AMERC Security Certificate on their computer. The implementation date for the 2013/14 examinations was 1st February 2013. REC Co-ordinators were recently informed that GK14 (question paper *and* answer paper) – and the full set of OPT scenario papers - have been updated. If not already done, please download the latest versions, and replace the original version stored on your local media (CD, DVD, memory stick etc). Reminder - don't treat the website as an 'always available' source. Examiners are reminded to check suggested stations on OPT 'card info' against the publications in individual centres.

**Chief Examiner centre audits – requirement for centres to hold cv's of trainers and examiners:** The Executive Committee has asked the Chief Examiner to check that training and examination centres hold cv's for all GMDSS trainers and examiners, during his course audit visit. The course audit form will be amended to reflect this additional task. The Secretary will also be writing to all examination centres, asking for an electronic copy of examiner's cv's to be forwarded for AMERC central records.

**Free copy of the latest Radio Regulations:**

The 2012 edition of the ITU Radio Regulations, which includes the results of WRC-12, is now available at <http://www.itu.int/pub/R-REG-RR-2012/en>

The electronic version is free of charge, at least through mid-2014 as per ITU Council 2012's decision.

**EPIRB False Alerts:** Resolution 9 (Revision WRC-12) states that the procedure for dealing with EPIRB false alerts is now to '*immediately stop the inadvertent transmission and contact the appropriate rescue coordination centre through a coast station or land earth station and cancel the distress alert.*' Training centres are asked to check that their course material has been updated to take account of this revised procedure.

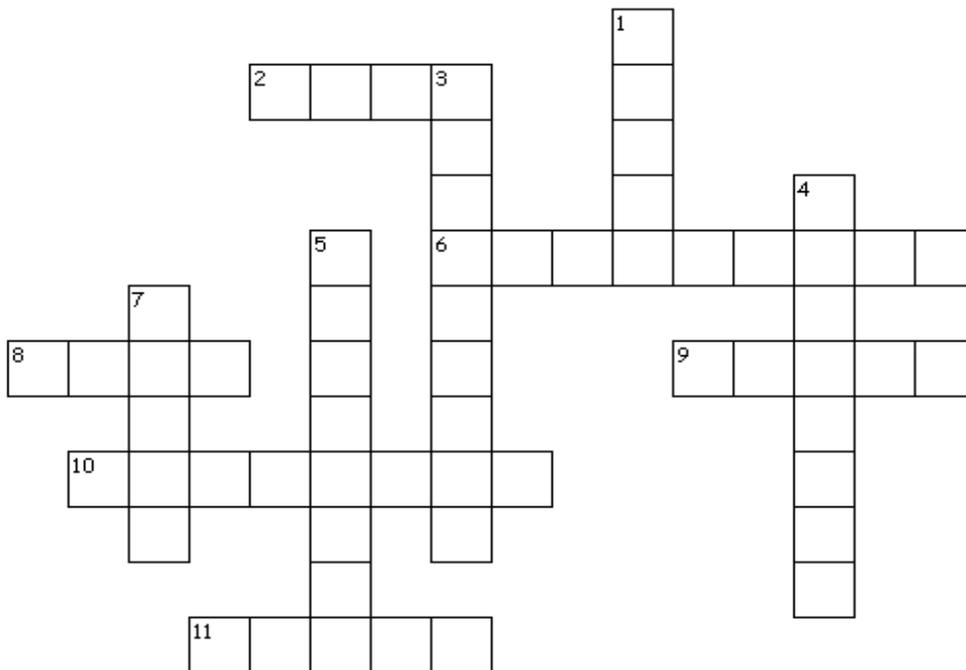
**TRANSAS GMDSS Simulator and Windows 8.** It has come to our attention that the current release of TRANSAS GMDSS simulator software (GMDSS TGS Tutor 4100 V 7.2) does not work with Windows 8, which was not available at the time of release. A new version of the TRANSAS GMDSS TGS Tutor is under development and is expected to become available during 2013/H2 (July onwards).

**Inmarsat-B, M and Mini-M Update.** I'm reliably informed that Inmarsat intends to retire **Inmarsat M** as a service on 30 December 2014, along with **Inmarsat B**. The intention is to retire the **maritime mini-M** service on 30 December of 2016. Over the coming years, I'm told, Inmarsat will continue working with its partners to successfully transition their maritime mini-M customers to the FleetBroadband and GPS FleetPhone services.

**GMDSS Examination Statistics – quarterly report:** National Administration Centre (NAC) examination statistics for the period **1 July 2012 – 28 Sep 2012** are shown below:

EXAMINATION	ENTERED (1 <sup>st</sup> time)	PASSED (1 <sup>st</sup> attempt)	% PASSED 1 <sup>ST</sup> ATTEMPT
UK GOC	274 (240)	236 (203)	203/240 (>84%)
ALL GOC	552 (478)	461 (394)	394/478 (>82%)
UK ROC	24 (24)	24 (24)	24/ 24 (100%)
ALL ROC	28 (28)	28 (28)	28/ 28 (100%)
LRC	18 (16)	16 (15)	15/ 16 (>93%)

**GMDSS Criss-Crossword Number 44** - all answers should be researched and/or confirmed by reference to ALRS, *where appropriate*



**Down**

1. Persian Gulf state whose sole land border, to the south, is with Saudi Arabia.
3. **F77** Distress telephone calls over the **IOR** satellite, using **station ID number 022**, will be directed to the rescue authority in this country
4. Met information for the Navarea IX **SafetyNET** service is issued by the authority in this country
5. **Port** and largest city in Turkey. **RT (HF)**; **VHF/MF/HF DSC**; and **NAVTEX** station location.
7. The **F77 LES** on **POR** with **ID number 003** is in this country

**Across**

2. Capital of **1-down**.
6. **MRCC** in the Faroe Islands
8. Phoneticised international ID letter for **NAVTEX** station at 10-across.
9. The **Nav-information co-ordinator** for **SafetyNET** info in **NAVAREA XV** is in this country
10. Spanish Med' **port** - location of **NAVTEX**, **VHF & MF DSC** Stations.
11. Phoneticised international **NAVTEX ID** for 5-down.

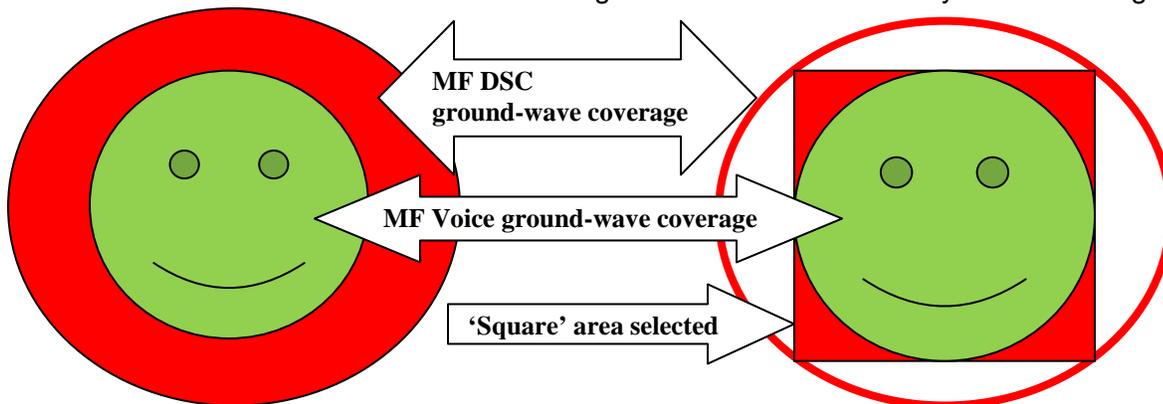
**Issue 43 answers: DOWN:** 1. Paita; 2. Mindanao; 4. Rabat; 5. Casablanca; 8. Nakhodka; 10. Sixteen.  
**ACROSS:** 3. Gambia; 6. Bissau; 7. AORW; 9. Banjul; 11. Kaliningrad; 12. Davao.

## Explanation Please?

This is the area for questions that may puzzle you – whether related to procedural questions, international regulations, or because it isn't clear why a specific answer is necessary when it seems that other answers may also appear to be appropriate. Or - even if you as an instructor are satisfied with the question - you may want to know why the candidate should have to produce the level of detail being asked. One question continues a previous discussion on DSC Geographical Area addressing; the other asks for an explanation of 'class of emission' and 'mode of emission'.

**Question:** Following-on from earlier questions about Geographical Area DSC addressing (a requirement on MF for DSC Distress Alert Relay, and for Urgency/Safety MF DSC Calls, rather than using the 'all ships' address that would be appropriate for VHF DSC) – we have some equipment that offers the area call in a 'square' format and another SSB set that offers 'circular'. When using the 'square' we are certain to sound DSC alarms onboard vessels beyond ground-wave voice-range (unless we restrict the square considerably) – something we can avoid when using the 'circular' format. To compound the problem - our ICS DSC2 Controller, though offering Geographical Area for Urgency and Safety, only offers 'all ships' or 'individual' for Distress Alert Relay (i.e. no Geographical Area, so we can't limit the range). For the sake of consistency within AMERC, how would you suggest that we deal with such issues in class?

**Reply:** As you recognise, the effective MF ground-wave coverage when transmitting a DSC Alert/Call will be considerably more than you can achieve on the associated voice frequency. For example - when using our own Furuno FS1570 radio (which allows the 'circular' format – diagram below left) with 150W on high power - we might expect to achieve in excess of 200NM with the 2187.5 kHz DSC alert/call (the 'red' circle). But - recognising that the same 150W output might only achieve effective **voice** range of around 130-150 NM when we move to 2182 kHz/working frequency (the 'green' circle) - we normally limit the circular area programmed to 150NM radius. If we had the Furuno FS2570, with 250W output, we could probably extend the circular area to 200NM radius without sounding the alarms on vessels beyond voice range coverage.



To achieve the same 200NM (ground wave) radius when using the 'square' area (above right) we'd have a number of vessels in the four 'corners' of the square who won't receive our voice transmission. [\*\*Reminder – a fuller explanation on square-area addressing was included in AMERC News 40.\*\*](#)

When using the ICS DSC2 for MF Distress Alert Relay – where we're stuck with the 'All ships' address without geographical limitation - there will be even more vessels who'll receive the DSC transmission without being able to hear the subsequent voice call. In both cases they should follow the published procedure for vessels receiving a DSC Alert/Call without any follow-up voice after a five minute interval. In the case of a Distress Alert, they'd 'relay ashore'. For Distress Alert Relay they know that someone else is dealing with it so could – assuming they've checked the casualty position and (the Master has) ascertained that they are not in any position to help - log the information and continue on voyage. For Urgency they should monitor the voice channel for 'at least five minutes' after which – if no urgency message has been received – they should 'if possible' inform a coast station. For missing Safety messages, your delegates might be advised to double-check what's been received on NAVTEX and/or SafetyNET to make sure they haven't overlooked anything pertinent to their position/voyage.

**Question:** For the benefit of those of us teaching GMDSS - but who don't have the classic 'Radio Officer' background - could you explain in simplified/lay-terms, the difference between 'Class of Emission' and 'Mode of Emission' (if there is a difference)? I'm thinking in particular for voice and telex transmissions when using the SSB radio.

**Reply:** The easiest approach is probably to think of 'voice' and 'radio telex' as the two 'classes' of emission (with DSC being a third 'class'). The classes can then be sub-divided into 'modes'.

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All MF/HF SSB radio **Voice** emissions are identified by a 3-digit mode identifier which, for the MF/HF SSB Radio, would be J3E, H3E and R3E – the '3' representing the 3-kiloHertz (upper-side) band of frequencies containing the 'intelligence' in the form of your voice (and across which your transmitter power is spread).

**J3E – Simplified:** *is the mode used on all marine MF/HF Single SideBand (SSB) voice channels, including 2182 kHz.*

**Elaboration:** J3E is the mode where the 'intelligence' (in the form of the **Upper SideBand** voice transmission) is emitted without the addition of the reference carrier frequency. If the receiver reference frequency is slightly different from the transmitter reference frequency, there may be some distortion in the received signal – hence the need to 'fine tune' or 'clarify' some incoming signals. The main advantage of J3E is that it is economical in the use of battery power (for the transmitting station).

**H3E – Simplified:** *selecting H3E will give the best quality when receiving 'broadcast' stations (e.g. BBC). However - you'll need to select J3E if using a broadcast signal to demonstrate 'clarify/fine-tune' on your receiver– which won't function if you leave H3E selected.*

**Elaboration:** broadcast stations transmit the 'full strength' carrier reference frequency alongside the voice signal. When H3E is used by the transmitting station, and the receiver is also set to H3E, the receiver will 'lock on' to the carrier even if there is a slight difference in the local receiver reference frequency (thus giving you a very clear signal – hence its use by broadcast stations where 'quality' is more important than just getting the message across/saving power).

**R3E – Simplified/elaboration:** *is the mode used to provide a 'pilot' or 'reduced strength' carrier alongside the voice band.* This pilot carrier will induce a 'tone' on the receiver, if off-frequency, allowing the receiving operator to 'tune-in' to the 'dead beat' – putting the receiver exactly on to the incoming signal – before both sides revert to J3E to exchange message(s).

For **Radio Telex** ('Class' variously identified as F1B/NBDP/FSK – where **FSK** means 'Frequency Shift Keying'; **NBDP** = 'Narrow Band Direct Printing' – and the '1' in **F1B** represents the narrow bandwidth within which your transmitter power is concentrated), the two relevant 'modes' are **FEC** and **ARQ**.

**FEC – Simplified:** *used when sending a message to more than one recipient at the same time (as with NAVTEX; and when broadcasting a distress telex message on 2174.5 kHz).*

**Elaboration:** FEC (**F**orward **E**rror **C**orrection) is used in 'broadcast' mode, where receiving station(s) equipment does not interact with the transmitting station. The 'correction' part is a misnomer, in that FEC will *detect* errors and *identify* them (showing the errors as \*asterisks\* - something you'll probably have seen on the occasional NAVTEX message), rather than 'correct' them.

**ARQ – Simplified:** *used for 'one-to-one' exchanges, with full error correction.*

**Elaboration:** **ARQ** (**A**utomatic **R**e**Q**uest) transmitting and receiving station systems synchronise, allowing the receiving station system to detect that a 'packet' of data was received correctly – in which case it **A**utomatically **R**e**Q**uests the next packet – or, when it receives a corrupt packet, it (automatically) requests a repeat.

**DSC/J2B** transmissions are contained within a 2kHz bandwidth and so, as with radio telex, your transmitter power is concentrated more than with the voice 3kHz bandwidth (hence the greater distance achieved by DSC as against voice on MF ground wave, as described on the previous page for geographical area calling). There's no 'sub-division' for this class of emission where MF/HF SSB radio is concerned.

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## Tales from the Key-Side - by AnonyMouse ...

This is the page for your stories – whether from personal experience at sea, at work, in the classroom or life generally – recent past or distant past. Or it may be something you've heard. Doesn't matter – we're looking for interesting, funny or informative stories that may make us laugh, cry or look for someone to hit.

Submissions may be edited, and the writer's name will, of course, be withheld on request.

**Dateline:**

AMERC AGM - Liverpool, England - 1974

**Time:**

The following day, in the late edition of Willie Williamson's local newspaper, (he wasn't up for the early edition ... )



Pictured at the AGM of the Association of Marine Radio and Electronic Colleges are (left to right) Mr C. J. Lydell, UK sales manager, Mrs Newell, Cllr J. R. Wilmington, Lord Mayor of Liverpool, Mrs Connors, Mr G. Brown, vice principal, Riversdale, and this year's AGM chairman, Miss Brown, and Mr F. W. Newell, manager, Liverpool depot.

Willie tells me that Fred Newell (extreme right of the photo) was his old boss at Marconi - he was the manager at the Liverpool depot and that Fred was '*A real nice bloke and one who looked after his men*'

[Got a Tale to tell? Got a Question? Want to say something?](#)  
[Click on this link to the AMERC Website to generate a message to the AMERC News Editor.](#)

**Maritime Miscellaneous: Maritime museum ship ‘SS Soldek’ in Gdansk, Poland.**

Most ex-seafarers like to visit maritime museums – all looking, no doubt, for different things. I particularly enjoyed my visit to this (ex-coal/ore carrier) museum ship in Gdansk, Poland – not least for the original radio kit in Soldek’s ‘cabin’, and that installed in the exhibition area.



The Bellini-Tosi MF D/F loops on the monkey island are now a rare feature of a ship’s radio antenna installation – direction-finding on the marine bands not being a part of the GMDSS functional requirement.

(Airband D/F is used on 121.5MHz, on SAR craft and passenger vessels – and increasingly on 406MHz for Cospas-Sarsat EPIRB location).



The sparsely-fitted bridge featured a single piece of radio-electronic kit bolted to the after bulkhead – the VHF radio control panel shown here. The VHF transceiver unit itself was inside the (radio) cabin, on the other side of that bulkhead, directly behind the control unit – and measured about 90cm high, 50cm wide and 25cm deep. The size of the control panel can be compared with my (cheap-and-cheerful) Nokia mobile phone resting on top. The only other means of communication installed on the bridge was the voice-pipe to the engine room ☺

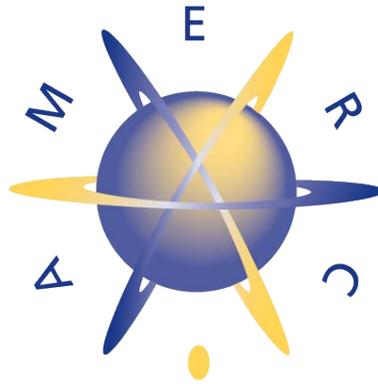


Soldek's own Main and Emergency radio kit, above left and right – located in the radio cabin directly off the bridge. The installation below – a bit more 'posh' than Soldek's own installation - was an exhibit in the main cargo hold (where temporary exhibitions feature).



For anyone interested, the museum also has a number of ship models, and the 'tour' includes an up-close (not for the claustrophobic) encounter with the boilers in an extremely cramped (but now very clean!) stoke-hole!

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# GMDSS Quiz

[www.amerc.ac.uk/quiz](http://www.amerc.ac.uk/quiz)

