



SOUTH AFRICAN NOTICES TO MARINERS

November 2020 EDITION

**PUBLISHED MONTHLY
BY THE
HYDROGRAPHIC OFFICE
CAPE TOWN**

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IMPORTANT

Mariners are requested to inform the Hydrographer, Private Bag X1, Tokai 7966, immediately of the discovery of new dangers, or changes or defects in aids to navigation and of shortcomings in South African charts or publications. Copies of form SAN HO-16, which is a convenient form on which to send in a report, is available on www.sanho.co.za and from any Official Chart Agent or the reproduction at the end of Section VI of the monthly edition of Notices to Mariners.

In addition to postal methods, the following additional communication facilities are available:

Notices to Mariners Web site :	Web : www.sanho.co.za
Urgent navigation information : (24 Hour Service)	E-mail : ncc@sanavy.co.za Fax : +27 21 787 2228
Other navigation information : (0730 1600 Mon Fri)	Fax : +27 21 787 2233 Phone : +27 21 787 2445/2408 E-mail : hydrosan@iafrica.com
General information : (0730 1600 Mon Fri)	Phone : +27 21 787 2408

**Captain (SAN) T. Stokes
South African National Hydrographer
NAVAREA VII Co-ordinator**

I

INDEX OF CHARTS AND PUBLICATIONS AFFECTED

Charts	Notices	Pages
79 (INT 2670)	78(T)	7
80 (INT 2680)	78(T)	7
119	78(T)	7
150	78(T)	7
1016	78(T)	7
PEXA 1016	78(T)	7
PEXA 1016A	78(T)	7
PEXA 150	78(T)	7
SC 4	78(T)	7
SC 5	78(T)	7

Publications	Notices	Pages
South African Tide Tables (SAN HO-2) 2021 Edition	80/20	9

Charts – New Charts / Editions	Notices	Pages
Nil.	-	-

Publications – New Publications / Editions	Notices	Pages
South African Tide Tables (SAN HO-2) 2021 Edition	79/20	9

Charts and Publications – Permanently Withdrawn	Notices	Pages
Nil.	-	-

Spheroid / GPS Positions

All positions quoted in these Notices are referred to the **WGS Spheroid**, unless otherwise indicated. On chart scales of **1: 150 000 and smaller**, positions from **GPS receivers** set to **WGS 84** may be plotted directly on these charts. Mariners are warned that **insertion of Clarke 1880 (or other) positions on Automatic Plotters which are set to WGS 84 Spheroid can result in inaccurate navigation practices.**

Temporary and Preliminary Notices

These are indicated by (T) or (P) after the notice number. These are printed on one side of the paper in order that they may be cut and filed and are placed at the end of Section II. To assist in filing, the year is indicated after the notice number. **Information from these notices is not included on charts before issue;** charts should be updated in pencil on receipt.

Permanent Notices

Permanent corrections in Section II are marked by a star adjacent to the notice number to indicate that the notice is based on original information. Periodic lists of permanent corrections pertaining to affected navigational charts and publications are published annually and copies may be obtained from the Hydrographic Office or through a Chart Agent.

Chart Corrections

Further details are contained in NP100 The Mariner's Handbook which should be consulted for the correct procedures of filing, inserting and noting all types of corrections on nautical charts and other hydrographic Publications. The Handbook may be obtained from Admiralty Chart Agents in Cape Town and Durban. Consult SAN HO-6 for Symbols and Abbreviations used on SAN Charts and NP735 for an illustrated explanation of the IALA Maritime Buoyage System.

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GUIDANCE NOTES FOR VIEWING AND PRINTING NOTICES USING ADOBE ACROBAT

For optimum results when viewing and printing material from the PDF digital files please note the following:

When printing data from the files, ensure the Fit to Page icon in the Adobe Acrobat print menu is switched off before printing. Otherwise large text pages will be compressed, or large size Blocks may not fit the chart.

If printing text or monochrome NM Blocks, the minimum specification is an Inkjet or good quality Laser Postscript printer with at least 6 MB of memory. (NB. If using a Postscript printer, ensure the Postscript printer driver is installed).

For printing Colour NM Blocks the minimum specification of printer is a good quality Ink Jet/Laser printer with 300 dpi resolution or greater.

If using certain types of Ink Jet printer ensure the setting is set to Dithered screening not Pattern screening.

Printed colour copies should be compared with the colour image on screen to ensure that all the colours have reproduced correctly. Printer property resolution and ink density may need to be increased or adjusted to obtain the best results.

Ensure the Colour Ink Cartridge is in accordance with the printer manufacturers specifications. Minimum paper specification for printing Colour NM Blocks is International paper size A4, thickness/weight 80 gms paper. (The same paper as used for NM Blocks in the NM Monthly). NB. (Ensure the paper quality is in accordance with the Printer manufacturers specifications).

The Hydrographer does not accept any liability for the display and printing of these digital Notices to Mariners on the user's equipment.

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**TEMPORARY NOTICES AND PRELIMINARY NOTICES
In force 01 December 2020**

CANCELLED NOTICES

Nil

TEMPORARY NOTICES

2020 Series

29(T)/20	Namibia	Port of Walvis Bay	Spit Buoy Racon N. Chart SAN 1004 (INT 2612), 1005 (INT 2613)
37(T)/20	Namibia	Walvis Bay Approaches	Oyster Lines And Buoys. Chart SAN 1005 (INT 2613)
38(T)/20	RSA	Offshore Adam se Baai	Current Metres. Chart SAN 54, 55, 77 (INT 2650), 115
39(T)/20	RSA	Port of Saldanha	Shoals. 1012 (INT 2672)
41(T)/20	RSA	Port of Cape Town	Depths. Chart SAN 1014 (INT 2682)
42(T)/20	RSA	Port of Port Elizabeth	Depths. Chart SAN 1025 (INT 7532)
43(T)/20	RSA	Port of East London	Depths. Chart SAN 1027 (INT 7541)
44(T)/20	RSA	Port of Durban	Depths. Chart SAN 1031 (INT 7562)
45(T)/20	RSA	Port of Richards Bay	Depths. Chart SAN 1033 (INT 7571)
46(T)/20	RSA	Richards Bay	Temporary Light Established. Chart SAN 60, 61, 87 (INT 7570), 132, 133, 1032 (INT 7572), 1033 (INT 7571), SC 12
50(T)/20	RSA	Port of Saldanha	Wreck. Chart SAN 1011 (INT 2673), 1012 (INT 2672), SC 2
51(T)/20	RSA	Saldanha, Hoek van Bobbejaan to Cape Maclear, Cape Point to Paulsberg, Smitswinkelbaai, Millers Point to Oatland Point, Roman Rocks, Mackerel Bay to Kalkbaai, Muizenberg to Swartklip, Seal Island, East Shoal and Macassar to Kleinmond, Mossel Bay to Plettenberg Bay	Octopus Lines. Chart SAN 79 (INT 2670), 81 (INT 7510), 82 (INT 7520), 118, 119, 120, 122, 123, 124, 150, PEXA 150, 1010 (INT 2671), PEXA 1010, 1011 (INT 2673), 1012 (INT 2672), 1016, PEXA 1016, PEXA 1016A, 1017, 1020 (INT 7521), 1022
52(T)/20	RSA	Mossel Bay	Mooring Buoy. Chart SAN 81 (INT 7510), 82 (INT 7520), 122

I cont/...

54(T)/20	RSA	Sandy Point Harbour	Buoys. Chart SAN 1009, SC 3
55(T)/20	RSA	Saldanha Small Craft Harbour	Reported Shoals / Rocks. Chart SAN 1012 (INT 2672), SC 2
57(T)/20	RSA	Langebaan	Rocks, Depths, Absent Aids to Navigation. Chart SAN SC 2
58(T)/20	RSA	False Bay	Desalination pipelines laid. Exclusion zones established offshore Strandfontein and Monwabisi. Chart SAN 150, PEXA 150, 1016, PEXA 1016
59(T)/20	RSA	False Bay	Buoy. Chart SAN 1017
60(T)/20	RSA	Knysna	Aids to Navigation Unlit And Absent. Chart SAN 1021
62(T)/20	RSA	Port of Durban	Reported Shoal. Chart SAN 1030 (INT 7561), 1031 (INT 7562), SC 12
63(T)/20	RSA	Table Bay	Waverider Buoy Deployed. Chart SAN 118, 119, 150, PEXA 150, 1013 (INT 2681), 1014 (INT 2682), SC 4
67(T)/20	RSA	Simon's Town	Lights Intermittent. Chart SAN PEXA 1016A, 1017
69(T)/20	RSA	Lamberts Bay, Laaiplek and St. Helena Bay	Dredging Operations. Chart SAN 1003, 1009, SC 3
70(T)/20	RSA	West Coast	Magnetic Anomaly. Chart SAN 1, 2, 5, 27 (INT 204)
74(T)/20	RSA	Saldanha	Aquaculture Development Zone. Chart SAN 1011 (INT 2673), 1012 (INT 2672), SC 2
75(T)/20	RSA	Ngqura Harbour	Buoys Unreliable. Chart SAN 1024 (INT 7531), SAN 1026 (INT 7533)
78(T)/20	RSA	False Bay	Whittle Rock Buoy and Racon. Chart SAN 79 (INT 2670), 80 (INT 2680), 119, 150, PEXA 150, 1016, PEXA 1016, PEXA 1016A, SC 4, SC 5

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PRELIMINARY NOTICES

2020 Series

Nil.

**SUMMARY OF SAN CHARTS AND PUBLICATIONS
PERMANENTLY WITHDRAWN**

Nil.

ERRATUM

October 2020 Notices to Mariners

75(T)/20* SOUTH AFRICA – South Coast – Ngqura Harbour – Buoys Unreliable.

1. Ngqura Harbour Fairway Buoy (Racon Tango) unreliable.

Amend: 025° 45.70' E

To read: 025° 41.70' E

**SA NAVY SAN CHARTS OF SOUTH AFRICA AND NAMIBIA THAT ARE REFERRED TO THE
WGS 84 SPHEROID**

1002 (INT 2631)	1004 (INT 2612)	1005 (INT 2613)	1010 (INT 2671)	1011 (INT 2673)				
1012 (INT 2672)	1013 (INT 2681)	1014 (INT 2682)	1020 (INT 7521)	1024 (INT 7531)				
1025 (INT 7532)	1026 (INT 7533)	1027 (INT 7541)	1029 (INT 7563)	1030 (INT 7561)				
1031 (INT 7562)	1032 (INT 7572)	1033 (INT 7571)	2003 (INT 7745)	2004 (INT 9056)				
1003	1015	1016	1017	1021	2051	2053	2054	3001
SC 3	SC 5	SC 9	SC 12					

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SA NAVY SAN CHARTS OF SOUTH AFRICA AND NAMIBIA THAT IS REFERRED TO THE CLARKE 1880 SPHEROID

1. Corrections to be applied to positions obtained from GPS satellite receivers (based on the Global Positioning System (WGS 84) spheroid) for plotting on SAN nautical charts based on the Clarke 1880 (mod) spheroid.

LARGE SCALE CHARTS

CHART NUMBER	SHIFTS (m)	
	Latitude	Longitude
SAN 1009	-16	64
SAN 1022	-12	48

1 : 150 000 AND SMALLER SCALE CHARTS

Positions obtained from a GPS Receiver can be plotted directly on these charts as the shift is negligible.

MISCELLANEOUS

1. Mariners are advised that the primary and most reliable means of communication with the Hydrographic Office for all URGENT navigational correspondence is via facsimile to number : +27 21 787 2228.

2. Current and archived South African Notices to Mariners are available in PDF format on website www.sanho.co.za.

GENERAL: SA NAVY HYDROGRAPHIC OFFICE CONTACT DETAILS

1. Mariners and interested parties are advised to take note of the SA Navy Hydrographic Office **24 hour service contact details**. This will assist to prevent late action being taken on important navigational information.

2. The relevant contact details can be found on the front page of the monthly Notices to Mariners, as well as at website www.sanho.co.za.

MERCHANT VESSEL VOLUNTARY REPORTING SCHEME AND SECURITY RELATED INFORMATION TO MARINERS

IMPORTANT: UPDATED VERSION (Previous update: May 2013 NTMs).

1. Mariners and interested parties are advised to take note of the **NAVAREA IX Message 092** regarding the **Merchant Vessel Voluntary Reporting Scheme**. More detail is provided on **page 13 and 14** of this Notice to Mariners.

CAUTION REGARDING USE OF ECDIS IN STANDARD DISPLAY MODE AND OPERATING ANOMALIES IDENTIFIED WITHIN ECDIS

IMPORTANT: UPDATED VERSION (Previous update: October 2012 NTMs).

1. Mariners and interested parties are advised to take note of the **caution** regarding the use of ECDIS in **standard display mode**, the IHO notice regarding the importance of the **visual inspection** of passage plans and important issues regarding displayed information of certain versions. This includes certain **display anomalies** with relevant **advice**. More detail is provided from **pages 15 to 19** of this Notices to Mariners.

II

78(T)/20* SOUTH AFRICA – South West Coast – False Bay – Whittle Rock Buoy and Racon.

Source: Hydrographer (Previously issued as CNW 600 of 2020)

SAN 79 (INT 2670) [*Previous Update – 34/20*]

SAN 80 (INT 2680) [*Previous Update – 34/20*]

SAN 119 [*Previous Update – 34/20*]

SAN 150 [*Previous Update – 34/20*]

PEXA SAN 150 [*Previous Update – 34/20*]

SAN 1016 [*Previous Update – 77/16*]

PEXA SAN 1016 [*Previous Update – 77/16*]

PEXA SAN 1016A [*Previous Update – 77/16*]

SAN SC 4 [*Previous Update – 34/20*]

SAN SC 5 [*Previous Update – 65/18*]

1. Whittle Rock buoy and racon off station in approximate position 34° 14.78' S 18° 34.16' E

(SAN 79, 80, 119, 150, PEXA 150, 1016, PEXA 1016, PEXA 1016A, SC 4, SC 5)

IIA

LIST OF TEMPORARY AND PRELIMINARY NOTICES TO MARINERS ISSUED BY THE ANGOLAN MINISTRY OF TRANSPORT IN FORCE

Important Notice: Mariners are advised that positions for Angolan Notices are referred to the WGS 84 Spheroid. Caution is therefore advised when plotting positions on large scale British Admiralty charts that are not based on the same spheroid.

Nil prior to these Notices.

2020 Series

Nil.

IIB

LIST OF TEMPORARY AND PRELIMINARY NOTICES TO MARINERS ISSUED BY THE MOZAMBIQUE INSTITUTE OF HYDROGRAPHY AND NAVIGATION (INAHINA) IN FORCE

Mariners are advised to consult the monthly Notices to Mariners as published by INAHINA.

Contact details:

Instituto Nacional De Hidrografia E Navegação
Av. Karl Marx 153-5/12
P.O. Box 2089
Maputo
Mozambique

Tel: 43 01 86/8
Fax: (258)-(1)-43 01 85-42 86 70
Telex: 6-619-Maputo-Mozambique
E-mail: hidro@inahina.uem.mz

IIC

LIST OF TEMPORARY AND PRELIMINARY NOTICES TO MARINERS ISSUED FOR MADAGASCAR IN FORCE

Important Notice: Mariners are advised that positions for Madagascar Notices are referred to the WGS 84 Spheroid. Caution is therefore advised when plotting positions on large scale British Admiralty charts that are not based on the same spheroid.

Nil prior to these Notices.

IIIA

CHARTS AND PUBLICATIONS – NEW CHARTS/ EDITIONS ISSUED BY THE MOZAMBIQUE INSTITUTE OF HYDROGRAPHY AND NAVIGATION

Nil.

IIIB

CHARTS AND PUBLICATIONS – NEW CHARTS/ EDITIONS ISSUED FOR NAMIBIA

Nil.

III C

SAN HO CHARTS AND SAN HO PUBLICATIONS NEW CHARTS / EDITIONS

79/20 South African Tide Tables (SAN HO-2) 2021 Edition

1. The 2021 Edition of the publication is available from all recognised Chart Agents and supersedes the 2020 edition.

SAN HO CHARTS AND SAN HO PUBLICATIONS – PERMANENTLY WITHDRAWN


Nil.

IV

CORRECTIONS TO SAN HO PUBLICATIONS

80/20 South African Tide Tables (SAN HO-2) 2021 Edition

1. The moon symbols on page (viii), table entitled MOON PHASES are erroneously printed and should read as follows:

New Moon		First Quarter		Full Moon		Last Quarter	
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2. All the moon symbols on page 1-52 were erroneously printed as new moon. The attached run-on, also included with each copy of SAN-HO2, is the correct moon symbols for all ports through-out pages 1-52.

V

CORRECTIONS TO SA LIST OF LIGHTS AND RADIO SIGNALS - SAN HO-1 - 2011 EDITION

Nil.

VI

NAVAREA VII Bulletins and Coastal Navigational Warning Messages in force as at 1000 UTC on 01 December 2020

See Annual NM 3/2019. Broadcast Warnings are available at Port Offices and remain valid until cancelled or until superseded by this and/or other broadcast bulletins. These are also available in digital format on website www.sanho.co.za. The website version is only updated during normal working hours. See front cover for contact information.

NAVAREA VII MESSAGES

2020 Series

- 011 Indian Ocean - SW Sector - Port of Beira - Buoys.
- 087 Indian Ocean - SW Sector - Madagascar - Port of Ehoala - Lights.
- 120 South Atlantic Ocean - NE Sector - Angola - Mooring Buoys and FPSOs.
- 122 Indian Ocean - SW Sector - Port of Pemba - Buoy out of position.
- 123 Indian Ocean - SW Sector - Port of Mocimboa da Praia - Buoy out of position.
- 124 Indian Ocean - SW Sector - Port of Nacala - Buoy Unlit.
- 125 South Atlantic Ocean - NE Sector - Port of Luanda – Mooring Buoys.
- 226 Indian Ocean - SW Sector - Port of Quelimane - Buoys out of position.
- 264 South Atlantic Ocean - NE Sector - Rig List.
- 267 South Atlantic Ocean - SE Sector - Gough Island.
- 269 Indian Ocean - SW Sector - Port of Maputo - Buoys and Lights.
- 271 Messages in Force.
- 273 South Atlantic Ocean - NE Sector - Towing Operation.

COASTAL NAVWARNING MESSAGES

2020 Series

- 569 South Coast - Offshore East London - Fishing Gear left.
- 583 South Coast - Offshore Port Elizabeth - Anchor Left.
- 588 West Coast - Offshore Skulpfontein punt - Anchor left.
- 600 South West Coast - False Bay- Buoy out of position.
- 601 South Coast - Offshore Cape Agulhas - Missile Firing.
- 633 Messages in Force.

VI
ANNEX A

USA Government Special Warning in force 18 December 2001

SPECIAL WARNING NUMBER 120 WORLDWIDE

1. Due to recent events in the Middle East and the American Homeland, U.S. Forces worldwide are operating at a heightened state of readiness and taking additional defensive precautions against terrorists and other potential threats. Consequently, all aircraft, surface vessels, and sub-surface vessels approaching U.S. Forces are requested to maintain radio contact with U.S. Forces on bridge-to-bridge channel 16, international air distress (121.5 MHz VHF) or MILAIR distress (243.0 MHz UHF).
2. U.S. Forces will exercise appropriate measures in self-defence if warranted by the circumstances. Aircraft, surface vessels, and sub-surface vessels approaching U.S. Forces will, by making prior contacts as described above, help make their intentions clear and avoid unnecessary initiation of such defensive measures.
3. U.S. Forces, especially when operating in confined waters, shall remain mindful of navigational considerations of aircraft, surface vessels, and sub-surface vessels in their immediate vicinity.
4. Nothing in the Special Warning is intended to impede or otherwise interfere with the freedom of navigation or overflight of any vessel or aircraft, or to limit or expand the inherent self-defence rights of U.S. Forces. This Special Warning is published solely to advise of the heightened state of readiness of U.S. Forces and to request that radio contact be maintained as described above (Issued 16 Nov 2001).

VI
ANNEX A/cont...

USA Government Special Warning in force 20 March 2003

SPECIAL WARNING NUMBER 121 PERSIAN GULF

1. Coalition Naval Forces may conduct military operations in the Eastern Mediterranean Sea, Red Sea, Gulf of Aden, Arabian Sea, Gulf of Oman and Arabian Gulf. The timely and accurate identification of all vessels and aircraft in these areas are, critical to avoid the inadvertent use of force.
2. All vessels are advised that coalition Naval Forces are prepared to exercise appropriate measures in self-defense to ensure their safety in the event they are approached by vessels or aircraft. Coalition Forces are prepared to respond decisively to any hostile acts or indications of hostile intent. All maritime vessels or activities that are determined to be threats to Coalition Naval Forces will be subject to defensive measures, including boarding, seizure, disabling or destruction, without regard to registry or location. Consequently, surface vessels, sub-surface vessels and all aircraft approaching Coalition Naval Forces are advised to maintain radio contact on Bridge-to-Bridge channel 16, International Air Distress (121.5 MHZ VHF) or Military Air Distress (243.0 MHZ UHF).
3. Vessels operating in the Middle East, Eastern Mediterranean Sea, Red Sea, Gulf of Oman, Arabian Sea and Arabian Gulf are subject to query, being stopped, boarded and searched by US/Coalition warships operating in support of operations against Iraq. Vessels found to be carrying contraband bound for Iraq or carrying and/or laying Naval mines are subject to detention, seizure and destruction. This notice is effective immediately and will remain in effect until further notice.

SPECIAL WARNING NAVAREA II 193 OF 2016

MARITIME SECURITY IN WEST AFRICA GULF OF GUINEA

1. MDAT-GOG is a virtual reporting mechanism supporting the interregional architecture defined by the Yaoundé code of conduct. The primary output from the MDAT-GOG is to contribute by maintaining coherent maritime situational awareness in the Central and Western African maritime space, with the ability to inform and support industry, contributing to the safety and security of the mariner in the regional maritime domain. All vessels are encouraged to report to the MDAT-GOG using the existing reporting formats. The information supplied by vessels will be treated as commercially confidential.
2. The e-mail address for MDAT-GOG (h24) is: watchkeepers@mdat-gog.org. In emergency, vessels should telephone at the following number: +33 (0)2 98 22 88 88. The maritime security chart for the Gulf of Guinea in digital format, the reporting forms and the active security related information to mariners are available online in French version (<http://diffusion.shom.fr/surete-golfe-guinee>) and English version (www.ukho.gov.uk/productsandservices/martimesafety/pages/q6114.aspx).

VI
ANNEX A/cont...

USA Government Special Warning in force 11 March 2005

SPECIAL WARNING NUMBER 122 EAST AFRICA

1. The US Government has received unconfirmed information that terrorists may attempt to mount a maritime attack using speedboats against a western ship possibly in East Africa. No additional information is available on the planning, timing or intended targets of the maritime attack. This notice is effective immediately and will remain in effect until further notice.

USA Government Special Warning in force 11 November 2005

SPECIAL WARNING NUMBER 123 EAST AFRICA

1. Due to continuing conditions of armed conflict and lawlessness in Somalia and waters off its coast, mariners are advised to avoid the port of Muqdisho (Mogadishu) and to remain at least 200 nautical miles distant from the Somali coast. The US government does not have an embassy in Somalia and cannot provide services to US citizens.

2. Recent vessel hijackings off the east coast of Somalia demonstrate that pirates are able to conduct at sea hijackings from as far south as Kismaayo (Chisimayu) (00-22S), though vessels are advised to transit no closer than 02-00S, to as far north as Eyl (08-00N), and out to a distance of 170 miles. The first known attempt to hijack a cruise vessel occurred in November 2005. All merchant vessels transiting the coast of Somalia, no matter how far offshore, should increase anti-piracy precautions and maintain a heightened state of vigilance. Pirates are reported to have used previously hijacked ships as bases for further attacks.

3. Another reported pirate tactic has been to issue a false distress call to lure a ship close inshore. Therefore, caution should be taken when responding to distress calls keeping in mind it may be a tactic to lure a vessel into a trap.

4. Victimized vessels have reported two to three (2-3) speedboats measuring six to nine metres (6-9m) in length. Each vessel has a crew of three to six (3-6) armed men with AK-47s and shoulder launched rockets, which are opening fire on vessels in broad daylight in order to intimidate them into stopping.

5. To date, vessels that increase speed and take evasive maneuvers avoid boarding while those that slow down are boarded, taken to the Somali coastline, and released after successful ransom payment, often after protracted negotiations of as much as 11 weeks.

NAVAREA IX 092 OF 2009

1. A Merchant Vessel Voluntary Reporting Scheme has been established to increase security, provide anti-piracy support and to maintain the freedom of navigation to all vessels in the Indian Ocean, Arabian Sea, Persian Gulf, Gulf of Aden and the Red Sea.

2. Merchant vessels operating in these areas are strongly encouraged to liaise with the military authorities below. Any vessel or owner/operator/manager, which chooses not to report may delay any military assistance in the event of an incident and will not receive an updated threat assessment.

3. All vessels should send position reports to both:

- a. UK Maritime Trade Operation, Dubai
E-mail: ukmto@eim.ae
Tel: +971 50 552 3215
Fax: +971 4 306 5710
Telex: (51) 210473

NAVAREA IX 092 OF 2009/cont...

b. Maritime Liaison Office, Bahrain (Marlo)
E-mail: marlobahrain@me.navy.mil
Tel: +973 3940 1395

4. In return, vessels will receive passage guidance, recommended routing, as well as the latest threat assessment from MTO, Dubai.

5. All masters are advised to ensure that prior to sailing through or entering the region, that the owners/operators/managers have registered the vessel with the Maritime Security Centre, Horn of Africa (MSCHOA), <http://www.mschoa.eu>.

6. The website offers group transit information in the Gulf of Aden and best management practice for vessel self protection.

Tel: +44 1923 958545.

SECURITY RELATED INFORMATION TO MARINERS

About Admiralty Security Related Information to Mariners

1. Admiralty Maritime Security Planning Charts (Q Series) should be maintained so that they are fully up-to-date with the latest security-critical navigational information. The Admiralty Security Related Information to Mariners (SRIM) service provides all of the data you need to maintain the Q Series charts as well as additional security related information which will aid passage planning.

Promulgation of Corrections to Q Series Planning Charts

2. These charts will be updated/corrected using the established United Kingdom Hydrographic Office Notices to Mariners process.

Promulgation of Security Related Information to Mariners (SRIM)

3. New threats, embargo, exclusion zones and specific advice will be promulgated using the Security Related Information to Mariners (SRIM) and can be viewed by clicking on the relevant Q Chart Tab. The SRIM for each chart will be sequentially numbered and identified by a unique title as follows: Q6XXX/yr/zzz (e.g. Q6011/12/001) meaning the first SRIM of 2012 for chart Q6011.

Data assurance

4. The data and information within the Security Related Information to Mariners (SRIM) is compiled and validated by government and military officials directly involved within the operation and often trained by the UK Fleet Awnis Unit. Where possible any safety critical information will be promulgated by the World Wide Navigational Warning System (WWNWS).

Availability

5. Admiralty Security Related Information to Mariners is provided free of charge on this website <http://www.ukho.gov.uk/ProductsandServices/MartimeSafety/Pages/SRIM.aspx>

CAUTION REGARDING USE OF ECDIS IN STANDARD DISPLAY MODE

1. Mariners are advised of a potentially serious issue that has come to light relating to the way ECDIS displays and operates with some shoal soundings, marked as "reported" on paper charts that will not be visible when operating in the base or standard display modes and that may not trigger automatic grounding alarms in any display mode, even if their depth is less than the vessel safety depth set in the ECDIS. This is due to a specific manner of encoding these particular shoal soundings within S-57.
2. All ENC's produced by SANHO have been corrected where such soundings occur in navigable waters, beyond the first safety depth contour depicted in these ENC's.
3. As a precaution, mariners are alerted to this issue via NAVAREA warnings that have been transmitted in most regions. The text of the warning as broadcasted is as below. Updated information on this issue will be provided as it becomes available.
4. Mariners navigating beyond South African ENC coverage must consult the various promulgated notifications released by the ENC producer nations, covering this issue.
5. Mariners are advised that ECDIS may not display some isolated shoal depths when operating in "base or standard" mode. Route planning and monitoring alarms for these shoal depths may not always be activated. To ensure safe navigation and to confirm that a planned route is clear of such dangers, mariners should visually inspect the planned route and any deviations from it using ECDIS configured display "all data". The automated voyage planning check function should not be solely relied upon. The International Hydrographic Organisation (IHO) is leading technical action to resolve this matter. Further information will be available through Notices to Mariners.
6. Display Anomalies in some ECDIS. Mariners are advised that the International Hydrographic Organization (IHO) check data set shows that some ECDIS systems fail to display some significant underwater features in the standard display mode. The use of this check data set, issued through ENC service providers and available from the IHO website www.iho.int, to check the operation of ECDIS is strongly recommended. JRC has confirmed that certain versions of JRC ECDIS fail to display some types of wreck and obstructions, including stranded wrecks, in any display mode. Where JRC ECDIS is in use, paper charts should be the primary means of navigation until the ECDIS has been proved to operate correctly.
7. See www.jrc.co.jp/eng/product/marine/whatsnew/20120313/index.html for further information.

VISUAL INSPECTION OF PASSAGE PLANS

8. As previously notified by NAVAREA warning, mariners using ECDIS are reminded not to rely solely on automated voyage planning and monitoring checks and alarms. Some ECDIS appear only to undertake route check functions on larger scale ENC's and therefore alarms might not activate. This may not be clearly indicated on the ECDIS display. Mariners should always undertake careful visual inspection of the entire planned route using the 'other / all' display mode to confirm that it, and any deviations from it, is clear of dangers.
9. Recent preliminary investigation indicates that some ECDIS may not display certain combinations of chart features and attributes correctly and on rare occasions may fail to display a navigationally significant feature. This appears to be caused by anomalous behaviour in some ECDIS software, especially early versions. The existence of such anomalies highlights the importance of maintaining ECDIS software to ensure that operational capability and reliability are maintained. It is recommended that appropriate checks are made with the equipment manufacturer. This is of particular importance where ECDIS is the only source of chart information available to the mariner.
10. The International Hydrographic Organization (IHO) is investigating these matters in consultation with ECDIS equipment manufacturers. Further information will be made available through Notices to Mariners and within the UK element of the README.TXT file included on ENC service media.

VI ANNEX A/cont...

OPERATING ANOMALIES IDENTIFIED WITHIN ECDIS

1. The Sub-Committee on Safety of Navigation, at its fifty-eighth session (2 to 6 July 2012), was tasked by the Maritime Safety Committee at its ninetieth session to circulate further guidance or information that becomes available on operating anomalies identified within ECDIS to supplement the guidance in MSC.1/Circ.1391, and has developed the attached information for the guidance of all concerned.
2. Member Governments are invited to bring the attached information, in the annex and appendix, to the attention of all concerned and, in particular:
 - a. ensure that mariners are aware of the potential for some ECDIS to exhibit display and alarm behaviour anomalies;
 - b. alert mariners to the characteristics of these anomalies;
 - c. note the list of the currently identified anomalies and related advice;
 - d. alert the maritime community to the existence and use of the International Hydrographic Organization (IHO) Data Presentation and Performance Check (DPPC) dataset and to ensure that all installed ECDIS and training equipment is checked; and
 - e. continue to observe the guidance in MSC.1/Circ.1391 dated 7 December 2010 in particular to encourage vessels under their flag to report anomalies with sufficient detail on the ECDIS equipment and ENC's to allow analysis.

Introduction

1. The following information and guidance is provided to assist all those involved in the use of ECDIS.

ECDIS anomalies

2. A number of ECDIS operating anomalies have been identified. Due to the complex nature of ECDIS, and in particular because it involves a mix of hardware, software and data, it is possible that further anomalies may exist.
3. These anomalies are particularly apparent in ECDIS units that have been built and type-approved to ECDIS Performance Standards (resolution A.817(19), as amended), (i.e. before 2009). However, ECDIS units type-approved to the revised ECDIS Performance Standards (resolution MSC.232(82)) are still vulnerable to the limitations in appendix, item 5(a).
4. An ECDIS anomaly is an unexpected or unintended behaviour of an ECDIS unit which may affect the use of the equipment or navigational decisions made by the user.
5. Examples include, but are not limited to:
 - a. failure to display a navigational feature correctly, such as:
 - navigation areas recently recognized by IMO such as PSSA (Particularly Sensitive Sea Area) and ASL (Archipelagic Sea Lanes);
 - lights with complex characteristics; and
 - underwater features and isolated dangers;
 - b. failure to detect objects by "route checking" in voyage planning mode;
 - c. failure to alarm correctly; and
 - d. failure to manage a number of alarms correctly.

VI ANNEX A/cont...

6. The existence of such anomalies highlights the importance of maintaining ECDIS software to ensure that operational capability and reliability are maintained in accordance with SN.1/Circ.266/Rev.1. It is recommended that appropriate checks are made with the equipment manufacturer. This is of particular importance where ECDIS is the only source of chart information available.

7. A list of the known anomalies with advice, and information on whether or not the DPPC dataset checks for each anomaly, is in the appendix.

IHO ECDIS Data Presentation and Performance Check (DPPC) dataset

8. IHO has produced an ECDIS DPPC dataset that allows mariners to check some important aspects of the operation of their ECDIS. This dataset contains two fictitious ENC cells which navigating officers can load into their ECDIS units to assess operating performance and to determine whether there may be any display anomalies that either need to be remedied or otherwise managed in the way that the ECDIS is operated. If the check highlights a problem, the accompanying guidance notes with the check dataset offer suggested courses of action. The check dataset and accompanying instructions can be obtained from ENC service providers, or can be downloaded from the IHO website at:

www.iho.int/srv1/index.php?option=com_content&view=article&id=585:news&catid=166:1news-links&Itemid=828.

LIST OF ECDIS APPARENT OPERATING AND DISPLAY ANOMALIES (NOT IN PRIORITY ORDER)

In the following list, items 1, 2, 3, 4, 5(b), 6, 7, and 11 are checked by the IHO DPPC dataset dated November 2011:

1. Inability to correctly display symbols for recently-approved IMO features such as ASLs or PSSAs (SN.1/Circ.266/Rev.1 refers) – ECDIS equipment that does not have the latest version of the IHO Presentation Library installed will, instead of displaying the correct symbol, either show question marks (?) or nothing at all. In some cases the ECDIS may fail to load an ENC that includes such data. An ECDIS retains its type approval certificate regardless of the version of the Presentation Library installed.

Workaround – interrogate any "?" symbol displayed using the "pick report" or refer to paper charts and/or publications.

2. Incorrect display of foul areas and obstructions in some ECDIS equipment – some ECDIS models do not show some underwater features in Standard display mode as expected (however they do activate appropriate alarms). These features are only displayed when the "All" or "Other" display mode is used. Also in some cases different symbols are used to depict these features.

Workaround – use Mode "All" or "Other".

3. On some occasions some stranded/dangerous wrecks and obstructions may not display in any mode; it is believed that this is limited to some ECDIS versions from a single manufacturer who has now produced a software amendment to resolve the problem.

Workaround – use paper charts.

4. An object that falls on a contour line may fail to display in "Standard" Mode in some ECDIS equipment.

Workaround – use Mode "All" or "Other".

5. Small (point) land areas, especially those depicted only on small scale (usage band 1 and 2) ENCs may not always be clearly displayed and do not always activate alarms in route planning or route monitoring modes in some ECDIS equipment:

- a. it is possible for small land features to be obscured by other chart detail such as names or contour labels; and

VI ANNEX A/cont...

- b. some ECDIS equipment may not conduct route checks on small scale ENC's and may not therefore provide an appropriate warning. Where this is the case the land area may not be detected by the "look-ahead" function during route monitoring.

Workaround – careful manual inspection of the largest scale ENC available.

Due to the limitations of ECDIS referred to in 5(a) above, mariners (even those using the most modern systems) should always undertake careful visual inspection of the entire planned route using the "Other/All" display mode to confirm that it, and any deviations from it, are clear of dangers.

6. Incorrect display of the coloured arcs of light sectors – some ECDIS may not display the coloured arcs of complex lights as intended. This is especially prevalent where the sectors straddle 0/360deg (North).

Workaround – use "pick report" function to check light sectors.

7. Some early models of ECDIS are unable to display correctly time-variable data encoded in ENC's. For example features with Date Start and Date End attributes used for the implementation of new Traffic Routeing measures in ENC's may not be depicted correctly; the result being that both old and new instances are displayed simultaneously. Tests for this were not included in IEC61174 Ed1.

Workaround – use "pick report" function to determine Start/End date/time.

8. Tidal stream data not available in usable form – some early models of ECDIS only provide a comma-separated list of values which is difficult to interpret and use.

Workaround – use Tidal Stream Atlases external to ECDIS.

9. Display of anchorage, berth and channel names may not be easily visible to the mariner and the radius of a maximum swinging circle may not be shown.

Workaround – use "All" or "Other" display mode and "pick report" function to obtain swinging circle information; VTS/Port Authority communications will be able to clarify any necessary names.

10. Three hundred and sixty degree landfall lights not always prominent in comparison to shorter range sector lights.

Workaround – mariners to be aware – use "pick report" to verify light characteristic.

11. ENC's may include certain shoal soundings, especially reported depths, which have been encoded in such a way that they do not display in "Standard" Mode and might not activate an alarm even where the depth is less than the safety contour setting. Most Hydrographic Offices have reported to the IHO that they have updated the relevant ENC's to ensure that significant depths are displayed in Standard Mode.

Workaround – operate in a display Mode where all soundings are shown.

12. Areas of foul ground that have no known depth value may be depicted in some ECDIS as isolated dangers and shown in "Standard" mode; this can result in unnecessary screen clutter.

Workaround – no workaround for clutter problem, mariners to be aware and use "pick report" function to determine if the feature is a danger.

13. Where ECDIS includes an option to show isolated dangers in waters shoaler than the safety contour value the symbology used may vary between manufacturers.

Workaround – mariners to be aware and to use "All" or "Other" Mode when operating in such areas.

VI ANNEX A/cont...

14. Screen clutter can be a problem when displaying smaller scale ENC's for areas where larger scale coverage is also loaded in ECDIS. This can be more apparent when the user zooms out. This is due to a combination of each manufacturer's ENC loading strategy and the individual ENC producer's encoding policy. Where HO's use SCAMIN (scale minimum) attributes on chart features then this problem is minimized. The intention of the IHO standard is that ECDIS should not display ENC data which has a compilation scale significantly different from the display scale in use. Improvements could be made, in future, by adopting a standardized ENC loading strategy based on a scale range defined within the ENC.

Workaround – the situation can be improved through use of the standard display mode during voyage monitoring and appropriate (but not over) use of the zoom function. This technique has been included in the IMO 1-27 Model Course syllabus.

15. In some ECDIS equipment the text for some notes in the ENC may be truncated or not displayed at all, and therefore is not available to the mariner.

Workaround – no workaround available; mariners should advise ENC service providers where they observe this problem.

16. Unnecessary alarms and indications – feedback from mariners shows that ECDIS can produce excessive and distracting alarms. This is due to a combination of the interpretation of the requirements of the ECDIS Performance Standards and the ENC encoding. Some control over the number of alarms and indications is available to the mariner in ECDIS built to the revised Performance Standards (resolution MSC.232(82)) but this is not always recognized.

Workaround – the methods available to minimize alarms are included in the IMO 1-27 Model Course syllabus

HYDROGRAPHIC NOTE

SAN HO-16

For the reporting of navigational dangers and changes
observed at sea by mariners navigating beyond harbours

(ver 2011.1)

GENERAL LOCALITY			
CHART(s) AFFECTED		Edition Date	
ENC(s) AFFECTED		Edition/ Update Number	
DETAILS OF CHANGES/ DANGERS OBSERVED Changes in navigational aids or dangers or useful new aids			
<p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>			
Date of Observation		Time observed (UTC)	
POSITION OF DANGER OR FEATURE DESCRIBED ABOVE			
Latitude	Longitude	Position Method	Vertical datum
		GPS/Radar/Sextant/other	
Position System Details			
Sextant Angle Details			
Echo Sounder used		Transducer Depth	
Accompanying plots and photographs (if any)	(details)		
VESSEL AND OBSERVER DETAILS			
Vessel Name		Vessel Type	
Master/ Observer's Name		Signature	
E-mail		Telephone	
Fax		Other	
PLEASE RETURN THIS COMPLETED FORM TO			
The Hydrographer, SA Navy Private Bag X1 TOKAI, RSA 7966	Telephone: +27217872408	Fax: +27217872233	E-mail: hydrosan@iafrica.com

INSTRUCTIONS

1. This form and its instructions have been designed to help both the sender and the recipient. It should be used, or followed closely, whenever appropriate. Form *SAN HO-16a* lists the information required for South African Sailing Directions and should be used as an aide memoir to this form if necessary. Mariners are requested to notify the Hydrographer of the South African Navy, when new or suspected dangers to navigation are discovered, changes observed in aids to navigation, or corrections to publications seen to be necessary. *The Mariner's Handbook (NP 100) Chapter 8* gives general instructions. The provisions of international and national laws should be complied with when forwarding such reports.

2. When a **position** is defined by sextant angles or bearings (true or magnetic being specified) more than two should be used in order to provide a check. Distances observed by radar should be quoted if available. Latitude and longitude should only be used specifically to position the details when they have been fixed by astronomical observations or GPS and a full description of the method, equipment and datum (where applicable) used should be given.

3. A cutting from the largest scale chart is the best medium for forwarding details, the alterations and additions being shown thereon in red. When requested, a new copy will be sent in replacement of a chart that has been used to forward information, or when extensive observations have involved defacement of the observer's chart. If it is preferred to show the amendments on a tracing of the largest scale chart (rather than on the chart itself) these should be in red as above, but adequate details from the chart must be traced in black ink to enable the amendments to be fitted correctly.

4. When **soundings** are obtained and a paper echo sounding trace is available, the echo sounding trace should be marked with times, depths, etc., and forwarded with the report. It is important to state whether the echo sounder is set to register depths below the surface or below the keel; in the latter case the vessel's draught should be given. Time and date should be given in order that corrections for the height of the tide may be made where necessary. The make, name and type of the echo sounder should also be given.

5. Modern **echo sounders** frequently record signals from echoes received back after one or more rotations of the stylus have been completed. Thus with a set whose maximum range is 500m, an echo recorded at 50m may be from depths of 50m, 550m or even 1050m. Soundings recorded beyond the set's nominal range can usually be recognized by the following:

- (a) the trace being weaker than normal for the depth recorded,
- (b) the trace passing through the transmission line,
- (c) the feathery nature of the trace.

As a check that apparently shoal soundings are not due to echoes received beyond the set's nominal range, soundings should be continued until reasonable agreement with charted soundings is reached. However, soundings received after one or more rotations of the stylus can still be useful and should be submitted if they show significant differences from charted depths.

6. Reports which can not be confirmed or are lacking in certain details should not be withheld. Shortcomings should be stressed and any firm expectation of being able to check the information on a succeeding voyage should be mentioned.

7. Reports of **shoal soundings**, uncharted dangers and navigational aids out of order should, at the mariner's discretion, also be made by radio to the nearest coast radio station. The draught of modern tankers is such that any uncharted depth under 30 metres may be of sufficient importance to justify a radio message.

8. **Port information** should be forwarded on Form *SAN HO-16a* together with Form *SAN HO-16*. Where there is insufficient space on the form an additional sheet should be used.

Note : An acknowledgement or receipt will be sent and the information then used to the best advantage which may mean immediate action or inclusion in a revision in due course. When a Notice to Mariners is issued, the sender's ship or name is quoted as authority unless (as sometimes happens) the information is also received from other authorities. Further communication should only be expected when the information is of outstanding value or has unusual features.

HYDROGRAPHIC NOTE

For the reporting of navigational dangers and changes
observed at sea by mariners concerning ports and harbours

SAN HO-16a

(ver 2011.1)

Name of Port/Harbour	
General Remarks Principle activities and trade. Latest population figures and date. Number of ships or tonnage handled per year. Maximum size of vessel handled. Copy of Port Handbook <i>(if avail)</i> .	
Anchorage Designation, depths, holding ground, shelter afforded.	
Pilotage Authority for requests. Embark position. Regulations	
Directions Entry and berthing information. Tidal streams. Navigational aids.	
Tugs Number available.	
Wharves and Quays Names, numbers or positions & lengths. Depths alongside.	
Cargo Handling Containers, lighters, Ro-Ro etc.	
Repairs Hull, machinery and underwater. Shipyards. Docking or slipping facilities. <i>(Give size of vessels handled or dimensions.)</i> Divers.	

Supplies Fuel (with type, quantities and methods of delivery) Fresh water (with method of delivery and rate of supply) Provisions.	
Services Medical. De-ratting. Garbage and slops. Ship chandlery, compass adjustment, tank cleaning, and hull painting.	
Communication Nearest airport or airfield. Port radio and information service. (with frequencies and hours of operating)	
Port Authority Designation, address, telephone, e-mail address and website.	
Views Photographs (where permitted) of the approaches, leading marks, the entrance to the harbour etc.	
Additional Information	

VESSEL AND OBSERVER DETAILS

Vessel Name		Vessel Type	
Master/ Observer's Name		Signature	
E-mail		Telephone	
Fax		Other	

PLEASE RETURN THIS COMPLETED FORM TO

The Hydrographer, SA Navy Private Bag X1 TOKAI, RSA 7966	Telephone: +27217872408	Fax: +27217872233	E-mail: hydrosan@iafrica.com
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MOON SYMBOLS

2021

JANUARY		FEBRUARY		MARCH		APRIL		MAY		JUNE	
DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY
1 F	16 S	1 M	16 T	1 M	16 T	1 T	16 F	1 S	16 \$	1 T	16 W
2 S	17 \$	2 T	17 W	2 T	17 W	2 F	17 S	2 \$	17 M	2 W	17 T
3 \$	18 M	3 W	18 T	3 W	18 T	3 S	18 \$	3 M	18 T	3 T	18 F
4 M	19 T	4 T	19 F	4 T	19 F	4 \$	19 M	4 T	19 W	4 F	19 S
5 T	20 W	5 F	20 S	5 F	20 S	5 M	20 T	5 W	20 T	5 S	20 \$
6 W	21 T	6 S	21 \$	6 S	21 \$	6 T	21 W	6 T	21 F	6 \$	21 M
7 T	22 F	7 \$	22 M	7 \$	22 M	7 W	22 T	7 F	22 S	7 M	22 T
8 F	23 S	8 M	23 T	8 M	23 T	8 T	23 F	8 S	23 \$	8 T	23 W
9 S	24 \$	9 T	24 W	9 T	24 W	9 F	24 S	9 \$	24 M	9 W	24 T
10 \$	25 M	10 W	25 T	10 W	25 T	10 S	25 \$	10 M	25 T	10 T	25 F
11 M	26 T	11 T	26 F	11 T	26 F	11 \$	26 M	11 T	26 W	11 F	26 S
12 T	27 W	12 F	27 S	12 F	27 S	12 M	27 T	12 W	27 T	12 S	27 \$
13 W	28 T	13 S	28 \$	13 S	28 \$	13 T	28 W	13 T	28 F	13 \$	28 M
14 T	29 F	14 \$		14 \$	29 M	14 W	29 T	14 F	29 S	14 M	29 T
15 F	30 S	15 M		15 M	30 T	15 T	30 F	15 S	30 \$	15 T	30 W
	31 \$				31 W				31 M		

MOON SYMBOLS

2021

JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER	
DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY
1 T	16 F	1 \$	16 M	1 W	16 T	1 F	16 S	1 M	16 T	1 W	16 T
											
2 F	17 S	2 M	17 T	2 T	17 F	2 S	17 \$	2 T	17 W	2 T	17 F
											
3 S	18 \$	3 T	18 W	3 F	18 S	3 \$	18 M	3 W	18 T	3 F	18 S
4 \$	19 M	4 W	19 T	4 S	19 \$	4 M	19 T	4 T	19 F	4 S	19 \$
											
5 M	20 T	5 T	20 F	5 \$	20 M	5 T	20 W	5 F	20 S	5 \$	20 M
											
6 T	21 W	6 F	21 S	6 M	21 T	6 W	21 T	6 S	21 \$	6 M	21 T
											
7 W	22 T	7 S	22 \$	7 T	22 W	7 T	22 F	7 \$	22 M	7 T	22 W
											
8 T	23 F	8 \$	23 M	8 W	23 T	8 F	23 S	8 M	23 T	8 W	23 T
											
9 F	24 S	9 M	24 T	9 T	24 F	9 S	24 \$	9 T	24 W	9 T	24 F
											
10 S	25 \$	10 T	25 W	10 F	25 S	10 \$	25 M	10 W	25 T	10 F	25 S
											
11 \$	26 M	11 W	26 T	11 S	26 \$	11 M	26 T	11 T	26 F	11 S	26 \$
											
12 M	27 T	12 T	27 F	12 \$	27 M	12 T	27 W	12 F	27 S	12 \$	27 M
											
13 T	28 W	13 F	28 S	13 M	28 T	13 W	28 T	13 S	28 \$	13 M	28 T
											
14 W	29 T	14 S	29 \$	14 T	29 W	14 T	29 F	14 \$	29 M	14 T	29 W
											
15 T	30 F	15 \$	30 M	15 W	30 T	15 F	30 S	15 M	30 T	15 W	30 T
											
	31 S		31 T				31 \$				31 F
	