

## RADIO COMMUNICATIONS INSTRUCTIONS - CAPE TO RIO 2017

### Appendix A: Day and Night Frequency Propagation Map

#### 1 GENERAL:

##### 1.1 Treat communications seriously –

1.1.1 Nothing prevents a mobile station or mobile earth station in distress from using any means at its disposal to attract attention, make known its position, and obtain help. Nothing prevents a coast or land earth station from using any means at its disposal to assist a mobile station in distress.

1.1.2 For a large part of the race, your nearest help will be another competitor. The success of the race and the SAFETY OF YOUR LIFE AND THE LIVES OF FELLOW COMPETITORS may well depend on you maintaining good interboat communications on the following inter-ship frequencies: Simplex - VHF Ch16 and HF 4149, 8294 and 12353 kHz. It is suggested that a listening watch should be maintained the HF frequencies as best suited for the vessels position in accordance with the attached Day/Night Frequency Propagation Map. The listening watch must be maintained at 0800UTC (position TX to Cape Town Radio) and 1230UTC (position RX from Cape Town Radio) – (refer to attached Propagation Map)

1.1.3 As is the case in South Africa, a network of Coast Radio Stations in Brazil maintains a continuous listening watch on International Digital and Voice Distress Frequencies. In addition, the International COSPAS-SARSAT Ground Segment that includes the South African and the Brazilian Mission Control Centres tracks satellites that search the Earth for transmissions from emergency beacons from terrestrial, maritime and aeronautical carriers in distress:

| Serial | Station         | Number           | E-mail Address   |
|--------|-----------------|------------------|--|
| 1      | MRCC Brazil     | 0055 21 21046056 | <a href="mailto:mrccbrazil@con.mar.mil.br">mrccbrazil@con.mar.mil.br</a>   |
| 2      | MRCC Cape Town  | 0027 21 9383300  | <a href="mailto:mrcc.ct@samsa.org.za">mrcc.ct@samsa.org.za</a>             |
| 3      | Cape Town Radio | 0027 21 5512617  | <a href="mailto:maritimeradio@ixmail.co.za">maritimeradio@ixmail.co.za</a> |

#### 2 EQUIPMENT CARRIAGE REQUIREMENTS [VHF, HF SSB AND 406 MHZ EPIRB]:

2.1 All boats shall carry VHF transceivers capable at least of receiving and transmitting on channels:

| Channel | Station  |
|---------|--|
| 14      | Cape Town Port Control                                 |
| 16      | Call and answer and distress                           |
| 06      | Race Communications in Cape Town and in Rio de Janeiro |

- 2.2 Minimum power output - 20 watts. An emergency antenna must be provided for the VHF transceiver if the main antenna depends on the mast. All boats shall have a registered radio call sign and at least one crew member shall have certified authority to operate such radio equipment.
- 2.3 All boats shall be fitted with an HF SSB marine radio transceiver - minimum power of 100 watts PEP. Alternatively a yacht may carry a Satellite telephone, provided that the skipper acknowledges in writing on the Communication Information document that he is aware of the safety deficiencies inherent with this equipment.
- 2.4 Note well that in the GMDSS [Global Maritime Distress and Safety System] that was implemented in February 1999, that distress watch-keeping by ships on the MF distress frequency 2182 kHz is not mandatory. Said calls or alerts are initiated on the associated digital selective calling frequency 2187.5 kHz and this prompts listeners to tune to 2182 kHz for further distress communications that may follow.
- 2.5 Digital Selective Calling
- 2.5.1 Probably the easiest way to report your position at any given time is via the GMDSS Digital Selective Calling System, if of course, you have this equipment installed.
- 2.5.2 Your ROUTINE, SAFETY, URGENCY or DISTRESS call is identified by the unique Maritime Mobile Service Identity or MMSI allocated [in South Africa] to your vessel by the Independent Communications Authority [ICASA - telephone 021 561 6800]. ICASA also issues radio call signs, MMSI's, provides the authority to operate, and will register your 406 MHz EPIRB.
- 2.5.3 Considerable range is achieved on the DSC (Digital Selective Calling) system and the duration of this call type is typically 8 seconds. When necessary, subsequent voice communications may be arranged via this system.
- 2.6 HF SSB Radio – Cape Town Radio - RT distress and call and answer:

| Usage                     | Channel  | (KHz)       |        |        |
|---------------------------|----------|-------------|--------|--------|
|                           |          | Band 1      | Band 2 | Band 3 |
| Distress simplex          | VHF Ch16 | 4125        | 12290  | 16420  |
| Call and Answer (duplex)  | 421      | 4417/4125   |        |        |
|                           | 821      | 8779/8255   |        |        |
|                           | 2221     | 22756/22060 |        |        |
| Call and Answer (simplex) | Ch12C    | 12359       |        |        |
|                           | Ch16D    | 16537       |        |        |

| Commercial Traffic  | ITU Ch | Coast Station | Ship Station |
|---|--------|---------------|--------------|
| These channels are used subsequent to establishing initial contact with CTR | Ch405  | 4369          | 4077         |
|   | Ch805  | 8731          | 8207         |
|   | Ch1209 | 13101         | 12254        |
|   | Ch1608 | 17263         | 16381        |

|  |        |       |       |
|--|--------|-------|-------|
| on the call and answer channel listed above. | Ch2204 | 22705 | 22009 |
|--|--------|-------|-------|

### 3 POSITION REPORTING:

- 3.1 **Skippers are required to complete and submit the Communication Equipment Information form no later than 16h00(B) on Monday 19<sup>th</sup> December 2016.**
- 3.2 Boats are required to report their position at 0800 UTC daily. Inability to comply with this requirement should be reported in the declaration form with reasons.
- 3.3 The daily position report is mandatory and failure to report will incur a time penalty.
- 3.4 Daily position reporting may be achieved by any of the following methods:

#### 3.4.1 Electronic mail:

3.4.1.1 TO [positions@rcyc.co.za](mailto:positions@rcyc.co.za); [rcycgm@gmail.com](mailto:rcycgm@gmail.com)  
CC [maritimeradio@ixmail.co.za](mailto:maritimeradio@ixmail.co.za)

3.4.1.2 Subject line "**POSITION REPORT – SY (NAME)**".

3.4.1.3 The mail address may be amended during the race and, if so, the fleet will be informed of the new address.

### EXAMPLE

**From:** hotice@skymail.com  
**Sent:** Monday, January 09, 2017 08:00AM  
**To:** [positions@rcyc.co.za](mailto:positions@rcyc.co.za)  
**Subject:** POSTION REPORT - SY HOT ICE

28 54' 47.89" S } Mandatory information  
001 44' 18.82"W }

AP – 1008 }  
AT – 22 } Optional Information  
ST – 15 }  
WS – 13 }  
WD – NW }  
SS - 2 }

- 3.4.2 By HF DSC via Cape Town Radio – MMSI 006010001
- 3.4.3 By HF SSB via Cape Town Radio – Ch405, 805, 1209, or 1608 - roll call will be in alphabetical order.
- 3.4.4 By satellite telephone to Race Control – 0027 64 652 6316. If no communications is established with Race Control pass position to Cape Town Radio: 0027 21 551 2617

3.5 When latitude and longitude are used, they shall be expressed in:

- 3.5.1 Degrees and minutes [and decimals of a minute if necessary],
- 3.5.2 North or South of the Equator
- 3.5.3 East or West of Greenwich.
- 3.5.4 Latitude: 2 figures for degrees 2 figures for minutes [and decimals of a minute if necessary]
- 3.5.5 Longitude: 3 figures for degrees 2 figures for minutes [and decimals of a minute if necessary]

## 4 EQUIPMENT. INSPECTIONS AND TESTS:

4.1 Equipment will be inspected and tested by an appointed scrutineering committee.

## 5 COMMUNICATIONS AT THE START:

- 5.1 The Race Committee will use VHF channel 06 to transmit information and instructions to the fleet at the start.
- 5.2 From 10.30 to 14.00 UTC on the start date, boats should only transmit on this frequency if absolutely necessary.
- 5.3 Time checks will be transmitted at 1000 and 1030 UTC.
- 5.4 In an emergency in the start area, the NSRI can be contacted on either of VHF channel 16 or 06.

## 6 LISTENING WATCHES:

6.1 In the interest of safety for all concerned it is necessary for boats to maintain a continuous watch outside the reporting times on 2182 kHz.

## 7 FINISHING PROCEDURE:

- 7.1 The finishing procedure is explained in paragraph 16 of the Sailing Instructions.
- 7.2 Communications with the finish shall be either by:
  - 7.2.1 HF Radio 4431.8Khz or 8291.1Khz
  - 7.2.2 VHF Ch 68/73
  - 7.2.3 Telephone – + 55- 21- 32237214
- 7.3 For the report from 1 mile, boats may use VHF Channel 68 using call sign “ECHO 21”.

7.4 The call sign for communication with ICRJ is “ECHO 21”.

## 8 RETIREMENT:

8.1 If a boat retires it shall report this fact as soon as possible, together with its destination, and it shall continue to report its daily position as provided for in paragraph 3 above.

## 9 GENERAL

### 9.1 Handicap Positions

9.1.1 Will be shared at 1400 UTC. This will be provided by reply E-mail via [positions@rcyc.co.za](mailto:positions@rcyc.co.za) and by HF SSB broadcast via Cape Town Radio.

9.1.2 The handicap positions will be broadcast on:

- 9.1.2.1 *ITU Ch405 at 1400 UTC*
- 9.1.2.2 *and on Ch 805 at 1440 UTC*
- 9.1.2.3 *from 20 Jan on Ch 1209*

9.2 Voluntary Observing Ships and The Weather - Along with daily position reports at 0800 UTC, competitors are encouraged to submit a brief summary of the current weather being encountered. Temperature and humidity profiles over the oceans are vital to weather and climate forecasting.

9.3 The most critical being

- 9.3.1 Air pressure,
- 9.3.2 Air temperature,
- 9.3.3 Sea-surface temperature,
- 9.3.4 Wind
- 9.3.5 Swell direction
- 9.3.6 And sea state.

9.4 Your reports will be forwarded by Cape Town Radio, to the folks at the South African Weather Service who in turn will use this information to improve their predictions to you.

9.5 The Cape Town Radio Scheduled Weather Bulletins - on RT take place at 1015 UTC and 1815 UTC daily on all available VHF traffic channels and on HF on 4375, 8740 and 13146 kHz.

9.6 Safetynet Weather Broadcasts - for those equipped with a SATCOM C EGC receiver take place at 0940 UTC and 1940 UTC daily.

## 10 SAFETY & EMERGENCY INFORMATION:

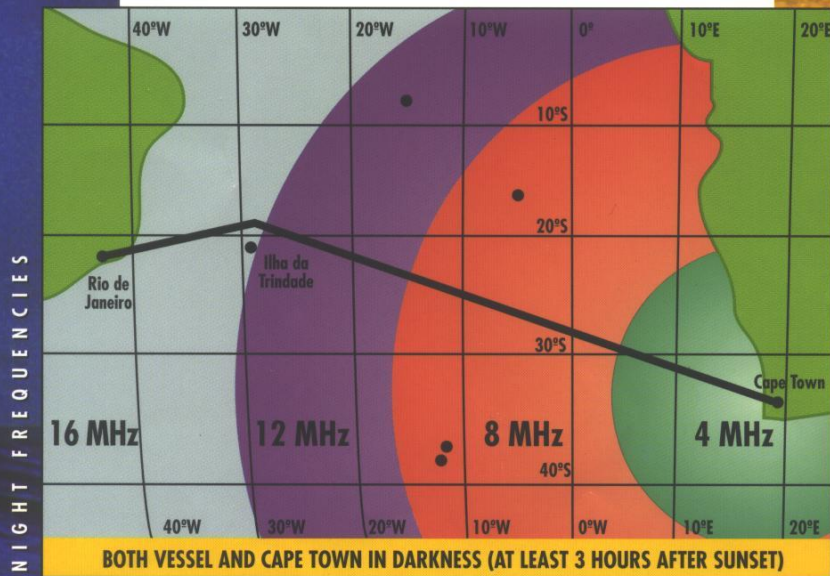
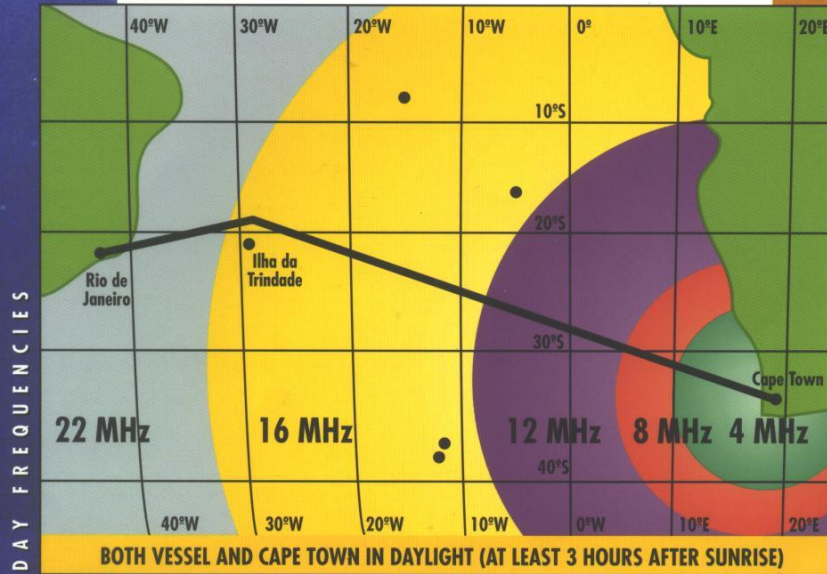
10.1 The Race Committee is very aware of the potential dangers of trans-ocean passages and, while all boats are required to be equipped and crewed to “be completely self-sufficient for extended periods of time, capable of withstanding heavy storms and prepared to meet serious emergencies without the expectation of outside assistance (ISAF Offshore Special Regulations), we will be diligent in ensuring that –

- 10.1.1 Every boat in the fleet is sea-worthy and equipped to the standard set out in the World Sailing Offshore Special Regulations, category 1 as amended,
- 10.1.2 At least one person is properly capable of navigating the boat to its destination,
- 10.1.3 Least two members of each boat's crew has completed a Safety at Sea Survival Course and
- 10.1.4 Communications by the selected method and by EPIRB (which is compulsory) is effective.
- 10.2 The Race Committee will ensure that, by the time the race starts, it will have a database of all the communication equipment on board each boat, together with contact details of the entire crew's next of kin to facilitate contact in the event of an emergency. This database will be given to both Cape Town Radio (CTR) and the Maritime Rescue Co-Ordination Centre (MRCC) in Cape Town.
- 10.3 All participants should be aware that they cannot rely on any SAR operation being able to rescue them. The best they can expect is that another vessel will be diverted to collect them from the boat or life-raft. It is thus very important that a means of communication is mobile and can stay with the crew.
- 10.4 If the chosen mode of communication is by satellite telephone, in an emergency call Cape Town Radio at +27-21-5512617 (or 00 27 64 652 6316 – Duty Officer) and give them:
- 10.4.1 The boat name,
- 10.4.2 Position and
- 10.4.3 Form of emergency (fire holed, medical as appropriate).
- 10.5 CTR will alert MRCC and the Race Headquarters who will initiate the appropriate action. In the event of having to leave the boat (and this should be as a last resort), ensure that you have all mobile means of communicating (EPIRB, Handheld VHF, GPS and Satellite Phone) with you and initiate the EPIRB's signal. This signal will identify the boat and will alert MRCC via the satellite ground station.
- 10.6 In the event of an emergency being recorded, the Maritime Rescue Co-ordination Centre will notify the Race Committee's Officer on Watch on 00 27 64 652 6316, who will contact the family and be the liaison between the family and MRCC. The public is urged not to contact MRCC as this will distract them from the task at hand.



## MAPS

### OF DAY AND NIGHT FREQUENCIES



CITY OF CAPE TOWN  
ISIXEKO SASEKAPA  
STAD KAAPSTAD



MASERATI  
*Presenting Partner*