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PRELIMINARY DRAFT REVISION OF RECOMMENDATION ITU-R M.541-9

Operational procedures for the use of digital selective-calling equipment in the maritime mobile service

1 Suggested change

Define interships DSC calling frequencies for routine calls in HF band and clarify some usage of DSC frequencies.

2 Discussion

The Recommendation ITU-R M.541-9 specify the intership DSC calling frequency in MF band (2 177.0 kHz) and in the VHF band (156.525 MHz – Channel 70), it is lacking the indication of intership frequencies in the HF bands.

Successfully calling another ship station requires that the called station maintain DSC watch on appropriate digital selective calling frequencies within these bands, taking into account propagation characteristics.

For VHF transceivers on board ships the situation is the simplest possible, all distress, urgency and safety traffic as well as routine DSC calls are automatically received on Channel 70 with a dedicated watch-keeping receiver.

For SSB transceivers on-board ships are receiving only distress, urgency and safety calls with a dedicated watch receiver; on MF on 2 187.5 kHz and on HF on 8 414.5 kHz plus at least one of the other five frequencies. To receive routine calls from coast stations or from other ship stations specific frequencies should be programmed and a scan function activated for watch.

This recommendation specify in the MF band 2 177.0 kHz to be watched by ships in order to receive routine calls from other ship stations and from those coast station which are transmitting on 2 177.0 kHz (the first choice of international routine calling).

The Recommendation ITU-R M.541-9 does not specify any intership routine calling frequencies in the HF band. One user groups tried to promote frequencies for intership calling (e.g. 4 208.0, 6 312.5, 8 415.0, 12 577.5 and 16 805.0 kHz - all ship transmit frequencies) without real international acceptance. More recently they recommend for intership calling the usage of 4 207.5, 6 312.0, 8 414.5, 12 577.0 and 16 804.5 kHz – all distress, urgency and safety frequencies (monitored by the dedicated watch receiver), but against RR Appendix 17. Many other users have no idea, which would be the appropriate channels for intership DSC calling.

This Recommendation should make it clear for all.

2 Proposals

2.1 Intership frequencies inserted in Annex 5

Specify the following frequencies for the purposes of intership communications in the HF band. There are three alternatives:

a) Selecting frequencies that are also **ship transmit frequencies to call coast** stations: 4208.0, 6312.5, 8415.0, 12577.5, 16805.0, 18898.5, 22347.5 and 25208.5 kHz.

These frequencies to be programmed and scanned by the SSB transceiver in DSC watch mode to receive individual routine calls from other ships [this is Terry Spark's proposal].

b) Selecting frequencies which are also **coast station transmit frequencies**: 4219.5, 6331.0, 8436.5, 12657.0, 16903.0, 19703.5, 22444.0 and 26121.0 kHz.

These frequencies to be programmed and scanned by the transceiver in DSC watch mode to receive individual routine calls from other ships and possibly from coast stations [this is used as an example in Furuno SSB FS-1575 Users' Manual].

c) Selecting frequencies which are used for **distress, urgency and safety** purposes: 2187.5, 4207.5, 6312.5, 8414.5 and 16804.5 kHz. Note that the 18, 22 and 25 MHz bands are not covered.

This alternative is similar to the arrangement on VHF using Channel 70 for all DSC calling. The main advantage is that these frequencies are automatically monitored by the dedicated watch receiver of the SSB transceiver, no need to programme and scan by the user [this is promoted now by a user group in the Caribbean].

As routine calls are addressed to individual ship stations or to group of ship stations, never to all stations, the usage of these frequencies not expected to make a heavy load.

2.2 Consolidation of Annex 5

The figures of one of these alternatives to be used in Annex 5 for the purpose of intership calling and watch keeping on an international basis in [square brackets].

Presenting the paired frequencies for ship/coast stations in Annex 5 improves the readability of the table. The table in the first part shows frequencies assignable on an international basis.

The reference to RR Appendix 17, Part A, footnote is corrected

The use of additional DSC frequencies in the second part to be assignable (not usable) on a national basis.

Attachment: revised and consolidated Annex 5

Annex 5

Frequencies used for DSC

1 The frequencies assignable on an **international** basis to ship stations and coast stations for DSC are as follows:

| Frequency band | Description of usage and purpose | Ship station transmit (kHz) | Coast station transmit (kHz) |
|----------------|----------------------------------|-----------------------------|------------------------------|
| MF I | International routine calling | 458.5 | 455.5 |
| MF II | Distress, urgency and safety | 2 187.5 | 2 187.5 |
| | International routine calling | 2 189.0 | 2 177.0 |
| | Intership calling | 2 177.0 | – |
| HF 4 MHz | Distress, urgency and safety | 4 207.5 | 4 207.5 |
| | International routine calling | 4 208.0* | 4 219.5* |
| | International routine calling | 4 208.5 | 4 220.0 |
| | International routine calling | 4 209.0 | 4 220.5 |
| | Intership calling | [4 219.5] | – |
| HF 6 MHz | Distress, urgency and safety | 6 312.0 | 6 312.0 |
| | International routine calling | 6 312.5* | 6 331.0* |
| | International routine calling | 6 313.0 | 6 331.5 |
| | International routine calling | 6 313.5 | 6 332.0 |
| | Intership calling | [6 331.0] | – |
| HF 8 MHz | Distress, urgency and safety | 8 414.5 | 8 414.5 |
| | International routine calling | 8 415.0* | 8 436.5* |
| | International routine calling | 8 415.5 | 8 437.0 |
| | International routine calling | 8 416.0 | 8 437.5 |
| | Intership calling | [8 436.5] | – |
| HF 12 MHz | Distress, urgency and safety | 12 577.0 | 12 577.0 |
| | International routine calling | 12 577.5* | 12 657.0* |
| | International routine calling | 12 578.0 | 12 657.5 |
| | International routine calling | 12 578.5 | 12 658.0 |
| | Intership calling | [12 657.0] | – |
| HF 16 MHz | Distress, urgency and safety | 16 804.5 | 16 804.5 |
| | International routine calling | 16 805.0* | 16 903.0* |
| | International routine calling | 16 805.5 | 16 903.5 |
| | International routine calling | 16 806.0 | 16 904.0 |
| | Intership calling | [16 903.0] | – |
| HF 18 MHz | International routine calling | 18 898.5* | 19 703.5* |
| | International routine calling | 18 899.0 | 19 704.0 |
| | International routine calling | 18 899.5 | 19 704.5 |
| | Intership calling | [19 703.5] | – |
| HF 22 MHz | International routine calling | 22 374.5* | 22 444.0* |
| | International routine calling | 22 375.0 | 22 444.5 |
| | International routine calling | 22 375.5 | 22 445.0 |
| | Intership calling | [22 444.0] | – |

| | | | |
|-----------|-------------------------------|------------------|-------------|
| HF 25 MHz | International routine calling | 25 208.5* | 26 121.0* |
| | International routine calling | 25 209.0 | 26 121.5 |
| | International routine calling | 25 209.5 | 26 122.0 |
| | Intership calling | [26121.0] | – |
| VHF | Distress, urgency and safety | 156.525 MHz | 156.525 MHz |
| | International routine calling | 156.525 MHz | 156.525 MHz |
| | Intership calling | 156.525 MHz | – |

* Indicates paired frequencies (for ship/coast stations) which are the first choice international frequencies for DSC (See RR Appendix 17, Part A, footnote k) \ddagger and l).

2 In addition to the frequencies listed in the table above, appropriate working **and calling** frequencies in the following bands are **assignable ~~may be used~~** for DSC (see RR Chapter II, Article 5) **on a national basis**:

- 415-526.5 kHz (Regions 1 and 3)
- 415-525 kHz (Region 2)
- 1 606.5 - 3 400 kHz (Regions 1 and 3)
- 1 605.5 - 3 400 kHz (Region 2) (For the band 1 605-1 625 kHz, see RR No. 5.89)
- 4 000 - 27 500 kHz
- 156-174 MHz