RECOMMENDATION 542-1*

**ON-BOARD COMMUNICATIONS
BY MEANS OF PORTABLE RADIOTELEPHONE EQUIPMENT**

(Question 18/8)

(1978-1982)

The CCIR,

CONSIDERING

(a) that common channels for on-board communications are necessary to meet world-wide requirements;

(b) that although the frequencies around 160 MHz as specified in Appendix 18 to the Radio Regulations are technically suitable for on-board communications, they are to an increasing extent required for other maritime needs;

(c) that frequencies in the UHF band around 460 MHz are technically suitable;

(d) that on larger vessels it may not be possible to obtain satisfactory communications at all desired locations between two hand-carried transceivers;

(e) that it is important to avoid interference from on-board communications stations to the fixed radio installation on a ship;

(f) that no tests have yet been carried out on frequencies above 470 MHz,

UNANIMOUSLY RECOMMENDS

1. that frequencies around 460 MHz are the most suitable of those so far tested for on-board communications, although other frequencies in the VHF and UHF bands are also technically suitable;

2. that the effective radiated power of on-board communication stations should be limited to the minimum required for satisfactory operation, but not exceeding 2 W** in the UHF band up to 470 MHz and 1 W** in the VHF band;

3. that the mode of operation between hand-carried transceivers should be single frequency simplex;

4. that, where the use of relays is necessary, frequencies with a spacing of the order of 10 MHz should be used for two-frequency simplex mode of operation, and the repeater stations should transmit only on the lower frequencies.

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* The Director of the CCIR is requested to bring this Recommendation to the attention of the International Maritime Organization (IMO).

** For the purpose of type approval of equipment, the transmitter carrier power output terminated in its designed load impedance should not exceed 4 W and 2 W respectively (this takes into account typical feeder losses of relay transmitter installations and typical antenna efficiencies of hand-carried equipment).