

INTER-GOVERNMENTAL MARITIME CONSULTATIVE ORGANIZATION

SN/Circ.2

COM/Circ.2

21 September 1962

CO-ORDINATION OF SAFETY AT SEA AND IN THE AIR

In furtherance of Recommendation 23 of the 1948 International Convention on Safety of Life at Sea and Recommendation 40 of the 1960 International Convention on Safety of Life at Sea, the Inter-Governmental Maritime Consultative Organization, the International Civil Aviation Organization, the International Telecommunications Union and the World Meteorological Organization have established, under the auspices of IMCO, an advisory body known as Inter-Agency Group to consider problems of common interest relating to the safety at and over the sea.

The subjects which have been discussed at the first meeting of the Group appear in Attachment "A" to this circular. Attachment "B" is a summary of the conclusions reached by the Group. These are now circulated to Member Governments for their information.

It should be noted that:

- (i) the findings of the Group in connexion with the proposed Radiotelephone Code have been taken into account by the IMCO Sub-Committee on the International Code of Signals;
- (ii) the International Frequency Registration Board of ITU has adopted the conclusions of the Group concerning the question of interference between shipborne and airborne radar (Group I, Item 3) and has recommended to the

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administrations of its Member Governments to comply with these conclusions (IFBR Circular Letter No. 46 of 30 July 1962).

It might be of interest to Member Governments to take particular note of:

(i) Paragraph 2, Group I, Item 1A and

(ii) Item 2, Group I

of this Summary.

ATTACHMENT "A"

GROUP I - COMMUNICATIONS - SEARCH AND RESCUE

- Item 1: Establishment of communications between aircraft and ships in case of emergency.
- Item 2: Standardization of emergency and survival equipment.
- Item 3: Interference between shipborne and airborne radar.

GROUP II - METEOROLOGY

- Item 1: Times of watch of radio officers in single-operated ships in various zones in relation to the transmission of radio messages.
 - Item 2: Possible means of improving arrangements for reception and dissemination of radio weather messages from ships in certain areas.
 - Item 3: Need for regular information about probable availability of shipping in sparse areas of the oceans for meteorological purposes.
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ATTACHMENT "B"

SUMMARY OF CONCLUSIONS REACHED BY THE INTER-AGENCY
WORKING GROUP ON CO-ORDINATION OF
SAFETY AT SEA AND IN THE AIR AT ITS FIRST SESSION
(LONDON, 30 APRIL - 4 MAY 1962)

GROUP I - COMMUNICATIONS - SEARCH AND RESCUE

Item 1: Establishment of communications between aircraft
and ships in case of emergency

A - Radio-communications

In view of the fact that (a) the Administrative Radio Conference, 1959, considerably extended the obligations of coast stations and ship stations as regards watch on the frequency 2182 kc/s and regulated the specification and the conditions of use of a radiotelephone alarm signal to be transmitted on 2182 kc/s; (b) this frequency is to be watched in the future on board a larger number of ships; and (c) no world-wide requirement has been established by ICAO either for the carriage of 2182 kc/s or for the carriage of an automatic triggering device on that frequency by commercial aircraft engaged in international operations, the following conclusions were reached:

1. Ships - aircraft communications

1.1 On special occasions there may be a need for communication between a ship in distress and an aircraft. The aircraft, however, cannot normally give further assistance.

1.2 Communication between an aircraft in distress and a ship will be necessary only in those cases where the ship can give further assistance to the aircraft.

1.3 As these situations occur very seldom, the equipping of ships and aircraft so that they will be able to communicate on a world-wide basis solely for such purpose is perhaps not justified.

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1.4 In the event that there would be a need for such communication and that the solution could not be found in the use of frequency 2182 kc/s because of the decrease in its use by aviation, the practicability should be investigated of ships equipped with maritime VHF (frequency modulation) to listen to aircraft on 121.5 Mc/s (amplitude modulation) and for aircraft equipped with amplitude-modulated equipment to listen to ships on 156.3 or 156.8 Mc/s (frequency modulation).

However, as long as VHF equipment is not compulsory on board ships, the possibility of using VHF for this purpose has the same drawbacks as those at present encountered with respect to 2182 kc/s.

2. Ships - SAR aircraft communications

Sight should not be lost of the desirability of retaining on board SAR aircraft means of communicating with ships on 2182 kc/s, since 2182 kc/s will be of increasing importance for maritime mobile communications. Account was taken of the fact that (a) at present many SAR aircraft are actually equipped with 2182 kc/s, and (b) the authorities responsible for the provision of SAR services have instituted measures to ensure as far as practicable that the SAR aircraft, by means of relay through a ground or other air station, is enabled to communicate with the ship.

B - Radiotelephone Code

1. Consideration was limited to the needs of communication between aircraft and ships in case of distress and in case of rescue operations.

2. A requirement exists for a few radiotelephone signals between aircraft in distress and ships and between ships in distress and aircraft in cases in which communications cannot be conducted in a common language. These signals should be limited to a few vital expressions for use in distress situations and kept to the absolute minimum to facilitate their memorization, ready reference and usage.

3. A requirement exists for radiotelephone signals between SAR aircraft and ships during SAR operations in cases in which communications cannot be conducted in a common language. Such signals should provide a SAR aircraft with the means for direct communication with ships in situations in which it has

- (a) to exchange information which might facilitate the search operation;
- (b) to direct one or more vessels to the scene of the rescue.

4. Direct communication is considered desirable but not essential in cases in which a SAR aircraft wishes

- (a) to obtain information concerning the results of the rescue action;
- (b) to obtain information from a vessel in distress as to the type of assistance required;
- (c) to facilitate landing near the vessel in distress, or hovering over it in the case of a helicopter, in order to pick up survivors.

5. The significations corresponding to these situations should be consistent with similar significations included in the International Code of Signals and in the Q-Code. As far as practicable, significations for use in radiotelegraphy, radio-telephony, visual and sound signals should be identical.

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6. For the successful co-ordination of search and rescue operations a common figure spelling table should be adopted for use by aircraft and surface craft. This is the sole reason for having a common table. Tests carried out so far seem to indicate that it might be necessary to use two-syllable words for transmitting figures, in order to cope with interference. Additional extensive tests should be carried out, using the ICAO figure spelling table. These tests should be conducted between aircraft and ships in different parts of the world and the conclusions reached should reflect the concerted views of the aviation as well as of the maritime interests in each country.

7. It would be necessary to include in the Radiotelephone Code significations designed to call the attention of a vessel to the fact that an aircraft wished to communicate with it in the International Radiotelephone Code or in plain language and to convey the meaning of such procedure signals as "ROGER" ("I have received your last transmission"), "WILCO" ("I will comply with your request or instructions"), "STAND BY" and "SAY AGAIN".

8. The signals concerning search and rescue operations should form a special section of the Radiotelephone Code and of the International Code of Signals and should be so presented as to enable them to be published separately. The size of any documents or material required for application of the Code should be compatible with the requirements for quick reference and easy carriage aboard aircraft.

9. Those parts of the Code required for use in distress situations should be extracted and reproduced as a "Table of Distress Signals" with the object of ensuring their ready availability in the case of emergency on the bridge of a ship and in the cockpit of an aircraft.

10. A draft list of significations submitted by ICAO will be brought to the attention of the IMCO Sub-Committee on the International Code of Signals.

Item 2: Standardization of emergency and survival equipment
Emergency position-indicating radio beacons

It appeared that automatic emergency radio beacons should be able to operate without any human action in case of wreck and that the same equipment could usefully be put on board a life-boat if time permits. In such a case its operation should be capable of being started by one of the survivors. Thereby this equipment would fulfil the functions of the equipment to which ICAO refers on the one hand as "crash locator beacon" and on the other as "radio survival beacon".

With respect to the frequency to be used, it was noted that Recommendation 48 of the International Conference on Safety of Life at Sea, 1960, requested a "standard of world-wide application" and referred to "all ships". It appeared extremely difficult to solve this problem in a satisfactory way on a world-wide basis with equipment which would use a single frequency. In certain seas the watch on frequency 2182 kc/s is extensive, while in other parts of the world means of aeronautical search seem to be essential for the success of a SAR operation.

Consequently, it appeared that, on a world-wide basis and for ships sailing in different seas, the equipment should allow for the use of two frequencies. For smaller ships, it should rest with States to determine whether a single frequency equipment would be adequate.

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With respect to general specifications it was noted that

- (a) ICAO has formulated criteria for survival radio beacons; and
- (b) some States have already chosen or studied different specifications for this equipment.

Consideration was given to the need for standardization and it was suggested that IMCO and ITU should pursue, as a matter of urgency, the problem of establishing uniform specifications for emergency position-indicating radio beacons.

Item 3: Interference between shipborne and airborne radar

In view of the information available, it was noted that

- (a) there was at present no problem of interference between aircraft radars or between aircraft and ship radars; and
- (b) there were relatively few cases of harmful interference between ship radars.

It was very desirable to ensure that the band 9300-9500 Mc/s is utilized in a manner which will prevent or reduce harmful interference and this is capable of accomplishment without endangering the use of this frequency band by any legitimate user, in accordance with the provisions of Article 5 of the ITU Radio Regulations (Geneva, 1959).

Satisfactory results might be realized by planning a random distribution of all legitimate users within the entire band. One way in which this could be achieved would be for the ITU to request its Members to encourage the production of magnetrons for the 9300-9500 Mc/s band on an appropriate number of different nominal frequencies in such proportions as would lead to a

substantially even usage of the entire band, giving due regard to the number of magnetrons which are already in use or available in stock and their nominal design frequencies.

GROUP II - METEOROLOGY

Item 1: Times of watch of radio officers in single-operated ships in various zones in relation to the transmission of radio messages

At present only in two zones do two of the four weather reports made at the main standard times for surface synoptic observations (0000, 0600, 1200, 1800 G.M.T.) fall during the working hours of single-operated ships. In the remaining zones there is the possibility of only one weather report during the same hours.

Apart from the practical difficulties of revising the Radio Regulations in order to change the times of watches, it would be wise to consider all the consequences from the point of view of safety as well as from the public correspondence point of view. Modifying the times of watch would be of no use if coast stations do not receive and transmit messages and if the meteorological forecasts do not reach the ships at least not later than at present.

It was agreed that WMO should pursue the study of the problem in collaboration with ITU and IMCO.

Item 2: Possible means of improving arrangements for reception and dissemination of radio weather messages from ships in certain areas

Attention was drawn to two problems: (i) meteorological traffic capacity of coast stations and (ii) addressing of ships' weather reports.

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On the first point not much can be done at present at the international level. The question merits further consideration and it was agreed that documentation should be provided by WMO to IMCO for dissemination to maritime authorities and to the ITU for study.

As regards the second point, the addressing of ships' weather reports should be simply "obs" followed by the name of the coast station instead of the name of the meteorological service. It was concluded that this question should be pursued by ITU in co-operation with WMO.

Item 3: Need for regular information about probable availability of shipping in sparse areas of the oceans for meteorological purposes

The need of the meteorological services for more observations from the so-called sparse areas of the world was considered. The Group expressed the opinion that, to give this subject the attention it merited, the WMO should document its views to IMCO which should bring the matter to the attention of the shipping authorities.