

RECOMMENDATION 692

**NARROW-BAND DIRECT-PRINTING TELEGRAPH EQUIPMENT
USING A SINGLE-FREQUENCY CHANNEL**

(Question 5/8)

(1990)

The CCIR,

CONSIDERING

- (a) that single-frequency channel operation is possible using the operating algorithm for narrow-band direct-printing telegraph equipment described in Recommendations 476 and 625;
- (b) that a changeover to single-frequency operation could make available additional radio channels in the MF and HF bands;
- (c) that investigations carried out in a number of countries have demonstrated that there is a real possibility of using narrow-band direct-printing equipment using single-frequency radio channels;
- (d) that no specific frequencies are allocated for NBDP single-frequency non-distress operation between ship and coast stations, but under the provisions of Article 9 (No. 961) of the Radio Regulations, coast station frequencies could be used for this purpose*,

UNANIMOUSLY RECOMMENDS

- 1. that where possible and as an alternative to using two frequencies, use should be made in the maritime-mobile service of narrow-band direct-printing telegraph equipment operating in the ARQ mode on a single frequency, under the condition that no harmful interference is caused to other stations (see Article 9, No. 961 of the Radio Regulations);
- 2. that, in the case of single-frequency operation with narrow-band direct-printing equipment, the provisions and operating procedures indicated in Annex I should be applied.

ANNEX I

- 1. Channels to be used for single-frequency operation between coast stations and ship stations should be indicated as such in the List of Coast Stations.
- 2. Also in the case of single-frequency operation, the procedures set forth in Recommendation 492 should be followed.
- 3. In ship-to-shore and shore-to-ship communications operations should be carried out on one of the coast station frequencies allocated for single-frequency operations.
- 4. In ship-to-ship communications operations should be carried out on one of the unpaired frequencies allocated to ship stations for such operations.
- 5. The input circuits of a ship's radio receiver used for single-frequency operations should effectively be protected against excessive HF voltages induced by the ship's associated transmitter.
- 6. The radio receiver used at the master station (see Recommendation 625) (normally the ship) should have regained its full sensitivity sufficiently soon after the transmission period of the associated transmitter so as to be able to accommodate short distances between master and slave stations (see Recommendation 625, § 1.7).
- 7. The radio receiver used at the slave station (see Recommendation 625) (normally the coast station) should have regained its full sensitivity sufficiently soon after the transmission period of the associated transmitter.
- 8. The (noise) output from each transmitter used for this single-frequency operation should be sufficiently suppressed during transmission pauses to a level which ensures that the effective sensitivity of the associated radio receiver is not degraded.
- 9. The narrow-band direct-printing equipment should preferably be sensitive to input signals only during the time period when signals are expected to be received from the other station.

* Administrations should take CONSIDERING (d) into account to the extent necessary when preparing their proposals for the next competent WARC.