

**Recommendation T/R 21-02 (Rome 1967)****CREATION OF A EUROPEAN RADIO-PAGING SERVICE**

Recommendation proposed by the "Radiocommunications" Working Group T/WG 3 (R)

*Text of the Recommendation adopted by the "Telecommunications" Commission:*

"The European Conference of Postal and Telecommunications Administrations,

*considering*

- (a) that the introduction of a radio-paging system has become urgent in a number of countries,
- (b) that a large number of subscribers must be able to participate in this service, and that the frequency band to be employed should remain as narrow as possible,
- (c) that it is necessary to provide a uniform Paging system for all the CEPT countries,
- (d) that the various contributions submitted by Administrations have been carefully studied by the Sub-Group of Experts R6,
- (e) that it is possible to draw upon the experience already acquired by various Administrations who are operating Paging systems,
- (f) that many tests have been conducted by different Administrations and the Sub-Group of Experts R6,
- (g) that in view of the congestion of the frequency bands concerned and the difficulty of designating frequencies which could be liberated by all Administrations for the Paging service, it is necessary to impose strict economy in the use of frequencies,
- (h) that the final report of Sub-Group R6 annexed\* to this Recommendation proposes uniform technical characteristics for a European Paging service,

*recommends*

that the following technical characteristics should serve as a basis for Administrations wishing to establish a radio-paging service.

1. **BASIC NETWORK**

- 1.1. Subdivision of the CEPT Nations into approximately 50 base networks.
- 1.2. Use of one radio channel per base network; where a base network comprises several transmitters, the frequencies of adjacent channels in a given base network shall be slightly offset one from another.
- 1.3. Calls shall be transmitted to central installations by means of the public telephone network.
- 1.4. Code numbers shall be assigned taking account of the characteristics of the various types of telephone switching equipments.

\* This report is not included in this compendium.

- 1.5. On acceptance of a signal by the central equipment, the emission of an electric signal "reply from called subscriber" followed immediately by a spoken phrase consisting of the "Eurosignal" call-sign, and the name of the base network.
- 1.6. Use of the same basic networks for both national and international calls.
- 1.7. Selection of the location of calling centres to take account of the final basic network configuration with an initial capacity of 1 million different code numbers during the First Phase and the possibility of extension to 7 million.

## 2. TECHNICAL CHARACTERISTICS

- 2.1. Use of frequencies 87.340; 87.365; 87.390 and 87.415 MHz for national and international calls.
- 2.2. Possibility of using 87.290; 87.315; 87.440 and 87.465 MHz for local networks.
- 2.3. Offset for adjacent transmitters in a base network of 0, +4 or -4 kHz (in relation to the nominal channel value).
- 2.4. Frequency tolerance,  $\pm 6 \cdot 10^{-6}$ .
- 2.5. Amplitude modulation of transmitters with a modulation depth of 100% (+5%; -15%).
- 2.6. Useful field intensity in main service zone above 20  $\mu\text{V/m}$ , or 5  $\mu\text{V/m}$  in mountainous regions.

## 3. METHOD OF CODING

- 3.1. Code signal of six successive impulses.
- 3.2. Impulses of 100 ms  $\pm 5\%$ . Use of 16 tones between 313.3 and 1062.9 Hz (frequency tolerance 1%) this process permits 7 million different codes.
- 3.3. Transmission of the interval frequency—1153.1 Hz—between successive calls. This interval shall have a duration of not less than 200 ms; during this interval the decoders should return to the rest position.
- 3.4. Possibility of assigning several code numbers to a subscriber to enable him to receive additional information.
- 3.5. Possibility of repeat calls to increase the probability of success."