

RECOMMENDATION ITU-R SF.356-4*

**MAXIMUM ALLOWABLE VALUES OF INTERFERENCE FROM
LINE-OF-SIGHT RADIO-RELAY SYSTEMS IN A TELEPHONE CHANNEL OF A SYSTEM
IN THE FIXED-SATELLITE SERVICE EMPLOYING FREQUENCY MODULATION,
WHEN THE SAME FREQUENCY BANDS ARE SHARED BY BOTH SYSTEMS**

(1963-1966-1970-1974-1978)

The ITU Radiocommunication Assembly,

considering

- a) that systems in the fixed-satellite service and line-of-sight radio-relay systems share frequency bands in the range above 1 GHz;
- b) that mutual interference would increase the noise in both types of system beyond that which would exist in the absence of frequency sharing;
- c) that it is desirable that the noise due to interference in the telephone channels of systems in the fixed-satellite service because of the transmitters of radio-relay systems should, during most of the time, be a small fraction of the total noise in those systems, as set out in Recommendation ITU-R S.353;
- d) that it is necessary to specify the maximum allowable interference power in a telephone channel, to determine the maximum transmitter power and equivalent isotropically radiated power of line-of-sight radio-relay stations, and to determine whether specific locations for satellite-earth stations and terrestrial radio-relay stations would be satisfactory;
- e) that a distribution of one-minute mean power, as exemplified in Fig. 1 would allot to interference an appropriate fraction of the total noise power permitted in the hypothetical reference circuit;
- f) that systems in the fixed-satellite service may receive interference both through the satellite receiver and through the earth-station receiver, but will receive the higher levels of interference associated with small percentages of time primarily through the earth-station receivers,

recommends

- 1. that systems in the fixed-satellite service and radio-relay systems sharing the same frequency bands, be designed in such a manner that the interference noise power, at a point of zero relative level in any telephone channel of a hypothetical reference circuit of a system in the fixed-satellite service, caused by the aggregate of the transmitters of radio-relay stations, conforming to Recommendation ITU-R SF.406, should not exceed:
 - 1.1 1000 pW0p psophometrically-weighted one-minute mean power for more than 20% of any month;
 - 1.2 50 000 pW0p psophometrically-weighted one-minute mean power for more than 0.03% of any month.
- 2. that the following Note should be regarded as part of the Recommendation.

Note – The way in which the above values are to be taken into account in the general noise objective for systems in the fixed-satellite service is defined in Note 6 of Recommendation ITU-R S.353.

* Radiocommunication Study Groups 4 and 9 made editorial amendments to this Recommendation in 2000 in accordance with Resolution ITU-R 44.

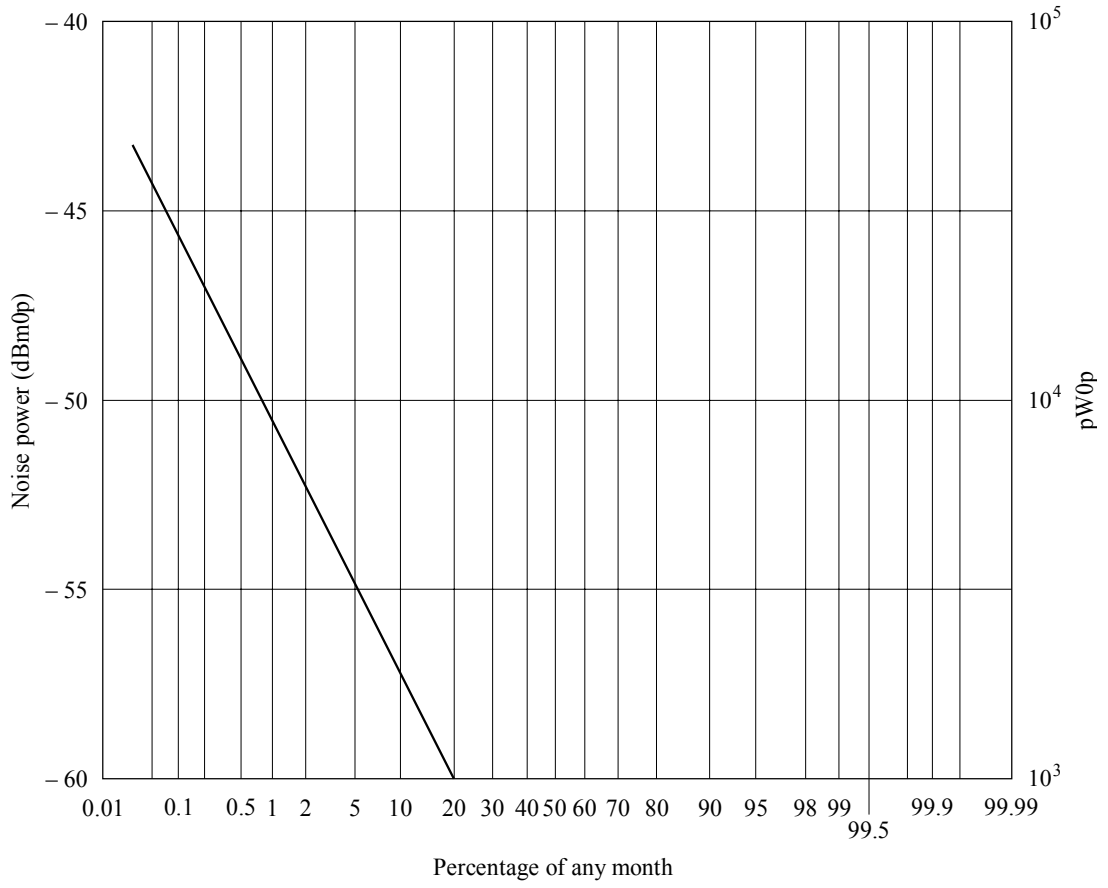


FIGURE 1 – Example of possible interpolation

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