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TELEPHONE TRANSMISSION QUALITY SUBSCRIBERS' LINES AND SETS

TRANSMISSION CHARACTERISTICS OF WIDEBAND AUDIO TELEPHONES

Supplement 22 to ITU-T Series P Recommendations

(Previously "CCITT Recommendations")

FOREWORD

The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the International Telecommunication Union. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, established the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

Supplement 22 to ITU-T Series P Recommendations was prepared by the ITU-T Study Group XII (1988-1993) and was approved by the WTSC (Helsinki, March 1-12, 1993).

NOTES

1 As a consequence of a reform process within the International Telecommunication Union (ITU), the CCITT ceased to exist as of 28 February 1993. In its place, the ITU Telecommunication Standardization Sector (ITU-T) was created as of 1 March 1993. Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.

In order not to delay publication of this Recommendation, no change has been made in the text to references containing the acronyms “CCITT, CCIR or IFRB” or their associated entities such as Plenary Assembly, Secretariat, etc. Future editions of this Recommendation will contain the proper terminology related to the new ITU structure.

2 In this Recommendation, the expression “Administration” is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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TRANSMISSION CHARACTERISTICS OF WIDEBAND AUDIO TELEPHONES

(Helsinki, 1993)

(referred to in Series P Recommendations)

1 Introduction

This supplement provides preliminary audio performance requirements for telephones capable of transmitting an audio bandwidth extending beyond the conventional telephony bandwidth of 300 to 3400 Hz, to a bandwidth of approximately 150 to 7000 Hz. Such telephones are known as wideband audio telephones, and will make use of digital encoding schemes such as Recommendation G.722. Wideband audio represents a considerable departure from traditional telephony, offering significantly improved quality. However, since this is a new technical area, the requirements in this supplement are not complete, and studies are on-going. Guidance on making wideband audio measurements may be found in the Annex A to this supplement.

2 Handset sending characteristics

2.1 Levels

Pending completion of a method for calculating wideband loudness ratings, the electro-acoustic gain in the send direction should be adjusted in terms of a narrow-band loudness rating calculated according to Recommendation P.79 (calculated over the range 200 to 4000 Hz). When measured in this manner the provisional send loudness rating (SLR) should be +8 dB (consistent with Recommendation P.31).

NOTE – The overload point for wideband audio is defined as +9 dBm0.

2.2 Sensitivity/frequency characteristics

The sending sensitivity/frequency characteristic from the mouth reference point (MRP) to the digital interface should fall within a mask which can be drawn between the points given in Table 1, also shown in Figure 1. All sensitivities are dB on an arbitrary scale.

TABLE 1

Frequency (Hz)	Upper limit (dB)	Lower limit (dB)
100	4	$-\infty$
125	4	-7
200	4	-4
1000	4	-4
5000		-4
6300	9	-7
8000	9	$-\infty$