



INTERNATIONAL TELECOMMUNICATION UNION

**ITU-T**

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

**R.58**

**TELEGRAPHY**

**TELEGRAPH TRANSMISSION**

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**STANDARD LIMITS OF TRANSMISSION  
QUALITY FOR THE GENTEX AND TELEX  
NETWORKS**

**ITU-T Recommendation R.58**

(Extract from the *Blue Book*)

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## NOTES

1 ITU-T Recommendation R.58 was published in Fascicle VII.1 of the *Blue Book*. This file is an extract from the *Blue Book*. While the presentation and layout of the text might be slightly different from the *Blue Book* version, the contents of the file are identical to the *Blue Book* version and copyright conditions remain unchanged (see below).

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

**Recommendation R.58**

**STANDARD LIMITS OF TRANSMISSION QUALITY  
FOR THE GENTEX AND TELEX NETWORKS**

*(New Delhi, 1960; amended at Geneva, 1964)*

The CCITT,

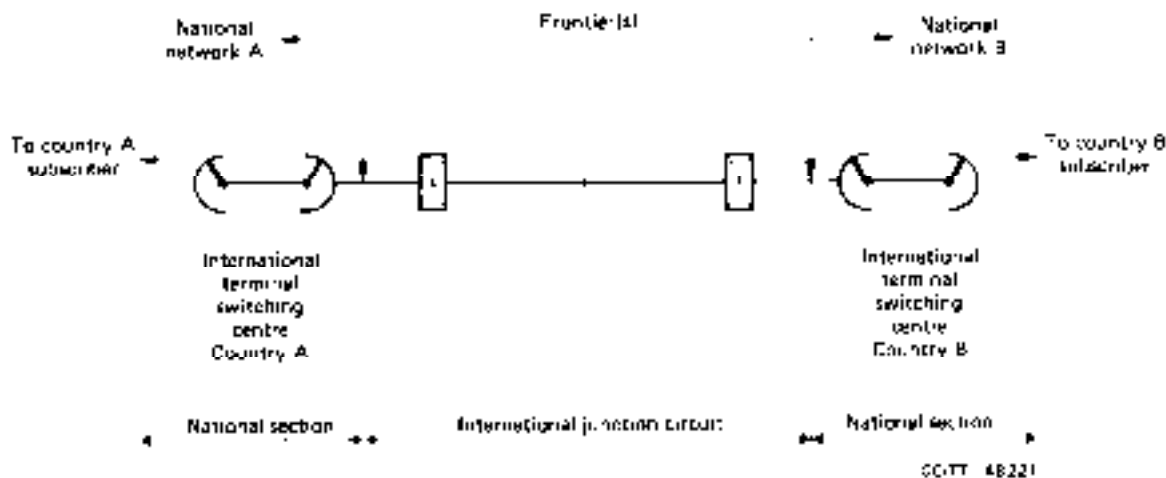
*considering*

(a) that to permit the sharing of responsibility for the maintenance of a high-standard of transmission between countries participating in the establishment of switched connections, it is necessary to specify limiting values of distortion at the international terminal exchanges;

(b) that on the other hand, to enable national switched networks to be interconnected, it is necessary to have a distribution plan of the telegraph distortion between national networks and the international junction circuits connecting up the international switching centres (international terminal switching centres);

(c) that Figure 1/R.58 shows the points of entry and exit of the national network and the ends of the international junction circuit;

(d) that it is difficult to lay down standards applicable both to small and to large national networks. However, it has been possible to fix limit values for large countries and they could apply to the great majority of telex subscriber stations or gentex stations taking part in the international service,



**FIGURE 1-R.58**  
**Network diagram**

*unanimously declares the following view*

**1** The following standards of transmission quality are observed for the interconnection of 50-baud national networks set up by means of telegraph channels and start-stop equipment in accordance with CCITT Recommendations (national gentex or telex networks):

- a) Degree of gross start-stop distortion in service (i.e. including the effect of distortion due to the sending equipment and the exchanges) at the point of exit of the national network: not more than 22%.

*Note* – When a terminal country of an international connection possesses an intercontinental transit centre, that transit centre is considered as forming part of the national network.

- b) Degree of inherent start-stop distortion of the international junction circuit: not more than 13%.

*Note 1* – In establishing the 13% limit for the degree of start-stop distortion in the international junction circuit, account has been taken of the fact that, in a world telex or gentex chain, the junction circuit might quite often consist of two VFT channels in tandem. If the international junction circuit is established on a single channel, the 8% limit mentioned in Recommendation R.57 is applicable to that circuit.

*Note 2* – No limit for distortion on the entry of the national network at the receiving end has been indicated in Recommendation R.58. The values mentioned in § 1 a) and § 1 b) above are adequate for planning purposes.

**2** Although the degrees of distortion to be inserted in the Recommendations relative to the planning of networks are normally conventional degrees of distortion, the maximum values mentioned under § 1 above correspond to the results that would be provided by the routine measurements carried out in accordance with Recommendation R.5.

**3** These limit values are applicable to large countries that are directly connected without switching in a transit country. The stations taking part in the international service that cannot satisfy condition § 1 a) above will have to be specially equipped, for example with distortion correctors.

**4** Small countries (defined as countries in which all stations can be reached with not more than one long-distance telegraph circuit in the national network) will have to try to obtain values less than the maximum of 22% for the measurements corresponding to § 1 a) above.

**5** The standard limits mentioned under § 1 above can also apply to private switched networks.