INTERNATIONAL TELECOMMUNICATION UNION

# ITU-T Q.153

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

## SPECIFICATIONS OF SIGNALLING SYSTEM No. 5

# MULTIFREQUENCY SIGNAL SENDER

## ITU-T Recommendation Q.153

(Extract from the *Blue Book*)

**NOTES**

1 ITU-T Recommendation Q.153 was published in Fascicle VI.2 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.

## 3.3 MULTIFREQUENCY SIGNAL SENDER

3.3.1 *Signalling frequencies*

700, 900, 1100, 1300, 1500 and 1700 Hz.

A signal shall consist of a combination of any two of these six frequencies. The frequency variation shall not exceed ± 6 Hz of each nominal frequency.

3.3.2 *Transmitted signal level*

-7 ± 1 dBm0 per frequency.

The difference in transmitted level between the two frequencies comprising a signal shall not exceed 1 dB.

*Note* - The level of the leak current transmitted to line should be at least:

a) 50 dB below the single-frequency level when a multifrequency signal is not being transmitted;

b) 30 dB below the transmitted signal level of either of the two frequencies when a multifrequency signal is being transmitted.

3.3.3 *Signal duration*

KP1 and KP2 signals: 100 ± 10 ms

All other signals: 55 ± 5 ms

Interval between all signals: 55 ± 5 ms

Interval between cessation of the seizing line signal and transmission of the register KP signal: 80 ± 20 ms.

3.3.4 *Compound signal tolerance*

The interval of time between the moments when each of the two frequencies comprising a signal is sent must not exceed 1 ms. The interval of time between the moments when each of the two frequencies ceases must not exceed 1 ms.