



INTERNATIONAL TELECOMMUNICATION UNION

**ITU-T**

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

**B.1**

**MEANS OF EXPRESSION**

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**LETTER SYMBOLS FOR  
TELECOMMUNICATIONS**

**ITU-T Recommendation B.1**

(Extract from the *Blue Book*)

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## NOTES

1 ITU-T Recommendation B.1 was published in Fascicle I.3 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 B.1<sup>1)</sup>

### LETTER SYMBOLS FOR TELECOMMUNICATIONS

The CCITT,

*considering*

(a) that in order to simplify the reading of documents dealing with telecommunication technique, it is essential to use simple notations in a homogeneous system and having well-defined meaning; that, moreover, it is an advantage, wherever possible, to have notations that have been universally adopted;

(b) that CMV is collaborating with Technical Committee No. 25 of the IEC,

*recommends*

that in their mutual relations the ITU and its permanent organs and Administrations and recognized private operating agencies use in all languages, wherever possible, the letter symbols and the notations recommended by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) to represent the physical quantities and the mathematical operations.

*Note* – References of relevant publications (updated in 1988).

*ISO Standard 31*: “General principles concerning quantities, units and symbols”

Parts of ISO Standard 31 of greatest interest for telecommunications:

- 0 (General principles)
- I (Quantities and units of space and time)
- II (Quantities and units of periodic and related phenomena)
- V (Quantities and units of electricity and magnetism)
- VI (Quantities and units of light and related electromagnetic radiations)
- VII (Quantities and units of acoustics)
- XI (Mathematical signs and symbols)

*IEC Publication 27*: “Letter symbols to be used in electrical technology”

- 27-1 General (1971 Edit. 5, with 1974 Amend. 1 and 1977 Amend. 2) (1983 Amend. 4, including 1981 Amend. 3)
- 27-1A (1976) (Time-dependent quantities)
- 27-2 (1972) (Telecommunications and electronics)
- 27-2A (1975) (First supplement: waveguide propagation; scattering matrix and transfer matrix; static convectors; automatic control science and technology)
- 27-2B (1980) (Second supplement: linear  $n$ -port networks)
- 27-3 (1974) (Logarithmic quantities and units) (see CCIR Recommendation 574)
- 27-4 (1985) (Quantities to be used for rotating electric machines)

See also IEC Handbook *Letter Symbols* (1983) and the *Directives applicable to the work of the IEC on letter Symbols* (1986).

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<sup>1)</sup> A similar text will be submitted to the CCIR as a revision of Rec. 608.