



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

G.242

INTERNATIONAL ANALOGUE CARRIER SYSTEMS GENERAL CHARACTERISTICS COMMON TO ALL ANALOGUE CARRIER - TRANSMISSION SYSTEMS

THROUGH - CONNECTION OF GROUPS, SUPERGROUPS, ETC.

ITU-T Recommendation G.242

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation G.242 was published in Fascicle III.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.

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Recommendation G.242

THROUGH-CONNECTION OF GROUPS, SUPERGROUPS, ETC.

(amended at Geneva, 1964; further amended)

1 General considerations¹⁾

It may be found desirable from both the technical and the economical points of view to provide facilities at the end of certain sections such that the channels routed over one section do not all have to be extended to the next section, this being done without demodulating all the channels to voice frequency, whole batches of channels being extended to different line sections.

At such points, which are at the ends of *the line links* concerned, the through-connection of batches of telephone channels should be possible from one line link to another. This can be achieved by means of the following two methods which, though basically different, can nevertheless be used in association at a given point for different batches of channels. In both cases arrangements are necessary to ensure that the through-connected frequency band is "clear", that is to say, as far as possible the channel vestiges on the two sides of the through-connected batch of channels should be suppressed by means of a through-connection filter.

1.1 Through-group, supergroup, mastergroup, supermastergroup or 15-supergroup assembly

It is assumed that the batch of through-connected channels occupies the frequency band of a group, supergroup, mastergroup, supermastergroup or 15-supergroup assembly, or that it can be split into several such bands. Each of the groups, supergroups, mastergroups, supermastergroups or 15-supergroup assemblies is then brought into the basic frequency band and is filtered in that band by means of a through-group filter, or through-supergroup, through-mastergroup, through-supermastergroup or through-15-supergroup assembly filter.

Note - The frequency band occupied by the 15-supergroup assembly No. 3 (8620 to 12 336 kHz) is within the frequency band occupied by the basic supermastergroup (8516 to 12 388 kHz). Hence, when 15-supergroup assemblies are used in the conditions specified in Recommendation G.211 (procedure 2), 15-supergroup assembly No. 3 can be through-connected by means of through-supermastergroup filters.

1.2 Direct through-connection

It is also possible to through-connect a group, supergroup, mastergroup, supermastergroup or 15-supergroup assembly or a batch of them by direct line filtration without demodulation and passage via the basic frequency band. It is then necessary to have direct through-connection filters connected to the line equipment to effect the necessary separation. An example of this possibility is given in Recommendation G.333 for the 60 MHz system.

In fixing the degree of suppression of unwanted components, it is convenient to use the following definitions:

intelligible crosstalk components

F: composantes de diaphonie intelligible

S: componentes de diafonía intelígible

¹⁾ This Recommendation does not consider certain precautions necessary for the protection of various pilots and additional measuring frequencies. Such precautions are given in Recommendation G.243.