



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

M.470

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

MAINTENANCE:

**INTERNATIONAL TRANSMISSION SYSTEMS
(ANALOGUE)**

**SETTING UP AND LINING UP ANALOGUE
CHANNELS FOR INTERNATIONAL
TELECOMMUNICATION SERVICES**

ITU-T Recommendation M.470

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation M.470 was published in Fascicle IV.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.

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Recommendation M.470

SETTING UP AND LINING UP ANALOGUE CHANNELS FOR INTERNATIONAL TELECOMMUNICATION SERVICES

1 Check of channel-translating equipment

The translating equipment, before it is connected to the ends of the link, must be checked and adjusted to ensure that it meets CCITT Recommendations and the other relevant specifications. The check should include a general visual inspection and vibration tests, if applicable. This is of particular importance if the equipment has remained unused since acceptance tests were carried out after installation.

2 Setting up and lining up the analogue channels

2.1 *Measurement and adjustment of levels*

After the group link has been set up, and the channel-translating equipment at each end of the group link has been connected and checked, the channels are adjusted as follows.

An 1020 Hz test¹⁾ signal is sent over each channel in turn at a level of -10 dBm0. At the transmitting end, the channel-translating equipment is adjusted so that the sideband level on each channel at its output is as near to nominal as possible. At the receiving end, the channel-translating equipment should then be adjusted to bring the received level on each channel as near as possible to its nominal value.

2.2 *Checking the analogue channel performance*

Channel performance measurements are only required when the need is indicated during circuit line-up. On such occasions the parameters to be checked will depend on the particular difficulty experienced during circuit line-up.

3 Check level of line signalling

In the case of groups which are intended to be used for telephone circuits employing Signalling System R2, the checks of signalling level stipulated in the Specifications of Signalling System R2 should be made [2].

For other signalling systems, the check of signalling level should be carried out at the circuit line-up stage (see Recommendation M.580, § 8).

References

- [1] CCITT Recommendation *1020 Hz reference test frequency*, Vol. IV, Rec. O.6.
- [2] CCITT Recommendations *Specifications of Signalling System R2*, Vol. VI, Recs. Q.400 to Q.490.

¹⁾ For further information about the choice of the test signal frequency, refer to Recommendation O.6 [1].