



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

J.11

TELEVISION AND SOUND TRANSMISSION

HYPOTHETICAL REFERENCE CIRCUITS FOR SOUND-PROGRAMME TRANSMISSIONS

ITU-T Recommendation J.11

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation J.11 was published in Fascicle III.6 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 J.11

HYPOTHETICAL REFERENCE CIRCUITS FOR SOUND-PROGRAMME TRANSMISSIONS^{1), 2), 3)}

(Geneva, 1972; amended at Geneva, 1976, and at Melbourne, 1988)

Terrestrial systems and systems in the fixed-satellite service

The CCITT,

considering

(a) that there is a need to define a hypothetical reference circuit to enable design performance standards to be set;

(b) that the hypothetical reference circuit should allow the different types of sound-programme circuits to be compared on a common basis,

unanimously recommends

(1) that the main features of the hypothetical reference circuit for sound-programme transmissions over a terrestrial system (shown in a Figure 1/J.11), which may be provided by either radio or cable, should be:

- the overall length between audio points (B and C) is 2500 km,
- two intermediate audio points (M and M') which divide the circuit into three sections of equal lengths,
- the three sections which are lined up individually and then inter-connected without any form of overall adjustment or correction;

(2) that the main features of the hypothetical reference circuit for sound-programme transmissions over a system in the fixed-satellite service (shown in Figure 2/J.11) should be:

- one link: earth station – satellite – earth station,
- one pair of modulation and demodulation equipments for translation from baseband to radio frequency, and from radio frequency to baseband, respectively.

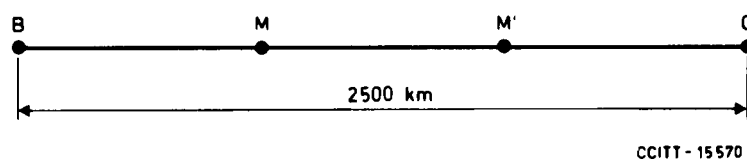


FIGURE 1/J.11

Hypothetical reference circuit for sound-programme transmissions over a terrestrial system

¹⁾ This Recommendation corresponds to CCIR Recommendation 502.

²⁾ The hypothetical reference circuits defined in this Recommendation should apply for both analogue and digital systems.

³⁾ For maintenance purposes there may be a need to define other circuits of which an illustration is shown in Annex A of this Recommendation.

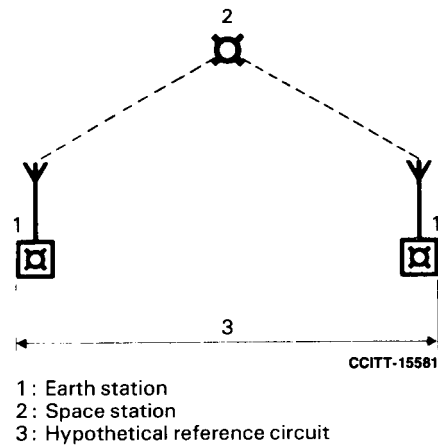


FIGURE 2/J.11
**Hypothetical reference circuit for sound-programme transmissions
over a system in the Fixed-Satellite Service**

ANNEX A

(to Recommendation J.11)

Illustration of an international sound-programme connection

Figure A-1/J.11 illustrates a typical international sound-programme connection in which:

- point A, to be considered as the sending end of the international sound-programme connection, may be the point at which the programme originates (studio or outside location);
- point D, to be considered as the receiving end of the international sound-programme connection, may be a programme-mixing or recording centre or a broadcasting station;
- the local sound-programme circuit AB connects point A to the sending terminal station, point B, of the international sound-programme circuit BC;
- the local sound-programme circuit CD connects point C, the receiving terminal station of the international sound-programme circuit BC to the point D.

The hypothetical reference circuit must not be considered identical to any of the sound-programme circuits illustrated above or to those defined for maintenance purposes in [1]. However, some of these circuits may display the same structure as the hypothetical reference circuit. Such types of circuits are:

- an international sound-programme connection comprising three audio sections;
- a single sound-programme circuit made up of three audio sections.

In this case, the performance standards set for the hypothetical reference circuit may be applied to these circuits.

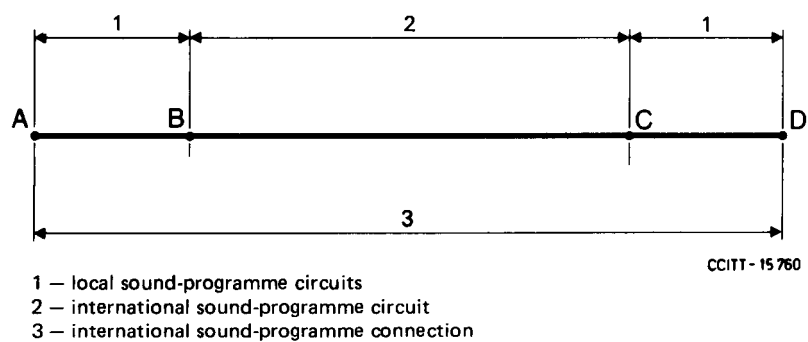


FIGURE A-1/J.11
 An international sound-programme connection

Reference

- [1] *Maintenance; international sound-programme and television transmission circuits*. Recommendations of the N Series. Fascicle IV.3.