



INTERNATIONAL TELECOMMUNICATION UNION

**ITU-T**

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

**J.13**

**TELEVISION AND SOUND TRANSMISSION**

---

**DEFINITIONS FOR INTERNATIONAL  
SOUND - PROGRAMME CIRCUITS**

**ITU-T Recommendation J.13**

(Extract from the *Blue Book*)

---

## NOTES

1 ITU-T Recommendation J.13 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.13**

### **DEFINITIONS FOR INTERNATIONAL SOUND-PROGRAMME CIRCUITS**

*(former Recommendation J.12; amended at Geneva, 1972 and 1980)*

#### **Definition of the constituent parts of an international sound-programme connection**

The following definitions apply to international sound-programme transmissions.

#### **1 international sound-programme transmission**

The transmission of sound over the international telecommunication network for the purpose of inter-changing sound-programme material between broadcasting organizations in different countries. Such a transmission includes all types of programme material normally transmitted by a sound broadcasting service, for example, speech, music, sound accompanying a television programme. etc.

#### **2 broadcasting organization (send)**

The broadcasting organization at the sending end of the sound programme being transmitted over the international sound-programme connection.

#### **3 broadcasting organization (receive)**

The broadcasting organization at the receiving end of the sound programme being transmitted over the international sound-programme connection.

#### **4 international sound-programme centre (ISPC)**

A centre at which at least one international sound-programme circuit terminates and in which international sound-programme connections can be made by the interconnection of international and national sound-programme circuits.

The ISPC is responsible for setting up and maintaining international sound-programme links and for the supervision of the transmissions made on them.

#### **5 international sound-programme connection**

5.1 The unidirectional path between the broadcasting organization (send) and the broadcasting organization (receive) comprising the international sound-programme link extended at its two ends over national sound-programme circuits to the broadcasting organizations (see Figure 2/J.13).

5.2 The assembly of the “international sound-programme link” and the national circuits between the broadcasting organizations, constitutes the “international sound-programme connection”. Figure 3/J.13 illustrates, by way of example, an international sound-programme connection as it might be encountered in practice.

#### **6 international sound-programme link (Figure 2/J.13)**

The unidirectional path for sound-programme transmissions between the ISPCs of the two terminal countries involved in an international sound-programme transmission. The international sound-programme link comprises one or more international sound-programme circuits interconnected at intermediate ISPCs. It can also include national sound-programme circuits in transit countries.

#### **7 international sound-programme circuit (Figure 1/J.13)**

The unidirectional transmission path between two ISPCs and comprising one or more sound-programme circuit sections (national or international), together with any necessary audio equipment (amplifiers, compandors, etc.).

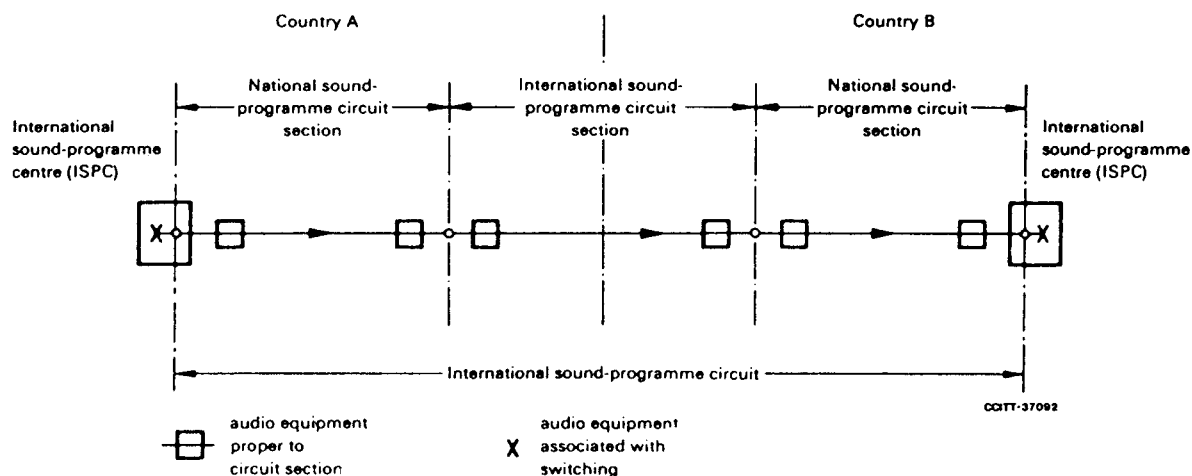


FIGURE 1/J.13

An international sound-programme circuit composed of two national and one international sound-programme circuit-section

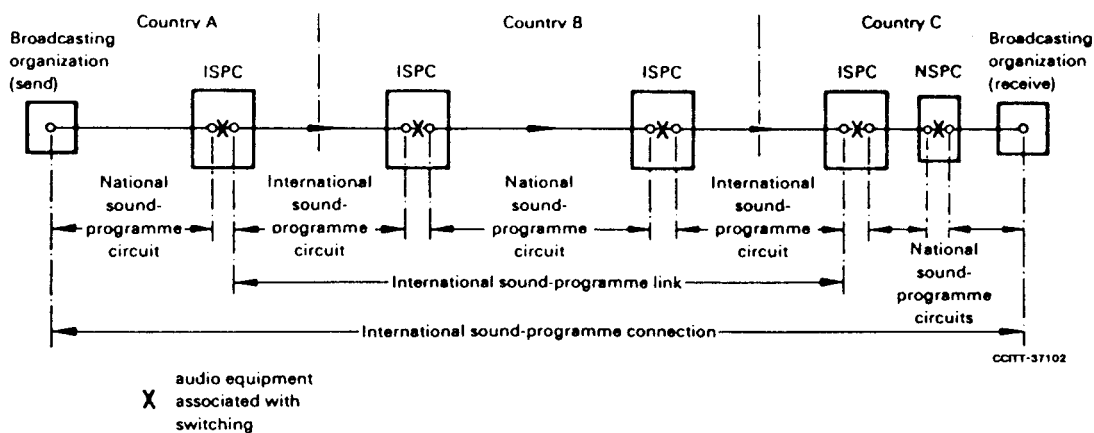
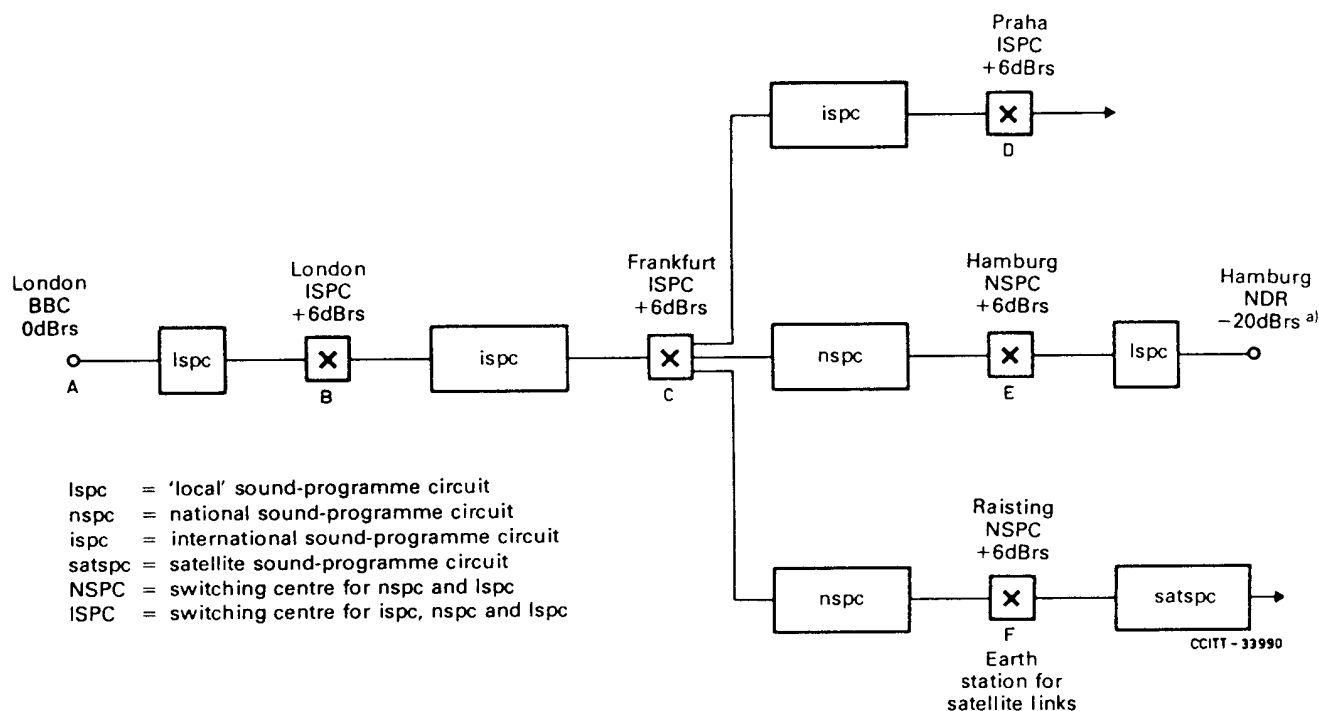


FIGURE 2/J.13

An international sound-programme link composed of international and national sound-programme circuits and extended on a national sound-programme circuit at each end to form an international sound-programme connection



*Note* – Maximum level of sound programme signals: +9dBm0s (this means +9dBms at a 0dBrs relative level point and +15dBms at a +6dBrs relative level point respectively). The value of +9dBms corresponds to a peak voltage of 3.1 V which is the maximum value of a sine-wave signal of 2.2 V r.m.s.

a) Other values can be chosen by the relevant Administration on a national basis.

FIGURE 3/J.13  
Diagram of an international sound-programme circuit

## 8 sound-programme circuit-section (Figure 1/J.13)

Part of an international sound-programme circuit between two stations at which the programme is transmitted at audio frequencies.

The normal method of providing a sound-programme circuit section in the international network will be by the use of carrier sound-programme equipment. Exceptionally sound-programme circuit sections will be provided by other means, for example, by using amplified unloaded or lightly loaded screened-pair cables or by using the phantoms of symmetric-pair carrier cables.

## 9 national circuit

The national circuit connects the ISPC to the broadcasting authority; this applies both at the sending and at the receiving end. A national circuit may also interconnect two ISPCs within the same country.

## 10 effectively transmitted signals in sound-programme transmission

For sound-programme transmission, a signal at a particular frequency is said to be effectively transmitted if the nominal overall loss at that frequency does not exceed the nominal overall loss at 800 Hz by more than 4.3 dB. This should not be confused with the analogous definition concerning telephony circuits given in [1].

For sound-programme *circuits*, the overall loss (relative to that at 800 Hz) defining effectively transmitted frequency is 1.4 dB, i.e. about one-third of the allowance.

### Reference

- [1] CCITT Recommendation *General performance objectives applicable to all modern international circuits and national extension circuits*, Vol. III, Rec. G.151, § 1, Note 1.