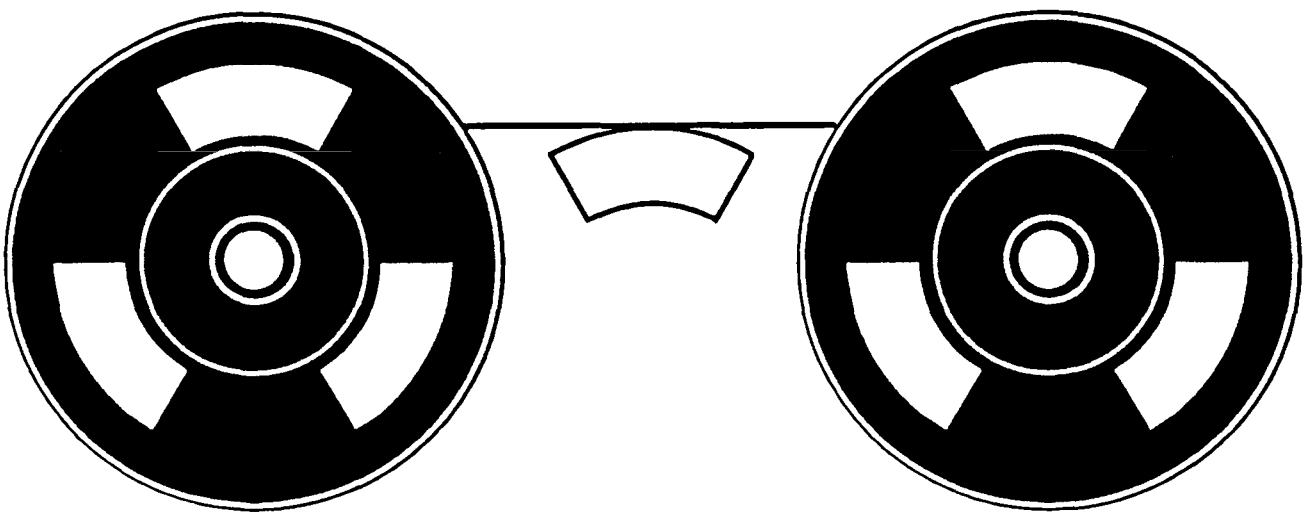
INTERNATIONAL TELECOMMUNICATION UNION

1992 - CCIR RECOMMENDATIONS

(New and revised as of 15 September 1992)



RBR SERIES

SOUND AND TELEVISION RECORDING

CCIR

INTERNATIONAL RADIO CONSULTATIVE COMMITTEE

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Recommendation 777 (1992)

International exchange of digital audio recordings

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RECOMMENDATION 777

INTERNATIONAL EXCHANGE OF DIGITAL AUDIO RECORDINGS

(Question 91/10)

(1992)

The CCIR,

considering

a) that the Digital Audio Tape (DAT) cassette system has been standardized by the IEC in Publication 1119, and the DAT cassette system is available from several manufacturers;

b) that the EBU has recently recommended the use of the same digital audio recording format commonly known as R-DAT for the exchange of digital audio recordings of finished programmes among its member organizations;

c) that, since the R-DAT format only uses 16 bits/sample a compromise between level, headroom and noise performance must be established; according to the EBU for finished programmes this is obtained when the reference level is recorded 12 dB below maximum digital level; the SMPTE recommends 20 dB;

d) that the use of the compact disc (CD) has gained very wide acceptance in the consumer market for recordings of finished audio programmes in digital form and such recordings offer high audio quality;

e) that CD recordings are often used in broadcasters' operation as a source of high quality commercial material, and several broadcasters commercially release their audio productions using the CD format;

f) that, although the CD format uses a sampling frequency different from the one recommended by the CCIR for application in broadcasting, this does not cause major difficulties in broadcasters' operation since methods for sampling-rate conversion are readily available,

recommends

1. that the format commonly known as R-DAT, and specified in IEC Publication 1119, may be used for the international exchange of finished audio programmes in digital form;

Note 1 – Two formats for longitudinal recording of digital audio on 6.3 mm tape known as "DASH" and "Prodigi" are available and can be used for the same application.

2. that R-DAT recordings used for programme exchange should conform to the parameters given in Table 1;

3. that, for the international exchange of finished audio programmes in digital form, the CD format can be used for those programmes for which recordings in this format are commercially released by the sending organization for consumer use;

4. that when the CD format is used in broadcasters' operation due care should be taken of the fact that it uses a sampling frequency different from the one recommended by the CCIR for application in broadcasting.

TABLE 1

Parameters for DAT tapes used for the exchange of finished programmes

Parameter	Value
Sampling frequency	48 kHz
Signal coding	Linear, 16 bit, 2 s complement
Pre-emphasis	None
Alignment level	See Note 1
Time code	Optional, but if present should be recorded in accordance with IEC Publication 1119-5

Note 1 – The EBU recommends that the alignment level, as defined in CCIR Recommendation 645, should correspond to a digital coding level 12 dB below the maximum.

The SMPTE recommends that the reference signal shall be 20 dB below the system maximum.