



INTERNATIONAL TELECOMMUNICATION UNION

**ITU-T**

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

**J.65**

(ex CMTT.570)

(02/78)

**TELEVISION AND SOUND TRANSMISSION**

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**STANDARD TEST SIGNAL FOR  
CONVENTIONAL LOADING OF  
A TELEVISION CHANNEL**

**ITU-T Recommendation J.65**

(Formerly Recommendation ITU-R CMTT.570)

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## FOREWORD

The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the International Telecommunication Union. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, established the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

ITU-T Recommendation J.65 (formerly Recommendation ITU-R CMTT.570) was elaborated by the former ITU-R Study Group CMTT. See Note 1 below.

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## NOTES

1 As a consequence of a reform process within the International Telecommunication Union (ITU), the CCITT ceased to exist as of 28 February 1993. In its place, the ITU Telecommunication Standardization Sector (ITU-T) was created as of 1 March 1993. Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector (ITU-R).

Conforming to a joint decision by the World Telecommunication Standardization Conference (Helsinki, March 1993) and the Radiocommunication Assembly (Geneva, November 1993), the ITU-R Study Group CMTT was transferred to ITU-T as Study Group 9, except for the satellite news gathering (SNG) study area which was transferred to ITU-R Study Group 4.

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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## STANDARD TEST SIGNAL FOR CONVENTIONAL LOADING OF A TELEVISION CHANNEL

(1978)

The CCIR,

### CONSIDERING

- (a) that a common transmission path may be used by one or more television signals and one or more sound-programme channels or telephony channels;
- (b) that, due to distortion in the common path, the signals applied to one or more television channels may result in unwanted signals appearing in other channels;
- (c) that Report 375 draws attention to the need, where a sound-programme circuit is carried on a radio-relay system for television, for measurements or calculations to be made with the television channel loaded with a standard test signal;
- (d) that a similar problem exists for cable systems such as that described in CCITT Recommendation J.73 or that being studied in CCITT Question 20/XV (1976-80);
- (e) that a special test signal is required for use as a conventional load for a television channel when measuring, calculating or specifying the noise in other circuits which are carried in a common path with the television channel or channels;
- (f) that such a standard test signal for conventional loading of a television channel should preferably be one which is already in general use or which can readily be made available to users and manufacturers of the transmission systems concerned;
- (g) that a standard test signal for conventional loading of a television channel should preferably be typical of a wide range of video signals likely to be used in practice, and should include chrominance information and a field-frequency component,

### UNANIMOUSLY RECOMMENDS

1. that a composite colour-bar test signal, appropriate to the colour television standard to be carried, should be used as the standard test signal for conventional loading of an analogue colour television channel;
2. that, using the nomenclature of Recommendation 471, the luminance and chrominance amplitudes of the colour bar test signal when used for conventional loading should be 100/0/75/0 for 625/50 standards;
3. that countries which operate on 525/60 standards should employ a colour bar signal of the split field type for conventional loading. The colour bars occupy the larger portion of the active lines and have the characteristic 75/7.5/75/7.5.

Accompanying the colour bars, on a split-field basis is a peak-white bar on all active lines not carrying the colour bars. For example, Electronic Industries Association (USA) RS-189-A colour bars;

4. that the colour bars should be arranged in order of descending luminance as commonly used.

*Note 1.* – The choice of standard test signals for conventional loading of analogue television channels which are used only for monochrome transmission, and digital channels for monochrome and colour television transmission, should be the subject of further study.

*Note 2.* – The colour bar test signal at an appropriate saturation is representative of the circuit load caused by the studio outputs. It is not typical, however, of some test signals, electronically-generated captions, or some data and other special signals, of which the disturbing effect on other channels on the same bearer path may be greater than for camera-generated signals. The disturbing effect due to the spectral components of these special signals should be tested by means of the signals themselves.

*Note 3.* – Administrations making measurements of the disturbing effect of a television signal on other signals which share the same bearer path, should take into account the relative stability of the carrier frequencies of the disturbing and disturbed circuits on the common bearer channel.

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<sup>1)</sup> Formerly Recommendation ITU-R CMTT.570.