

SECTION 10/11S-D: PLANNING AND SHARING

RECOMMENDATION 600-1

**STANDARDIZED SET OF TEST CONDITIONS AND MEASUREMENT
PROCEDURES FOR THE SUBJECTIVE AND OBJECTIVE DETERMINATION
OF PROTECTION RATIOS FOR TELEVISION IN THE TERRESTRIAL
BROADCASTING AND THE BROADCASTING-SATELLITE SERVICES**

(Question 1/10 and 11, Study Programmes 1A/10 and 11, 1C/10 and 11, 1D/10 and 11)

(1982-1986)

The CCIR,

CONSIDERING

- (a) that several experiments have been carried out for the determination of protection ratios for television;
- (b) that some of these experiments have been carried out using different test conditions and measurement procedures, so that the results cannot be readily interpreted and compared;
- (c) that the values of subjectively measured protection ratios depend on a large number of factors;
- (d) that it is desirable to establish a standardized set of test conditions and measurement procedures in order that the results of subjective measurements of protection ratios for television made by different administrations may be properly interpreted and applied,

UNANIMOUSLY RECOMMENDS

that the following set of test conditions and measurement procedures described in Annex I should be used for the subjective and objective determination of protection ratios for television, whenever possible.

ANNEX I

1. Introduction

The protection ratio is the minimum value of the wanted-to-unwanted signal ratio, usually expressed in decibels, at the receiver input determined under specified conditions such that a specified reception quality of the wanted signal is achieved at the receiver output (Note 1). The protection ratio is useful in planning and operations where multiple transmissions require frequency and orbit sharing between similar or dissimilar transmissions.

Protection ratios for monochrome television systems and for colour television systems using vestigial sideband amplitude-modulation are found in Recommendation 655. For satellite broadcasting, a summary of results of protection ratio tests made by several administrations in cases where the wanted and unwanted signals are modulated by colour television signals or other transmissions such as multiple sound channels are found in Report 634 (see Note 2).

The assessment of protection ratios for television signals is made following the method established in Recommendation 500 and taking into consideration Report 405. Procedures can entail absolute or comparative methods of assessment depending on the specific investigations being carried out.

The test arrangements and measurement procedures presented next are recommended for use in tests for the determination of protection ratios for television [CCIR, 1978-82a and b].

Note 1 – This definition is in line with the definition of protection ratio found in Report 625 and in No. 164 of the Radio Regulations.

Note 2 – Protection ratio data for interference between an amplitude-modulation, vestigial-sideband or a frequency-modulation television signal and the types of signals used in the fixed and mobile services will be found in Report 449.

2. Measurement procedure and laboratory assessment of protection ratios

2.1 Reference case conditions

The values of subjectively measured protection ratios depend on a number of factors.

In order to allow that the results of subjective measurements of the protection ratio made by different administrations may be properly interpreted and applied, tests should be performed under a set of reference case conditions for the factors affecting these subjective measurements (see Table I).