

**Sound and television broadcast receivers and associated equipment -  
Immunity characteristics -  
Limits and methods of measurement**

Récepteurs de radiodiffusion et de  
télévision et équipements associés -  
Caractéristiques d'immunité -  
Limites et méthodes de mesure

Ton- und Fernseh-Rundfunkempfänger  
und verwandte Geräte der  
Unterhaltungselektronik -  
Störfestigkeitseigenschaften -  
Grenzwerte und Prüfverfahren

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**CENELEC**

European Committee for Electrotechnical Standardization  
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## Foreword

This Interpretation Sheet to the European Standard EN 55020:2007 was prepared by CLC/TC 210 "Electromagnetic Compatibility (EMC)".

## Text of IS3 to EN 55020:2007

**Table 15 'Enclosure port' of EN 55020:2007 + A11:2011**

It has been reported that the test set-up requirements for the RF e.m. field immunity test in the frequency range 790-862 MHz that have been recently added in Table 15 by A11:2011 (see below) may be differently interpreted.

Parameter	Test specification	Test set-up	Applicability	Performance criteria
RF e.m. field AM modulated carrier	790-862 MHz: 3 V/m AM: 1 kHz, 80 % depth Except the tuned channel $\pm 0,5$ MHz: 1 V/m AM: 1 kHz, 80 % depth	EN 61000-4-3 With measurement conditions from I.5 using a tuned channel within the frequency range 790-862 MHz. Digital Cable TV mode only. For this test, I.7.2 does not apply.	Equipment with tuners suitable for reception of Digital Cable TV signals.	A

It is not clear from the above "Test set-up" column whether the set-up should be as per EN 61000-4-3 or whether the set-up defined in 5.8.4 should be used.

If the test set-up is in accordance with EN 61000-4-3, the test is carried out using a horizontally and vertically polarized field on four sides of the EUT, with a minimum of 1 m of all cables exposed to the RF field.

If the set up of 5.8.4 is used, the test is carried out with only a vertical polarized field on only one side of the EUT and with ferrites on all cables connected to the EUT.

There is a significant difference between these set-ups with regard to the amount of time required for the test and also with regard to the possible results of the test.

These different interpretations are highly likely to lead to different test results.

### Question:

What set-up should be used for the RF e.m. field immunity test in the frequency range 790-862 MHz ?

### Interpretation

Table 15 does not specifically refer to 5.8.4 for this test, as compared to the references made for other RF field tests in the table. The reference to I.5, which in turn refers to Clause 5, is a general one to require that all relevant immunity tests are carried out on digital receivers with wanted signals as described in I.5. This reference does not mean the test should use the set up of 5.8.4. Therefore, the test should be carried out in accordance with EN 61000-4-3 using a horizontally and vertically polarized field on four sides of the EUT, with a minimum of 1 m of all cables exposed to the RF field.