
British Standard Specification for

**Limits and methods of measurement of radio
interference characteristics of household electrical
appliances, portable tools and similar electrical
apparatus**

Limites et méthodes de mesure des caractéristiques des appareils électrodomestiques,
des outils portatifs et des appareils électriques similaires relatives aux perturbations radioélectriques

Grenzwerte und Meßverfahren für Funkstörungen von Elektro-Haushaltgeräten,
handgeführten Elektrowerkzeugen und ähnlichen Elektrogeräten

The European Standard EN 55 014 : 1987 has the status of a British Standard

Contents

	Page
National foreword	Inside front cover
Text of EN 55 014	1
Annex A (normative)	56
Annex B (informative)	57
National appendix Y	Inside back cover
National appendix Z	Inside back cover
Cooperating organizations	Back cover

National foreword

This British Standard has been prepared under the direction of the General Electrotechnical Engineering Standards Committee and is the English language version of EN 55 014, which is based on CISPR Publication 14 : 1985 'Limits and methods of measurement of radio interference characteristics of household electrical appliances, portable tools and similar electrical apparatus', with CENELEC common modifications. It is a revision of BS 800 : 1983, but it will become effective only from a date to be announced later by amendment. The reasons for this are explained in the following paragraphs of this foreword.

The title has been changed from that of the 1983 edition to align with EN 55 014.

Withdrawal of BS 800 : 1983 will be announced at the appropriate time. It is at present specifically referred to in Statutory Instrument 1985 No. 808, which is an amendment to SI 1978 No. 1267, which implements in the United Kingdom the provisions of EEC Directive 82/499/EEC.

EEC Directive 87/308 makes compliance with EN 55 014 mandatory. It is not possible to say precisely how and on what date HM Government will implement the revised EEC Directive, but this is expected to be by a new Statutory Instrument replacing SI 1985 No. 808 and SI 1978 No. 1267 and making compliance with BS 800 : 1988 mandatory. Withdrawal of BS 800 : 1983 will follow at the appropriate time.

NOTE 1. Upon publication of this revision, BSI Sales Department will respond to purchase orders for BS 800 by supplying copies of the 1988 edition. Copies of the 1983 edition may be obtained by quoting the number 'BS 800/83'.

Page numbering. Attention is drawn to the fact that the page numbers quoted in the text of EN 55 014 in relation to the figures are the page numbers of CISPR Publication 14. These page references do not correspond to the EN page numbers. All the figures can be found on EN page 45 to 55.

Cross-references. Details of other international publications quoted in this standard are given in annex A. Where there are British Standards either identical or technically equivalent to these international standards, the relationship is given in national appendix Z.

NOTE 2. *Textual error.* 5.1.3.10 on page 16 should be read as 5.3.1.10.

Compliance with a British Standard does not of itself confer immunity from legal obligations.



Amendment No. 1
published and effective from 29 June 1990
to BS 800 : 1988 [EN 55 014 : 1987]

Specification for limits and methods of measurement of
radio interference characteristics of household electrical
appliances, portable tools and similar electrical apparatus

Revised text

NOTE. This amendment is issued to implement Amendment 1 to the English language version of EN 55 014 but it also contains a change to the national foreword.

National foreword. Delete paragraphs three and four and substitute the following text.

'HM Government has implemented EEC Directive 87/308 with effect from 24 April 1989 by means of Statutory Instrument 1989 No. 562 which amends SI 1978 No. 1267 as amended by SI 1985 No. 808.

The effect of SI 1989 No. 562 is that equipment complying with either BS 800 : 1983 or BS 800 : 1988 can be marketed freely until 31 December 1989, at which time BS 800 : 1983 will be withdrawn and thereafter only equipment which complies with BS 800 : 1988 can be placed on the market.

From 1 January 1992, EEC Directive 76/889 as amended by Directives 82/499 and 87/308 will be repealed and BS 800 : 1988 will be the subject of the provisions of EEC Directive 89/336 on Electromagnetic Compatibility.'

Text of EN 55 014. Amend the text of European Standard EN 55 014 in accordance with the details given on the attached pages.

UDC: 64.06-83 : 621.391.82

Key words: radio interference; household electrical appliance; electrical apparatus; portable tool; method of measurement; characteristic

Amendment 1 to the English version of EN 55 014

Limits and methods of measurement of radio interference characteristics of household electrical appliances, portable tools and similar electrical apparatus

(Amdt 1 (1987) to CISPR 14 (1985, 2nd edition, modified), not appended)

Limites et méthodes de mesure des caractéristiques
des appareils électrodomestiques, des outils portatifs
et des appareils électriques similaires relatives aux
perturbations radioélectriques
(Amdt 1 (1987) à la CISPR 14 (1985, 2ème édition,
modifiée), non jointe)

Grenzwerte und Meßverfahren für Funkstörungen
von Elektro-Haushaltgeräten, handgeführten
Elektrowerkzeugen und ähnlichen Elektrogeräten
(Amdt. 1 (1987) zu CISPR 14 (1985, 2. Ausg.,
modifiziert), liegt nicht bei)

This Amendment 1 modifies the European Standard EN 55 014, Edition February 1987. It was ratified by CENELEC on 1988-03-01.

CENELEC members are bound to comply with the requirements of the CENELEC Internal Regulations which specify under which conditions this Amendment should be incorporated, without any alteration, in the corresponding national standard.

This Amendment exists in the three official versions (English, French and German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to CENELEC Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

General Secretariat: rue Bréderode 2, B-1000 Brussels

Brief history

Amendment 1 of EN 55 014 covers Amendment 1 (1987) of IEC/CISPR Publication 14 (1985) and in addition covers an extension of the average limits in Table I and Table II.

This amendment is based on the decision taken by the CENELEC Technical Committee CISPR during its meeting held in November 1986 in Frankfurt.

Amendment 1 to the English version of CENELEC EN 55 014

This amendment is based on the decision taken by the CENELEC Technical Committee CISPR during its meeting held in November 1986 in Frankfurt.

The changes to be made to the EN text are as follows.

4.1 Continuous interference

Add at the end of the existing text the following new paragraphs:

Continuous interference may be either broadband, caused by switching devices such as mechanical switches, commutators, and semiconductor regulators, or may be narrowband, caused by electronic control devices such as microprocessors.

Broadband interference is measured with a measuring receiver including a quasi-peak detector as described in Section One of CISPR Publication 16 (1977).

Narrowband interference is measured with a CISPR measuring receiver in which the quasi-peak detector is replaced by an average detector. The average detector shall comply with Clause 23 of CISPR Publication 16.

Note. — The limits for narrowband interference are tentative and may be relaxed or restricted after a period of experience.

4.1.1 Frequency range 0.15 MHz to 30 MHz (terminal voltages)

Delete the text of the first paragraph.

4.1.2 Frequency range 30 MHz to 300 MHz (interference power)

Delete the text of the first paragraph.

Clause 4, Table I and Table II to be replaced by the following tables.

Figure 1 to be replaced by the following figure (page 5).

TABLE I
Terminal voltages limits for the frequency range 0.15 MHz to 30 MHz (see Figure 1, page 88)

Frequency range	Electrical household appliances and equipment causing similar interference		Regulating controls incorporating semiconductor devices			
			At mains terminals		At load terminals and at additional terminals	
(MHz)	dB (µV) quasi-peak	dB (µV) average*	dB (µV) quasi-peak	dB (µV) average*	dB (µV) quasi-peak	dB (µV) average*
0.15 to 0.50	decreasing linearly with the logarithm of the frequency from 66 to 56		decreasing linearly with the logarithm of the frequency from 66 to 56		80	70
		59 to 46		56 to 46		
0.50 to 5	56	46	56	46	74	64
5 to 30	60	50	60	50	74	64

Frequency range	Portable tools					
	Rated power of motor**					
	Not exceeding 700 W		Above 700 W and not exceeding 1000 W		Above 1000 W and not exceeding 2000 W	
(MHz)	dB (µV) quasi-peak	dB (µV) average*	dB (µV) quasi-peak	dB (µV) average*	dB (µV) quasi-peak	dB (µV) average*
0.15 to 0.35	decreasing linearly with the logarithm of the frequency from 66 to 59					
		59 to 49	70 to 63	63 to 53	76 to 69	69 to 59
0.35 to 5	59	49	63	53	69	59
5 to 30	64	54	68	58	74	64

* If the average limit is met when using a quasi-peak detector receiver, the test unit shall be deemed to meet both limits and measurements with the average detector receiver need not to be carried out.

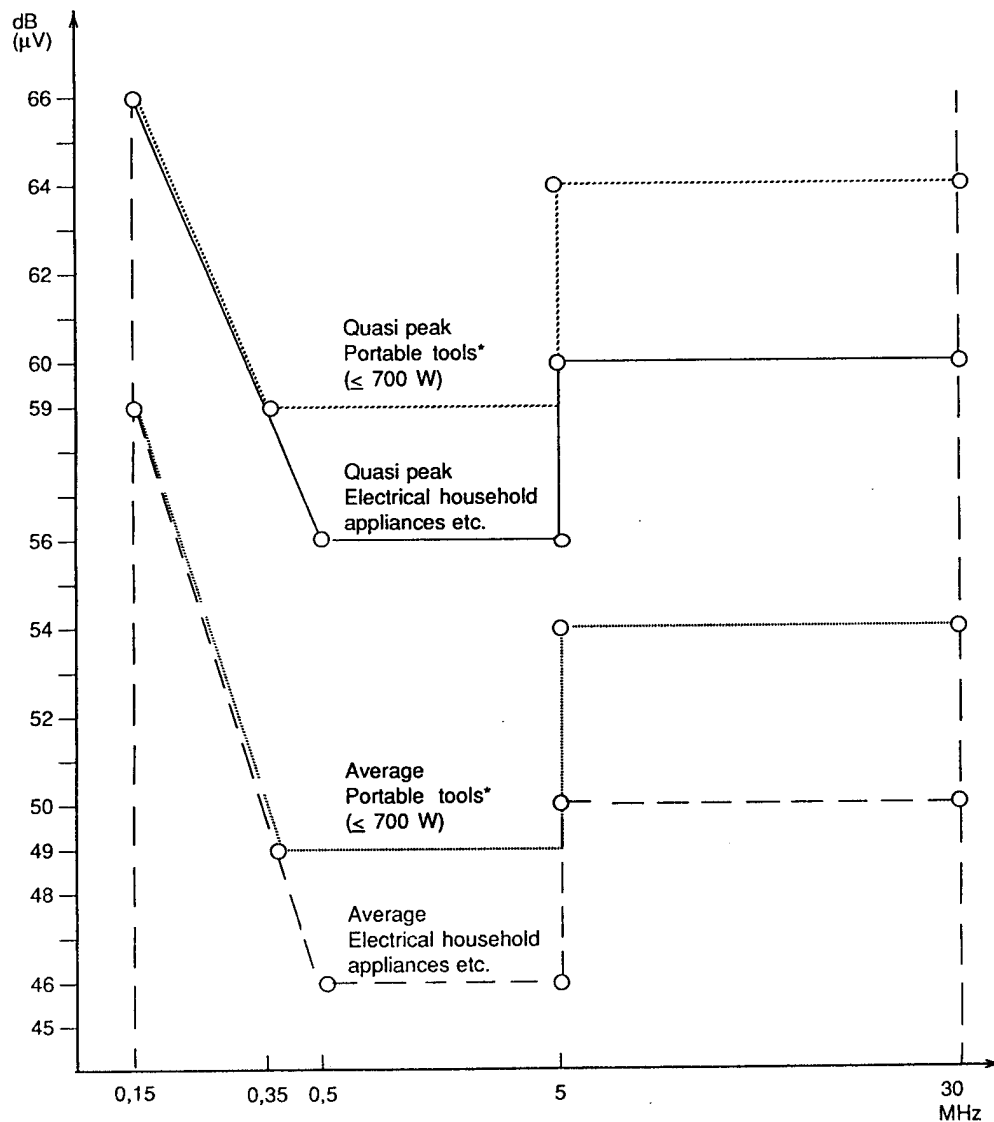
** The power of any heating device is to be excluded, for instance heating power in a blower for plastic welding.

TABLE II
Interference power limits for the frequency range 30 MHz to 300 MHz

Frequency range	Household and similar appliances		Portable tools					
			Rated power of motor**					
			Up to and including 700 W		Above 700 W up to and including 1000 W		Above 1000 W up to and including 2000 W	
MHz	dB (pW) quasi-peak	dB (pW) average*	dB (pW) quasi-peak	dB (pW) average*	dB (pW) quasi-peak	dB (pW) average*	dB (pW) quasi-peak	dB (pW) average*
30 to 300	increasing linearly with the frequency from 45 to 55	35 to 45	increasing linearly with the frequency from 45 to 55	35 to 45	increasing linearly with the frequency from 49 to 59	39 to 49	increasing linearly with the frequency from 55 to 65	45 to 55

* If the average limit is met when using a quasi-peak detector receiver, the test unit shall be deemed to meet both limits and measurements with the average detector receiver need not to be carried out.

** The power of any heating device is to be excluded, for instance heating power in a blower for plastic welding.



* For portable tools: 700 W to 1000 W: + 4 dB
1000 W to 2000 W: + 10 dB

Figure 1: Graphical representation of some of the limits (Example)
(see Subclauses 4.1.1 and 4.1.3).

Amendment No. 2
published and effective from 28 June 1991
to BS 800 : 1988 (EN 55014 : 1987)

Specification for limits and methods of measurement of
radio interference characteristics of household electrical
appliances, portable tools and similar electrical apparatus

Revised text

NOTE. This amendment is issued to implement Amendment 2 to the English language version of EN 55014 which includes Amendment 1 to EN 55014 which is herewith withdrawn. It also contains a change to the national foreword.

AMD 6578
June 1991

National foreword

Delete paragraphs 3 and 4 and substitute the following:

Government has implemented EEC Directive 87/308/EEC with effect from 24 April 1989 by means of Statutory Instrument 1989 No. 562 which amends SI 1978 No. 1267 as amended by SI 1985 No. 808.

The effect of SI 1989 No. 562 was that equipment complying with either BS 800 : 1983 or BS 800 : 1988 could be marketed freely until 31 December 1989, at which time BS 800 : 1983 would be withdrawn and thereafter only equipment which complies with BS 800 : 1988 could be placed on the market.

From 1 July 1991, HM Government are obliged to enact further legislation which will come into force on 1 January 1992 to implement the provisions of Directive 89/336/EEC (Electromagnetic Compatibility), at which time Directive 88/368/EEC as amended by Directives 82/499/EEC and 87/308/EEC will be repealed.

Under this legislation, a method of meeting the essential requirements of Directive 89/336/EEC will be compliance with harmonized standards. BS 800 : 1988 is one of the harmonized standards.

AMD 6578
June 1991

Text of EN 55014

Amend the text of European Standard EN 55014 in accordance with the details given on the attached pages.

Attention is drawn to the following:

1. The IEC text consists of Amendment No. 2 incorporating Amendment No. 1 to CISPR Publication 14 with the text of Amendment No. 2 indicated by a single sideline.
2. The CENELEC common modifications listed on page 2 are deletions to the text of Amendment No. 2 to CISPR publication 14 (see pages 3 to 12), the effect of which is to retain the original text of EN 55014. The deleted text is indicated by double sidelines.
3. Page numbering in the IEC text refers to the page numbers of CISPR Publication 14.

UDC 64.06-83:621.391.82

Descriptors: Radio interference, household electrical appliance, electrical apparatus, portable tool, method of measurement, characteristic

Amendment 2 to the English version of EN 55014

Limits and methods of measurement of radio
interference characteristics of household
electrical appliances, portable tools and similar
electrical apparatus

(CISPR 14 : 1985/Amdt 2 : 1989, modified)

Limites et méthodes de mesure des
caractéristiques des appareils
électrodomestiques, des outils
portatifs et des appareils
électriques similaires relatives aux
perturbations radioélectriques
(CISPR 14 : 1985/Amdt 2 : 1989, modifiée)

Grenzwerte and Meßverfahren
für Funkstörungen von
Elektro-Haushaltgeräten,
handgeführten
Elektrowerkzeugen und
ähnlichen Elektrogeräten
(CISPR 14 : 1985/Amdt 2 : 1989, modifiziert)

This Amendment 2 modifies the European Standard EN 55014, edition February 1987.
It was ratified by CENELEC on 13 September 1988.

CENELEC members are bound to comply with the requirements of the CENELEC
Internal Regulations which specify under which conditions this Amendment should be
incorporated, without any alteration, in the corresponding national standard.

This Amendment exists in the three official versions (English, French and German).
A version in any other language made by translation under the responsibility of a
CENELEC member into its own language and notified to CENELEC Central Secretariat
has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium,
Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg,
Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue Bréderode 2, B-1000 Brussels

Brief History

Amendment 2 to EN 55014 includes

- Amendment 1 to EN 55014, which is herewith withdrawn, and
- the results of the parallel voting procedure on IEC documents CISPR/F (Central Office) 44 to 50.

The documents which received a majority support were ratified by the Technical Board during its 57th meeting from 12 to 14 September 1988.

Due to a different weighting of the votes, document CISPR/F (Central Office) 45 was adopted in IEC and was rejected in CENELEC. Also a repeated voting on a modified version of this document has led to a negative result.

Technical text

The text of Amendment 2:1989 (incorporating Amendment 1:1987) to the International Standard CISPR 14:1985 was approved by CENELEC on 13 September 1988 as an Amendment to the European Standard.

The following dates are applicable:

- latest date of announcement of the EN at national level (doa) : 1989-04-01
- date of latest publication of a new harmonized standard (dop) : 1990-06-01
- date of withdrawal of conflicting national standards (dow) : 1990-09-01

Endorsement notice

Amendment 2 to EN 55014 consists of Amendment 2:1989 to CISPR Publication 14:1985 (not appended) and the following common modification.

CENELEC common modification

This CENELEC common modification excludes from Amendment 2:1989 to CISPR Publication 14:1985:

- Sub-clause 4.2.4.2 (page 21)
- Sub-clause 4.2.4.5 (page 21)
- Sub-clause 5.3.5.11 addition (page 41)
- the deletion of the asterisks in Table III (page 69)
- the addition of new asterisks in Table III
- the addition of new Note under Table III
- the deletion of asterisks in Table IV (page 71)

4.1 *Continuous interference*

Add at the end of the existing text the following new paragraphs:

Continuous interference may be either broadband, caused by switching devices such as mechanical switches, commutators and semiconductor regulators, or may be narrowband, caused by electronic control devices such as microprocessors.

Broadband interference is measured with a measuring receiver including a quasi-peak detector as described in Section One of C.I.S.P.R. Publication 16 (1977).

Narrowband interference is measured with a C.I.S.P.R. measuring receiver in which the quasi-peak detector is replaced by an average detector. The average detector shall comply with Clause 23 of C.I.S.P.R. Publication 16.

Note.- The limits for narrowband interference are tentative and may be relaxed or restricted after a period of experience.

4.1.1 *Frequency range 0,15 MHz to 30 MHz (terminal voltages)*

Delete the text of the first paragraph.

4.1.2 *Frequency range 30 MHz to 300 MHz (interference power)*

Delete the text of the first paragraph.

Replace Table I by the following new Table I:

Table I

*Terminal voltage limits for the frequency range
0,15 MHz to 30 MHz (see Figures 1a and 1b, pages 20 and 21)*

Frequency range	Electrical household appliances and equipment causing similar interference		Regulating controls incorporating semiconductor devices			
			At mains terminals		At load terminals and at additional terminals	
MHz	dB (µV) Quasi-peak	dB (µV) Average*	dB (µV) Quasi-peak	dB (µV) Average*	dB (µV) Quasi-peak	dB (µV) Average*
0,15 to 0,50	Decreasing linearly with the logarithm of the frequency from 66 to 56 59 to 46		Decreasing linearly with the logarithm of the frequency from 66 to 56 56 to 46		80	70
0,50 to 5	56	46	56	46	74	64
5 to 30	60	50	60	50	74	64

Frequency range	Portable tools					
	Rated power of motor**					
	Not exceeding 700 W		Above 700 W and not exceeding 1 000 W		Above 1 000 W and not exceeding 2 000 W	
MHz	dB (µV) Quasi-peak	dB (µV) Average*	dB (µV) Quasi-peak	dB (µV) Average*	dB (µV) Quasi-peak	dB (µV) Average*
0,15 to 0,35	Decreasing linearly with the logarithm of the frequency from 66 to 59 59 to 49 70 to 63 63 to 53 76 to 69 69 to 59					
0,35 to 5	59	49	63	53	69	59
5 to 30	64	54	68	58	74	64

* If the average limit is met when using a quasi-peak detector receiver, the test unit shall be deemed to meet both limits and measurements with the average detector receiver need not be carried out.

** The power of any heating device is to be excluded, for instance, heating power in a blower for plastic welding.

Replace Table II by the following new Table II:

Table II

Interference power limits for the frequency range 30 MHz to 300 MHz

Fre- quency range	Household and similar appliances		Portable tools					
			Rated mains power**					
			Up to and in- cluding 700 W		Above 700 W up to and including 1 000 W		Above 1 000 W up to and including 2 000 W	
MHz	dB (pW) Quasi- peak	dB (pW) Average*	dB (pW) Quasi- peak	dB (pW) Average*	dB (pW) Quasi- peak	dB (pW) Average*	dB (pW) Quasi- peak	dB (pW) Average*
30 to 300	Increasing linearly with the frequency from		Increasing linearly with the frequency from		Increasing linearly with the frequency from		Increasing linearly with the frequency from	
	45 to 55	*** 35 to 45	45 to 55	35 to 45	49 to 59	39 to 49	55 to 65	45 to 55

* If the average limit is met when using a quasi-peak detector receiver, the test unit shall be deemed to meet both limits and measurement with the average detector receiver need not be carried out.

** The power of any heating device is to be excluded, for instance heating power in a blower for plastic welding.

*** Additional provisions may be required for cases where interference occurs.

Table IIa

Delete this table and the sentence above it.

4.2 Discontinuous Interference

Replace, page 21, the wording of Sub-clause 4.2.4.2 by:

4.2.4.2 Appliances which have a click rate of not more than 5 and which have instantaneous switching (i.e. the duration of each click is less than 10 ms) shall be deemed to comply with the limits, independent of the amplitude of the clicks. If either condition is not satisfied then the limits according to Sub-clause 4.2.3 apply.

Thermostats for, or integrated in room-heating equipment (including convectors, fan heaters, forced-air heaters, oil-filled heaters, space-heaters, water-heaters or oil-burners) intended to be used stationary shall be in conformity with the limits for continuous interference of household appliances and shall be tested according to the upper quartile method.

Delete Sub-clause 4.2.4.5.

4.3 *Radiated interference from equipment with built-in batteries*

Replace as follows:

4.3 *Interference from battery-operated equipment*

4.3.1 The limits of Sub-clauses 4.1 and 4.2 apply to battery-operated appliances which can be connected to the mains.

The equipment shall be tested operating in each permitted mode while connected to the mains.

4.3.2 *Equipment with built-in batteries*

No interference limits apply in the frequency range 0,15 MHz to 30 MHz, to battery-operated appliances.

Limits are under consideration for the frequency range 30 MHz to 300 MHz.

4.3.3 *Equipment with external batteries*

No interference limits apply in the frequency range 0,15 MHz to 30 MHz to battery-operated appliances with external batteries if the connecting lead between appliance and battery is shorter than 2 m.

If the connecting lead is longer than 2 m or easily extendable by the user without special tools, the limits of Table I for additional terminals shall apply.

Measurements in the frequency range 0,15 MHz to 30 MHz are made at the terminals of the connecting lead using a probe in series with the input impedance of the measuring receiver. The probe consists of a resistor having a resistance value of at least 1 500 Ω in series with a capacitor with a reactive value negligible to the resistance value (in the range 0,15 MHz to 30 MHz). Due allowance shall be made for the voltage division between the probe and the measuring set. Equipment which is made to be held in the hand shall be connected to the artificial hand.

In the frequency range 30 MHz to 300 MHz the limits of Table II shall apply. Measurements are made as prescribed in Sub-clause 7.3 with the current transformer of the clamp pointing towards the appliance.

5.1.2.1 *Continuous interference*

In Item *d*) of this sub-clause, page 25, replace the first line of the note by the following:

Note. - An initial survey or scanning of the complete range shall be made. In the case of broadband interference, the registered values shall be given at ...

In Item e), replace the first line of the note by the following:

Note.- An initial survey or scanning of the complete range shall be made. In the case of broadband interference, the registered values shall be given at ...

Add at the end of Item e), the following two new paragraphs:

In the case of narrowband interference caused by electronic devices, such as microprocessors, isolated spectral lines may occur, constituted by the fundamental frequency and higher harmonics of the interference source.

The values registered with the average detector shall be given at least at all the frequencies at which the limits are exceeded.

Add on page 25 the following new paragraph:

f) When an equipment contains only a commutator motor as source of disturbance, no average detector measurement needs to be carried out.

Page 27

5.2.2.1 *Measuring arrangement*

Replace, in Note 1, "500 pH" by "500 pF".

Page 31

5.3.1.1 *Vacuum cleaners*

Replace, in the text of Sub-clause 5.3.1.1.1, "5.3.1.1.3 and measured" by "5.3.1.1.3 are to be measured" and "5.2.2.2: to be operated continuously" by "5.2.2.2 while operating continuously".

Replace, in the second last line of the second paragraph of Sub-clause 5.3.1.1.2, "6.2.2.4.2" by "7.3".

Add the following new sub-clause:

5.3.1.1.5 Vacuum cleaners with a mains lead, retracted by an automatic spindle device. To be measured with the mains lead pulled out completely. For the measurement of terminal voltages the length of the lead shall be folded back and forth so as to form a bundle parallel to the lead with a length between 30 cm and 40 cm.

5.3.2 *Portable motor-operated tools*

Add, under the heading of this sub-clause, the following note:

Note.- Hand-held electric power-operated tools which incorporate vibrating or swinging masses should, where possible, be measured with these masses removed or disconnected. Such tools, which have an inadmissible increase of their rev/min (revolutions per minute) when operating without their vibrating or swinging masses, can be operated at lower voltages so that their nominal operating rev/min is reached.

This note has been deleted from Tables I and II.

Add, page 37, a new sub-clause:

5.3.2.14 Power staplers to be measured (with the artificial hand in place) with the longest nails or cramps in accordance with the manufacturer's instructions, while working on soft wood (for instance pinewood).

All power staplers shall be in conformance with the limits given for portable tools with a power consumption less than 700 W, while operating at 6 strokes per minute (independent of product information or manufacturer's instructions).

5.3.5 *Electrical thermal appliances*

Add in the text of Sub-clause 5.3.5.2, "*grills*" after "*Cooking ovens*".

Add to Sub-clause 5.3.5.11, page 41:

See also Sub-clause 4.2.4.2 for room-heating equipment intended to be used stationary.

5.3.6 *Electric fence supply units*

Replace in the last line of the first paragraph of this sub-clause, "15 °C" by "15 degrees".

Page 49

5.3.10 *Electric toys running on tracks*

Add at the end of Sub-clause 5.3.10.3.1, page 51, the following text:

Measurements shall also be made at the terminals for the low voltage supply and control-leads on the track side of the transformer/controller, using a probe in series with the input impedance of the measuring receiver. The probe consists of a resistor having a resistance value of at least $1\ 500\ \Omega$ in series with a capacitor with a reactive value negligible to the resistance value (in the range 0,15 MHz to 30 MHz). Due allowance shall be made for the voltage division between the probe and the measuring set.

For the principal measuring arrangement see Figure 4. The limits specified in Table I at the load terminals of regulating controls incorporating semiconductor devices shall apply.

Page 53

Add the new Sub-clause 5.3.14:

5.3.14 *Insect killers*

A resistor of $2\ \text{k}\Omega$ shall be placed across the discharge path.

Note.- Normally only continuous interference can be observed.

Page 61

Replace the title of Clause 7 by the following:

7. Methods of measurement of interference power (30 MHz to 300 MHz)

7.1 *General*

Replace in the second paragraph "mains lead" by "lead" (twice).

Page 69

Amend Table III as follows:

- i) replace in the third column, "30 to 300" by "30 to 300**" and
- ii) add under the existing note the following new note:
** See note in Sub-clause 4.2.1.

- iii) Delete the asterisks in the first column of Table III and before the note given below this table.
- iv) Add an asterisk to "convectors, fan heaters, forced air heaters, oil filled heaters, space heaters, separate thermostats for control of room or water heaters and oil burners".
- v) Add the following new note below Table III:
 * Thermostats for, or integrated in room heating equipment (including convectors, fan heaters, forced air heaters, oil filled heaters, space heaters, water heaters or oil burners) intended to be used stationary shall be in conformity with the limits for continuous interference of household appliances and shall be tested according to the upper quartile method.

Page 71

Amend Table IV as follows:

Delete the asterisks in the first column of Table IV and before the note given below this table.

Amend Table V as follows:

- i) replace, in the second column, " $N 0,2$ " by " $N \leq 0,2$ ";
- ii) replace, in the third column, "30 to 300" by "30 to 300*" and
- iii) add, under the table, the following note:

* See note in Sub-clause 4.2.1.

Page 77

Replace the last paragraph of Note 6 of Appendix C by the following new paragraph:

Interference source 1 being connected (with switch in on position) but not powered (plug 5 disconnected) the auxiliary source 3 is activated (coupling loop energized by a pulse generator or small motor-driven apparatus supplied from batteries) and the position of the clamp 4 is adjusted along the mains lead to obtain the maximum reading on the receiver. This position is approximately the same as the one which would be obtained if the interference source 1 were continuous. One can therefore then connect plug 5 and proceed with the measurement of the interference produced by apparatus 1 after having, of course, turned off auxiliary source 3.