II

(Acts whose publication is not obligatory)

COUNCIL

COUNCIL DIRECTIVE

of 4 November 1976

on the approximation of the laws of the Member States relating to radio interference caused by electrical household appliances, portable tools and similar equipment

(76/889/EEC)

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 100 thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Parliament (1),

Having regard to the opinion of the Economic and Social Committee (2),

Whereas in most Member States electrical household appliances, portable tools and similar equipment which cause radio interference are subject to mandatory provisions relating to such possible interference; whereas such provisions differ from one Member State to another;

Whereas the differences between such national provisions are a barrier to trade in electrical household appliances, portable tools and similar equipment likely to cause radio interference; whereas for that reason they directly affect the establishment and functioning of the common market;

Whereas it is therefore necessary to lay down at Community level the rules to be observed with regard to the permissible upper limits of the radio interference caused by the appliances covered by this Directive, together with the methods for measuring such interference;

Whereas, as a general rule, when applying interference limits it is necessary to distinguish between interference heard as a continuous sound or a 'buzz' as distinct from interference heard as a 'click';

Whereas in order to measure the interference produced by the appliances covered by this Directive, it is necessary to operate the appliance under specified conditions, to interpret in a uniform manner the values given by the measuring apparatus and to carry out the measurement in accordance with a defined statistical procedure based on uniform rules of evaluation, to ensure that the results conform with the limits laid down;

Whereas technical progress necessitates frequent adaptation of the technical requirements contained in this Directive and in subsequent Directives in the field of radio interference; whereas in order to facilitate implementation of the necessary measures, a procedure should be set up for establishing close cooperation between Member States and the Commission in the Committee responsible for adapting to technical progress Directives for eliminating technical barriers to trade in equipment likely to cause radio interference,

(1) OJ No C 37, 4. 6. 1973, p. 8.
(2) OJ No C 52, 5. 7. 1973, p. 23.

HAS ADOPTED THIS DIRECTIVE:

Article 1

1. The purpose of this Directive is the approximation of the laws, regulations and administrative provisions of the Member States relating to radio interference caused by electrical household appliances, portable tools and similar equipment which cause a similar type of continuous or discontinuous radio interference, by fixing the permissible upper limits for the interference caused by such equipment and the methods for measuring such interference.

2. The scope of this Directive is specified in section 1 of the Annex.

3. 'Continuous' radio interference means the interference defined in section 2.1 and 'discontinuous' radio interference the interference defined in section 2.2 of the Annex.

Article 2

The equipment referred to in Article 1 may not be placed on the market unless it meets the requirements of this Directive with regard to the radio interference which it is likely to cause.

Article 3

1. The conformity of the equipment with the requirements of this Directive shall be certified by the manufacturer, assembler or importer, on his own responsibility, in a statement to be included in the instructions for use, the guarantee certificate or on the equipment itself.

2. The statement provided for in paragraph 1 shall be unnecessary where use is made of marks or certificates issued by the bodies notified by each Member State to the other Member States and to the Commission.

3. For a period of five and a half years from the time this Directive is notified, Member States may require that compliance by equipment with the requirements of this Directive shall be attested by marks or certificates issued on behalf of the competent authorities on the basis of prior type testing.

In the light of experience gained and the results obtained within the Community, all appropriate measures shall be taken in accordance with the procedure laid down in Article 8, within this period of five and a half years.

Article 4

Member States may not prohibit or prevent the placing on the market or use of equipment on grounds relating to radio interference, if such equipment meets the requirements of this Directive.

Article 5

Member States shall take the necessary steps to ensure that the methods of measurement used in official tests for verifying compliance with the permissible limits specified for each type of appliance, are in accordance with those specified in the Annex.

Article 6

1. The requirements of this Directive shall not prevent, with regard to the use of the equipment referred to in Article 1, the application in any Member State of the following measures to protect reception:

(a) special measures, in the case of receiving stations used for public utility or safety purposes;

(b) additional suppression measures, in isolated cases, where individual appliances, even though complying with the requirements of this Directive, have caused interference.

2. Member States shall inform the Commission of the special measures taken pursuant to paragraph 1 (a) and each year forward a brief summary of action taken in individual cases.

Article 7

1. A committee, hereinafter called 'the Committee', is hereby set up to adjust to technical progress the Directives on the elimination of technical barriers to trade in appliances causing radio interference. It shall consist of representatives of the Member States and be chaired by a Commission representative.

2. The Committee shall adopt its own rules of procedure.

3. Any amendments required to adapt the requirements of the Annex (excluding section 1) to technical progress shall be adopted in accordance with the procedure laid down in Article 8. However, such amendments must not result in a decrease in the

quality of radioelectric communications, including sound radio and TV reception, in the frequency range covered by this Directive.

Article 8

1. In the event of the procedure laid down in this Article being invoked, the matter shall be referred to the Committee by its chairman, either on his own initiative, or at the request of the representative of a Member State.

2. The Commission representative shall submit to the Committee a draft of the measures to be adopted. The Committee shall give its view on this draft within a period to be fixed by the chairman having regard to the urgency of the matter.

The Committee shall take its decisions by a majority of 41 votes, the votes of the Member States being weighted as provided for in Article 148 (2) of the Treaty. The chairman shall not vote.

3. (a) The Commission shall adopt the proposed measures where they are in accordance with the opinion of the Committee.

(b) Where the proposed measures are not in accordance with the opinion of the Committee, or if no view is given, the Commission shall without delay propose to the Council the measures to be adopted. The Council shall decide by a qualified majority.

(c) If, within three months of the matter being submitted to it, the Council has not taken a decision, the proposed measures shall be adopted by the Commission.

Article 9

1. Member States shall bring into force the provisions necessary in order to comply with this Directive within 18 months of its notification and shall forthwith inform the Commission thereof. Within the United Kingdom the 18-month period shall be extended to 30 months for the class of semi-conductor devices rated up to 1 000 W and intended for use as lighting dimmers.

2. Member States shall ensure that the texts of the provisions of national law which they adopt in the field covered by this Directive are communicated to the Commission.

Article 10

This Directive is addressed to the Member States.

Done at Brussels, 4 November 1976.

For the Council

The President

Th. E. WESTERTERP

ANNEX

1. SCOPE

1.1. These provisions shall apply to electrical household appliances, portable tools and other electrical equipment causing similar types of interference, continuous or discontinuous, such as office machines, cine or slide projectors, record players, milking machines, motor operated electromedical apparatus, regulating controls incorporating semi-conductors, electric fences, vending machines and slot-machines, etc., excluding appliances using in-built batteries.

1.2. Procedures are given for the measurement of interference and limits are laid down within the frequency range 0·15 to 300 MHz. There must be 80 % confidence that at least 80 % of the series-produced appliances comply with these limits.

1.3. Portable tools with a rated power exceeding 2 kW and regulating controls incorporating semi-conductors with a rated imput current exceeding 16 A are excluded from the scope of this Directive.

1.4. Unattached motors, sold as such, are also excluded from the provisions of section 3 *et seq*. They shall carry a label drawing the attention of the user to the fact that he is responsible for any action necessary to ensure that his equipment complies with the requirements laid down.

2. DEFINITIONS

For the purpose of this Directive the following definitions shall apply.

2.1. **Continuous interference**

Continuous interference may arise from either impulsive or random noise or maybe a superposition of these, the disturbance lasting for more than 200 ms.

2.2. **Discontinuous interference**

Interference which is not continuous. In the calculation of limits and the measurement of discontinuous interference the following definitions are used.

2.2.1. *Click*

A disturbance which lasts not more than 200 ms, and which is separated from a subsequent disturbance by at least 200 ms. A click may contain a number of impulses. Examples of discontinuous interference which are classified as clicks are shown in figures 1a, 1b and 1c.

2.2.2. *Counted clicks*

Clicks which exceed the limit of continuous interference.

2.2.3. *Switching operation*

One opening or one closing of a switch or contact.

2.2.4. *The minimum observation time T*

In general, the time taken to register 40 counted clicks and to count 40 switching operations (see 6.1.1.5 for details).

2.2.5. *Click rate N*

The number of counted clicks per minute determined from the formula $N = n_1/T$; n_1 being the number of counted clicks during the observation time T minutes.

For certain appliances (see 3.2.6.4) the click rate N is determined from the formula $N = fn_2/T$, where n_2 is the number of switching operations during the observation time T and f is a factor given in Annex 1, Table D.

2.2.6. *Permitted limit L_q (for counted clicks)*

The relevant limit for continuous interference increased by a specified amount (given in 3.2.3 and 3.2.6).

2.2.7. *Typical value (of counted clicks)*

The value allocated to the equipment or appliance according to the upper-quartile method. That is, the equipment or appliance under test shall be deemed to comply with the limits if not more than a quarter of the counted clicks are higher than the permitted limit. Examples of application of the upper-quartile method are shown in Annex 2.

2.3. **Duty cycle**

Over a number of cycles of openings and closings the duty cycle is the sum of the times during which the contacts are closed expressed as a ratio of the total time.

3. INTERFERENCE LIMITS

3.1. **Continuous interference**

3.1.1. *Frequency range 0·15 to 30 MHz (terminal voltage)*

Limits of interference voltage produced in the frequency range 0·15 to 30 MHz are given in Table I.

TABLE I

Frequency range	Limits for the frequency range 0·15 to 30 MHz									
	Electrical household appliances and similar equipment		Portable tools						Regulating controls not incorporated			
			Rated power of motor									
			Up to and including 700 W		Above 700 W up to and including 1 000 W		Above 1 000 W up to and including 2 000 W		At mains terminals		At load terminals	
(MHz)	dB (μV)	mV	dB (μV)	mV	dB (μV)	mV	dB (μV)	mV	dB (μV)	mV	dB (μV)	mV
0·15 to 0·50	66	2	66	2	70	3	76	6	66	2	80	10
0·50 to 5	60	1	60	1	64	1·5	70	3	60	1	74	5
5 to 30	66	2	66	2	70	3	76	6	66	2	80	10

Note: The limits apply across the whole frequency range but, for practical reasons, measurements may be made at the following preferred frequencies: 0·16; 0·24; 0·55; 1·0; 1·4; 2·0; 3·5; 6·0; 10 and 22 MHz; all of which have the permitted tolerance of ± 10 %.

3.1.2. *Frequency range from 30 to 300 MHz (interference power)*

Tables II and III show the limits of interference power.