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STATUTORY INSTRUMENTS

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**2005 No. 281**

**The Electromagnetic Compatibility Regulations 2005**

**PART 1**

**PRELIMINARY**

**Citation and commencement**

1. These Regulations may be cited as the Electromagnetic Compatibility Regulations 2005, and shall come into force on 7th March 2005.

**Repeal and disapplication**

2.—(1) The following Regulations are hereby revoked—

- (a) the Electromagnetic Compatibility Regulations 1992 (1);
- (b) the Electromagnetic Compatibility (Amendment) Regulations 1994 (2); and
- (c) the Electromagnetic Compatibility (Amendment) Regulations 1995 (3).

(2) The regulations made under section 10 of the Wireless Telegraphy Act 1949 (4) listed in Schedule 1, to the extent that they impose electromagnetic compatibility requirements which must be complied with if relevant apparatus is—

- (a) to be supplied or taken into service and
- (b) used for the purpose for which it was intended,

shall cease to have effect, but nothing in these Regulations shall affect the said regulations to the extent that they impose requirements for radio frequency spectrum planning or for the prevention of undue interference to wireless telegraphy from relevant apparatus in use.

**Interpretation**

3.—(1) In these Regulations,

“the 1949 Act” means the Wireless Telegraphy Act 1949;

“the 1984 Act” means the Telecommunications Act 1984(5);

“the EMC Directive” means Council Directive 89/336/EEC on the approximation of the laws of the member States relating to electromagnetic compatibility (6) as amended by

- (a) Council Directive 92/31/EEC(7); and

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(1) S.I. 1992/2372.

(2) S.I. 1994/3080.

(3) S.I. 1995/3180.

(4) 1949 c. 54.

(5) 1984 c. 12.

(6) OJNo. L139, 23.5.89, p.19.

(7) OJ No. L126, 12.5.92, p.11.

(b) Articles 5, 14.1 and 14.2 of Council Directive 93/68/EEC<sup>(8)</sup> (the CE Marking Directive); “affixed” in relation to the CE marking, or any inscription which is liable to be confused therewith, or which is likely to deceive third parties as to the meaning and form thereof, means affixed to one of the items mentioned in regulation 35 (2) below or to any other item such that it is referable to any apparatus;

“authorised representative” means a person established within the Community appointed by the manufacturer (whether or not established in the Community) to act on his behalf in fulfilling his obligations under the EMC Directive as implemented by these Regulations;

“business” includes a profession and an undertaking, and a supply in the course of a business includes any supply by a business;

“CE marking” and “CE conformity marking” shall be construed in accordance with regulation 35 below;

“the Commission” means the Commission of the European Communities;

“the Community” means the European Community;

“competent body” shall be construed in accordance with regulation 47 below;

“conformity assessment requirements” shall be construed in accordance with regulation 33 below;

“EC declaration of conformity” has the meaning given in regulation 36(1) below;

“EC type-examination certificate” in relation to the EC type-examination route to compliance in respect of radiocommunication transmission apparatus means an EC type-examination certificate issued by—

(a) a United Kingdom notified body pursuant to regulation 66 below; or

(b) a notified body of an EEA state other than the United Kingdom pursuant to Article 10.5 of the EMC Directive;

“the EC type-examination route to compliance” in relation to radiocommunication transmission apparatus shall be construed in accordance with regulation 33(b) below;

“education and training equipment” means any relevant apparatus (including a kit)—

(a) supplied or possessed for supply to education or training establishments or manufactured in such an establishment for the purposes of experimentation, learning or practical training; and

(b) the usual electromagnetic environment of which is a classroom, laboratory, study area or similar such place;

“electrical apparatus” shall be construed in accordance with regulation 7(2) below;

“enforcement authority” in relation to any relevant apparatus means any person who is, pursuant to the provisions of regulation 75 below, authorised to act as an enforcement authority in relation to that relevant apparatus;

“end user” means

(a) a manufacturer who first uses electrical apparatus which he has manufactured for the purpose for which it is designed, but excludes a manufacturer who uses the apparatus by incorporating it into other apparatus; and

(b) any other person who uses the electrical apparatus;

“excluded installation” has the meaning giving by regulation 12(2);

“immunity” means immunity to electromagnetic disturbance;

<sup>(8)</sup> OJ No. L220, 30.8.93, p.1.

“kit” means a collection of all or substantially all the necessary components, for supply as a single commercial unit, required for the construction of an item of electrical apparatus and intended for such use, whether or not accompanied by instructions. For the purposes of the definition of “system” in this paragraph and of the application of regulation 7 below, a kit shall be considered to be a system with an intrinsic function intended for the end user notwithstanding that, when it is supplied, it is not yet assembled;

“manufacture” means manufacture in the course of a business, and includes—

- (a) assembly;
- (b) finishing;
- (c) reconditioning;
- (d) modification which substantially alters the electromagnetic compatibility characteristics of the apparatus;

but does not include repair or the assembly of relevant apparatus from a kit;

“medical device” has the meaning given by regulation 22(3) below;

“notified body” shall be construed in accordance with regulation 63 below;

“OFCOM” means the Office of Communications established under the Office of Communications Act 2002(9);

“presumption of conformity” shall be construed in accordance with regulation 34 below;

“protection requirements” has the meaning given by regulation 5 below;

“radio amateur apparatus” means wireless telegraphy apparatus designed or adapted for use in the amateur service, but excludes citizens' band apparatus, and in this definition—

- (a) “amateur service” has the meaning given by Article 1, definition 1.56 of the 2001 edition of the Radio Regulations annexed to the International Telecommunication Constitution 1992 (10) pursuant to Articles 4 and 54 of that Constitution; and
- (b) ‘citizen’s band apparatus’ means wireless telegraphy apparatus designed or adapted exclusively for the provision of voice radiocommunication in the frequency bands 26.960 MHz to 27.410 MHz and 27.60125 MHz to 27.99125 MHz;

“radiocommunication transmission apparatus” has the meaning given by regulation 61(2) below;

“radio frequency spectrum” means that part of the electromagnetic spectrum at frequencies not exceeding 3,000 GHz; and requirements of regulations made under section 10 of the 1949 Act shall be taken to concern radio frequency spectrum planning if they concern the frequency allocation for any apparatus (whether wireless telegraphy apparatus or other apparatus which operates by emitting electromagnetic radiation in the radio frequency spectrum) and the necessary characteristics of any signal or emission authorised by such regulations;

“relevant apparatus” shall be construed in accordance with regulation 6 below;

“responsible person” in relation to relevant apparatus means—

- (a) the manufacturer;
- (b) the manufacturer’s authorised representative; or
- (c) where the manufacturer is not established in the Community and he has not appointed an authorised representative, the person who supplies the relevant apparatus;

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(9) 2002 c. 11

(10) The International Telecommunication Constitution was adopted by the International Telecommunications Union at Nairobi on 6<sup>th</sup> November 1982 and was ratified by the United Kingdom on 15<sup>th</sup> November 1984.

“the standards route to compliance” in relation to relevant apparatus other than radiocommunication transmission apparatus shall be construed in accordance with regulation 33(a) (i) below;

“supply” means the first making available of relevant apparatus in the Community including, offering to supply, agreeing to supply, exposing for supply and possessing for supply such apparatus; but relevant apparatus shall not be regarded as having been supplied by reason only of its having been displayed at a trade fair or exhibition or advertised for supply when not available for supply;

“system” means an item of equipment, or a combination of items of equipment, containing—

- (a) electrical components;
- (b) electronic components; or
- (c) both (a) and (b),

and includes a kit but excludes any such equipment containing a medical device;

“technical certificate” in relation to the technical construction file route to compliance in respect of relevant apparatus other than radiocommunication transmission apparatus means a technical certificate issued by—

- (a) a United Kingdom competent body in accordance with regulation 52 below; or
- (b) a competent body of an EEA State other than the United Kingdom pursuant to Article 10.2 of the EMC Directive;

“technical construction file” shall be construed in accordance with regulation 45 below;

“the technical construction file route to compliance” in relation to relevant apparatus other than radiocommunication transmission apparatus shall be construed in accordance with regulation 33(a)(ii) below;

“technical report” in relation to the technical construction file route to compliance in respect of relevant apparatus other than radiocommunication transmission apparatus means a technical report issued by—

- (a) a United Kingdom competent body in accordance with regulation 52 below; or
- (b) a competent body of an EEA State other than the United Kingdom pursuant to Article 10.2 of the EMC Directive;

“test apparatus” means relevant apparatus designed or adapted to generate or be susceptible to electromagnetic disturbance for the specific purpose of conducting any test or measurement in relation to—

- (a) any relevant apparatus; or
- (b) any other thing, matter or phenomenon;

“United Kingdom competent body” shall be construed in accordance with regulation 48 below;

“United Kingdom notified body” shall be construed in accordance with regulation 64 below; and

“wireless telegraphy”, “wireless telegraphy apparatus” and “station for wireless telegraphy” have the meanings given respectively by section 19(1) of the 1949 Act.

(2) For the purpose of these Regulations—

- (a) “electromagnetic compatibility” (“EMC”) is the ability of relevant apparatus to function satisfactorily in its electromagnetic environment without introducing intolerable electromagnetic disturbance to anything in that environment;
- (b) the electromagnetic (“EM”) characteristics of relevant apparatus comprise—
  - (i) the propensity of that apparatus to generate electromagnetic disturbance; and

- (ii) the adequacy of the immunity of that apparatus to external electromagnetic disturbance;
- (c) a reference to an applicable EM characteristic of relevant apparatus is a reference to—
  - (i) in the case of apparatus to which regulations 27 to 29 below apply, any EM characteristic thereof which falls within the scope of these Regulations; and
  - (ii) in the case of any other apparatus, any EM characteristic thereof;
- (d) “applicable EMC standard”, “harmonised standard”, “recognised national standard” and “transposed harmonised standard” shall be construed in accordance with regulation 40 below;
- (e) an electromagnetic environment is the totality of electromagnetic phenomena existing at a given location, and
  - (i) a reference to the immediate electromagnetic environment in relation to education and training equipment or test apparatus (“disturbance permissible apparatus”) is a reference to a sufficient space for that apparatus to—
    - (aa) operate as intended, where the object of the study or test as the case may be is that it should generate electromagnetic disturbance;
    - (bb) be subjected to electromagnetic disturbance, where the object of the study or test as the case may be is that it should be the victim of electromagnetic disturbance,without preventing other relevant apparatus (other than any apparatus involved in the study or test) from operating as intended; and in this definition, “sufficient space” means a space no greater in size than is reasonably necessary having regard to all the circumstances, to enable the disturbance permissible apparatus to be so operated or so subjected, and having regard in particular to the steps which might reasonably be taken to insulate the site at which the disturbance permissible apparatus is being used against the escape of emissions therefrom;
  - (ii) a reference to a sealed electromagnetic environment is a reference to an electromagnetic environment which prevents relevant apparatus therein from causing electromagnetic disturbance to relevant apparatus outside that electromagnetic environment and includes an anechoic chamber, an electromagnetic anechoic room or a Faraday cage; and
  - (iii) a reference to the usual electromagnetic environment of apparatus is a reference to—
    - (aa) where the apparatus is manufactured or supplied for the purpose of being used at a specific location, the totality of electromagnetic phenomena which exist at that location under normal circumstances at the time when it is first used; or
    - (bb) where sub-paragraph (aa) above does not apply, the totality of electromagnetic phenomena which might reasonably be expected to exist at the usual range of locations at which that relevant apparatus might reasonably be expected to be used, having regard to all the circumstances, and in particular to—
  - (iv) the electromagnetic phenomena associated with that relevant apparatus and other relevant apparatus which might reasonably be expected to be in sufficient proximity to the first mentioned relevant apparatus to be affected thereby; and
  - (v) any indication by the manufacturer or supplier of the applications for which the first-mentioned relevant apparatus is suitable; and

- (f) relevant apparatus other than a kit is taken into service when it is first used by the person who assembled it or the person who imported it from a country or territory other than a member State; but relevant apparatus shall not be regarded as having been taken into service by reason only of its having been operated by or on behalf of the manufacturer at a trade fair or exhibition or by a supplier for demonstration purposes.

(3) In these Regulations, with respect to matters arising on and after 1st January 1994, a reference to the Community includes a reference to the EEA States, and for the purposes of this paragraph an EEA state means a member State, Norway, Iceland or Liechtenstein **(11)**.

### **Electromagnetic disturbance**

**4.** In these Regulations, “electromagnetic disturbance” means, subject to paragraphs (2) to (6) below, any electromagnetic phenomenon which is liable to degrade the performance of relevant apparatus.

(1) Without prejudice to the generality of paragraph (1) above, the following phenomena shall be regarded as electromagnetic disturbance (being phenomena expressly stated to be such in Article 1.2 of the EMC Directive):—

- (a) electromagnetic noise;
- (b) unwanted signals; and
- (c) changes in the propagation medium.

(2) Without prejudice to the generality of paragraph (1) above and in addition to the phenomena regarded as electromagnetic disturbance pursuant to paragraph (2) above, the phenomena and effects listed in Schedule 2 hereto may be regarded as electromagnetic disturbance.

(3) A signal or emission which is a necessary function, or consequence of the operation, of relevant apparatus shall not be taken to be electromagnetic disturbance if, in relation to that apparatus, that signal or emission is permitted, and does not exceed the limits specified, by—

- (a) the applicable EMC standard;
- (b) a condition of the technical report or technical certificate;
- (c) where the apparatus is radiocommunication transmission apparatus—
  - (i) a condition of the EC type-examination certificate; or
  - (ii) a term, provision or limitation of—
    - (aa) a licence granted under section 1 of the 1949 Act; or
    - (bb) regulations made under that section; or

- (d) where the apparatus is—
  - (i) radiocommunication transmission apparatus; or
  - (ii) apparatus other than wireless telegraphy apparatus which operates by emitting electromagnetic radiation in the radio frequency spectrum,
    - any relevant provisions of regulations made under section 10 of the 1949 Act concerning radio frequency spectrum planning.

(4) A nuclear electromagnetic pulse (“NEMP”) shall not be regarded as electromagnetic disturbance.

(5) Without prejudice to the generality of the foregoing provisions of this regulation, the performance of relevant apparatus shall be taken to be degraded if any of the following types of interference with its function occur—

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**(11)** The application of the EMC Directive was extended in 1994 to the European Economic Area by Decision 94/1/ECSC, EC (OJ No. L1, 3.1.94, p.291).

- (a) permanent, temporary or intermittent—
  - (i) total loss of function;
  - (ii) significant impairment of function; or
- (b) where the apparatus is information storage or retrieval equipment, destruction or corruption of information stored thereby.

### **Protection requirements**

**5.—(1)** A reference to “protection requirements” in relation to relevant apparatus is a reference to the requirements set out in the following provisions of this regulation.

(2) Subject to paragraphs (3) to (5) below, relevant apparatus shall be so constructed that—

- (a) the electromagnetic disturbance it generates does not exceed a level allowing other relevant apparatus to operate as intended; and
- (b) it has a level of intrinsic immunity which is adequate to enable it to operate as intended, when it is—
  - (i) properly installed and maintained; and
  - (ii) used for the purpose for which it was intended.

(3) Nothing in paragraph (2) above shall be taken to require relevant apparatus, not being apparatus specifically designed for use at a given location, to be constructed in such a manner as to—

- (a) prevent the generation of electromagnetic disturbance to, or
- (b) provide for intrinsic immunity to electromagnetic disturbance generated by,

other relevant apparatus which would not reasonably be expected to be present in its usual electromagnetic environment.

(4) Without prejudice to the generality of paragraph (2)(a), the electromagnetic disturbance generated by relevant apparatus shall—

- (a) not exceed a level allowing radio and telecommunications equipment to operate as intended; and
- (b) be such as not to hinder the use of apparatus of any of the descriptions listed in Schedule 3 hereto (being descriptions listed in the illustrative list of the principal protection requirements in Annex III of the EMC Directive) where that apparatus is constructed in such a way that it has an adequate level of immunity in its usual electromagnetic environment so as to allow its unhindered operation taking into account the levels of electromagnetic disturbance generated by relevant apparatus complying with applicable EMC standards.

(5) Without prejudice to the generality of paragraph (2)(b)—

- (a) relevant apparatus shall be constructed in such a way that it has an adequate level of immunity in its usual electromagnetic environment so as to allow its unhindered operation taking into account the levels of electromagnetic disturbance generated by other relevant apparatus which might reasonably be expected to be present in that environment and which complies with the protection requirements; and
- (b) whether the level of intrinsic immunity of relevant apparatus is adequate is to be considered having regard to all the circumstances of the case, and in particular to—
  - (i) the level of performance reasonably expected of that apparatus having regard to its function or intended function;
  - (ii) any specification for an acceptable level of degradation of performance provided to the end user by the manufacturer;

(iii) the consequences of degradation of performance,

but nothing in this sub-paragraph shall authorise a level of intrinsic immunity which could permit the operation of the apparatus to be dangerous (either to persons or property) in any reasonably foreseeable circumstances.

(6) The information required to enable use in accordance with the intended purpose of the relevant apparatus must be contained in the manufacturer's instructions accompanying the apparatus.