

European Commission Guidance Notes R&TTE Directive

Background

The introduction of the R&TTE Directive in April 2000 will bring a sea change in the way manufacturers of radio equipment and telecommunications terminal equipment (TTE) can gain access to the European marketplace for their products. This change heralds much greater flexibility and opportunity at the price of greater responsibility for the conformity of their products. Manufacturers will no longer have the comfort of a type approval regime but must shoulder the full consequences of product liability.

Introduction

The final text of the R&TTE Directive was signed by the presidents of the European Parliament and the Council on the 9 March 1999 and published in the Official Journal of the European Communities on the 7 April 1999. Member States have one year from this date to implement the Directive in their national legislation.

The Directive aims to provide the European radio and TTE industry with a more deregulated environment than at present. The involvement of third parties in conformity assessment is not necessary in most cases. The person who places equipment on the market will, in general, be regarded as taking full responsibility for its conformity to essential requirements, and for properly informing users of its intended use. Only in the case of radio equipment for which harmonised standards are not available, or are not used, is it mandatory to consult a notified body.

The Directive replaces the national approval regimes for radio equipment and TTE and the requirements of the consolidated Telecommunications Terminal Equipment Directive (98/13/EC). The Directive also contains requirements on Health & Safety and Electromagnetic Compatibility (EMC) based on those in the Low Voltage Directive (LVD) (73/23/EEC) and the EMC Directive (89/336/EEC), disapplying those Directives for equipment within its scope. This means that manufacturers will only have to declare conformity to one directive to enable them to place their products on the market anywhere in the European Union.

Why the R&TTE Directive

There are a number of reasons why it was felt that a directive covering both radio equipment and telecommunications terminal equipment was necessary.

Implementation of the existing TTE Directive had failed to fully harmonise the marketplace for TTE. This has been partly due to differences in national implementation and changing interpretation of the Directive by the European Commission.

The essential requirements of the TTE Directive were seen as disproportionate and to a large extent unnecessary.

The conformity assessment regime of the TTE Directive was seen as over-burdensome and time consuming.

There was an almost complete lack of mutual recognition of the various national type approval regimes for radio equipment within Europe.

Essential Requirements

Conformity is based on products complying with a set of essential requirements.

The following essential requirements (Article 3.1 (a) and (b)) are applicable to all equipment within the scope of the Directive:

the protection of the health and safety of the user and any other persons, including the objectives with respect to safety requirements contained in Directive 73/23/EEC (the LVD), but with no voltage limits applying; and
the protection requirements with respect to electromagnetic compatibility contained in Directive 89/336/EEC (the EMC Directive).

The following essential requirement (Article 3.2) is applicable to radio equipment;

radio equipment shall be so constructed that it effectively uses the spectrum allocated to terrestrial/space radio communications and orbital resources so as to avoid harmful interference.

The following essential requirements (Article 3.3 (a) to (f)) may be applied to equipment within the scope of the Directive if the Commission make a decision to apply them to certain classes of type of equipment:

inter-works via networks with other apparatus and that it can be connected to the interfaces of the appropriate type throughout the Community; and/or
does not harm the network nor misuse network resources, thereby causing an unacceptable degradation of services; and/or
it incorporates safeguards to ensure that the personal data and privacy of the user and of the subscriber are protected; and/or
supports certain features ensuring avoidance of fraud; and/or
it supports certain features ensuring access to emergency services; and/or
it supports certain features in order to facilitate its use by users with a disability.

It is likely that the Commission will apply the above Article 3.3 requirements vary sparingly and that for the vast majority of radio equipment no Article 3.3 requirements will be applied. Currently the Commission is only considering the application of Article 3.3(e) (access to emergency services) to marine radio equipment not within the scope of the Marine Equipment Directive and for radio equipment intended for use on inland

waterways.

Conformity Assessment Procedures

Manufacturers have the choice of the following conformity assessment routes:

Internal Production Control - Annex II

Available for TTE and receiving parts of radio equipment.

It is the responsibility of the manufacturer to assess their product against the requirements of the Directive, put together the technical documentation listed and to declare that the equipment complies with the essential requirements. Harmonised standards may be used at the choice of the manufacturer and where they are used they give a presumption of conformity. CTRs under the TTE Directive may continue to be used if the manufacturer wishes and they will have the same status as harmonised standards under the R&TTE Directive.

Internal Production Control Plus Specific Apparatus Tests - Annex III

Available for radio equipment only

Following this route the manufacturer applies an applicable harmonised; if this harmonised standard does not contain the essential radio test suites the manufacturer needs to have these identified by a Notified Body. It is then the responsibility of the manufacturer to have the identified essential radio test suites carried out and to put together the technical documentation listed in Annex II of the Directive and to declare that the equipment complies with the essential requirements.

The Technical Construction File (TCF) Route - Annex IV

Available for both radio equipment and TTE

The manufacturer presents a technical construction file to a Notified Body. This file should consist of the technical documentation listed in Annex II of the Directive. In addition, for radio equipment the file must contain the results of the essential radio test suite agreed previously with the Notified Body (as per Annex III). The Notified Body then has four weeks to issue an opinion. After the manufacturer has received this opinion or after four weeks he is free to place the equipment on the market.

The Full Quality Assurance Route - Annex V

Available for both radio equipment and TTE.

Following this route the manufacturer must operate an approved quality system for design, manufacture and final product inspection and test which has been assessed by a Notified Body.

As an alternative to the above routes the manufacturer has the choice of using:

the procedures specified in the Low Voltage Directive (73/23/EEC) to demonstrate compliance with the essential requirement specified in Article 3.1(a) of the Directive; and/or

the procedures specified in Articles 10.1 and 10.2 of the EMC Directive (89/336/EEC) to demonstrate compliance with the essential requirement specified in Article 3.1(b) of the Directive.

The important thing to remember with any of the above routes is that it is the manufacturer's responsibility to ensure his product complies and declare accordingly. Where Notified Bodies are used they have no power to prevent a product being placed on the market. Even with the TCF route the Notified Body only issues an opinion, it is the manufacturer who makes the final decision as to whether it complies or not.

The conformity assessment procedures are applicable for every Member State of the EU. Separate procedures are not required to gain access the different Member States market. The R&TTE Directive will give considerable freedom to manufacturers to assess their products against the requirements of the Directive taking into account the intended use and environment of their equipment. It should speed up the manufacture, conformity assessment, product to market cycle considerably.

Implementing Regulations - Transposition

The Directive requires Member States to implement the Directive in National Law no later than 12 Months after the Directive enters into force (i.e. 12 months after the Directive is published in the OJ). In the UK this will be achieved by the introduction of the Radio Equipment and Telecommunications Terminal Equipment Regulations 2000 before 8 April 2000, when the Directive has to have been transposed into national law.

These Regulations take the form of a Statutory Instrument (SI) (i.e. Secondary legislation) made under The European Communities Act 1972. They will repeal Telecommunications Terminal Equipment Regulations SI 1992/2423. They will also will disapply Sections 22 and 84 of the Telecommunications Act 1984, the Electromagnetic Compatibility Regulations SI 1992/2372 and the Electrical Equipment (Safety) Regulations SI 1994/2372 for equipment within the scope of the Directive.

The text of the Regulations will follow that of the RTTE Directive wherever possible and appropriate. This approach has been taken in recognition that the text of the Directive might be open to interpretation in more than one way. A European committee - the Telecommunication Conformity Assessment and Market Surveillance Committee (TCAM) - assists the Commission in the application of this Directive. Differences in interpretation will be aired in TCAM and may result in a common understanding at a European level. Should this occur, the UK may issue Guidance on the interpretation of the Directive text, but it is expected that the Regulations will remain unaltered.

Radio Equipment Notifications

Article 6.4 of the Directive requires manufactures of radio equipment to notify the relevant Member States of their intention to place a product on their national market at

least four weeks in advance, unless the product used frequency bands whose use is harmonised throughout the Community.

At a meeting of the Telecommunication Conformity Assessment and Market Surveillance Committee (TCAM) on 13/14 October 1999, the Commission and Member State representatives indicated their understanding of the interpretation of Article 6.4 of the Directive to be as follows:

Notification under Article 6 (4) of directive 99/5/EC is required for equipment covered by the following definition: Radio equipment which uses frequency bands whose use is not harmonised throughout the Community. This is considered to be all radio equipment except those:

- a) which do not transmit; or*
- b) which can only transmit under the control of a network; or*
- c) which use a frequency band which is allocated to the same radio interface in every Member State in the following way:*

*there is a common frequency allocation; and
within this allocation, the allotment and/or assignment of radio frequencies or radio frequency channels follows a common plan or arrangement; and
the equipment satisfies common parameters (e.g. frequency, power, duty cycle, bandwidth, etc.).*

Notification of radio equipment which uses frequency bands whose use is not harmonised throughout the Community should be made to relevant Member States, i.e. Member States upon whose market it is intended to place the equipment but where the equipment is not allowed to be used.

At the same TCAM meeting, it was also understood that the information to be notified should include all items on the following list if the notification is to be considered complete and proper:

Clear identification and means of contacting (address...) of the notifying party
Equipment Identification;
*The intended use/purpose of the equipment**
Where appropriate, the consulted notified body/bodies
Frequency bands
Reference standard or other specification assumed to be complied with in frequency planning and defining the equipment type
Type of modulation
Channel spacing and designation of emission if not defined in the standard or other specification mentioned above
Maximum transmit power limit if not defined in the standard or other specification mentioned above
Duty cycle or channel access protocol if not defined in the standard or other specification mentioned above

Duplex direction if applicable
Type of antenna
Space for remarks

* The information on intended use of the equipment could be considered to include countries where it is or is not intended for use.

For equipment placed on the UK market these notifications should be sent to the RA. We will scrutinise all notifications received and in the vast majority of cases an acknowledgement to the manufacturer of receipt of the notification will be all that is necessary.

The notification procedure is not intended to be used as any form of approval process by spectrum management authorities and RA will not use it in this way.

It must be stressed that manufacturers should not rely on the notification procedure to identify countries where equipment can and cannot be legally used or licensed. Administrations have no obligation under the Directive to respond to a notification. A lack of response does not mean its OK. It is the suppliers' responsibility to ensure they meet the relevant requirements before placing products on the market.

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Banning Equipment from the Market

Member States have the authority to prohibit or restrict the placing on its market or require the withdrawal from its market of radio equipment if it considers it has caused or is likely to cause harmful interference (Article 9.5).

We do not expect to have to invoke this measure for all but a tiny minority of cases. Any application of article 9.5 will have to be justified to the Commission. At present in the UK a small number of products are banned from the UK market by the application of orders under section 7 of the Wireless Telegraph Act 1967 (i.e. illegal CBs, videosenders & CTs). We are currently reviewing the need to keep restrictions on these devices in place in the light of the R&TTE Directive. We have no plans to introduce restrictions on any other equipment types for the foreseeable future.

Notified Bodies

Notified bodies are required for three tasks under the conformity assessment procedures of the Directive:

- the identification of the essential radio test suites where the test suites are not defined in the harmonised standards (Annex III);
- reviewing and giving opinions on technical construction files (Annex IV); and
- Assessment and surveillance of full quality assurance systems (Annex V).

It is likely that the notified bodies currently working under the present TTE Directive will

become notified bodies under the R&TTE Directive. In addition a number of organisations to whom the RA has designated the authority to issue national type approval certificates for radio equipment under section 84 of the Telecommunications Act 1984 (RECABS) are also likely to become notified bodies in the UK.

Unlike for the current EMC Directive, the RA has decided that it will not seek to become a Notified Body itself, at least for the time being.

Licensing of Radio Equipment

The Directive does not change the licensing/licence exemption regimes in place nationally for radio equipment, which will continue to be the mechanism for giving authority to use radio equipment. In fact, Article 7.2 of the Directive specifically allows Member States to restrict the putting into service of radio equipment for reasons related to the effective and appropriate use of the radio spectrum, avoidance of harmful interference or matters relating to public health.

Regulated Interfaces

Article 4.1 of the Directive requires Member States to notify interfaces they have regulated to the Commission. These interface regulations should provide clarity to manufacturers and users of radio equipment on what can be licensed or exempted in the UK and should tie in with the provisions of Article 7.2.

The Commission Services give the following interpretation:

Interface Regulations are high level descriptions of how the spectrum should be used. They typically consist of the spectrum allocation table, together with requirements related to intentional transmissions in allocated frequency bands. They should not prescribe technical interpretations of the essential requirements of the Directive.

Harmonised Standards can give a presumption of conformity with the requirements of the Directive, also where equipment operates in non-harmonised frequencies. This may be achieved through appropriate parameterisation and is the responsibility of ETSI. It is in the interest of industry to maximise the use of harmonised standards and national authorities, through their Membership in ETSI and the ERC-ETSI MoU have due influence in the drafting of harmonised standards;

The current set of approval specifications constitutes a safe but voluntary set of specifications on which manufacturer can base the construction of products;

National restrictions on the putting into service of equipment should not impose additional requirements on equipment. No technical requirements should be imposed on equipment, which has already been assessed under the Directive to operate in conformity with the notified Interface Regulation and which meets the essential requirements of the Directive, other than those directly related to spectrum assignment and avoidance of health hazards.

When notifying interfaces, the model proposed by AHG-B should be followed:

- 1
.
Frequency band
- 2
.
Radio service or services within this band including the status of the service(s) in the sense of the International Radio Regulations
- 3
.
Licensing regime
- 4
.
Reference standard or other specification assumed to be fulfilled in frequency planning and defining the equipment type
- 5
.
Channel spacing and designation of emission if not defined in the standard or other specification mentioned above
- 6
.
Maximum transmit power limit if not defined in the standard or other specification
- 7
.
Duty cycle or channel access protocol if not defined in the standard or other specification mentioned above
- 8
.
Duplex direction if applicable
- 9
.
Possible need for an operator's certificate
- 1
0
.
Any planned or foreseen changes in the above items
- 1
1
.
Space for remarks

RA responding to the requirements of article 4.1 by developing documents, to be called UK Radio Interface Specifications, covering all classes of radio equipment licensed or licence exempted in the UK. These will highlight the national spectrum management/licensing constraints.

Transitional Arrangements

For a period of one year after the Directive is implemented (i.e. until 7 April 2001) manufacturers have the choice of complying with the R&TTE Directive or the requirements of the Directive 98/13/EC (if applicable) or the national rules in force before 8 April 2000.

This means that individual products approved under the old regime may continue to be placed on the market during the transitional period. During the transitional period of 8

April 2000 to 7 April 2001, notified bodies appointed under Directive 98/13/EC can continue to act in support of approvals given before that period, for example by continuing arrangements for production control, but cannot grant further approvals. Also, no new national approvals under sections 22 and 84 of the Telecommunications Act 1984 will be granted during the transitional period (the same is true for EMC Type Examination certificates issued under the EMC Regulations).

From 8 April 2001, all items of apparatus placed on the market must meet the requirements of the R&TTE Directive.

Equipment Classes and Equipment Class Identifiers

At a meeting of TCAM on 16/17 December 1999, the Commission proposed a Decision defining two equipment classes and assigning an equipment class identifier to one of these classes as follows:

1 Radio Equipment and Telecommunications Terminal Equipment which can be placed on the market and be put into service without restrictions will constitute a class. This class will be referred to as "Class 1". An Equipment Class Identifier is not assigned for this class of equipment.

2 Radio Equipment for which Member States apply restrictions on the putting into service as foreseen in article 7.2 of Directive 1999/5/EC or for which Member States apply restrictions on the placing on the market as foreseen by article 9.5 of Directive 1999/5/EC will constitute a class. This class will be referred to as "Class 2". The following Equipment Class Identifier is assigned to equipment within this class:

3 The Commission will publish and maintain, in consultation with the TCAM, an indicative and non-exhaustive list of equipment or sorts of equipment falling within the above classes on the website containing information on Directive 1999/5/EC (<http://forum.europa.eu.int/dg3/tcam>).

The following initial list of subclasses are proposed for class 1:

Terminal equipment attached to fixed networks and non-transmitting radio equipment:

<i>Class 1.1</i>	<i>ISDN (ISDN Basic Rate, ISDN Primary Rate, ISDN U, Broadband ISDN ATM)</i>
<i>Class 1.2</i>	<i>PSTN (Analogue single line, Analogue multi-line (with/without DDI), equipment attached to Centrex interfaces or Virtual Private Networks)</i>
<i>Class 1.3</i>	<i>Leased lines (2w and 4w analogue (baseband), 2w and 4w analogue (voiceband), Digital, SDH, optical)</i>
<i>Class 1.4</i>	<i>Wired data equipment (X.21, X.25, ethernet, token ring, token bus, TCP/IP, frame relay)</i>
<i>Class 1.5</i>	<i>Wired interactive broadcast equipment (unswitched</i>

vision/sound, switched vision/sound)

Class 1.6 Telex (single line equipment, multiple line equipment)

Class 1.7 Receive-only radio equipment

Class 1.8 Other terminal equipment attached to fixed networks

Radio equipment, which only transmits under control of a network:

Class 1.9 GSM handsets, including GSM 900, GSM 1800, GSM 1900 (and when it appears GSM 450)

Class 1.10 TFTS equipment

Class 1.11 Land Mobile earth stations in the 1,5/1,6 GHz bands

Class 1.12 Land Mobile earth stations operating in the Ku-band

Class 1.13 TETRA end-user equipment (non-DMO)

Class 1.14 Satellite Personal Communication earth stations operating in the 1,6/2,4 GHz bands

Class 1.15 Satellite Personal Communication earth stations operating in the 1,9/2,1 GHz bands

Class 1.16 Low data rate Land Mobile earth stations in the 1,5/1,6 GHz bands

Class 1.17 Other Radio equipment , which only transmits under the control of a network

Radio transmitters, technically harmonised in the Community for which Member States don't constrain their putting into service

Class 1.8 DECT equipment

The following initial list of subclasses are proposed for class 1:

Class 2.0 Other

Class 2.1 VSATs in the C-band

Class 2.2 VSATs in the Ku-band

Class 2.3 Satellite News Gathering earth stations in the Ku-band

Class 2.4 TETRA Direct Mode of Operation

Class 2.5 TETRAPOL

Class 2.6	Private Mobile Radio
Class 2.7	Short Range Devices
Class 2.8	Microwave links
Class 2.9	Fixed radio links
Class 2.10	Broadcast transmitters
Class 2.11	Maritime radio equipment
Class 2.12	Infrastructure equipment (e.g. base stations)
Class 2.13	Radio equipment, operating in amateur radio bands

Market Surveillance and Enforcement

RA acting for the Secretary of State will be an enforcement/market surveillance authority under the Directive. Its areas of responsibility will be those parts of the Directive dealing with radio equipment and having radio related requirements. It is anticipated that other aspects of the Directive will be the responsibility of local government Trading Standards Departments.

The enforcement powers will be based on those contained in the Consumer Protection Act 1987 and will be similar to those under the current Electromagnetic Compatibility Regulations SI 1992/2372

They will include such powers as to:

- make test purchases for the purposes of ascertaining whether the equipment is in compliance with the Directive (including testing the equipment);*
- enter premises (other than a persons residence) to inspect equipment and documentation;*
- seize and detain equipment for which there is reasonable grounds for suspecting that it does not comply with the Directive;*
- seize and detain documentation, records, information or anything else which might be required as evidence or required by the competent authority of another Member State;*
- serve prohibition notices on suppliers where it considers that the equipment does not comply with the essential requirements of the Directive. This would prohibit the manufacture, supply and taking into service of the equipment;*
- serve suspension notices on suppliers prohibiting the manufacture, supply and taking into service of the equipment which it has reasonable grounds of suspecting that it does not comply with the requirements of the Directive;*
- require the production of documents and information such as declarations of conformity, technical construction files, the technical documentation specified in Annex II of the Directive, etc.*

RA's approach to market surveillance and enforcement will be to try and strike a

balance between proactive market surveillance activities and reactive, complaint driven activities. The enforcement approach of Trading Standards Departments is not expected to change from significantly from the TTE Directive regime.

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