



Equipment Buyers' Information Sheet

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JRC Ltd
Dean Bradley House
52 Horseferry Road
London SW1P 2AF
Tel: 020 7706 5199
Fax: 020 7222 0100
info@JRC.co.uk

Introduction

JRC regularly receives enquiries regarding radio equipment that has been purchased and is subsequently found to be either un-licensable within the UK and / or does not operate to the specification for which it was bought.

JRC therefore offers the following advice.

Before considering purchasing equipment, ensure that:

- the 'supplier' confirms that it has a 'valid' CE Mark; and either
- it can be operated within the relevant UK licensable spectrum:
 - and it can be adjusted to meet:
 - the terms & conditions of the Ofcom licence / JRC authorisation; and
 - if necessary, the more stringent requirements for shared site operation; or
- it complies with UK licence exemption regulations.

This information sheet has been updated to reflect the current situation regarding relevant EU Directives following the UK vote to leave the EU and potential consequences.

Valid CE Mark

A valid CE Mark shows that the equipment meets all applicable EU Directives and may therefore be placed on the European market. (UK Trading Standards Authorities enforce CE Marking.)



Prior to purchase, ensure that the 'Supplier' confirms that the equipment has a 'valid' CE Mark. A valid CE Mark shows that the equipment meets all applicable EU Directives and thereby enables the equipment to be placed on the European market. It does not necessarily mean, however, that it can be used in all European countries, e.g. the UK.

It is important to note that 'the concept of placing on the market refers to each individual product, not to a type of product, and whether it was manufactured as an individual unit or as part of a series. Consequently, individual units of the same model or type which were placed on the market before the new EU Directive requirements became applicable must still comply with these new requirements'.

Two EU Directives that are particularly important for radio equipment and accessories are the new Radio Equipment Directive (RE-D) (2014/53/EU) and the new ElectroMagnetic Compatibility (EMC) Directive (2014/30/EU).

The equipment must meet the 'Essential Requirements' of the RE-D for it to be compliant. Meeting the requirements of an ETSI Standard 'may' be used to indicate RE-D compliance, but compliance with the Essential Requirements using only this method should not be assumed.

A manufacturer can either self-declare RE-D compliance of its equipment or arrange for a Notified Body (aka Test House) to independently assess and certify it. The number of the certifying Notified Body should appear next to the CE Mark.

The RE-D requires the 'supplier', rather than just the manufacturer, to confirm that the equipment is RE-D compliant, and the CE Mark is valid. Purchasing equipment from a European-based supplier may be the preferred option.

RE-D compliant equipment must include a Certificate of Conformity. This certificate is typically a single loose page or included within the instruction manual.

It should also be noted that individual CE Marked equipment that has been assembled into a system, e.g. a shared site repeater station, should be re-assessed to ensure that system's operation continues to meet the Essential Requirements of the RE-D.

UK licensable spectrum and JRC Channel Use Authorisation

There is an increasing amount of equipment on the market that cannot be licensed within UK spectrum. This equipment is typically supplied from outside of Europe.

Another problem is that the equipment cannot be sufficiently adjusted to meet the terms & conditions of the Ofcom licence or JRC channel access authorisation, e.g. the transmit power cannot be reduced sufficiently (ref: IR2044, OfW446, and OfW49) and / or the transmit mask does not meet the UHF 12.5 kHz, 25 kHz, and wider channel widths requirements (ref: Ofcom IR2037 and ETSI EN 300 113 / EN 301 561).

Prior to purchase, ensure that the supplier confirms in which UK licensable spectrum the equipment may be operated. Also, ensure that the supplier confirms that the equipment's transmit mask envelope and final transmitter power will be able to meet the requirements of the eventual Ofcom licensed / JRC authorised system and, if required, that it will be suitable for shared site use.

JRC can offer advice on licensable spectrum, equipment functionality, and channel access.

It is important to note that not all radio systems can be used in every environment, even if CE marked. For example, where single-port (single antenna connector) equipment is used on sites shared with other radio systems, although the equipment may meet the 'Essential Requirements' of the RE-D, and perhaps an ETSI Standard, it may not meet the enhanced technical requirements for shared site use; requiring additional filters and circulators, that can ameliorate specific site interference problems.

To avoid potential interference problems, JRC therefore recommends the use of dual-port (separate Transmit and Receive antenna connectors) equipment on shared sites. This enables the inclusion of a duplexer and filters to reduce potential interference problems. It will also minimise the risk of not gaining access to a JRC radio channel. Please also be aware that not all radio equipment can be licensed for all purposes within the UK. This may be because there are restrictions of use within certain UK bands. An example of this is UHF headset equipment that may be licensed for Programme Making & Special Events (PMSE) use but not for general on-site communications.

UK licence exempt compliant equipment

Prior to purchase, if not UK licensable, ensure that the supplier confirms that the equipment may be operated on a licence exempt basis within the UK, and in which band(s) this applies.

The JRC will be happy to offer UK Licence Exempt equipment compliance advice.

Equipment labelled as 'Licence Exempt', or the American 'License Free', for use in one country doesn't necessarily mean that it is compliant for licence exempt use in all countries.

One example of this is European Licence Exempt PMR446 radio equipment whose analogue channels, within 446.0 to 446.1 MHz, may be used anywhere within Europe whereas the 'License Free' American FRS or Canadian GMRS radio equipment cannot be operated on a Licence Exempt basis anywhere within Europe.

Another example is the American Licence Free WiMAX equipment operating within 902 to 928 MHz. This equipment may not be used on a licence exempt basis within Europe.

Even where Ofcom issues a Non-Operational (NOP), aka Test & Development, licence, it is not an indication that a normal licence will be issued.

In reality, there is no 'Licence Free' spectrum within the UK. There is only spectrum in which equipment that complies with the relevant UK exemption requirements may be operated on a licence exempt basis.

Ofcom IR2030 and ETSI EN 300 220 gives advice on licence exempt equipment.

Test & development trial systems and demonstration equipment

Caution should be observed when considering demonstration and trial equipment. This is because non-RE-D compliant equipment may be operated within the UK when part of testing or validating pre-production units, and also when shown at trade fairs, exhibitions or demonstrations. The same equipment cannot, however, be used for an operational system.

It may be permitted that non-RE-D compliant equipment be used in the UK when part of a test / trial system. This is because 'placing on the market is considered not to take place where a product is transferred for testing or validating pre-production units considered still in the stage of manufacture'. (NB: 'The prototype must be safe and under complete control and supervision. Controlled conditions would mean expert operators, restrictions to public contact with the product, avoiding inappropriate interaction with other neighbouring products, etc'.) An example would be when the manufacturer of non-RE-D compliant equipment seeks to trial its equipment under UK working conditions, after which, if the trial is successful and the potential market proves viable, modifying the equipment to be compliant and subsequently placing it on the market. In such cases, the trial equipment would need to be removed and subsequently replaced with compliant equipment.

Likewise, 'placing on the market is considered not to take place where a product is displayed or operated under controlled conditions at trade fairs, exhibitions or demonstrations'. (NB: 'In such circumstances a sign must clearly indicate that the product in question may not be placed on the market or put into service until it has been made to comply'.)

In both cases, above, the equipment will need to have appropriate spectrum access authorisation by having either a licence or meeting UK licence exemption criteria.

JRC ADVICE

In addition to the advice above, to safeguard your position regarding potential compliance issues in the future, JRC Members could include an obligation on suppliers to declare compliance with EU Directives 2014/53/EU and 2014/30/EU, but the legal status of this process is unclear.

It is therefore recommended that any radio procurement intended for use in VHF or UHF spectrum in the UK mandates compliance with **ETSI EN 300 113 v2.2.1 (2016-12) in its entirety** for 12.5 kHz systems and / or **ETSI EN 302 561 v2.1.1 (2016-03) in its entirety** for 25 kHz and wider channel widths systems. Where equipment is currently not compliant with the relevant ETSI Standard, this should be explained by the supplier in any proposal. It may also be appropriate to require that any radio equipment is identified as either Licence-exempt compliant within the UK or can be licenced if required.

If non-compliant equipment is being considered for a trial or demonstration, the supplier should agree that, if the trial proves successful and suitable long-term spectrum access is available, the non-compliant equipment will be replaced with CE Mark / RE-D / EMC-D compliant equipment before the go-live date. (NB: spectrum made available for a short-term Test & Development / Non-Operational (NOP) licence may not be available in the long-term.)