



Equipment Buyers' Information Sheet

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Introduction

JRC is receiving an increasing number of enquiries regarding radio equipment that has been purchased and is subsequently found to be either un-licensable in 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 it:

- has a 'valid' CE Mark; and either
- can be operated within UK licensable spectrum:
 - and 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
- complies with UK licence exemption regulations.

Valid CE Mark

Most important: prior to purchase, ensure that the supplier confirms the equipment has a '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.)

Two Directives that are particularly important for radio equipment and accessories are the Radio equipment and Telecommunications Terminal Equipment (R&TTE) Directive, soon to become the Radio Equipment Directive (RED), and the Electro-Magnetic Compatibility (EMC) Directive.

Equipment must meet the Minimum Requirements of the R&TTE Directive for it to be compliant. Please note that meeting the requirements of an ETSI Standard 'may' be used to indicate R&TTED compliance, but compliance with the Minimum Requirements using only this method should not be assumed.

A manufacturer can either self-declare R&TTED 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. An exclamation mark '!' next to a CE Mark indicates that the equipment may not necessarily be usable in all European countries.

The introduction of the RED will require the importer, rather than the manufacturer, to confirm that a CE Mark, etc, is valid. From that date therefore, purchasing equipment from a European-based branch of a non-European supplier may be the preferred option.

R&TTED 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 CE Marked equipment that has been assembled into a system, e.g. a repeater station, should be reassessed to ensure that system's operation continues to meet the Minimum Requirements of the R&TTED. See 'single port' equipment, below.

UK licensable spectrum and JRC Channel Use Authorisation

There has been 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 required final equipment setup cannot 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 12.5 kHz channel requirements (ref: VNS 2111).

Most important: 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 UK licensable spectrum and equipment functionality.

Likewise, the JRC will be happy to offer JRC channel access authorisation advice.

Please note that there is an increasing amount of equipment on the market that cannot easily be used in all radio system environments. An example of this may be where single-port (single antenna connector) equipment is used on sites shared with other radio systems. In such cases, although the equipment may meet the Minimum Requirements of the R&TTED, and perhaps an ETSI Standard, suitable for isolated operation it may not meet the technical requirements for shared site use.

To avoid the potential for harmful interference being caused or suffered, to and / or from adjacent users, JRC therefore recommends the use of dual-port (separate Transmit and Receive antenna connectors) equipment on shared sites. This equipment enables the standard inclusion of a duplexer, and perhaps filters, which reduce interference problems. It will also minimise the risk of not gaining access to a JRC 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 used for general on-site communications.

Once again, if you or your supplier are not sure, JRC can offer advice.

UK licence exempt compliant equipment

Most important: prior to purchase, ensure that the supplier confirms that the equipment may be operated on a licence exempt basis within the UK.

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

It is very important to note that equipment that is labelled as Licence Exempt, or the American License (sic) 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 American License (sic) Free FRS or GPRS 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 920 MHz. This equipment may not be used on a licence exempt basis within the UK. A Non-Operational (NOP), aka Test & Development, licence may be obtainable, but Ofcom makes it clear that the issuing of a NOP licence is not an indication that a normal licence will ever be issued. More recently, for smart grid systems, Ofcom has directed applicants to the licence exempt 870 to 876 MHz band.

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