



TCB Workshop

Part 15 updates and New Interpretations

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RFID

- Implanted passive "sensor" (tag) used with external RF ID Readers are not covered by TCB exclusion for implant transmitters and are allowed for TCB approval.
 - TCBs must consult TCB exclusion list to determine if the external RF ID reader can be approved by the TCB.
- Implanted active (battery powered) tags cannot be approved by TCBs



RFID

- RFID Passive Tag Policy

A passive tag does not contain batteries and is not certified individually.

Only the tag reader needs to be tested. At this time, the current technology for passive tags is such that the emission levels from the passive tags are much lower than the allowed levels for the tag reader.

*Tags that translate the reader frequency (operates on a frequency different from the reader) must be tested with the reader.

The fundamental passive tag emissions may not operate within a restricted band, just as the tag reader is prohibited from operating in a restricted band. Implanted passive "sensor" (tag) used with external RF ID Readers are not covered by TCB exclusion for implant transmitters and are allowed for TCB approval.

- TCBs must consult TCB exclusion list to determine if the external RF ID reader can be approved by the TCB.



RF ID

● Battery assisted passive tags.

- Battery assisted passive tags (BAPT) can be treated as passive tags under the following conditions.
Certification not required for BAPT's.
 - 1) The device does not operate in a restricted band.
 - 2) The RF portion of the BAPT must be isolated from the battery.
 - 3) The field strength level of the BAPT is comparable to passive tags.



Section 15.201(a)

- Section 15.201(a) Lower power devices(40 dB below 15.209) are subject to verification
 - **These devices may not operate in a restricted band in 15.205.**
 - Per 15.205(c), there are some exceptions to operating under a restricted band but 15.201 is not an exception.
 - Section 15.205(c) also indicates that regardless of the field strength of the device, it cannot operate in the restricted bands.



AM transmitters operating under Section 15.219

- Section 15.219 restricts the length of the antenna, connecting cable and ground lead to 3 meters. Watch out for filings with elevated installation mounting that require running a ground connection down to a ground plane. It is the ground, which now is well over 3 m itself and becomes the major radiator. This is how Certified AM transmitters are being installed or modified to operate over long distances.



Miscellaneous Updates

- Devices subject only to verification or are exempt may not be Certified.
 - Section 15.101 and 15.103 indicates verification and exemption.
 - Some License transmitters are verified.
- Loop antennas are required for measurements below 30 MHz.
- Bluetooth and WLAN composite filings
 - When filing Bluetooth as a DTS, file a DTS test report.
- Cell phones with computer port connectors must also be authorized as a computer peripheral.
- PDCF (Pulse Desensitization Correction Factor)
 - For pulsed modulated device, (Non UWB devices), a 100% continuous burst signal requires PDCF. 100% transmission of CW signal does not require PDCF.
 - Radar fluid level sensor transmitters commonly use short pulse widths.



Miscellaneous Updates

- **Question:** For UNII devices approved before July 20, 2007, does the restriction on importation and marketing after that date include warranty parts and field replacement parts for users whose U-NII devices may become damaged or are no longer functional and they wish to replace the original device under warranty or secure a replacement?
- **Answer:** After the final transition date, all devices imported or marketed need to comply with the rules, even replacement devices. Repairing a device within the US which does not require a new filing is ok. If the repair requires a new filing or is brought outside of the US and imported back in after repair, it is considered imported and is not allowed.



Miscellaneous interpretations

● KDB # 252102

- Wireless Keyboards may not operate under 15.231

● KDB # 388407

- Operation in a plane is considered indoors
 - Not prohibited by Section 15.407 in the UNII rules.

● KDB # 685804

- Updating an FCC approved device to meet the European RoHs (No lead) directive.
 - Section 2.1043 rules apply



Miscellaneous interpretations

- KDB 189073

Q: Can I sell a transmitter without an antenna and only supply a list of approved antennas?

A: Section 15.204(b) states that an approved "transmission system" must always be marketed as a complete system including the antenna.

Therefore, you can't market a transmitter to end users with a list of approved antennas.

However for professionally installed transmitters, if the grantee ensures and controls the professional installation of the device, the professional installer could choose the proper antenna for the install. e.g. The grantee may have contracted installers who install their equipment and ensure the proper antenna is used.

The grantee would need to justify professional installation (marketing, installation, and use restrictions. Follow professional installation justification) and ensure that the installation is done by a professional installer that they have control of. The professional installer gets the proper instructions for output power/cable/antenna configurations that meet the rules. These instructions are not given to the end user and in no case can the end user still have controls to adjust power.

- Marketing with list of antennas ok for professionally installed devices.



Miscellaneous interpretations

- KDB 661845

Can you clarify the perimeter protection system exclusion in 15.245?

The perimeter protection system exclusion in 15.245 applies to specific devices that used buried cables surrounding the protected area.

This provision was not meant to exclude any radar-type device operating with a conventional antenna even if that product is used to protect someone's property perimeter.



Miscellaneous interpretations

- KDB 868660

Cordless phones in which the remote and base units operate under different frequency bands can be filed under one FCC identifier.



Miscellaneous interpretations

● KDB 662614

- A Part 15 repeater can only be authorized for use with specific or generic transmitters. The repeater must only transmit signals that are uniquely identified with signals that originate from the transmitter(s) with which it is authorized to operate.
- The Part 15 repeater must comply with all requirements under the rule part applied for and must comply regardless of the input signal. e.g. A FHSS repeater would have to have input bandwidths that match the FHSS transmit bandwidth and must hop in synch with the FHSS transmitter.
- A Standalone Part 15 amplifier not allowed.



The End

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