

# FCC Lab Offers Major New Guidance on Equipment Authorization and RF Exposure Evaluation Procedures and Announces Notice of Proposed Rulemaking on Circulation at the Commission

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On October 24, the FCC Laboratory published a number of new and updated documents through its Knowledge Database ("KDB") that liberalize further the equipment authorization process for a number of product types, including Software Defined Radios ("SDRs"). That same day, the Lab released numerous other KDB publications providing guidance regarding both its RF exposure test procedures applicable to cellphones, smartphones, laptops, tablets, and other categories of devices, and the Commission's "Permit But Ask" ("PBA") procedures, which enable telecommunications certification bodies ("TCBs") to test equipment for compliance with RF emissions limits even though the Commission has issued only partial guidance or where a certain amount of FCC oversight is still considered necessary. Together, these changes are designed to allow a broader range of consumer devices subject to equipment authorization requirements prior to their being offered for sale, imported, or otherwise marketed to reach the marketplace quickly by allowing importers, manufacturers, and service providers to get them certificated more rapidly than in the past through the TCB process.

This wave of KDB publications, which are effective immediately subject to certain conditions in some cases, comes only one week after the FCC announced that a draft Notice of Proposed Rulemaking ("NPRM") is [on circulation](#) among the Commissioners that would consider (a) codification of and refinements to the FCC's permit-but-ask ("PBA") procedure, (b) further articulating the post-grant obligations of TCBs, (c) requiring labs that manufacturers and importers use to test radiofrequency equipment to be accredited, and (d) officially recognizing the latest industry testing standards. The text of the NPRM is not yet available and it is uncertain when the Commission will adopt the NPRM, which it is expected to do.

We cannot fully describe and summarize here the new and updated KDB entries. They are highly technical and require a close examination typically in tandem with other KDB releases. Moreover, the publications represent revised versions of previous KDB documents in most cases and cover myriad issues not modified by the current KDB publications. KDB entries are often updated at irregular periods by the FCC Lab as it deems necessary. However, key highlights of the recent publications are

- Class II Permissive Changes: Through changes to its [Permissive Change Policy](#) and [SDR Application Guide](#), the FCC Lab provides that Class II permissive changes to non-SDR devices previously certificated no longer need be filed directly with the Commission. Instead, responsible parties (manufacturers and importers) may engage TCBs to handle such changes provided the TCBs use the PBA process as needed.
- Modified Operating Parameters of SDR and non-SDR Devices: The Commission reiterated that, except for devices approved as SDRs or in extremely limited circumstances otherwise (such as where equipment authorization grantees have received specific Commission approval), it is still not permissible for anyone except the grantee (such as end users, service providers, operating system providers, application developers, OEM integrators, professional installers or authorized service dealers) to modify the operating parameters of frequency range, modulation type, maximum output power or the circumstance under which device has been approved, and user accessible software must not allow any such operations. For non-SDR devices, the new KDB publications make clear that approval for such arrangements may be sought through TCBs subject to the PBA procedures.
- PBA List: The Lab made several changes to clarify those devices subject to the PBA process, which applies to equipment subject to Certification under Part 2 of the rules and for which the FCC has not yet established specific testing guidelines or where the Commission has determined a continuing need to provide case-by-case guidance. The Commission made the new PBA List effective immediately, *but only if the revised RF Exposure procedures published by the Lab on October 24 are followed*. Otherwise, the new PBA List may be used only as of January 1, 2013, when applicants and TCBs must use the new RF exposure procedures and comply with the new PBA List. Until then the old RF exposure procedures otherwise apply in conjunction with the pre-October 24 PBA List. In brief, through the [updated PBA List](#) (version 11), the Commission, among other things:

- o removed the exclusion in the List applying to cellular base stations

- o clarified that devices using IEEE 802.11ac standards have been removed from the List because the Commission has now provided specific guidance for these devices

- o removed from the List devices operating under the WCS and SDARS rules

- o removed from the List broadband devices operating under Part 27 (subpart N) and Part 90 (subpart AA) as part of the 700 MHz Public/Private Partnership

- o added to the List certain equipment subject to Part 90 (subpart Z) governing operation of wireless broadband services in the 3650-3700 MHz band

- o added devices to the List for which the applicants seek approval as SDRs under Section 2.944 of the FCC's Rules

- o added transmitters operating under the special provisions of spectral efficiency in sections 90.203(j)(4), (5), (7), and (8) of the FCC's Rules and where there are specific waivers

- o added unlicensed wideband vehicular radars operating under sections 15.252 and 15.253 in the 16.2-17.7 GHz, 23.12-29.0 GHz, 46.7-46.9 GHz and 76.0-77.0 GHz bands

- o clarified exceptions to the applicability of PBA procedures to RF exposure evaluations in situations when a power reduction feature is used to reduce transmit power

o clarified that the PBA procedures apply to RF exposure evaluation, with certain exceptions, when device tilt and other sensing features are used to reduce transmit power in addition to proximity sensing features

o clarified that a Specific Absorption Rate (“SAR”) test report must fully explain if a PBA process was not required for power reduction based on the application of published RF exposure KDB procedures

o clarified that, in the case of tablets and similar devices, where the antenna is near the corner of the device, TCB approval is possible only following a KDB inquiry to determine if additional SAR tests are required

o clarified that the PBA process may be used for wireless charging applications in instances where test and approval guidance is available through RF exposure KDB procedures in specific scenarios

Again, this brief listing is not exhaustive and full details and understanding of what the FCC lab did in any respect requires examination of the new KDB publications. Some of these additions reflect guidance the Lab had already provided in other KDB publications which had not previously resulted in updates to the PBA List. The new PBA List also clarified the text applicable to other devices on the List without substantive change.

- PBA Procedures: The [PBA procedures](#) published in December 2011, and corrected for a typo in January 2012, remain in effect without further change.
- TCB Exclusion List: The Commission removed from the list of [applications that TCBs cannot certify](#) certain Class II permissive changes for non-SDR devices (as noted above); removed portable devices subject to certification operating according to occupational exposure requirements except certain push-to-talk configurations; removed from the exclusion list certification of certain portable transmitters with “hotspot” capabilities; removed portable transmitters operating between 100 and 300 MHz where SAR evaluation is required; and clarified certain requirements for devices subject to RF exposure evaluations, namely portable transmitters with source-based time averaged output power.
- Cross References: The FCC Lab added a number of welcome cross-references in the PBA List and Permissive Change Policy document to other KDB publications for extra clarity of its intent and meaning.
- Published RF Exposure KDB Procedures: The Lab published a new document covering [SAR measurement procedures for 100 MHz to 6 GHz](#). The Commission also made major revisions both to its general RF exposure evaluation requirements and test guidance for [mobile and portable devices](#) that may be applicable to all the other RF exposure procedures in specific cases. Further, the FCC Lab adopted and or revised specific SAR considerations and procedures used to determine compliance with RF exposure limits for [consumer wireless handsets](#) such as cellphones, smart phones, and cordless phones; mobile and portable broadband devices; [long term evaluation \(“LTE”\) devices](#); and [laptops, notebooks, tablets, and netbook computers](#). The Lab provided that previous published RF exposure KDB procedures and specifically-applicable equipment authorization policies may be used through December 31, 2012, subject to other guidance attendant to those procedures, including inquiries required of the FCC through the PBA process. As of January 1, 2013, the new RF procedures and the associated PBA procedures, as applicable, will govern. Whichever published RF exposure KDB procedures are used between now and January 1, 2013, the Lab underscored that they must be used *in their entirety*.