

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
Amendment of Parts 0, 1, 2 and 15 of the Commission's Rules Regarding Authorization of Radiofrequency Equipment)	ET Docket No. 13-44 RM-11652
)	
Amendment of Part 68 Regarding Approval of Terminal Equipment by Telecommunication Certification Bodies)	

To: The Commission

**REPLY COMMENTS OF ARRL,
THE NATIONAL ASSOCIATION FOR AMATEUR RADIO**

ARRL, the national association for Amateur Radio, formally known as the American Radio Relay League, Incorporated (ARRL), by counsel and pursuant to Section 1.415 of the Commission's Rules (47 C.F.R. §1.415), hereby respectfully submits its reply comments relative to the *Notice of Proposed Rule Making*, FCC 13-19, 78 Fed. Reg. 25917, 28 FCC Rcd. 1606, released February 15, 2013 (the Notice).¹ For its reply to comments filed in response to the Notice, ARRL states as follows:

1. In this proceeding, the Commission proposes changes to its equipment authorization processes (Part 2 of the Commission's Rules) in several respects. It examines the role of Telecommunication Certification Bodies (TCBs) in certifying radio frequency (RF) equipment and post-market surveillance, and the Commission's proper role in assessing TCB performance.

¹See Amendment of Parts 0,1, 2, and 15 of the Commission's Rules regarding Authorization of Radiofrequency Equipment and Amendment of Part 68 regarding Approval of Terminal Equipment by Telecommunications Certification Bodies, ET Docket No. 13-44, RM-11652, *Notice of Proposed Rulemaking ("Notice")*. On July 15, 2013 the Chief, Office of Engineering and Technology released an Order (DA-13-1574) in this proceeding granting the motions the American National Standards Institute Accredited Standards Committee C63 to extend the reply comment date, and extended that date to and including July 31, 2013. Therefore, these reply comments are timely filed.

It also addresses the role of test laboratories in the RF equipment approval process, including accreditation of test labs and the Commission's recognition of laboratory accreditation bodies, and measurement procedures used to determine RF equipment compliance. Finally, the Notice proposes to recognize the National Institute for Standards and Technology (NIST) as the organization that designates TCBs in the United States and to modify the rules to reference the current International Organization for Standardization and International Electrotechnical Commission (ISO/IEC) guides used to accredit TCBs. ARRL's concern in this proceeding is principally with respect to the performance of TCBs and the necessary level of Commission oversight of TCB certification grants.

2. This is not a docket proceeding that *directly* affects the Amateur Service because, other than with respect to scanning receivers and linear amplifiers, Amateur Radio equipment is not typically subject to the certification process. However, the Amateur Service has some countervailing considerations in this proceeding. On the one hand, because Amateur Radio spectrum allocations are used by unlicensed RF devices in many cases, it is important that RF devices utilized in other services which share spectrum with the Amateur Service (or where another radio service operates in bands adjacent to Amateur allocations) are carefully evaluated by a competent reviewer at the equipment authorization stage. On the other hand, it is necessary to avoid situations in which small manufacturers of small quantities of Amateur Radio equipment are burdened by the very high cost of the Commission's equipment authorization process. For example, a small manufacturer of Amateur Radio equipment that incorporates scanning receivers must meet a relatively high cost burden. Those receivers have to be certified according to Section 15.121 of the Commission's rules. The process involves testing by a private

laboratory² and a TCB certification, which is expensive and which deters manufacturing of RF equipment in small quantities for, as an example, the Amateur Radio Service market. The Commission could consider exemption of certain types of equipment that can only be operated legally in the Amateur Radio Service, so as not to deter small manufacturers and to make sure that it is available to licensed radio amateurs at a reasonable cost.

3. In the Notice, the Commission proposes to no longer conduct evaluations for initially approving RF equipment requiring certification. Instead, TCBs would approve all such equipment in the first instance, including equipment on an “exclusion list” that presently, only the Commission may approve, such as ultra-wideband equipment. Equipment on the exclusion list includes, as but one example, transmitters in the Medical Device Radiocommunication Service (MedRadio) designed to operate in, among other bands, 426-432 MHz, 438-444 MHz, and 2390-2400 MHz bands (Part 95, Subpart I). All of those bands are Amateur Radio allocations. A change from Commission certification to TCB certification can, therefore, have a significant impact on the Amateur Service, depending on the quality of a given TCB’s review of a certification application for MedRadio transmitters. The Notice also proposes to clarify and modify the rules on TCB responsibilities. Specifically, it proposes to codify the “permit-but-ask” procedure that TCBs must use when certifying new technologies, for which testing protocols have not been established; to clarify the responsibility of TCBs to perform post-market surveillance of products they have approved; and to specify steps that can be taken if a TCB’s performance is found to be deficient. The Notice also proposes to require accreditation of all laboratories that test equipment subject to the Part 2 certification procedure, and to codify the

² Whether or not accredited, an application for certification prepared by a test laboratory is an expensive proposition and is an inhibiting factor to small entrepreneurs who intend to develop a commercial product for a very limited market or which might sell in very limited quantities. In this proceeding, the Commission proposes to require test laboratories to become accredited. However, the Commission recognizes that this proposal would result in some increased costs.

existing procedure through which the Commission can recognize new laboratory accreditation bodies. Finally, the Notice proposes to incorporate the latest versions of industry standards for measuring equipment into the rules and address how to update these standards more quickly in the future, and to modify the rules to reference the current ISO/IEC standards used to accredit TCBs that approve RF equipment under Part 2 of the Commission's rules.

4. ARRL appreciates the Commission's effort and intention in this proceeding: (1) to enable new and innovative products to be brought to market as quickly as possible; (2) to promote competition in the provision of RF equipment, and (3) at the same time protecting against interference among radio services and devices using the RF spectrum. ARRL's concern is principally with the third goal. In this respect ARRL is in agreement with the comments of the National Association of Broadcasters (NAB), which expressed concern about the current level of TCB performance in equipment authorization and advised against delegation of all equipment authorization functions to TCBs. NAB's comments, at page 2, stated that:

The equipment authorization program is essential to ensuring that new products operate properly and in accordance with applicable rules, and do not cause interference to other services. In this way, equipment authorization is an important part of the Commission's enforcement programs (footnote omitted). While NAB supports this review of the equipment authorization process, we remain concerned with the proposal to eliminate all equipment authorization by the Commission and rely entirely on independent third parties, Telecommunication Certification Bodies (TCBs), for this critical function. NAB believes that the Commission should retain an active equipment approval capability, at least for a limited subset of equipment approvals, such as the current "exclusion list" of RF devices. In addition, NAB urges, as part of this review, that the Commission consider changes and investigate ways to make the equipment oversight and approval process more transparent and open.

NAB urged that the Commission should retain the sole authority to certify equipment on the current exclusion list,³ because those devices have "a significant potential to cause interference

³ The current exclusion list of equipment for which TCBs may not issue certification grants includes Unlicensed National Information Infrastructure (UNII) devices with dynamic frequency selection (DFS) capability, including

to other licensed operations; new and novel devices for which the Commission does not have sufficient knowledge or experience or for which testing procedures are not well developed; and devices that raise higher than average RF safety concerns.” To the above, ARRL would suggest that the Commission’s experience with TCB certification to date does not support the proposed delegation of authority proposed in the Notice. In ARRL’s experience, the track record for TCB certification of RF devices in terms of errors and ill-advised grants of certification is less than exemplary in several instances. ARRL is aware of several instances in which the Commission’s laboratory staff has had to review and set aside TCB grants of RF equipment. The Notice, at paragraph 18, refers to the TCB program as being “well-established” and it notes that 98 percent of RF equipment certifications are now handled by TCBs. What the Notice does not include, however, is any reference to how many TCB grants have been reviewed by the Commission, and what percentage of those is set aside by the Commission or returned to the TCB for further review. Before any decisions are reached as to the advisability of delegating further authority to TCBs for certification, and in the process of determining what level of Commission oversight of TCB certification grants, the Commission should inform the public of the level of accuracy and reliability that it has found in reviewing TCB applications.

5. ARRL is also in agreement with NAB that the TCB certification process is not transparent at all - but it should be. The public is not informed about TCB equipment authorization grants until after the fact, at which time an equipment manufacturer may have

client devices operating in bands that have radar detection capability; Ultra-wideband (UWB) devices; Split modular transmitters; Certain implanted transmitters; 700 MHz band transmitters; Television Band Devices (TVBDs); MedRadio transmitters; Signal boosters; and transmitters subject to certain RF exposure conditions and configurations, such as portable transmitters which could exceed the specific absorption rate (SAR) exclusion threshold for RF exposure or when SAR data is not provided to support compliance. *See*, KDB Publication No. 628591, at <https://apps.fcc.gov/oetcf/kdb/forms/FTSSearchResultPage.cfm?switch=P&id=20247>.

already sold large numbers of a non-conforming product if a TCB made an error in the grant.⁴ The Commission has no practical ability to retrieve large numbers of units of non-conforming devices which may have been TCB certified in error, once they are sold at retail. Nor has the Commission's laboratory demonstrated the capacity to quickly review and evaluate complaints lodged about errors in TCB certification grants, even if an interested party was somehow able to discover the TCB's error on a timely basis.

6. As a recent case illustrating the point, a TCB issued a grant of equipment authorization in April of 2010 to ReconRobotics, Inc. for a licensed, non-broadcast video transmitter marketed pursuant to a waiver previously granted by the Wireless Telecommunications Bureau and the Public Safety and Homeland Security Bureau.⁵ ARRL discovered several errors in the equipment authorization application and in the TCB grant of certification for the device. This should have, but did not cause the application to be denied or returned by the TCB. By the time the errors in the TCB grant were discovered and complained of by ARRL, there were at least 85 applications pending for licenses, filed specifically to allow use of this device. The numerous, obvious errors in the TCB grant included the specification of the emission designator for the device.⁶ The TCB apparently missed the error when reviewing the application and the result was that the grant specified the incorrect emission designator. ARRL also noted some errors in the actual measurement of occupied bandwidth of this device set forth in the test report, which should have

⁴ The Notice states at footnote 57 of the Notice that all TCB actions are subject to Commission review, per 47 C.F.R. § 2.962(f)(6). The Office of Engineering and Technology (OET) has the ability to override TCB actions. For example, OET can set aside a TCB grant within 30 days and return an application to pending status and it can mark an application as granted or dismissed.

⁵ See, *ReconRobotics, Inc.*, Order, DA 10-291, WP Docket No. 08-63 (released February 23, 2010).

⁶ The TCB grant stated that the emission designator was 100KC3F. This would indicate that the necessary bandwidth of the device was 100 kHz, and that the emission was an analog, vestigial sideband AM signal. In fact, according to the applicant, the device used one of three prioritized, 6 MHz channels in the band 430-448 MHz for a video, NTSC (analog) transmitter. Commission database records for other granted authorizations for C3F emissions were inevitably on the order of 5.75 MHz for this type of device. The appropriate emission designator for this device was 5M75C3F or similar, and subsequent equipment authorization applications filed by the same applicant specified a 5.75 MHz occupied bandwidth.

been noticed when the application for certification was evaluated by the TCB, but were not. Additionally, the transmit power was incorrectly tested by the applicant's test laboratory, and incorrectly evaluated by the TCB. Finally, there was a substantial discrepancy between the channelization plan set forth in the waiver and the specification of the frequency range of the device in the TCB grant of certification.

7. ARRL argued in a letter to the Commission's Laboratory dated October 4, 2010 that the TCB's certification grant for that device was improperly made and should be set aside by the Commission, pending retesting of the device and resubmission of an equipment authorization application for the device. The Chief, Office of Engineering and Technology, by letter dated January 11, 2011 opened a "permit-but-disclose" proceeding with respect to the matter in order to investigate ARRL's equipment authorization complaint. Both ARRL and the certification grantee submitted information to OET pursuant to that letter. To ARRL's knowledge, this proceeding is still under review by the Office of Engineering and Technology, because no resolution of the complaint has ever been reported to ARRL. During the entire time, the products were (and now presumably still are) being marketed and licensed pursuant to that same defective TCB grant of certification.

8. The foregoing anecdotal example illustrates that the Commission has not, to date, created an environment that permits members of the public to quickly review and ascertain errors that TCBs might make in certifying RF products. Even if (somehow) a TCB certification grant error is detected and reported to the Commission, there is no process that leads to a rapid evaluation of a complaint and resolution of a TCB error prior to the time that potentially large numbers of a non-compliant product are deployed by licensees or authorized users (or worse, by non-technical consumers who will buy and use a non-compliant, unlicensed RF intentional

radiator). It is recommended, therefore, that the Commission improve the transparency of the process of TCB grants of certification. It should provide on the Commission's web site an accessible database of TCB grants, updated regularly and timely, and with enough information to make it possible for members of the public to evaluate the accuracy of the TCB grant. This would minimally include the frequency range(s), emission type(s), power levels, occupied bandwidth and the type of device, and a link to the test results, unless the device is subject to post-grant confidentiality.

9. ARRL supports the Commission's proposals for improving post-certification, post-marketing surveillance by TCBs. Now, the obligations on TCBs are minimal and they are not at all transparent. The testing of a sample device is a reasonable step in insuring that the devices actually marketed to the public are similar to those submitted for test purposes pre-certification grant. However, as a general matter, enforcement of the Commission's equipment authorization rules is the proper task of the Commission's staff, and any complaints should be resolved in the first instance by the Commission, not by a TCB. Interference from RF devices can be practically avoided only prior to the time that the devices are marketed in quantity and not otherwise. Any process of evaluating post-certification compliance is a task that should be completed relatively quickly following the certification grant.

10. Most importantly, the Commission should provide in this proceeding a disclosure of the overall level of accuracy that it has ascertained exists now in the TCB program. Based only on anecdotal experience, ARRL is concerned that the reliability of TCBs exhibited heretofore is not sufficiently high to justify the proposed extensive delegation of the evaluation of more complex types of equipment authorizations, where interference potential is significant or where RF exposure is an issue. It is understood that the Commission intends to make some changes in

TCB accreditation, and that as part of the revision of the equipment authorization process it intends to dedicate more of its laboratory staff's time to oversight of TCB actions and less to actual equipment testing. However, without some specific plan to establish a transparent, timely and effective enforcement procedure, the proposal to delegate to TCBs any additional authority to address more complex equipment authorization issues is premature.

Therefore, the foregoing considered, ARRL, the national association for Amateur Radio respectfully requests that the Commission revise its equipment authorization program in accordance with the recommendations contained in these reply comments, and not otherwise.

Respectfully submitted,

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