



**Federal Communications Commission
Office of Engineering and Technology
Laboratory Division**

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Equipment Compliance Review (ECR) Inquiries

1. Introduction

The Knowledge Data Base (KDB) Inquiry system includes the "Equipment Compliance Review" (hereafter referred to as ECR) as a possible selection among the "First Categories", that is to be used when published FCC guidance specifically requires that a KDB Inquiry is submitted by an applicant to equipment authorization (typically a manufacturer, or their designated agent).

The objective of the ECR Category is to identify that a KDB Inquiry is being submitted as requested by the FCC in published guidance. ECR inquiries shall limit their scope only to provide the information requested by the FCC. ECRs refer to specific technical information that is either unique or specific to a manufacturer's equipment that the FCC requires to be reviewed before allowing further processing of the device authorization. The ECR category shall not be selected for KDB Inquiries with general questions, requests for clarifications, etc.

The ECR KDB inquiry needs to receive positive feedback from the FCC before the applicant can proceed with the equipment authorization process: i.e., an FCC reply with explicit concurrence on what was presented is required.

The ECR category can apply to both equipment authorization through Certification procedures, and Suppliers' Declaration of Conformity (SDoC). For certification applications, FCC positive feedback must have been received before the grant can be issued through a TCB. Similarly, an SDoC authorization will not be valid until the ECR that was submitted has received a positive FCC reply.

ECR is a different inquiry type from New Application Guidance (NAG)¹ or a Pre-Approval Guidance (PAG)² inquiry. NAGs, on the other hand, are only initiated by the applicant and must refer to a specific PAG item(s). A PAG is only submitted by a TCB for certification application for objects defined in KDB Publication 388624-D02 attachment. Table 1 below summarizes the differences between ECR, NAG, and PAG.

¹ The NAG process is discussed in KDB Publication 388624-D01

² The PAG process is described in KDB Publication 388624-D01, D02, and D03

Table 1 – A summary of the different KDB Inquiry Types

<i>KDB Inquiry Type</i>	<i>Submitted by</i>	<i>Purpose</i>
General Inquiry	Anyone	To obtain clarifications on FCC Published Guidance
ECR	Applicants for Equipment Authorization	Only to provide the specific information requested by the FCC in published guidance
NAG	Applicants for Equipment Certification	To gather additional guidance on methodologies related to specific items in the PAG List
PAG/MPAG	TCBs	To address compliance and obtain approval for PAG Items

2. Equipment Compliance Review (ECR)

The mainstay of an ECR is in the "Second Category" level for a KDB Inquiry, which identifies the particular matter for which the FCC requests information, as specified in a KDB Publication.

The list of the choices available for the second category is provided in Section 3 of this document, along with cross-reference information to the KDB publication where the ECR is mentioned. Addition or removal of any of these categories will be reflected in a new version of this publication, and become effective upon the publication posting.

3. List of Second Categories for ECR KDB Inquiries

3.1. Persistent Inquiry Acceptance (PIA)

An ECR Inquiry with a PIA Second Category refers to a special process that reduces the testing complexity for specific equipment authorization requirements that are common to different RF devices (i.e., different FCC IDs). More specifically, the PIA refers to cases when the technology used for demonstrating a particular FCC compliance requirement is independent of the functionality and use case of the RF device (examples are provided further below in this section).

Thus, in these scenarios, requiring to repeat the demonstration of compliance for each certified device would represent an unnecessary certification burden for manufacturers, Test Laboratories, and TCBs. Instead, the PIA allows applicants to refer to a previously accepted inquiry where the technology was presented and vetted by the FCC for the first time.

The process requires an initial FCC review of the first ECR/PIA KDB Inquiry submitted by the applicant. If the PIA is accepted, the information in the PIA can be used for subsequent applications for different devices, i.e., the previously reviewed and accepted ECR/PIA can “persist” in demonstrating compliance for different devices that use the same method/technology as originally presented.

The Applicant for equipment authorization, or their authorized representative, shall provide the information for demonstrating equipment compliance to a specific test requirement for which the PIA is allowed, as discussed in a specific KDB Publication that refers to that PIA.

Currently, the following ECR/PIA Inquiry items are required as PDF file attachments, per guidance in KDB Publication 987594 D01 “U-NII 6GHz General Requirements”:

- Geolocation Justification, as described in KDB Pub. 987594-D01, Section 10.2.1

- Geolocation General Description, in KDB Pub. 987594-D01 and Section 10.2.2.
- Geolocation Accuracy After a Power Cycle, as described in KDB Pub. 987594-D01, Section 10.2.3 Geolocation Accuracy After a Power Cycle.

3.2. Wireless Power Transfer (WPT)

This ECR sub-category (second category) refers to the requirement in KDB Publication 680106 for wireless power transfer devices that requires submitting a KDB Inquiry for certain devices, before proceeding toward equipment authorization. It is important to underline that this requirement applies both to certified and SDoC devices.

Once the applicant has received an acceptance for the approach described in the ECR/WPT KDB Inquiry, the equipment authorization may proceed. If certification is involved, a copy of the ECR/WPT with the final FCC reply shall be provided to the TCB and filed as part of the exhibits (as necessary, the reply may be held confidential as an operational description exhibit).

3.3. Minimum RF Exposure Compliance Distance (RFXd)

This ECR sub-category refers to applications for equipment authorization where the use case of an RF device does not always ensure the *minimum test separation distance* that was considered for RF exposure compliance. This is the distance, measured between the RF emitting structure (antenna) and a person's body, that is used to test and demonstrate RF exposure compliance to the equipment authorization guidance, as stated in KDB Publication 447498 (that follows §1.1310). Accordingly, the ECR-RFXd may refer to RF devices intended/designed for either §2.1091-Mobile or §2.1093-Portable RF Exposure Configurations.

An ECR KDB Inquiry under the RFXd 2nd category is required when the RF device demonstrates compliance for a minimum distance d , but there is nothing to prevent that in some cases a person's body may be closer than d for more than a short transitory time interval, here considered as any not regularly recurring event with duration in the order of one second.

For instance, this may be the case when the RF Exposure compliance minimum distance cannot be ensured by design features or installation constraints, such as a container/structure to prevent close contact or a sufficient power reduction is enabled by a proximity sensor or a use case that inherently requires installation in an out-reach location.

In the RFXd inquiry, the applicant for equipment authorization, typically the manufacturer) shall describe the use-case conditions of the RF device, and any feature that is set in place to reduce the likelihood of non-compliance conditions. Based on the information provided, the FCC may provide an acceptance of the Applicant's statements with a special equipment authorization provision, require modifications (e.g., a smaller minimum distance for the user case to be considered realistic), or reject the proposal.

The mentioned special provision accounts for cases where a minimum distance d is required for the RF device compliance, but there exist some infrequent, albeit realistic scenarios where this minimum distance may be not ensured. For equipment authorization via Grant of Certification, this provision requires that both the grant comments and the user's manual/instructions (or a similar document provided by the manufacturer with each new device) shall include the following statement:

"The FCC certification of this device refers to RF exposure testing performed in typical operating conditions, where a person is no closer than d centimeters from the device surface at all times, except for

non-repetitive patterns with transient time intervals in the order of a second. Only in the stated conditions, the device is shown to fully comply with the FCC RF Exposure requirements of KDB 447498."

When equipment authorization is provided under the Supplier's Declaration of Conformity procedure, this statement is required in the user's manual or similar documentation. This information is not submitted to the Commission unless explicitly requested according to § 2.945, however, it shall be part of the responsible party's Retention of Records as required by 47 CFR 2.938(b) for SDoC. In any case, even for SDoC, the ECR-RFXd KDB Inquiry represents a document of record that improves the traceability of the RF exposure compliance process.

3.4. Data Referencing (D-R)

This ECR sub-category (second category) refers to the requirements of KDB Publication 484586 related to the Data Referencing process between related devices with different FCC IDs.

Per the guidance in the mentioned publication, an ECR KDB inquiry is required to obtain FCC acceptance for what devices are considered "variants" of another "reference" device, and for the "spot-check" test plan, that is implemented to ensure that the compliance data from the reference model are provide a sufficiently close representation of the test data from the variant devices.

The applicant needs to receive an acceptance for the approach described in the ECR/D-R KDB Inquiry, before proceeding with the equipment certification through a TCB. The certification application to the TCB shall include a copy of the ECR inquiry showing the acceptance of the proposed approach.

Change Notice:

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