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From: oetech@fccsun34w.fcc.gov  
To: hotline@AmericanTCB.com  
Subject: audit  
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To: William Graff  
From: Tim Harrington  
Tim.Harrington@fcc.gov  
FCC Equipment Authorization Branch

Re: FCC ID: ALH36023110

Applicant: Kenwood USA Corporation  
Correspondence Reference Number: 10487  
731 Confirmation Number: TC204171  
Date of Original Email: 12/12/2003

Subject: audit

1) 1.1310 states occupational limits are applicable:  
in situations in which persons are exposed as a consequence of their  
employment provided those persons are fully aware of the potential for  
exposure and can exercise control over their exposure.

2.1091 states:  
If appropriate, compliance with exposure guidelines for devices in this  
section can be accomplished by the use of warning labels and by providing  
users with information concerning minimum separation distances from  
transmitting structures and proper installation of antennas.

2.1093 states:  
Awareness of exposure can be accomplished by use of warning labels or  
by specific training or education through appropriate means, such as an  
RF safety program in a work environment.

2.1033 states:  
Applications for equipment other than that operating under parts 15 and  
18 of the rules shall be accompanied by a technical report containing  
the following information: A copy of the installation and operating  
instructions to be furnished the user.

Supplement C section 2 states:  
In situations where a transmitter is in close proximity to the operator  
but nearby persons are normally further away from the device,  
occupational/controlled exposure limits may be applied if the exposure  
is work-related. Under such conditions, the operator must be aware of  
the exposure conditions and can exercise control to limit the exposure  
duration and/or conditions to satisfy compliance. Nearby persons are  
usually exposed to a weaker field. Since they have no knowledge of their  
exposure conditions, the more restrictive general population/uncontrolled  
exposure limits must be applied.

90.205(q) should be accounted for in MPE evaluations, i.e., compliance distances should be determined according to allowed 20% over nominal power, unless radio is documented to not support such levels. Nominal power is listed on Form731.

See also May03 TCB training notes on mobile device approvals slides 27-28, etc.

Applicant may want to consider mobile and portable PTT user training and labeling guidelines in TIA/EIA TSB-133.

Response: See Response to Item 2

2) Grant refers to RF exposure label on device as pointer to user training info - no label on file, please submit label and position info. Per Suppl C sect. 2 RF exposure label should be prominent.

Response: Label has been uploaded

3) Grant note refers to 26W EIRP with 0dBd antenna - may be error. 26W conducted with 0dBi antenna gives 26W EIRP. 0dBd = 2.15dBi, so 26W conducted with 0dBd gives 26W ERP, or 42.7W EIRP. Please revise grant note according to this and above issues.

Response: See revised Grant.

4) MPE exhibit and install/use instructions should reflect compliance distance for unaware bystanders, i.e., f/1500 not f/300 limit. Unless production and tune-up are such that 26W will never be exceeded in practice, +20% power level of 90.205 should be used in MPE evaluation.

Response: Please see revised RF exposure statement and users manual. Please note that Kenwood has voluntarily selected a minimum safe distance larger than that of the MPE calculation.

Note that the Kenwood transceiver design uses a power leveling circuit, which they call an APC (Auto Power Control). The radios are NOT to exceed the TX RF Po design rating, to insure operational longevity of the output device and associated components, and warranty to the end user. Kenwood does not condone unauthorized modifications to certified radio equipment, or taking transmitter power out of specified design limits. Additionally, the Kenwood specification for this radio is 25 1W. The radio, as supplied, was tuned to the maximum of this specification (26W). Test results therefore represent the worst-case radio that would ever be supplied. The radio will never support levels higher than 26W. The MPE exhibit shows calculations based on this level.

5) Please revise grant note to include following or similar text: "All qualified end users of this device must receive training to have the knowledge to control their exposure conditions and/or duration to comply with Occupational /Controlled exposure limit and also have control of the exposure conditions of bystanders for complying with General Population/Uncontrolled exposure limit."

Response: Please see revised Grant.

6) Bystander MPE distance needs to be considered for back seat passengers, in which case center trunk mount instructions may need revision - please comment and/or revise.

Response: Please refer to the revised manual uploaded with this response.

7) Please consider to include following text or similar in user instructions: transmit only when people outside the vehicle are at least the recommended minimum lateral distance away the antenna/vehicle  
[Response: Please refer to the revised manual uploaded with this response.](#)

The items indicated above must be submitted before processing can Continue on the above referenced application. Failure to provide the requested information within 30 days of the original e-mail date may result in application dismissal pursuant to Section 2.917(c).

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