

**Mike Meaker**

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**From:** oetech@fccsun27w.fcc.gov  
**Sent:** November 30, 2012 11:06 AM  
**To:** Mike Meaker  
**Subject:** Response to Inquiry to FCC (Tracking Number 433058)



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**Office of Engineering and Technology****Inquiry on 10/26/2012 :****Inquiry:**

We are requesting guidance for SAR evaluation of a portable VHF transmitter. It has a frequency range of 155-174MHz and transmits audio using FM modulation. There are no modes, just ON and OFF. It has a maximum rated output power of 500mW. The device is intended as a police product, so occupational limits would apply. It is normally in a cloth pocket that rests against the users upper body. The antenna runs down the side of the body.

Is SAR required for TCB certification?

If so, can you confirm that the device should be tested with bottom side and the entire length of the antenna touching the phantom?

I have photo's of the device, however I am unsure how to attach them to this inquiry.

Thank you.

**---Reply from Customer on 11/13/2012---**

I have an update to some technical specifications on this device. The frequency range is in fact 150-174 MHz and the maximum conducted output power is 760mW. All other specifications remain unchanged.

I would appreciate your quick response on this as our client is waiting on this decision.

Thank you.

**FCC response on 11/15/2012**

We apologize for the delay in responding. Is there an operational description document available for this device? How does the device operate in a communications environment?

For occupational limits, the following is from page 5 of the recently revised and published KDB 447498 DO1v5:

Occupational exposure limits only apply to work-related use conditions. Users must be fully aware of and be able to exercise control over their exposure to qualify for the higher occupational exposure limits. Occupational exposure limits do not apply to consumer devices and radio services supporting public networks and Part 15 unlicensed operations.

14/12/2012

Mandatory RF exposure training is required for workers to qualify for occupational exposure limits. When it can be demonstrated that users are required to adhere to the training instructions and are able to mitigate compliance concerns by applying the instructions, detailed training instructions incorporated in manuals, in conjunction with conspicuous permanent labeling on the device, may be considered as acceptable training to qualify workers to operate a device according to occupational exposure limits. The training information must be included in the equipment authorization application.

**---Reply from Customer on 11/15/2012---**

Thank you for your response. I will attach the manual that I have received from the client. Additionally I will ask them if they have any further documentation as to its operation that I could send as well.

The device is intended for occupational use only and I will inform the client of your response pertaining to KDB 447498 D01v05. The device itself is intended to be worn against the body under a shirt-as shown in the previously attached photos. When switched on the device will continuously transmit audio on the selected channel via FM modulation. There is also a VOX mode, which will only transmit when there is sufficient sound being picked up by the mic.

**---Reply from Customer on 11/15/2012---**

Thank you for your response. I will attach a manual that was provided by the client. Additionally, I will ask if they have a document that better describes its operation.

The device is intended for occupational use only. I will inform the client of your response according to KDB 447498. In a communications environment the device is worn as shown in the previously attached photos. When turned on it will transmit audio continuously. There is also an selectable VOX mode that will transmit only when a sufficient sound level is picked up by the mic.

**---Reply from Customer on 11/15/2012---**

Sorry for the previous double reply. I had a web browser error.

I have received an updated manual. See attached ATX502 MANUAL (5)11-8-2012.pdf

Thank you.

**---Reply from Customer on 11/27/2012---**

Hello, I do not have any additional documentation describing the device operation other than what I have already attached. At this time are you able to advise me on my two questions:

Is SAR required for TCB certification?

If so, can you confirm the required test position?

My thought would that the device should be tested with bottom side and the entire length of the antenna touching the phantom.

Please advise if additional information is required.

Thank you.

**FCC response on 11/30/2012**

SAR testing will be required for TCB certification. We agree that the entire length of the antenna should be tested while touching the phantom (0 mm gap). The entire length of the antenna should also be tested at a distance of 2 mm to 5 mm from the phantom (your discretion between 2-5 mm). The orientation of the transmitter case does not matter for the 0 mm and 2-5 mm SAR tests. Please utilize the recently published KDB 865664 v01 (SAR Measurement Requirements for 100 MHz to 6 GHz) for measurement procedures and requirements. This document is attached to the bottom of this response as a PDF file.

**Attachment Details:**

[KDB 865664 v01](#)

Do not reply to this message. Please select the [Reply to an Inquiry Response](#) link from the OET Inquiry System to add any additional information pertaining to this inquiry.