



ABG Tag and Traq, Inc.  
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**October 2, 2020**

Office of Engineering and Technology  
Federal Communications Commission  
Re: FCC ID: 2AAAXVLRTNTMOD1  
Applicant: ABG Tag and Traq, Inc

Dear Office of Engineering and Technology:

This letter is meant to address any potential concerns regarding requirement 15.519 and provide documentation on how this requirement is fulfilled.

According to “15.519, Technical Requirements for UWB Handheld systems”: (a) UWB devices operating under the provisions of this section must be handheld, *i.e.*, they are relatively small devices that are primarily handheld while being operated and do not employ a fixed infrastructure.

(1) A UWB device operating under the provisions of this section shall transmit only when it is sending information to an associated receiver. The UWB intentional radiator shall cease transmission within 10 seconds unless it receives an acknowledgement from the associated receiver that its transmission is being received. An acknowledgment of reception must continue to be received by the UWB intentional radiator at least every 10 seconds or the UWB device must cease transmitting.

This module is primarily hand-held and may operate indoors or outdoors; its operation is limited under the provisions of section **15.519**. The UWB transmitter operates as part of a system in which it sends short duration UWB packets to one or more receivers. The transmitter’s cycle of operation is as follows:

- 1) the transmitter’s microcontroller begins in a non-transmitting sleep state
- 2) the transmitter transitions to an active state, in which it sends a short UWB packet of fixed duration of 715 microseconds
- 3) the transmitter microcontroller ceases the transmission and returns to a sleep state.

An oscilloscope screen capture of the 715 microsecond packet is shown in the figure below.



Figure 1. Ultra-wideband Packet

Per the 15.519(a)(1) requirement, the UWB transmitter is allowed to operate up to 10 seconds after which it must cease its transmission if it has not received an acknowledgement from the associated receiver. As demonstrated, the UWB transmitter will automatically cease its transmission after only 715 microseconds, meeting the requirement in much less than the allowed 10 seconds.

The user's manual has been updated to be consistent with this document. The updated manual states that the module is a Single Limited Modular Transmitter and addresses the appropriate requirements.

Sincerely,

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