

TECHNICAL EXHIBIT
APPLICATION FOR LICENSE

FM Translator Station W275AJ
0.250 kW ERP / 102.9 MHz
Muncie, Indiana

WOOF BOOM RADIO MUNCIE LICENSE, LLC

October 2021

APPLICATION FOR LICENSE

The following engineering has been prepared for **Woof Boom Radio Muncie License LLC** (“Woof Boom”), licensee of FM translator station W275AJ at Muncie, Indiana, and is in support of their application for license to cover authorized modifications to that facility. This application is being filed to cover the construction permit assigned FCC File No. BPFT-20181210AAZ. The Facility ID for W275AJ at Muncie, Indiana is 156385.

The referenced construction permit authorizes continued operation on FM Channel 275, 102.9 MHz, with an effective radiated power of 250 Watts at a center of radiation of 535 meters above mean sea level, 232 meters above ground, utilizing a Propagation Systems, Inc. (“PSI”) model PSIFML-1-DA antenna. The facility is constructed in accordance with the parameters specified in the construction permit and its related application.

The construction permit, as issued by the Commission, lists two special conditions or restrictions.

The first condition pertains to RF radiation safety at the site. In compliance with this condition, Woof Boom certifies that it will coordinate with all other users of the site to ensure that workers and other personnel are not exposed to levels of radiofrequency radiation in excess of the applicable safety standards.

The second condition pertains to this application for license and program test authority. As stated in this condition, this application must be on file prior to the commencement of program

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tests. Upon submission of this license application, Woof Boom will commence operation under program test authority.

The specified transmitter power output achieves the authorized effective radiated power. The antenna utilized by the facility is a PSIFML-1-DA as previously stated. The manufacturer has specified 0.6 as the power gain of this antenna. The input power to the antenna that is required to achieve the authorized effective radiated power is 416.7 Watts.

Preceding the antenna is the run of transmission line. This run consists of 841 feet of Andrew/Commscope AVA5-50, which is a semi-flexible foam dielectric coaxial cable with a nominal diameter of 7/8 inches. Data from the manufacturer indicates that the insertion loss of this run of line, including the connector loss, is 3.06 dB. This corresponds to an efficiency of 49.43 percent. The input power to the transmission line to achieve the authorized effective radiated power is 842.9 Watts.

Between the antenna and the run of transmission line is a 7/8" transmission line elbow. This elbow has an insertion loss of 0.01 dB, which corresponds to an efficiency of 99.77 percent. The input to the elbow to achieve the authorized effective radiated power is 844.9 Watts, which rounds to 845 Watts. The input to the elbow is the output of the transmitter, thus the specified transmitter power output achieves the authorized effective radiated power.

The antenna utilized by the facility is a directional antenna. This antenna has been installed in accordance with the instructions of the manufacturer.

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The preceding statement has been prepared by me, or under my direction, and is true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature
License Expires November 30, 2021

Jeremy D. Ruck, PE
October 15, 2021

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