

Arkenets
Application for Experimental License

Narrative Statement

(1) Name, address, phone number (also e-mail address and facsimile number, if available) of the applicant.

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(2) Description of why an STA is needed.

Arkenets is developing an innovative solution, using commercial off-the-shelf components, to produce a low-power radar system for detecting and identifying unmanned aerial vehicles (UAVs), including drones. Arkenets' radars would be deployed around sensitive commercial sites, including stadiums, petroleum production facilities, corporate and college campuses, and airfields.

The radar uses separate antennas for transmit and receive. Arkenets would deploy up to 12 radar units at each specific site in order to undertake its testing.

Grant of experimental authority will allow Arkenets to test and demonstrate its technology.

(3) Description of the operation to be conducted and its purpose.

Please see the response to Question 2.

(4) Time and dates of proposed operation.

Arkenets requests an experimental license for a period of 2 years commencing July 1, 2019 and ending July 1, 2021.

(5) Class(es) of station (fixed, mobile, fixed and mobile) and call sign of station (if applicable).

Radiolocation service. The transmitting stations will operate at fixed locations only.

(6) Description of the location(s) and, if applicable, geographical coordinates of the proposed operation.

Please see the on-line application.

(7) Transmit equipment to be used, including name of manufacturer, model and number of units.

Manufacturer and model number: Arkenets UAV Detection Radar 1
Number of units: 132 (11 sites x 12 units per site)

(8) Frequencies desired.

Transmit: 9500 – 9800 MHz (9.5 – 9.8 GHz)
Receive: 9500 – 9800 MHz (9.5 – 9.8 GHz)

(9) Maximum output power and maximum effective radiated power (ERP) or equivalent isotropically radiated power (EIRP).

Peak input (transmitter) power will be 1 watt and the ERP will be 59 watts.

(10) Emission designator (see §2.201 of this chapter) or describe emission (bandwidth, modulation, etc.)

150MF0N

(11) Overall height of antenna structure above the ground (if greater than 6 meters above the ground or an existing structure, see part 17 of this Chapter concerning notification to the FAA).

The overall height of the antenna above ground level (or roof top level) will not exceed 6 meters.

(12) Additional Technical Information

Directional antenna: No
Width of beam in degrees at half-power point: N/A
Orientation of horizontal plane: N/A
Orientation of vertical plane: N/A
Frequency tolerance: 0.001%.

Stop buzzer POC

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