

**1. Introduction**

By the instant application (“Application”), ADC Automotive Distance Control Systems GmbH (“ADC”) requests that the Commission grant a two year conventional experimental license to permit ADC to operate the facilities specified in the instant application. This application for experimental license covers the radar sensor ARS5-A, which is expected to be certified in near future. Test driving will cover target locations around the United States.

**2. Purpose of Request**

The ARS5-A is a 76-77 GHz radar sensor with digital beam-forming scanning antenna which offers different scans. This test project covers the development of ADC’s 76-77 GHz automotive radar sensor ARS5-A for current applications like Adaptive Cruise Control, Forward Collision Warning and Emergency Brake Assist applications. Radar sensors are an integral part of advanced driver assistance systems. Several investigations by car manufacturers and insurance companies show the life-saving potential of this technology. The objective of the experiment is to run vehicle system tests on the public roads and proving ground to validate and improve the new hardware, software detection algorithms and overall performance. The road tests primarily focus on validation and tuning of detection algorithm, which does not impact radar emission.

The radar sensor is mounted on the front side or back side of the car, either behind the bumper or behind the supplier’s emblem in the front grille. The sensor uses a pulse compression radar modulation scheme as a basic principle for its measurements. The sensor has a field of view of  $\pm 60^\circ$  in azimuth and a maximum detection range of about 300 m.

**3. Waiver of Station ID Requirements of Section 5.115(a)**

A waiver of the Station ID requirements of 47 CFR §5.115(a) is respectfully requested.

**4. Mitigation of Interference**

Based on the anticipated technical implementation of the radar sensor ARS5-A the sensor should show the same or similar characteristic as other in market sensor using the same technology and frequency range. The sensor will be operated within vehicle installations or within R&D environment or dedicated locations.

**5. Stop buzzer**

ADC is well aware of its obligation under Commission rules to immediately terminate operation in the event of interference to any other licensed emitter. ADC is a long-standing Commission licensee and the company will take any and all actions to ensure that it complies with its obligations as a licensee of experimental facilities. The Stop Buzzers in the event of interference are:

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