

I. Introduction

By the instant application (“Application”), ADC Automotive Distance Control Systems GmbH (“ADC”) requests that the Commission grant an experimental license to permit ADC to operate the facilities specified in the instant application.

The application for experimental license covers the radar sensors SSR6-A, SSR6-B and LSR6-A which are expected to be certified in the near future. Test driving will cover target locations around the united states.

II. Scope and Objective

This application seeks experimental authority to assist in the development of ADC’s automotive radar sensor listed as follows:

76-77 GHz

SSR6-A: 76-77 GHz for vehicle applications like BSD (Blind Spot Detection), LCA (Lane Change Assist), RCTA (Rear Cross Traffic Alert) and other short-range driving functions by radar scan data output to the vehicle control unit via communication interface.

LSR6-A: 76-77 GHz for vehicle comfort/safety applications like Adaptive Cruise Control, Emergency Brake Assist, Occupant Safety Support, Collision Mitigation (Forward and Rear Collision Warning), Distance Warning/Monitoring etc. by radar scan data output to the vehicle control unit via communication interface.

76-81 GHz

SSR6-B: 76-81 GHz for vehicle applications like BSD (Blind Spot Detection), LCA (Lane Change Assist), RCTA (Rear Cross Traffic Alert), Parking and Park assist functions and other short-range driving functions by radar scan data output to the vehicle control unit via communication interface.

The radar sensor is mounted on the front side or back side corners or side of the car behind the bumper or vehicle fascia. The preceding generations of radar sensors, which are running in production vehicles on the market, operate in the 76-77 GHz frequency band, according to FCC Part 95M.

ADC’s objective 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. 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 radar electromagnetic characteristics of SSR6-A, SSR6-B and LS6-A are investigated beforehand in ADC’s laboratory and compliance to FCC Part 95 is assumed. The road tests primarily focus on validation and tuning of detection algorithm, which does not impact radar emission.

All models of radar sensor are with digital beam-forming scanning antenna which offers different scans. It uses a pulse compression radar modulation scheme as basic principle for its measurements.

The SSR6-A and SSR6-B sensors have a field of view of $\pm 60^\circ$ in azimuth and a maximum detection range of about 200 m. The LSR6-A sensor has a field of view of $\pm 75^\circ$ in azimuth and a maximum detection range of about 300 m.

III. 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.

IV. Mitigation of Interference/Stop Buzzer

Based on given technical implementation of the radar sensors 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.

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 Buzzer – in the event of interference is:

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