

ADC Automotive Distance Control Systems GmbH, Peter-Dornier-Straße 10, 88131 Lindau, Germany

rmakgotlho@icasa.org.za

Independent Communications Authority of South Africa

Private Bag X10, Highveld Park 0169 Centurion, Pretoria
South Africa

Thomas Reitmayer
Phone: +49 731 55035-3332
Email: Thomas.Reitmayer
@continental-corporation.com

Date: 26.08.2021

Response to “NOTICE REGARDING THE DRAFT NATIONAL RADIO FREQUENCY PLAN 2021 FOR PUBLIC CONSULTATION”

Public Consultation “Draft National Radio Frequency Plan 2021”

Issued: 9 July 2021

Closing Date: 27th August 2021

Dear Mr Manyapelo Richard Makgotlho,

We want to thank you for the opportunity and consideration by INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA (ICASA) to provide feedback to the “**Draft National Radio Frequency Plan 2021**”.

We as *ADC Automotive Distance Control Systems GmbH* located in Germany, a subsidiary of *Continental Automotive*, are working in the field of advanced driver assistance systems and automotive crash avoidance technologies. Therefore, we have reviewed the proposed regulation change with focus on automotive radars and would like to provide following comments.

Frequency plan and regulations to be adapted to enable upcoming vehicle radar applications.

Continental / ADC GmbH would like to comment and contribute to the frequency plan to enable implementation of upcoming vehicle radar technologies.

Short Range device product category: Radar devices

Currently radar sensors integrated to vehicles are fulfilling different applications and functions listed as follows:

Comfort/safety applications in passenger cars and trucks like Adaptive Cruise Control, Emergency Brake Assist, Occupant Safety Support, Collision Mitigation (Forward Collision Warning), Distance Warning/Monitoring, BSD (Blind Spot Detection), LCA (Lane Change Assist), RCTA (Rear Cross Traffic Alert) and other short range driving functions etc.

Frequency bands already allocated to automotive radars and certification approval process established in South Africa:

Reference: STAATSKOERANT, 30 MAART 2015, No. 38641 page 77

76-77G	RTTT radar	55 dBm peak No duty cycle restriction No channel spacing	EN 300 091 EN 301 489-1,3 EN 60950	CEPT/ERC/REC 70-03
--------	------------	--	--	--------------------

Frequency bands targeting upcoming automotive radar applications, no certification approval process established in South Africa yet:

The 77 – 81 GHz band is baseline for implementation of new vehicle radar application based on additional spectrum bandwidth due to higher number of sensors per vehicle and higher performance required to target a radar 360 degree view.

The 57 – 64 GHz band is considered to become applicable for in-cabin sensing to also cover the NCAP requirements for child left behind which is part of the EURO NCAP 2025: [euroncap-roadmap-2025-v4.pdf](https://cdn.euroncap.com/media/30700/euroncap-roadmap-2025-v4.pdf) (<https://cdn.euroncap.com/media/30700/euroncap-roadmap-2025-v4.pdf>)

Page 11 of the report refers to child presence detection,

Child Presence Detection (2022)

Leaving an unattended child in a parked car, even for a few minutes, can cause heat-stroke and death. Child deaths from vehicle-related heat-stroke happen less frequently than those resulting from crashes, but the nature of these entirely avoidable deaths deserves special attention.

A child's inability to exit the vehicle on his/her, own combined with a low tolerance for high temperatures, requires that children never be left unattended in a car. Technological solutions are available that can monitor a child's presence in the vehicle and alert the car owner or emergency services should the situation become dangerous. Euro NCAP will reward manufacturers that offer such solutions as standard

The vehicle industry is heading for a technical solution of child presence detection to cover it with radar technology using the 57-64 GHz frequency band, based on the nonspecific short range device category.

The two frequency bands are already harmonized in Europe and other countries around the world. EU regulations and standards are listed in the following table:

57-64 GHz	None specific short range devices	100 mW e.i.r.p. and a maximum transmit power of 10 dBm	EN 305 550	CEPT/ERC/REC 70-03 (Annex 1: Non-specific short range devices, band: n1)
77-81 GHz	RTTT radar	55 dBm peak No duty cycle restriction No channel spacing	EN 302 264	CEPT/ERC/REC (04)03

Based on A.D.C. GmbH information the listed frequency bands and applications are not yet covered by the South Africa device approval scheme, but partly covered in the frequency plan:

A.D.C request:

Therefore A.D.C GmbH would kindly like to submit this request to the administration to consider the two bands in the ongoing frequency planning, to also enable operation of new vehicle technical applications based on "Radio Location Service. This will also be an alignment with international frequency standards and regulations.

Request 1: The frequency plan should be adjusted accordingly to allow the operation of radar based on "Radio Location" service in the **57-64GHz** and in the **77 – 81 GHz** band.

Request 2: Regulation scheme to be updated to enable device certification base on given EN standards (table above).

We kindly ask you to consider our request in the frequency plan and related certification rules.

Sincerely,

Name: Thomas Reitmayer
Position: Technical Expert