

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of
Securaplane Technologies, Inc.
Request for Waiver of Section 15.205(a) of the
Rules for Non-Spurious Emissions in a Restricted
Band
ET Docket No. 25-260

ORDER

Adopted: May 11, 2026

Released: May 11, 2026

By the Chief, Office of Engineering and Technology:

I. INTRODUCTION

1. By this Order we grant the request of Securaplane Technologies, Inc. (Securaplane) for a waiver of Section 15.205(a) of the Commission's rules to allow Securaplane's Range-Controlled Radar (RCR), a motion-sensing component of its aircraft security system, to operate with non-spurious emissions in the 5.35-5.46 GHz restricted band.

II. BACKGROUND

2. Securaplane, a division of Parker Hannifin Corporation, manufactures and sells security systems for business and government aircraft. The RCR is part of a security system installed in aircraft wheel wells as an intrusion detection sensor that is designed to detect movement near the aircraft's landing gear while the aircraft is parked and vacated.

3. The RCR employs micro-power impulse radar technology operating at a center frequency of 5.8 GHz. A pulsed microwave oscillator transmits a pair of 10 ns half-sine envelope pulses separated by a configurable delay of 4-16 ns, repeated at a pulse repetition frequency of 400 kHz.

1 Petition for Certification of Waiver of Part 15 for Range Controlled Radar, ET Docket No. 25-260 (filed July 11, 2025) https://www.fcc.gov/ecfs/document/107111701805379/1 (Securaplane Waiver Request).

2 Securaplane is part of the Fire, Safety, and Power division of Parker Meggitt, which is a division of Parker Aerospace, which is a division of Parker Hannifin Corporation. Id. at 1.

3 Id. at 2, 8.

4 Id. at 4.

5 Addendum 1 to Petition for Waiver, Parker Meggitt, Securaplane Technologies, Inc., ET Docket 25-260, at 1 (filed March 12, 2026) (Securaplane Addendum)

pulse serves as a local oscillator reference in a homodyne detector that shares the transmit antenna.<sup>6</sup> The configurable delay determines the detection range, which is adjustable from two to eight feet. The total pulse duration is 20 ns (two 10 ns pulses separated by 4-16 ns) and the pulse repetition interval is 2.5 μs, resulting in a duty cycle of 0.8%.<sup>7</sup> The security system powering the RCR is armed only when the aircraft is parked and is disabled during all stages of flight.<sup>8</sup>

4. The RCR was originally certified for sale and operation more than 25 years ago under FCC ID CGGAA2.<sup>9</sup> However, the original manufacturer (United Technologies Corporation Fire & Security) ceased production, and Securaplane subsequently acquired the intellectual property. Securaplane states that because components within the original bill of materials became obsolete, it developed a replacement configuration that required minor component substitutions and manufacturing updates.<sup>10</sup> The resulting design change expanded the 20 dB bandwidth from approximately 250 MHz to 724.8 MHz, causing non-spurious emissions to fall within the 5.35-5.46 GHz restricted band.<sup>11</sup> The device continues to comply with the power limits under 47 C.F.R. § 15.209.<sup>12</sup>

5. On July 11, 2025, Securaplane filed a request for a waiver of Section 15.205(a) of the Commission's rules.<sup>13</sup> The Commission did not receive any responses to the Office of Engineering and Technology's (OET) request for comment on the Securaplane waiver request.<sup>14</sup>

### III. DISCUSSION

6. We are authorized to grant a waiver under Section 1.3 of the Commission's rules if the petitioner demonstrates good cause for such action.<sup>15</sup> Good cause, in turn, may be found and a waiver granted “where particular facts would make strict compliance inconsistent with the public interest.”<sup>16</sup> To make this public interest determination, the waiver cannot undermine the purposes of the rule, and there must be a stronger public interest benefit in granting the waiver than in applying the rule.<sup>17</sup>

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<sup>6</sup> U.S. Patent No. 6,239,736 B1, Abstract (issued May 29, 2001).

<sup>7</sup> Securaplane Addendum at 1.

<sup>8</sup> Securaplane Waiver Request at 7.

<sup>9</sup> Intertek Testing Services, Application for Certification, Sentrol Incorporated, Motion Detector, Report # J98018757, ET Docket 25-260, at 1 (July 10, 1998, filed July 11, 2025) (Intertek Test Report).

<sup>10</sup> Securaplane Waiver Request at 2.

<sup>11</sup> Element, Meggit Power and Sensing, RCR-01 version 2, Report-MEPO0005.0 Rev.0, ET Docket No. 25-260, at 15 (March 7, 2025, filed July 11, 2025 in ET Docket 25-260) (Element Test Report).

<sup>12</sup> *Id.* at 21.

<sup>13</sup> Securaplane Waiver Request.

<sup>14</sup> *Office of Engineering and Technology Seeks Comment On Securaplane's Request For Waiver Of Section 15.205 Of The Commission's Rules Restricting Emissions Within The 5.35-5.46 GHz Band*, ET Docket No. 25-260, Public Notice, DA 25-760 (OET Aug. 27, 2025).

<sup>15</sup> 47 CFR § 1.3. *See also* *ICO Global Communications (Holdings) Limited v. FCC*, 428 F.3d 264 (D.C. Cir. 2005); *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164 (D.C. Cir. 1990); *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

<sup>16</sup> *Northeast Cellular*, 897 F.2d at 1166; *see also* *ICO Global Communications*, 428 F.3d at 269 (quoting *Northeast Cellular*); *WAIT Radio*, 418 F.2d at 1157-59.

<sup>17</sup> *See, e.g.,* *WAIT Radio*, 418 F.2d at 1157 (stating that even though the overall objectives of a general rule have been adjudged to be in the public interest, it is possible that application of the rule to a specific case may not serve the public interest if an applicant's proposal does not undermine the public interest policy served by the rule); *Northeast Cellular*, 897 F.2d at 1166 (stating that in granting a waiver, an agency must explain why deviation from the general rule better serves the public interest than would strict adherence to the rule).

7. Our technical rules are designed to ensure that Part 15 devices do not cause harmful interference to authorized users in the band. The rule in question, Section 15.205, restricts Part 15 operations in certain bands that are used by sensitive and critical-use services for which the Commission has decided that additional limitations are warranted. The 5.35-5.46 GHz band is allocated for aeronautical radionavigation, Earth exploration-satellite, radiolocation, and space research services.<sup>18</sup>

8. As discussed below, we find that granting Securaplane's request for waiver meets the waiver standard because the RCR's design and deployment present no significant risk of causing harmful interference to the relevant Section 15.205 restricted band operations, and because there are clear public interest benefits in preserving the availability of a critical aircraft security sensor that protects high-value aircraft.

9. As an initial matter, the RCR behaves as a short-range intentional radiator with extremely low radiated power. Securaplane's test report shows that the out-of-band emissions within the restricted band are highest at approximately 5.46 GHz, with an average field strength of no more than 40 dB $\mu$ V/m.<sup>19</sup> The device emissions in the 5.35-5.46 GHz band are more than 14 dB below the general radiated emission limits set forth in Section 15.209 of the Commission's rules.<sup>20</sup> Therefore, the RCR's emissions in the restricted band are well below the maximum power levels deemed acceptable for intentional radiators under Part 15, thereby ensuring that the potential for harmful interference is not increased. Additionally, the RCR operates with an extremely low duty cycle of 0.8%, transmitting only 20 nanoseconds within every 2.5 microsecond interval.<sup>21</sup> This further minimizes the likelihood of the RCR's signal causing harmful interference to authorized services.

10. In addition, the operational environment of the RCR provides significant mitigation measures. The RCR is solely installed within aircraft wheel wells and operates only when the aircraft is parked on the ground.<sup>22</sup> The system is automatically deactivated during all phases of flight.<sup>23</sup> This operational context provides further assurance that there is no significant risk of harmful interference occurring from operation of the RCR. Based on all the reasons stated above, we find that Securaplane has adequately demonstrated that its system will not undermine the purpose of our rules by causing harmful interference within the 5.35-5.46 GHz restricted band.

11. We also find that there is a stronger public interest benefit in granting the waiver than in applying the rule in this situation. Securaplane describes how the RCR is the only sensor for these aircraft capable of detecting intrusions in landing gear wheel wells, and that no direct alternative exists to perform this task.<sup>24</sup> The RCR is intended to detect potential intruders to the aircraft as well as anyone in its immediate proximity which helps prevent tampering, theft, hijacking, or terrorism.<sup>25</sup> For these

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<sup>18</sup> 47 CFR § 2.106.

<sup>19</sup> Element Test Report at 20.

<sup>20</sup> 47 CFR § 15.209(a) (establishing a general radiated emission limit of 500  $\mu$ V/m at 3 meters for intentional radiators above 960 MHz, equivalent to 54 dB $\mu$ V/m). The RCR's measured average field strength in the restricted band is no more than 40 dB $\mu$ V/m. In other words, this is 14 dB below the allowed spurious limit in the 5.35-5.46 GHz band.

<sup>21</sup> Securaplane Addendum at 1.

<sup>22</sup> Securaplane Waiver Request at 1.

<sup>23</sup> *Id.*

<sup>24</sup> Securaplane Addendum at 2. Securaplane also discusses how a redesign of the sensor would necessitate updates to aircraft assembly and wiring documentation across three major aircraft manufacturers as well as FAA review and reissuance of type certificates, which would take "years" to complete and during which time no interim replacement would be available for providing this type of aircraft security. Securaplane Waiver Request at 9.

<sup>25</sup> Securaplane Addendum at 2.

reasons, we find that permitting continued deployment of this device serves the public interest in promoting aviation safety.

12. Recognizing the critical importance of the bands identified in Section 15.205(a), we emphasize that this waiver permits Securaplane to operate within the 5.35-5.46 GHz band only under the extremely low power levels and other technical limitations attendant to Part 15 operations, including the general requirements for radiated emission limits in Section 15.209 of the rules. In other words, we are not waiving any other aspect of our rules. Accordingly, we grant this waiver subject to the following conditions:

- 1) The Securaplane RCR system shall be certified by an authorized Telecommunications Certification Body, and a copy of this order must be submitted with the application for certification;
- 2) This waiver allows Securaplane's RCR to be used solely as a motion sensor installed in aircraft wheel wells. It may only radiate when the aircraft is parked and the system is armed, and must be automatically deactivated during all phases of flight, as described in the Securaplane waiver request;
- 3) Section 15.205(a) of the rules, 47 CFR § 15.205, is waived only with respect to the 5.35-5.46 GHz band;
- 4) Securaplane's RCR emissions in the 5.35-5.46 GHz band must be at least 14 dB below the limits set forth in Section 15.209 of the rules, 47 CFR § 15.209, and must comply with all other technical requirements for unlicensed intentional radiators as set forth in Part 15 of the rules, 47 CFR Part 15;
- 5) Securaplane's RCR emissions are limited to two half-sine envelope 10 nanosecond pulses separated by 4-16 nanoseconds, repeated at a pulse repetition frequency of 400 kHz;
- 6) This waiver is granted to Securaplane Technologies, Inc. and may not be assigned or transferred without prior Commission approval.

#### **IV. ORDERING CLAUSES**

13. Accordingly, pursuant to authority delegated in Sections 0.31 and 0.241 of the Commission's rules, 47 CFR §§ 0.31, 0.241, and Section 1.3 of the Commission's rules, 47 CFR § 1.3, IT IS ORDERED that the Request for Waiver filed by Securaplane on July 11, 2025 IS GRANTED consistent with the terms of this Order. This action is taken pursuant to Sections 4(i), 302, 303(e), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154(i), 302, 303(e), and 303(r). This action is effective upon release of this Order.

14. IT IS FURTHER ORDERED that, if no applications for review are timely filed, this proceeding SHALL BE TERMINATED, and the docket CLOSED.

FEDERAL COMMUNICATIONS COMMISSION

Andrew Hendrickson  
Chief, Office of Engineering and Technology