



**Federal Communications Commission**  
Washington, D.C. 20554

March 24, 2014

DA 14-402

## **Small Entity Compliance Guide**

### **Report and Order** **Amendment of the Commission's Rules Governing Certain Aviation Ground Station Equipment**

FCC 13-30  
WT Docket No. 10-61

**This Guide is prepared in accordance with the requirements of Section 212 of the Small Business Regulatory Enforcement Fairness Act of 1996. It is intended to help small entities—small businesses, small organizations (non-profits), and small governmental jurisdictions—comply with the new rules adopted in the above-referenced FCC rulemaking docket(s). This Guide is not intended to replace the rules and, therefore, final authority rests solely with the rules. Although we have attempted to cover all parts of the rules that might be especially important to small entities, the coverage may not be exhaustive. This Guide may, perhaps, not apply in a particular situation based upon the circumstances, and the FCC retains the discretion to adopt approaches on a case-by-case basis that may differ from this Guide, where appropriate. Any decisions regarding a particular small entity will be based on the statute and regulations.**

**In any civil or administrative action against a small entity for a violation of rules, the content of the Small Entity Compliance Guide may be considered as evidence of the reasonableness or appropriateness of proposed fines, penalties or damages. Interested parties are free to file comments regarding this Guide and the appropriateness of its application to a particular situation; the FCC will consider whether the recommendations or interpretations in the Guide are appropriate in that situation. The FCC may decide to revise this Guide without public notice to reflect changes in the FCC's approach to implementing a rule, or to clarify or update the text of the Guide. Direct your comments and recommendations, or calls for further assistance, to the FCC's Consumer Center:**

**1-888-CALL-FCC (1-888-225-5322)**  
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## **I. OBJECTIVES OF THE PROCEEDING**

In the *Report and Order* in WT Docket No. 10-61, the Commission took action to authorize new ground station technologies that will promote aviation safety. The rules adopted in this *Report and Order* are intended to ensure that the Commission's Part 87 rules governing the Aviation Radio Service remain up to date and continue to further the Commission's goals of accommodating new technologies, facilitate aeronautical spectrum efficiency and use effectiveness, avoid unnecessary regulation, and, above all, enhance flight safety.

The Commission amended Part 87 of the Commission's Rules to allow the use of frequency 1090 MHz by aeronautical utility mobile stations for airport surface detection equipment, commonly referred to as vehicle "squitters,"<sup>1</sup> to help reduce collisions between aircraft and airport ground vehicles. In addition, the Commission established service rules for audio visual warning systems to help aircraft in flight avoid antenna structures and other obstacles and adopted rules to permit ground testing of aviation data link systems.

The benefits of the rule changes adopted in this *Report and Order* outweigh any potential costs. The rules will promote aviation safety by allowing the use of frequency 1090 MHz by aeronautical utility mobile stations for airport surface detection equipment. The rules will also help aircraft in flight avoid antenna structures and other obstacles. In addition, the rules will benefit the public by ensuring the reliability of aviation data link test systems and thereby enhancing aviation safety. These rules do not impose new obligations on any licensee or prospective licensee. Rather, they give licensees new options to enhance the safety and reliability of their aviation-related operations. In light of the substantial public safety benefits associated with these rules and the costs and burdens they impose, such as the costs that may be incurred in coordinating with the Federal Aviation Administration (FAA) or the aeronautical enroute licensee, the Commission determined that the benefits outweighed the potential costs.

## **II. REGULATIONS AND POLICIES THAT THE COMMISSION ADOPTED OR MODIFIED, INCLUDING COMPLIANCE REQUIREMENTS**

In the *Report and Order* the Commission took the following actions:

- Amended Part 87 of the Commission's Rules to allow the use of frequency 1090 MHz by aeronautical utility mobile stations for airport surface detection equipment, commonly referred to as vehicle "squitters";
- Established service rules for audio visual warning systems to help aircraft in flight avoid antenna structures and other obstacles;
- Adopted rules to permit aviation data link system ground testing.

### **A. Vehicle Squitters**

The Commission concluded that permitting the use of frequency 1090 MHz by vehicle squitters to facilitate tracking of ground vehicle movements on the airport surface will further the public interest. Rules adopted will enhance the safety of airline passengers and airport workers, and reduce the costs associated with runway incursions (including direct costs due to collision damage and indirect costs such

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<sup>1</sup> "Squitter" refers to random output pulses from a transponder caused by ambient noise or by an intentional random triggering system, but not by the interrogation pulses.

as delay, plane changes, and fuel inefficiencies), without causing harmful interference to other uses of the frequency.

The Commission will coordinate FCC-filed applications with the FAA through the National Telecommunications and Information Administration's Interdepartment Radio Advisory Committee (IRAC). Before filing, however, prospective applicants themselves will be required to pre-coordinate with the relevant FAA Regional Office. (FAA Regional Offices are listed at [http://www.faa.gov/about/office\\_org/headquarters\\_offices/arc/ro\\_center/](http://www.faa.gov/about/office_org/headquarters_offices/arc/ro_center/).) Pre-coordination will expedite the licensing process. Vehicle squitters will be licensed as aeronautical mobility stations (station class of MOU), which by the Commission's rules are limited to operation in the airport movement area.

### **B. Audio Visual Warning Systems (AVWS)**

An AVWS is an integrated air hazard notification system that activates obstruction lighting and transmits audible warnings to aircraft on a potential collision course with an obstacle such as a power line, wind turbine, or tower. The Commission concluded that allowing the owners of antenna structure and other aviation obstacles to use AVWS stations to help aircraft avoid potential collisions will benefit the public by enhancing aviation safety, without causing harmful interference to other communications. Other potential benefits of AVWS include lower energy consumption, reduced light pollution, and increased migratory bird population protection.

An AVWS includes a radar unit and a radio capable of transmitting in the VHF aeronautical band (118-136 MHz). When the radar unit detects an aircraft in a pre-defined warning zone, the AVWS activates an obstruction lighting visual warning. If the aircraft continues into a second warning zone, the VHF radio transmits an audible warning. The radar unit and the VHF transmitter will be licensed under a single Part 87 authorization, as a form of radio determination station. The 1300-1350 MHz radar band will be available for AVWS use. With respect to the VHF transmitter, the Commission will permit AVWS operation only on aeronautical advisory (unicom) frequencies, multicom frequencies, aviation support frequencies 123.300 MHz and 123.500 MHz, and air-to-air frequencies 122.75 MHz and 123.025 MHz. The Commission will coordinate FCC-filed applications with the FAA through the IRAC.

The Commission concluded that requiring automatic monitoring of the lighting of AVWS-equipped structures could impose unnecessary costs with no commensurate benefit. AVWS equipment monitoring requires monitoring obstacle light activation components: the radar and the radar-to-lights communication link as well as the monitoring of the lighting system itself. However, an owner that believes that it can visually monitor an AVWS-equipped antenna structure's lighting without automatic monitoring (such as by flying an aircraft into the warning zone every day) may do so to comply with Section 17.47. However, regardless of how an antenna structure owner carries out its inspections, the owner is responsible if the lights fail to function.

### **C. Aircraft Data Link Test Equipment**

Aviation data link systems transmit data automatically between ground personnel and aircraft, but the Commission's rules did not authorize the use of equipment to test aircraft data link systems. In the *Report and Order*, the Commission concluded that licensing the ground testing of aviation data link test (DLT) systems will benefit the public by ensuring the reliability of these test systems, and will enhance aviation safety. Because aviation data link systems operate on aeronautical enroute frequencies, applicants must obtain consent to operate from Aviation Spectrum Resources, Inc. (ASRI), which is the exclusive aeronautical enroute service licensee, prior to filing an application with the Commission. The Commission concluded that DLT station applications will not be coordinated with the FAA.

### III. RECORDKEEPING AND OTHER COMPLIANCE REQUIREMENTS

Some of the rules adopted in the *Report and Order* may affect small businesses that manufacture aviation radio equipment, if they choose to manufacture any of the new ground station technologies authorized by the rule changes in the *Report and Order*. Also, the rule changes adopted in the *Report and Order* will require manufacturers to meet certain criteria, and for potential licensees to operate the equipment as prescribed in the Rules, including prior coordination with the FAA and ASRI. The other final rules will have no significant effect on the compliance burdens of regulatees. The *Report and Order* requires DLT system applicants to coordinate with the aeronautical enroute licensee for the frequencies on which the DLT applicant proposes to operate. This requirement affects small and large companies equally. The compliance requirement is no greater than the requirement to coordinate with the FAA applications to operate analogous radio navigation land test system equipment.

The Commission believes that the *Report and Order* does not impose any significant additional reporting, recordkeeping, or other compliance requirements on small entities. The rules adopted in the *Report and Order* authorize new ground station technologies that will promote the overriding issue of aviation safety.

For details of other compliance requirements refer to the *Report and Order*.

### IV. WEBLINK

The *Report and Order*, FCC 13-30, was adopted February 28, 2013 and released March 1, 2013. Final rules adopted in the *Report and Order* are effective on November 4, 2013.

[http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-13-30A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-13-30A1.doc)  
[http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-13-30A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-13-30A1.pdf)  
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