Federal Aviation Administration – Regulations and Policies
Aviation Rulemaking Advisory Committee

Air Traffic Issue Area
General Aviation Mode S Working Group
Task 1 – Mode S

Task Assignment

Aviation Rulemaking Advisory Committee; Air Traffic Subcommittee; General Aviation Mode S Working Group

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of establishment of General Aviation Mode S Working Group.

SUMMARY: Notice is given of the establishment of a General Aviation Mode S Working Group by the Air Traffic Subcommittee of the Aviation Rulemaking Advisory Committee. This notice informs the public of the activities of the Air Traffic Subcommittee of the Aviation Rulemaking Advisory Committee.

FOR FURTHER INFORMATION CONTACT: Mr. Aaron Boxer, Executive Director, Air Traffic Subcommittee, Air Traffic Rules and Procedures Service (ATP-230), 800 Independence Avenue, SW., Washington, DC 20591, Telephone: 202-267-8783; FAX: 202-267-5809.

SUPPLEMENTARY INFORMATION: The Federal Aviation Administration (FAA) established an Aviation Rulemaking Advisory Committee (56 FR 2190, January 22, 1991) which held its first meeting on May 23, 1991 (56 FR 20492, May 3, 1991). The Air Traffic Subcommittee was established at that meeting to provide advice and recommendations to the Director, Air Traffic Rules and Procedures Services, on air traffic operations rulemaking actions. At its first meeting on May 24, 1991 (56 FR 20492, May 3 1991), the subcommittee established the General Aviation Mode S Working Group.

Specifically, the working group's task is the following:

Validate the requirement for Mode S to be installed on general aviation aircraft, including the expected benefits to be derived from installation. Who should be required to have Mode S transponders? Is Mode S on general aviation aircraft necessary for the air traffic system to realize significant safety benefits? Can the system do without a Mode S requirement on general aviation aircraft? Should Mode S requirements exist for flight into high-density areas? By December 31, 1991, provide to the FAA a completed document.

The General Aviation Mode S Working Group will be comprised of experts from those organizations having an interest in the task assigned to it. A working group member need not necessarily be a representative of one of the organizations of the parent Air Traffic Subcommittee or of the full Aviation Rulemaking Advisory Committee. An individual who has expertise in the subject matter and wishes to become a member of the working group should write the person listed under the caption **FOR FURTHER INFORMATION CONTACT** expressing that desire and describing his or her interest in the task and the expertise he or she would bring to the working group. The request will be reviewed with the subcommittee chair and working group leader and the individual advised whether or not the request can be accommodated.

The Secretary of Transportation has determined that the formation and use of the Aviation Rulemaking Advisory Committee and its subcommittees are necessary in the public interest in connection with the performance of duties imposed on the FAA by law. Meetings of the full committee and any subcommittees will be open to the public except as authorized by section 10(d) of the Federal Advisory Committee Act. Meetings of the General Aviation Mode S Working Group will not be open to the public, except to the extent that individuals with an interest and expertise are selected to participate. No public announcement of working group meetings will be made.

Issued in Washington, DC, on August 13, 1991.

Aaron Boxer,

Executive Director, Air Traffic Subcommittee, Aviation Rulemaking Advisory Committee.

[FR Doc. 91-19728 Filed 8-16-91; 8:45 am]

BILLING CODE 4910-13-M

Recommendation Letter

Air Traffic Control Association, Inc.

Suite 711
2300 Clarendon Boulevard
Arlington, Virginia 22201

Telephone: (703) 522-5717
FAX: (703) 527-7251

June 24, 1996

Chris A. Christie
Executive Director
Aviation Rulemaking Advisory Committee
Federal Aviation Administration
800 Independence Avenue, SW
Washington, DC 20591

Dear Mr. Christie,

In light of the recent Notice of Proposed Rule Making to in effect change the Mode S requirements and make it applicable only to certain Part 121/135 operators, the Air Traffic Issues Group recommends the Mode S tasking assigned to it be withdrawn. To continue to study the benefits or lack there of with respect to the Mode S ground station/transponder and its safety and cost benefit in a mixed air carrier/general aviation environment does not make the best uses of the limited resources available to ARAC.

Sincerely,

James L. Crook
Chairman,
Air Traffic Issues Group

SEP 19 1996

Mr. James L. Crook
Vice President Operations
Air Traffic Control Association
2300 Clarendon Blvd.
Arlington, VA 22201

Dear Mr. Crook:

Thank you for your June 24 letter recommending that the Mode S Task assigned to the Aviation Rulemaking Advisory Committee (ARAC) be withdrawn. In light of the recent Notice of Proposed Rulekmaking to change the Mode S requirements and your recommendation, the task is withdrawn.

I would like to thank the aviation community for its commitment to ARAC, and in particular, the dedicated efforts of the General Aviation Mode S Working Group in completing the work thus far accomplished on this task.

Sincerely,

Original Signed By
Margaret Gilligan

Barry L. Valentine
Acting Associate Administrator for
Regulation and Certification

NOV 29 1991

Mr. Edward M. Scott
Chair, Air Traffic Subcommittee
National Association of State
Aviation Officials
Silver Spring, MD 20910

Dear Mr. Scott:

This is an interim response to the three recommendations relating to Mode S equipage requirements that were submitted to the Federal Aviation Administration (FAA) by the Air Traffic Subcommittee on October 24, 1991. Currently, all three recommendations are being evaluated by the agency. We expect to complete our evaluation and provide you with a decision by December 24 on whether the agency can accommodate each recommendation.

In the meantime, I would like to thank your subcommittee, and particularly the General Aviation Mode S Working Group, for responding promptly to the task that the FAA assigned at the subcommittee's initial meeting on May 24.

Sincerely,

Original signed by:
Anthony J. Broderick

Anthony J. Broderick
Associate Administrator
for Regulation and Certification

DEC 30 1991

Mr. Edward M. Scott
Chair, Air Traffic Subcommittee
National Association of State
Aviation Officials
Silver Spring, MD 20910

Dear Mr. Scott:

In my letter dated November 29, I indicated that the Federal Aviation Administration (FAA) would provide a final response to your recommendations by December 24, 1991. Unfortunately, the wheels of government have not moved as swiftly as I had hoped.

This letter is to inform you that the FAA will provide a final response to the recommendations received from the Air Traffic Subcommittee regarding Mode S requirements for General Aviation operations by January 30, 1992.

Thank you for your patience.

Sincerely,

Original Signed By:
Anthony J. Broderick

Anthony J. Broderick
Associate Administrator
for Regulation and Certification

MAR 05 1992

3-2-92

Mr. Edward M. Scott
Chairman, Air Traffic Subcommittee
National Association of State
Aviation Officials
Silver Spring, MD 20910

Dear Mr. Scott:

The Federal Aviation Administration (FAA) has reviewed the recommendations submitted by the Air Traffic Subcommittee regarding Mode S equipage requirements for aircraft operating under Part 91 of the Federal Aviation Regulations. We apologize for the delay in responding to you.

Your subcommittee's recommendations have prompted the FAA to review its position on Mode S requirements. Based on the present unavailability of Mode S ground sensors and the lack of a conclusive need for Mode S equipage i general aviation aircraft, it may be inappropriate to maintain a requirement for Mode S transponder equipage for use in all airspace. In addition, while we do not disagree with the subcommittee's recommendation Nos. 1 and 2, the requirement to install Mode S transponders in general aviation aircraft operating under Part 91 may not accurately reflect present and future transponder requirements. As such, the FAA is considering several options, including the suspension of the current regulation on Mode S equipage requirements. Consequently, we cannot, at this time, give you a final response to recommendation Nos. 1 and 2. We will however, keep you informed of our progress and will provide a response to these recommendations as soon as a final decision is reached.

We agree with the subcommittee's recommendation No. 3 and believe it is the vehicle to determine the specific benefits to be derived by the Mode S system if mandatory Mode S transponder equipage is not required throughout the National Airspace System. A real time study, examining radar target and altitude integrity of the Mode S system in a mixed environment, consisting of both Mode A and Mode S transponders, should provide the answers necessary to make a prudent decision on this issue.

We will advise you through the Designated Federal Official of the Air Traffic Subcommittee when the study is started. In addition, we will send you a progress report 6 months after the study's start and, upon completion, will advise you of the study's final findings.

Sincerely,

Original Signed By:
Anthony J. Broderick

Anthony J. Broderick
Associate Administrator
for Regulation and Certification

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★U.S.GPO:1989-0-236-244

MODE S EQUIPAGE REQUIREMENTS RECOMMENDATION

AIR TRAFFIC SUBCOMMITTEE
Aviation Rulemaking Advisory Committee

The Air Traffic Subcommittee (ATS), an entity of the Aviation Rulemaking Advisory Committee, has been asked to provide recommendations to the Federal Aviation Administration (FAA) regarding Mode S transponder equipage requirements for general aviation aircraft operating under Part 91 of the Federal Aviation Regulations (FAR). In connection with this task, the ATS convened a working group to receive and consider the latest information available on the subject. Target display problems associated with air traffic density such as lost radar targets, incorrect position and altitude reports, and other potentially serious effects resulting from deficiencies in the current radar system were addressed.

Aviation organizations represented on the working group are as follows: Aircraft Owners and Pilots Association, Airline Pilots Association, Air Traffic Control Association, Experimental Aircraft Association, General Aviation Manufacturing Association, General Aviation Pilots Association, Helicopter Association International, National Aeronautics Association, National Air Transport Association, National Association of State Aviation Officials and the Department of Defense.

Recommendations contained herein are based on facts received from aviation industry representatives and FAA officials.

BACKGROUND:

In 1969, the FAA determined that the radar beacon system in use at the time had flaws which technology could correct. Of concern was the problem of synchronous garble. Synchronous garble is caused when two aircraft simultaneously pass within the interrogation beam transmitted by a radar site. This phenomenon causes a loss of one or more targets on the controller's radar scope, or an incorrect altitude or position report (sometimes five or more miles from the actual position of the aircraft). Without accurate position and altitude data on aircraft, the controller's ability to efficiently manage aircraft under his control is diminished. Early on, the FAA discovered that improved ground based radar surveillance systems could provide vastly improved accuracy and integrity of position data relayed to air traffic control scopes. Based on the need for improved surveillance and beginning as a stand alone project (later made part of the National Airspace System (NAS) modernization plan), the Mode S system was developed to be the next generation of enhancement in radar surveillance of aircraft.

At the same time, it was determined that if the Mode S system was implemented in its entirety (namely, a homogenous environment with both Mode S ground sensor stations as well as airborne Mode S transponder equipment), tracking problems associated with increased aircraft density would be eliminated due to the selective interrogation

feature of the system. However, because of cost of equipage and then recent transition to the Air Traffic Control Radar Beacon System (ATCRBS), a high priority for the Mode S system was compatibility with airborne ATCRBS transponders.

In keeping with its NAS Plan and desired system end state, FAA promulgated the Mode S rule in 1987. Various amendments have been issued to the rule applicable to general aviation operations (Part 91). Currently the Mode S rule requires any new transponder installation after July 1, 1992, be a Mode S transponder. Non-electrical aircraft, balloons and gliders are exempt from this requirement.

DISCUSSION:

The ATS recognizes that the Mode S system is an integral part of the modernization of the NAS. However, two significant problems exist with respect to the current Mode S equipage requirement as it applies to general aviation aircraft.

First, Mode S ground sensor stations have experienced implementation delays. The original schedule for installation and certification of the first 137 ground sensors (which cover the largest terminal areas in the country) called for completion by January 1992. This date has now slipped to August 1995. These stations are the bulwark of the Mode S system. Without the ground sensors, a Mode S transponder operates as nothing more than a solid state ATCRBS transponder.

Second, the existing Mode S rule effectively exempts all existing ATCRBS transponder equipped general aviation aircraft from the requirement to install a Mode S transponder. In its present configuration, the rule allows an operator to repair his transponder indefinitely. Since FAA has not defined to what extent a repair becomes a new installation, if one intends to avoid the expense of equipping with Mode S, he can replace substantial portions of the transponder, thereby prolonging its life almost indefinitely, and still comply with the language of the rule.

The ATS recognizes that the FAA will is not satisfied with this technicality. However, we believe that an arrangement that provides for an eventual changeover to Mode S transponder equipage, albeit slowly, and will not penalize those who have already invested in and are making use of ATCRBS technology is possible. Specifically, require installation of Mode S transponders on newly manufactured, electrically equipped, type certificated aircraft after July 1, 1996.

There still appears to be a problem with ATCRBS transponder interrogation and reply (synchronous garble). The FAA has demonstrated that the problem will occur less often than it currently does due to a "thinner" more accurate beam used by the Mode S ground sensors to interrogate ATCRBS transponders. Although the FAA has conducted studies of synchronous garble, missing or incorrect position reports, and other problems associated with the current radar system, the studies presented to the ATS have not been sufficiently controlled to indicate that the lost target and synchronous garbling problems would not be eliminated with the implementation of Mode S ground sensors alone. Current data indicates a 97% chance of detection and display of a target whether transmitted to a Mode S ground sensor from a Mode S or ATCRBS transponder.

Even though the FAA intends to move to a homogenous Mode S environment, the working group is concerned over the requirement for general aviation aircraft to equip with Mode S transponders regardless of the airspace used. It may be true that some high density airspace areas will require the equipage of Mode S transponders. However,

there are many areas of the country where a Mode S transponder would not provide significant improvements in surveillance accuracy and integrity over the use of Mode S ground sensors alone.

The first Mode S sensor to be commissioned is at Fort Lauderdale, Florida in August 1992. According to FAA reports, general aviation traffic accounts for one third of the total operations at the Fort Lauderdale International Airport. We recommended that the FAA conduct studies of synchronous garble and missing/incorrect target data at Fort Lauderdale once the Mode S ground sensor is operational. Answers to the following questions would support further regulatory direction. What quantifiable deficiencies in target surveillance and integrity exist due to the present level of ATCRBS transponders? How much improvement would be realized by requiring Mode S transponders in this airspace? What system improvements would be realized from required Mode S equipage in this airspace? If the results of these studies, as well as, projections of future traffic densities indicate mandatory equipage would be beneficial, the airspace areas at which those benefits will be significant could be identified and regulatory action promulgated.

Adoption of this recommendation will limit mandatory equipage to specific areas where the system will benefit, rather than a mass requirement which would afford only specific benefit.

SUMMARY:

Recommendation #1- Change the requirements of FAR 91.215 so as to require installation of Mode S transponders on newly manufactured, type certificated aircraft after July 1, 1996.

Recommendation #2- Aircraft with electrical limitations, balloons and gliders should be exempt from the rule.

Recommendation #3- Conduct a study of the Mode S ground sensor at Fort Lauderdale to determine whether significant additional benefits would be derived from mandatory Mode S equipage in addition to the ground sensor versus the ground sensor alone. Publish a progress report within 6 months after the commissioning of the Fort Lauderdale Mode S ground sensor. Include in the report the expected completion date of the study. Examine the costs and benefits of linking equipage requirements to specific airspace areas needing such treatment.

The Air Traffic Subcommittee appreciates the opportunity to provide these recommendations and is ready to work on a NPRM to accomplish the above recommendations.

Respectfully Submitted,

Edward M. Scott

Edward M. Scott
Chairman, Air Traffic Subcommittee

October 11, 1991

Federal Register

Friday,
October 7, 2005

Part IX

Department of Transportation

Federal Aviation Administration

14 CFR Parts 121 and 135

Mode S Transponder Requirements in the National Airspace System; Proposed Rules

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 121 and 135

[Docket No. 28586; Notice No. 96–5]

RIN 2120–AE81

Mode S Transponder Requirements in the National Airspace System

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking; withdrawal.

SUMMARY: On May 23, 1996, the Federal Aviation Administration (FAA) proposed to rescind the requirement to install a Mode S transponder on all aircraft operating under parts 135 and those aircraft operating under part 121 of Title 14 of the Code of Federal Regulations that are not equipped with Traffic Collision and Alert System (TCAS) II. The FAA has, however, reassessed the need for retaining this requirement and now withdraws that notice.

DATES: Notice No. 96–5 is withdrawn October 7, 2005.

FOR FURTHER INFORMATION CONTACT: Mr. K. Douglas Davis, Avionic Systems Branch, Aircraft Certification Division, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 385–4636.

SUPPLEMENTARY INFORMATION: You can get an electronic copy of this document by going to our Web page at *http://www.faa.gov/avr/arm/nprm.htm* or by using the search feature of the **Federal Register**'s Web page at *http://www.access.gpo.gov/su_docs*.

You can get a printed copy by sending a request to the Federal Aviation Administration, Office of Rulemaking, ARM–1, 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267–9680. Please identify the docket number of this final rule.

Background

The FAA published a final rule on February 3, 1987 (52 FR 3380), requiring the installation of Mode S transponders on U.S. registered aircraft. The rule provided that any transponder newly installed before January 1, 1992, in aircraft used for operations under parts 121 and 135 of the Federal Aviation Regulations could be a Mode A or Mode C transponder if the transponder was manufactured prior to January 1, 1990. After January 1, 1992, only Mode S transponders could be newly installed in U.S.-registered civil aircraft operated under Parts 121 and 135. The rule also provided that Mode S transponders were required for Part 91 operations in specified designated airspace.

The FAA delayed the rule's effective date for 6 months until July 1992 due to manufacturing difficulties of Mode S transponders. Additionally, the Air Traffic Issues Group of the Aviation Rulemaking Advisory Committee recommended to the FAA that the Mode S requirement for Part 91 was premature and deserved further study. In light of this recommendation, we reviewed the issue and concluded that the requirement was not necessary for Part 91 operators. Specifically, we determined that ''While areas of high density aircraft activity might benefit from the improved target and altitude integrity of the Mode S system, many portions of the airspace over the country might not require a homogenous Mode S environment for several years.'' Subsequently, we rescinded this equipment requirement for Part 91 operations in 1992 (57 FR 34614; August 5, 1992).

On May 23, 1996, the FAA proposed rescinding the Mode S requirement for Part 135 operators and those Part 121 operators not required to have TCAS II (61 FR 26036). The FAA has reassessed the need for Mode S transponder equipage for these operators in today's transportation system.

FAA Assessment and Review

In the May 1996 NPRM (Notice 96–5), we articulated several reasons for proposing to rescind the Mode S transponder requirement because: (1) The FAA's revised strategy of multiple air-ground data links managed through Aeronautical Telecommunications Network would remove the requirements for Mode S transponders;[1] (2) operational experience with Mode S ground sensors has shown that most surveillance enhancements can be achieved by the Mode S ground sensors with the present mixed population of airborne transponders; and (3) the use of Mode S transponders for aircraft, other than those required to have TCAS II, does not offer, nor is it expected to offer, any significant safety advantage in the current or future environment.

Since Notice 96–5 was published, the National Airspace System (NAS) has experienced significant changes that now necessitate retaining the Mode S transponder requirement. The basis for this requirement, however, has changed due to advances in the technological use of Mode S systems, and the continued growth of aviation traffic. Mode S technology has the largest ground and airborne infrastructure in place. Both industry and the FAA have invested in this infrastructure, and as discussed below, new technology and new safety enhancement programs utilize Mode S. Thus, we conclude that Mode S transponders are necessary for part 135 and part 121 operators (those not required to have TCAS II) and provide benefits beyond those considered in 1996.

Mode S avionics now are available for all types of aircraft from general aviation to heavy commercial aircraft. Virtually all commercial aircraft manufactured within the last 10 years have been equipped with Mode S transponders. In addition, over the last decade, the FAA has modernized many ground-based systems with considerable investment placed on Mode S capability—enhancing the operational picture available to aircrews and air traffic control.

The FAA has developed and implemented safety enhancements that either did not exist at the time that Notice 96–5 was published or that perform better with Mode S transponders than with Mode A or Mode C transponders. Airport Surface Detection 3 (ASDE–3), ASDE–X and Airport Movement Area Safety Systems (AMASS) are the core of supporting surveillance services for airport surfaces at approximately 60 of the busiest airports around the United States. These systems were all implemented after 1996.

ASDE–3 was the first surface detection system to become operational, and when used with the AMASS system, it provides a safety alerting service that warns the controllers of possible runway incursions.

ASDE–X is the next generation of surface detection systems and adds multilateration transponder based surveillance, both ground based and airborne, that is used with ASDE–3. The multilateration capability of ASDE–X allows the system to provide much more reliable overall surveillance than the ASDE–3 AMASS system. Increasing use of Mode A or Mode C transponders in lieu of Mode S transponders will weaken the surveillance capability of an ASDE multilateration system (as discussed below) and increase the risk of false or missed alerts.

The multilateration component of these systems uses fixed wide beam antennas when it interacts with transponders, and is thus more susceptible to synchronous garble and

[1] In our review, we determined that this specific rationale was incorrect. Data link capability is not required and moreover, the use of the Mode S transponder only will not provide that data link services.

Frequent Replies to Unwanted Interrogation Transmissions (FRUIT). FRUIT occurs when one system detects replies that match another system's interrogation. When FRUIT replies are received at the same time as the reply that actually matches the system's interrogation, these replies will garble the matching reply. A combination of the timing of the interrogation and its matching reply allows the development of the surveillance data in determining the location and altitude of the aircraft. The garbling of these transmissions corrupts the surveillance data.

Synchronous garble occurs when a ground sensor or a TCAS (airborne) interrogate Mode A or Mode C aircraft and receive replies from more than one aircraft at the same time. Again, the replies garble each other and their corresponding data may be lost. Reducing the number of Mode A and Mode C transponders will reduce the frequency of this garble and corruption of the data. Mode S systems use addressed interrogations where only one Mode S transponder replies at a time.

We also have found that Mode S transponders perform better than Mode C or Mode A transponders with respect to the Traffic Information Service (TIS). TIS avionics is optional and provides pilots with information on nearby traffic. It operates in Mode S radar systems. The Mode S radar system receives requests from TIS avionics through a Mode S transponder onboard an aircraft. The Mode S radar system processes the request from the TIS avionics and transmits basic traffic information to the requesting aircraft for processing and display to the pilot. This information includes distance and bearing to the traffic, for up to eight aircraft. This information also allows the pilot to look out the window and find the aircraft more effectively.

ADS–B is a system where aircraft automatically transmit surveillance data derived from navigation position data, *e.g.*, GPS. ADS–B, when using the 1090 extended squitter application, uses Mode S transponder transmissions. Just as FRUIT garbles regular transponder reply transmissions, FRUIT will garble these transmissions. Excessive FRUIT will lower the capacity of ADS–B and reduce its usefulness, and any related safety and efficiency benefits.

TCAS is a system installed in aircraft to help avoid midair collisions. Mode A and Mode C transponders can affect TCAS in two ways. First, the TCAS may experience FRUIT, synchronous garble or transponder dead time, which results in reduced ability to detect and track aircraft and provide its collision service effectively. Secondly, the presence of Mode A and Mode C transponders may limit the TCAS's range of operation. The fewer Mode A and Mode C transponders operating around TCAS equipped aircraft, the greater the range the TCAS may operate, which maximizes its safety benefit. Decreasing the numbers of Mode A/C transponders decreases the risk of missed alerts and false alerts.

Mode S provides benefits over Mode C or Mode A transponders during interrogation and transponder dead time. ''Dead time'' is when the transponder is busy. The transponder is kept busy when processing interrogations and preparing/transmitting a reply. The transponder also is kept busy with processing interrogations with an indication to suppress and not transmit an unnecessary reply. In systems such as ASDE–X, FRUIT replies from Mode A and/or Mode C aircraft can be received at the same time as the Mode S reply matching the interrogation. These garbling FRUIT replies can cause the loss of the Mode S reply. While the Mode S protocols prevent data corruption, the ASDE–X system will re-interrogate the Mode S transponder again in an effort to get the needed reply. This increases the transponder's dead time through over-interrogation. The Mode S interrogations also include an indication to Mode A and/or Mode C transponders to suppress and not reply. This protects against synchronous garble. Consequently, while the Mode S interrogations are intended primarily for a Mode S transponder, the Mode A and/or Mode C transponders anywhere near the path from the Mode S transponder to the radar or TCAS will see the suppression indication. Again, as with over interrogation, these transponders are also kept more busy than necessary, which increases their dead time as well.

Overall, the selective interrogation and the superior resolution ability of Mode S eliminates synchronous garble; resolves the effects of over interrogation; simplifies aircraft identification; and allows Mode S integration with new technologies designed to improve efficiency in the NAS.

Since the NPRM, the European Union and similar global coalitions have implemented equipage mandates, including Mode S, to operate in their airspace. Consequently, the FAA is working to synchronize and bridge equipage gaps to ensure that the United States' aviation economic interests around the world are maintained.

Published concurrently with this notice, is a separate notice seeking public comment on a proposed date for the equipage of Mode S transponders for aircraft that have been operating under FAA issued exemptions from this requirement.

Withdrawal of the NPRM

Since Mode S transponders can provide improved safety and efficiency in a more densely populated NAS, the FAA has concluded that the Mode S requirement for Part 135 and certain Part 121 operators remains valid. Therefore, the FAA withdraws NPRM 96–5.

Issued in Washington, DC on September 28, 2005.

James J. Ballough,

Director, Flight Standards Service.

[FR Doc. 05–20181 Filed 10–6–05; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 121 and 135

[Docket No. FAA–2005–22593]

Mode S Transponder Requirements in the National Airspace System

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of policy; request for comments.

SUMMARY: This notice of policy announces the FAA's policy concerning current exemptions from the Mode S transponder equipment requirements under Title 14 of the Code of Federal Regulations §§ 121.345(c) and 135.143(c). Additionally, this notice of policy seeks comments from persons currently holding an exemption from the above regulations on a proposed date for which they must comply with the equipment requirements.

DATES: Comments must be filed no later than November 7, 2005.

ADDRESSES: You may send comments to Docket Number 22593 using any of the following methods:

- DOT Docket Web site: Go to *http://dms.dot.gov* and follow the instructions for sending your comments electronically.
- Government-wide rulemaking Web site: Go to *http://www.regulations.gov* and follow the instructions for sending your comments electronically.
- Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL–401, Washington, DC 20590–001.
- Fax: 1–202–493–2251.
- Hand Delivery: Room PL–401 on the plaza level of the Nassif Building,