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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 121

[Docket No. FAA-2002-14081; NPRM No. 03-02]

RIN 2120-AH67

Transponder Continuous Operation

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking.

SUMMARY: This proposal would amend the instrument and equipment requirements for airplanes operated in domestic, flag, and supplemental operations. Specifically, the Federal Aviation Administration (FAA) proposes to require affected airplanes to have the capability to help assure immediate activation of the designated air traffic control (ATC) hijack alert code, and continuous transmission of that code to ATC during a hijack situation. The FAA is proposing this action in response to the heightened threat to U.S. civil aviation. The FAA believes that this capability would help provide ATC personnel with more time to initiate a national security response to a potential airplane hijack situation.

March 17, 2003

DATES: Send your comments on or before [Insert date 60 days after date of publication in the Federal Register].

ADDRESSES: Address your comments to the Docket Management System, U.S. Department of Transportation, Room Plaza 401, 400 Seventh Street, SW., Washington, DC 20590-0001. You must identify the docket number FAA-2002-14081 at the beginning of your comments.

You may also submit comments through the Internet to http://dms.dot.gov. You may review the public docket containing comments to these proposed regulations in person in the Dockets Office between 9:00 a.m. and 5:00 p.m., Monday through Friday, except Federal holidays. The Dockets Office is on the plaza level of the NASSIF Building at the Department of Transportation at the above address. Also, you may review public dockets on the Internet at http://dms.dot.gov.

FOR FURTHER INFORMATION CONTACT: Richard E. Jennings, Aircraft Certification Service, Aircraft Engineering Division, AIR-130, Federal Aviation Administration, c/o Atlanta ACO, 1895 Phoenix Boulevard, Suite 450, Atlanta, GA 30349; telephone (770) 703-6090; facsimile (770) 703-6055, e-mail Richard.Jennings@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites interested persons to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. We ask that you send us two copies of written comments.

We will file comments we receive in the docket, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. The docket is available for public inspection before and after the comment closing date. If you wish to review the docket in person, go to the address in the ADDRESSES section of this preamble between 9:00 a.m. and 5:00 p.m., Monday through Friday, except Federal holidays. You may also review the docket using the Internet at the web address in the ADDRESSES section.

Comments regarding national security information or sensitive security information should not be submitted directly to the public docket. These comments should be submitted according to procedures for safeguarding sensitive security information and sent to: Armen A. Sahagian, Office of Civil Aviation Security, Program Manager, Aircraft Security, ACP-400, Room 323, Transportation Security Administration, 800 Independence Avenue, SW., Washington, DC 20591, Docket No. FAA-2002-14081. Questions on these procedures may be directed to Armen Sahagian. These comments will be reviewed to determine appropriateness for inclusion in the public docket system.

Before acting on this proposal, we will consider all comments we receive on or before the closing date for comments. We will consider comments filed late if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

If you want the FAA to acknowledge receipt of your comments on this proposal, include with your comments a pre-addressed, stamped postcard on which the docket number appears. We will stamp the date on the postcard and mail it to you.

Availability of Rulemaking Documents

You can get an electronic copy using the Internet by taking the following steps:

(1) Go to the search function of the Department of Transportation's electronic Docket Management System (DMS) web page (http://dms.dot.gov/search).

(2) On the search page type in the last five digits of the Docket number shown at the beginning of this notice. Click on "search."

(3) On the next page, which contains the Docket summary information for the Docket you selected, click on the document number of the item you wish to view.

You can also get an electronic copy using the Internet through the Office of Rulemaking's web page at http://www.faa.gov/avr/armhome.htm or the Government Printing Office's web page at http://www.access.gpo.gov/su_docs/aces/aces140.html.

You can also get a copy by submitting 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. Make sure to identify the docket number, notice number, or amendment number of this rulemaking.

Background

On September 11, 2001, four U.S.-registered commercial airliners operating under the provisions of 14 CFR part 121 were hijacked and subsequently crashed, resulting in great loss of life and extensive damage to occupied buildings. In order to reduce the likelihood of such an event reoccurring, the FAA initiated a complete review of aircraft and airport security procedures. Based on this review, the FAA has determined that it is necessary to propose certain new regulations that would increase the desired level of safety and security.

If adopted, these proposed amendments would require that a single action by the pilot or copilot (or flight engineer, where appropriate) immediately activate the air traffic control (ATC) transponder beacon code "7500," which is the International Civil Aviation Organization (ICAO) code indicating to ATC that an aircraft is being subjected to unlawful interference, that is, being hijacked.

Before the events of September 11, a flight crew would have responded appropriately to an airborne hijack situation by acceding to a hijacker's demands, flying the aircraft to the instructed destination, and allowing the appropriate authorities to resolve the situation. Before September 11, however, no one had envisioned a hijacking situation in which a hijacker would take control of a commercial aircraft and successfully use that aircraft as a weapon. Of the four aircraft involved in the events of September 11, none of the flight crews were able to switch to the designated hijack alert code, thus delaying ATC awareness of the unfolding situation. Further, the transponders on three of the four airplanes ceased replying to ATC radar interrogations within minutes of departing from their assigned routes. These events have changed profoundly the way in which a future hijack situation may be handled, and more generally, our concept of what is considered appropriate aviation safety and security.

In response to the events of September 11, the Secretary of Transportation established the Rapid Response Teams (RRT) for Aircraft Security and Airport Security to identify measures to improve aviation security. The Aircraft Security Team was composed of individuals from the aviation industry, including airplane designers and manufacturers, airline operators, airline pilots, and flight attendants. Additionally, the teams consulted with and considered input from concerned private citizens and other

sectors of industry. The RRT for Aircraft Security considered changes to aircraft design and operation that could (1) deny or at least delay any unauthorized access to the flight deck, (2) better train crewmembers to deal with security risks, and (3) ensure the flow of information from an aircraft to ATC. The RRT for Airport Security focused on such issues as improved screening of passengers, baggage, and aircraft and airport personnel prior to direct contact with an aircraft.

On October 1, 2001, the RRT for Aircraft Security submitted its report to the Secretary of Transportation for consideration. [This report is available in Docket No. FAA-2002-14081.] The report included 17 recommendations to help counter a situation in which an airplane might be hijacked and used as a weapon. Recommendation No. 16 called for the creation of an FAA-industry task force to determine the necessary modifications for airplane transponders to assure continuous transmission of a hijack signal, even if the fight deck-selected code or function is disabled. The task force was to examine the following: all alternatives that would allow pilots the ability to set and lock-in the hijack code so that a hijacker could not disable it; a "panic button" that would initiate the hijack code during an emergency situation; and an independent transponder that could not be disabled by the hijacker.

Based on that RRT recommendation, the Air Transport Association of America (ATA) volunteered to facilitate formation of an FAA-Industry Transponder Task Force. The Task Force was composed of representatives from U.S. and foreign passenger and cargo airlines; FAA; Transport Canada; various industry associations; research and development centers funded by the U.S. Government; and manufacturers of airplanes, transponders, and transponder controls.

At the time the Task Force was formed, several design concepts that could potentially satisfy RRT Recommendation No. 16 had been formulated. In evaluating these concepts and other suggestions, the Task Force assumed as its basis that any transponder system modifications should (1) allow for the rapid selection of the hijack alert code, and (2) assure continuous transmission of this code once it had been activated. The Task Force also assumed that the flight deck doors on airplanes operated under part 121 would be modified for increased strength, allowing additional time for the flight crew to initiate the hijack alert code.

The Task Force evaluated the three most promising design concepts and submitted a final report to the FAA on November 5, 2001. The report also identified potential vulnerabilities in the various design concepts, and therefore, because of national security considerations, the details of this report are not being released to the general public for review or placed in the public docket. However, this proposed rule is based, in part, on the efforts of the Task Force. A redacted version of this report is available in Docket No. FAA-2002-14081.

These actions taken by the FAA and the aviation industry following the events of September 11 are directly in line with the Aviation and Transportation Security Act of 2001 (Act), Public Law 107-71. Section 104, Paragraph (b), Sub-Paragraph (2), of the Act states that "the FAA Administrator may develop and implement methods to ensure continuous operation of an aircraft transponder in the event of an emergency."

Related Activity

In response to the September 11 attacks, the FAA has initiated several regulatory actions. On January 10, 2002, the FAA issued a final rule temporarily authorizing

variances from existing flightcrew compartment door design standards for the doors and allowing for approval for return to service of modified airplanes without prior approved data if the modification constitutes a major alteration. This rule mandated these modifications on aircraft in certain passenger and cargo carrying operations. Also on January 10, 2002, the FAA issued a final rule requiring certain airplanes operated under part 121 to be equipped with a means to protect the flight deck from unauthorized intrusion and small arms fire or fragmentation devices. The FAA believes these related rulemaking activities will significantly reduce the danger to the flying public by preventing future terrorists from gaining access to an airplane's flight deck.

Since this document was drafted, a number of other security measures have been adopted in response to the Aviation Security Act of 2001. The FAA welcomes and encourages comments about how this proposal, when considering these other security measures that have been adopted, would contribute further to safety and security and how this additional proposal would affect the aviation industry.

Current Requirements

All air carrier aircraft are required to be equipped with an ATC transponder (see 14 CFR §§91.215 and 121.345), which in normal operation provides a radar beacon identity code and altitude (Modes 3A/C) for ATC use in controlling aircraft in en route and terminal areas of operations. During normal operations it is expected that a flight crew could manually dial-in a new ATC-directed Mode 3A transponder radar beacon code, through the transponder control panel, in roughly five to ten seconds. However, under the stress of a hijack situation it may take considerably longer than ten seconds to dial-in the designated hijack alert code, or it may not be possible at all if the flight crew is

distracted by a flight deck intruder. In addition, during a hijack situation, the current requirements do not prevent an airplane's ATC transponder from being switched to the "standby" position, or having its circuit breaker "pulled" -- actions which would disable the transponder's response to an ATC ground radar beacon interrogation.

The designated hijack alert code is "7500," which is defined in section 2.1.4 of Volume IV of the International Civil Aviation Organization (ICAO) Annex 10 as the appropriate code to indicate to ATC that an aircraft is being subjected to unlawful interference.

General Discussion of the Proposal

If an aircraft were to be used as a terrorist weapon, there are numerous targets of opportunity that could be destroyed by a large airplane. With this in mind, the FAA proposes to add a new § 121.346 to require all airplanes operated under part 121 to be modified to provide the capability for the immediate notification to ATC of a hijack situation, and for the transponder to continuously transmit the emergency transponder code once activated. At this time, the FAA is proposing that the rule should apply only to passenger and cargo airplanes operated under part 121. The FAA invites interested persons to comment on the applicability of these requirements to aircraft operated under 14 CFR parts 91, 125, 129, or 135. If the FAA determines that additional aircraft should be included, a separate proposal will be issued.

Paragraph (a) of the proposed rule would require that a single action would immediately set the airplane's ATC transponder Mode 3A beacon code to "7500," which would be picked up by ATC ground surveillance radar. The proposal would require the "single action" method of activation, for example a switch or a button, to be accessible to

both the pilot and copilot (and flight engineer, where appropriate). The FAA believes that activation through a single action would greatly enhance the flight crew's ability to quickly enable the transponder hijack alert code and thus ensure faster recognition of the hijack situation by ATC. However, the FAA also has determined that there should be a means to protect against unintentional activation of the hijack alert code. Therefore, as an example, a motion that lifts a guarded switch or breaks a frangible wire in the process of activation would still be considered a single action.

Paragraph (b) of the proposed rule would require that three conditions be met upon activation of the hijack alert code. Paragraph (b)(1) would require that the transponder's Mode C, or altitude reporting function, be maintained with activation of the hijack alert code. Altitude reporting would help ATC positively identify the hijacked airplane, and keep other aircraft safely out of its projected path.

Paragraph (b)(2) would require that a visual indication be provided to the flight crew as positive feedback of activation. A recent incident has shown the FAA the importance of this feedback to the flight crew. An airplane with a system similar to that proposed by this rule departed on a flight without realizing that the hijack alert code had been activated. Upon takeoff, ATC immediately detected the hijack alert code and challenged the flight crew. The airplane subsequently returned to its departure airport, escorted by two military fighter aircraft. On further investigation, it was determined that the airplane's hijack alert code had been activated unintentionally by ground personnel. Had the flight crew been provided a visual indication that the system had been activated, the crew could have corrected the situation before departure, averting a cost to the airline and disruption to the flow of the local air traffic.

Paragraph (b)(3) would require installation considerations to help ensure continuous operation of the ATC transponder hijack alert code once it is activated. The FAA believes that continuous operation considerations should include inhibiting any further inputs from the ATC transponder control panel, for example any attempts to change beacon codes or to switch the transponder to standby, as well as for improving the security for electrical power to the transponder equipment. In addition, the FAA believes that resetting the ATC transponder to a normal mode of operation should be through a ground action by appropriate personnel. Where practical, this resetting action should not be accessible from within the airplane. Because inhibiting any further inputs to the transponder control panel would also prevent turning off altitude reporting at the request of ATC, the flight crew would be unable to comply with the requirements of § 91.217(a). Therefore, paragraph (b)(3) also would provide relief from § 91.217(a) when the capability described in proposed § 121.346 is activated.

Common airplane transponder installations provide for separate electrical power breakers in the flight deck for each of the two installed ATC transponders. As proposed, this rule would require (upon activating the hijack alert code) the removal of power from the electrical breakers for the ATC transponders in the flight deck, and the transfer of power to remotely mounted breakers not accessible from the flight deck or cabin. This design change would prevent removing electrical power from the transponders as flight crews would perform when required to do so.

Because the FAA does not want to cause a complete redesign of an airplane's electrical system, and because the FAA realizes that transponder operation could be silenced by the removal of all electrical power, the FAA has used the phrase "...must not

be able, by reasonable means, to disable the transponder..." to mean that no person onboard the airplane should be able to remove power from the transponder simply by pulling the associated circuit breaker.

Deactivation of the ATC transponder by means of removal of significant airplane electrical power to the detriment of airplane operations or obtaining access to a part of the airplane normally not accessible by the crew, are not considered *reasonable*.

It is expected that most part 121 operators will add the capability required by § 121.346 to function with the existing ATC transponder equipment installed on their airplanes. However, some operators may desire not to alter their existing equipment configuration, and instead choose to install an additional and dedicated ATC transponder to meet the requirements of this proposed rule. Because one cannot assure that a hijacker will, in fact, disable an airplane's normally operating ATC transponder, it is possible that more than one transponder could be operating and attempting to respond to the ATC secondary surveillance interrogation. This could result in an inaccurate reply, and subsequent rejection of both transponders' Mode 3A/C beacon codes by the ATC ground interrogator. To prevent this situation, operators who choose to install an additional and dedicated transponder to meet these proposed requirements should provide a means to inhibit replies from all other ATC transponders installed on the airplane at the time that this dedicated ATC transponder is activated.

Given the importance of these proposed requirements, the FAA would prefer to put them into effect as quickly as possible. However, the FAA is aware that operators will need approved installation data in order to accomplish the airplane modifications

required by this proposed rule. Therefore, the FAA proposes a compliance date of March 29, 2005. This date also was selected to coincide with the current compliance date for Terrain Awareness and Warning Systems (14 CFR § 121.354(b)), to minimize the amount of downtime for any given airplane. Assuming that the final rule for this proposal is issued by December 31, 2002, operators would have approximately 27 months to accomplish the required modifications. This would allow approximately 6 months to support development of the approved installation data, including for example equipment modifications, manufacturer's service bulletins, and Supplemental Type Certificates, and 21 months for operators to schedule the necessary airplane downtime to complete the actual modification. Because the airplanes in question are maintained under a continuous airworthiness maintenance program, which includes a heavy maintenance visit scheduled approximately each 12 months, the FAA believes that operators could conclude any modifications required by this proposed rule within the time constraints of a single heavy maintenance cycle. The FAA believes the March 2005 compliance date would minimize the financial burden for affected operators as well as provide a long-term aviation safety benefit.

Initial Economic Evaluation, Regulatory Flexibility Determination, Trade Impact Assessment, and Unfunded Mandates Assessment

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs each Federal agency proposing or adopting a regulation to make a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements

Act prohibits agencies from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, this act requires agencies to consider international standards and, where appropriate, use them as the basis for U.S. standards. Fourth, the Unfunded Mandates Reform Act of 1995 requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed and final rules. An assessment must be prepared only for rules that impose a Federal mandate on State, local, or tribal governments, in the aggregate, or on the private sector, likely to result in a total expenditure of $100 million or more (adjusted for inflation) in any one year.

In conducting these analyses, the FAA determined the following: the benefits of this proposed rule justify its costs; it would be a "significant regulatory action" as defined in section 3(f) of Executive Order 12866; it would be "significant" as defined in DOT's Regulatory Policies and Procedures; it would not have a significant impact on a substantial number of small entities; it would have no effect on trade-sensitive activity; and it would not impose an unfunded mandate on State, local, or tribal governments, or on the private sector. These analyses, available in the docket, as summarized below.

Benefits and Costs

This proposed rule is part of a series of rulemaking actions aimed at preventing or deterring a similar occurrence to the September 11 attacks. It is designed to ensure immediate ATC notification of a hijack situation, and to assist in maintaining ATC tracking of the hijacked airplanes for purposes of national security. As such, the benefits of this proposed rule are to ensure the security of the American public.

The cost of another catastrophic terrorist act cannot be reasonably measured in dollars. As it was witnessed on September 11, terrorist acts can result in the complete destruction of an aircraft with the loss of all on board, and with collateral damage far exceeding that of the aircraft and passengers. The main benefit related to this proposed rule is the averted loss of life by taking corrective action.

The economic and social costs of the September 11 attacks have been measured in the billions of dollars, and another terrorist attack could be far more costly. Therefore, the FAA attributes the benefits of this proposed rule to the series of rules designed to ensure the safety and security of the American public. Such benefits cannot be reasonably quantified nor allocated between the multiple actions taken to avoid a repeat of the attack. In addition to preventing the extraordinary costs of another attack, this proposed rule responds to the interest of the U.S. Congress as specified in the Aviation and Transportation Security Act.

The FAA estimates that 7,394 airplanes would be potentially affected by the proposed rule. Given that the deadline to comply with this proposed rule is tentatively set for March 2005 (27 months after the expected issuance of the final rule), the FAA assumes that all retrofitting expenses would be spread evenly, on a monthly basis, between January 2003 and March 2005.

The estimated capital cost to upgrade airplanes with transponders capable of continuous operation in hijack mode is approximately $3,000 for each airplane. This figure was provided by transponder and transponder control manufacturers, aircraft manufacturers, and airlines that received quotes from suppliers. Purchasing the compliant transponder controls or software upgrade for a fleet of 7,394 airplanes would

cost $22.2 million, over the three-year period. The industry also estimated overall certification costs for the software and hardware to be $1,000,000, to be incurred in 2002.

The software or hardware investment is only a portion of the cost to the industry. Locking a transponder into continuous operation is a relatively inexpensive and easy solution. Every transponder manufacturer claimed that a software upgrade would not require any downtime. The transponder could be removed from the airplane in a matter of minutes, replaced by a substitute transponder while the software upgrades were implemented (airlines indicated an abundance of transponders), and then reinstalled. The simplest, and quickest, solution for some operators is a transponder software upload, which is expected to be on the market for less than $3,000, and which could be accomplished on the airplane (that is, the transponder would not have to be removed). This update could be accomplished in about 5 minutes, and would allow the transponder to lock out all other inputs after the hijack alert code is entered.

To comply with the proposed rule, operators also would need to install a method of rapid activation and isolate electrical power to the transponder control equipment. The labor cost, therefore, would likely be the same, regardless of the solution chosen, because there would be a need to wire a method of rapid activation and isolate the electrical power. Industry identified these tasks as being labor-intensive. Airline technicians would require approximately 52 work hours per aircraft to wire a method of rapid activation and/or install a transponder control in the avionics bay. At an average hourly rate of $50, this translates into $19.2 million to retrofit the entire affected fleet. The upgrade would have to be performed during a 'C' or 'D' check, or place the aircraft out of service for a 2-day period. Alternatively, because the task would not need to be

completed in one setting, the wiring could be performed in stages during several overnight maintenance sessions. In addition, the parts and supplies for this wiring would cost about $1,000 per aircraft. For the entire fleet, this would mean approximately $7.4 million over the 3 years.

The FAA conservatively estimated that all passenger and cargo airplanes affected by the proposed rule would incur downtime costs, at a fleet-wide average opportunity cost of $5,178 per aircraft. This opportunity cost of capital represents the return foregone by having invested in the airplane rather than investing in securities. This figure reflects a fleet-wide average value of $15.0 million per airplane, multiplied by the industry's return on investment of 6.3 percent for the year 2000, for 2 days of lost service. The total cost of airplane downtime is calculated to be approximately $38.3 million, spread over the 3 years. The FAA believes the estimate of downtime is a high-side estimate because most operators will perform the conversion during normal scheduled maintenance. A compliance date of 2005 will allow operators adequate time to schedule the upgrades within regular maintenance intervals.

Cumulatively, the proposed rule is expected to cost the industry up to $88.1 million ($78.9 million discounted) between 2002 and 2005. However, the cost to the industry could be as low as $49.8 million ($44.6 million discounted), if no downtime costs were incurred. Accordingly, the FAA believes that the proposed rule is cost-beneficial and is necessary to ensure the level of aviation security expected by the American public.

The FAA solicits comments from affected entities with respect to these findings and determinations, and requests that all comments be accompanied by clear documentation.

Regulatory Flexibility Act

The Regulatory Flexibility Act of 1980 (RFA), 5 U.S.C. 601-612, establishes "as a principle of regulatory issuance that agencies shall endeavor, consistent with the objective of the proposed rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the business, organizations, and governmental jurisdictions subject to regulation." To achieve that principle, the RFA requires agencies to solicit and consider flexible regulatory proposals and to explain the rationale for their actions. The RFA covers a wide range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a proposed or final rule will have a significant economic impact on a substantial number of small entities. If the determination is that it will, the agency must prepare a regulatory flexibility analysis as described in the RFA.

However, if an agency determines that a proposed or final rule is not expected to have a significant economic impact on a substantial number of small entities, section 605(b) of the RFA provides that the head of the agency may so certify and a regulatory flexibility analysis is not required. The certification must include a statement providing the factual basis for this determination, and the reasoning should be clear. This proposed rule will not have a significant impact on a substantial number of small entities, therefore a full Regulatory Flexibility Analysis is not necessary.

To determine the potential economic impact on small entities conducting business as part 121 operators, the FAA first estimated the number of small entities affected by this proposed rule. The FAA then estimated the compliance cost and, subsequently, the economic impact. Using the criterion from the North American Industry Classification System of the Small Business Administration (SBA), the FAA identified approximately 100 operators that qualify as small businesses, and developed a random list of 50 air carriers to further analyze.

Estimating the compliance cost and economic impact for each small entity involved several analytical steps. First, we obtained from the BACK Associates Fleet Database the fleet of aircraft operated by the small entities. Second, we estimated the purchase and installation cost of the transponder solution and method of rapid activation for the fleet of each small entity. The purchase cost of the transponder solution was estimated to be approximately $3,000 per airplane, with an additional $1,000 in parts and supplies, and $2,600 in labor. Additionally, downtime costs were estimated at approximately $5,178 per aircraft, resulting in a total per airplane cost of $11,778. This per airplane cost was then multiplied by the number of affected aircraft in the air carrier's fleet to obtain a total cost per operator.

The degree to which small entities can "afford" the cost of compliance is determined by the availability of financial resources. The implementation costs of this proposed rule could be financed, paid for using existing company assets, or borrowed. As a proxy for the firm's ability to afford the cost of compliance, the FAA calculated the ratio of the total cost of the rule as a percentage of annual revenue. The FAA expects that

the cost of the proposed rule would exceed 2 percent of total revenue for no more than two entities. The FAA does not believe that two is a substantial number of small entities.

In the interest of fully assessing the impact of this proposed rule on small entities, the FAA explored the potential competitive impact. The FAA examined the route structures and specific markets of the three firms who would be most affected (as a percentage of revenues) by the proposed rule, Chautauqua Airlines, Pan Am, and Grand Canyon Airlines. Chautauqua Airlines operates under a codeshare agreement at major hubs as an America West, American Airlines (since the purchase of TWA), and US Airways affiliate, whereas Pan Am is an independent airline operating mostly at second-tier airports. These two air carriers sometimes compete with large airlines (which would incur the same fixed and marginal cost per airplane), but many routes served could be considered local monopolies in which the affected airline is the only provider of service. As a result of operating in these "niche" markets, an air carrier would be able to pass some of the cost to its customers. In the more competitive air tour business, keeping costs down is critical, because affected air carriers likely would not be able to pass costs down to customers. However, Grand Canyon Airlines is a dominant player in that market and its main competitors are not other airplane tour operators, but rather helicopter tour operators, with significantly higher operating costs. Thus, as a result of this proposed rule, there is expected to be little change in competition, and little change in market share within the industry.

Accordingly, pursuant to the Regulatory Flexibility Act, 5 U.S.C. 605(b), the Federal Aviation Administration certifies that this proposed rule would not have a significant impact on a substantial number of small entities.

Trade Impact Assessment

The Trade Agreement Act of 1979, 19 U.S.C. 2531-2533, prohibits Federal agencies from engaging in any standards or related activities that create unnecessary obstacles to the foreign commerce of the United States. Legitimate domestic objectives, such as safety, are not considered unnecessary obstacles. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards.

In accordance with the above statute, the FAA has assessed the potential effect of this proposed rule and has determined that the objective of this proposed rule is the safety and security of the United States, and therefore not considered an unnecessary obstacle to international trade.

Unfunded Mandates Assessment

Title II of the Unfunded Mandates Reform Act of 1995 (the Act), 2 U.S.C. 1531-1571, requires each Federal agency, to the extent permitted by law, to prepare a written assessment of the effects of any Federal mandate in a proposed or final agency proposed rule that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more (adjusted annually for inflation) in any one year. Section 204(a) of the Act, requires the Federal agency to develop an effective process to permit timely input by elected officers (or their designees) of State, local, and tribal governments on a proposed "significant intergovernmental mandate." A "significant intergovernmental mandate" under the Act is any provision in a Federal agency regulation that will impose an enforceable duty upon State, local, and tribal governments, in the aggregate, of $100 million (adjusted annually for inflation) in

any one year. Section 203 of the Act, 2 U.S.C. 1533, which supplements section 204(a), states that before establishing any regulatory requirements that might significantly or uniquely affect small governments, the agency shall have developed a plan that, among other things, provides for notice to potentially affected small governments, if any, and for a meaningful and timely opportunity to provide input in the development of regulatory proposals or proposed rules.

This proposed rule does not contain any Federal intergovernmental or private sector mandate. Therefore, the requirements of Title II of the Unfunded Mandates Reform Act of 1995 do not apply.

Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)) requires that the FAA consider the impact of paperwork and other information collection burdens imposed on the public. We have determined that there are no new information collection requirements associated with this proposed rule.

International Compatibility

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with International Civil Aviation Organization (ICAO) Standards and Recommended Practices to the maximum extent practicable. The FAA has determined that this proposed rule will have no effect on ICAO Standards and Recommended Practices or ICAO Procedures for Air Navigation Services during normal airplane operations. However, it should be noted that, upon activation of the hijack code, the flight crew would not be able to perform the transponder actions outlined in ICAO Procedures for Air Navigation Services. These actions include modifying the Mode 3A

transponder code, turning the transponder to standby or off, or inhibiting the transponder altitude reporting function. It is not expected that ATC personnel would request any of these actions during an actual hijack situation.

Regulations Affecting Interstate Aviation in Alaska

Section 1205 of the FAA Reauthorization Act of 1996 (110 Stat. 3213) requires the Administrator, when modifying regulations in title 14 of the CFR in manner affecting interstate aviation in Alaska, to consider the extent to which Alaska is not served by transportation modes other than aviation, and to establish such regulatory distinctions as he or she considers appropriate. Because this proposed rule would apply to all aircraft operated under the provisions of part 121, it could, if adopted, affect interstate aviation in Alaska. The FAA therefore specifically requests comments on whether there is justification for applying the proposed rule differently in interstate operations in Alaska.

Executive Order 13132, Federalism

The FAA has analyzed this proposed rule under the principles and criteria of Executive Order 13132, Federalism. We determined that this action would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, we determined that this notice of proposed rulemaking would not have federalism implications.

Plain English

Executive Order 12866 (58 FR 51735, Oct. 4, 1993) requires each agency to write regulations that are simple and easy to understand. We invite your comments on how to

make these proposed regulations easier to understand, including answers to questions such as the following:

- Are the requirements in the proposed regulations clearly stated?
- Do the proposed regulations contain technical language or jargon that interferes with their clarity?
- Would the regulations be easier to understand if they were divided into more (but shorter) sections?
- Is the description in the preamble helpful in understanding the proposed regulations?

Please send your comments to the address specified in the ADDRESSES section.

Environmental Analysis

FAA Order 1050.1D defines FAA actions that may be categorically excluded from preparation of a National Environmental Policy Act (NEPA) environmental impact statement. In accordance with FAA Order 1050.1D, appendix 4, paragraph 4(j), this proposed rulemaking action qualifies for a categorical exclusion.

Energy Impact

The energy impact of the proposal has been assessed in accordance with the Energy Policy and Conservation Act (EPCA) Public Law 94-163, as amended (42 U.S.C. 6362) and FAA Order 1053.1. It has been determined that the proposal is not a major regulatory action under the provisions of the EPCA.

List of Subjects in 14 CFR Part 121

Air carriers, Air transportation, Air traffic control, Aircraft, Aviation safety, Federal Aviation Administration, Radio equipment, Transponder.

The Proposed Amendment

In consideration of the foregoing, the Federal Aviation Administration proposes to amend Chapter I of Title 14, Code of Federal Regulations, as follows:

PART 121—OPERATING REQUIREMENTS: DOMESTIC, FLAG, AND SUPPLEMENTAL OPERATIONS

1. The authority citation for part 121 is revised to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 40119, 41706, 44101, 44701-44702, 44705, 44709-44711, 44713, 44716-44717, 44722, 44901, 44903-44904, 44912, 45101-45105, 46105, Sec. 104, Pub. L. 107-71, 115 Stat. 597-647.

2. Add § 121.346 to read as follows:

§ 121.346 ATC transponder operation.

(a) After March 29, 2005, no person may operate an airplane unless that airplane has the capability to allow each flight crewmember to quickly activate the ATC transponder Mode 3A beacon code "7500" through a single action that includes protection from inadvertent activation.

(b) Upon activation of the ATC transponder Mode 3A beacon code, as described in paragraph (a) of this section:

(1) The ATC transponder must continue to report the airplane's altitude;

(2) There must be a visual indication to the flight crew that the activation has occurred; and

(3) A person onboard that airplane must not be able, by reasonable means, to disable the transponder or change its code during the remainder of the flight. In this case, the pilot-in-command need not comply with the requirements of § 91.217(a) of this chapter.

Issued in Washington, DC, on JAN 8 2003

John J. Hickey
Director, Aircraft Certification Service

Certified to be a True Copy
Bonnie Fritts