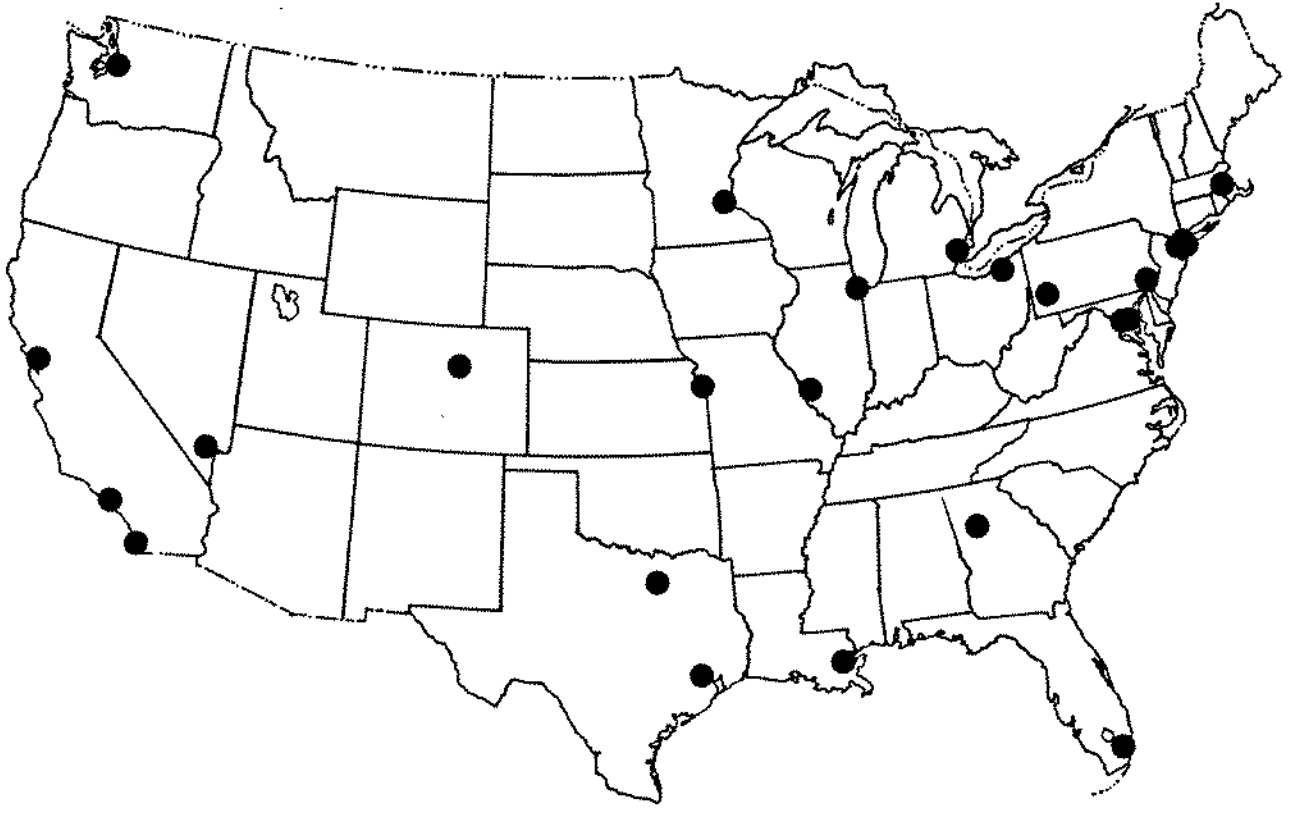
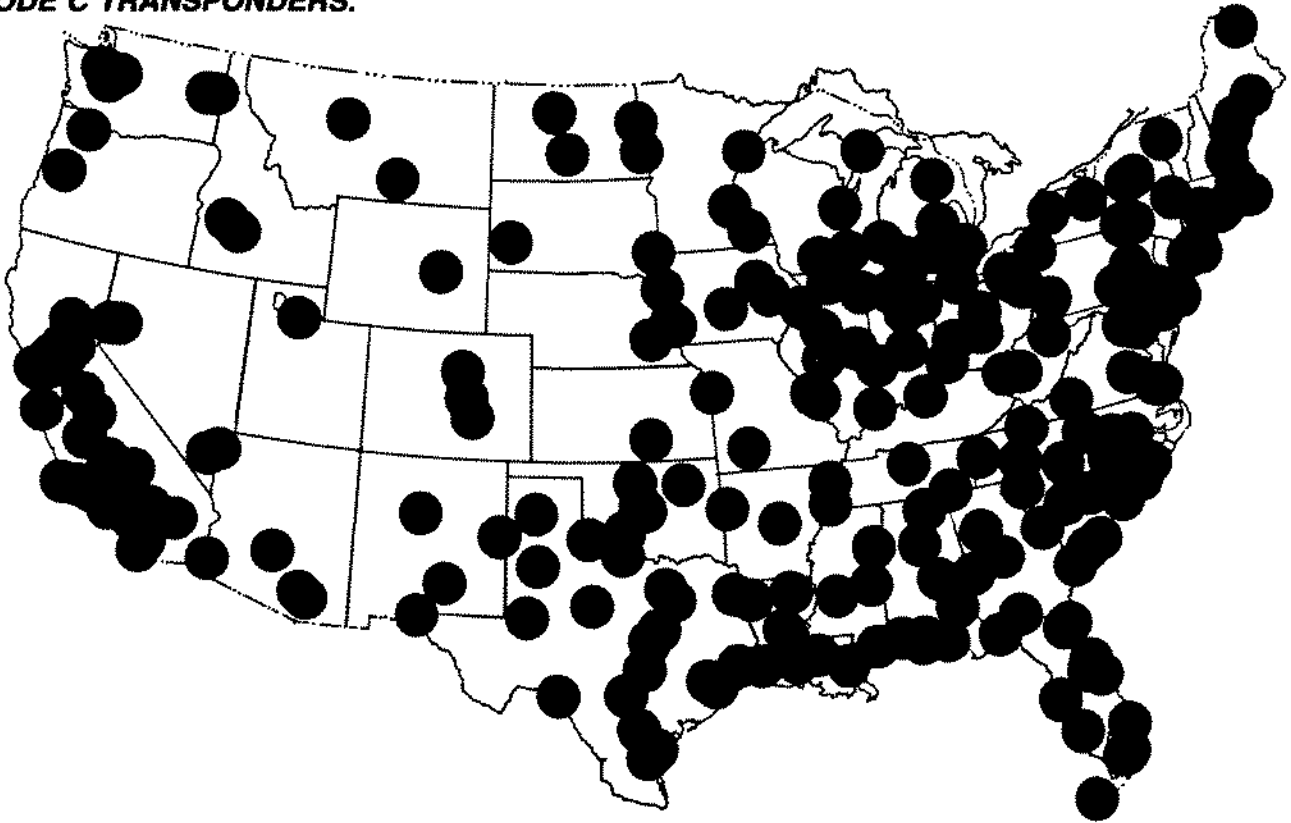


THE PROPOSAL

THE FAA HAS ISSUED A NPRM WHICH WOULD MASSIVELY INCREASE THE NUMBER AND SIZE OF TERMINAL AREAS IN WHICH MODE C TRANSPONDERS WOULD BE REQUIRED, FROM THE CURRENT 23 TCA'S . . .



. . . TO THIS INCREDIBLE MUTILATION OF THE NATION'S AIRSPACE. OVER 250 CYLINDERS OF AIRSPACE, EACH 92 MILES WIDE, WOULD BE CENTERED OVER ALL THE NATION'S CIVIL AND MILITARY AIRPORTS THAT HAVE BEEN DESIGNATED AS TRSA'S, ARSA'S AND TCA'S. MODE C WOULD BE REQUIRED IN THESE CYLINDERS FROM THE GROUND UP TO INFINITY, EFFEC-TIVELY GROUNDING ALL AIRCRAFT BASED WITHIN THEM THAT ARE NOT EQUIPPED WITH MODE C TRANSPONDERS.



On Friday, February 12, the FAA issued a Notice of Proposed Rule Making (NPRM) entitled **Transponder With Automatic Altitude Reporting Capability Requirement and Controlled Airspace Common Floor** (Docket No. 25531, Notice No. 88-2). It contained three provisions that, if adopted, will affect all who fly in the airspace of the United States.

1. Mode C transponders would be required in all aircraft flying at 6,000 feet (and higher) above the surface of the entire United States, Puerto Rico, the U. S. possessions and its territorial waters. In mountainous areas, the Mode C floor would be 6,000 feet AGL or 12,000 feet MSL, whichever is lower.

2. In addition, all aircraft operating at any altitude within 46.06 statute miles (40 nautical miles) of an airport at which

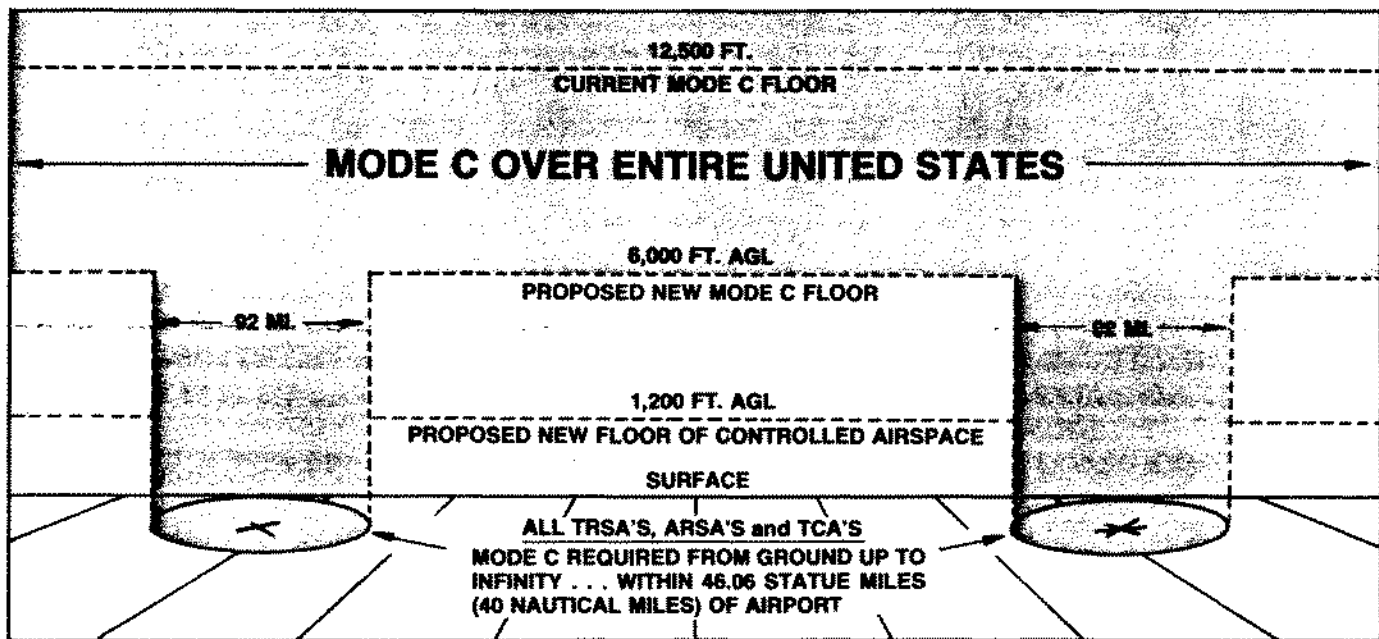
(Note: Ultralights are not classified as aircraft by FAA and thus do not come under the provisions of this NPRM.)

This NPRM came about as a direct result of two federal laws passed by Congress and signed by the President in the waning days of 1987. First, the **FY 1988 Continuing Resolution** (Public Law 100-202) provided that FAA would issue regulations requiring Mode C transponders (1) "in terminal airspace where ATC radar service is provided, and (2) in all other controlled airspace above a minimum altitude determined by the FAA." It further required that FAA should issue such a rule by December 22, 1988 and make it effective "at the earliest feasible date."

Second, **The Airport and Airways Safety and Capacity Expansion Act of 1987** (Public Law 100-223) provided that the FAA would require a Mode C

the specific limits of terminal airspace, so FAA took full advantage of that oversight and interpreted it to mean the entire area around an airport in which radar service is provided for separation of aircraft . . . which is 46.06 statute (40 nautical) miles from the center of the airport. (Beyond 46 miles, radar service is normally provided by enroute ATC, if available.) By this wild flight of extrapolation, FAA proposes to require Mode C from the ground up within the over 250 cylinders of airspace you see on the accompanying map, each over 92 miles across!

Predictably, the agency also took full advantage of its *carte blanche* mandate to require Mode C over the entire U. S. "above a minimum altitude determined by the FAA" by pushing it all the way down from the current 12,500 feet to just 6,000 feet. This was justified in the



terminal radar approach control service has been established would have to have a Mode C transponder. These are the airports, **over 250 at present**, that have been designated as TRSA's, ARSA's and TCA's.

3. The floor of controlled airspace would be set at 1,200 feet above the surface of the entire United States, Puerto Rico, the U. S. possessions and its territorial waters. At and above this 1,200 foot floor a 3 mile visibility minimum would be required. This airspace would henceforth be known as the **U. S. Control Area**.

Public comment on the NPRM must be received by FAA at its offices in Washington **on or before March 28, 1988**. A final rule must be issued by June 30, 1988 and the rule will become the law of the land on December 30, 1990.

transponder in "designated terminal airspace where radar service is provided for separation of aircraft." A final rule would be issued by FAA by June 30, 1988 and would become effective no later than December 30, 1990. This law specifically stated that "access to designated airspace other than TCA's and ARSA's may be granted to non-equipped aircraft if such access will not interfere with normal traffic flow."

Since the two laws were not identical in their language, FAA reconciled their differences, adopting, for example, the compliance, deadlines of **The Airport and Airway Act** because they were earlier or more specific than those of the **Continuing Resolution**. In their interpretation of the other provisions, however, FAA went far beyond what EAA believes was the intent of Congress. For example, neither law defined

NPRM on the basis that since FAA has the ultimate goal of achieving radar coverage of the U. S. at and above 6,000 feet, it was only logical that the Mode C floor be at the same level . . . even though FAA will not be able to achieve the radar coverage until sometime in the "mid-1990s."

Similarly, the FAA justified creating a uniform floor of controlled airspace at 1,200 feet AGL by claiming it would simplify the current airspace structure by encompassing, and thereby eliminating, individual transition areas, additional control areas, Federal airways, etc. This is just another way of saying that FAA wants to reconfigure the nation's airspace totally in accord with the requirements for IFR flying. It takes little imagination to anticipate FAA's next step: eliminate all VFR flying.

THE PROBLEMS IT PRESENTS . . .

3

Any pilot can take one look at the accompanying terminal control maps and instantly grasp what the NPRM will mean for owners of the 33,000 U. S. aircraft not equipped with electrical systems: **ESSENTIALLY, THEY WILL BE GROUNDED IN CALIFORNIA AND IN THE STATES EAST OF THE MISSISSIPPI RIVER, AND WITHIN 46 MILES OF ALL THE MAJOR METROPOLITAN AREAS IN THE REMAINDER OF THE COUNTRY.** In point of fact, both the Congress and FAA's NPRM state that "access to designated airspace other than TCA's and ARSA's may be granted to non-equipped aircraft if such access will not interfere with normal traffic flow . . . but almost all the circles you see on the map are ARSA's and TCA's, and the few that are still TRSA's are being converted to ARSA's just as fast as FAA can go through the motions of holding "public hearings." And even if some sort of way out from under, say, the Florence, SC terminal area, were granted, where would one go? That airport's 92 mile wide cylinder of airspace is totally surrounded and, in fact, overlapped by other 92 mile wide cylinders. You can, if you'll look closely, trace an unbroken, convoluted chain of overlapping cylinders from Florence all the way to Houston, Texas!

What alternatives to junking their aircraft does the NPRM provide for owners of aircraft without electrical systems? Install an electrical system, FAA says, for "approximately \$2,000." Of the 33,000 aircraft without electrical systems, almost all . . . Cubs, Aeroncas, Taylorcraft, Luscombes, Vagabonds, Baby Aces and the like . . . are powered by the Continental A-65. Who has 33,000 FAA approved generators to fit this engine? Wind driven generators have been approved for most of these aircraft, but who has 20,000 or 25,000 ready to ship for those not presently fitted with them? Does anyone know if a wind driven generator puts out enough juice to operate a Mode C transponder full time on all flights?

And what about the rest of us who own aircraft with electrical systems, but are not yet equipped with Mode C transponders? No problem, FAA says, all it takes is money . . . "approximately

\$1,050, installed" for a "basic transponder" and "\$800 to \$900, installed", for "an altitude encoder suitable for general aviation use." This would add up to "only" \$1,950 for owners of aircraft with electrical systems and \$3,950 for owners of aircraft without them . . . which brings up a very important point. The Federal government has decreed that when any rule or law causes a citizen to spend more than \$3,540 to comply with its provisions, the agency making the rule or law must do an economic impact study. The FAA has not done this, despite the fact that, using their own numbers, owners of aircraft without electrical systems will be over the impact limit by \$410. Actually, the FAA sidesteps the entire economic question by rightly noting that the two Federal laws that forced them to issue the NPRM "do not provide for exceptions to those requirements based on cost or economic impact."

What about gliders? The FAA dismisses them with a single sentence: "A second cost of the Mode C transponder requirement will be the elimination of the existing exception for glider operations above 12,500 feet MSL and below the floor of positive control areas." In other words, no Mode C transponder, no soaring over 5,999 feet AGL and within 46 miles of the 250+ terminal areas — the same as airplanes. A battery powered Mode C transponder has been developed, but at this time the manufacturer is getting nothing but a hard time from its regional FAA office on the certification process. The Soaring Society of America also reports that battery life is quite limited in such units due to the high power drain of a constantly transmitting transponder.

Estimates vary on the number of U. S. civil aircraft already equipped with transponders . . . some say as many as 70%. Based on a total of 230,000 aircraft that means 69,000 do not have transponders. Estimates on the number of aircraft already equipped with altitude encoders average around 45% — which would mean 126,500 do not. The question, then, is whether 69,000 new and airworthy used transponders exist to be sold and installed between now and December 30, 1990 . . . and

whether the avionics manufacturers have any incentive to boost production on existing transponder models when, by law, they are required to switch over to production of the new Mode S transponders on January 1, 1990? Further, only 4 or 5 companies make altitude encoders. Do they have the production capacity to produce 126,500 encoders in time for all of them to be installed by December 30, 1990? Do we have enough radio shops in the U. S. to install that much equipment in the two and a half years (from the June 30 final rule date) that remain?

Did Congress investigate these potential problems when it passed its two laws requiring Mode C by December 30, 1990? Are they putting aviation in the same ridiculous situation they did in the early 1970s when they mandated ELTs before the industry was ready to produce them?

If this NPRM goes into effect as written, a unique problem will come to exist for all pilots. Because for the first time almost all the airspace over the U. S., from the ground up, will be an area where full time use of Mode C transponders will be required . . . WHAT ARE THE CONSEQUENCES OF AN IN-FLIGHT TRANSPONDER AND/OR ALTITUDE ENCODER FAILURE? Will we be in instantaneous violation of FAR's, subject to fines recently escalated to a maximum of \$10,000? Will a pilot be permitted to continue his flight to his planned destination . . . or to one of the few of our nation's airports with an avionics shop . . . or to return to his home airport? Or . . . will he be required to land at the closest airport, not to fly again until his equipment is repaired? These are the potential consequences of the totally unwarranted size of the terminal areas in which FAA wants to require use of Mode C transponders, leaving pilots with literally no options that do not involve unnecessary delay and expense . . . and, very likely, violation of the law.

The transponder rule will, of course, have consequences that extend beyond the borders of our own country. Aircraft of neighboring Canada and Mexico will have to have Mode C to be flown into the U. S. — such as to Oshkosh —

which would be an economic hardship if those nations do not have similar requirements.

The proposed 1,200 foot AGL universal floor for controlled airspace appears to be little more than a dollop for the convenience of FAA personnel. The NPRM language essentially admits that, saying, "... controlled airspace should exist at least coincidentally with the airspace where Mode C transponders will be required in the enroute ATC

environment," and then goes on to, in effect, say that, what th' hey, if we are going to take it down to 6,000 feet, why not just run it on down to 1,200 feet instead? That will make it easier for us to make rules and draw charts, they seem to be saying, and, besides, it will provide additional safety by upping visibility minimums to 3 miles above the floor. This proposal epitomizes the entire NPRM. It reveals as few previous actions have the arrogance of the FAA

... Its total disregard for the needs, desires and rights of its largest constituency when it believes it has been given free rein by Congress. Given the fluid nature of the atmosphere, the difference between flying enroute in one mile or three mile visibility always has and always will be a judgment call on the part of the pilot. The proposed 1,200 foot controlled airspace floor serves no purpose other than the administrative convenience of the FAA.

4

ACTION REQUIRED . . . NOW!

EAA Headquarters' position on the structure and regulation of U. S. airspace is well known and has been consistent over the years. We believe that the government, both Congress and the FAA, have a fundamental obligation to create an airspace structure and rules for flying in that airspace that serve the needs of all . . . not just those of stockholder owned, for profit air carriers. EAA has always been philosophically opposed to the FAA's concept of a ground based ATC/collision avoidance system, which we believe to be based more on bureaucratic empire building than on safety. EAA believes aviation and our society would be best served by a simple demarcation line at 12,500 feet MSL (with appropriate allowances for high terrain in mountainous areas). The airspace above that line would be for air carrier aircraft and all others able to comply with FAA equipment and procedure requirements. The airspace below that line would be for other than certificated air carriers. For the protection of their passengers and the occupants of other aircraft, air carriers would be strictly limited to ascents and descents through this lower level airspace to terminal areas only . . . inside the smallest possible, most clearly defined corridors. The terminal areas, themselves, would be only as large as necessary for go-arounds and close-in maneuvering to align with runways not on the same heading as the climb and descent corridors. Fully independent, on-board collision avoidance devices for all aircraft, likely inte-

grated with loran or satellite navigation equipment, should be developed instead of TCAS, Mode C, Mode S, etc., all of which are simply band aids for the FAA air traffic control system which the NTSB has held primarily responsible for the deaths of the victims of the Cerritos, CA and other more recent mid-air collisions.

The NPRM in consideration here is simply the latest and most oppressive of those band aids. Everyone must understand that it is unique, however, in that it came about as a result of a mandate from the Congress and the President of the United States . . . few of whom had any understanding of what problems they were creating when they voted for money bills upon which the Mode C amendments were attached. It is necessary, therefore, that each of you do two things: (1) respond to the NPRM, and (2) contact your U. S. Representative and your two U. S. Senators. In the short term, we need to respond to the NPRM in order to get the size of the terminal areas reduced and the floors of enroute Mode C and controlled airspace raised. We cannot ask FAA to eliminate the Mode C requirement, however, because, again, it is now required by law — and only Congress can change the law.

EAA urgently requests that each of you:

1. Call, write or, if possible, visit the U.S. Representative from your congressional district and the two U.S. Senators from your state. You'll find a list of their names and the addresses to write at

the end of this section. Brief each on the identity of the laws in question (Public Laws 100-202 and 100-223) and their particulars regarding the Mode C requirement . . . then provide each with a detailed description of how their votes on these laws are going to affect you. Use any of the information aired in the preceding sections of this flyer that pertains to you, plus, of course, your own ideas based on your own particular circumstances. **Be successful, but be courteous.** Nothing will be gained by heaping personal abuse on your elected officials, no matter how predisposed you are to do so. You have an election coming up and it falls in which to express your personal opinion of them.

2. Respond to the NPRM. You must send two copies of your letter to:
Federal Aviation Administration
Office of the Chief Counsel
Attention: Rules Docket (AGC 204)
Docket Number 20531
800 Independence Ave., SW
Washington, DC 20591

Express your opinions . . . but EAA Headquarters recommends that you also include the following:

A. Reduce the size of the proposed terminal airspace in which Mode C transponders are required from 92 miles across to the present sizes and shapes of TRS's, ARSA's and TCA's . . . with the exception of the Los Angeles TCA which should revert to its previous configuration before Administrator McAnis's recent emergency enlargement. Justify this request with the

arguments outlined in the previous section.

B. Insist on access for aircraft without Mode C transponders to satellite airports under the outer layers of all TCA's, from their outer perimeters into but not including the innermost ground up layer. This access area should extend up to at least 1,200 feet AGL, which would provide more than adequate separation of airliners and aircraft without Mode C.

C. Leave the floor of the enroute Mode C airspace at 12,500 feet MSL and create climb and descent corridors

in which air carrier aircraft can transit the low level airspace to and from airports without endangering the lives of their passengers and the occupants of other aircraft they might otherwise run down.

D. Also place the floor of controlled airspace **for VFR operations** at 12,500 feet MSL (with the appropriate allowances for mountainous terrain).

Again, back up all these requests with the arguments outlined in the previous section, plus any others that apply to your situation.

And, finally, remember to send two

copies of your letter to FAA and mail it in time to be received in Washington by the 28th day of this month. This NPRM represents the greatest threat to date to our right to fly lightplanes in the United States . . . and potentially far worse, it sets the stage for realizing FAA's long held goal of imposing full time positive control of everything that flies. That would be the end of sport flying, and we must not let it happen. We must make a stand here . . . get out those pens and strike a major blow for freedom!

U.S. SENATORS AND CONGRESSMEN

The mailing address for all U. S. Senators is:

The Honorable
Senate Office Building
Washington, DC 20510

The mailing address for all U. S. Congressmen is:

The Honorable
House Office Building
Washington, DC 20515

BE SURE TO ASK YOUR SENATORS AND CONGRESSMEN FOR A REPLY . . . AND TELL THEM YOU DO NOT WANT A COPY OF A FORM LETTER FROM THE FAA.