

April 25th 2013

Reply to comments made FCC Docket 01-289 3rd rulemaking

The various comments made by general aviation pilots all have very common themes. This was the result of the AOPA urging its 400,000 members to comment, providing them a direct link to the FCC comment site. This was done using a series of emails linked to its newsletters and governmental advocacy websites urging members to respond while providing them with misleading and factually incorrect information. A response by less than 200 of their 400,000 members over the 2 month comment period does not indicate an overwhelming amount of concern by the general aviation community regarding this rule. In contrast there were 16,000 responses to the FAA proposal to change the requirements for 3^d class medical certification.

Following are my replies to many similar general comments made by individual pilots and in the AOPA response letter. These comments should be evaluated with consideration given to the source and accuracy of the information given the commenters:

- The decision to equip his aircraft with an ELT should be determined by the pilots and should not be forced upon them by regulation.*

I agree with these comments and believe the pilot has the right to decide what's best for him. The FAA also agrees and allows every pilot to decide to fly with or without installing an ELT. FAR 91.207(f) (1) exempts all aircraft from the requirement to carry an ELT if it is equipped to carry only the pilot. Any aircraft owner can remove all but the pilot's seat and legally fly his aircraft without an ELT and without any restrictions. This allows a pilot to fly anywhere in the US for as long as he wants without an ELT installed.

It is when the pilot brings aboard passengers, loved ones, and children that the FAA and FCC become concerned with their safety and the ELT carriage requirements change. If you examine fatal accidents in which there are survivors you quickly become aware that in a large majority of cases the pilot and front seat passenger are killed but the rear seat passengers survive. While a pilot may be very aware of the risks inherent in flying and knows how to use the 121.5 distress voice frequency, operate comm radios, activate PLB's and other tracking devices the surviving passengers especially children do not.

I have been involved in general aviation for over 30 years as a pilot and manufacturer and the notion that GA pilots brief passengers as to what to do in the event of a crash and how to use emergency devices is just fantasy. Most passengers are nervous enough without the pilot briefing them on what to do in the event of a crash. Banning the use of 121.5 MHz ELT's which would have the practical effect of requiring the use of 406 MHz ELT's, shown to have a 83% chance of activating in an accident, and detectable by satellite is a reasonable use of the FCC's authority to protect life and property.

- The cost to the aviation community is much too high. This is what the AOPA told their members about ELT retrofit costs. It is also referenced in their comment letter:*

“By FAA estimates, that burden could total close to \$500 million.” (1)

The AOPA used an outdated and highly inflated figure of 500 million dollars to general aviation sighting an FAA study done during the period of 1995 to 2005 on the cost of 406 retrofit. The average cost used in this study was \$2,800.00 without GPS capability. The AOPA knows the cost of 406 ELT's has dropped to a fraction of the cost during this time period. (7) A simple internet search for “406 MHz ELT” on any of the popular search engines will return a wide variety of websites that offer 406 MHz ELT's with and without GPS for under \$600.00.

A realistic estimate is the cost to retrofit 200,000 US aircraft I believe is 175 to 225 million.

- *The FAA not the FCC should determine matters of aircraft safety. This is from the AOPA Governmental Advocacy website:*

“The FAA is the authority for regulations affecting aviation and in this case is the correct agency to determine the outcome of this issue,” Hackman said. “The FCC should still defer to the FAA on issues of aviation safety.” (1)

This stated position that the FAA not the FCC should make decisions regarding aircraft safety sounds logical but what is not told the members is that largely due to AOPA efforts in 2000, the FAA is prohibited from mandating 406 ELT's no matter what the benefits to safety. Chip Bulger a FAA representative who attended the Search and Rescue forum when ask by the NTSB members why the FAA doesn't require the removal of 121.5 ELT's and require 406 ELT's answered that the FAA hands are tied and is prohibited from mandating 406 ELT's by federal law enacted in the year 2000.

Following is a video link to Chip Bulger's response during the NTSB Search and Rescue forum in July of last year.

<https://www.youtube.com/watch?v=GvNwFz6-xiU>

The only reason the FCC is involved in this action is because the FAA's hands have been tied and they are unable to mandate 406 MHz technology to improve aircraft accident survivability.

- *406 ELT technology is slightly better or no better than the 121.5 ELT*

This is from the AOPA Governmental Advocacy site after the rule making was announced:

*“That's a high cost to impose on the industry for a switch when there has been no study or analysis provided showing increased safety benefits. **The 406 MHz ELT is only slightly more likely to be set off by the impact of an accident than a 121.5 MHz ELT.** While the 406 MHz ELT transmits GPS coordinates, it also transmits a signal over 121.5 MHz. Because neither ELT is 100-percent reliable, many pilots are flying with other tracking devices that can be set off while in the air” (2)*

This statement by AOPA is a patently false statement and misleading to its members. From the AOPA's own regulatory brief to members in 2008 this is what the AOPA told their members about the improvement in ELT technology. I believe their statistics are from a study conducted for the FAA by NASA. (6)

*“The original ELTs were manufactured to the specifications of an FAA technical standard order **(TSO-C91)** and have an activation rate of less than 25 percent in actual crashes and a 97 percent false-alarm rate. In 1985, a new TSO-C91A ELT was developed, which substantially reduces or eliminates many problems with the earlier model. **The TSO-C91A provides improved performance and reliability (with an activation rate of 73 percent in actual crashes)** at a reasonable cost to users (\$200-\$500 including installation). Since then, an even more advanced model of ELT has been developed — **the C126 ELT (406 MHz).** This newest model*

activates 81-83 percent of the time and transmits a more accurate and near-instantaneous emergency signal by utilizing digital technology. This digital 406-MHz ELT also allows search and rescue personnel to have vital information specific to you and your aircraft.” (3)

By our estimate close to 50% of the US registered aircraft still have the old TSO-C91 ELT's installed. These have been shown to have less than a 25% chance of activating in an accident and if activated transmit at low power a signal incapable of being detected by satellite. The NASA (6) report concluded that simply by switching from the TSO-C91 to the newer TSO-C91a ELT would save 25 lives per year.

This is from the NOAA web page and quotes a study done by the FAA on mandating 406 MHz ELT's:

“Presently, most aircraft operators are mandated to carry an ELT and have the option to choose between either a 121.5 MHz ELT or a 406 MHz ELT. The Federal Aviation Administration has studied the issue of mandating carriage of 406 MHz ELTs. The study indicates that 134 extra lives and millions of dollars in SAR resources could be saved per year.” (4)

An 83% activation rate of 406 ELT's is more than 3 times that of TSO-C91 ELT's which are installed in approximately half of the US aircraft. An 83% activation rate is really quite remarkable considering the severity of many aircraft accidents and with satellite detection is a great improvement over the old 121.5 ELT's.

- *ADS-B will replace ELT's in the near future and is being mandated by the FAA*

This is from the AOPA Governmental Advocacy site: (3)

“AOPA opposes any mandate that relies on only one technology, and has pointed out that the plan would soon be rendered moot by the FAA's mandate to equip aircraft with ADS-B Out by the year 2020. That technology will provide the aircraft's last known position and registration number to air traffic control.” (2)

This sound like a reasonable rational until one examines the facts. During the NTSB search and rescue forum Vincent Capezzuto of the FAA was ask by the NTSB board members if ADS-B would be a substitute for 406 ELT's. He responded that ADS-B could provide some coverage and aircraft identification but it was limited to line of site and at low altitudes areas of the country will have no coverage and therefore will not be a replacement for a 406 MHz ELT. The requirement to equip aircraft with ADS-B only applies to class B airspace and above 10,000 feet. This leaves a very large number of aircraft that operate out of this airspace without ADS-B.

How does ADS-B determine an accident has happened? Is the equipment subject to the rigid crashworthiness standards ELT's are required to meet? Will the FAA send out search and rescue personal every time an aircraft drops below ADS-B coverage or a unit fails and stops transmitting?

As I noted in my original comment the AOPA is strongly opposed to mandatory requirements to equip aircraft with ADS-B yet cites it as a replacement for ELT's.

- *The FCC does not have the authority to regulate aircraft safety*

The only reason the FCC is involved is because the FAA's hands are tied and cannot mandate 406 MHz ELT's.

The FCC has been granted the responsibility and authority to discontinue the use of outdated technology which they have done recently with the discountenance of analog television broadcast

which made obsolete hundreds of millions of television receivers in the US and the banning of 121.5 MHz EPIRB's in January of 2007. They are also granted the responsibility and authority to protect life and property using wire and wireless technology.

7 USC 151 - Purposes of chapter; Federal Communications Commission created

Sec. 151. Purposes of chapter; Federal Communications Commission created

For the purpose of regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex, a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges, for the purpose of the national defense, **for the purpose of promoting safety of life and property through the use of wire and radio communications**, and for the purpose of securing a more effective execution of this policy by centralizing authority heretofore granted by law to several agencies and by granting additional authority with respect to interstate and foreign commerce in wire and radio communication, there is created a commission to be known as the "Federal Communications Commission", which shall be constituted as hereinafter provided, and which shall execute and enforce the provisions of this chapter.

In the interest of safety the FAA has banned the use of hand held electronic devices on aircraft even though it is the FCC that has the regularity authority over where and how these devices are used. It is apparent that one agency can enact regulations that have impact on a different agency in the interest of safety.

The FCC has the authority and the duty to discontinue the use of obsolete technology and provide for better regulation and efficient use of the spectrum to protect life and property.

Following are my replies to specific comments

- *AOPA Posted 04/02/2013*

The AOPA continues to use outdated disingenuous information about the costs of retrofitting the US fleet with 406 MHz ELT's. They know this information is incorrect I explained this to Rob Hackman in a letter sent on May 22, 2012⁽⁷⁾ in which I pointed out ELT prices have fallen to a fraction of the costs used in the old FAA study. The FCC has asked for factual comments on the cost of ELT replacement. The AOPA, even though they asked for additional time to study the issue before commenting, did not provide any factual or accurate replacement cost information.

The AOPA contends that the FAA and not the FCC should determine the standards for flight safety. In general this is true. The FAA has determined that an ELT is a "Minor Failure Condition" and is not a hazard to flight safety. But when the aircraft has impacted the ground and is no longer in flight it becomes a matter of survival which the Search and Rescue community must deal with and they have all expressed the strong support banning the use of 121.5 MHz ELT's and the requirement to carry a 406 MHz ELT. The AOPA was instrumental in 2000 tying the hands of the FAA so they could not require the retrofit of 406 MHz ELT's no matter what their benefit. I asked our AEA governmental advocate, Ric Peri, early on in the proceedings "what is the chance of the FAA changing the regulations to require 406 retrofit if the FCC doesn't act on the proposal. His answer, "Zero chance".

The AOPA contends that the FAA opposes the mandatory retrofit of 406 MHz ELT's. This was true in 2010 when there was not enough manufacturing capacity or time to comply with the rule without grounding a large number of the fleet in the time frame proposed. The conditions today and the schedule for retrofit proposed by the RTCM in their comment will address all issues that were present in the 2010 proposal. I have seen no comments from the FAA opposing the adoption of this current rulemaking. All the FAA representatives I have spoken with have strongly supported 406 retrofit.

The AOPA contends that requiring 406 retrofit will freeze the development of improved safety equipment. The fact is, the AOPA has been the leader in opposing any regulatory requirement that might cost the membership they represent any amount of money. The AOPA has effectively frozen ELT technology at the 1973 level. Its opposition has left approximately 50% of the fleet using TSO-C91 ELT's working in less than 25% of the accidents in which they are installed. It is no wonder that most pilots consider them a nuisance required by regulation. The AOPA has opposed every regulation which would improve aircraft safety. They unsuccessfully opposed the requirement that Mode C altitude encoders be required in all US aircraft even after two collisions within 8 years between small aircraft and passenger aircraft resulted in a large loss of life both in the air and on the ground caused by the lack of an encoder in GA aircraft. In the 23 years following the encoder mandate, there have been no further accidents of this type. They successfully opposed the retrofit requirement that TSO-C91 ELT's be replaced by TSO-C19a ELT's which a NASA (6) study determined could save 25 lives a year. They successfully opposed a regulation requiring Mode S transponders which would provide aircraft identification of all aircraft and could be used to some extent with radar to help locate downed aircraft.

Finally the AOPA contends that the aviation community has not been given proper notice and specifics about the dates this ruling will take effect. The aviation community has known about these proposals for many years as they have been widely published in the aviation media and discussed in almost all of the aviation forums at some point. The FCC made it very clear in 2010 that their intent was to prohibit the use of stand-alone 121.5 MHz ELT's. This was widely discussed within the aviation industry at the time. The current rulemaking notice has been widely reported throughout the aviation industry news websites.

- *Experimental Aircraft Association Posted 04/02/2013*

These comments generally mirror the AOPA position. My only comment is that almost all of the owner/members of the EAA do their own work and maintenance. The installation costs for these owners will be basically the cost of the ELT. This is also true of great many owners of certified aircraft especially older single engine aircraft. Typically the owner will do his own install and then have a certified mechanic inspect their work and if found satisfactory enter the work in the log book and certify the aircraft as airworthy.

- *Aviation Suppliers Association posted 04/01/2013*

The ASA argues that a rule which prohibits the use of stand-alone 121.5 MHz ELT would constitute a taking of private property under the 5th amendment of the Constitution. Quite to the contrary it has been long established law in the US that regulatory agencies have the authority to ban or restrict the use of personal property in the interest of public safety.

I asked one of the most recognized attorneys practicing in the area of condemnation law his opinion regarding the merits of the argument. (5)

Issue: The government banning the sale and use of older 121.5 MHz ELT's with a limited range because of new requirements which require better global positioning and satellite detection. The issue is whether this is an appropriate regulation or a taking?

Short Answer: The federal and state courts place the regulation of businesses or business products under the police power, with rare exception. The government, under its police powers, can ban the use of certain pesticide, outlaw drugs, and require warnings be placed on cigarette packages. The statute banning the sale and use of older 121.5 MHz ELT's is reasonably necessary to effectuate a substantial public purpose. Therefore, a court would likely find the ban on use and the sale of older 121.5 MHz ELT's as an appropriate regulation and not a taking.

Police Power

Under state and federal police power, the government has the right to make laws and regulations for the benefit of the public. There is a broad range of laws and regulations which courts have found to be proper exercise of police power. A few examples are:

Graham v. Kingwell, 218 Cal. 658 (Cal. 1933) - An act that was designed to prevent the introduction and spread of bee diseases was a proper exercise of the state's police power, despite the fact that the bee diseases that the act aimed to eradicate were not harmful to humans.

Kucera v. Lizza, 59 Cal. App. 4th 1141 (Cal. App. 1st Dist. 1997) - An ordinance that prohibited the unreasonable obstruction of views or sunlight by the growth of trees was a valid exercise of a city's police power and was not preempted by general state laws, and the lower court improperly denied relief.

People v. Norton, 108 Cal. App. Supp. 767 (Cal. App. Dep't Super. Ct. 1930) - A city had the police power to prohibit billboards in residential areas with greater than 12 feet in surface area because such a prohibition reasonably tended to promote the public health and welfare.

San Diego County Veterinary Medical Assn. v. County of San Diego, 116 Cal. App. 4th 1129 (Cal. App. 4th Dist. 2004) - A county did not exceed its police power authority in conducting rabies vaccine clinics at which dog owners could also purchase other vaccines for their pets; the county had broad constitutional and statutory authority to regulate and control dogs.

Disney v. City of Concord, 194 Cal. App. 4th 1410 (Cal. App. 1st Dist. 2011) - Ordinance amending a city's rules for storage of recreational vehicles on residential property did not exceed the city's police power, even though it was adopted primarily out of concern for community aesthetics, because cities could use their police power to adopt ordinances for aesthetic reasons.

Oxygenated Fuels Ass'n v. Davis, 163 F. Supp. 2d 1182 (E.D. Cal. 2001) - Trade association's challenge to state law that banned a gas additive was dismissed since Congress authorized California to set its own course in air quality regulation, so ban was not preempted by Clean Air Act or prohibited by Commerce Clause.

When a regulation is found to be a proper exercise of police power, the resulting effect of the regulation is not considered a taking. In the cases below, the court found that there was no taking as a result of a government regulation.

Relevant Case

Massingill v. Department of Food & Agriculture, 102 Cal. App. 4th 498 (Cal. App. 4th Dist. 2002)

Gas station owners and vendors of water and compressed-air machines brought an action for injunctive and declaratory relief against the state, challenging a statute that required gas stations to provide free air, water, and a tire pressure gauge to customers (Bus. & Prof. Code, § 13651). The trial court granted summary judgment for defendant government.

The Court of Appeal affirmed. The court held that Bus. & Prof. Code, § 13651, was a valid exercise of the state's police power. The court explained that the police power is the power of sovereignty or power to govern--the inherent reserved power of the state to subject individual rights to reasonable regulation for the general welfare. The police power extends to legislative objectives in furtherance of public peace, safety, morals, health and welfare. Whether a law is a constitutional exercise of the police power is a judicial question. A law is a valid exercise of the police power unless the law is manifestly unreasonable, arbitrary or capricious, and has no real or substantial relation to the public health, safety, morals or general welfare.

The court further explained that a law is presumed to be a valid exercise of police power. The party challenging the law has the burden of establishing it does not reasonably relate to a legitimate government concern.

A regulation of economic interests which "goes too far" may become a "taking" even though the property remains in private hands. The property owner may bring an inverse condemnation action and, if successful, the regulatory agency must either withdraw the regulation or pay just compensation. Inverse condemnation damages can only be recovered for a "regulatory taking," i.e., a governmental regulation which exceeded the police power to the extent it allowed for the taking of private property without payment of fair compensation.

Short Summaries of Additional Cases

Bronco Wine Co. v. Jolly, 129 Cal. App. 4th 988 (Cal. App. 3d Dist. 2005) - Because a geographic name in a brand name was inherently likely to mislead wine consumers when grapes were grown elsewhere, Cal. Bus. & Prof. Code § 25241, in restricting the commercial speech of a winemaker by prohibiting such use of brand names, did not constitute a taking. *An approved certificate of label approval for wine is not a recognized property interest under federal takings law. Wine labels are highly regulated and a COLA serves as an enforcement tool that can be revoked.*

A key question in any such case is whether the complaining party has a *protected property interest*. Here the old technology is obsolete. There is no protected interest in continuing sales or use of a particular product. Plus, in this case the upgrade improves air safety a major governmental concern.

Andrus v. Allard, 444 U.S. 51 (U.S. 1979) - Eagle Protection Act and Migratory Bird Treaty Act exempted any activity other than possession and transportation, even of pre-existing bird artifacts; reduction in value of property that included pre-existing artifacts did not constitute taking.

Small Property Owners of San Francisco v. City and County of San Francisco, 141 Cal. App. 4th 1388 (Cal. App. 1st Dist. 2006) - Because an ordinance that required payment of five percent interest on tenants' security deposits caused little or no loss, the landlords failed to prove that this loss was inconsistent with their reasonable investment-backed expectations, and the ordinance allocated economic benefits and burdens for the public good, there was no regulatory taking.

Golden Cheese Co. v. Voss, 230 Cal. App. 3d 727 (Cal. App. 4th Dist. 1991) - Cheese company had no reasonable expectations to any particular milk price level, and any interference with property rights arose from a public program to promote the common good and did not constitute a taking requiring government compensation.

Conclusion

Banning the sale and use of older 121.5 MHz ELT's is a regulation that is reasonably necessary to effectuate the substantial public purpose of health and safety of the public. This law is not manifestly unreasonable, arbitrary or capricious. It has a real and substantial relation to the public health, safety, morals and general welfare of the public. Therefore, if a court were to balance the factors described above, it would likely find this ban an appropriate regulation under the police power and not a taking.

One approach that would not require the banning of stand-alone 121.5 MHz ELT's would be for the FCC to allow the continued use of 121.5 MHz ELT's requiring that such use only be permitted if a 406 MHz ELT was used in conjunction with it. There is one fully FAA approved 406 ELT manufacturer who makes an ELT which broadcast only on 406 MHz. The latest TSO-C126b requires that all newly certified ELT transmit on both 121.5 and 406 MHz. This would surely not be a taking under the 5th amendment. This would also alleviate the concerns of the National Office of the Civil Air Patrol posted 03/15/2013 that 121.5 not be phased out too quickly.

The ASA also contends that the 121.5 ban would damage the distributors who have 121.5 MHz ELT's in stock yet not one distributor or manufacturer commented that they would be adversely affected by the ban. There are only two manufacturers I know of that still manufacture 121.5 MHz

ELT's both also make 406 MHz ELT's. We have been in the ELT manufacturing business for 22 years and have produced over 70,000 ELT's and we know the industry very well. No distributor that I am aware of stocks a large amount of ELT's 121.5 or 406 MHz, and the reason is the ELT battery life is limited and distributors don't want to supply a product that has had much of its battery life used sitting on the shelf. We and other ELT manufacturers tend to build when distributor orders are placed. Based upon my discussions with our distributors I believe that no more than 300 to 500 121.5 MHz ELT's a year are being produced. In our last year of 121.5 MHz production 2010, which was before we received certification of the new 406, our 121.5 MHz ELT according to our distributors it was the bestselling 121.5 ELT and priced as low as \$180.00 retail. We sold a total of 540 121.5 ELT's. It is my belief the banning of manufacturing and importation of 121.5 MHz ELT would not create a hardship on any manufacturer or distributor. I believe this is why there have been no comments received from the manufacturers or distributors asking the ban not be implemented.

- *RTCM Posted 01/28/2013*

I believe the phasing in of the transition to 406 MHz ELT carriage requirements is a reasonable and well thought out plan. The RTCM's involvement in phasing out the 121.5 MHz marine beacons gives them expertise in the area. One thing I would recommend modifying is the initial phase in which there is only one year from the effective date of the rulemaking to install the first phase of 406 ELT's. As a manufacturer we see lead times of 12 to 24 weeks on several specialized electronic components. I would recommend that the first phase deadline be extended to 18 months while leaving the other transition dates intact. This would allow for manufacturers to get in place all the supply chains required to provide for uninterrupted ELT production. I would also recommend that the FCC in the rulemaking provide for extension of the requirement dates if there is a documented shortage of ELT's necessary to meet the requirements and to avoid the grounding of aircraft because of such shortages.

- *Aircraft Electronic Association Posted 04/03/2013*

Why would the Aircraft Electronic Association and other aviation associations be opposed to the 406 retrofit requirements? The answer is quite simple and basic. Like most trade associations, the AEA supports those companies that most support them. The AEA is supported by its member companies both by paying dues on a graduated scale according to their size and by purchasing space at the annual AEA conventions. The four ELT manufacturers that are members of AEA are small entities producing only ELT's. The majority of financial support for AEA comes from the large broad line avionics manufacturers none of which produce ELT's. These manufacturers do not want to see any available revenue spent on a product they do not produce.

Ric Peri pretty much sums it up in his comment letter.

“General Aviation would be better served with avionics upgrades rather than ELT upgrades”

**Mike Akatiff
President**

References

(1) http://www.aopa.org/advocacy/articles/2013/130228fcc-floats-new-elt-ban-proposal.html?WT.mc_id=130301epilot&WT.mc_sect=adv&cmp=ePlt:RdMr

(2) http://www.aopa.org/advocacy/articles/2013/130314dont-ban-121-5-mhz-elts-aopa-says.html?WT.mc_id=&wtmcid;&WT.mc_sect=adv

(3) <http://www.aopa.org/whatsnew/regulatory/elt.html>

(4) <http://www.sarsat.noaa.gov/emercbns.html>

(5) http://www.matteoni.com/att_norm.html

(6) NASA Contractor report CR-4340

(7)

**ACK TECHNOLOGIES
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AOPA

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Attn: Robert Hackman.

May 22, 2012

Dear Mr. Hackman:

The reason for this letter is to ask that your organization reconsider the AOPA position on mandatory requirements for retrofitting US aircraft with the new generation 406 MHz ELT's. I can't find any other group or organization opposing the requirement.

I believe the AOPA opposition to this requirement, was the result of an estimate of several thousand dollars per aircraft to fit them with a 406. Since we introduced our 406 ELT in June of last year, 406 pricing has dropped dramatically. I have attached a comparison chart showing the current street prices of the most popular ELT's. Most of the other manufacturers shown on the chart have reduced prices by up to 60% from their pricing prior to our entering the market.

As you and the aviation community are aware, the FCC ban on 121.5 MHz ELT's in June of 2010 was an ill-conceived plan that was unworkable because of the short time frame and lack of manufacturing capabilities. Since that time we along with a number of new manufacturers have entered the market. I believe there now is ample manufacturing capacity to support a reasonable 3-4 year time frame for transition to the 406 MHz ELT standard as much of the world has already done.

We attended your AOPA convention in November 2009 as we were working on certifying the 406 ELT. Our purpose was to learn more about the ELT's pilots were using, and what their thoughts were about ELT's in general. We spoke to about 800 pilots who stopped by our booth. Two things struck us as we spoke to the pilots. First; most of them considered the ELT to be a FAA required nuisance, of not much use, and of course none of them felt they would ever crash. The other thing that was of interest was the number of aircraft that did not have the latest TSO C-91a 121.5/243 MHz ELT. Most were still using the old TSO C-91 ELT's which had been proven to be highly unreliable and prompted the C-91a TSO revision. Well over 50% of the pilots that knew what ELT was installed in their aircraft, had the 40 year old original TSO C-91 installed.

As volume increases the cost of 406 ELT's will continue to drop. As the market grows competition will drive the prices down as it did with the encoder market in late 1980. At that time the FAA required all aircraft flying within 60 miles of controlled airspace install an altitude encoder. This was a mandate that was also opposed by your organization. In 1988 when we first entered the avionics market with our A-30 altitude encoder, the lowest cost encoder other than ours was close to \$1,000.00. By the time the FAA mandate came into effect in 1989, you could purchase our encoder for less than \$250.00. Adjusting for inflation based on a 1989 cost of \$250.00 in 2010, the cost of an encoder would be \$465.00. Today the ACK and other encoders can be bought in Trade-A-Plane, and through the internet for under \$200.00.

I don't need to go over the advantages of the 406 as you have written very knowledgably on the subject. I believe support by AOPA for implementing the 406 standard over a reasonable time frame would be in the best interest of the aviation community. This would provide a real improvement in safety with very modest cost to the aviation community, especially if you factor in the cost savings from maintenance requirements and time and resources spent searching for old 121.5/243 MHz ELT's.

Please let me know if you would consider reviewing AOPA's current position on mandating replacement of the old 121.5/243 MHz ELT's.

Best Regards,

Mike Akatiff
President