



- ***Entered the avionics manufacturing business in 1987***
- ***Developed a low cost solid state altitude encoder in 1988***
- ***Has produced over 128,000 altitude encoders***
- ***Developed a low cost TSO C-91a ELT in 1991***
- ***Produced over 63,000 TSO C-91a ELT's before production was discontinued in early 2011***
- ***Developed a low cost 121.5/406 MHz ELT in 2011 which is currently in production***

- ***Mike Akatiff, president***

406 MHz ELT COSTS HAVE FALLEN

406 MHz ELT costs have dropped dramatically over the last two years.

5 years ago the cost for an 406 ELT with GPS was close to \$5,000.

One year ago the lowest cost 406 ELT with GPS was over \$2,500.

Today our 406 ELT with GPS is available as low as \$547

GPS enabled ELT's provide the fastest response and most accurate location of downed aircraft.

As new manufacturers enter the market and the technology advances the cost of ELT's will continue to decline.

ACK E-04 ELT RETAIL PRICING

LOWEST RETAIL PRICING FOUND ON THE INTERNET 07/09/2012

ACK MODEL E-04 121.5/406 MHz ELT WITH GPS

E-04R Retrofit
\$547.00
Wag Aero



E-04 Complete
Install
\$584.95
Chief Aircraft

INSTALLATION COSTS

The cost to install a 406 ELT can vary depending on aircraft type and the complexity of the installation.

We offer a direct replacement for the 55,000 plus ACK model E-01 ELT's still in service.

Without connection to the GPS installation time can be less than one hour.

Connection to the GPS can add an additional 2 - 3 hours installation time.

A complete new installation of our ELT can take from 4 to 6 hours to complete.

Aircraft shop labor rates vary between \$65 and \$100 per hour.

GA PILOTS ELT PERCEPTION

In 2009 we attended the AOPA convention to talk to pilots about how the general aviation community viewed ELT's.

We spoke with about 800 pilots at the convention.

Most pilots viewed the ELT as a nuisance of not much use but required by FAA or Canadian regulations and of course none thought they would ever crash.

Of the pilots that knew what ELT was installed in their aircraft more than half still had the old TSO C-91 ELT installed many dating back to 70's.

An FAA study done in 1982 by Hugh Waterman of ANM-130L found that over 40% of TSO C-91 ELT's in general aviation aircraft when tested failed to operate primarily because of battery issues.

MANDATES DO WORK

In 1987 the FAA was proposing making altitude encoders mandatory for general aviation aircraft flying within 60 miles of a TCA (now class B airspace).

At that time the cost of an encoder was approximately \$1,000.

This was strongly opposed by the AOPA and other pilot's organizations.

We introduced our model A-30 encoder in early 1988 at a retail price of \$299.

In 1989 a rule was implemented and by then encoder prices had dropped to \$250 or less.

Today virtually all general aviation aircraft are equipped with an encoder.

Based on the 1989 cost of \$250.00 the inflation adjusted cost today would be \$489.

Today you can purchase ours and other manufacturer's encoders for less than \$200.

VOLUNTARY REPLACEMENT NOT EFFECTIVE

In the late 1980's the FAA had proposed mandatory replacement of the older TSO C-91 ELT's with TSO C-91a ELT's.

Again this was opposed by the AOPA and other pilot's organizations.

In 1991 we received TSO approval for the model E-01 ELT with a suggested retail price of \$299.

Several other manufacturers followed suite and produced ELT's from \$250 to \$500 dollars.

The mandatory replacement was never implemented.

In the mid 1990's the old TSO C-91 was revoked but older ELT's were allowed to remain in use until they were no longer serviceable.

In February of 2011 when we ceased production of our model E-01 ELT retail pricing had dropped to \$180 or less.

Today we estimate that close to 50% of the US aircraft still have the old TSO C-91 ELT's installed most of which are 30 to 40 years old.

COMMON ELT FAILURES

The most vulnerable part of the ELT is the antenna any protrusion from an aircraft structure can be impacted by terrain, brush and other objects.

There is very little that can be done to mitigate this however the 406 transmission produces 50 times or more power than the old ELT's.

I believe there may be sufficient power for the satellites to receive a signal with the antenna missing or shorted.

Retention of the ELT in its tray is another area of concern – believe better TSO testing requirements should be developed.

REAL COST TO GENERAL AVIATION

406 MHz technology is a vast improvement to existing ELT's.

The cost of the COSPAS/SARSAT system is financed by the US and other countries.

If not mandated we will still see many general aviation aircraft 10 to 15 years from now flying with 50 year old ELT technology.

To fill a typical single engine piston airplane with fuel today costs over \$500.

A mandate to install a 406 MHz ELT is a relatively insignificant expenditure when amortized over the life of an ELT.

This would bring a significant increase in safety to the general aviation community at very modest cost especially if you factor in the current cost of battery replacements and maintenance of the old ELT's and reduced search and rescue costs.