Chino Valley Model Aviators

Official News Letter

AMA Chapter #3798

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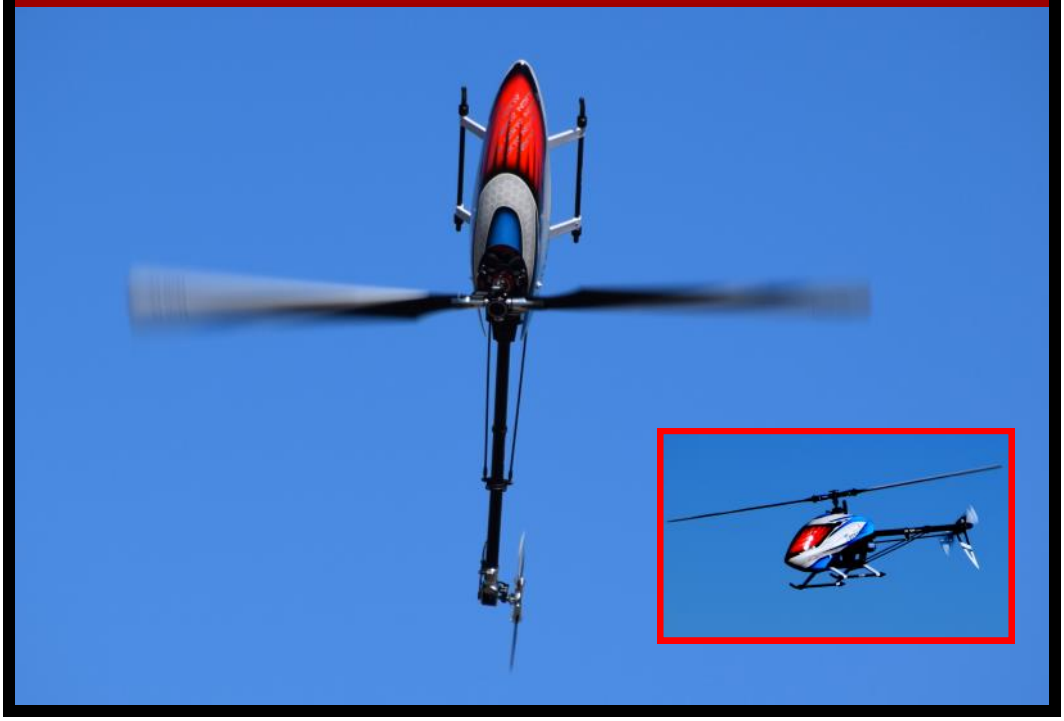
"To create an interest in, further the image of, and promote the hobby/sport of radio controlled aircraft"

Inside this issue

Kindness is One Thing You Cannot Give Away; It Always Comes Back!

Dan Avila's Turbine Powered T-33 Thunderbird

Chris Corbitt's Aerobatic Helicopter



Field Chatter from CVMA President Michael Kidd: No Kidding!

Greetings Fellow Pilots!

Just a reminder there is no meeting in December, so we will see you for the January meeting, same place, same time; Airport, 7pm.

For those that did not attend the meeting this month, and for those that were, here is a bit more info regarding the "rumor", which is talk about the gun range getting our flying field. Right now it is just that, talk.

We have been approached by the city with that issue and so far it is only a possible idea.

Be assured that if it goes any further the Board will let everyone know. What I can say for sure is the Board will be absolutely hard core in the fact that if we do end up with a new flying field, it will be "turn key". There will be nothing more to do but unlock the gate and fly.

If this does happen, we will not lose any flying time. We will be flying at the current field until the new location is ready.

Again, at this point in time this is not a done deal but just an idea under discussion.

This year was a big one for this club. The only work at the field were cleanup days. Thanks to all that showed up to help. We also had a busy year with all the events we hosted. We met a lot of new people and hopefully made new friends.

Next year will not be as busy, however Don will have a lot of help in setting up and running the events we have planned. Hope to see the members attend to show support. These events really bring each of us closer together as a club. If you would like to help please let any Board member know.

If you are attending the Christmas Banquet, I will see you there. Otherwise, I will see you at the field.

Have a great Holiday and a Happy New Year. Well, that is all for now, safe flying.

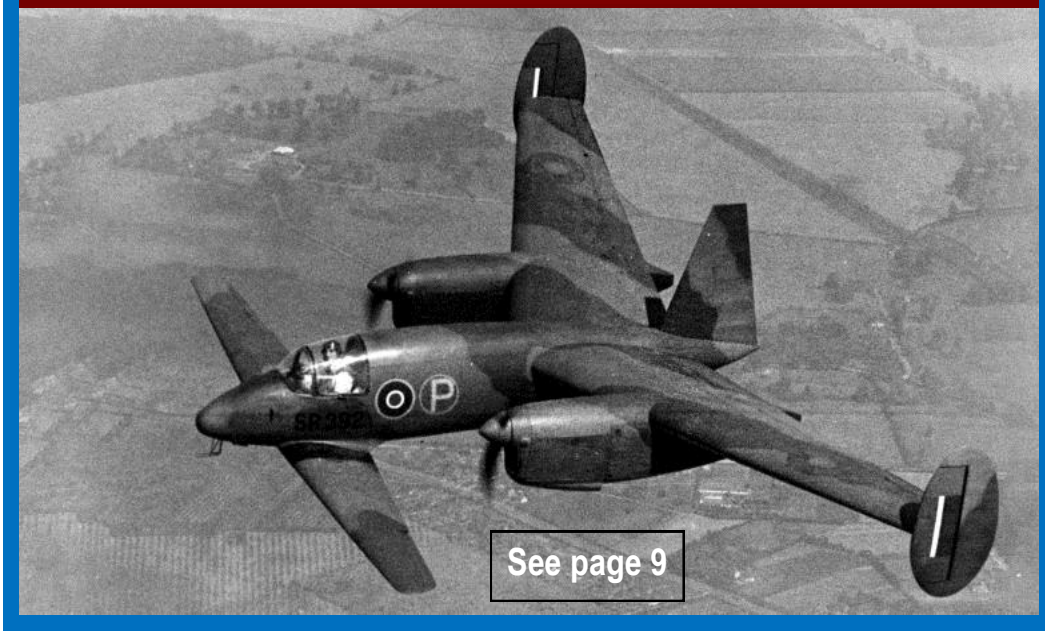
IF YOU BROUGHT IT, YOU TAKE IT HOME

There are no trash cans at the field.
If you bring it you take it home.

LIGHT YOUR AFTERBURNERS...

BUILD SOMETHING, BRING IT TO OUR NEXT MEETING!

CAN YOU NAME THIS PLANE?



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CVMA NEWSLETTER
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USAF Air Combat Command Heritage Flight: Nellis AFB

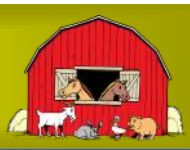
MARK YOUR CALENDARS

CVMA 2015 EVENTS

Dec 5: Christmas Party at Gabby's in Chino Valley

Club meetings: Third Wed. of each month at 7pm. Prescott Airport

BORN IN A BARN?



IF YOU ARE THE LAST ONE TO LEAVE THE FIELD:
PLEASE REMEMBER TO LOCK THE GATE.
SPIN THE LOCK A FEW TIMES AFTER FASTENING TO INSURE IT IS FASTENED, AND NOT ON THE OPENING NUMBER.

SAFETY: ALWAYS A CRITICAL ISSUE

We recently completed our Jet Meet and as I visited with various pilots I discovered that some completely rewire their planes if they have been used for a long time and some do a direct wiring into the receiver from servos and other on-board devices. Extensions, while convenient can corrode making the connection weak or prone to failing. There is an electronic spray cleaner one can get at Radio Shack or other electronic stores.

I have used it on various electronic devices to free up connections, I also used it on one of my older RC radios that had a sticky scrolling button. I suppose one could spray the connector plugs as well, however, if you have that special plane you have flown for years you might want to consider new extension plugs and a servo swap out. You might do as some of the jet flyers do wiring direct with no extension plugs.

So don't forget to do some cleaning and maintenance on your radio equipment as well as the various systems on your planes.

Check battery connectors as well, they too can become corroded. Your editor lost one of his planes with a poor battery connection.

CLUB PILOTS AND THIER FLYING MACHINES

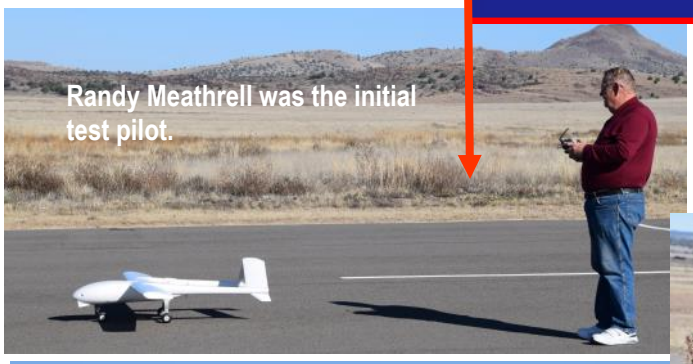
Sparky Thornton's WWII Dornier Twin 335

Dan Avila with Marvin Jones assisting, unfortunately Dan lost his T-33 in an unfortunate crash.

Chris Corbett is undoubtedly the best RC helicopter pilot in Arizona!

Very cool T-33 cockpit details.

Member *John Walker* is part of the Sheriff's Posse and is working on a search and rescue RC plane equipped with cameras and a GPS locater to help pin point locations of lost individuals so the posse can get there



Randy Meathrell was the initial test pilot.

The Anaconda foam aircraft; it flies very well with short take off and landing capabilities.

A potential new member at left with his plane and hovering far left. Your editor didn't write down his name! Good flying!

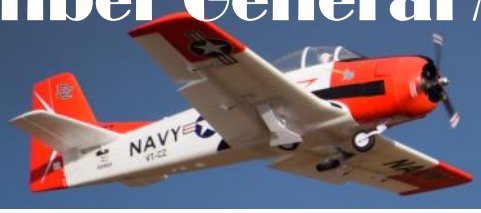
Don Crowe and his "Honda" It's a Sukhoi 60" SU-26M with a cobra motor and a 6 cell 4250 mAh battery for power.

This 3D aerobat belongs to Dennis O'Connor.

Dick Bjork's AreoWorks Edge 540 ARF

Don Ferguson's EP airliner.

November General Meeting Highlights



Large T-28 from Electri-Fly

Meeting opened by President *Mike Kidd* 7pm. Pledge to Flag led by *Bob Shanks*. Minutes for October Meeting were approved after call for corrections. President *Mike Kidd* congratulated CD *Don Ferguson* for a year of great events. Thanks Don!

There was a brief discussion of a "rumor" that the gun range was going to "take over our flying field" for a skeet range. President Kidd stated the bottom line: "...a fully functioning and complete flying field will be in place before we abandon our field and nothing would be happening overnight…not to worry."

The President also stated that 17 new chairs have been purchased for the field along with a new pair of gates after recent vandalism at our field.

Note for Pilots

Embry Riddle Aeronautical University students will be test flying their designs on 11/20, 11/23 and 11/24. They are not to interfere with our flying.

Treasurer *Don Crowe's* Report was approved (only two dissenters). Safety Officer *Charlie* Gates stressed the importance of pre-flights on all aircraft. Chief Flight Instructor *Steve Shepherd* reported 4 student pilots, with 2 ready for solo. President Kidd thanked *Dan Avila* for his work on our successful November Jet Rally. Not a big turnout but a great first start for the club.

We broke at 7:45pm for coffee and goodies provided by *Bob Shanks*. Meeting resumed at 8pm.

Show and Tell

Mike Kidd showed off his great looking A6 Intruder; *John Walker* displayed and discussed his large Anaconda FPV; *Larry Parker* brought in his foam "Twirler" (whirlybird?); *Don Crowe* showed his large foam Edge 540; and *Terry Steiner* brought in his mini-stik won in last month's raffle.

If you did not get your meal ticket for December 5th Christmas Party…you're simply out of luck…deadline has come and gone.

Reminders

There will be no December CVMA General Meeting…see you next year for more great flying with CVMA. For those not yet renewing membership, do get your 2016 CVMA dues to Don Crowe before end of year. Meeting adjourned 8:40pm.

Respectfully: *Bob Steffensen*
Secretary


Nice attendance.

Mike Kidd and his A-6.


Don Crowe with his Edge 540.


John Walker's Anaconda Search and Rescue effort; see page 4 for flight test pictures.


Larry Parker with his "Twirler".


Larry Parker (left) with his "Twirler" and right is Terry Steiner with his Slow Stick.


Larry Parker's "Twirler" pilot is Snoopy.

CVMA'S FIRST JET MEET HELD NOV. 5-6

The event went very well until a cold stiff crosswind starting blowing on Saturday. Thanks to all our members that helped with the set up and tear down.

We had a total of 10 pilots flying, here's the break down; Prescott 4 (CVMA Members) Scottsdale 1, Phoenix 1, Surprise 1, Tucson 1, Kingman 2. We want to send out a big thanks to *Dan Avilla*, our resident "jet man" for contacting many of these individuals who fly turbines and getting them to come and fly at our field at a time of year when the weather can be very unpredictable. However, the weather was great for flying Thursday, Friday and in the early morning Saturday. Next year we plan to move the event to September if we continue this event at our field.

Our event coordinator, *Don Ferguson* did an outstanding job of organizing the event and keeping it running smoothly. And what would we do without our venerable announcer with his wit and knowledge, *Randy Meathrell*. Thanks Randy for keeping the crowd informed and entertained during the flying.

Randy Meathrell's A-10 on a strafing run!

These two A-10s in formation belong to Randy Meathrell and Don Ferguson. Nice flying guys!

Dan Avila's "Mig Mad Marine" F-86, John Glenn's Korean Mig.

Don Ferguson's A-10 looking for his wing man!

John Glenn was on loan to the Air Force during the Korean war and flew this F-86 the "Mig Mad Marine."

Dan Avila's Bandit.

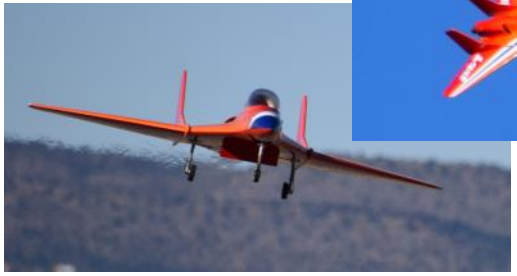
MORE CVMA JET MEET: "THERE'S NOTHING LIKE THE SMELL OF JP-4 IN THE MORNING."

Two cool "Boomerangs"

Member Frosty Wells set a new standard for jet meet attire, boots with his shorts! *(He gave me permission to use this.)*

The turbine powered Avanti.

A wild vectored thrust turbine very aerobatic.



A well attended event with all eyes skyward.

Name That Plane: The 1945 British Libellula

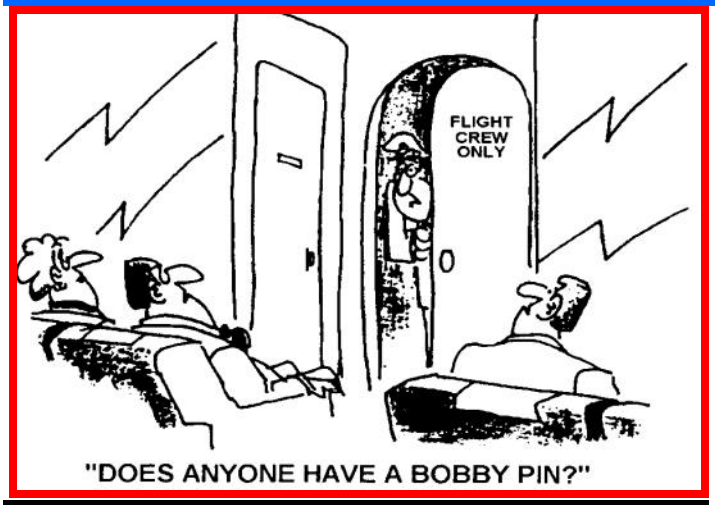
The M.39B Libellula (from Libellulidae, a taxonomic family of dragonflies) was a Second World War tandem wing experimental aircraft built by Miles Aircraft, designed to give the pilot the best view possible for landing on aircraft carriers. A scale version of the M.39 design was proposed by Miles to meet Air Ministry specification B.11/41 for a fast bomber. The M.39B was used by Miles to generate data from which the M.39 design was improved, but the M.39 project was cancelled and the B.39B broken up.

Though it had some problems, the earlier M.35 proved sufficient to show the idea had merits, and the larger M.39 was drawn up as a twin-engine design prepared to meet Specification B.11/41 which had been issued by the Air Ministry for a high speed bomber. The specification had been written for the P.1005 proposal by Hawker, powered by two Napier Sabre engines, estimated to achieve 400+ mph at 25,000 ft. and deliver a 2,000 lb. bomb load over 1,600 miles.[2] The P.1005 was cancelled after several delays on behalf of the Air Ministry and before Miles submitted his design to the Ministry[1] in July.[3] In November 1943 a full-size prototype (to use the serial RR910) was ordered, but not built.

Until the intended (three) Power Jets W.2/500 turbojets were available the M.39 would have had two Rolls-Royce Merlin 60 inline or Bristol Hercules VIII radial piston engines. The M.39 would have a crew of three in a pressurized cabin. As well as the bomb-bay amidships, the M.39 would carry two fixed 20 mm cannon in the roots of the forward wings.

To prove the concept Miles designed and built a 5/8th scale version, the M.39B, which flew on 22 July 1943, showing no "undesirable handling" characteristics. It coincided with interest by the authorities in unorthodox designs for large aircraft. The rear wing was higher than the forward one to avoid downwash and give ground clearance for the propellers. The M39 design had inboard flaps and outboard ailerons on the rear wing and the front wing had an auxiliary aero foil/flap/elevator device, which could vary the wing area without changing lift coefficient.

The Ministry of Aircraft Production agreed a development contract and purchase of the M.39B. Miles continued testing, generating more flight data and submitted an improved M.39 design in early 1944.[4] Meanwhile, the sole M.39B passed to the Royal Aircraft Establishment at Farnborough in 1944, where it carried the serial SR392, being damaged and repaired after two accidents, only to be broken up with the full-sized bomber project's cancellation.

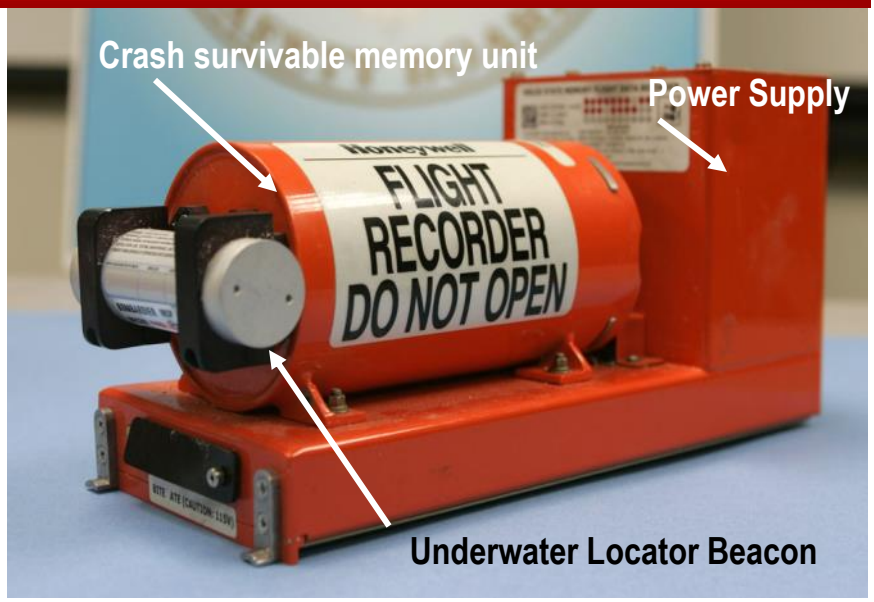


Member Project: Don Crowe's Sukhoi SU-26M

Don's 60" Sukhoi SU-26M from Skyline was purchased from General Hobby.com. It has a Cobra Motor with a 85A ESC. Power is from 6s/4250mAh battery with a 16x8x3 propeller.

Aircraft Flight Data Recorders

The horrible loss of large passenger aircraft generates a lot of fear in some people about flying, especially over areas in the world where major conflicts are taking place. The recent loss of the Russian Air Bus over the Sinai in Egypt and the downing of the Malaysia Airlines plane over the Ukraine last year are two recent examples. The black boxes for both crashes were recovered. The Sinai recorder was sent to Russia for analysis. The first question always has to be will the Russians send out accurate results from their examinations? They cannot be trusted in this area so hopefully over time all the accurate information recorded will eventually get adequately released.



In regard to the Black Boxes what is the "how and what" of these instruments, what do they really record? Let's take a look at just what these devices do and how they work. Your editor went on-line and began researching these devices so the following is information is mainly gathered from the following science web site, "How Stuff Works": http://science.howstuffworks.com/transport/flight/modern/black-box4.htm.

These recording devices, which cost between $10,000 and $15,000 each, reveal details of the events immediately preceding the accident. The widespread use of aviation recorders didn't begin until the post-World War II era. Since then, the recording medium of black boxes has evolved in order to log much more information about an aircraft's operation.

Older black boxes used magnetic tape, a technology that was first introduced in the 1960s. Magnetic tape works like any tape recorder. The Mylar tape is pulled across an electromagnetic head, which leaves a bit of data on the tape. These days, black boxes use solid-state memory boards, which came along in the 1990s.

Flight Data Recorder (FDR) and Cockpit Voice Recorder (CVR), Data from both the CVR and FDR is stored on stacked memory boards inside the Crash-Survivable Memory Unit (CSMU). The memory boards have enough digital storage space to accommodate two hours of audio data for CVRs and 25 hours of flight data for FDRs.

Airplanes are equipped with sensors that gather data such as acceleration, airspeed, altitude, flap settings, outside temperature, engine performance, and cabin temperature and pressure. Magnetic-tape recorders can track about 100 parameters, while solid-state recorders can track a lot more.

For instance, in the Boeing 787, the units can log a whopping 146,000 parameters, resulting in several terabytes of data for every single flight. That incredible load of data is a double-edge sword; it's great for monitoring the aircraft, but it can overwhelm engineers and maintenance personnel. To manage all of that data, they need sophisticated data management software.

Whether the system is an older version or fully modern, all of the data collected by the airplane's sensors is sent to the flight-Data Acquisition Unit (FDAU) at the front of the aircraft. This device often is found in the electronic equipment bay under the cockpit. The flight-data acquisition unit is the middle manager of the entire data-recording process. It takes the information from the sensors and sends it on to the black boxes.

In almost every commercial aircraft, there are several microphones built into the cockpit that listen to flight crew conversations. These microphones also track any ambient noise in the cockpit, such as switches being thrown or any knocks or thuds. There may be up to four microphones in the plane's cockpit, each connected to the cockpit voice recorder (CVR).

Continued on page 11.

More on Aircraft "Black Boxes"

These two pictures show vividly the crash damage sustained by Flight Data Recorders.

Microphones send audio to the CVR, which digitizes and stores the signals. In the cockpit, there is also a device called the Associated Control Unit (ACU), which provides pre-amplification for audio going to the CVR. The four microphones are placed in the pilot's headset, co-pilot's headset, headset of a third crew member (if there is a third crew member) and near the center of the cockpit, to pick up audio alerts and other sounds.

Most magnetic-tape CVRs store the last 30 minutes of sound. They use a continuous loop of tape that completes a cycle every 30 minutes. As new material is recorded, the oldest material is replaced. CVRs that use solid-state storage can record two hours of audio. Similar to the magnetic-tape recorders, solid-state recorders also record over old material.

Airplane crashes are violent affairs as shown in the above photos. In many such accidents, the only devices that survive are the Crash-Survivable Memory Units (CSMUs) of the flight data recorders and cockpit voice recorders. Typically, the rest of the recorders' chassis and inner components are mangled. The CSMU is a large cylinder that bolts onto the flat portion of the recorder. This device is engineered to withstand extreme heat, jarring crashes and tons of pressure. In older magnetic-tape recorders, the CSMU is inside a rectangular box. Using three layers of materials, the CSMU is in a solid-state black box that insulates and protects the stack of memory boards that store the digitized data.

Although they are called "black boxes," aviation recorders are actually painted bright orange. This distinct color, along with the strips of reflective tape attached to the recorders' exteriors; help investigators locate the black boxes following an accident. These are especially helpful when a plane lands in the water. There are two possible origins of the term black box: Some believe it's because early recorders were painted black, while others think it refers to the charring that occurs in post-accident fires.

In addition to the paint and reflective tape, black boxes are equipped with an underwater locator beacon (ULB). If you look at the picture of a black box, you will almost always see a small, cylindrical object attached to one end of the device. While it doubles as a carrying handle, this cylinder is actually a beacon.

If a plane crashes into the water, the beacon sends out an ultrasonic pulse that cannot be heard by human ears but is readily detectable by sonar and acoustical locating equipment. There is a submergence sensor on the side of the beacon that looks like a bull's-eye. When water touches this sensor, the beacon is activated.

After finding the black boxes, investigators take the recorders to a lab where they can download the data from the recorders and attempt to recreate the events of the accident. This process can take weeks or months to complete. In the United States, black box manufacturers supply the National Transportation Safety Board (NTSB) with the readout systems and software needed to do a full analysis of the recorders' stored data.

A team of experts is usually brought in to interpret the recordings stored on a CVR. This group typically includes representatives from the airline and airplane manufacturer, an NTSB transportation-safety specialist and an NTSB air-safety investigator. This group may also include a language specialist from the FBI and, if needed, an interpreter.

Both the FDR and CVR are invaluable tools for any aircraft investigation. These are often the lone survivors of airplane accidents, and as such provide important clues to the cause that would be impossible to obtain any other way. As technology evolves, black boxes will continue to play a tremendous role in accident investigations.