

# Police Aviation News

A close-up photograph of a helicopter's tail rotor assembly. The main rotor hub is white, and the tail boom is a vibrant red. The registration number 'AM169' is printed in large white characters on the red section. The background is dark, suggesting an indoor exhibition space with some lights visible.

## HELI- EXPO 2016

# REPORT

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Welcome to Louisville, Kentucky!

## THE DOWNSIDE

This was the first foray of HAI into operating its annual Heli-Expo get together in Kentucky and much negative information flowed about the location and its likely weather right from the moment the venue was announced. Numerous negative tales circulated on how the HAI had been seduced by the people of Kentucky with offers of a free venue and much more. Fortunately it did not get into the venom of a FIFA style allegation. It was a fairly open position to take even if unpopular.

Many decided months before the event that they were not going to be there for a wide range of reasons but central to that was that it was going to be difficult to get there as there were no direct flights from Europe. Louisville is not the first venue with that difficulty for International travellers but I do not recall many complaints about Las Vegas for instance.

Well the predictions of those that said that this would be a weather disaster were way off the mark. Although it was cold and there were snow flurries the weather was worse in the UK than in Kentucky. Travel was no worse than some other locations. A flight connection is a flight connection and lots of people have to endure those for every edition of HAI.

But the dissent was serious and in some ways the event was on the sick list. Lots of people did not make the journey and the footfall was well down. There will be a ready market in event specific bags you just take as many as you want no need for a tear off slip of paper and claim a baghere. We can only hope that the 'right' people were here for the exhibitors. The masses of leftover books and guides are pulp.

Some exhibitors may well not have been happy. The whole vast hall was given free to HAI and I have come across no-one that disputes that claim - but in fairness there were other substantial costs associated with the hall. Potentially more serious information from the exhibitors is a claim that rates this year are 10% up on last year - where is there an inflation rate of 10%?

So on the basis of these claims it seems that HAI did not pass on any of their windfall to their membership. HAI relies on this event for their income so they declared an intention to raise rates over the next few years. Some would claim that the unusual windfall position this year should have at least set aside the rate rise.

In the end, for the majority of the exhibitors, what matters is whether good business was done.



## REALITY

The people of Louisville got what they sought, world recognition for holding a World Class event that was not connected with their home brands – Kentucky Fried Chicken, Bourbon whiskey and The Kentucky Derby. As a city they were first class, welcoming and friendly.

Even in these days of oil recession, it seems the majority of the exhibitors did good business but it is their choice – if HAI did get it wrong it will not be forgotten by them, they are the main arbiters not us the pundits [especially the absent ones].

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## PRE HELI-EXPO EVENTS

A welcome return of the popular two-day Goodrich Hoist Users Conference – now re-branded to the new owners UTC – took place in the city. There has been a short gap of two years in holding the event as the new owners consolidated their position but it is good to see they have once again allocated money to celebrating their products and inviting along the users of them.

The event format for the Rescue Hoists and Cargo Winches Division of the Sensors and Integrated Systems UTC was similar to the earlier editions with a mix of user experience and equipment handling.

The first day was allocated to presentations on the forward plan for Goodrich Hoists, customers service and highlighting and remedying maintenance issues. These were interspersed with presentations from users including Bristow, the New York Police and Cougar Helicopters, rounding down with feedback and questions. The second day – actually a half day – was almost wholly taken up with presentations from the user community and presenting the Rescue of the year award. For the latter one of the Day 1 speakers, Bristow Helicopters Chris Bond [right] accepted an award from UTC for an important rescue operation the company undertook in the UK.



A few days later Sikorsky also a sector of UTC also recognized Bristow Helicopters for its critical role in safely evacuating hundreds of workers with S-92<sup>®</sup> helicopters from six oil platforms in the North Sea on December 31, 2015. Sikorsky President Dan Schultz presented the recognition to Bristow President and CEO Jonathan Baliff in a ceremony at Heli-Expo.

Bristow crews, with support from engineers, technicians and operations personnel, utilized nine Sikorsky S-92 aircraft to airlift 400 offshore workers safely from platforms in the Eldfisk and Valhall fields in extreme weather conditions, after a 360-foot-long barge set loose by stormy weather and high seas drifted toward the oil installations and threatened their operations. The barge, which was being used to transport cargo, was returning to Norway from Tunisia when the tow line broke. Bristow's mission was to evacuate offshore personnel away from the threatened platforms to other rigs in the area outside the danger area and to a safe onshore location as quickly as possible, then transport personnel back to their worksites in the following days. product and its users.

When concluded, Bristow transported nearly 800 workers on 40 flights over three days. Sikorsky and Bristow have done business together for more than 40 years. The Bristow fleet currently features more than 160 aircraft of various types. Bristow currently has 75 S-92 aircraft in its consolidated fleet, which are operated in Europe Caspian, Africa, Asia Pacific and the Americas. Certified to meet the most stringent safety requirements around the world, the S-92 is one of the most successful helicopters in operation.

Back out near the airport at the Convention Center a similar niche event, the 2016 Rescue Summit organised by the Helicopter Rescue Association [HARRA] took place as a one day gathering prior to the main event.

This free to members event (agency members can send five people to the summit free of charge) included various presentations pertaining to helicopter rescue operations

including, but not limited to: Tactics and Equipment, Lessons Learned/ Near Miss Incidents, Operational Considerations, Clinical Studies, and Regulations.

Very forward thinking this event relied wholly upon electronic programming through the website [helirescueassociation.org](http://helirescueassociation.org) and Facebook. As an outsider simply popping in and out rather than sitting through the whole event it did cause problems in understanding the layout of the event and who the speakers were or had been but it was clearly well attended and had an enthusiastic and participatory audience. The HRRA has some high profile corporate sponsors including Airbus Helicopters and Bell and the Rescue Summit is made possible in a large part due to the generosity of these sponsors.

## THE HALL

If I have any complaints about the venue it is that the hall was long and thin. Everywhere was a long walk and at times the constant backtracking for differently timed appointments seemed daunting.

Probably for the first time in many years each and every manufacturer was faced with a significant part of their target market – oil and gas – being dormant and a complete lack of real news to impart to the gathered faithful. The customary first day unveil of a new airframe was absent from each and every manufacturer so perhaps it was fortunate for them as gathering together any sort of crowd was difficult. Footfall on every day was to be a shadow of previous years and day 3, always a quiet affair when all the loose ends are gathered together was more a meet your neighbour in booth land event.

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The honour of first press conference went to L3 which was promoting its L-3 Lynx line of ADS-B products to the rotorcraft industry and ahead of the opening ceremony for the event at which it must be said the Lynx was well marketed—it seemed to be all round the hall at times.

The top-of the line Lynx NGT-9000 is an all in one solution for rotorcraft operators needing to replace their ageing transponder and at the same time meet ADS-B compliance.

The 9000 combines a touchscreen transponder with a display for viewing traffic and weather data in a single panel mounted unit. In order to meet the weight and size considerations of helicopters the screen is clear but very small the – especially if mounted low as most would be – but it has the ability to wi-fi its images to a number of larger devices including to such as iPad and Android pilot apps does overcome what would otherwise be a significant problem for many.

Visit the website [www.L-3com.com/aviationproducts](http://www.L-3com.com/aviationproducts) to learn more about the system and try out an app that simulates the Lynx touchscreen.



## AIRBUS HELICOPTERS

With the current downturn in interest in purchasing helicopters by the oil industry Airbus Helicopters is suffering the pain as well as any in the industry. Fortunately they have a broad product line and can rely on other sectors to see them through. They remain the group with the biggest sales record over the last year, eclipsed only by Robinson in sheer numbers – but with a massive difference in value.

The main areas of loss are the Puma related family and the new H175 – both types with a heavy reliance on oil and gas and with only limited interest in the less depressed emergency services field. No doubt the recent success in selling the H175 to Hong Kong in the SAR role was a major relief.

On display on the booth were examples of the current production successes rather than the up and coming types the EC125, the H130, the H145 and the H215 Puma – both the H175 and the small 120 were perhaps sidelined as temporarily out of favour in the market this year. Any expectation that the H120 with the Diesel engine was to feature was not met.

*The H125 was represented by N350MS an law-enforcement example from Mississippi*



Airbus Helicopters has however delivered two Puma related types for coastal patrol in Finland. The first of two H215s has now joined the Finnish Border Guard fleet. The first H215 arrived in Finland on February 28 following a training session at the Airbus Helicopters headquarters in Marignane, France. The second is set to arrive upon completion of a second training session in April. More than 140 flight hours will be performed during the training.

The Finnish Border Guard, a long term operator of the Puma family of helicopters, already operates three new AS332 aircraft delivered last year and has in addition signed a Maintenance, Repair and Overhaul (MRO) HCare contract to retrofit these AS332s to the new H215 multirole configuration. The H215s will be used to perform Border Security and Maritime Search and Rescue (SAR) duties from the Turku and Helsinki bases. The Air Patrol Squadron of the Finnish Border Guard carries out more than 4,000 flight hours annually, 1,400 of which in their Super Pumas.

Although visible new activity was depressed across the event there were small signing events and, that very American practice, the recognition of old and valued customers in photocalls.

One of a number of small occasions was the announcement by Airbus and the Orange County Sheriff's Department that it had ordered an Airbus Helicopters H125 AStar helicopter as an upgrade to its existing law enforcement helicopter fleet. The aircraft, contracted on the Wednesday of the show, will be delivered to the California law enforcement agency this month and is expected to be in service this summer after an outside completion. Orange County current operates a pair of earlier model Airbus AS350 B2 AStars, one of which will be replaced by the new H125 (formerly AS350 B3e). The H125 is produced by Airbus Helicopters Inc. at its plant in Columbus, Miss.

"We are pleased that the Orange County Sheriff's Department has shown their continued faith in Airbus Helicopters and the AStar family of aircraft," said Ed Van Winkle, Senior Sales Manager of law enforcement for Airbus Helicopters Inc. "They join a growing list of respected law enforcement agencies that have found Airbus Helicopters AStars to be the right aircraft for their missions, and who are now upgrading to the more capable H125."

In 2015 alone, Airbus Helicopters Inc. received orders for 15 new law enforcement aircraft to customers including California Highway Patrol, Los Angeles Police Department, Lee County Florida Sheriff's Office, Ohio State Highway Patrol, Ontario Police Department, Pinellas County Sheriff's Office and Elbit Systems. Airbus Helicopters Inc. delivered nine aircraft to law enforcement agencies in 2015. <http://www.airbushelicoptersinc.com>.

Ed Van Winkle is the industry representative to the Airborne Law Enforcement Association (ALEA) and, as ever, he featured in the ALEA get together in Downtown Louisville during the week. A great time was had by all – the event providing a clear link-up between the industry suppliers and the members of ALEA.

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*The rest of the cover image—the AW169 in a show special colour scheme. The display airframe was configured with an Aerolite medical interior.*

## AGUSTAWESTLAND

It can be said that the press conference held Downtown by Daniele Romiti the Agusta-Westland CEO was more engaging than some but they too were held back by a muted period in the progress of helicopter aviation so it was a great deal said enthusiastically about nothing much.

Their conference came after that of Bell and it was soon clear that while Bell were trumpeting about its sales successes in fact AgustaWestland sold significantly more helicopters in the last year with around 200 deliveries in the first nine months topped up with 190 orders. On the booth area were examples of the AW169, AW119 and AW109 in its skid equipped Trekker configuration. The real version of the latter has only just flown – which is a surprise in view of its apparently minimal change from the standard AW109. Finally the last airframe on show is the smallest in the range, the SW-4. They have now renamed the SW-4 piston single the AW009 but whether this and a snazzy new paint job are going to lift the helicopter out of obscurity remains to be seen.

The Bond like 009 aside the modern AW range is doing well against the competition led by the AW139 and its 169 and 189 brethren. The AW139 now has ramped up 800 deliveries with the latest sales total being in excess of 950, how the management at Bell must have felt after they walked away from the AB139 we can only surmise but there are no tears for that decision being shed in Italy. The main delays to service in this family of airframes relate to de-icing. In each case the wait for FIPS certification has stood out as the last item prior to the airframe entering full service.

Even the older Agusta machines have not fallen completely out of favour with the various types of 109 and 119 taking well their regular revisionary tweaks in guises such as Da Vinci, Trekker, Grand etc.

A contract for 25 AgustaWestland AW119Kx single engine helicopters has been signed with Sino-US. Deliveries are expected to start by June 2016. This contract includes a comprehensive support and training services package and is part of a framework agreement for 60



AW119Kx aircraft to be acquired through 2017. The helicopters will be operated by Kingwing General Aviation Co. Ltd (Kingwing) and will be used in China for Emergency Medical Service (EMS) missions.

The shadow of the AW609 accident was addressed briefly and set aside there being considered that the accident investigation is not likely to bring out any serious flaws that will slow the progress towards certification. It is considered likely that the type will prove to be a capable contender in both the EMS and SAR fields despite earlier concerns about the effect of downwash.

One airframe did not deserve a mention in the briefing and that was the Polish W3 development of the Mil Mi-2. It has been around a long time and it seems remains a product very quietly on offer by AgustaWestland to special order – and even that was not to be mentioned until a question from the floor drew it out. One was delivered to Africa last year and after prompting it seems the guide price is \$1.2M to \$1.5M.

*A blast from the past was this former New York police AW119 Koala still wearing its police registration sequence. The interior is now fully corporate*



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Spectrum Aeromed were celebrating their 25<sup>th</sup> year in business and were showing new medical equipment designed for the Bell 429 Helicopter at the event.

“We started this year celebrating with our employees the accomplishments that have been made during the last 25 years,” said Spectrum Aeromed Owner and CEO Dean Atchison. “Our employees work hard daily to produce great products and we are excited in our 25<sup>th</sup> year to introduce a new product specifically designed for the Bell 429 Helicopter. This new design is just one example of our team’s innovative work throughout the years.”

The new Bell 429 mockup uses a FERNO ProFlexx gurney for transportation of the patient. Spectrum Aeromed created custom locks that mount to the existing Bell 429 floor to secure the gurney. The new mockup shown simulates the height of the standard Bell 429 floor with secondary fluid barrier floor. The forward cabinet is a design that has a single drawer, two oxygen connectors and the bottom area for a LOX unit. Spectrum Aeromed is currently working on their STC application process with the FAA.

Spectrum Aeromed also had an interior in the Agusta Westland Trekker displayed on the manufacturers booth. This medical interior application, featuring a pivot system, already has an STC in place for the AW109/AW119 range.



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## BELL

Mitch Snyder, Bell Helicopter's recently appointed president and CEO [right] faced a difficult opening press conference. Firstly he might have been a long standing company man but times were hard and there was not a great deal to say that was not simply platitudes. There was talk of technology products in the future but much of it came across as anything but sharp and attention getting. Like his predecessor, Garrison, he comes across as nice enough but evasive. Under questioning!



Bell Helicopter invited attendees to its opening on booth event where they displayed the current product line and developing prototypes that included the second flight test Bell 525 Relentless complete with extensive flight test equipment [right], the third Bell 505 Jet Ranger X flight test vehicle, a Bell 429 owned by Three Forks Ranch; a Bell 407GXP owned by Air Methods and a mock-up of the Bell V-280 Valor.



Elsewhere in the hall could be inspected a Bell 412EPI in a utility configuration and a Bell 407GX in a corporate configuration. Over on the airport Bell offered a 429 and 407GXP for flight test.

Heli-Expo remains one of Bell's most important events of the year and one at which they hope to impress but that hope was somewhat thwarted by their star turn – the first fly-by-wire commercial helicopter the Bell 525 – being at the centre of the most depressed sector of the market, oil and gas. An attempt to realign its role into SAR was clearly a sop to the situation it finds itself in although it was always seen as one of the roles that would fit it. Petroleum Helicopters [Phi], a long standing a loyal launch customer for Bell and other customers engaged with the manufacturer on the design has faded into the mist with the new situation.

That Bell were able to announce a signed letter of intent with Guangxi Diwang Group for 10 Bell 525 Relentless super-medium helicopters was fortunate. Guangxi Diwang Group, a Commercial Development and Real Estate Investor, will it seems market the Bell 525s for tourism and search-and-rescue missions. But in the end it is a letter of intent and not firm orders.

Bell continues to have production, manufacturing and development unknowns to test the management but the company reaffirmed its intention to stick to the production line in Mirabel, Canada despite clear signs that modern and future production is clearly in favour of production in the USA.





N350UM for the University of Miami

## METRO

Metro Aviation a completion centre with numerous examples of emergency services helicopters delivered recently completed a one-of-a-kind helicopter to the University of Miami's Rosenstiel School of Marine and Atmospheric Science. The Airbus H125 (formerly the AS350) N350UM illustrated above will serve as a unique observation platform to provide the scientific community with the capability to make unprecedented observations about the earth's climate system and human health.

Metro's team of engineers worked closely with Dean Roni Avissar to create an attachment to hold a system of sophisticated scientific sensors and a full inertial monitoring system, including differential GPS and accelerometers. The final sensor carrying rod measured just under 13 feet long and was mounted on the aircraft using a Meeker Aviation AirFilm Camera System and a vibration damping device.

## PRATT & WHITNEY

Pratt & Whitney Canada (P&WC) were fairly low key in their presence; they occupied a large and imposing stand but were not large on press conferences or announcement – perhaps it is an indication that they are comfortable with themselves.

There are grounds for celebrating a major milestone; they recently delivered their 75,000<sup>th</sup> engine. The engine, a PT6C-67C, was delivered recently to AgustaWestland for installation on an AW139.

Since delivery of the first Twin-Pac engine for the AB412 model helicopter in 1970, Agusta-Westland has taken delivery of more than 3,600 P&WC engines to power the AW109 Power, AW139, AW119, Grand and Grand New model helicopters.

The PT6C is the turboshaft variant of the PT6A-67 turboprop engine, which has accumulated over 10 million hours of operation. The PT6C engine builds upon the demonstrated reliability, durability and low cost of operation of the PT6A engine family.

Along with some in industry P&WC remains optimistic regarding helicopter market demand. P&WC helicopter engine deliveries have more than tripled over the last decade and the company powers 60% of all new civil helicopter applications in the light-twin, and intermediate and medium segments that have entered service in the past 15 years.

## SAFRAN TURBOMECA

DRF Luftrettung has selected Turbomeca's (Safran) Arrius 2B2Plus engine to power its three new Airbus Helicopters H135. With these new Turbomeca-powered H135 fleet DRF Luftrettung will perform HEMS (Helicopter Emergency Medical Service) missions in Germany.

Franck Saudo, Turbomeca EVP Support & Services, said: "This is a further step that strengthens our relationship with DRF Luftrettung, and we are proud to be part of this continuing effort to provide medical assistance to the German people. The Arrius 2B2Plus combines state-of-the-art technology with best-in-class reliability. Its selection confirms the competitive advantage of our solution for the light and medium helicopter market."

Steffen Lutz, CEO of DRF Luftrettung, said: "We have selected Arrius 2B2 Plus on our new H135, equipped with Helionix, because it delivers higher mission capabilities and lower operating costs. It will allow our crews to operate with extra confidence in the most demanding mission environments."

The 2B2Plus is the latest member of the Arrius family for twin helicopter which, with seven million recorded flight hours, is the most popular engine of its class. In addition to its un-



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matched reliability, its advantages over the earlier 2B2 variant include a six per cent power increase in hot and high conditions. This strongly contributes to the H135's ability to carry more payload at the same altitude.

DRF Luftrettung is already operating a fleet of 11 Arriel 1E2-powered EC145/BK117C1 and 5 Arriel 2E-powered H145. DRF Luftrettung was the launching customer to operate the H145. These Arriel engines are supported through a Support By the Hour (SBH) contract. It delivers engine availability at a predictable cost per flight hour.

To date, Turbomeca has delivered more than 3,000 Arrius engines to 430 customers in 60 countries.

## TRAKKA

In many ways it was for Trakka a watershed event. In the past the company has deliberately avoided in showing all of its wares so as to ensure that its core aim of promoting its unique searchlight design was not diverted from. As PAN reported at the time from a show in Indonesia the company has a range of products it produces and promotes for others but it was thought that bringing them to market would dilute their prime aim.

The company now considers that it has come of age and can display and talk about these other lines without damaging their image. Nonetheless the product promotion in Louisville was centred around the searchlight, its latest developments and a new link up with a niche Swedish camera manufacturer SWESYSTEM—a name that has been in the market place for some years.

Trakka Systems announced the launch of its new TLX searchlight with dual sensor TV/Thermal Imaging camera option which was displayed for the first time at the HAI Heli-Expo.



Trakka TLX

Trakka Systems has captured a significant segment of the searchlight market and is now also a leader in the supply of fully exportable, non ITAR, gyro-stabilized camera systems. Applying the innovation and engineering skills for which it has built an enviable reputation, Trakka Systems announced the option for a dual sensor TV/TI payload co-located

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with the TLX searchlight. The TLX already offers a 25% brighter beam using less power draw, combined with expanded 6-position multispectral internal filter wheel and improved digital control with Geo-Axis Lock. These improvements are now expanded by a dual sensor payload option which allows for improved situational awareness and recording either by day or night, with the searchlight beam on or off.

“At Trakka Systems, we are 100% committed to on-going innovation and customer satisfaction” says Andrew Phillips, EVP Global Sales. “Yet again Trakka Systems has set the bar higher, with the world’s first searchlight/camera combination. The new dual camera option for the TLX opens up exciting new possible applications for users across our traditional market sectors. It goes about safety and situational awareness, especially for EMS and SAR operations – to help the crews to see, to save and Trakka Systems is pleased to announce that Airbus Helicopters have selected the TrakkaBeam A800 tactical searchlight for the new 7 x H175 multi-mission helicopters acquired by Hong Kong’s Government Flying Services (GFS).



Trakka has teamed up with a Swedish camera company for its latest products so it seemed quite reasonable to show case one of the SWESYSTEM cameras on a Swedish UAV from CybAero

Elbit Systems presented a range of unique and cutting-edge solutions for the commercial helicopter market.

Elbit Systems’ wearable Head-Up technology combined with the multispectral Helicopter HeliEVS enables pilots to fly while looking outside of the cockpit all the time, enhancing safety and situational awareness. The Elbit Systems’ booth is built to support this concept with a unique simulation: various scenarios such as rig approach, EMS mission in snowy mountains and more are projected on a half transparent glass-screen that represents the “real world” environment. This unique display concept will provide visitors with a hands-on, real experience of the final configurations of the systems as they are used in actual flight.

The Elbit Systems’ helicopter avionics product line for commercial aviation applications fuses both synthetic and real-time imagery using unique design symbology and computer flight guidance. These features offer helicopter pilots a “real-world” view of the terrain along with all obstacles within their flight path, allowing them to “see and avoid” even when visibility outside the aircraft is limited.

## ROLLS ROYCE

Rolls-Royce and MD Helicopters have reached agreement to launch the new M250-C47E/3 variant for MD 530-series and growth derivative airframes. Rolls-Royce is the exclusive engine provider for MD Helicopters' single-engine platforms. The new agreement continues a long-standing relationship between Rolls-Royce and MD Helicopters. Rolls-Royce M250 engine variants power multiple MD Helicopters aircraft, including the MD 500, MD 520N, MD 530F and MD 600 models.

Jason Propes, Rolls-Royce, Senior Vice President Helicopters and Light Turboprop Engines, said, "Our new M250-C47E/3 provides the power and innovation needed to support the mission requirements of the preferred MD Helicopters MD 530-series aircraft, and is perfectly suited to power the company's growth airframes as well. The true value of the M250-C47E/3 comes from combining a more robust performing engine with lower direct operating costs. We are excited to continue our long-term relationship with MD Helicopters and to be selected as the exclusive power plant for their single-engine rotorcraft."

Lynn Tilton, MD Helicopters, Chief Executive Officer, said, "Like MD Helicopters, Rolls-Royce is an iconic rotorcraft brand. I am honored to have built a solid partnership with the Rolls-Royce team that has only grown stronger over the past decade. I look forward to welcoming the M250-C47E/3 as the preferred powertrain for our MD 530-series airframes." As a result of the recently signed engine upgrade agreement, the MD 530-series aircraft will be available for purchase following the FAA Type Certification of the M250-C47E/3. The engine includes the Rolls-Royce Value Improvement Package (VIP) and a new dual channel FADEC.



The current MD helicopters use the same basic RR250 as their Vietnam era forebears



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## MD HELICOPTERS

In recent years it is clear that to survive Lynn Tilton and MD Helicopters has been obliged to turn to the military product represented by the latest variants of their MD500/OH-6/530 helicopter. The result has been a successful change in direction but it has resulted in the commercial arm of the company being all but abandoned. Overall sales remain depressed and commercial sales are only a shadow of their former level – most police forces in the USA have given up a long standing preference for the MD product for those of other manufacturers and turning that situation around may well be a lost cause. A similar position applies to the MD902 Explorer where long established markets are fading fast.

What has not gone away though is the spectacle of the Lynn Tilton Press Conference Show. There was a time when these events were held away from the public gaze in the Press Conference Room but that has now passed by. The word got out that the events were a good public spectacle and that on a good year you might catch the Lady Tilton skewering some hapless journalist within an inch of his life.

In recent years they have moved to the MD Booth.... Initially outside show hours and more recently in show time with lots of publicity. It's not much about helicopters its more about a public persona, politics, and even a little about sex. It is standing room only. 'Roll up, roll up, come and hear the rich girl speak....'

This year—with its American Eagle rebranded badging—was not a classic one, the crowds were there initially but the content soon failed to grip them and it was more of a moving audience than in the past. The theme of the subject matter was familiar but perhaps not as attractive as it has been in the past. For many years there have been apologies for letting the production targets and spares availability drift and of bringing production back to the USA [if a car plant in Mexico counts as being the USA] and that has not changed a great deal. But little of it has actually happened. If you can bother to read back into the PAN back archives you will see similar promises as yet unrealised. Again she launched the MD969 development of the 902 that promises more, more and yet more but the detail is lacking. It seems that some of the 'temporary' technical fixes that brought about the 902 from the original non-conformist 900 design of 1994 are to be remedied and streamed into the new design but that does not add too much detail to the design secrets of the 'new' type. A statement about a better NOTAR likewise is devoid of detail.

Thankfully there was some tangible positive news on the 969 project at the show thanks to Universal Avionics [UA]. UA announced the accomplishment of the first flight of a test bed MD 902 Explorer equipped with the InSight Integrated Flight Deck. The successful testing was achieved at MDHI's Mesa, Arizona (USA) facility in multiple phases and concluded on February 17<sup>th</sup>.

"This is an important step in the development of the new avionics suite for the MD 902," said Grady Dees, Universal Avionics Director of Technical Sales. "Flight testing was con-



Image from MD Helicopters

ducted in multiple phases including ground run operations, ramp area hover/maneuvering, and airport area operations with speed and altitude buildups,” he added. “It concluded with an up and away flight to a test area away from the airport traffic area.”

“The MD test team was supported by an on-site team from Universal Avionics and our partner, Howell Instruments,” said Carl Schopfer, Chief Technology Officer for MD Helicopters. “All display and engine functions performed as expected. Flight testing will continue with the current configuration, and incremental software changes and additional systems integrations are planned prior to certification.”

MDHI is the launch OEM customer with the InSight Integrated Flight Deck for production and retrofit MD 902 Explorer helicopters. The flight deck features two or three large format high-resolution LCD displays with LED backlighting. A collective-mounted Cursor Slew Switch allows for a unique 'Point & Click' display control allowing pilots to keep "hands on, head up" during all phases of flight.

Throughout the Heli-Expo, MDHI had a Explorer flight deck available in their Booth for prospective customers to examine. The flight deck [below] included a fully functional three-display InSight system with simulation. In addition to demonstrations, the flight deck will be used for evaluation of software releases during the ongoing flight test program, integration testing with other Line Replaceable Units (LRU), human factors evaluations, and training.

All of this is, as always, a work in progress. We just do not know the end game.



The exhibit inside the MD Helicopters booth

## BLAST FROM THE PAST

Eagle Copters Ltd., announced that the Nevada Department of Wildlife (NDOW) is to be its next customer for the Eagle 407HP helicopter powered by the Honeywell HTS900 turboshaft engine. NDOW is a state agency largely responsible for the management of fish and wildlife resources within Nevada.

The Eagle 407HP is a conversion of the standard Bell 407 to take the more powerful engine and is similar in concept to Bell's own Model 417 of ten years ago. The light helicopter fitted



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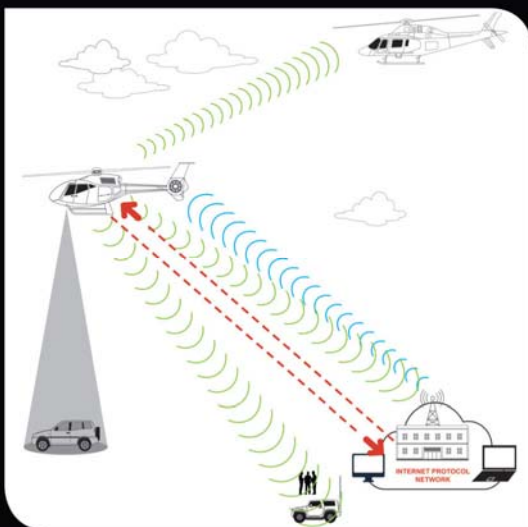


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with the powerful HTS900 was aimed at law enforcement and other applications requiring improved hot and high hover performance. It was unveiled at Heli-Expo in February 2006 and flew later that year. Bell inexplicably dropped it from their production line-up [they did a lot of that in those days]. Where the 417 was expected to enter production in 2008 the certification process by the less resourceful Eagle Copter has understandably taken far longer.

### CAMERA POWER

Video cameras are getting cheaper by the day and Meeker Aviation are grasping the technology with both hands to meet the specific needs of customers.

The wide availability of affordable personal body cams in the sporting world and security arenas has expanded the perceived need in the aviation world. Fitting cameras to aircraft to check the load and otherwise invisible parts of the airframe is not new but it is the negligible cost of the cameras that is leading to a wider range of uses. The cameras used for watching over rescue winch operations are just a recent example that is gaining wider acceptance.



At one time it would be rare for such fittings but the film industry now has started employing small cameras to check on what their large and expensive camera pods are doing. In the same way special forces [and not so special organisations] are now fitting multiple 'GoPro' type cameras to aircraft that observe and record all aspects of operations. A training exercise or operational flight can be recorded from a dozen different aspects and the aftermath of the flight be viewed and reviewed from various angles.



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The search for a suitable and lightweight CVR and crash recorder for the UK police fleet continues and there was ample opportunity to inspect the type of camera fitted as standard in recent Airbus Helicopters but not featuring in the older Glasgow crash helicopter.

On display at the Appareo booth the company showed the standard black plastic unit alongside a clear plastic version allowing the interior workings to be viewed.

Airbus selected the Appareo years ago as an unobtrusive lightweight system that records visual, audio and data tracks on a simple SD card and has its own hard drive. The Appareo sales team state that some of the UK police aircraft fleet were retro-fitted with their system at the whim of the individual police service but it was not universal.

The basic Vision 1000 unit captures attitude data [pitch, roll, yaw], height and position data from the GPS, cockpit images, crew and ATC communication and ambient audio in a self-contained box 4 inches x 2.5 x 2. The accepted limit of the system is that it is a complex plastic box and therefore not able to withstand fire. In defence of that it can be said that many of the more recent accidents – particularly to the EC135 have not resulted in a post-crash fire. If the SD card flash memory card does not survive impact the in device flash memory usually does. The SD card provides four hours of recording and the in device memory two hours – enough at least for the last two flights.



## Notice of sale of Aircraft

### Available for sale:

Aircraft 1: MD902 Explorer G-SASH

Aircraft 2: MD902 Explorer G-CEMS

Consideration given to selling as whole units or as individual components for use as spare parts

Enquiries to Mr Bruce Burns, Vice-Chairman: 01422 237900 or [b.burns@yaa.org.uk](mailto:b.burns@yaa.org.uk)

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Whether – in the wake of the Glasgow accident the pressures from the UK AAIB will allow the simpler Ap-pareo solution to prevail remains to be seen.

The Israeli camera manufacturer Controp Precision Technologies has teamed up with a Punta Gorda, Florida based company to market its high quality sensors. Needless to say they are not affected by ITAR restrictions and can be made available worldwide.

APG Avionics and Controp held a press conference to talk about their partnership and to introduce Controp’s line of S.I.T.E. (Surveillance, Infrared, Thermal, Electro-Optical) products and their potential in the US market.

APG Avionics is making available to Controp an existing facility capable of providing installation, maintenance and repair of the turrets in Punta Gorda. <http://avionix.com/> [sales@avionix.com](mailto:sales@avionix.com) +1 941-637-8585



This was the first year of Heli-Expo for Sikorsky under its new owners Lockheed Martin. Last year there was little indication that the aircraft manufacturer was not going to return as part of United Technologies [UTC], since then UTC formally announced it was to get out of helicopters and the deal finally went through late last year.

The depression in the oil and gas market has hit Sikorsky particularly severely and its other non-gas and oil offshoots including Schweizer are not in a position to take up the slack.



## UNMANNED

There were just a handful of UAS market sector sellers in the hall and one of those was determined to knock the small craft out of the sky!

Readers will recall the large UK sourced AUDS equipment and various other stories about sending out 'rays' to disable the small craft, or sending up other small UASs to fire nets at intruder craft, all reasonable ways to deflect them from entering areas where they are not wanted – just as letting off both barrels of a scatter gun might be.

The Heli-Expo presentation was a relatively cheap and simple PC based jammer device that seeks to set up a cone 'no fly zone' around it to automatically take control of a rogue craft and land them safely.

The presenters were Alion Science & Technology an organisation that encourages the innovative application of science, engineering and operational experience to support the successful resolution of problems. The problem presented was what to do about single or swarms of personal drones taking over an area.

Their Counter Unmanned Aerial System (C-UAS) scans an area and is capable of identifying and safely landing one or more craft. It detects, blocks the connection between the UAS and its operator, establishes a new connection and lands it.

At the show the developers could explain the concept but it is clearly still in development and lap-top based with the jammer temporarily utilising a non-specific casing. Not intended to be as sophisticated or costly as the AUDS it can offer some of the features it has at a price point a small police operation might consider. It is also designed to be built into helicopters or ground vehicles. [www.alionscience.com](http://www.alionscience.com)

Meanwhile two more anti-UAS products have been announced in the UK, Paul Trimble [a regular at the annual PAvCon Europe] has launched his Sparrowhawk net firing UAS at a secret Farnborough venue and another company in the north-east has offered up a hand-held ground launched net firing device with similar aims.

*Ed: Standing back from, and assessing these anti-UAS developments I would assume that all of these measures relate to simple UAS technology. Can we envisage another level at which a new electronic warfare breaks out and the encroaching craft does not helpfully use the standard control radio wavelengths that the 'off-the-shelf' machines are fitted with? Already the military are talking of using small unmanned craft in swarms—how would these measures fare against such a threat? To modify a term from more than 90 years ago might the UAS always get through?*

One exhibitor was showing a multi-fan answer to all needs. Their advertising directed at the emergency services sector may be enlightening – then again it may be delusional.

*"Most agencies are discovering the hard way, unmanned aircraft that must be carried to a location, set up and flown by ground personnel are a waste of time, manpower and money. Tethered systems are equally useless for emergency response. Ground personnel need to see what's happening before they arrive, to work more effectively. AEVA 2.0 automatically launches to incoming 911 emergencies and arrives in about 90 seconds. Serving police, fire and disaster management teams simultaneously, she helps them work more effectively and safer. And commanders can adjust response in real-time, based on live situational awareness."*

Olaeris already claims to have government customers planning citywide and countywide integrations of AEVA fleets that will automatically respond to incoming 911 calls.

*Ed: But I am unsure what the 'arrive in 90 seconds' statement is meant to imply? I do not think any craft could get to the bottom of our garden in that time!*

There was lots of space in the main hall and these are just a few of the 'seating areas' that were clearly really booths that did not get let.

THALES

*So that was this years HAI Heli-Expo. In many ways could do better, but except for the cold and the threat of snow there was nothing wrong with the location or getting there. HAI and Heli-Expo are part of my life and it is my aim to go there every year as long as I am physically capable. Next time I might take a different route to get there but overall there was nothing there that would deter me from going to Louisville again but we all know that next year at Dallas should be much warmer!*

[www.policeaviationnews.com](http://www.policeaviationnews.com)  
**Emergency Services First**



The 2016 PAVCon Police Aviation Conference is to be held on 14-15 June 2016 at Oberschleißheim near Munich, Germany. This year there will be a FLIR Training Day on Monday 13 June sponsored by the EO/IR industry. The training will be led by Officer Jack Schonely a highly regarded EO/IR trainer and ALEA member from California. This event is an extract from a multi-day training event operated by the ALEA in the USA.

Fees for this training day have been held at 35 Euro per person where they are a member of a Police Aviation Unit. Group rates are available on request to the organisers.

Industry can attend at a higher rate of £75 [UKP] and subject to space being available on the day.

All places can be pre-booked through the PAVCon office and can be Invoiced or directly paid through such as Paypal.

In 2017 the plan is to work with NPAS to bring the event to the United Kingdom for the first time since 2009.



**HELICOPTER LINKS**  
 The online yellow pages of the helicopter industry<sup>SM</sup>



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GUIMBAL



AIRBUS



THALES



Robinson's in the Static Area



Clear skies in the run-up to the show. The Fairground skyline