

Police Aviation News

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Heli-Expo Issue

March 2018

HELI-EXPO

News and views
from the floor
of the major
helicopter
SHOW 2018



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All Quiet: The scene of last years mass shooting viewed from the Las Vegas McCarran Airport . The Mandalay Hotel left and 'New York' right. One of the now controversial sightseeing EC130s coming into land. ©PAR

HELI-EXPO REPORT

It appeared likely that this year's HAI Heli-Expo had been the largest yet. It certainly came across as the largest in terms of volume in recent years. The devil is in the detail and sometimes even that can be skewed to provide a positive picture for the organisers. When HAI issued the statistics it turned out, year on year, to be slightly smaller and less well attended than the impression given. There were a creditable 17,312 registered attendees to visit 705 exhibitors who were in the main more than happy with the numbers. There was business to be had.

The helicopter industry has not got itself out of the doldrums just yet but there is a positive thread in expectations and that is partly driven by the knowledge that the demand for pilots and engineers has never been greater in peacetime and is outstripping supply. That alone increases the demand for trainer aircraft and their components. It is the demand for the larger working airframes that remains the questionable element.

The event ran at a time when there were several fresh identity changes in the industry including those of Bell and Kopter. Each attracted comment – both positive and negative - but regardless of the comment they had come to pass, and it was time to look beyond to the new identities and the future products.

This report is based in part on press conferences and networking and it is fair to say that it was the latter that brought about the more satisfying information. In general, the chore of running a press conference looked and was presented as something to be endured. Thank goodness for Networking. This is not a negative comment on any specific marque. The industry is apparently just coming out of the doldrums and for most there is simply nothing really exciting to announce. For most manufacturers it is the announcement of one or two helicopters ordered or delivered where in the past there were dozens.

HEADLINES

ROBERTSON and STANDARD AERO

Although it had been a few days since the tragic crash of a Papillon Grand Canyon Airways helicopter in the Grand Canyon the early hours of the Heli-Expo were inexorably linked to the tragedy and people involved in the accident just an hour east of Las Vegas.

The show got underway as the young bride who was critically injured in what has become known as the *Grand Canyon* honeymoon *helicopter crash* that killed her groom and three friends died in hospital from her injuries sixteen days after the crash. She was among the survivors of the impact but as has regularly been the case of fire victims she succumbed to the burns she suffered in an ensuing fire.

FRONT COVER: Airbus Helicopters might well perceive Robinson products as not worthy of counting when they wish to claim their majority share of the market but Robinson seem to brush that aside. At the Expo they were promoting their R66 with working craft tools including the Bambi fire bucket.

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On the eve of the show, February 26, Papillon Helicopters and StandardAero signed a Memorandum of Understanding (MOU) for 40 retrofittable Crash-Resistant Fuel Tanks (CRFTs) in support of Papillon Grand Canyon Helicopters' fleet of Airbus AS350 B3 and EC130 B4 tour aircraft. Installation of the first CRFT will take place this April.

The CRFT has been developed by StandardAero (formerly Vector Aerospace) and Robertson Fuel Systems as a direct replacement for all AS350 models, including the AS350 C, AS350 D/D1, AS350 B/B1/B2/BA/B3 and AS350 B3e (H125), as well as for the EC130 B4. The tank's unique design features a robust crash-resistant fuel bladder, offering the same capacity as the legacy fuel cell and uses several innovations including magnetic field sensor fuel gauging technology and vent system roll-over protection. The CRFT is compliant with the latest FAR Part 27.952 fuel system crash resistance requirements, even when used in combination with a cargo swing. It is a Robertson tank but StandardAero are undertaking the lions share of the marketing, sales and installation into the US market. Currently the tank is FAA certified, the EASA uptick on the paperwork will occur later this year.



Airbus have had a crash resistant fuel tank in the H130 for some years and apparently reluctantly moved it over to recently delivered AS350B3/H125. The problem with that tank is that it is only half the job in that it does not allow fitting to airframes fitted with a load hook. As a result even brand new police airframes which tend to want to carry Bambi buckets did not have access to the safer fuel tanks until Robertson developed their unique answer to the life-or-death problem.

Public and regulatory focus on enhanced helicopter safety has continued to grow since the CRFT was first unveiled in 2015. The FAA Reauthorization Act now includes an amendment requiring the FAA to make helicopter owners aware of fuel system retrofits and to urge them to install retrofits "as soon as practica-

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ble.” The pressure to buy will be significantly more than that.

Both StandardAero and Robertson Fuel Systems (RFS), were exhibiting variations on the Crash-Resistant Fuel Tank (CRFT) for the AS350 variants. The latter exhibit was in the form of the distorted fuselage section that passed the 50-foot FAA drop test in July 2017 which led to STC FAA certification in December 2017.

The drop test, witnessed by the FAA, included the cargo hook swing attachment and was dropped in fuselage structure. The one-of-a-kind, exclusive drop-test display allows operators and attendees to view, in person, the CRFT’s ability to withstand impact without any leakage, thereby helping to prevent post-crash fires and is an impressive look into the systems durability. Sitting at 76” L x 70” W x 61”H, it will allow for constructive conversations about how to affordably modernize and retrofit AS350 or EC130 aircraft to meet potential future safety mandates.

The sales activity profile was greatest on the StandardAero booth. It was there that the Papillon MOU was announced on Day 1 of the show, followed on the second day by a similar sized order by Air Methods to retrofit their AS350 based fleet. The latter are already fitting the new tank and will require in excess of 100.

Clearly all this acquisition activity has been in train since the replacement tank was certified at year end but equally a sense of public interest and urgency was driven by the multiple fatality Papillon accident. A potentially low interest sale of conversion kits that would normally receive scant coverage was near headline news. This hopefully draws to a close a period that is really no-ones fault.

In continuously improving their venerable AS350 series Eurocopter/Airbus effectively created an increase in survival rates through impact that the rest of the airframe was unable to keep up with. A few years ago before the availability of stroking [crashworthy] seats the pilot and passenger would have probably died in the impact. The better seats were effectively delivering the occupants to a fire caused by a less than perfect fuel tank. The Airbus remedy was simply not up to standard in many ways and furthermore it will not allow the back conversion of legacy aircraft and more. Since December that negative scenario has been resolved with a certified modification. For the operators it is now a race to convert to the safe fuel system in the knowledge that the civil courts will show little mercy in future accidents if the opportunity to upgrade is not taken quickly.

Other legacy airframes have been more fortunate in this aspect of flight safety. Often by chance rather than design the fuel systems have been more forgiving after impact. That fortune has not necessarily fed across to the seating layout or the ability to fit efficient stroking seats. Modern design edicts do not allow passengers to sit on fuel tanks and yet in several legacy designs the practice remains.



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The latest move is that the helicopter operator and Airbus have been cited in a court case that the British families have put before a court. No amount of compensation will bring back the victims and the modification programme is finally underway.

ESG

The show opened to news that the German engineering company ESG had firmed up two important fleet upgrade contracts at home. The first of these was for the already completed upgrade of two EC135P2 helicopters for a state police unit but the more important second signing was with the Bundespolizei, the Federal Police, to upgrade their entire fleet with a common system. As the Bundespolizei fleet numbers around 100 airframes and includes such as the EC135, EC155 and Puma the overall value is significant.

Several other companies in the halls of HAI have an interest in this contract, the details of which have yet to be released. Ultimately we can expect to see both smiles and gloom in among the selection of displays and searchlights.

ESG Elektroniksystem- und Logistik-GmbH, a 55 years old German company with little profile in the USA, succeeded in winning the contract issued by NATO Support and Procurement Agency (NSPA) for the German Federal Police for the fleet-wide replacement of all mission equipment in the AS332L1 "Super Puma", EC155 and EC135 helicopters.

The Missions Management System ESGMM supports the operator with a fusion of map data, terrain models, real-time video and databases of geo-referenced objects. ESGMM has wide-ranging interfaces to avionic systems such as the Electro-Optical System (EOS), Automated Identification System (AIS), High Definition (HD) Video Downlink, Intercom, Cockpit MFDs, GPS, radar altimeters and FMS. ESG has integrated the new Hensoldt Argos-II HD as the EO/IR system [replacing FLIR supplied systems in the main]. South Africa based Hensoldt is the most recent identity of Denel/Zeiss/Airbus DS.



ESG were exhibiting an example of the TFO crew station intended for the Federal Police upgrade ©PAR

The work on the EC135 and EC155 fleets will be undertaken by ESG in Germany where the integration into the Super Puma, has been contracted the firm HeliOne from Stavanger in Norway. Readers may recall that HeliOne has been undertaking earlier modification work on this type for the Federal Police.



Ed: For some hours of Day 1 this contract was the most high value announcement in town. Unfortunately few if any of the visitors knew who ESG were. Importantly though many of their fellow exhibitors knew their status exactly and I personally directed a handful of them to their low key booth area in the Central Hall. The selection of the Hensoldt sensor is a significant move and massive kudos for them.

AIRBUS HELICOPTERS

The star of the show as far as Airbus were concerned was their H160. The H160 prototype F-WWPL landed in Las Vegas to headline Airbus Helicopters' presence for the first time ever at an international air show.

Maintenance demos on the H160 were performed daily to demonstrate how maintenance has been optimised and facilitated thanks to the latest thoughts on design. Alongside the second prototype of the H160 the company displayed its HGeneration range of mission enablers including HCare services that allow customers to focus on safely, efficiently and cost-effectiveness. Also on display were an LAPD H125 in a law enforcement configuration, the H135 equipped with Helionix, and the H145 in a private and business aviation configuration.



H160 in America ©Airbus Helicopters-Jerome Deulin




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Babcock is set to become the global launch customer for the H160 after signing a five year framework agreement for the purchase of a fleet of H160s. The fleet of H160s is destined for EMS and other critical services missions starting in Europe and to be deployed progressively across Babcock's bases worldwide.

With 68 patents, the H160 integrates Airbus Helicopters' latest technological innovations aimed at providing passengers with superior comfort thanks to the sound-reducing Blue Edge blades and superb external visibility for both passengers and pilots, not to mention the additional safety features provided by Helio-nix's flight envelope protection and reduced pilot workload. Airbus Helicopters' new industrial model, based on site specialisation and a plug and play component assembly process, has reduced the H160's time to market to 24 weeks giving customers more flexibility. This will enable customers to confirm their mission configuration at later stage based on market needs.

Babcock's Aviation business provides mission critical services, ranging from aerial emergency medical services, aerial fire-fighting, Search and Rescue, Surveillance operations, and Oil and Gas transportation, in 14 countries with over 51 years' experience in saving lives and protecting the environment.

Ed: The H160 is seen as the direct, but somewhat late, answer to the AW139. In which case the comment that it offers a reduced time to market of 24 weeks to give customers more flexibility may bring a smile to faces who recall the recent comments by the head of Leonardo that sales teams had been causing major problems in offering customers late mission configuration. The type also looks to be incorporated into the French public services in a large way. Whether this will be to the same extent as the early EC145 remains to be seen. Other sales were announced.

Other examples of Airbus products were to be found across the hall including the inevitable large booth of Metro Aviation close by Airbus. Metro are further developing their lightweight version of the early model BK117/EC145 to incorporate a lightweight IFR fit as the EC145e. The original batch of the non-Fenestron model agreed with Airbus has proven popular as a US built product but it is not an IFR capable machine. The original Airbus IFR fit is relatively heavy and Metro have been making full use of the load improvement of around 300 pounds but have now been able to source an excellent lightweight system that dramatically increases overall performance options without seriously degrading that extra load performance. They are working with Genesys Aerosystems and hope to have an STC by year end. The Metro production assured the continued production of this variant of the BK117C2 in the USA. Since Heli-Expo the US Army has confirmed a new production batch of UH-72s which effectively 'saves' the local production line for many years to come.



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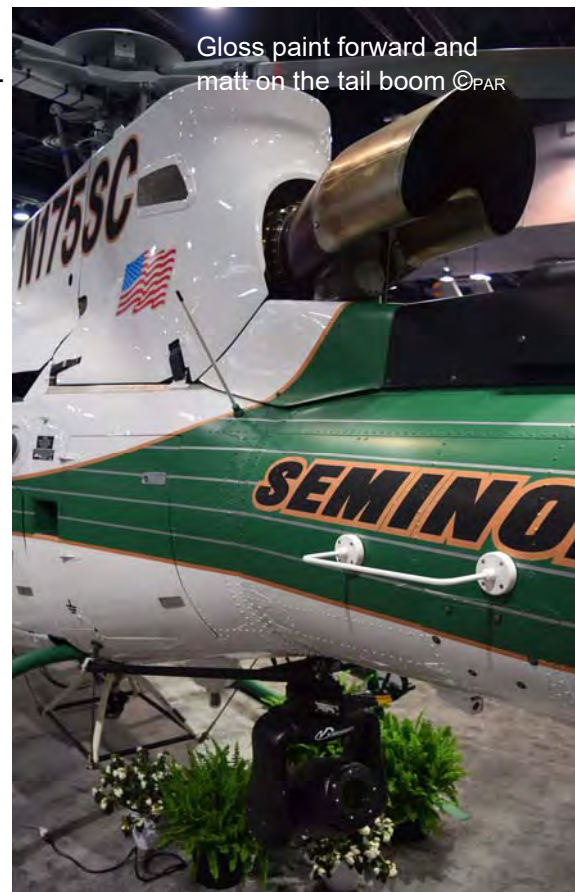


The new H125 has hardpoints underneath which preclude the fitting of the standard Airbus fuel tank. ©PAR

Another near unique US built product is the H125 which remains popular with the US police – notwithstanding the query over the upgraded fuel tank. Metro were displaying N175SC the latest H125 for the Seminole County Sheriff based at Sanford Airport, Orlando, Florida.

The airframe, c/n 8430, features a colour scheme that caught the attention of some. Where the forward cabin was the usual gloss finish the rear was wholly in a matt finish that might prove more resilient to cleaning the inevitable sooty deposits of the engine exhaust. Time will tell whether the concept gains wider acceptance.

Airbus maintain their 'magic' 50% share of the market and the actual numbers remain not too far from those achieved last year. Again though the percentage is only achieved if they manage to convince themselves, if not everyone, that Robinson produces toy helicopters. As the EC120 found, the R66 is no toy and at least Bell have faced up to the Robinson challenge in the pricing and marketing of the 505.



Gloss paint forward and matt on the tail boom ©PAR



BELL

Bell, no longer Bell Helicopter, launched the new 407GX_i at the show as a well thought out refresh of the existing product line but it was no crowd puller. The new model incorporated new avionics, an upgraded engine offering a dual channel FADEC and automatic relight and some tinkering with the executive interior designs. Go utility or law enforcement and the latter improvement becomes wholly irrelevant.



The focus is now on the 505 as it moves centre stage. The sale 100 examples of the Bell 505 JetRanger X into China was headline grabbing in itself but so were the individual reports of 'the first' sale of a 505 in to the ENG community and to a Californian police operation. Although it will be a while before either of the latter see the light of day in an operation sense the pressure is now back on both the Airbus H125 and the Robinson 66 for sales into the niche sector.

As expected Bell displayed the new Uber backed air taxi cabin, along with an example of the Bell 505 Jet Ranger X and a Bell 525 Relentless mock-up in the colours of Bristow.



Following its debut at the 2018 Consumer Electronic Show, Bell's Urban Air Taxi arrived in Las Vegas to invite guests to step inside and experience the future of transportation. In truth no-one knew what to expect of the Taxi and some remain bemused after they had seen it and its VR headset wearing guests. The Bell explanation was fairly clear but the outcome remained unclear.

"We are continuously discovering new ways to deliver the vertical flight to the masses and Bell's Urban Air Taxi is the first step," said Michael Thacker, executive vice president, Technology and Innovation. "Changing the landscape of the vertical lift industry has been our objective from the start and we are excited to push the limits of VTOL as we change the way the world flies."

Like last years future airframe the taxi was mainly a gimmick, a crowd pleaser, and one that may serve to widen thinking on the subject but, like my car at home, it has no visible means of aerial support and cannot take wing.

The Bell 525 Relentless advances and receives interest from customers around the world even though its prime market is still moribund. Again the delivery date has slipped so we are unlikely to see deliveries prior to 2020 .



The Bell Booth projected a new marketing future ©PAR



Essex and Herts AW169 Air Ambulance projected beyond the tail of the A109 Trekker on the Leonardo booth. ©PAR

LEONARDO

Orders announced at the show were pleasing but not often earth moving. It was not so many years ago that manufacturers shied away from making much of a fuss of single sales – those days may return of course – but not just yet.

The big order was announced on Day 1 with 26 helicopters worth \$147M being ordered by a distributor in China. In terms of individual numbers it is for seven AW119Kx, 15 AW109 Trekker, and four AW139. The first Trekker sale into the UK was also announced as going to Sloane the official Leonardo agent for many years but recently somewhat overshadowed by the direct sales to such as Specialist Aviation Services [SAS]. In mid-show Leonardo announced further combined orders for helicopters at the show - 17 aircraft valued at almost €140M for several customers in various countries and for a range of commercial and public service applications.

One law enforcement order announced was for the Tianjin Municipal Public Security Bureau. They are having the AW139 for law enforcement emergency response, security, traffic control, search and rescue (SAR), and other public utility duties. This further expands the grip of Leonardo on the Chinese law enforcement market. The Company has already delivered to Chinese operators more than 20 aircraft of various models for this task to date, including 9 AW139s.

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The vast Las Vegas Convention Center was the temporary home for this year's event. Captured on the flight out from McCarran Airport ©PAR Virgin Atlantic

A close-up photograph of a pilot wearing a helmet and oxygen mask, sitting in the cockpit of an aircraft. The pilot is using a laptop computer. The cockpit is filled with various instruments and screens. The view out the window shows a landscape with water and trees.


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Last year at the HAI Heli-Expo this was the Marenco SKYe SH.09 Swiss Helicopter. This year saw the launch of the Kopter name. Nonetheless this potential challenger for the market of the AS350/H125 line of singles is some two years off offering a serious market challenge.

The Sikorsky Blackhawk appeared across the hall in several guises. The type is now old enough to be on the second hand market [below] and yet leading edge enough to be still vying for new contracts and providing for day to day security to law enforcement as depicted by the US Customs example.



KOPTER

Fresh from a name change the former Marenco Swiss Helicopter was at the show in the new crisper guise of Kopter. The, still in development, product remains very much the same and is perhaps to be spared critical technical critique until the end of 2019.

The company CEO, Andreas Loewenstein, and members of the management team, were much in evidence presenting marketing strategy for the US market and announcing new contracts. The latter were few and many of those who have signed up for the type remain in the shadows. The time for them to 'come out' and to prove their backing for the type are yet to come. More important is the enduring partnership forged with Metro Aviation regarding EMS interiors.

The type may work well in both EMS and law enforcement but another year will have to pass before there are any significant developments in those areas.

ELBIT SYSTEMS

Elbit Systems Ltd. was showcasing their Enhanced Flight Vision System (EFVS) at the show. Heli-ClearVision, the rotary-wing version of the existing Clearvision™ fixed-wing suite, has been selected by Leonardo Helicopters to be installed on the company's commercial helicopters. The suite allows helicopter pilots to perform flights in low visibility conditions, previously considered as challenging and risky.

The system is packaged in a single Line Replaceable Unit (LRU), installed outside of the helicopter. The high quality imagery in low visibility conditions is accomplished through real-time image fusion between sensors at multiple spectral bands.

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ROBINSON

The R44 and R66 are offering Garmin's new G500H TXi displays as options. The two TXi displays add touchscreen functionality to Garmin's popular G500H system, and consolidate PFD/MFD information on to a single screen. The upgraded displays provide increased resolution and interface with Garmin's GTN 6xx/7xx touchscreen GPS series.

Several Robinson helicopters were on display at the Heli-Expo in both the static display and different booths. An R66 Turbine helicopter with a Garmin 1060 TXi installation, along with an R44 Raven II helicopter with a Garmin 700L TXi installation, Genesys SAS/Autopilot were on display.

Over in the static area Robinson had an R66 set in a sprawling display that suitably showed off the new wire strike protection provisions to its R66 options list. Available only on R66 helicopters, the provisions are FAA certified and allow for easy, bolt-on installation of Magellan's WSPS (Wire Strike Protection System) sold separately by Magellan Aerospace, Winnipeg, Canada.

Robinson provisions add 7 lb to the empty weight of the helicopter and include reinforcement and attach points on the windshield bow, roof, and chin, with low-profile deflectors near the ground handling ball and forward landing gear struts at a cost of \$4,200.

Magellan's R66 WSPS, complete with wire deflectors and cutting blades adds 16 lb. to the empty weight of the helicopter. The system is available as a kit compatible with Robinson factory-installed provisions for \$16,000 or as a complete aftermarket kit with field-installable provisions for \$22,800. The whole looks a very clunky but effective solution that also slows the type a minimal amount.

The same aircraft also displayed the yet to be FAA certified R66 cargo hook installation and some serving suggestions including a Bambi bucket. The optional extra carries external loads up to 1,200 lb and, for external load operations, the R66's maximum gross weight increases from 2,700 lb to 2,900 lb.



Two installations of the hook are available: *Basic* - includes the cargo hook and right-seat controls allowing operations from the pilot seat only. MSRP \$12,800 and *Advanced* - includes the cargo hook, right and left-seat controls, a left-seat hydraulic switch, and a left-seat start button. A load weight gauge and a second set of engine power gauges (torque and gas temperature) are located in the left door sill allowing the pilot to monitor engine operations while keeping an eye on the external load. Provisions for remote control of external equipment (e.g., long line hook or a water dropping bucket) are also included. MSRP \$28,000.

Precision Aviation Group, Inc. (PAG), has signed a dealership agreement with Honeywell Aerospace which allows PAG to sell, exchange and provide MRO services on Honeywell avionics products including Aspire (satcom) and SkyConnect.

Honeywell received its first helicopter platform supplemental type certificate (STC) for its Aspire 200 satcom system in 2015, and over the past 24 months has completed certification on a range of helicopters across all segments of the market, including the Leonardo AW139, the Airbus AS350, the Bell 429, the Sikorsky UH-60/S-70 family, and a fleet of Mil Mi-8s in Europe.

TRAKKA SYSTEMS

The US based branch of Trakka announced that Washoe County Sheriff have selected the TrakkaCam TC-300 multi-sensor, stabilized surveillance system and the TrakkaMaps TM-100 Mission Mapping and Video Management System for their OH-58 multi-mission helicopter.

"We are extremely pleased that the TC-300 and TM-100 have been chosen by Washoe County Sheriff's aviation unit as launch user in the USA ALE market. Airborne law enforcement is a very demanding and unforgiving task and we are excited to be a part of their mission. We look forward to supporting Washoe

County in their future operations. With an operating area of over 6,500 square miles and Nevada's second most populous county, Washoe County Sheriff has a demanding job and we are confident that the enhanced capability of the TC-300 and TM-100 will aid in their mission success" said Glen Rowling, Trakka Systems VP Business Development for Americas and Asia Pacific.

The TC-300 should enhance Washoe County's multi-role capabilities, by offering greater detection and recognition ranges from the high-resolution InfraRed (IR) and High Definition (HD) Day/Night cameras than the system the aviation unit has been operating to date. The integration of the Trakka Systems TM-100 Mapping and Video Management System will significantly increase their situational awareness and mission responsiveness by offering 3D maps with street address lookup and slaving of the TC-300 and searchlight. The TM-100 is further enhanced by providing real time augmented reality overlays on live video.

Trakka also announced an order for five SWE-400 QUAD TrakkaCams from Western Power Distribution. Western Power Distribution is the company responsible for electricity distribution in the Midlands, South West and South Wales of the UK, with a network comprising 220,000 km of overhead lines and underground cables, and 185,000 substations. The business serves over 7.8 million customers and employs over 6,500 members of staff to ensure the highest quality of service to their customers.

An FAA STC now covers the installation of the A800 searchlight onto the Bell 206B/206L and B407 helicopter variants.

The Certification covers the integration of the Trakka A800 searchlight, Pilot Control Interface Unit (PCIU), Control Interface Unit (CIU) and Trakka Control Pane; (TCP). The pilot or co-pilot can control the A800 via the CIU or TCP interfaced with the existing four-way switches on the helicopter's collective control or via a pistol grip that can be operated by a crewman. The certification also includes a Red and Amber filter with an option for an IR filter for government agency operations and interfaces for slaving the Trakka A800 system to a variety of EO camera systems.

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AIRCRAFT

Work was carried out in conjunction with Tampa Police Department and FAA DER Jeff Fox Engineering. The installation utilizes the Meeker B206/407 aft mount allowing for easy new or retrofit equipment installations.

A similar FAA STC covers the installation of the A800 searchlight onto the MD500 helicopter variants. In that case the work was carried out in conjunction with Prince George's County Police Department and The IPL Group utilising the Meeker MD500/369 side mount allowing for easy or new retrofit equipment installations.

There is little doubt that Trakka has taken a dominant position in the searchlight market, but it remains just one of several options for illuminating the scene. The main rivals are the original Spectrolab and Luminator who now have on offer the former Thommen certified searchlight to add to their less sophisticated option that looks a whole lot like an SX-16. So there is plenty of choice the deciding factors are clearly preference and budget.

In choosing from the start to seek to certify their searchlight the original Trakka option cost a great deal to develop and the purchase price reflects that. Industry experts have suggested a price in excess of £70,000 compared with perhaps £50,000 for a new specification Spectrolab. The original SX-16 by the latter remains a very low cost and attractive option, there are many available and these can be obtained fully refurbished for just £10,000 – a significant saving where budgets are strained. Each of these options has variations in specification which will significantly alter the price.

None of these manufacturers rely wholly on the searchlight as their sole product line, Trakka is now venturing into integrated and stand-alone sensors where both Luminator and Spectrolab offer alternative lighting such as landing and marker lights.

Luminator were promoting a range of LED landing lights designed to simply replace original equipment and offering a significantly longer life and multiple redundancy. With old filament lights failure was just that – no light – but LED technology failure is usually progressive and promises to be some 30,000 hours after installation. That should be for the life of most airframes.



As related in the past, and reported in the Helitech edition last year, Spectrolab have been working on a steerable LED landing light for the tilt rotor. The final Milspec motorised lamp works well but is expensive so work is in hand to produce a similar version that will be attractive to the civil market by year end.

Every little helicopters dream is to grow up and serve the police? This Colibri was displaying a Shot Over surveillance camera option.

Spectrolab hope to re-engineer their steerable landing light so that it attains a price acceptable in the commercial aviation field.



The MD Helicopters booth in the North Hall included the ever popular Day 1 Press Conference & Reception with MDHI CEO Lynn Tilton. Press conference it may be by name but the interested interlopers way outnumber the journalists. They tend to be the same year in year out but I make moves to attend. I missed this one and can only take the anecdotes that Ms Tilton is mellowing. Perhaps it is something to do with a far sunnier situation in her Mesa factory.

The long promised wholly US production line is out of Mexico and into Mesa. Business is though primarily military in nature and the new MD902 Explorer successor and the MD6XX development can go hang. There is no room in the factory for them and, although long term promoters of the type remain as enthusiastic as ever the market for the Explorer must surely recede by the day.

On the booth were the Virginia Beach Police Department's new MD 530F alongside one of six MD 530G Attack Helicopters ordered by the Malaysian Ministry of Defence. Despite its dated architecture the MD 530 airframe remains very popular and features an advanced all-glass cockpit. According to the MDHI Press Release the two glass cockpit solutions will be FAA Type-Certified to the MD 530 airframe and available to all MD 530 operators. No date is given.

The MD 530F, the glass cockpit incorporates Howell Instruments Engine Instruments Displays, Garmin 500TXi MFD/PFD, Garmin GTN650 Coms/Navigation Display, L-3 ESI-500 Electronic Standby Indicator

The Milspec MD 530G-glass cockpit, is evolved from that shown last year in the MD 6XX Concept aircraft at HAI. It features two Genesys Aerosystems IDU-680 6" x 9" LCD primary displays and Tek Fusion Global's PATHFINDER™ Mission Management System (MMS) and "ARES" Weapons Management System (WMS) on Dual Side-Mounted Mission Displays.



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Some projects appear to take on a long drawn out life of their own and that involving the Fresno County Sheriff's Dept. Air Squadron, based at the Fresno Yosemite International Airport, in California is just one of them.

This unit dates from the mid-1990s and in late 2015 they announced they were to acquire a new MD helicopter, due to be delivered in late 2016 and financed by budget savings, federal asset forfeiture funds and state Proposition 172 monies.

A new helicopter was among the sheriff's office's top priorities because the two existing MD500E helicopters were 24 years old and each had in excess of 14,000 flight hours.

In January 2016 there was a report on Twitter they had have ordered an MD530.

Finally last month MDHI announced the delivery of a new, custom-configured MD 530F to Fresno County Sheriff's Office. It was the first airborne law enforcement unit in the USA to fly MD Helicopters' advanced, FAA-certified all-glass cockpit.

The Fresno glass cockpit features the Garmin 500H EFIS flight display, Garmin GTN650H touchscreen GPS/Navigation and communications panel, Aero Computers UC-6000 airborne mapping system, and a Garmin GTR 225 audio panel.

Powered by the Rolls-Royce 250-C30 650shp turbine engine, EAGLE 1 features a high landing gear, a Fargo 21-gallon auxiliary fuel tank, wire strike protection system, and Talon LC Keeperless hydraulic release cargo hook for external loads up to 2,000 pounds.



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Cobham Group products and services being displayed included Antenna Systems – anti-jam GPS systems; search and rescue (SAR) and ADS-B antennas; Tactical Direction Finders and DF Controllers; conformal, embedded and tuneable antennas, Helicopter Services - Ab-initio and Operational Flying Training including Search and Rescue and Tactical; Government Helicopter operations including Maintenance and Logistic Support, Radio Systems – airborne audio & audio-radio management systems; FLEX-COMM, TETRA and RT-7 civil support radios and Satellite Communications.

The tactical radio system featured in the cockpit of the LAPD Airbus H125 displayed on the Airbus Helicopters booth.



SCHWEIZER



For a somewhat ancient military trainer the 300 has many friends. Born of the Hughes Tool Company in the late 1950s it picked up military contracts and, alongside the Bell 47 and Hiller 12, was one of the first airframes offered as military surplus to many police operators in its original form. It was original Hughes versions that set up the Sky Night patrol programme in California and remained popular when in 1986, Schweizer acquired all rights to the *helicopter* from McDonnell Douglas, which had purchased Hughes *Helicopters* in 1984. After Schweizer acquired the FAA Type Certificate, the production standard Hughes TH-55/269/300 *helicopter* became the *Schweizer 300C*.

Other developments were produced including a turbine powered S333 which saw limited police service across the world.

Sikorsky bought the company and the original helicopter spiralled into obscurity as the Sikorsky 300. All work was moved out of an original factory in New York state down to Florida. Eventually Sikorsky tired of the troublesome type and rid itself of the programme to RSG - the bare bones of the aircraft have now moved west to Fort Worth. Numerous shipping containers of parts and part complete airframes are now owned by RSG after Sikorsky washed its hands of them for an undisclosed sum.

The President of the 'new' Schweizer RSG David R Horton worked with the products before Sikorsky took them. He was at Heli-Expo explaining his hopes and aspirations for the product line.

There is no magic bullet, Spares, existing or new production will happen but future production of any of the models as a new build venture will probably require an indication of a production run of 100 or more. Whether the S300C is going to be that popular is the \$64,000 question.

TROLL SYSTEMS

Troll Systems' FAA and FCC certified Network LinkBox simplifies the control and management of voice, video and data transmission, encoding, decoding and encryption. The Network LinkBox connects airborne cameras, antennas, mapping and mission payloads to a wireless air-to-ground IP network. Using Ethernet as the common denominator, the LinkBox creates a bidirectional network bridge that can adapt to current and future mission payloads across multiple frequencies.

Troll's Network LinkBox supports long-range and tactical video data links in DVB-T, MIMO, TCDLs, CDLs, cellular and standard communication protocols. Designed to facilitate the rapid integration of third-party equipment, its multi-port Ethernet switch and router provide a seamless connection to control cameras, mapping systems, tracking antennas and other specialized sensors and equipment. Ethernet further simplifies security, control and data management, while providing a means to distribute encrypted content to mobile or networked devices.

Troll's Network LinkBox can support any video input including multiple video streams from onboard cameras, sensors and mapping systems. Live video capture can be displayed on the LinkBox touch screen monitor or external monitor via HDMI. Radio options are flexible and can be configured for each application. Audio is supported in both analog and embedded modes. Data may be sent over serial or native IP links. Bidirectional options are available to support full network bridging, routing and connection to and from the aircraft

Donaldson Aerospace & Defense, has now delivered in excess of 9,000th of its Inlet Barrier Filter (IBF). The milestone was marked at a special ceremony at the show with Robinson Helicopter Company Chairman and President Kurt Robinson. During the ceremony Robinson symbolically accepted delivery of the 9,000th filter, an R66 IBF, from Tom Newman, Engineering Director, Donaldson Aerospace & Defense. R66 IBF certification was announced in February 2017 and more types are added to the certification list each year.

Donaldson Aerospace & Defense, say that the Hong Kong Civil Aviation Department has validated the MD 900 Inlet Barrier Filter (IBF) Supplemental Type Certificate, clearing the way for installation of IBFs on MD 900 Series helicopters in Hong Kong.

Heliservices (HK) LTD operates a fleet of three MD 902s and has already equipped one with an IBF; the two other aircraft will also have IBFs installed soon.

"The operating environment in Hong Kong can be demanding of the airframe and engines, particularly during summer months when the temperature and humidity are exceptionally high, the air salt laden, not to mention a degree of pollution containing particulates and airborne substances that can lead to corrosion and erosion of mechanical components," he said. "We had also experienced a couple of FOD (Foreign Object Debris) ingestion incidences and clearly needed a more effective engine intake filtration solution to ensure complete ongoing protection of our engines. I have used the Donaldson IBF System previously and know how effective the filtration system can be once implemented. It was clear to us that the IBF System suited our requirements, in that respect the decision to implement the Donaldson IBF System into the Heliservices fleet was an easy one."



BLR Aerospace announced that the first factory installation of an Airbus Helicopters H125 FastFin® System has been completed and the aircraft will be delivered in June to Heli-Austria. The company also announced that 25 Airbus Helicopters Customer Centers worldwide have been authorized to sell and install the FastFin System. Heli-Austria is a long-time FastFin System supporter operating FastFin Systems on its H125 and Bell medium helicopter.



©PAR

Thirty H125 FastFin Systems have been sold to date and are operating in seven countries. More than 1,100 FastFin Systems are flying worldwide.

Guardian Flight LLC is the new rebranded name of the former Air Medical Resource Group (AMRG), headquartered in South Jordan, Utah, near Salt Lake City.

Guardian Flight, recently acquired by Air Medical Group Holdings Inc (AMGH), operates a fleet of approximately 100 fixed and rotary wing aircraft dedicated to air medical flights in the Upper Midwest, Mountain West, Southwest, Alaska and Hawaii. With more than 800 professional staff, including clinical providers, pilots, mechanics, trained communicators and support staff, Guardian Flight's aircraft and associated medical crews are at 55 bases in 13 states that serve a total of 15 states.

"The change to Guardian Flight reflects the new legal structure of all of our entities and eliminates potential confusion between AMRG and AMGH," said Guardian Flight President Fred Buttrell, who also serves as CEO of AMGH. "Importantly, the rebranding of our Guardian Flight umbrella company provides an opportunity to build a reputation for providing the finest possible servant care of the patients we transport," he added.

All of the Guardian Flight companies are active in AirMedCare Network, the largest alliance of affiliated air ambulance providers. An AirMedCare Network membership automatically enrolls participants in all participating providers' membership programs providing necessary transport at a nominal membership fee. It has three million members in 38 states.

Guardian Flight companies include Eagle Air Med serving parts of Arizona, New Mexico, South Dakota, Colorado and Utah; Hawaii Life Flight in Hawaii; Guardian Flight in Alaska and Wyoming. Companies also include Gallup Med Flight and MedStar in New Mexico; Valley Med Flight in North Dakota, Michigan, Montana, and Minnesota; Alaska Regional LifeFlight in Alaska; MountainStar AirCare operating in Utah; and AeroCare Medical Transport serving in Arizona.

FMI: www.guardianflight.com



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The Airbus Helicopters Booth ©PAR

CURTISS WRIGHT



In late February the company was awarded a contract by Sikorsky to provide its Air Data Computer (ADC) and Windshield Anti-Ice Controller (WAIC) technology for use on multiple variants of the Black Hawk helicopter delivered to the U.S. Army and Foreign Military Sales (FMS) customers.

The company has expanded its Rugged Video Gateway (RVG) family of COTS-based video management solutions with the introduction of the RVG-FC1, a Rugged Video Gateway Format Converter. As modern video equipment is rapidly integrated into airborne and ground aerospace and defense platforms, system developers are often confronted with the complex burden of converting older legacy video formats to work with a newer video management system. The time and effort needed to integrate a myriad of legacy and modern video formats and resolutions can add risk and slow deployment. The RVG-FC1 provides a simple yet powerful solution in a small, compact unit (49 x 160 x 185 mm) weighing only 1.1 kg. The unit supports 15 of the most common video formats and resolutions encountered in aerospace and defense video applications. The RVG-FC1 is claimed to be the only video gateway on the market rugged enough to perform optimally in demanding deployed applications.



The latest Curtiss-Wright recorder offers recording via rugged SD card or stick ©PAR



New at the 2018 Heli-Expo, RDDDS Avionics Limited from the UK previously left the US marketing of their displays to local partners. This year they decided to join DAC International on their booth.

In contrast Cal Meeker of Meeker Aviation is a constant at this and many shows and an attraction for many seeking to securely hang all manner of equipment in and on aircraft.



There were several instances of 'Projects' to be found in the vast Las Vegas halls—most of these may never be seen—including this quad copter concept on the Airbus Helicopters Booth and of course the Uber Taxi on the Bell [no Helicopter] booth.

What was clear though was that Drone fever has gone away and it looks like they, the Drones, are consigned to their own little shows in the back-ground. Time will tell. #



As the picture below indicates Helicopter Association International looks forward to seeing everyone in Atlanta, March 4-7 2019



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