

ROTORCRAFT PRO 2015 INNOVATORS CONTEST

There are lots of companies in the helicopter industry, both large and small, who are innovative but go unnoticed. The Rotorcraft Pro Innovators Contest set out to fix that by soliciting submissions of products and services considered to be innovative. We received dozens of entries from big companies like Airbus and Rockwell Collins, as well as from small companies like TT Aerospace and Helipad Kneeboards.

Once all submissions were in, a neutral panel narrowed the field down to the top 20, which were then presented via Rotorcraft Pro's Facebook page for a social media vote-off where 4,900 votes were cast.

The top three finishers are receiving prestigious engraved glass awards (with all associated bragging rights) and the winner is also being awarded \$5,000 worth of advertising in *Rotorcraft Pro*. Thanks to all the innovators and pioneers out there who make products and provide services that keep our industry moving forward!
Here are the top 10 Rotorcraft Pro Innovators ...

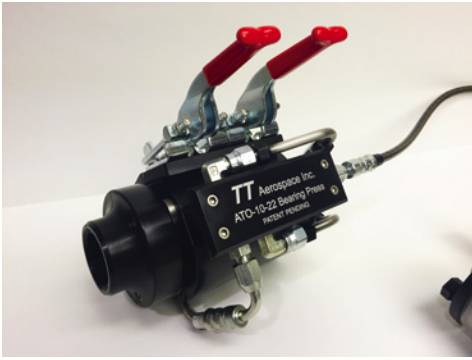


WINNER!

AirEL Illuminated & Thermal Identification

For over 50 years, identification of public safety vehicles has been through the use of black vinyl roof numbers. While this has been adequate during the day, visibility at night has been a challenge. AirEL has developed an innovative solution by introducing their patented illuminated and thermal identification for police, fire, marine, airport and military applications. The ultra-thin lighted platforms utilize electroluminescent technology to illuminate in aviation blue or aviation green colors. For stealth identification, AirEL developed its patented thermal technology which allows helicopter pilots and drones with thermal cameras to identify vehicles.





2nd PLACE

TT Aerospace Portable Bearing Press

PROBLEM: The tail rotor driveshaft support bearings on the AS-350,

EC-130, and other Airbus Helicopter models are very difficult to move, especially when new. Mechanics use tools inadequately designed to do the job, homemade contraptions, and magic potions made of soap to help the rubber liner slide on the driveshaft. No simple solution existed ... until now.

SOLUTION: The TT Aerospace Portable Bearing Press is a hydraulic unit that can clamp onto the shaft to adjust the bearings position, or just break them loose from a stuck condition. It requires no tools to install and is fully self-contained. It allows precise controlled movement, and what once took hours to do can now be done in 15 minutes. Two years were devoted to R&D and the patent process and the first production units were delivered this past February.

TT Aerospace and the Portable Bearing Press is the innovation of Travis Taylor, a helicopter pilot in Las Vegas. Prior to becoming a pilot, he was an aerospace toolmaker for 15 years. This project merges his two careers.

www.ttaerospace.com



3rd PLACE

sHeli-Port Portable Helicopter Storage

WHAT IT IS: sHeli-Port is a “violin case” for helicopters; a patented, hydraulic-powered clamshell fiberglass case designed to secure a helicopter from tampering, weather, and hangar rash. Put it anywhere: the airport, backyard, or even on the yacht. It even doubles as a shipping case.

HOW IT WORKS: Pilots simply land on one of three available configurations into the open sHeli-Port. Once the aircraft is shut down and secured, simply flip a switch that activates the solar battery-powered hydraulic system that closes the clamshell and leaves the helicopter safe and secure.

WHY IT'S INNOVATIVE: sHeli-Port will revolutionize how helicopters are stored, bringing safety, security, and immediate cost savings by eliminating:

- Hangar Rash (Blades are expensive!)
- Ground handling equipment (simply land and close)
- Hangar construction issues (Check out the tax advantages.)
- Shared hangars (strangers around your helicopter)
- Wasted hangar rent

The sHeli-Port is wind tunnel tested up to 100 mph.



www.sheli-port.com

WATCH VIDEO NOW



4th PLACE

Rockwell Collins Pro Line Fusion® Integrated Avionics Systems

The Rockwell Collins Pro Line Fusion® integrated avionics systems is an advanced cockpit system that brings unparalleled situational awareness and ease-of-use to the helicopter cockpit.

Configurable for multiple helicopter types, the system consists of 14.1-inch high resolution multi-function displays that offer pilots more information without clutter or confusion.

Featuring an intuitive graphical interface and easily configurable display windows, Pro Line Fusion increases “heads up, eyes out” time for the pilot by presenting the right information at the right time, reducing the need for pilots to search through complicated menus to obtain critical flight information. The system also offers an industry-first “touch what you want to change” interactive touch-screen control on all flight displays, instead of just one or two control panels. Whether it's tuning a radio or modifying a flight plan, most pilot tasks can be

completed with two or three taps directly on the screen displaying the setting the pilot wishes to change.

For safe operations in all visual conditions, the system features software-embedded and fully integrated HTAWS and HSVS with the highest terrain resolution on the market today.

Pro Line Fusion truly represents the next generation of helicopter avionics ... but it's available today.

www.rockwellcollins.com



5th PLACE

Night Flight Concepts L.E.A.S.E.™

Reimagine law enforcement aviation with the introduction of the Law Enforcement Air Support Entity or L.E.A.S.E.™, another innovation by Night Flight Concepts.

It's a challenging time for law enforcement, with more demands being placed on services, decreasing budgets, and tighter scrutiny on virtually every aspect of law enforcement.

L.E.A.S.E. was created to help solve some of those challenges by removing the need for capital outlay required to start, update, and refresh airborne law enforcement.

L.E.A.S.E. utilizes a revolutionary approach for agencies to gain the latest equipment and expertise. It provides a method to train the airborne crew as a team in a controlled environment, thus maximizing effectiveness.

With L.E.A.S.E., an agency simply selects the aircraft that best meets their needs. The agency then selects the level of support needed in order to ensure that the operation is safe, efficient, and operational. Options include seasoned law enforcement pilots, experienced maintenance technicians, and fleet augmentation during peak times of need (such as planned major events or unplanned natural disasters). Once options are selected, the L.E.A.S.E. team starts working with the agency to provide the optimum in airborne support.

www.NightFlightConcepts.com/LEASE



6th PLACE

ASU N16HT Pro NVG Video System

Aviation Specialties Unlimited's new N16HT Pro product is a digital-intensified night vision system coupling an ultra high-definition (4X HD) GoPro Hero 4 camera to a high performance Generation III image intensifier. This is the only night vision system that images extremely low light scenes (overcast, starlight) in ultra-HD and HD formats, captures these images in many hours of internal recording storage (approx. nine hours for HD), and is able to disseminate images and videos in real time through wireless communications (WiFi) to other digital networks or portable cloud computing devices. This system can be applied to any commercial application requiring ultra-HD imaging, capture, and dissemination of real time video of night vision scenes. ASU's N16HT Pro night vision system is innovative because:

1. It is a completely new night vision product using very high performance military and consumer electronics components.
2. It has brand new and patent pending optical coupling technology and creates the smallest network-enabled digital night vision system available.
3. The N16HT Pro system merges many other innovative technology options, such as the addition of ASU's advanced white phosphor intensified technology and BearTek's remote communications glove accessory that allows remote hands-free operation of the system.

www.asu-nvg.com/n16ht_pro/



7th PLACE

DART Aerospace Bell 412 Stainless Steel Crosstube

Many years ago, DART Aerospace and Bell Helicopter had to impose a life limit along with

liquid penetrant inspections (LPI) on the 412 aft crosstube following some field failures. DART therefore responded to industry demands for improved durability and easier maintenance with a radically new stainless steel crosstube for the Bell 412. This straight replacement of the OEM crosstube is highly corrosion resistant, four times more durable, and allows for 300 percent more landings (40,000 vs. 10,000) and requires no LPI testing. All this translates into longer part life, less downtime, less maintenance, and considerable cost savings.

The stainless steel crosstube is also available in an extended height version, another innovation from DART that allows for extra ground clearance (12 inches more than standard

high gear) for the installation of belly mounted equipment.

www.dartaerospace.com/landing-gear



8th PLACE

X-Copter Simulator

X-Copter is one of the latest innovations in helicopter aviation, blending hardware and software technologies

while providing a state-of-the-art flight training device at a reasonable cost (something the market was missing).

“Firsts” in industry are true representations of innovation. X-Copter has delivered a first in helicopter flight simulation by providing training in complex IFR procedures and VFR maneuvers, such as autorotations, slope landings, and hovering. These fundamental maneuvers were never before available in helicopter (primary) flight simulation. X-Copter’s innovations have delivered a helicopter flight simulator that exceeds the requirements of the primary helicopter flight training market while delivering precise flight models desired by commercial operators.

More innovations by X-Copter include an aerospace-grade aluminum body designed to scale, the finest representations of flight controls on the market, and incredibly immersive, extraordinarily crisp in-flight visuals produced by four massive 55-inch UHD curved displays. In the cockpit, X-Copter has two high-definition touch-screen monitors providing fluid graphics and highly customizable cockpit displays. The end result is a more realistic, true to life flight experience with a higher transfer of learning. The best in simulation is now available to all flight schools because of X-Copter’s desire to do it better.

www.x-copter.aero

9th PLACE

PRISM SMS online ARMOR™



The PRISM SMS online ARMOR™ product is a set of innovative software tools that allow companies to more effectively manage their safety management system (SMS) programs while enhancing overall quality and performance within their operations. By providing fully customizable SMS tools online, users can have company-specific elements that are pertinent to their work while maintaining direct access to information 24/7 from any computer with an internet connection. With the added iOS mobile device capability, data input capability extends to virtually anywhere in the world - with or without an internet connection.

In addition, by integrating with other data sources (such as fatigue management, flight data management, and flight following) users have additional automated resources to fully recognize risk exposure and hazard identification. All of this functionality is available while still allowing for a simple and scalable platform that any size organization can utilize at a very affordable price.

www.aviationresearch.com/ProductsServices/SMSSubscriptionServices.aspx



10th PLACE

Elbit Systems Brightnite

Brightnite’s unique night vision pilot solution brings a fused image of the outside world

to the pilot’s HMD, based on a staring array of multi-spectral uncooled FLIR and CMOS sensors. Imagine flying through extreme weather conditions, harsh environments, and challenging hostile territory in total darkness. Execute your operational flights, based on your choices and preferences, without limitations and barriers.

Carry out missions in 90 percent of the nights. Low, stealth, operational night flights can now be performed under the toughest conditions. Brightnite’s end-to-end intuitive, light-weight, and complete solution augments standard NVG with a clear fused image displayed to the eyes of the aircrew. Leave behind the classic dependency on night vision goggles only,

and improve your mission probability with this staring uncooled FLIR sensor, fused by a multi-spectral synthetic vision system (SVS) and color-conformal 3D mission symbology. An ultra-wide field of regard display solution brings together the best of visual and synthetic panoramic vision to allow all aircrew members to be surrounded with a daylight-like picture from all angles.

www.elbitsystems.com/Elbitmain/files/Brightnite.pdf

