

THE AVIATION MAGAZINE

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No: 38 October 2015
Volume 6, Issue 8



- ✈ Duxford Flying Legends, UK
- ✈ Royal International Air Tattoo, UK
- ✈ Oregon International Air Show, USA
- ✈ Lt Col John Klatt and Michael Wiskus in the air
- ✈ Su-30 MKI Flankers from India at RAF Coningsby, UK
- ✈ MAKS 2015 and so much more...

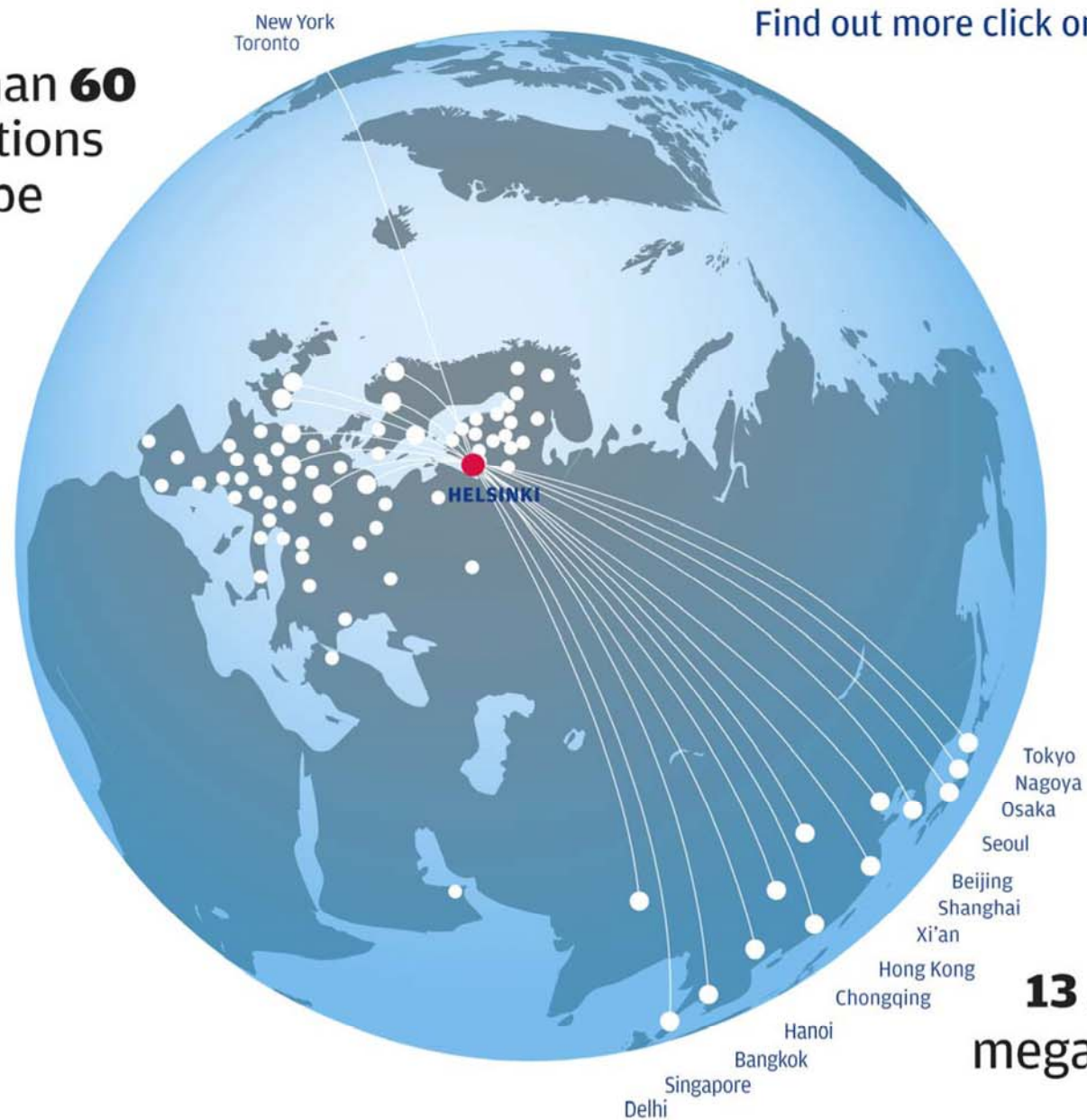
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Cover: Lt Col John Klatt and Michael Wiskus, photo by Norman A. Graf

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THE AVIATION MAGAZINE is published six times a year, by a Team of Volunteers interested in aviation. We are devoted to cover a wide range of aviation events ranging from air shows, air base visits, military exercises, civilian spotting, pilot and veteran interviews all with exceptional photography. **THE AVIATION MAGAZINE** is a leader in the e-magazine format since 2009, bringing exclusive and fascinating reports to our global aviation enthusiasts digitally.

Please note: we do not accept any unsolicited articles or images for publication.

Interested in joining us? We have (3) Volunteer Team positions available. We are looking for a Far East contributor, preferably from Japan, with good English communication skills, also for someone to cover the South East and West portion of the USA, and for Marketing Person. If you are interested in becoming a contributor e-mail us with samples of your work:

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NEWS FROM THE EDITOR

Change is good and **THE AVIATION MAGAZINE** has made some recent changes. Among them is our recently expanded contributing staff and, starting with this issue the publishing dates will be revised. Essentially we will still be publishing 6 issues a year, which may be supplemented by one or two special editions, depending on our coverage of special features. With this issue we are also now mobile compliant on the Joomag magazine reader platform. Meaning that you can see our magazine issues on your smartphones, and tablets too not just on desktops or laptops.

Our new bi-monthly dates will be: January-February, March-April, May-June, July-August, September-October and November-December. This, our, current issue will be only for the period of October.

In this issue of **THE AVIATION MAGAZINE** we continue to bring the Red Bull Air Race World Championship to our readers, with outstanding images, as well as two International air force exercises; one from the UK and the other from the USA. Our correspondents attended two recent air shows which both had fatalities; Shoreham and Dittingen. Due to the accident at Shoreham we have no images or report available as our correspondent was almost hit by the Hawker Hunter crash, apart from the ones below from The Daily Mail. <http://www.timesofmalta.com/articles/view/20150826/local/wrong-turn-saves-maltese-enthusiast-from-air-crash-fireball.581961>

We send our heartfelt condolences to all the people who were affected by these tragic accidents!



The historic airfield at Duxford, in the Cambridgeshire countryside, once again was this summer's host for a sun-scorched edition of the Flying Legends, which brings together a varied and spectacular collection of propeller driven aircraft from all over the globe.

Held this year between July 11-12, 2015, the omnipresent feature in each edition wasn't missing this time round, and so P-51Ds with several Spitfires were the fare of the event once more. Ten Supermarine Spitfires and a Seafire LF.IIIc scrambled to open the proceedings, with the lead of four being taken by Griffon engined models. Considering that this Seafire has taken two decades to restore, one would have imagined that it would be given its own slot, but as things turned out it was treated like any other of its land-based stable mates, surely a missed opportunity there.

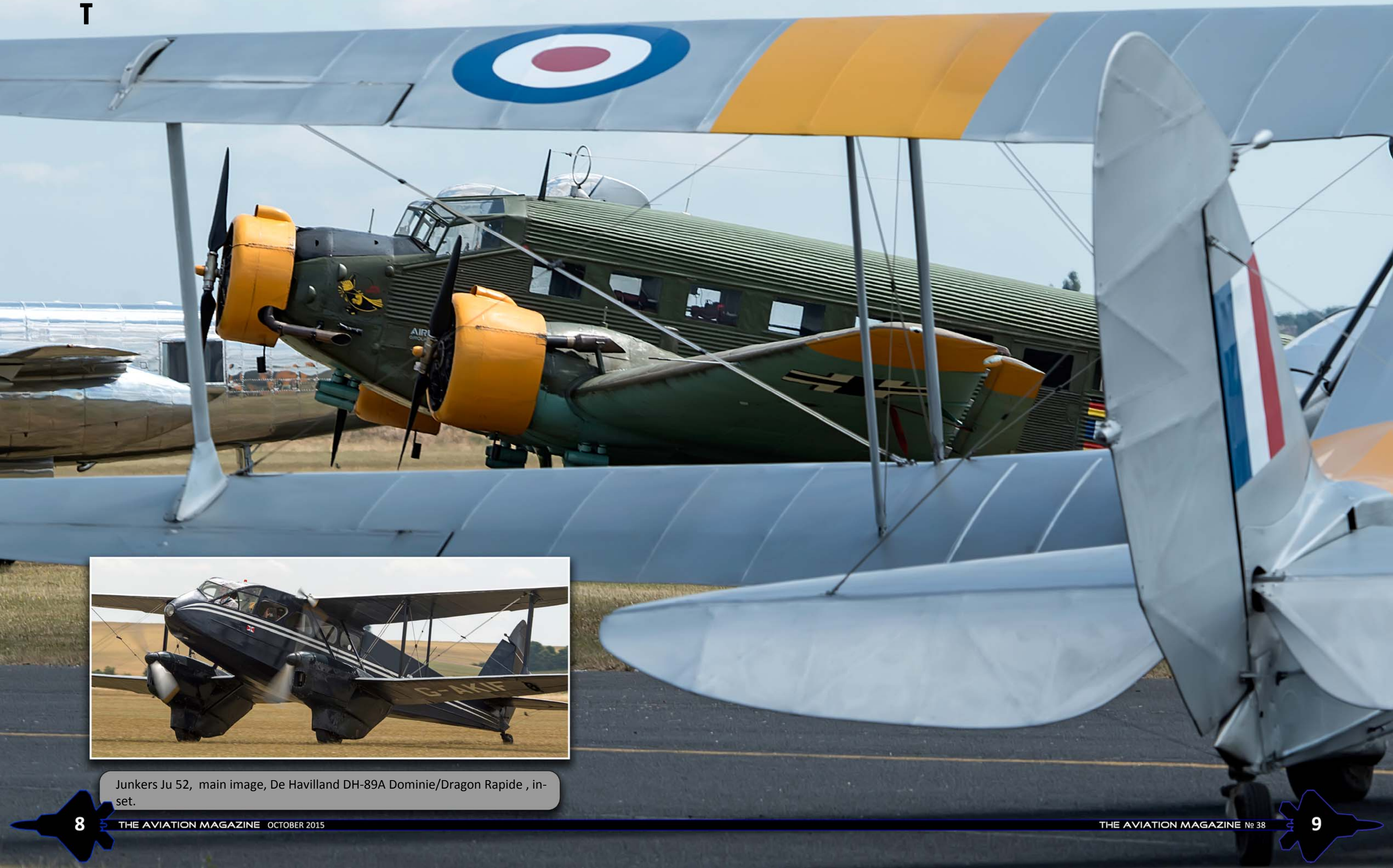
The recent addition of Stephen Grey's Curtiss P-36C debuted this edition of the Flying Legends, after having been shipped from California. The aircraft made its first appearance at Planes of Fame Airshow earlier this year. The two Curtiss Hawks – the P-36C and a Hawk 75 – along with a P-40C and a Merlin powered P-40F, provided a unique formation, almost covering the whole lineage of the type. One cannot see anything like this anywhere else today. Rare appearances included the Flying Bulls 'shiny duo' from Austria, made up of a B-25J Mitchell and the P-38J Lightning. Another favourite of mine is undoubtedly Red 7, a Messerschmitt Bf 109G-4 owned by the Airbus Group which was flown alongside two Hispano Buchons based at Duxford. The inter-war years were represented by two Gloster Gladiators and a trio of Hawker biplane types, made up of two Hawker Nimrods and a Hawker Fury. Such graceful aircraft are simply delightful both on the ground and in the air. Important naval prop types at this year's Legends included the Grumman TBM Avenger, two versions of Corsair, two RAN Sea Furies and a Grumman Wildcat in FAA Martlet colours.



Being the 75th anniversary of the Battle of Britain, TFC took the opportunity to display the wonderful and recently restored Bristol Blenheim MkI in formation with three Spitfire MkIs and a Hurricane MkXII. This formation was simply wonderful to watch, and the Blenheim solo showed just how manoeuvrable the type can be.

In total, around fifty aircraft graced the skies this year at Duxford. Flying Legends is my annual pilgrimage, and one which I plan for well ahead. Long may it continue to thrill its audiences in years to come.

B-17G Flying Fortress escorted by a Brit P-51D Mustang



Junkers Ju 52, main image, De Havilland DH-89A Dominie/Dragon Rapide , inset.



Hawker Nimrods and a Hawker Fury



dH Tiger Moth

Hawker Nimrod

Bristol Blenheim Mk.I

Grumman TBM Avenger

P-51D Mustang

Douglas DC-3

P-51D Mustangs....



- 2 Gloster Gladiators main page and right inset
- 2 Curtiss Hawks – the P-36C and a Hawk 75, along with a P-40C left bottom inset





- Messerschmitt Bf 109G-4 left top inset
- Messerschmitt Bf 109G-4 flown alongside two Hispano Buchons based at Duxford, left bottom inset
- Hawker Hurricane, (3) Spitfire alongside with a Bristol Blenheim Mk.I , main image
- Supermarine Spitfire Vb, level
- Supermarine Spitfire PR Mk XIX , 152 Squadron UM – E. South East Asia Command WWII, banking and Supermarine Spitfire LF Mk IXb banking, right bottom inset



Record crowds were greeted by near-record heat at this year's Intel Oregon International Air Show. Headlining the show were the Navy's Blue Angels, back for the first time since 2008. The Air Force's Viper East Tactical Demonstration Team added additional jet noise and precision flying to the lineup. The Bremont Horsemen brought three F-86 Sabrejets to the show and Greg Colyer added his T-33 Shooting Star to the vintage jet list. Throw in a few additional warbirds, two parachute demonstration teams and a world-class set of aerobatic performers and you had action hotter than the afternoon temperatures.

Like many airshows on the West Coast this year, the weekend started off with an evening show on Friday night. The gates opened at 6PM and featured a variety of performances culminating in a fireworks presentation after dark. The gates opened for the day shows at 9AM, with flying starting at 11AM. This gave visitors enough time to get settled in, view the aircraft on static display (or the vintage automobiles in the car show), buy some souvenirs at the vendors' booths or food and drinks at the many food stands. Free water was available from water buffalos situated throughout the grounds, and lines were understandably long as temperatures neared triple digits. Additional water supplies, as well as misting stations under which to cool off were added on Sunday in response to demand.

The Wings of Blue parachute demonstration team, from the US Air Force Academy, kicked off the airshow with each jumper trailing a different flag under his canopy. They were circled on their descent by John Klatt and Michael Wiskus who then performed teasers of their full routines. Kent Pietsch continued with the first of his three demonstrations of the day. He started with his energy management routine, continued with his comedy routine and ended by landing atop the "world's smallest aircraft carrier," a pickup truck. Vicky Benzing put on a very nice demonstration of the aerobatic capabilities of the Boeing Stearman by putting her bright red biplane through a series of precision maneuvers. She was followed later by Jacquie B, who stepped it up with a faster-paced, crisper performance in her red Extra 300. Bill Sheppard continued the crimson aerobatics with a very nice series of passes in the red-tailed P-51C Mustang "Tuskegee Airmen" and Greg Anders performed a similar warbird aerobatic display in the P-51D Mustang "Val-Halla" in bright red Korean War USAF markings.

There was plenty of jet action at this airshow, and Greg Colyer started it off nicely in his T-33 Shooting Star "Ace Maker II." The Bremont Horsemen followed with a superb performance in their F-86 Sabrejets. All four of these vintage jets wore Korean War markings. The natural metal finish and bright yellow stripes against the bright blue Oregon sky made for some nice photographic opportunities. Steve Stavrakakis flew his IAR-823 in a beautiful tribute to the Vietnam War veterans.

Local talent Renny Price put on an impressive aerobatic display in his Sukhoi SU-29. He concluded his performance with a low photo pass along the flight line, punctuated by a massive Wall of Fire just as he passed show center. Dan Buchanan slowed things down a bit in his hang glider, although he was buzzed by Kent Pietsch, whose prop relieved him of several of his streamers. It was all in good fun, though. The Lucas Oil Skydivers thrilled the crowd with their extremely rapid descent and swooping landings. Michael Wiskus put the bright red Lucas Oil Pitts biplane through his full demonstration, concluding with an inverted ribbon cut. John Klatt would finish up the aerobatic flying later in the day in the Air National Guard MX-S. Then it was back to the jets, although in a most remarkable circumstance. Bob Carlton has equipped his Super Salto sailplane with a jet engine mounted directly over the wing. He uses this to fly to altitude, after which he performs a standard glider demonstration. However, just as it appears that he has run out of altitude and airspeed he fires up the jet engine to begin the second half of his show.



But if it's real jet noise you want, you have to bring in the military. And Captain Craig Baker brought it. Staging out of nearby Portland International Airport, "Rocket" roared in from behind the crowd, the noise from the F-16's engine immediately capturing everyone's attention. He put on a full tactical demonstration, making extensive use of the afterburner and coaxing plumes of vapor from the cloudless sky. After his final high-speed dedication pass Captain Baker joined up with Tommy "Limiter" Williams in the F-86E "Hell-er Bust" and Greg Anders in the P-51D "Val-Halla" for the Heritage Flight. The formation's three passes afforded the multitude of photographers plenty of opportunities for some very nice images. The bright red markings of the Mustang and brilliant yellow stripes of the Sabrejet contrasted beautifully against the bright blue sky.

The Blue Angels finished the show in spectacular fashion. First, of course, the Marines in Fat Albert put on a demonstration of the C-130's flying capabilities, pushing the envelope in every category during the eight and a half minute flight. In command of the Hercules was the first female Blue Angel pilot, Captain Katie Higgins. Soon enough, though, the six bright blue and gold F/A-18 jets taxied out to begin their impressive demonstrations of precision formation flying and thrilling solo crosses. Saturday's diamond formation featured the A, B and C models of the venerable Hornet, with a D model held in reserve. Once back on the ground the Blue Angels pilots proceeded to the crowd line to sign autographs and answer questions from their fans.

Announcer Rob Reider kept the audience informed and entertained and Air Boss Ralph Royce kept the action flowing smoothly and safely. We would like to thank Herb Gillen and Stacey Stathulis for arranging our media access. Bill Braack, who air show fans know as the pilot of the Smoke-N-Thunder jet car, was named president of the board of directors of the Oregon International Air Show at the end of last year. Kudos to him and his team for another exciting and successful show in his inaugural year and thanks to the many pilots, sponsors, staff and volunteers who made this air show such a success. The Air Show encourages strong community involvement, with over 1500 volunteers each year contributing to the success of the program. Since 1988 more than one million volunteer hours have been contributed, and more than \$1.4 million has been given to local charities and non-profit organizations.

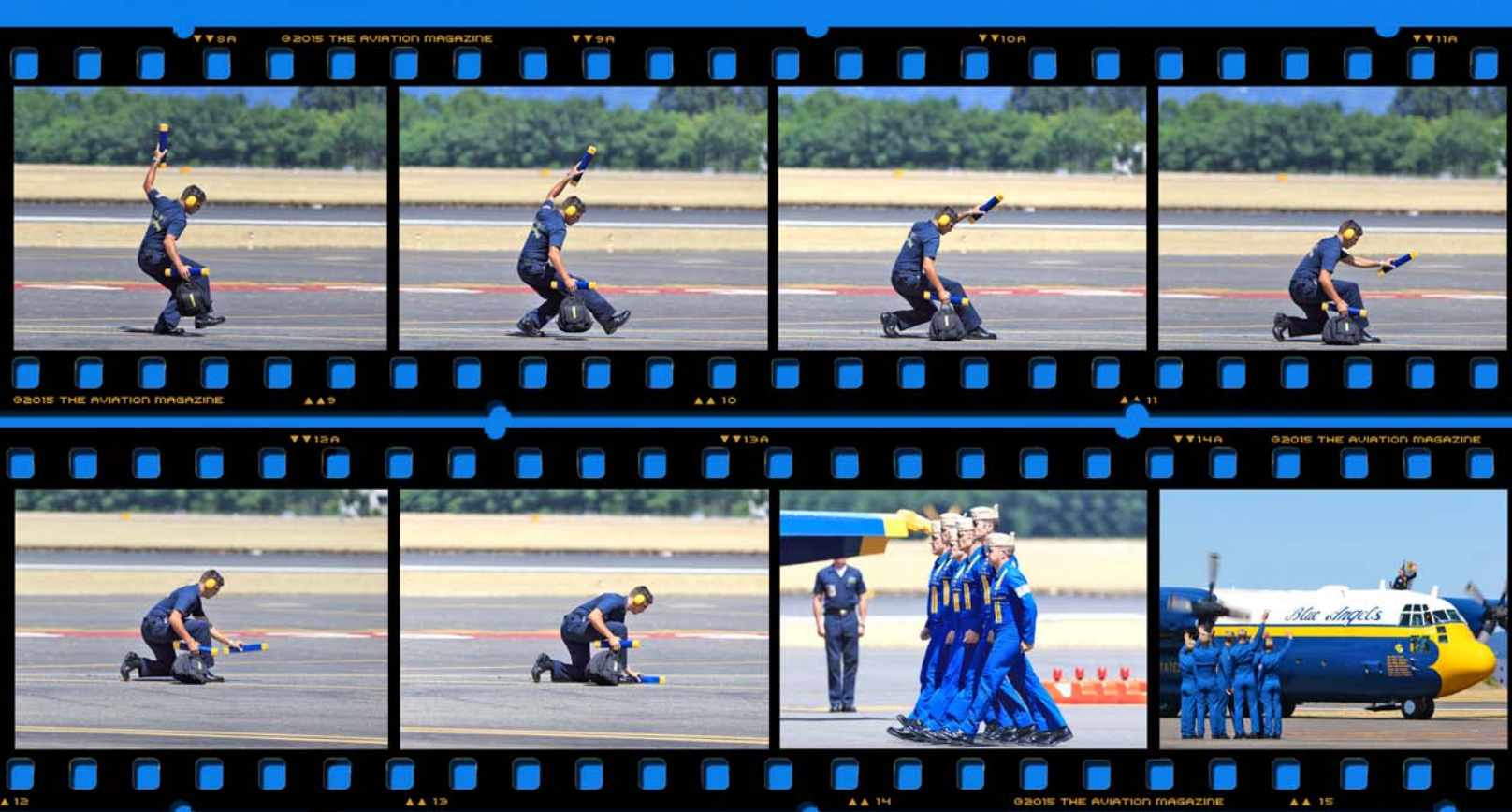
For a list of participating aircraft please visit our website review by clicking on the following link http://www.theaviationmagazine.com/2015_Oregon_International_Airshow.htm





- The Bremont Horsemen above and inset with their F-86 Sabrejets. Seeing three F-86 Sabrejets was a rare sight!
- A US Navy Lockheed EP-3E ARIES II which is based upon the P-3 Orion, right inset.





Blue Angels action on the ground can be fascinating!



Vicky Benzing in the Boeing Stearman above,
John Klatt in the Air National Guard MX-S below,



Bill Sheppard in the red tail P-51C Mustang above,
Greg Colyer in his T-33 Shooting Star "Ace Maker II"



USAF Heritage Flight:

- F-16 with Captain Baker
- Greg Anders in the P-51D "Val-Halla"
- Tommy "Limiter" Williams in the F-86E "Hell-er Bust X"

Lt. Col. John Klatt and Michael Wiskus in the air

REPORT AND PHOTOGRAPHY BY NORMAN A. GRAF

Re: Oregon International Air Show

Norman:

I believe that I can get you on a flight with John Klatt on Thursday at 4 p.m. Would that work for you?

You have a couple of options for your flight:

Fly in the two-seater Extra 300L which is equipped with GoPro cameras

John could fly in his MX-S and you could be in the chase plane capturing air-to-air images

Which of these options sounds best to you?

Stacey

Stacey Stathulis is an Account Director with the Herb Gillen Agency and was handling media relations for the Oregon International Airshow. While applying for media accreditation I had routinely asked about any ride-along or air-to-air photo opportunities, but I was still surprised when I received the invitation. It was a tough choice. Although flying with John would have been a thrill, in the end I opted to fly along for the air-to-air photography. After all, the media opportunity wasn't about me, it was about getting the story out. And what better way to do that than with some up close and personal photos of John Klatt in the air?

On Thursday afternoon I showed up for the pre-flight briefing. John started off by asking what I wanted to get out of the flight. I was frank with him: "I'm after a cover shot." He smiled, but being the consummate professional that he is, knew exactly what I was going for and began going through his flight plan. Michael Wiskus, who was also performing at the show, noticed our discussion and wandered over. It wasn't long before the solo flight turned into a tandem. The two of them soon worked out a plan of action and I was excited to have both John's blue MX-S and Mike's bright red Pitts biplane flying in formation.

The chase plane was a Beechcraft Bonanza, piloted by Mike Ganor. Mike recently joined John Klatt Airshows as an Operations Manager (pilot, mechanic, media liaison, air show narrator, photographer, and logistical organizer) and did a great job of not only making sure that I was securely strapped in, but also that I had the mobility to get the shots I wanted. Before too long we took off in formation from Hillsboro's runway 31 and headed for the skies above nearby Henry Hagg Lake. For the next half hour we flew straight and level as John and Mike approached in various attitudes, giving us the opportunity to take these amazing photos. At times they came so close that I worried that I should have brought a wider angle lens. What a thrill!

We'd like to thank John Klatt, Michael Wiskus and Mike Ganor for an amazing flight and photo opportunity and Stacey Stathulis and Herb Gillen for setting up this media opportunity.







Lt. Col. John Klatt

"With more than 25 years of flying experience, John Klatt has no problem captivating audiences young and old. Klatt pushes his Air National Guard MX-S to the limits during his performances. Maneuvering at speeds over 250 mph, Klatt shoots his plane up towards the sky and then tumbles down, plummeting towards the ground, leaving the audience awestruck. Klatt is a Lieutenant Colonel in the Air National Guard. He has flown our nation's finest aircraft, including the F-16 Fighting Falcon for three deployment missions to Iraq, and the C-130 Hercules for relief missions to Somalia and Kenya, and over Sarajevo as part of Operation Sarajevo Relief." Read more about John and find out when and where you can see him perform next at: <http://www.johnklattairshows.com/>

Michael Wiskus

Michael Wiskus' passion for aviation started when his dad took him to his first air show at their hometown in Iowa at the age of 10. Since that time Mike has accumulated more than 24,000 flight hours and has qualified in more than 40 aircraft.

"Mike's air show career is a testimony of how dreams really can come true. As a 2002 U.S. National Aerobatic Champion, and a member of the 2004 U.S. Aerobatic Team, Mike has traveled the World with the same aircraft you will see him performing in at your air show. His excitement for aviation and willingness to share his experience with people around the country is nothing short of contagious in his attempt to help encourage kids of all ages, to not only dream, but to live their dreams and never give up!"

Read more about Mike's incredible career at:

<http://sportaerobatics.wix.com/lucasoilairshows#!the-pilot/cjg9>



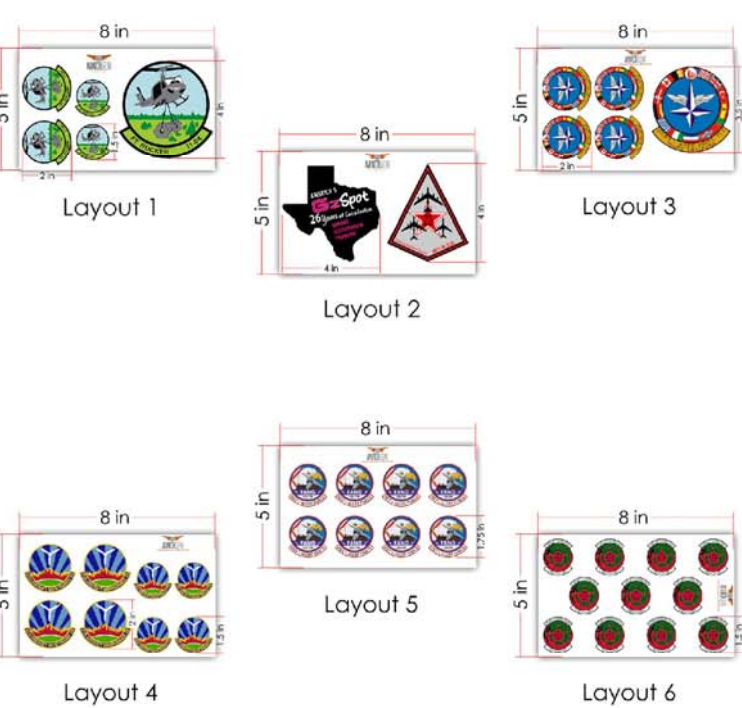
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THE ROYAL INTERNATIONAL
2015 AIR TATT
REPORT BY ROBERT KYSELA WITH PHOTOGRAPHY AS NOTED

To write about the Royal International Air Tattoo, actually would be the famous carrying coals to Newcastle. Every year recessions on the world's largest aviation event can be found in relevant journals. Interestingly, but is always written only about the event itself, and the respective participants. That is why this report is supplemented by a few facts and figures about the organization and its historical outline.

Kawasaki P-1 from Japan



©2015 Robert Kysela / CHK6

No other event had so many highlights, but also (a very few) experienced low points, such as the Air Tattoo. Since its founding in 1971, the Air Tattoo was held a total of 31 times. Twice had the show to be cancelled (once in 1975 after the oil crisis, and again in 2008 due to heavy rainfall prior to the event). The Tattoo was founded by Timothy Prince and Paul Bowen (both former Air Traffic Controller) together with Air Marshal Denis Crowley-Milling, CBE, DSO, DFC. Air Marshall Crowley-Milling was a veteran of the Battle of Britain and flew as a wingman with the legendary Sir Douglas Bader. The very first Air Tattoo was held at the airfield North Weald in the north of London on May 31, 1971.

After only three events in North Weald the Air Tattoo had to move to RAF Greenham Common, which served as the venue until 1985. After this period it was transferred to this airbase, which is brought up today in conjunction with the RIAT - the RAF Fairford. With its 2-mile-long runway and the enormous space this base is predestined for an event of this magnitude. The RAF Fairford is next to RAF Lakenheath and RAF Mildenhall, the last remaining UK-based airbase still used by the USAF. With the first Air Tattoo some 100 aircraft participated (among others a Sikorsky S-65Oe the Austrian army), this went to the late 1990s and at the beginning of the new millennium in an almost astronomical heights (which the number of participating nations and aircraft are concerned.) With no less than 535! participating aircraft and helicopters the RIAT 2003 was the largest public aviation event that has ever been held worldwide. In order for the RIAT has even received an entry in the Guinness Book of Records. Such figures are now completely illusory, the organizer of the Air Tattoo, RAF Charitable Trust Enterprises (RAFCTE) make it but still, to organize a huge number of aircraft

(for 2015 there were 232 aircraft from a total of 75 countries on site!). In case of the flying program, no difference can be seen in comparison with the major events of the past years.

The list of highlights, which accumulated over the past 44 years at the various Air Tattoos is absolutely gigantic. It is easier to list what type of aircraft was not a guest at RIAT, than all the naming rarities and exotics that have participated. Even this year the RAFCTE managed to draw a highlight on land, which was not to be seen anywhere else, at least not outside of Japan. We're talking about two Kawasaki P-1 maritime patrol aircraft. This aircraft is operated exclusively by the Japanese Navy, and is currently the most modern system of its kind (its American counterpart, the Boeing P-8 POSEIDON is based on the tried and true model 737-800). Developed by the Kawasaki Heavy Industries the, originally called P-X type had its maiden flight on 28 September 2007. To date, 33 aircraft were produced and handed over to the Japanese armed forces. One reason for the participation of the P-1 at this year's Air Tattoo are the negotiations with the MoD (Ministry of Defense -MoD) for the procurement of this aircraft as a substitute for the abandoned BAe Nimrod MRA4. The Royal AirForce has shown a keen interest in the P-1, but there are concerns about the used engines (Ishikawajima-Harima Heavy Industries IHI XF7-10). Should the RAF opt for the P-1, the British model will, in all likelihood, use replacement engines from the Rolls Royce company.

What distinguishes the RIAT from other events? On the one hand, of course, the high level of professionalism with which the experienced team organizes, performs and markets the event. This results in a continuity which rarely can be found at other events. A significant factor is that the organizer is of a profit-making organization with strong links to the MoD. As how this entanglement looks exactly should not be the subject of this article. It is important that a portion of the revenues proceeds into a foundation for RAF members (RAF Charitable Trust). This in turn financed various foundations, such as the Air Cadet Organisation or the Flying Scholarships for Disabled People. An important cornerstone of success is tremendously hard work, which puts the team in the acquisition of the participating air forces and aircraft. Years of networking here pays off especially. The good reputation, compounded with the excellent relationship which has developed with many air forces over the years the organizer, constitutes a large part of the success. This will benefit especially the audience. Nowhere else the aviation enthusiast same as the regular visitors gets more for their money than at the Air Tattoo.

Of course in such a long history there is not only always bright sun. The first setback experienced the event in 1975 as a short-term after the resignation of the then Air Show Directors and the previous oil crisis the whole event was cancelled. Much worse it hit the RIAT and of course the many who had traveled from distant countries participants and spectators in 2008. At that time, the event was cancelled just the day before the actual show should have started due to flooding of the parks and campsites - an enormous shock for everyone involved. On the plus side is the safety record of the Air Tattoo. With the exception of two

MiG-29 from Poland



©2015 Peter Thivessen



©2015 Peter Thivessen

Avro Vulcan above, Kawasaki P-1 main image

relatively unscathed
ex-tending accidents
no people were harmed
at all events. In a spectacular crash
of two Russian MiG-29, both pilots were able
to get out unharmed with the ejection seat at RIAT
1995. In 2002 came to a tricky situation when an Alenia G-222 of
the Italian Air Force touched down so hard by performing a so-called
Sarajevo-landing that the front wheel collapsed and the aircraft thundered along the
runway with sparks, until it came to a halt. Another critical situation, in which a RAF Eurofighter
TYPHOON recovered from a dive just 3 m above ground level, rounded off the series of significant
"incidents" in with the Air Tattoos.

Probably for the last time (at least for visitors to the RIAT in Fairford) the 2015 season saw a flight
demonstration of the Avro Vulcan B.Mk2. This icon of the Cold War has been restored airworthy after years
of restoration by the Vulcan to the Sky Trust (VTTST). The entire project was financed privately (through
donations, lottery funds and private sponsoring). Actually, hardly anyone had really expected that this
prestigious project would ever get off the ground, but somehow the VTTST managed to collect enough Pound
Sterling so that the AVRO 698 VULCAN was able to complete her second maiden flight with the identifier
XH588 on 18 October 2007. Since then, this bomber, looking like an oversized moth enriched
the British air show scene. Much to the chagrin of the British, but also of the many aviation

VTTST has announced that 2015 will be the
last season in which the XH588 will be
demonstrated in flight. When and where the
last flight will take place, is not entirely clear at the
moment. In addition to the highlights mentioned
above, there was still plenty to see. The completely sold-out event was meeting all demands. The so-called
Synchro Pair Formation, consisting of a Supermarine SPITFIRE Mk IIa and a Eurofighter TYPHOON FGR4,
wowed the nearly 150,000 spectators just as the demonstrations of the Airbus A400M ATLAS or a Lockheed
Martin F-16C Block 52 of the Hellenic Air Force - just to name a few.

The next show will take place between July 8th and 10th, 2016, the preparations for this run
already in full swing. The Aviation Magazine will be there!

- Bristol Blenheim IF, above left,
- The Solo Greek F-16, mid left,
- Avro Vulcan, bottom left,
- The Rolls-Royce Spitfire XIX, top right,
- The Belgian Solo F-16, mid right,
- The Red Arrows, bottom right.





Two Apache AH-1s of the Royal Army Air Corps left full page, the Swiss display with the PC-7 Team and the AS332M1 Super Puma above, the Avro Vulcan B2 escorted by the Red Hawks below.



Supermarine Spitfire and Typhoon FGR4S celebrating the 75th Battle of Britain Anniversary below.



All images ©2015 Peter Thivessen



EXERCISE INDRADHANUSH 2015

Photography by Peter Thivessen with additional notes by the Editor

INDRADHANUSH (Rainbow) is a ten-day long bilateral exercise between the Indian Air Force (IAF) and the Royal Air Force, (RAF) that took place at RAF Coningsby in Lincolnshire in July 2015. The IAF brought over four Sukhoi SU-30 MKI (NATO code Flanker-H) fighters to take part in the fourth edition of 'Indradhanush'.

The 190-member Indian Air Force contingent brought over also an IL-78 tanker, a C-17 strategic and a C-130J tactical airlift aircraft. The main goal of the exercise was to enhance mutual operational understanding between the two Air Forces. The IAF aims to demonstrate its ability to project air power in transcontinental deployment of a task force comprising Su-30 MKI fighters, IL-78 tankers, C-17 strategic and C-130J tactical airlift aircraft in air operations. Su-30 MKI was operating with the Typhoons of the RAF Air Base at Coningsby. The IL-78 and C-130J were hosted at Brize Norton and they were inducted in missions.

For the Royal Air Force, the chance to train and fly against the Russian-designed Su-30, one of the best fourth generation fighter aircraft in the world, was a rare and excellent opportunity. India is the largest international operator of the Su-30MKI; super-maneuvrable fighter now built in India under licence by India's Hindustan Aeronautics Limited (HAL) for IAF. A variant of the Sukhoi Su-30, the Flanker-H is a heavy, all-weather, long-range fighter. The development of the variant started after India signed a deal with Russia in 2000 to manufacture 140 Su-30 fighter jets. The first Russian-made Su-30MKI variant was accepted into the Indian Air Force in 2002, while the first indigenously assembled Su-30MKI entered service with the IAF in 2004. Additional MKIs have been ordered to increase the total to 272. The Indian Su-30MKI integrates Indian systems and avionics as well as French and Israeli sub-systems. It has abilities similar to the Sukhoi Su-35 with which it shares many features and components, While the Flanker-H has different avionics different from the Russian models, yet with enough similarities to properly accessing the capabilities of the Su-30/Su-35 just in case RAF and NATO would have to fly against such adversary.

The West has a tendency to under-rate Russian built equipment, based upon experiences gained in the Gulf Wars as well against Russian equipment they faced in Iraq. Let's not forget that the West did not face properly trained as well as dedicated Russian pilots or the top of the line aircraft, which the Russians do not export. In capable hands the Russian top of the line aircraft, are just as capable as the models from the West such as the F-16, F-15, and F-18; it really comes down to the skill of the pilots, and the reliability of their aircraft.

The IAF and their pilots were keen to hone their skills against RAF's top fighter fleet: the Eurofighter Typhoon with their highly trained pilots.

During the exercise, the Su-30MKI and Typhoon aircraft were operating in mixed formations under various near-realistic scenarios and evaluated tactics. The first phase of the exercises consisted of a series of dogfight scenarios the Flanker-H against the Typhoon. First, one against one, where a single jet of each type engaged each other in Within Visual Range (WVR) combat, firing simulated missiles to a range of two miles. Then progressed to two against two (two Typhoons against two Flankers) and finally two against one (two Typhoons against one Flanker, and vice versa).

In one such two-on-one scenario, according to the IAF, a lonely the Flanker emerged as the victor "shooting" down both "enemy" Typhoons. There was no public comment from the RAF about this nor about the performance of the Su-30MKI in general.

In the dogfight scenarios the Flankers were able to turn sharply into the extremely agile Typhoons using their thrust-vectoring engines in close-combat manoeuvring. The Typhoons are much smaller aircraft, and they were expected to out turn the considerably larger and heavier Flankers. Both the IAF and RAF used the capabilities of their onboard radars in training mode, which meant that actual radar frequencies used in combat conditions were never exposed for confidentiality reasons. The actual detection ranges of the radars of both aircraft were of no consequence for the aerial dogfight as it was about combat as close to the real thing as possible.

In the second phase, the exercises shifted to Large Force Engagements (LFE). The Large Force Engagements saw mixed formation scenarios where the IAF operated its jets alongside RAF Typhoons in air battles against fellow Su-30s flying together with other Typhoons. During the LFE four aircraft flew against four other at Beyond Visual Range (BVR) and graduated to a massive eight versus eight engagement featuring 16 aircraft in the skies near Coningsby. The IAF and RAF pilots were forced to share tactical information via radio, during these vents, as the Link 16 system in use with NATO aircraft like the Typhoon were not compatible with the Flankers data-link system sharing information with friendly aircraft.

Group Captain Srivastav of the IAF told NDTV, when asked about LFE that his pilots did "fairly well" though "quantifying [the results] is difficult". It was expected to "lose one or two jets" given that the movement of each formation was directed by fighter controllers coordinating an overall air battle. Both sides agreed to simulate their BVR missiles at 25 miles for offensive missions and 22 miles for defensive scenarios.

The Su-30s proved to be reliable, all were available for the daily exercises which took place over two segments, one in the morning, the other in the afternoon for a total of eight sorties daily.

Over all the exercises gave both the IAF and the RAF a wealth of experience, learning and training opportunity not to mention for the RAF an insight into the capabilities of the Su-30 MKI Flanker – H.





Su-30 MKI

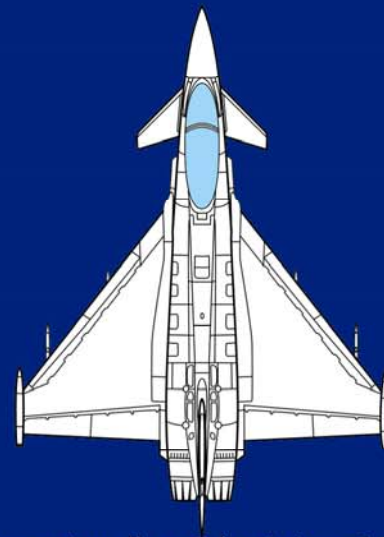


Crew: 2
Length: 21.935 m (72.97 ft)
Wingspan: 14.7 m (48.2 ft)
Height: 6.36 m (20.85 ft)
Wing area: 62.0 m² (667 ft²)
Empty weight: 18,400 kg (40,565 lb)
Mission weight: 26,090 kg (57,520 lb) typical
Max. takeoff weight: 38,800 kg (85,600 lb)
Powerplant: 2 x Lyulka AL-31FP thrust vectoring turbofans, 123 kN with afterburner (27,560 lbf) each
Maximum speed: Mach 2.0 (2,100 km/h or 1,300 mph) at altitude; 1,350 km/h, 839 mph near ground level
Range: 3,000 km (1,620 nmi) at altitude; (1,270 km, 690 nmi near ground level; with no external fuel tanks)
Endurance: 3.75 hrs without in-flight refuelling
Service ceiling: 17,300 m (56,800 ft)
Rate of climb: >300 m/s (>45,275 ft/min)
Wing loading: 401 kg/m² (82.3 lb/ft²)
Thrust/weight: 0.96
Maximum g-load: +9 g
Armament: Guns: 1 x 30 mm GSh-30-1 gun with 150 rounds
Hardpoints: Total of 12

AIRCRAFT ARE PROPORTIONAL IN SCALE



Eurofighter Typhoon



Crew: 1 (operational) or 2 (training aircraft)
Length: 15.96 m (52.4 ft)
Wingspan: 10.95 m (35.9 ft)
Height: 5.28 m (17.3 ft)
Wing area: 51.2 m² (551 sq ft)
Empty weight: 11,000 kg (24,250 lb)
Mission weight: 16,000 kg (35,270 lb)
Max. takeoff weight: 23,500 kg (51,800 lb)
Powerplant: 2 x Eurojet EJ200 afterburning turbofan, >90 kN (20,230 lbf) each
Maximum speed: Mach 2+ class (2,495 km/h or 1,550 mph) at altitude; Mach 1.25, 1,470 km/h or 910 mph at Sea level
Range: 2,900 km (1,800 mi) at altitude without in-flight refuelling
Ferry range: 3,790 km (2,350 mi with 3 drop tanks)
Service ceiling: 19,812 m (65,000 ft)
Rate of climb: >315 m/s (>62,000 ft/min)
Wing loading: 312 kg/m² (63.9 lb/ft²)
Thrust/weight: 1.15 (interceptor configuration)
Maximum g-load: +9/-3 g[330]
Armament: Guns: 1 x 27 mm Mauser BK-27 revolver cannon with 150 rounds
Hardpoints: Total of 13

Which is better?

The Su-30MKI Flanker-H is surprisingly manoeuvrable, and approximately 60% less expensive when compared to the Eurofighter. The Eurofighter is faster and has more advanced avionics. They are very different aircraft, and when in capable hands of well trained pilots both are equally dangerous. In WVR close combat the Su-30MKI may have slight edge. When it comes to BVR the Eurofighter has the edge, due to better avionics and speed.



Flankers in formation with the Typhoon above, and one taking off, below.





RAF Eurofighter Typhoons above, and below left side.

IAF Su-30MKI Flanker-H above and below right side.



The Antonov 124 at the Blue Danube Airport in Linz-Hörsching

Report and photography by Wolfgang Jarisch

Usually we report from air show events or from military airfields but for this occurrence, The Aviation Magazine was fortunate enough to be invited to cover an unusual event that occurred at the Blue Danube Airport, Linz Hörsching, Austria, on August 8th, 2015. The subject of the event was the loading of a 64.8 ton steam super heater. Destination airport was Dammam, Saudi Arabia.

To transport such a heavy object like this steam super heater, the only civilian aircraft that make this transport possible is the Antonov AN-124 "Ruslan" NATO code name Condor.

The international logistic company, Panalpina, was commissioned and authorised for the transport of this huge steam super heater, which was produced by Josef Bertsch GmbH & Co KG, Bludenz Austria.

After the challenge with the road transportation from the most western part of Austria (just east of Liechtenstein) to the Blue Danube airport located in Linz Hörsching, the precious and heavy cargo made in time. The next challenge was the loading of the freight onboard. With only 13cm clearance to the left and right side, the experts from three different companies (Antonov Airlines; Panalpina logistics and Felbermayr cranes) had to coordinate everything together.

The loading started at 10:00 am, first the loading ramp had to be prepared that alone weighs in at 7 tonnes. The ramp was ready for use in less than one hour. When the ramp was ready, the truck with the steam super heater drove in front of the aircraft where two heavy-duty cranes were positioned to pick up in synchrony with the huge lifting hooks. Extra care had to be utilized as not to damage the aircraft or the cargo during these procedures.

Once the cargo was lifted on to the ramp, which functions like a rail system, the cargo was secured by the Antonov crew with chains, the cargo was slowly entered into the belly of the Antonov. Like a huge whale swallowing a large fish! This was a completely autonomous operation with a built in winch onboard the aircraft that pulled in the cargo. Once the cargo was inside the Antonov, the crew started to take apart the ramp. While this was happening additional parts of the super heater in heavy wooden crates were brought to the rear ramp of the aircraft. The crates were lifted onboard with the aircraft's own cranes in the belly of this giant. When everything was onboard and secured, the most fascinating part was performed by the Antonov's crew: closing the front section of the aircraft. By 2 p.m. the crew closed both the front hood and the rear cargo doors and the aircraft was ready for takeoff. The takeoff was planned for later on the day between the evening and early dawn of the next day.

The Aviation Magazine would like to thank the following people for their invitation as well as for their cordial cooperation; Ms. Andrea Zach Assistant to the Business Unit Manager Linz from Panalpina, and the Flight Manager from Antonov Airlines, Ingo Hagedorn, Marketing Blue Danube Airport Linz-Hörsching. Special thanks the Flight Manager, Mr. Eugene Kiva from Antonov Airlines for the guided tour onboard the giant.

Antonov Airlines is the ANTONOV company's subdivision that specializes in international cargo transportation. It was founded in 1989. Antonov Airlines became the first airline which performed charter air transportation of large-size and extra-heavy cargoes on the AN-124 Ruslan heavy transport.

The Antonov Airlines' fleet includes one AN-225 Mriya, seven AN-124-100 Ruslans, one AN-22 Antei, two AN-12s, one AN-26 and one AN-74T.

First flight of an Antonov 124 was on 26 December 1982. Maximum weight of cargo is 150 tons and the maximum take-off weight is 450 tons.







The cockpit of the AN-124 above, the front nose section opened up as the steam super heater is inched in slowly and the heavy crates are lifted onboard with the built in cranes at the rear, below.



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ASCOT, UK

Report by the Editor with photography as noted

Nigel Lamb [middle] and Paul Bonhomme of Great Britain [right] give Peter Besenyei of Hungary [left] an aerial view over the Waddesdon Manor in the heart of the Buckinghamshire countryside near Oxford in the United Kingdom on August 11, 2015.

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Aerial view of Ascot Racecourse as Juan Velarde of Spain performs during the finals of the fifth stage of the Red Bull Air Race World Championship, on August 16, 2015.

Britain's Paul Bonhomme was crowned the winner of the Red Bull Air Race World Championship stop at the famous Ascot Racecourse on Sunday, flying brilliantly under pressure in the world's fastest motorsport series. The victory was Bonhomme's third this season and second straight win at Ascot to the delight of more than 40,000 spectators.

Bonhomme's final run was flawless and he stopped the clock in 1.06.416 seconds. Australia's Matt Hall took second place in a time of 1:09.024 while Yoshihide Muroya got his first podium of the season with third. With the hard-fought victory in the Final Four, Bonhomme picked up 12 points to widen his lead at the top of the Red Bull Air Race Championship to eight points (46) ahead of Hall (38 points) in second going into the final three races. Reigning Red Bull Air Race World Champion Nigel Lamb of Britain, who last year finished second at the race over the historic Ascot Racecourse, finished back in 5th place, a result that destroyed his chances of defending his title.

"It was a hard day at the office but today was great fun – I enjoyed that," said Bonhomme after hitting speeds of near 370 km/h on the track that featured a static start in front of the majestic grandstands and a challenging course made up of 12 Air Gates standing 25 metres high on the infield of the track. "All I can say is this was due to teamwork, teamwork, teamwork. I'm only the driver. I just point the plane in the right directions. It was the second time the Red Bull Air Race was staged in Ascot, just west of London, that has quickly become one of the most attractive air race locations in the world and a favourite of the pilots who relish taking off and landing on the grassy strip in front of the big crowd.

Austria's Hannes Arch, who struggled in the training session and was last in Qualifying on Saturday, finished a disappointing eighth after winning the last two races in Budapest and Rovinj, Croatia. Arch had a great run in the Round of 12, just beating Bonhomme. But Bonhomme was the "fastest loser" and advanced to the Round of 8. But Arch was unable to get his engine started before the Round of 8 and was forced to retire. "It's frustrating if you can't race but that's life," said Arch, who slipped to third overall with 30 points.

In the Red Bull Air Race, which is the official world championship of the Fédération Aéronautique Internationale (FAI), the world's top pilots hit speeds of 370 km/h while enduring forces of up to 10G as they navigate as precisely as possible through a low-level slalom track marked by 25-metre high air-filled pylons.

Red Bull AIR RACE

WORLD CHAMPIONSHIP

Ascot



- Paul Bonhomme on the turf, top left and above, at the famous Ascot Racecourse where one usually sees four legged horsepower!
- Hannes Arch of Austria waits for his flight during the training on August 15th, at Ascot, UK.
- Pete McLeod of Canada arrives from his flight after the qualification, right bottom middle.
- Nicolas Ivanoff of France, with a British Airways 747 cruising by, on the right.

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Ascot Results: MASTER PILOTS

1. Paul Bonhomme (GBR),
2. Matt Hall (AUS),
3. Yoshihide Muroya (JPN),
4. Nicolas Ivanoff (FRA),
5. Nigel Lamb (GBR),
6. Peter Besenyei (HUN),
7. Martin Sonka (CZE),
8. Hannes Arch (AUT),
9. Michael Goulian (USA),
10. Matthias Dolderer (GER),
11. Juan Velarde (ESP), 1
12. Kirby Chambliss (USA),
13. Pete McLeod (CAN),
14. François Le Vot (FRA)

World Championship standings:

1. Bonhomme 46 points,
2. Hall 38,
3. Arch 30,
4. Sonka 18,
5. Lamb 17,
6. McLeod 14,
7. Dolderer 12,
8. Muroya 11,
9. Ivanoff 11,
10. Goulian 8,
11. Besenyei 8,
12. Chambliss 2,
13. Velarde,
14. Le Vot

Challenger Cup

1. Petr Kopfstein (CZE) 10 pts.,
2. Cristian Bolton (CHI) 8 pts.,
3. Daniel Ryfa (SWE) 6 pts.,
4. Peter Podlunsek (SLO) 4 pts.,
5. Florian Berger (GER) 2 pts.,
6. Francis Barros (BRA) 0 pts.



Michael Goulian of the United States performs during the qualifying of the fifth stage of the Red Bull Air Race World Championship in Ascot, Great Britain on August 15, 2015.



Cristian Bolton of Chile (L), Petr Kopfstein of Czech Republic (C) and Daniel Ryfa of Sweden (R) celebrate during the Challenger Cup Award Ceremony , above.

The Master Pilots Race: Matt Hall of Australia (L), Paul Bonhomme of Great Britain (C) and Yoshihide Muroya of Japan (R) at the Award Ceremony of the fifth stage of the Red Bull Air Race World Championship in Ascot, Great Britain on August 16, 2015.



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F-15I Ra'am, of the IAF



15-4

ARTICLE AND PHOTOGRAPHY BY NORMAN A. GRAF

Although the schedule for Red Flag 15-4 had been announced early in the year, as the date neared none of the usual updates appeared: no list of participating units, no announcement of media day, nothing. Rumors were, of course, floating around the internet, but nothing official. Since Las Vegas was just a short flight away I decided to check it out anyway. Even from off-base the viewing is very good and there were bound to be lots of aircraft. In addition to any Blue Force units flying in to participate, there would be Red Force Aggressors and the resident weapons and tactics development units. Plus, a Green Flag exercise was also going on. The trip was a go.

I started to have my doubts as we neared McCarran airport and began to descend. It was early morning and the temperature was already in triple digits. That was to be expected, though. After all, it was August in the Southwestern desert. But when I looked out the window I saw something quite unexpected. Although the skies were crystal clear at altitude, the ground was covered in a thick grey layer of crud. The westerly winds were carrying the smoke from the wildfires which were ravaging the California forests. Aircraft would be flying, but would I be able to get any useful photos? I was especially concerned since I would be shooting from off-base. Heat haze would already be a factor, but now there was going to be smoke too... What if nothing out of the ordinary showed up? I'd be taking pictures of grey planes against a grey sky.

But I needn't have worried. Not only did some very interesting units show up, but the skies cleared sufficiently to get some decent photos. The highlights of this Flag were clearly the Middle Eastern participants. The Royal Jordanian Air Force (RJAF) brought five F-16s and the Israeli Air Force (IAF) brought five F-15D Baz and five F-15I Ra'am aircraft. It's not often you see units from either Air Force here in the US, and even rarer to see both at the same time. They had flown together across the Atlantic, refueled by two IAF KC-707 Re'em tankers. The Jordanian Vipers bore standard overall grey paint schemes, but the Israeli F-15Is were camouflaged with desert browns and greens and the F-15Ds, although grey, at least had interesting artwork on their tails. Joining them on the Blue team were numerous F-16 units from across the US. We've chosen to share with you images of the more colorful ones. We've featured the two red-tailed Royal Singaporean Air Force Vipers before, but the 50th anniversary "Wild Weasel" Viper of the "Fighting Fifty Fifth" was a pleasant surprise. A Raptor squadron from Hawaii also participated, but no bombers took part in this exercise, so the "heavies" were limited to KC-135 tankers, E-3 AWACS and C-17 transport aircraft. Electronic warfare aircraft seemed to be limited to EA-18G Growlers of VAQ-131 "Lancers" from NAS Whidbey Island. We hope you enjoy the photo coverage of Red Flag 15-4 and we look forward to returning to Nellis AFB for Red Flag 16-1.

Among the aircraft participating in Red Flag 15-4 were:

- McDonnell Douglas F-15D Baz, IAF 106 Squadron "Spearhead", Tel Nof Airbase, Israel
- McDonnell Douglas F-15I Ra'am, IAF 69 Squadron "Hammers", Hatzerim Airbase, Israel
- General Dynamics F-16AM Fighting Falcon, RJAF 1 Squadron, Muwaffaq Salti Air Base, Jordan
- General Dynamics F-16D Fighting Falcon, USAF 425 FS "Thunderbolts", Luke AFB (Republic of Singapore Air Force)
- General Dynamics F-16C Fighting Falcon, USAF 55 FS "Fighting Fifty Fifth", Shaw AFB
- Boeing KC-707 Re'em, IAF 120 Squadron "Desert Giants", Nevatim Airbase, Israel
- Boeing E-3G Sentry AWACS, USAF 960 AACs, Tinker AFB
- Boeing C-17A Globemaster III, USAF 437AW, Charleston AFB



F-15D Baz, of the IAF



15-4

Boeing F-15D Baz from the 106 "Edge of the Spear" Squadron above, and a Boeing F-15I Ra'am' "Thunder" from the 69 "Hammers" Squadron below.





A Jordanian Air Force F-16AN above, (2) F-16D Fighting Falcons dorsal spines of the Republic of Singapore Air Force based at Luke AFB with interesting tail schemes, middle and bottom.



A rare sight of the Boeing KC-707 "Re'em" tanker of the IA 120 Squadron "Desert Giants" from Nevatim Airbase, Israel, above, an F-16C of the 64th Aggressor Squadron from Nellis AFB in the middle, and an F-16C Wild Weasel from the 55th Fighter Squadron "Fighting Fifty Fifth" from Shaw AFB bottom, participating in Red Flag 15-4 exercises at Nellis AFB.



AIRPORT SPOTTING



Aer Lingus EI-DEH, Airbus A320-214, EGKK, Gatwick airport, above © 2015 Christopher Mifsud



Meridiana I-SMEV McDonnell Douglas MD-82 EGKK, Gatwick airport, above © 2015 Christopher Mifsud
Vueling EC-LSA, Airbus A320-214, EGKK, Gatwick airport, below © 2015 Christopher Mifsud



Portuguese AF P3, LMML Malta International airport, above © 2015 Christopher Mifsud



Ghadames Air Transport Fokker F100, LMML Malta International airport, middle and Transavia France Boeing 737 Next Gen LMML Malta International airport, bottom © 2015 Ray Biagio Pace



Kuwait Air Force, Boeing C-17A III, LMML Malta International airport, above, middle and two of them parked besides each other, certainly not a usual sight. © 2015 Ray Biagio Pace

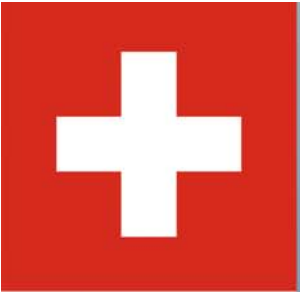


West Atlantic, Boeing 737-400SF, LMML Malta International airport, above © 2015 Ray Biagio Pace



Olympic Air, Bombardier DHC-8 Dash 8, LMML Malta International airport, above and Jet2 Germany, Boeing 737 Next Gen, LMML Malta International airport, below. © 2015 Ray Biagio Pace





Dittingen Air Show

Article and photography by Patrice Olivier



David Oldani flying his Yak-52 over Dittingen, Switzerland

+Dittingen Air Show+



We were in Switzerland, at the very scenic town of Dittingen, where an air show was scheduled for August 22-23. The Airfield of Dittingen is on a little hill above Dittingen around 20km south of Basel. It is based in the "Dreiländereck" of France, Germany and Switzerland. The airfield is grass covered and usually used for gliders. However, every other year for the past 60 years an air show has been held here.

The organizers of the event were very friendly and helpful to all the aviation enthusiasts. Parking was just behind the event, and there the catering delighted the public and especially the photographers. The loud speakers were placed 2m above ground and placed behind the public, not interfering with the sightline, and were comfortable to listen too, unlike at many events!

The program on paper looked good, but there were additional surprises. The air show started at noon, and was scheduled to last until the evening, with hot air balloons and gliders with flares having a lightshow.

The weather was excellent on Saturday, but on Sunday it degenerated somewhat and at the start of the air show there was a tragic and fatal mid-air collision of The Grass Hoppers Team. As a direct result of this accident the show organizers decided to cancel Sunday's event.

Our heartfelt condolences to all who were affected: families, teammates, organisers and friends.



- A pair of Dewoitine D.26, above
- A five ship formation of Pilatus P-3, below



Pilatus P-3

Sukhoi Su-26

Pitts S-1S



TBM-3E Avenger above, and our photographer sitting in the cockpit with Pacal "Grynych" Rioland, Avenger mechanic, with the torpedo bay open for display, below.



BÜ 131 APM Glider tug



T-28 nose art



T-28 Trojan/Fennec



EKW C-36



Hawker Hurricane



Interview with David Oldani, Yak-52 pilot/co-owner

The Bronco OV10 and the Yak-52 in formation

We met David Oldani, a 30 year old Swiss pilot and Flight Test Engineer, and we talked about his passion at the Dittingen airfield before his performance on Saturday.

The Aviation Magazine (TAM): Hi David, welcome to the columns of The Aviation Magazine. Your formation flight with a Bronco, is quite rare, and not often seen. Can you tell us how this came about and what is it like to fly in the company of Alain (Alain BES is a pilot of Bronco OV10)?

David: Flying with Alain, who is not only a very good friend but is very experienced pilot, is pure joy. In formation flying, trust is one of many key figures. Flying in formation with the Bronco in particular requires good speed management by the leader if the formation consists of different types of aircraft, since below 130kt the bronco flies with flaps extended. To avoid continuous extension and retraction of the flaps and hence unsettled flight conditions, the airspeed ideally should be kept at 120kt when flying together with the Yak-52. This gives a bit of margin for both airplanes to react to the given environmental conditions like turbulence and wind.

TAM: Can you tell our readers a bit about your passion for aviation?

David: Since I was 12 years old, I spent my time on airfields and started flying gliders at the age of 15. Since then, the passion only grew and one step followed the other (glider towing, meteorological measurement flights, aerobatics, air show flying, flight instruction). One lucky moment was to meet Paul Ruppeiner, a Swiss air show legend flying Hawker Hunters who taught me the first steps in display flying over 3 years. Today, Paul is still training me and looks at my trainings critically. Often, critical comments of friends led to discover probable safety issues in my routine which then could be removed.

TAM: Flying at air shows versus aerobatics is a different experience, can you tell us more?

David: Indeed, it's a huge difference flying aerobatics, doing competitions and flying air displays. At an air show, many aspects have to come together and complete the puzzle ON TIME. Parts of this puzzle are i.e. : airplane's technical state, personal fitness, schedule, delays and of course the weather. If any of those factors has issues – the display cannot happen and one has to say NO. This is the most difficult but most important bit in air show flying in my eyes. The first lesson I was taught was: "you are not displaying yourself, but the airplane you are sitting in". The second lesson then was: "never change your routine in flight and stick to what you have trained". Those lessons, together with many others have to be taken in account to ensure a safe display.

TAM: How many air shows you have flown so far?

David: Around 50 in the last 6 years.

TAM: As we see you at several air shows how do you find the time to practice?

David: Unfortunately, in Europe it's hardly possible to make a living out of air show flying. Hence nearly every one of the performers has a daily job other than doing air shows. But yes, I fly the Yak-52 every week to keep the training standard as high as possible.

TAM: Which air show is your "dream event" and which aircraft would you love to fly if you could?

David: Duxford! Just an incredible atmosphere... and Hawker Sea Fury is my dream aircraft apart from and the Yak-52 of course!

TAM: Can you explain your passion for the Yak-52, and why you chose it?

David: I never thought that I would have the privilege to fly an airplane such as a Yak-52 until a friend offered me to fly his. In exchange I looked after the airplane and ensured airworthiness. At that time, I still was studying mechanical engineering and did not have the resources to fly really. Today, we own the very same machine in a joint ownership, which I still consider a great privilege. With every hour in the Yak I spend, I like it more and more, enjoy every minute.

TAM: Professionally, you worked on the Solar Impulse some time ago, now Pilatus, what a great adventure!

David: Aviation is a virus which cannot be cured in my case. So I always was looking for a job in aviation which couples with the engineering background. Being the head of structural testing of the second Solar Impulse aircraft which now stays in Hawaii over the winter was indeed a great and sometimes tough adventure. Once the aircraft took off for its first flight, structural testing was not needed anymore so I moved on. Pilatus then offered me the perfect option. In flight test with Pilatus, I now can continue where I stopped at Solar Impulse, in the flight test campaign of the PC-24.

TAM: And finally, what advice can you give to all those children who share dreams like yours?

David: There is always a way! Sometimes it only takes a bit longer to get there.

TAM: David thank you very much and we wish you good flight!

David: Thank you, pleasure was all mine.



Julien "Teddy" Meister Swiss Hornet display pilot, left and performing above.



De Havilland DH-115 Vampire T.55





Alain "Bilou" Bes Bronco pilot, inset left, the Bronco OV-10 main image and taking off from the grass airfield, right.



Team Avenger and friends: (left to right) Raymond Calame Sr. Team Member, Charles Trachsel TBM 3E owner/pilot, Pascal "Grynych" Rioland Mechanic, Alain "Bilou" Bes #1 Bronco pilot & Chairman of Musee Europeen de l'Aviation de Chasse, Laurent Calame TBM Avenger and Dewoitine D26 display pilot, and Damien Vadon #2 Pilot Bronco OV-10B.

The two RedBull Blanix gliders performing after sunset Saturday evening, top right, and the Hot Air balloons later on the evening, bottom right.



USMC KC-130J Tanker Flights

WTI 2-15, MCAS Yuma

ARTICLE & PHOTOGRAPHY NORMAN A. GRAF

Twice each year, Marine Corps Air Station Yuma hosts the Weapons and Tactics Instructor (WTI) exercise, which brings together a select group of aircraft and aircrews from aviation units across the Corps. After roughly six weeks of intensive training these students return to their squadrons to serve as instructors. The USMC maintains five Marine Aerial Refueler Transport Squadrons (VMGR) equipped with KC-130J Super Hercules aircraft and during a recent WTI at MCAS Yuma, we were privileged to ride along during two training flights to learn more about their aerial refueling mission.

Five KC-130J aircraft and crews from four of the five refueling and transport squadrons took part in WTI 2-15: VMGR-152, -234, -252 and -352. They staged out of the south Combat Arming and Loading Area (CALA) which is where we met the crew of Draft 81. Although we would be flying on a Super Hercules (QD 065, BuNo 168065) assigned to VMGR-152 based at MCAS Iwakuni, our crew was truly composite. Capt. Jason "Chewie" Murphy and Cpl Travis Wells were "Sumos", whereas Maj Sam "Cooter" Watts and LCpl Jarrod O'Connor were "Rangers" from Reserve Squadron VMGR-234 based at NASJRB Fort Worth. The lone "Otis" crewman was CPL Kasey Artmayer, from VMGR-252 out of MCAS Cherry Point. After a quick safety briefing we loaded up. Flying with us was a video team filming a documentary for the National Museum of the Marine Corps. We each donned our loadmaster harnesses before strapping in for takeoff. I was grateful to be able to sit in the cockpit (see image below), watching the crew ready the aircraft for takeoff. After ascending to 11,000 feet we levelled off and dropped the rear ramp: below us in the distance were the runways and staging areas of MCAS Yuma. We then flew out over the Southern Arizona desert and began to circle in our designated "racetrack," reeling out the long refueling drogue. Soon enough an EA6-B Prowler of VMAQ-3 "Moondogs", based at MCAS Cherry Point, North Carolina, appeared in the distance. The pilot of Storm 72 quickly closed the distance and expertly placed the probe into the basket and began taking on fuel. It was thrilling to be able to walk back out onto the ramp as we flew in close formation at 200 knots. It didn't take long for the Prowler to top off its tanks, but the pilots stuck around and made a few passes for the camera before finally exiting in dramatic fashion with a wing-over just below the ramp.





EA-6B Prowler of VMAQ-3 "Moondogs"

Our next flight was a much larger and longer mission. Four KC-130Js (Draft 81-4) and nine MV-22 Ospreys (Rampage 31-9) would be flying to a Military Operating Area (MOA) in New Mexico, code-named Exxon. One of the Hercules would be landing to set up a Forward Arming and Refueling Point, while another would be deploying Container Delivery System bundles. The cargo in a CDS bundle sits atop a wood pallet and a layer of impact-absorbing, collapsible, corrugated cardboard, allowing supplies to be delivered quickly and accurately via a high velocity parachute. We were in the lead Hercules, Draft 81, and as the ramp opened we were treated to the sight of a veritable armada of aircraft behind us. After a short while Ospreys from VMM-163 "Evil Eyes" and VMM-166 "SeaElk", both from MCAS Miramar, formed up on our wing and began to take on fuel. Soon they drifted off and we continued our flight, closing the ramp as the sun set. Later in our flight the Ospreys returned to refuel in the dark. Despite their close proximity all we saw was the dim glow of their formation lights. In the cockpit, our pilots navigated skillfully, using their night vision goggles to pick out landmarks in the complete darkness. Finally, after almost six hours in the air, we began our descent to MCAS Yuma.

We would like to thank 1st Lt. Joshua Pena, I MEF Public Affairs, for arranging the media flights and MAWTS-1 for their hospitality in hosting us during the exercise. We would also like to express our sincere appreciation to the aircrew of Draft 81 for allowing us to participate in their aerial refueling missions



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MV-22 Osprey from VMM-163 "Evil Eyes"



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KC-130J crew I flew with: [L to R]

- Capt. Jason "Chewie" Murphy, VMGR-152
- Maj Sam "Cooter" Watts, VMGR-234
- CPL Kasey Artmayer, VMGR-252
- Cpl Travis Wells, VMGR-152
- LCpl Jarrod O'Connor, VMGR-234

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MAKS
2015

Article and photography by Peter Thivessen and Wolfgang Jarisch



Su-34 pulling vapour © Wolfgang Jarisch

We visited the 12th International Aviation and Space Salon MAKS which was held from August 25 to 30, at the Zhukovsky Air Base, Russia, to give our readers an insight to one of the largest and also one of the most interesting aviation exhibition that is held every two years featuring the latest Russian aircraft.

Zhukovsky AB is located 20 miles south-east of Moscow. The organisers reported 600 Russian and over 155 foreign exhibitors representing 30 countries. The first three days of the exhibition were dedicated to business, where many deals were made for a variety of civilian and military aircraft. The weekend was open for the general public. During the exhibition, each day featured different flight demonstrations that include the Russian Knights six Su-27 and Su-30, Baltic Bees six L-39 from Latvia, as well as the Russian stealth fighter the Sukhoi PAK FA, also known as the T-50. For additional information please see our website review.

The Aviation Magazine Media would like to express our thanks to the head of the press Center for their great hospitality and assistance on the base. Our special thanks to Mrs. Irina Ermolaeva.



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- 5 of 6 Russian Knights with Su-27/30
- Russian Falcons 2 x Su 27UB and 2 x Su30SM

All images ©Peter Thivessen unless noted.



SSJ 100-95B VIP



IL 114 Radar testbed



- Ka-52 top left
- Mi-171 and Mi-35M (new export version of Mi-24) top right
- TVS-2DT (modification of Antonov An-2) bottom left



MAKS
2015



One of the two US-made Douglas DC-3 airplanes of WWII period which performed the Alaska - Siberia flight in honor of the 70th anniversary of the WWII victory and ALSIB co-operation between USA and USSR following the course of the planes supplied by the United States to the Soviet Union from 1941 to 1945 during the US lend-lease policy. The flight took off on July 17, 2015 in Great Falls, Montana, USA crossed the Bering Strait and then flown enroute Anadyr-Magadan-Yakutsk-Bratsk-Yekaterinburg terminating on August 8, 2015 at Vnukovo airport, Moscow, Russia.



Tupolev Tu-160 (NATO: Blackjack) is very similar to the American B-1B— see our visit to Dyess AFB [click here](#). However, the Tu-160 is 20% larger, and is partially blocking the Tupolev Tu-22M3 (NATO: Backfire) supersonic, variable-sweep wing long range strategic and maritime strike bomber.

©Wolfgang Jarsisch



Myasishchev VM-T Atlant a variant of Myasishchev's M 4 Molot bomber (the "3M"), re-purposed as a strategic-airlift airplane. The VM-T was modified to carry rocket boosters and the Soviet space shuttles of the Buran program. It is also known as the 3M-T.

©Wolfgang Jarsisch

Su-35 pulling vapour



©Wolfgang Jarisch

Russian Power: Su T-50 in front, Su-34, in center, Su-35 in front.



©Wolfgang Jarisch

Russian Heritage Flight: MiG-3 and MiG-35



©Peter Thivessen

Aeroflot Tu-144 SST (the Soviet Concorde)



©Peter Thivessen

MAKS
2015



MAKS
2015

- Two Su-27 of the Russian Knights, left top
- Five L-29 of the Baltic Bees, right top
- Su T-50 Stealth Aircraft, bottom left
- The white missile is a Zvezda KH-35 a KH-35U3, anti ship missile, middle top
- X-58USHKE(IRR) with other missiles, middle bottom
- The BRAHMOS short range ramjet supersonic cruise missile jointly developed by India and Russia, far right



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