

THE AVIATION MAGAZINE

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No: 48 January-February 2017

Volume 8, Issue 1

- ✈ Airshow London, Canada
- ✈ Reno 2016, USA
- ✈ NATO Days & Czech Air Force Days, Ostrava
- ✈ Malta International Air Show
- ✈ And so much more...



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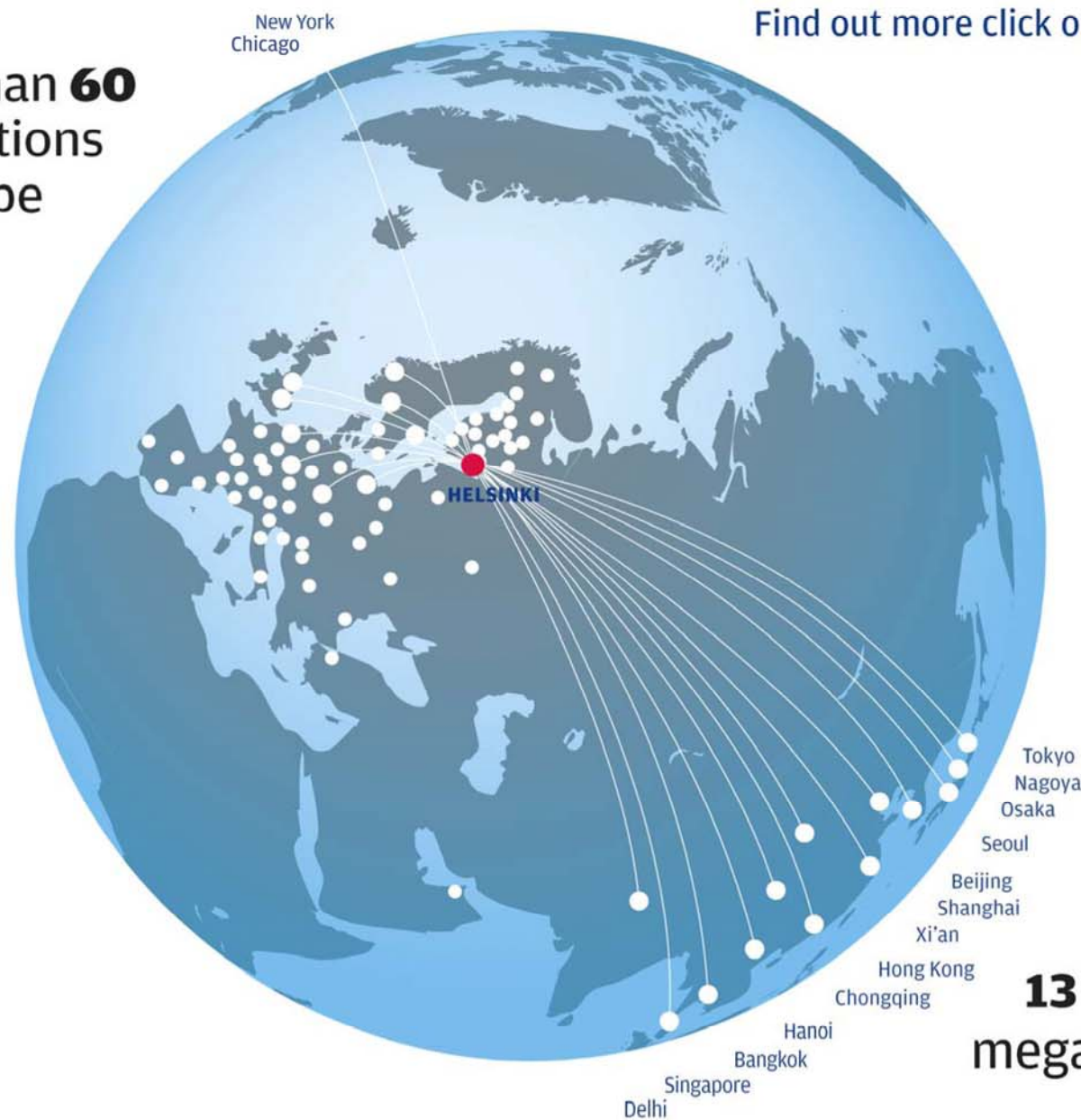
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THE AVIATION MAGAZINE

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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.

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NEWS FROM THE EDITOR

Welcome to the 48th edition of **THE AVIATION MAGAZINE**. This is first issue for 2017, but still features events from 2016, such as military exercises, air shows and related events from Austria, Canada, Czech Republic, France, Ireland, Malta, Poland, Romania and the USA.

2016 was very busy for us, always changing and evolving to bring you our readers better content not just focused on air shows, but other events such as air base and museum visits worldwide. For 2017 we will continue with the same itinerary, despite due to our contributing staff changes. Many of our readers may not be aware that all of our contributors are volunteers; several of them are or were working in the aviation industry and their full time work is their priority. Therefore, sometimes they cannot dedicate as much time to their passion as they would like and are no longer with us, and we wish them all best their endeavours.

In the next coming month or so the 2017 air show schedule will be released by organization such as ICAS. We look forward to 2017 with much anticipation, and we hope that you will joins us by downloading **THE AVIATION MAGAZINE** the BEST and FREE e-based magazine since 2009, imitated by so many, but never surpassed.



The crew of the USN E-2D Hawkeye from VAW-12, NAS Norfolk, at the 2016 Airshow London.

Spotters Day at Creil AB, France

Report and photography by Ralf Peter Walter

A photo position close to the runway, close to the display axis and fairly good weather were the ingredients of an interesting Spotters Day on Friday May 27th at the Base Aérienne 110 Creil some 50 km north of Paris, France. (Editor's note: We are publishing this now as we only received the report recently.)

Well organized by the FOSA (Fondation des Œuvres Sociales de l'Air), 250 aviation enthusiasts were given the possibility to take photos of the aircraft arriving and some rehearsing for the air show the next day. Unfortunately, the weather on Saturday was bad and many displays were cancelled.

The Polish Air Force sent two Mig-29 fighters and a CASA 295M as support aircraft. The German Air Force brought two EF200 Eurofighters and the Spanish Air Force was present at Creil with a single EF-18BM Hornet. Fast jets of the French Air Force included three Rafales, a Mirage 2000-5, one of the few Mirage 2000B in active duty and the Ramex Delta team with two Mirage 2000N plus one spare aircraft. The highlight of the day was the Ramex Delta's rehearsal, flying close formations and tactical manoeuvres at high speeds. Rehearsals also included the acrobatic team Cartouche Doré with three TB-30 Epsilon and a vintage De Havilland DH-100 Vampire FB.6. Flying in for the static display were various additional aircraft of the French Air Force such as a rarely seen Airbus A310 transport aircraft, Alpha Jets, EMB 121 Xingu, Cirrus and an Eurocopter Tiger HAP. Those who love warbirds and historic aircraft enjoyed taking photos of a Boeing Stearman, a Curtiss P-40N Kittyhawk, two North American T-6G Texan and a Fouga CM-170R Magister.

At the end of the day, the flight line was open to the spotters for taking photos of all the aircraft that arrived during the day along with some other aircraft of units based at Creil AB.



G-9 Renegade 912 Spirit



Pietenpol Air Camper J3



Airbus A310



DH-100 Vampire



Rafale



Transall C-160



Mirage 2000-5F



TB-30 Epsilon Cartouche Doré



Fouga CM-170 Magister



Eurocopter Tiger HAP

Bray International Air Show Republic of Ireland

Report and photography by Jason Phelan



The Bray International Air Display held over the weekend of 23rd & 24th July 2016 at Bray Promenade, Bray, Co Wicklow just outside Dublin, is now in its 11th consecutive year. 2016 saw the event move from a single day event to two days following the success of 2015's show which attracted 90,000 people and saw the Swiss Air force Aerobatic Team the Patrouille Suisse with their 6x Tiger II aircraft displaying and flying with an Aer Lingus A320 for a Unique special flypast. Nestled in the scenic town of Bray the dominant feature, Bray Head to the right of the display as you look out to the Irish Sea, with its scenic Cliff Walk makes for a beautiful location and backdrop for the show.

2016 saw a truly International flavour with support from Italy, UK, Sweden, France and Military and Civilian support from the Republic of Ireland. Featuring 26 jets and a total of 46 aircraft and pilots, 50 support crew with 11 acts performing on Saturday and 5 additional acts on Sunday with many first time displays at Bray and in Ireland. Saturday was attended by 50,000 people, whilst Sunday attracted 90,000, making a total of 140,000 to one of Ireland's biggest outdoor events. The weather over the weekend was challenging to say the least with a very dull and overcast day Saturday and Sunday being interchangeable with sunshine, showers, and strong gusts in the early afternoon making way for low clouds tracking throughout the display.

Majority of the aircraft for the show were based in three locations around Dublin with the Irish Air Corp (IAC) at Baldonnel (Casement Aerodrome) hosting the Freccie Tricolori, Red Arrows, Swedish Historic Flight (SAAB Viggen and Draken) and the PC-9s and Cessna 172s of the IAC. Dublin Weston Airport supported the Breitling Wingwalkers, the Pitts of the Trig Team, Spitfire/Seafire and the Irish Historic Flight Foundation's



Fouga Magister of the Patrouille Tranchant



Pitts S-1D of the Trig Display Team



three Chipmunks and DH84 Iolar. Finally, Cityjets new SSJ100 and an Aer Lingus A321 rotating from Dublin Airport. With all these various locations bringing its own problems for timings and locations for the show. With this in mind it has to be said the co-ordination and organisation was timed to perfection with the added burden of transiting aircraft from these various locations which is testament to the Air Traffic Controllers and organisers, whilst also taking into account being close to Dublin's ATC zone for commercial traffic into Dublin Airport.

The Frecce Tricolori arrived in Dublin in typical Italian style on the Thursday before the show flying down the Liffey River and specially changing their normal red smoke to orange to paint the Irish Tricolour. Moving to the first day of the event it can be said that an enthusiastic crowd gathered early in anticipation of the varied line up on offer. The dull grey skies didn't dampen the atmosphere for the display which was opened by the Defence Forces Parachute Team "The Black Knights" dropping into the centre point on the beach. The display Saturday culminated with the Frecce Tricolori giving a flat display under low clouds but their coloured smoke being highlights by the grey skies. But it was the Breitling Wingwalkers that stole the show bringing a distinct sound in their Boeing Stearman bi-planes, piloted by Martyn Carrington and Dave Barrel with the girls strapped on top of the wings. With close formation flying and breath taking manoeuvres that delighted the crowd the wingwalkers (Emily Guilding and Florence Rolleston-Smith) even moved from their rigs to sit on the leading edge and then moved backwards standing above the forward cockpit for the amazing arabesque.

The only negative to Saturdays display is that some of the acts felt too distant seeming to be further away than the 230 meter line and not making any impact with their routine. Overall though it was a good introduction to the new two day display and overnight the organisers had moved to make changes in time to Sunday's display. Sunday is the traditional day for Bray and with two of Europe's biggest and well known Military display teams on the participating list it was obviously going to attract the biggest crowd.

Before I move on to Sunday it must be noted that for any Display Director and organisers running a show of this scale is difficult enough having to contain with many elements and dimensions. From ensuring the aircraft are on time, ground operations, watching the safe conduct of displays and everything in between the pressure is a skill to contain. On Sunday a fire was purposely started 20 minutes before the first act was due on at the side of Bray Head. This fire took hold very quickly and with the wind gusting up to almost 25 mph and smoke being blown down between the crowd and display line, I'm sure the organisers could have done without this added pressure. Fire crews and the Garda were on the scene quickly and even though the fire kept smouldering and reigniting throughout the display it didn't stop any of the displays and this is testament to the skill of the pilots not allowing such an event to detract from the flying. (Consequently four people were arrested by the Garda for starting the fire).

The RAF Red Arrows opened the show on Sunday at 14:00 performing their new "wall" rear crowd arrival. Unfortunately, the Reds, as they commonly known as could only display the flat show due to very low cloud base. However, as ever their flat routine is just as dynamic as the rolling and full displays and spontaneous applause I am sure, was greatly appreciated by Mike Ling (Red 10) giving the commentary. With the lessons learnt the day before it was clear these changes had been implemented to full effect. With all but one act bringing their display's closer and able to perform a more dynamic routine this was helped by the weather giving way for full display sequences. It was only the SAAB Viggen's routine that seemed to have a display line that was half a mile away and as a photographer I didn't even pick up my camera to take a single image. Closing the weekend the Frecce Tricolori had this honour and were blessed with clear blue skies and flew in low for a rear crowd arrival to give a full and excellent display that was the talk of the town all evening.



BAe Hawk T1As of The Red Arrows



Vans RV4/8s of the Ravens Display Team

Both days show cased the Republic of Irelands aviation history. The Irish Air Corps contributed 4 PC9s known as "Eagle" displaying in formation and with a solo aircraft breaking away to display the aerobatic attributes of the PC-9M. Three Cessna FR172H Reims Rockets displayed together in their last ever public display in a gentle, tight close formation routine. Representing Irelands rich aviation history the Irish Historic Flight Foundations (IHFF) three Chipmunks and DH84 "Iolar" gave a very sedate display with the chipmunks trailing smoke enhancing their routine. Also in support for the weekend transiting Red 10 and being the jump platform for the Black Knights and Irish Parachute Club was an Augusta Westland AW139.

Se Pardy, Director, Bray Air Display, said, "This is the first time in the event's 11 year history that the Red Arrows have performed and we are thrilled to have them here. To also have Italy's finest, the Frecce Tricolori and teams from the UK, France and Sweden, as well as the very best in Irish aviation is a wonderful achievement for all involved. This really is a very special day for Bray and a day to remember in Irish aviation history. Many thanks to everyone who came out to watch the display this weekend, to the event sponsors and the people of Bray for all their support."

Eamonn Brennan, Chief Executive of the Irish Aviation Authority said, "We are very proud to have been the main sponsor of the Bray Air Display 2016 in the year of the Centenary of the Easter Rising. We are delighted that the Air Display has been such a success. Aviation has played a critical role in the development of the Irish economy over the last 100 years and it remains a key part of the Irish economic system, supporting over 40,000 jobs directly. We hope that this weekend will have helped to inspire a new generation of pilots, engineers, and enthusiasts."

To sum up Bray Air Display 2016 attracted rare gems and variety of aircraft that would compare to some of the best and well known displays in Europe. Many of the pilots and crew reported they received a great Irish welcome and would look forward to returning to the Emerald Isle in the near future. In giving Bray a 10 I can break this down to many reasons. Saturday on its own was an 8 with Sunday being a 10. Am I biased, yes probably, but taking into account the participants, FREE air display, timings, co-ordination and the hard work and effort from all involved to create an "event" not seen in Ireland for some time. A 10 gives credit to all involved from the pilots, crew, organisers, sponsors and the unsung heroes who contribute with no real thanks, but dedication. An expectation for 2017's show has been the talk of social media and the next few months will no doubt be a challenge for the organising team wondering 'how do you' top the event that was Bray Air Display 2016.



Boeing Stearman of the Breitling Wingwalkers



Aer Lingus A321 that flew on Sunday only above, and the Italian Air Force Frecce Tricolori MB339 PANs that performed on Saturday only, below



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MIROSLAWIECZ OPEN DAY

Report Co-written by István Kelecsényi and L Nyary, with photography by István Kelecsényi

Mirowslawiec Air Base used to be the home of the Sukhoi Su-22M3 tactical regiment. A few years ago the Sukhoi squadrons relocated to Swidwin Air Base. The Su-22M3s were replaced with a squadron of Orbiter Unmanned Aerial Vehicles (UAV) used for Aerial reconnaissance.

The Polish Air Force and Naval Air Arms organized an Open Day on September 3, and just about all their current and past flying inventory were exhibited to the public. The static line consisted of MiG-21, MiG-29, Su-22, and F-16 tactical combat aircraft, PZL W-2, W-3, W-4, and Mil Mi-24 helicopters, M-28, C-235 and C-130 transport, PZL-130 basic and TS-11 advanced trainer aircraft.

The flying program included performances by the Mi-14 and Super Seasprite maritime helicopters, search and rescue demonstration by the PZL W-3 and Mi-24 helicopters, a solo display by the MiG-29 and F-16 combat aircraft. The "Biało-Czerwone Iskry" Team (Red-White Spark) performed as well in their old TS-11 Iskra jets.

There was a parachute jump demo from a M-28 Bryza aircraft. At the end of a full day program, attendees could view a series of historical aircraft stationed at Mirowslawiec Air Base from the beginning.

Over all the show was excellent, well organized, free to attend and with an interesting flying program.



PZL M28 Bryza aircraft above, and an F-16 with conformal fuel tanks, below.



Sukhoi Su-22UM3K, below.





The "Biało-Czerwone Iskry" Team (Red-White Spark) in their old TS-11 Iskra jets above, and Polish Navy Kaman SH-2G Super Seasprite below.



Mil Mi-14 Haze above, and the W-3W/WA Sokół Armed version, with twin 23 mm GSz-23ł cannon and four pylons for weapons used by Polish Land Forces, below.





EADS CASA C-295M above, and the MiG-29 below.



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New York Air Show

Article and photography by Brian R. Veprek

For the second consecutive year, Stewart International Airport located in New Windsor, New York, hosted the New York Air Show. After the success of their 2015 air show - the first since 2003 - the organizers were excited for another opportunity to show off their beautiful airport while showcasing many of our finest military airplanes, their pilots and crew.

On a picture-perfect weekend, September 3rd and 4th, thousands and thousands of delighted spectators packed the grounds to take pictures of their favourite displays, talk with U.S. Air Force members eager to answer questions, and watch the spectacular manoeuvres of the amazing pilots.

Headlining the event were our Thunderbirds consisting of six F-16 Fighting Falcons piloted by the best-of-the-best U.S. Air Force pilots. The Thunderbirds, also referred to as Vipers, were introduced in the U.S. Air Force in 1978 as all-weather, multi-role aircraft focusing on air superiority as fighters equipped with an internal M61 Vulcan cannon and 11 locations for mounting weapons and other mission equipment. Their 65-person entourage consisting of 8 pilots, 4 support staff and dozens of maintenance personnel, traveled from their home at Nellis Air Force Base in Nevada via a C-17 Globemaster III. Despite a gruelling 6 day-a-week schedule for a 9 month season of 72 performances, the Thunderbirds were fresh and flawless. They wowed the crowd with their precise formations while maintaining wing distances that appeared non-existent and cross-over manoeuvres that appeared like a guaranteed collision until the masterful pilots passed one another with ease. While several Thunderbirds distracted us with their performance, a few skirted behind the crowd to stun us all with their roaring flight overhead. After shocking us all with their sudden appearance you could hear wows, laughs and applause from the delighted crowd.

The GEICO Skytypers aerobatic team was on-hand to perform stunts using SNJ-2 World War II era planes. They are called Skytypers because they perform low-level manoeuvres while creating aerial smoke messages.

A fan favourite, the F/A-18 Hornet jolted the crowd with its manoeuvres and high-speed pass. This twin-engine supersonic, all-weather, multi-role combat jet was designed as both a fighter and attack aircraft (hence the F/A designation) and serves the US Navy and Royal Canadian Air Force from aircraft carriers and bases ashore. It has a top speed in excess of Mach 1.8 and can carry air-to-air missiles and air-to-surface weapons, supplemented by a 20mm M61 Vulcan cannon. The fighter's primary missions are fighter escort, fleet air defence, Suppression of Enemy Air Defences (SEAD), air interdiction, close air support, and aerial reconnaissance.

The size of a whale, the huge C-17 Globemaster III military transport aircraft seemed to effortlessly glide off the runway. The C-17 is the home-town aircraft, flown by Stewart's 105th Airlift Wing of the National Guard. Developed for the U.S. Air Force performs tactical and strategic airlift missions, transporting troops and cargo throughout the world. The first C-17 squadron, the 17th Airlift Squadron, became operationally ready on January 17, 1995. Since that time, the C-17 has broken 22 records for oversized payloads and was awarded the Collier Trophy, the U.S. aviation's most prestigious award. The C-17 accompanies the President of the United States on domestic and international trips. It is used to transport the Presidential Limousine and security detachments. There have been several occasions where the C-17 has been used to transport the President, himself, temporarily being assigned the Air Force One call sign. In addition to providing service in the United States, the C-17 is also used by the United Kingdom, Australia, Canada, Qatar, United Arab Emirates, NATO Heavy Airlift Wing, India, and Kuwait.





The Black Knights, West Point's Parachute Team, provided a precision free-fall demonstration. During their performance the Team worked together to build various formations then separated to deploy their canopies to demonstrate their accuracy skills by landing on a target placed on the ground. The Black Knights participate in the National Collegiate Parachuting Competition, winning the title in 2013.

The pristine B-25 "Panchito" performed at the air show - its twin 1700 horsepower to Wright R-2600 engines rumbling in the sky. The B-25 was designed as a medium bomber, built to operate at altitudes between 8,000 and 12,000 feet. While the basic configuration remained the same throughout its production over 9,800 aircraft, there were many changes to its armament depending on the squadron's mission. The armament variations included 75mm cannons, rockets, and up to eighteen .50 caliber machine guns. Some B-25's were modified to carry torpedoes. While the B-25's most famous mission was the Doolittle raid, B-25's played a much larger role throughout World War II. They were used in all theatres of the war from Alaska to North Africa, China, Europe and the Southwest Pacific. B-25's were flown by the U.S. Air Force and U.S. Marine Corps, as well as the air forces of Britain, Canada, Australia, Russia, China, Brazil and the East Indies. The "Panchito", whose crew consisted of combat veterans and recent trainee graduates, was assigned to the 41st Bomb Group - the first unit to attack the Japanese home islands since the Doolittle Raids. The crew was preparing for their August 13, 1945 mission when at 5 o'clock in the morning when a loudspeaker announcement was made "Mission for today cancelled - and all planes will leave for Manila at dawn." Japan had surrendered.

An appearance was made by an Aero L-39 Albatros. This high-performance jet trainer was designed during the 1960's in Czechoslovakia Aero Vodochody. In order to minimize damage caused by inexperienced crew, this aircraft was designed with simplified onboard systems. Its low landing speeds and rugged design of its landing gear enabled this aircraft to be flown from difficult airstrips such as frozen lake beds. Several display teams, such as the Breitling Jet Team, use the L-39.

A U.S. Coast Guard Search and Rescue (SAR) Team provided a demonstration of their rescue techniques. SAR is one of the Coast Guard's oldest missions, involving multi-mission stations, cutters, aircraft and boats lined by communication networks. To meet their responsibilities, the Coast Guard maintains SAR facilities on the East, West and Gulf coasts; in Alaska, Hawaii, Guam, and Puerto Rico, as well as on the Great Lakes and inland U.S. waterways. The Coast Guard is recognized by the world as the leader in the field of search and rescue. Kent Pietsch performed an aerobatic routine in his 800-pound, Interstate Cadet Jelly Belly plane. Kent fell in love with flying when he was four years-old. While growing up in North Dakota every day after school he would find his way to the airport and do whatever he could to get into an airplane. One of his unique stunts includes landing on the rooftop of a moving RV.

David Windmiller and his Zivko Edge 540 performed gymnastics in the sky executing gyroscopic tumbles, spins, aerial cartwheels, torque rolls and soaring feats of precision. The maximum aerobatic weight of the aircraft is 1,550 pounds. It can climb 3,700 feet per minute, roll 420 degrees per minute and is strong enough to withstand 20 Gs.

Buck Roetman has been flying for over 35 years, experienced in more than 105 different types of airplanes, from Cubs to corporate jets, logging more than 13,500 hours of flight time. At the air show, he flew his modified Christen Eagle with a Lycoming IO360 4 cylinder, 250 HP engine.

On display were many planes including a B-1B Lancer Bomber, a MH-53E Sea Dragon Helicopter, a C-130J Hercules airplane, and a F-16 from Vermont's Air National Guard Fighter Wing. The B-1B Lancer is a four-engine supersonic, variable-sweep wing, jet-powered, heavy strategic bomber used by the U.S. Air Force. It was manufactured as a low-level penetrator with long range and Mach 1.25 speed capability at high altitude. It entered service in 1986 with the USAF Strategic Air Command as a nuclear bomber. However, in the early 1990's it was converted to a conventional bomber. It served its first combat missions during Operation Desert Fox in 1998 and again during the NATO action in Kosovo in 1999. The B-1B has supported the U.S. and NATO in Afghanistan and Iraq. It is expected to continue to serve in the 2030's.



- SAR demo with the MH-60D, top left
- F/A-18C, bottom left
- B-25 "Panchito" with the bomb bay doors open, top right
- Nose art of the C-17 Globemaster III on static display, right center
- USAF Thunderbirds, the Best-of-the Best of the United States Air Force landing, bottom right.



AIRPOWER16



Airpower at Zeltweg Airbase is wholly funded by the Austrian Armed Forces (Bundesheer) and serves as a recruitment activity for the Austrian Air Force and Land Force. The Airbase itself is geographically situated between two hill ranges, one to the North and the other to the South. Weather conditions can vary dramatically over the span of a day and what starts off as a mist cloaked valley in the early hours after dawn will easily clear up to reveal a scorching sunny day by noon with intermittent cloudy patches. Dense forests and high windswept bare hilltops provide for a dramatic background for the aviation photographer, with splendid hues provided by the contrast and depth of the natural topography of this location. The weather during our stay at Zeltweg, which was between the 31st August and the 4th September turned out to be almost perfect.

The sun shone, almost all of the planned aircraft arrived and the crowds came to enjoy what was probably one of the best air shows anywhere this year. The Friday show drew tens of thousands of visitors who arrived early, parked with ease and made their way to the airbase some three miles away on foot. I was surprised that no shuttle bus service was in place, considering the distance, but I think that the organiser may have underestimated just how popular this air show had become. Saturday's show was packed, a full house.

For the keener aircraft spotter and photographer the days leading to the show are probably as interesting as the air show itself, if not more. For us, having arrived in the area on Wednesday afternoon, we made our way to the perimeter road next to runway 26L just in time to see the practice demo of the Airbus Heritage Flight Messerschmitt Me262 which was the highlight of the whole show for me.

We also spent the whole of Thursday at the same location. It should be noted that while runway 08R might also be chosen by some of the pilots, the majority use 26L because there are no immediate built up spots under the approach.



One should note that 'flying aircraft' aprons were not accessible to the public during the air show. Aerobatic teams were segregated further and allocated a separate apron on the opposite side of the runway close to the threshold of runway 26. Many of the accessible static aircraft were stood on hastily prepared areas with makeshift tape, iron barriers and/or improvised seating nearby. This prevented uncluttered photography.

The event itself is a non-stop nine hour flying programme, that alone makes Airpower at Zeltweg one of the best events in Central Europe for air show enthusiasts however, it is far from perfect. One of the main failures, and the organizer should consider this for future events, there was absence of shuttle transport between car parks and the main venue. They should recognize the fact that not everyone is capable of walking several kilometres, especially people with disabilities, or walking issues, and this over looked detail forced me to watch the show from the car park!

Zeltweg Airbase also houses a comprehensive museum comprising of many of the Austrian Air Force's historic aircraft types used over the years, which is worthwhile to visit.







F-16AM of the Belgian Air Force, above Eurofighter Typhoon of the Austrian Air Force doing some low level passes with smoke, below.



Red Bull Air Force: P-38 Lightning in front flanked by two Alpha Jets with the F4U-4 Corsair at the rear above, and the F4U-4 Corsair about to land below.





PATROUILLE DE FRANCE (French Air Force) – aerobatic display team top left, and the Douglas DC-6B (The Flying Bulls) left bottom. Hawker Hunter T68 with tiger stripes landing top right, and the KRILA OLUJE/ WINGS OF STORM (Croatian Air Force) – aerobatic display team bottom right.





FRECCIE TRICOLORI (Italian Air Force) – aerobatic display team top left and the PATRULLA AGUILA (Spanish Air Force) – aerobatic display team below.



Historic Jet Formation with (1) De Havilland Vampire, (2) Saab 105OE, (3) Fouga CM.170 Magister, (4) Saab 35 Draken, (5) Saab 29 Tunnan, (6) Northrop F-5E Tiger II (7) and Eurofighter Typhoon above. Eurofighter Typhoon German Air Force below.



AIRSHOW LONDON

Report Co-written by Hamish Grant and
the Editor of The Aviation Magazine
with photography as noted



Snowbirds

The first air show in 12 years in London, Ontario was held on Sept 16th to Sept 18th at the London International Airport, with mixed results. On paper, or on the web more accurately these days, it looked very promising and by the number of performers and static displays too: it was the largest air show in Canada for 2016.

The general synopsis of the air show consisted around the spectacular line up with the Snowbirds, CF-18 Demo Team, Canadian Armed Forces Parachute Team – The Skyhawks, F-22 Raptor Demo Team and historical flight with the CF-18 and Harvard II and the F-22 with a P-51D Mustang, in flight refuelling demo, F-16s and F-15s delivering military fighter demonstration with lots of jet noise! Add civilian performers to mix, such as Pete McLeod in his Edge 540 of the Red Bull Air Racing fame, Gregory “Wired” Colyer flying his Ace Maker T-33 and several others.

As any seasoned air show attendee knows, having a long list of aircraft at an air show does not make the show a good one alone there are many other factors that make or break the event. Some of them are the entry fee, facilities such as food vendors, portable toilets, friendliness and knowledgeable staff, ease of parking and getting around, and a very key important factor: the weather!

Media day was on Friday, when many performers and static aircraft arrived during the day. Later on the same evening with a show called the Hour of Power with gates opening at 4 pm and the show starting at 5pm until dark. A limited number of tickets were available in advance for this with a cost of \$15.00 and included free onsite parking. Perhaps the best deal over all. The weather was perfect on Friday, warm and sunny and the sun was behind the spectators during the air show, which makes photography better. From a media perspective, there was some confusion as to where the media would be permitted to stay by the security personnel, our promised tent was not accessible, as the security did not allow the media to go there, also we were prevented getting a closer look at the USAF B-1B, RC-135 Rivet Joint, and USN P-8 Poseidon as well, which were parked on the way back on the static apron. This was a bit of a joke as school kids were able to visit them all day. After 4 pm as the Hour of Power attendees started to come in, the media finally had a chance to visit the 3 aircraft already mentioned which was joined by the KC-135R tanker by then.

The Photo Tour attendees were corralled into a large area on the flight line right of the static apron, giving them a fairly good look at the right hot ramp, but limited view of the left side where the F-22s, CT-130, P-51 Mustang, OV-1 Mohawk and the Harvard II were parked. A limited amount of Photo Tour tickets were available for 2 days \$125.00 or for 4 days \$200.00 (arrivals on Friday, departures Monday).

The Hour of Power was quite good and started off with the arrival of the F-16s and the F-15s, they made several low level passes thrilling the photographers. Also 3 additional CF-18s arrived as the sun was going down.

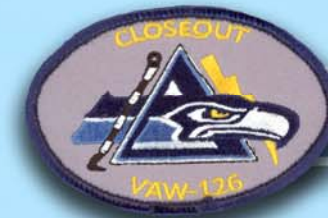
Saturday: was cancelled due to weather: rain and thunderstorms.

Since the Saturday show having been cancelled due to rain, the organizers honoured those tickets at the Sunday show. This was a good move from the organizers as many attendees drove to the show on Saturday morning only to learn at the gates that it was cancelled, and they were not too happy!

We arrived at the show around 7am for the photo tour on the tarmac. Security was a bit lax in that there was no ropeline across the taxiway where performing planes were parked, we delighted as a Westjet 737 departed on YXU's live runway 33/15, and viewed the Snowbirds, F16s (3) Harvard 2 and F18s as well as the CAF Skyhawks' CC-130J Hercules on the performing line then crossed to the static area where we saw 3xF15C, a CF-18, and a nice assortment of heavies – the RAF KC-30 Voyager, a USAF KC-135R tanker and a USN P-8 Poseidon as well as the USAF's RC-135 Rivet Joint. Tucked behind all those big planes at the end of the runway was a sweet USAF B-1B Lancer bomber, truly a beautiful feat of engineering. There was a nice assortment of trainers and classic planes including a Canadair T-33, a USN T-6 II, a USN T-45 and a pair of Harvards. Copters included an RCAF CH-139 Jet Ranger, an RCAF Bell 412, US Navy MH-60 Seahawk and the most impressive of them: the US Navy MH-53 Sea Dragon. Others included the big Antonov AN-2 bi-



Canada's very own Pete McLeod in his Edge 540 of the Red Bull Air Racing circuit.



The show itself was fairly well handled although the extra crowds made getting around a bit difficult due to Saturday's cancellation. Navigating around pools of water in the seating area in addition to dealing with crowds and long lineups at the food trucks and in the VIP area, made for a less than optimal experience. The organizers must have been proud of the high attendance however, as the weather was perfect. The media were also pushed out of a reserved area with access to refreshment and tables and internet hook-ups, to make room for more catering for the anticipated larger VIP crowd. We had to make do with a small, swampy area on the flightline in between the VIP and general admission seating areas, and had to scrounge our own seating and tables to store gear (the ground was still very wet). But we muddled through.

The organizers of the show, or at least our media contact, were unable to provide a schedule of performers and from the looks of the performer's ramp and listening to the Air Boss chatter on our scanner, it was evident that there were times when they were kind of making it up as they went along depending on who was ready right at that moment, whether there was a regular flight arriving or departing from YXU, or how much traffic there was on the tarmac. They did still provide a very good show that included a terrific display by the F-22 Raptor East demo team (who really never disappoint to be honest), Pete McLeod's Edge

540 stunts and several classic displays from a BAC Jet Provost, a Grumman OV-1 Mohawk (sporting an MIA livery), the CF-18 Demo Team in its BCATP livery, the Skyhawks parachute team with CC-130J flybys... Two heritage flights featured the F-22 with a beautifully restored P-51 Mustang and the CF-18 with a Harvard 2. I think my favourite performer aside from the F-22 was Greg Colyer's T-33 Acemaker, a beautifully restored USAF jet from the Cold War era.

Interesting observations: CC-150 with 2x CF-18 Flyby did occur. A lot of to-ing and fro-ing going on as the CF-18s headed to Ottawa in the morning for a flyby and returned for their flyby in the London show with the CC-150 (an RCAF Airbus A-310)... this might have been what the show was calling a 'refuelling demo' as the CF18s lined up nicely on the wingtips of the CC-150. The three F16s that were so popular on the ground did manage to get a couple up for a few flybys before the show, after which they headed south of the border to do a flyover at a football game in the US. They returned mid-show for a couple of flyovers again. Another plane that had been promised was the C-17 Globemaster as part of the static lineup but it was absent. The show also promised the 3xF-15C jets as "performers" but they never left the static display. I asked one of the pilots and was told that the quick flyover they did before they landed on Friday afternoon was the extent of their "performance" for the weekend.

Over all the show was good, but Saturday's cancellation did dampen the over all rating .



- USAF ANG F-15C, top left
- USAF ANG F-16, mid left
- Grumman OV-1 Mohawk, bottom left
- RCAF (2) CF-18s, top right
- Canadian Armed Forces Parachute Team – The Skyhawks bottom right.



- CF-18 Hornet Demo taking off, left
- Canadian Historical Flight CF-18 Hornet with Harvard II, top right
- USAF Historical Flight F-22 Raptor with P-51 Mustang, bottom right.



AIRSHOW LONDON

Harvard Mk 4 "Bessy" of The Canadian Harvard Aircraft Association, top and RCAF CT-142 Dash-8, bottom.



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National Championship Air Races 2016

For the 53rd time, the National Championship Air Races thrilled the crowd at Reno with plenty of awe-inspiring aircraft both in the air and on the ground. The major highlight of this year's event was the United States Navy Blue Angels, coming to the races for the first time since 2009.

The static ramp featured a wide variety of very special military aircraft including the unique F-15C Eagle of the Oregon Air National Guard painted up in honor of the division's 75th Anniversary. Along with that rare bird were two soon to be retired QF-4E Phantom IIs, F-16N and F-15N Aggressors and EA-18G Growler from NAS Fallon, F/A-18F Super Hornets of VFA-41, Hawaii Air National Guard C-17 Globemaster III, Thunderbirds F-16 Fighting Falcon Mock-Up, the new F-35A Lightning II, and much more!

Highlights of the air show performances this year were aerobatics by Mike Wiskus in his Lucas Oil sponsored Pitts Special and Jim Peitz flying his Beechcraft F33C Bonanza. Other acts included the United States Air Force Academy's Wings of Blue Parachute Team, Bill Braack in his Smoke 'n' Thunder Jet Car, and a rare Dassault Falcon 7X flight demonstration. On Friday, the crowd was treated with some very exciting flybys of the F-35A Lightning II and QF-4E Phantom II formations as the jets came to land for static display.

The stars of the air show acts were the Blue Angels. Under the command of Cdr. Ryan Bernacchi, the Blue Angels took to the skies of Reno for the first time in seven years with the precise maneuvers they famously showcase across America. Following the tragic loss of former Solo pilot Jeff Kuss earlier this year, the team modified their takeoff routine by having the solo pilots depart separately.

The race course this year didn't feature as much high end competition as seen previously since both "Strega" and "Rare Bear" were unable to participate in the Unlimited Class. On Friday, the defending Jet Class champion, Pete Zaccagnino crashed his rare DeHavilland Vampire making an emergency landing, but managed to exit his aircraft unharmed.



The champions of this year's races were Jeff Rose in "Reno Rabbit" for the Biplane Class, Lowell Slatter in "Fraed Naught" for the Formula One Class, Jeff LaVelle in "Race 39" for the Sport Class, Chris Rushing in "Baron's Revenge" for the T-6 Class, Rick Vandam in "American Spirit" for the Jet Class, and last but not least, Steve Hinton in "Voodoo" for the Unlimited Class.

To get a full list of race participants and their aircraft for the 2016 Air Races, click the link here: <http://reports.airrace.org/2016/2016.Pilots.Report.html>

Despite the less tightly matched races this year, the air show performances by the Blue Angels and the other great acts made this year's Air Races a huge success. Special thanks goes to the pilots, volunteers, and attendees for their support in making the great event of Reno happen in 2016.

2016 Unlimited Race Winner Steve Hinton





- T-33 top left
- P-51 bottom left
- The 2016 Unlimited Race Winner Steve Hinton's highly modified Mustang "Voodoo" and the Championship Trophy, right above and below.





(2) QF-4E Phantom II in a rare two ship formation top left, and a single one top right and the world famous USN Blue Angels at Reno, NV.





Nato Days & Czech Air Force Days OSTRAVA

Article and photography by Peter Thivessen and Wolfgang Jarisch





We're back for another edition of the NATO Days in Ostrava, Czech Republic, which is the biggest security event in Europe. The event was held at Leoš Janáček Airport, the aviation gateway to the largest city in Moravian-Silesian Region. Responsible for the security part was the Czech non profit organisation JAGELLO 2000 which is also a part of the Atlantic Treaty Organisation since 2003. Many different units from the Czech Republic, Fire Brigade, Border Control, Police, etc. were involved in the ground and the static displays.

This year's special guest nation was Germany. The Germans brought a lot of equipment to Ostrava. The audience could see, in addition the German aircraft and helicopters, from the Joint Support Service the Dingo, the armoured vehicle Fuchs, the light armoured vehicle Enok, Water Canon YAK, road tanker 8x8 TEP 90 with conversion kit; from the German Red Cross the Nissan Patrol, a Mercedes Unimog, Rescue Seabob, a Water Rescue Boat, and also units from the Saxon Police were present on the event. The German Army was in the static display as well as in the dynamic display with a Leopard 2 and the Bergepanzer 3 (armoured recovery tank). These are only a short overview of the equipment.

The biggest surprise for the aviation enthusiasts was the participant of all kinds of aircraft and helicopters which were in service by the German Air Force, Navy and Army. (see participation list) Heavy metal has been sent directly after the end of the multinational NATO Exercise, Ample Strike 2016, which was also held in Czech Republic, from the US-Air Force in part of the B-52H Stratofortress, the B-1B Lancer and the KC-135R Stratotanker to Ostrava. This exercise was the reason that we could also see the United States Army AH-64 Longbow Apache, two Lithuanian Air Force L-39 Albatros and the Slovenian Air Force PC-9M Hudournik here in Ostrava.

Due the political situation between Turkey and the EU, the Turkish Air Force has cancelled their participation of the Turkish Stars and the Solo Turk. The Swedish Air Force Historic Flight brought the Saab 105, the J-29 Tunnan, the SK-35 Draken and the AJS-37 Viggen with an amazing display back to the sky over Leoš Janáček Airport. In the flying display from the Czech Air Force we could see the Aero L-159 Alca and a brilliant display as well from the SAAB JAS-39C Gripen. The Czech Air Force brought also the complete inventory of their helicopters, including the police helicopters, Bell 412, Eurocopter EC-135T2 together with a brand new Slovakian Police Helicopter, a Bell-429, in the flying display.

The flying display of the fast jets was this year was not dominated by the usual F-16's. For a change the Eurofighter was the dominant jet for this weekend. Austria, Germany, Spain, Italy, and the UK (the Brit's don't like to say Eurofighter for their British Typhoon) brought their jets.



The Austrian Eurofighter was stationed in Ostrava for the event, as normally they fly from their home base in Zeltweg. After years of absence in a flying display was a big surprise that we could see the German Air Force Eurofighter in flying display on an event like this. Both displays were not as spectacular as from the other 3 countries, but let's see what happen in the upcoming years.

A rarely seen display, and maybe one of the last, was from the Rumanian Air Force, the legendary Mig-21MF Lancer C. This display of this old warrior was flown nearly to 100% with fully afterburner. The French Air Force Rafale C, the Greek F-16C Block 52+ from the Zeus Demo Team provide for variety. At the end of the day the Italian Air Force Frecce Tricolori thrilled the spectators. Unfortunately the weather made the organizers unhappy. After fantastic weekdays we had a rainy and cloudy sky on the weekend. Let's hope for better weather in 2017!

Conclusion: a highly successful event for everybody! Great flying demos, fantastic ground displays combined with a professional organization. Well done!!!

The Aviation Magazine Media would like to express our thanks to the head of the Press Center for their great hospitality and assistance on base. Our special thanks to Mrs. Barbora Urbisova. Thank you!





- L-159s ,Czech Air Force, top left
- AN-26, Hungarian Air Force bottom left .



- KC-130 tanker from the Swedish Air Force demonstrating air-to-air refuel with (2) Jas 39C Gripens of the Czech Air force, top right
- Eurofighter EF-2000, German Air Force, bottom right.





- Mi-24 gunship, Czech Air Force, top left
- AH-64 Longbow Apache, US Army, middle left
- Eurofighter, Spanish Air Force , bottom left.
- F/A-18C Hornet, Swiss Air Force, top right
- Tornado GR4, Royal Air Force, bottom right.





PC-9M, Slovenian Armed Forces, top left,
L-39C Albatros, Lithuanian Air Force, middle left , and the Saab SK-35 Draken from the Swedish Air Force Historic Flight, left bottom.

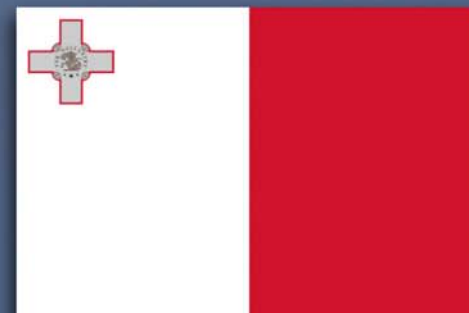


Rafale, French Air Force, top right,
A pair of MiG-21MF Lancer C, Romanian Air Force middle right , and the PZL SW-4 Puszczuk Polish Air Force, bottom right.





FrecceTricolori the Italian aerobatic team in their MB-339s above and below.



2016 MALTA INTERNATIONAL AIR SHOW

Article and photography by Christopher Mifsud
with additional images as noted

Malta International Air Show 2016, this year in its 24th edition, has in the opinion of many managed to pull off a good show in very difficult circumstances.

It should be pointed out that Park 4 at Malta International Airport was also the venue, until 2015, of a charity fund-raising supercar show held just weeks apart. In the last edition of the supercar show around a year ago a Porsche 918 skidded uncontrollably and careened into the crowd, injuring 26 spectators including 5 critically. In the aftermath of what could have been a much bigger tragedy and to this date a legal process has ensued and which is still underway, hence it would be imprudent to comment any further upon it. However, it was obvious even then that the air show would be unjustly dragged into the spotlight despite its 23 years of flawless organisation.

Its fate hanging by a thread, this year's edition of Malta Air Show has had to be split into two areas because of safety concerns and insurance. As in previous editions all static aircraft and viewing remained at Park 4, Malta International Airport. Meanwhile, the flying display was taken out over the sea, to a stretch of coast near Smart City, which is located at Kalkara in the SE of Malta. Air show arrivals were spread out over two days, with the main 'flying display' participants arriving on Thursday and the 'statics' landing on Friday. This would give the 'flying' participants ample time to rehearse on Friday afternoon. As it turned out the Sunday display was cancelled due to bad weather, much to the disappointment of all including several tourists who had flown over to Malta especially for the show. Most participating aircraft left on Monday morning.

Malta International Air Show is organized by the Malta Aviation Society. Its volunteers give their own spare time throughout the year to ensure that the event progresses swiftly, safely and efficiently. The absence of a major aerobatic team in this year's line up and the split venue translated into a poor public attendance which is probably way below average for an air show of this magnitude. The shifting of the air display to the coast has undoubtedly translated into an appreciable loss of revenue.





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IL-76 flanked by 2 Su-27 Flankers top left, and the Su-27 UB landing top right, and the IL-76 parked on the tarmac, main image.



©2016 Max Zammit



2 Su-27 Flankers top left, and the Su-27 UB top right, TS-11 of the Team Iskry (White-and-Red Sparks) bottom left and the EADS CASA C-295 support aircraft from Poland landing, bottom right.





Italian AB212 top right, TS-11 of the Team Iskry (White-and-Red Sparks) performing over the sea right bottom, AW139 with the B200 King Air left bottom and the US Navy P-8A Poseidon bottom right.





Maltese Armed Forces B200 King Air top left, Italian CAP 21DS The Silver Chicken bottom left, the Alpi Pioneer 300 of the Pioneer Team civil aerobatic display team with flares during the evening performance top right, and the Falcon 50 of the French Navy leaving Malta on Monday, after the air show.





Return of the Black Sea Knights

Article and photography by Carlo Kuit and Paul Kievit

Romania's Navy (Forțele Navale Române/ FNR) is small compared to other naval forces in the Black Sea region and within NATO. Despite having a number of frigates, corvettes and minesweepers, the size of the naval aviation component is limited to three IAR.330 'Puma Naval' locally designed and built helicopters serving in a variety of tasks.

Romanian Naval Aviation celebrates its tenth anniversary in 2017. The 'Black Sea Knights' helicopter squadron is housed at Tuzla Airport, located southwest of Constanta, and is operating three IAR.330s locally built and designated 'Puma Naval' (Navy) helicopters.



Heinkel He 114 of Romanian Naval Air Force
Courtesy of San Diego Air and Space Museum

The history of Romanian Naval Aviation dates back to June 1920 when the first aircraft arrived. By the end of World War 2 twenty-four Heinkel He-114s were in service. These seaplanes were withdrawn from service over the years with no replacement. Naval Aviation operations were disbanded in May 1960 when the last eight He-114s were scrapped.

In the late 1980's, when the first Tetal II class frigate and destroyer 'Mărășești' entered service with the FNR, a number of IAR.316B Alouette helicopters were outfitted with inflatable flotation gear and a winch on the port side, as well as foldable main rotor blades. The two Tetal II class ships have a deck capable of handling one IAR.316B while 'Marasesti' has a deck and hangar capable of accommodating two

IAR.316Bs. The helicopters were sourced from Air Force (Forțele Armee Română/ FAR) inventory, based at Tuzla at the time. With the disbandment of the 59th Helicopter Group from Tuzla in 2001 and the retirement of most of the IAR.316s, the Romanian Navy found itself with no helicopter support from the FAR. The few operational IAR.330s from the disbanded squadron at Tuzla transferred to the 863rd Helicopter Squadron at Mihail Kogalniceanu.

According to Captain Ioan, FNR, "With the acquisition of two Type 22 frigates; F-221 Regele Ferdinand (ex HMS Coventry) and F-222 Regina Maria (ex HMS London) in 2004 it became clear there was a need for a dedicated naval helicopter force and procedures had to be adopted resulting in a steep learning curve for our crews. Without helicopters we are not able to perform all our tasks. They are a vital part in our ASW/ASuW tasks. In March 2016 a modernization programme has been started to upgrade the Type 22 frigates to be able to carry out ASW and Anti-Surface Ship Warfare (ASuW) missions and to improve the Command & Control systems onboard. The upgrade will have a timespan of three years planned to be finalized in 2019".

A request for three new helicopters was issued. Elbit Systems & IAR Brasov were contracted in July 2005 with cooperation of FHL Claverham, Aerazur, Rockwell Collins, Breeze Eastern and Rafael Company from Israel. The first IAR.330 Puma Naval (#140) made its first flight at Ghimbav, Brasov on 30 January 2007.

The IAR.330 Puma Naval underwent testing from February until June 2007, including sea trials and ship compatibility tests.

On 13 July 2007 the 'Black Sea Knights' squadron was formally re-established after forty-seven years of absence with the introduction into service of the first IAR.330 Puma Naval (#140) assigned to the Type 22 Frigate "Regele Ferdinand". By the end of 2007, each of the eight Naval Aviation pilots logged a total of 25 flight hours. The second IAR.330 Puma Naval (# 141) was delivered during January 2008. After delivery of the third IAR.330 Puma Naval ('142') the squadron relocated end 2009 to Tuzla. "Initial tasks were mainly day operations to get to learn operating the Puma Naval and get used to seaborne operations" according to Lt. Cmdr. Bogdan Curca. "The next phase we started to train and explore the capabilities of the tactical consoles onboard, lastly in the period 2009-2010 night operations were high on our agenda in the training syllabus to be able to operate 24/7 when required". Currently not all pilots have been qualified for night operations.

The main modifications to the Puma Naval compared to the standard IAR.330L variant are: cockpit layout, Rafael Toplite electro-optical ball sensor in the nose (EOP), laser and radar warning receivers, blade antennas under the tail boom and on top of the main rotor fairing, chaff and flare dispensers under the main gear. These modifications can also be found in the IAR.330 SOCAT fleet of the Romanian Air Force (FAR). For naval operations a number of changes were made to the basic IAR.330L airframe: foldable main rotor blades, inflatable flotation gear, door-mounted winch on the starboard side, anti-crash seats, harpoon for deck landing in rough weather conditions, crash position indicator on the port side of the tail boom, two searchlights under the fuselage and a bubble-type observation window on the sliding doors. "We basically added what devices we require for naval operations to the standard IAR.330L airframe" adds squadron commander Marius Mitric.

At the time of the Authors visit exercises were conducted with the DDG-78 USS Porter to share experiences and procedures operating in a multi-national environment. This also included deck landings of an IAR.330 at the USS Porter. Till date the FNR have been involved in Unified Protector (2011) and Operation Atalanta (2012) as part of European Union Naval Force (EU NAVFOR).



The latter deployment included an IAR.330, 4 pilots and 12 technicians/engineers. "Before we deployed we had a Maritime Interdiction training to prepare ourselves for the anti-piracy mission" according to Commander Ciobotaru. He continued "We mainly conducted ISR missions of the Somali coast working with multi-national MPAs with usage of digital cameras. On average two missions a day were flown during the deployment of three months" he concludes.

Operations with the Puma Naval typically consists of a pilot, copilot and a mechanic, who is also operating the winch in case of SAR missions. "For ASuW missions two operators are added to the crew who are responsible for operating the sonar buoys and datalink 11 which is used to exchange large amounts of data between helicopter and the ASuW operators onboard our Frigates. The tactical consoles can be added rapidly and can deliver a valuable Recognized Maritime Picture (RMP) to our fleet" explains Black Sea Knight Commander Mitric.

In December 2005 ten selected naval officers started their initial flight training at the Air Force Academy at Boboc on the IAR.316B helicopter type qualifying as Navy pilots in July 2006 finalizing a 100 hour training syllabus. "At the start the trainers at Boboc were a bit hesitant to have naval aviators with no experience trained, luckily this changed as we showed our capabilities and dealing successfully with the fast pace of training" according to one of the FAR Naval pilots. The new naval aviators continued with an accelerated training on the IAR.330 SOCAT at Bucharest-Otopeni airport for an additional 75 hours focusing on day operations, basic maneuvering and emergency procedures" explains Commander Ciobotaru, one of the current elite naval pilots. Simultaneously with the pilot training, eighteen ground crew technicians were trained at Boboc Air Force Academy. Two of the eight pilots are also instructors on the IAR.330 Puma Naval.

According to Lt. Cmdr. Bogdan Curca "As we did not have any relevant experience anymore in naval operations we had to start building our expertise again. In a way we are a self-learning squadron. To build up our expertise in Anti-Submarine Warfare (ASW) operations we have been working closely together with ASW operators on our Frigates as of 2014. After an extensive training we gained operational ASW capabilities in 2015".



To enhance IAR-330 Puma Naval helicopter's ASW IAR Brasov awarded a contract in June 2013 to Thales to develop and deliver TMS 2000 sonobuoy processors. The sonobuoys send acoustic data to the processor through a VHF link which is received from the VHF receiver and processed by the aircraft in real-time. The TMS 2000 provides capabilities for detection, tracking, localization and classification of surface and subsurface targets in all environments by processing active and/or passive acoustic data gathered from sonobuoys. The TMS 2000 provides mono and multi-static processing modes for all active sonobuoys.

The last stage of the modernization was finalized by late 2015 and had run for two years. The helicopters have been fitted with torpedo launchers, extending their operability to anti-submarine warfare. The Puma Naval had previously been outfitted in 2012 with two machine guns (7.62 mm and 12.7 mm), for anti-piracy operations (operation Atalanta). "We have not selected and procured the actual torpedoes yet" adds squadron commander Mitric. "The Puma Naval is able to carry various torpedoes. We just select what equipment we want to have and put it on the helicopter. That is our way of working and thinking" finalizes Marius Mitric. It is expected a final decision will be made before end of 2016 which torpedo will be selected. It is most likely the BAE systems Stingray torpedo will be selected.

To further sustain the future of Romanian Naval Aviation there are plans to acquire a fourth IAR.330 Puma Naval specifically to support the Batalionul 307 Infanterie Marina (307th Marine Battalion), the elite squadron of the Romanian Marines. The Marines are trained in a similar way with the Green Berets and Rangers and are primarily used for on/off-shore and beach-head establishing missions, as well as fighting in Delta regions such as the Danube Delta. Less known is the cooperation with GNFOG Grupul Naval - Forte pentru Operații Speciale Grupul Scafandri Incursori (Special Operations Naval Group) who also saw action during Operation Atalanta (2012).

To support the future expansion of tasks and sustain the 'Black Knight' squadron a new group of young pilots is planned to be trained at Boboc training school in the near future.



Members of the GNFOG Grupul Naval - Forte pentru Operații Speciale Grupul Scafandri Incursori (Special Operations Naval Group)

AIRPORT SPOTTING

Images and locations as noted



- KLM Cityhopper Fokker 70/100, top
- Middle East Airlines Airbus A330-243, middle
- Virgin Atlantic Airways Airbus A340-642, bottom, all at London Heathrow LHR



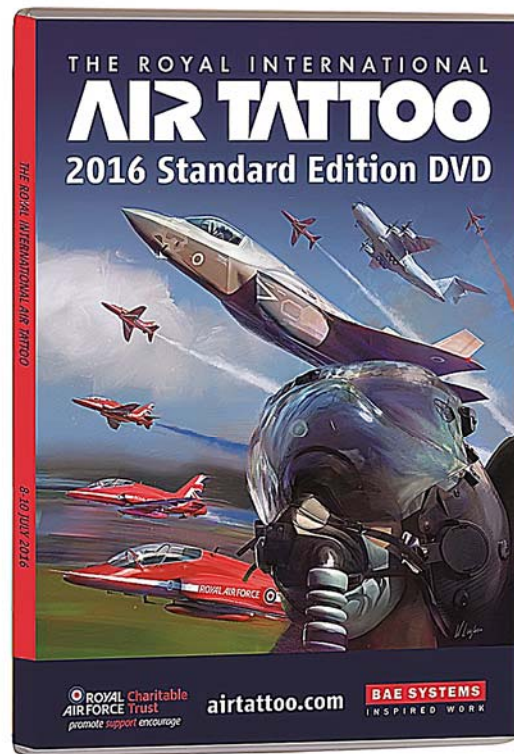
- Egyptair, Boeing 777-36N, top
- Aer Lingus Airbus A320-214 retro livery, middle
- Air Algérie, Boeing 737-8D6(WL), bottom, all at London Heathrow LHR



- Air New Zealand Boeing 777-319(ER) "All Blacks", top
- Aer Lingus, Airbus A320-214 "IRFU" bottom, all at London Heathrow LHR



AIR TATTOO DVD READY FOR TAKE OFF



Relive the thrills, buzz and excitement of the 2016 Royal International Air Tattoo

Expertly shot in high definition and ultra-high 4K resolution by aviation film specialists PlanesTV, the Air Tattoo DVD includes in-cockpit footage, behind-the-scenes features and pilot interviews alongside coverage of the extensive flying display, arrivals and departures.

All the highlights from the world's biggest military air show have been captured including the show-stopping international display debut of the F-35B, whose manoeuvrability and hovering capabilities were demonstrated for the first time to a UK audience by RAF test pilot Squadron Leader Hugh Nichols. The aircraft also appears in an iconic joint flypast with the Red Arrows and two RAF Typhoons, which provided a dramatic demonstration of UK airpower to the Air Tattoo's sell-out crowd.

Sold in support of the Royal Air Force Charitable Trust, the official Royal International Air Tattoo 2016 Official Souvenir DVD is priced £20 (Blu-ray, £25). The two-disc Collector's Edition DVD, featuring an additional two hours of special features including extended in-cockpit action, and full coverage of arrivals and departures, is priced £30 (Blu-ray, £35).

A must-buy for aviation fans of all ages, the official Air Tattoo 2016 official souvenir discs can be ordered from: <http://www.airtattoo.com/shop>