

THE AVIATION MAGAZINE

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Cover: Royal Army Air Corps WAH-64D APACHE by Peter Thivessen Index page: Polish AF MiG 29 at Radom AB, Poland, by Wolfgang Jarisch







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 emagazine 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 several Volunteer Team positions available. All require a good command of English communication skills.

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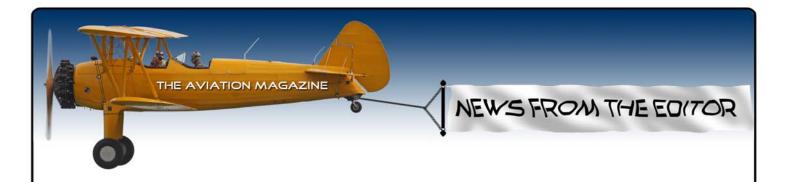
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Welcome to the 53rd edition of **THE AVIATION MAGAZINE**. The air show season is about to come to the end for the 2017 season. But don't fret we still have many air show reports, not only in this issue, but in our upcoming ones in 2018. Once again we are living up to our worldwide coverage of aviation events from Australia, New Zealand to Russia.

Our aviation gallery of available aircraft prints also expanded. Now it includes several notable aircraft with Canadian markings and uniqueness such as the CF-188, the original Harvard and the modern Harvard II. Buy our spectacular prints, all are reasonably priced. Take advantage of our limited tome offer of "buy to prints and get the third one for FREE!" They make a perfect Christmas gift for any aviation enthusiast. Check out the ever expanding selection here: http://www.theaviationmagazine.com/shop.htm

We are looking forward to 2018 with great anticipation for more coverage of aviation events. Stay tuned for our reports and join us by downloading **THE AVIATION MAGAZINE** the BEST and FREE e-based magazine since 2009, imitated by so many, but never surpassed.



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de Havilland DH 112 Venom



In 1934 the New Zealand Permanent Air Force was renamed as the Royal New Zealand Air Force but it was still part of the Army. Another three years were to pass before the RNZAF became an independent service.

when on 14th June 1923 the New Zealand Permanent Air Force, made up of elements and a few persons

who had served with the (British) Royal Air Force, was formed as part of the New Zealand Army.

In 2017 saw the 80th Anniversary of the RNZAF as an independent service and the RNZAF organised an air tattoo to commemorate the occasion. The event brought a wide array of aircraft to entertain the crowd in a thrilling air show, while showcasing the capability, personnel and skills of the RNZAF.

The RNZAF is now a predominately turbo-prop/helo force and the jet noise during the event was provided by the RAAF F-18s and the USAF F-16. This was counterbalanced by the flypasts and displays of the 'old-timers' such as the Spitfire, Avenger, Harvard and Devon.

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RNZAF	Boeing 757-200	No. 40 Squadron	RNZAF Base Auckland
	P-3K2 Orion	No. 5 Squadron	
	C-130 Hercules	No. 40 Squadron	
	NH90	No. 3 Squadron	RNZAF Base Ohakea
	A109 Light Utility Helicopter	No. 3 Squadron	
	Beech King Air B200	No. 42 Squadron	
	T-6C Texan II	No. 14 Squadron & Central Flying School	
RNZ Navy	SH-2G(I) Super Seasprite	No. 6 Squadron	RNZAF Base Auckland
Royal Australian Air Force	F/A-18A Hornet	No. 3 Squadron	RAAF Base Williamtown
	F/A-18B Hornet	No. 2 Operational Conversion Unit	RAAF Base Williamtown
	C-17	No. 36 Squadron	RAAF Base Amberley
Royal Air Force	A400M Atlas	70 Squadron	RAF Brize-Norton
United States Air Force	F-16 Fighting Falcons	14th Fighter Squadron	Misawa, Japan
	USAF C17 Globemaster III	535th Airlift Squadron	Hickam AFB, Hawaii
	KC-135 Stratotanker	909th Air Refuelling Squadron	Kadena AFB, Japan
French Armed Forces	CASA CN235	Détachement Air 376	Nouméa, New Caledonia
Republic of Singapore Air Force	C-130H Hercules	122nd Transport Squadron	Paya Lebar AB
	F-15SG Strike Eagles	149th Fighter-Bomber Squadron	
Japan Air Self-Defense Force	KC-767J	404 Hikotai (Squadron)	Komaki AFB
Royal Canadian Air Force	CC-130J Hercules	436th Transport Squadron	CFB Trenton



de Havilland 104 Devon left top de Havilland 104 Devon flanked by 2 Harvards right top 2 RAAF Boeing F/A-18A/B Hornets right bottom



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Parachute jumpers with the RNZAF and the New Zealand flags





A P-3K2 Orion with two C-130H and a Boeing 757-200 in formation!



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Exercise "Dawn Strike 2017" is the final exercise in the six month long Royal Australian Air Force "Air Warfare Instructors Course 2017". The course involves Pilots, Intelligence Officers and Air Combat Officers across a range of Air Force platforms including F/A-18A Hornets, F/A-18F Super Hornets, E-7A Wedgetail and C-130J Hercules aircraft. Conducted by the Air Warfare Centre, the aim of the "Air Warfare Instructors Course" is to graduate expert leaders and instructors capable of tactics development, validation and instruction. The series of exercises is designed to integrate people and systems; an objective which is now achievable with the introduction of fifth generation capabilities into the Royal Australian Air Force. As Australian Defence Force platforms interact, electronically, so too must the human elements interact more closely to get the greatest benefit from this technology. The "Air Warfare Instructors Course" developed by the Air Warfare Centre, has done that and each component of the course has prepared the instructors to be effective in the integrated Air Warfare space.

Graduates will provide leadership in the development of future tactics and help determine how those tactics can be used to enhance the Australian Defence Forces joint war fighting capability using fifth generation platforms.

The course exercises complex war-like scenarios and the students put their newly developed skills into practice and make decisions which will shape the way Air Force fights in the future; in an integrated war-space using fifth generation platforms.

Exercise "Dawn Strike 2017" is the culmination of the "Air Warfare Instructor Course 2017" and represents the final mission prior to graduation", according to Air Commodore Joe Iervasi, commander of the Air Warfare Centre. "These RAAF Air Warfare Instructors will put their newly developed skills into practice on this final mission." The new Air Warfare Instructors returned to RAAF Base Williamtown on Friday 30 June 2017 after taking part in Exercise "Diamond Storm" which took place at RAAF Base Darwin and RAAF Base Tindal. "The graduates will form a nucleus for tactics development which will shape the way the Air Force conducts air power in the future. Graduates will provide leadership in the development of future tactics and help determine how those tactics can be used to enhance the ADF's joint war fighting capability using the fifth generation platforms."

In this final phase of the course a total 45 Royal Australian Air Force aircraft took part in a simulated battle in the RAAF Base Williamtown area with various elements tasked as either offensive or defensive forces. At the conclusion of the attack all the participating aircraft recovered to RAAF Base Williamtown after a series of low level, high speed passes at dawn.

20 F/A-18A/B Hornets and 2 Hawk Mk.117's departed from RAAF Base Williamtown at 6.00am while the other aircraft departed from RAAF Base Amberley. Around 08.15am Exercise "Dawn Strike 2017" came to an end.

Aircraft involved in Exercise "Dawn Strike 2017": 26 F/A-18A Hornets 11 F/A-18B Hornets 4 F/A-18F Super Hornets 2 Hawk Mk.127's 1 E-7A Wedgetail



F/A-18A top F/A-18F midde Hawk Mk.127 bottom



1 C-130J Hercules





Flying Legends Airshow held at the Imperial War Museum (IWM) Duxford Airfield, UK over the weekend of the 8th & 9th July 2017 brought together some of the best in classic aviation aircraft. The Fighter Collection (TFC) produces the show and this year saw its 25th incarnation of what has grown to be one of the most respected and undoubtedly the biggest warbird event in the world.

In the words of Stephen Grey (TFC) "Several of the aircraft at the event are the only airworthy examples of their type flying in the world today. These flying monuments are a testament to the dedication of the engineers and pilots demonstrating the skills and airmanship who restore, repair and fly these aeroplanes to the highest standards"

The weekend was full of so many highlights it would take a hardback novel to complete a report that would justify every aspect of the weekend from the moment you arrived to when the last prop shut down and hush descended back on the airfield. Therefore, I have bullet point paragraphed as many of the highlights as I could to give the reader a feel for the show

- 9 Spitfires (Various Marks) opening Sequence initially a formation of nine before splitting into two groups tail chasing using two display axis a pure spectacle and unique to Duxford
- P-51B Mustang Berlin Express making the epic transatlantic flight (5,470 miles) from Texas to Duxford taking six days and arriving on 4th July rather than being shipped by sea. Berlin Express is marked in the 357th Fighter Group Mustang which the legendary American ace Bill Overstreet flew under the Eiffel tower while successfully shooting down a Messerschmitt Me-109 in 1944.

- Aircraft Restorations Company's Hispano HA-1112-MIL Buchon specifically painted in its new weathered colour scheme representing a Messerschmitt Bf-109 E-7 'Black 8' of Luftwaffe Jagdeschwader JG-27.
- The Bremont Horsemen, the world's only P-51 Mustang formation aerobatic team made a return to the Flying Legends Air Show, with the UK debut performance of P-51 Mustang Freseni, having been shipped from Houston, Texas, USA especially for the Flying Legends Air Show and reassembled at Duxford.
- Classic Formations from Switzerland with their stunningly restored Beechcraft 18's and a Douglas DC-3 aircraft flying a spirited routine showing off the classic lines of these two types of aircraft in a rare and engaging routine.
- The golden age of air racing was re-enacted with a 'first' for Duxford with a de Havilland DH-88 Comet, a Percival Mew Gull, Travel R Type R Mystery Ship and LeVier Cosmic Wind.
- Richard Grace flying Fury ISS 315 and Pete Kynsey in the F8F-2P Bearcat giving a master class of display flying at its very best. The tight formation displayed the aircraft and the skills of the pilots with ease and passion.
- Unique formation of 5 Hurricanes, 3 Spitfire Mk 1s and the only airworthy Blenheim representing a truly incredible Battle of Britain flypast.
- For the first time, on Sunday 9 July only, the Flying Legends flying display was opened at 1.20pm by the world-famous Red Arrows, the Royal Air Force aerobatic team.
- The balbo, a massed-formation finale featuring many of the aircraft that had taken part in the flying display, is unique to the Flying Legends Air Show and a world-renowned spectacle.



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Flying is not the only aspect of Flying Legends with many ground attractions transporting you to the 1940s with period dressed characters on the flightline walk and music provided by the fabulous Manhattan Dolls from New York and the Umbrella Big Band. Laurel and Hardy also managed to bumble their way around causing mayhem in their Model T Ford car. In addition to the action in the sky and fun activities across the museum, visitors can experience the award-winning exhibitions at IWM Duxford as entrance to the whole museum – including AirSpace, the newly redeveloped American Air Museum and the Battle of Britain exhibition – is included in the price of the ticket.

Safety, as ever is paramount at any event and the Flying Display Director, Organisers and Pilots ensure that they are briefed and prepared at all times. Three separate incidents occurred over the weekend including a canopy loss for P51 Mustang 'Berlin Express' on its first pass on the Saturday leaving FOD on the runway. The pilot of P51 Mustang 'Miss Velma' made a text book emergency landing in a field approaching the Duxford Runway at the end of Sundays Balbo due to engine failure with the aircraft. The RAF Red Arrows had to pause their display for 5 mins due to a paramotor infringement in their R(AT). After regrouping and the paramotor safely out of the airspace, the Reds continued their display.

None of these detracted from what was truly a first class event that entertained the crowds with a fun packed weekend of thrills, music, enthralling displays and Nostalgia. Flying Legends is a must see show to be witnessed at first hand, the sight and sound of these rare and historic aircraft flown at a living working historic airfield is second to none.











Report and photography by Peter Thivessen









The Royal International Air Tattoo (RIAT) at RAF Fairford, UK, took place over three days (July 14-16), attracted a record crowd of 160,000 people who enjoyed thrilling flying demonstrations by some of the world's leading pilots. RIAT is the world's largest air show that features military aircraft predominately with a few civilian acts thrown in a few times over the years.

For 2017, in total, 246 aircraft took part in the Air Tattoo from 32 air arms representing 26 nations. Highlights among the 115 aircraft in the static park included a US U-2 spy plane, a Boeing 737 Airborne Early Warning aircraft from the Royal Australian Air Force and a Royal Canadian Air Force Boeing CH-147F Chinook Helicopter which had been airlifted over in the back of a giant Boeing CC-177 Globemaster airlifter. After a 15 year absence, the Israeli Air Force (IAF) has returned to RIAT, with a Shimson C130J Hercules after an eight and a half hour flight before appearing on the static display.



Battle of Britain fly-by main image and the IAF Shimson C-130J, inset

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For 2017 the USAF Thunderbirds were the special guests they are rarely seen in Europe and it was a chance for many to see them for the first time. Their routine was quite disappointing for many. The Thunderbirds team was joined on the Friday by nine Red Arrows' Hawks for a colourful joint flypast to launch the air show. Other US made assets in the air included some historic warbirds such as the vintage B-17 and P-51D Mustang, a state-of-the-art F-22 Raptor and a dramatic flypast by a number of UK and European based USAF aircraft.



On the Sunday, visitors were treated to a surprise flypast by a stealth B-2 Spirit bomber that was taking part in an epic 23-hour transatlantic "Global Power" training flight from Whiteman Air Force Base in Missouri. The aircraft was escorted by two F-15 fighters.

Other flying display highlights included the French Air Force's Couteau Delta team (in many ways the new Ramex Delta) flying two Mirage 2000D fighter aircraft; the Midnight Hawks, Finland's aerobatic display team who last performed at the Air Tattoo back in 2004, an RAF Typhoon demo flown by Flt Lt Ryan Lawton and a Russian-built Sukhoi Su-27 'Flanker' from the Ukrainian Air Force, which offered enthusiasts a rare opportunity to view this aircraft in British skies.

The weather was not the best at RIAT for 2017. On Friday it was cloudy with sunny periods until noon. On Saturday and Sunday it was covered by grey clouds. On Sunday, the clouds were partly below 1,000 ft. Some demonstrations had to be cancelled in the morning but the program could still be continued to the delight of many viewers.

For 2018 RIAT will feature the RAF's 100 anniversary, should be an excellent event to attend.





- B-2 Spirit bomber escorted by an F-15C main image.
- Red Arrows ' Hawks in formation with the F-16s of the USAF Thunderbirds left inset.

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Italian Air Force Tornado A-200







Slovenian Air Force PC-9M











BUDAPEST



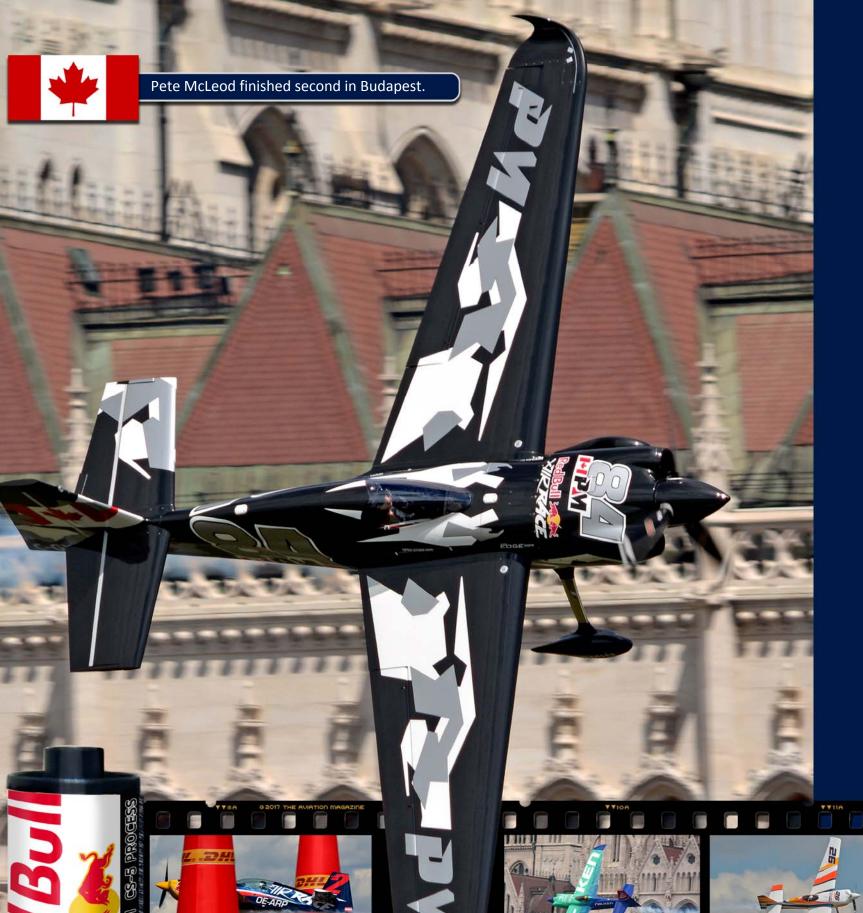
Report and photography by István Kelecsényi

The Red Bull Flying Championships continued in Budapest on July 1-2, 2017. In the Master series there were no Hungarian pilot since Péter Besenyei's retirement. However, Peter did perform an aerial demonstration to thousands of cheering crowds along the banks of the River Duna (Danube, for those who do not know how it is spelled in Hungarian.) Budapest was the fourth race for 2017 in the Red Bull Air Race series which will end in Indianapolis, and by the time this report is published.

The contestants flew two types of aircraft: The EDGE 540 is designed by the American Zivko Aeronautics, with the Lycoming Thunderbolt AEIO-540-EXP engine and the Harzell Tri-Axle Propeller. The pilots flew either the V2 or V3 versions of the aircraft. The other type is the MXS-R, made of composite materials, the so called "EGDE-killer" Only one pilot flew this aircraft Mikael Brageot of France. The fate of the MXS-R is somewhat similar to the Corvus Racer 540, which is a nice aerobatics aircraft but not quite up to the Red Bull Racing requirements in performance. Péter Besenyei flew the Corvus Racer 540, in his demo flight.

The Challenger series pilots flew the older Extra 300LX aircraft, which were a few years ago were used by the "TOP" pilots. Their aerobatic skills were spectacular.

Péter Besenyei in the Corvus Racer 540, before the race in a demo flight.



The races were held on Saturday and Sunday: the START line was by flying under the famous Chain Bridge. In addition to the race, the Flying Bulls show was featured with B-25J Mitchell two engined bomber, F8U Corsair fighter and T-28 Trojan powered piston aircraft, as well as two Alpha jet planes. Bo-105 helicopter performed a spectacular show.

Kirby Chambliss turned back the clock today in Budapest by putting in a fantastic performance and claiming his first victory since the London race in 2008.

Going first in any flight session isn't easy, but Chambliss bucked that trend. He was first into the track of the Final 4 and laid down a time of 1:00.632, the second fastest time of the day. Pete McLeod followed after Chambliss and was looking good. He was quicker at the first three spilt times, but a slight mistake cost him and he ended up crossing the finish line 0.108s behind the American. Although this was enough to see him finish second. Third into the track was Martin Sonka. Sonka had set the track record earlier in the week and on his run was on track to be the only pilot to get under one minute today. However, at Gate 18 he was given a two second penalty for climbing in the Gate and that saw him drop from first to fourth.

Championship leader, Muroya had the advantage of flying last and knew exactly what he needed to do. But he just seemed unable to push his raceplane as hard as he would've liked. He flew cleanly,

which was enough to see him on the podium, but only in third.

After the race Chambliss said: "I love Budapest. I have to thank my team, it's not a one person effort, I can't thank them enough. I'm super stoked. Winning is easy when you're winning, it's not when you're not."

It's still tight at the top of the World Championship standings, with Muroya just two points ahead of Sonka. Today's results also sees Pete McLeod move up to third and Chambliss up to fourth. Current World Champion, Matthias Dolderer has dropped to sixth.











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Fliegerstaffel 6 shows the "Duck" while the Fliegerstaffel 19 shows the "Swan", perhaps the swansong of the F-5?

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In addition to their F/A-18 Hornets, the Swiss Air Force is still flying the F-5E. But for how long? For several years, no new pilots have been trained on the F-5. The F-5E is likely to be phased out in 2018. The future is uncertain. It is planned that a successor model for the F-5 and F/A-18 will be introduced at the Swiss Air Force in 2025.

At present, about two dozen F-5E and F are operational in three Flying Squadrons:

- Fliegerstaffel 6 based at Payerne
- Fliegerstaffel 8 based at Meiringen
- Fliegerstaffel 19 based at Sion

In 2017 some F-5E received a new and wonderful tail paint scheme. The J-3033 of the Fliegerstaffel 6 shows a marching duck in armour and the unit uses the callsign "Duck". The J-3073 of the Fliegerstaffel 8 shows a red sawfish (Sägezahnfisch). The sawfish is named "Vandalo". The inscription "Addido Vandalos" refers to the imminent dissolution of the squadron. The J-3038 of the Fliegerstaffel 19 called "Swans" and shows this on the tail. The J-3074 is an earlier F-5E of the Fliegerstaffel 13, which was disbanded in 2000 in Payerne has a winged lion. Their inscription was "Pa Capona" is not easy to describe. This motto of Flugplatzbrigade 32 consists of the two words in the dialect of Savièse, which could be interpreted in English as "Look fate in the eye". Describing the determination to be always ready to contribute part of the defence of the homeland.

Enjoy our images from the Swiss AB Sion.



Fliegerstaffel 8 shows a red sawfish main image and the Fliegerstaffel 13 the winged lion, inset.





I he Premier and Award winning Air Show at Bray, Co. Wicklow returned in 2017 for the twelfth year of the ever popular event which attracted a record-breaking 140,000 people last July. For the second year in a row, the event retuned for two days with over 50,000 in attendance on Saturday and over 90,000 on Sunday making it the largest non-stadium outdoor event on the Irish calendar. The Irish Aviation Authority (IAA), as the main sponsor helps to attract aircraft from around the world with participation from Sweden, Norway, France, South Africa, Jordan, Spain, UK and of course the Republic of Ireland.

2017 saw one of the most diverse air displays to have been witnessed in Ireland for many years with an array of classic jets, classic vintage aircraft, aerobatic solos and display teams, right up to modern military fighter jets. The weather truly came into its own with Sunday seeing scorching blue skies and for the photographer, the sun is behind you throughout the display giving way for good lighting.

The classic DC-3 above.

One of the major stars of the show was a Douglas DC-3 resplendent in an Aer Lingus livery it carried in 1956. The project to bring the DC-3 to Ireland was initiated by the Irish Historic Flight Foundation (IHFF) board member Hugh Flynn and was made possible by the support of Aer Lingus which originally operated the type between 1940 and April 1964.

The aircraft flew from Zweibrucken, Germany to Shannon Airport on 13th June 2017 and was given the 1950s colours of El-ACD with the name of "St Gall". The aircraft carries its ZS-NTE South African registration and had previously spent most of its flying career with the Royal Air Force and South African Air Force before its retirement in 1995. It was then sold and spent time in storage before renovations to airworthiness with the DC-3 returning to flight in 2009 and operated by Springbok Classic Air.

The sound of the DC-3s, two Wright Cyclone engines and coupled with its classic livery and spirited display, brought nostalgia and a trip down Irish aviation history. A massive thank you most go to all involved in undertaking such a project to bring this wonderful aircraft to the shores of the Republic of Ireland.



The Irish Air Corps in their PC-9Ms above

Further highlights throughout the weekend included:

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- The Royal Jordanian Falcons, having flown in from the Royal International Air Tattoo at RAF Fairford the previous weekend and putting on an extremely tight display of formation and solo aerobatics.
- EF-18 Hornet Demonstration Team from the Spanish Air Force bringing a highly energetic performance of noise and power and stopping the Bray audience in their tracks
- Richard Grace and David Puleston flying a graceful and nostalgic display in the Supermarine Spitfire and Seafire showing off the classic lines and the unique sound of the Griffon and Merlin engines
- Irish Air Corps "Silver" formation of four PC-9Ms including a spirited solo routine, and a demonstration from an off shore maritime patrol CASA CN235
- Patrouille Tranchant flying four Fouga Magisters the team from Brittany, France fly the distinctive V-shaped tailed trainer and the display included coloured smoke representing the Irish Flag gaining spontaneous applause from the appreciative crowd
- An array of Classic jets was the order of the day (including the above Magisters) a Mig 15, SAAB Viggen, Strikemaster Pair and Vampire pair
- Solo aerobatics from Eddie Goggins in the CAP 232 and Richard Goodwin in the Pitts S2S demonstrated world class aerobatics with commentary direct from the pilots cockpit
- Irish Historic Flight Foundation displaying a trio of Chipmunks and Boeing Stearman (Spirit of Tipperary)
- Proceeding the show on the Thursday the Irish Air Corps flew 5 of their PC-9Ms with smoke down the River Liffey in central Dublin to promote the show.

Eamonn Brennan, Chief Executive of the Irish Aviation Authority said, "The Bray Display has been a phenomenal success over the last couple of years. Aviation is a hugely important economic driver for our country and this year under the IAA's "Aviation Ireland" campaign we are supporting not just one but two spectacular air shows over the same weekend at Foynes and at Bray, making this year an extra special one for fans of aviation across Ireland. We see this as a great avenue to raise the profile of aviation and to generate an interest in our industry."



- The Royal Jordanian Falcons, above
- EF-18 Hornet from the Spanish Air Force, below



"A big thank you to everyone who came out to support the event – it's wonderful to see so many enjoying the spectacle. And we were blessed with glorious sunshine and the backdrop of a most beautiful blue sky," said Sé Pardy, Director, Bray Air Display.

Congratulations to all who contributed in providing a world-class show that has grown in stature over the years and has become a "must" on the calendar over the summer holidays for any enthusiast or those looking for an entertaining day out.

Thanks goes to Louise Cassidy & Paul Carney from the Bray Media team and to Rebecca McKenna and Se Pardy for their help before and during the show.

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- Irish Air Crops CASA CN235 above
- Coastguard Search and Rescue Sikorsky S-92 below



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Saint-Dizier Spotter's Day

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Report and photography by Raif Peter Walter



f While in previous years the French Air Force conducted three Meetings Aérien a year, in 2017 there were only two. The first was held at the Base Aérienne 106 Bordeaux-Mérignac and the second one at the Base Aérienne 113 Saint-Dizier.

The Fondation des Oeuvres Sociales de l'air (FOSA) organized a spotters day on Friday May 31st, 2017 for about 250 aviation enthusiasts at Saint-Dizier. Positions close to the runway/taxiway provided excellent opportunities to take photos of the aircraft flying in or rehearsing for the airshow on the weekend. The weather was a mix of rain and scattered clouds with sun. Usually, an aviation photographer prefers sun instead of rain. However, the high percentage of humidity provided a lot of possibilities to get an impression of the aerodynamics of jet fighters. Ambient humidity condenses to vapour when the air temperature reduces below the dew point as a result of reduced air pressure. Thus, airflow separations and vortices could be seen perfectly.

As for every military air show, historic and current aircraft were at the show. Several foreign countries sent aircraft for the static and dynamic displays. For Example the RAF sent a Tornado GR4 and a Hawk, the Spanish AF brought an EF2000, the RDAF participated with two F-16, the Swiss AF had two F/A-18 and a Super Puma helicopter. Even the Austrian AF flew in with two venerable Saab 1050E. A highlight was the newly formed display team "Couteau Delta" with two Mirage 2000D. This team is the successor to the "Ramex Delta" team and is based at BA 133 Nancy-Ochey. Also, fairly new in the air show business is the "Sparflex" team. This is a privately owned, French aerobatic team performing their displays with two L-39 Albatros.

The noisy part of the day was the solo displays of a Spanish EF2000, a French Rafale and Mirage 2000s, a Danish F-16 and a Swiss F/A-18. Significantly less noisy but just as remarkable were the performances of of historic aircraft. Some of these were a German Klemm 35D built in 1940, a North American T-6 Texan from 1942, a 1943 Convair BT-43 and the Morane Saulnier MS-317 manufactured in 1947. Also on show were two replicas of biplane fighter aircraft flown during World War I, a hundred years ago: a Sopwith Pup and a Nieuport 28 C.1.

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Klemm 35D from 1940







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- Colors Strike Australia

- Royal International Air Tattoo, UK
 Red Bull, Budapest, Hungary
 Russain Army Week Air Show, Kubinka, Russia
 And so much more...



2017 New York Air Show



The 2017 New York Air Show, featuring the U.S. Navy Blue Angels, took place at Stewart International Airport in New Windsor, New York on July 1-2, 2017. A few days before the show, we had the pleasure of attending Media Day - getting up close to the Blue Angels' F/A-18 Hornets; meeting the Blue Angels Team; and exploring the C-17 and learning about the capabilities of this aircraft and its crew.

Seventeen Navy and Marine Corps officers volunteer to serve as Blue Angels. Officers typically serve two years with the Blue Angels, so each year three tactical/fighter jet pilots, two support officers and one Marine Corps C-130 pilot joins the team to replace departing members. To fly Fat Albert, the Blue Angels' support plane, a Marine Corps pilot must have at least 1,200 flight hours.

Blue Angel #8, the Events Coordinator, requires experience as a Naval Flight Officer or Weapons System Officer with at least 1,250 flight hours. Blue Angels #1-7 are piloted by Marine or Navy pilots with aircraft carrier qualifications and at least 1,250 flight hours. Blue Angels #1, the Commanding Officer or "Boss," must have a minimum of 3,000 tactical jet flight hours and must have commanded a tactical jet squadron.

Commander Ryan J. Bernacchi of the U.S. Navy and the current Blue Angels "Boss" joined the team in 2015 with over 3,500 flight hours and 600 carrier landings. His impressive resume includes Top Gun training followed by a stint as a Top Gun Instructor Pilot; a Master's Degree with Distinction from the Naval War College; service as a Federal Executive Fellow at MIT; two deployments with the USS Abraham Lincoln; deployment with the USS John Stenis for Operation Enduring Freedom; and numerous commendation medals.

Commander Bernacchi, inspired to become a military aviator after attending an air show as a child, now has the great opportunity to inspire other children to follow in his footsteps. To hear Commander Bernacchi speak with great pride of serving with the Blue Angels is like seeing a child playing with his favourite toy on Christmas - eyes brightly open with a twinkle and brilliant smile surrounded with a beautiful glow of Blue. Commander Bernacchi explains that all the manoeuvres and formations performed in their shows are the same as those they train for as naval aviators - just a bit closer and lower to the ground. The Blue Angels spend an immense amount of time practicing their routine hundreds and hundreds of times. Starting in a loose formation, they gradually bring the formation closer and closer together till they successfully reach their goal - 18 inches from wingtip to canopy in their tightest formation.

Imagine driving 700 miles per hour while maintaining less than an arms distance between you and the car next to you. Think you could do it? That's what the Blue Angels do in the air while performing perfectly timed and stunning manoeuvres, compensating for varying weather and wind conditions. "Lots of trust - teamwork - and practice" is the recipe according to Commander Bernacchi.

I asked the "Boss" about the breathtaking opposing solos - how did they come up with those manoeuvres? Commander Bernacchi explained "they are tactical manoeuvres of two fighters merging in a simulated dog fight - just closer to the ground for our viewing pleasure."

Performing their manoeuvres the exact same way during every practice and performance is essential to minimize the variables they must accommodate.

Often during an air show we are allowed to listen over the loudspeaker as the "Boss" rhythmically chants the timing of their manoeuvre. I asked him if he is the only one making the calls. The Commander explains that they all take turns making calls at the appropriate time. Add chatter from the ground crew and there's a lot of talking going on during their performance. It's an "invigorating experience," Commander Bernacchi explains.

Twenty-one years into his military service, the Commander doesn't look to far into the future. While he anticipates returning to The Fleet after his Blue Angels tenure, his current focus is on flying a great show each and every time. Later in the morning, we met up with the Blue Angels Public Affairs Officer who went through extensive training by the military to become a Mass Communication Specialist.



to become a Mass Communication Specialist. To date he has flown four times with Blue Angels #7 which has a back seat. While these flights were used for aerial photography, the officer was also treated to the powerful capabilities of the F/A-18 Hornet and its pilot. He told us of the thrill of experiencing rolls, inverted flight and high-speed passes at 0.8 Mach. He explained that the Hornet is capable of pulling up to 8 Gs (i.e. 8 times the ground force of gravity on the body) which causes blood from the head to pool in the lower extremities, eventually resulting in a blackout. The Blue Angels don't wear g-suits because the suits would interfere with their flying. Since the pilots are aware which manoeuvres result in high Gs, they can fight the G forces by performing the "Hick Manoeuvre" - tightening the muscles in the abdomen and lower extremities to keep the blood in their heads.

The Public Affairs Officer told us that on one flight, after experiencing 7 Gs four or five times, his body was so exhausted that he no longer had the strength to perform the Hick Manoeuvre and blacked-out on the next high-G manoeuvre. Upon regaining consciousness, he recalled his body feeling as if had just completed a 3-hour gym workout. He then went to his room and slept for 10 hours to recover from the impact the Gs had on his body.

We were later directed to a C-17 Globemaster III, assigned to the 105th Airlift Wing of the New York Air National Guard located next to Stewart International Airport. The 22-year old C-17 we examined included nose art of Captain America hovering about a New York City street scene. The nose art was proudly painted by a Stewart National Guardsman after going through a rigorous approval process.

The cargo section of a C-17 can be converted from a personnel carrier to a helicopter transporter to a mobile hospital in as little as 10 minutes. The cargo floor can be outfitted with rollers to easily load metal pallets of cargo. Missions performed by the 105th have included transport of the Presidential limousine and a marine detachment with all their gear and Humvees. If a journey is too far to fly direct, Army helicopters can be loaded into the C-17 and delivered to their destination. The sides of the cargo area are outfitted with sidewall seats - enough for 54 individuals or paratroopers with all their gear. The seating capacity increases to 102 when the center of the cargo area is fitted with seats that are carried in the back of the plane.

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The C-17 can also be outfitted as a flying Army hospital with room for up to 9 patients who are picked up from the battlefield and flown directly to a medical facility. Often patients are flown directly to the U.S. Military Hospital in Landstuhl, Germany. However, if a patient will be better served elsewhere, the crew of the 105th is prepared to do whatever it takes to help their fellow soldiers. We were told of a 18 hour mission to transport badly burned soldiers to Brooke Army Medical Center near San Antonio, Texas. This direct flight required two aerial refuelling and the dedication and determination of the C-17 crew. The survivability rate of wounded soldiers has improved significantly due to the ability to get the injured from the battlefield to proper medical care quickly.

But how does the C-17 crew accommodate for an 18 hour mission? The C-17 requires two pilots and one load-master. If a short mission is anticipated, it will go out with a basic crew - two pilots and one loadmaster. But for an extended mission it is deployed with an augmented crew - three pilots and two loadmasters, to allow the crew to get some rest during the mission. The C-17 crew is authorized to fly up to 24 hours - waiverable for a longer mission in a life or death situation.

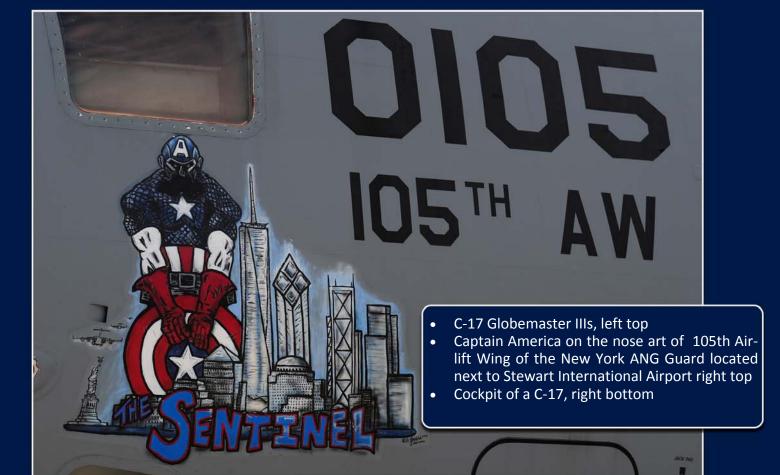
The loadmaster is the "cargo boss," responsible for the safe loading/unloading of cargo and passengers to ensure the aircraft remains within permissible center of gravity limits throughout the flight. While computerized calculations are usually used by the loadmaster, he is capable of completing the calculations manually should their computer system fail.

As an Air National Guard Base, Stewart is manned by a skeleton crew of 15 full-time soldiers. Part-time guardsmen are required to fly once every 60 days and spend one weekend per month attending to other duties to keep the base fully operational. But strong pride in their unit, their base and their country drives many guardsmen to return to their base more often than required. The names of the C-17 mechanics are stamped on the outside of their planes so it's not just a job to them - its personal.

We attended the Air Show on Saturday, July 1st. The B25 Panchito was unable to fly due to mechanical issues, but enjoyed a fan-favourite, the Heritage Flight, flown with a P51 Mustang, F-35 Lightning and F-16 Viper. Air Shows at Stewart International Airport are unique in that cargo and passenger departures/arrivals continue throughout the show - requiring a well coordinated dance between the Air Show Air Boss and Stewart Tower.

As the day progressed, the sky started to darken. The prospect of rain holding off through the Blue Angels show scheduled to start at 3pm looked bleak. But the entire air show team rallied and the Blue Angels quickly took to the skies followed by the familiar gasps, roars and claps from the crowd as the Angels successfully performed manoeuvre after manoeuvre, finishing their 45 minute show before the rains fell.

For 2018 the New York Air Show is scheduled for September 15-16 and will feature the U.S. Air Force Thunderbirds. Tickets are currently available online at www.airshowny.com





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- USAF Heritage flight: F-35A, P-51D, F-16C left top
 F-35A demo, left bottom
 T-6 Texans of the GEICO Skytypers, right top
 AIR TRACTOR INC AT-602, crop duster demo, right bottom









Radom International Air Show 2017

Article by István Kelecsényi and the Editor

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Held biannually, the Radom Airshow has built up a reputation in recent years as one of Europe's largest aviation events - with its geographical location attracting a diverse array of aircraft from both East and West. The Radom International Air Show 2017 was held in memory of the 85th Anniversary of Challenge 1932. The "Challenge 1932", was an event in which the Polish pilot Franciszek Żwirko won the International Tourist Aircraft Competition.

The public was able to admire the aircraft not only during their air display but also closely at the static display, which provided a great variety of civil and historic aircraft: RWD 5R Polish Touring and Sports Plane, The Let-Mont Tulak Light Aircraft, Yak-18Trainer Aircraft, Antonov-2 Biplane, DH82A Tiger Moth Trainer Biplane and DHC-1 Chipmunk trainer aircraft among them. As would be expected, the Polish Air Force was demonstrated en masse at the show, with familiar favourites such as the MiG-29 Fulcrum solo and Su-22 Fitter Tactical Team display.

Each day the host nation opened the afternoon flying display with a mass flypast featuring nearly every type in the Polish Air Force inventory. Formations of Mi-2 Hoplites, Mi-24 Hinds & Mi-8/17 Hips, W-3 Sokol, MiG-29 Fulcrums, Su-22 Fitters, M-28 Bryzas, C-235, and C-130 Hercules were a sight to behold for visiting enthusiasts, and in all 64 aircraft took part in the impressive spectacle. The workhorse of the Polish military, the W-3 Sokoł, featured in a solo & three-ship (TS-11 Iskra, MiG-29 and F-16C Falcon "Jastreb" in Polish) display which rounded off the flying display on both Saturday and Sunday. The Sokoł is a real success story for the Polish aviation industry, however it is rarely seen on display outside its home nation - making it a real treat to see the helicopters (in a variety of types and names) performing. Another impressive display not seen outside of Poland is a routine of two Mi-24 Hinds performing together. An interesting combination of tactical manoeuvring and photogenic pivots, the display was a great chance to view the rarely seen drab green helicopters. The most attention grabbing display from the home team at Radom was a short close air support demonstration: lasting approximately 120 seconds! The display comprised a pair of Su-22s completing a high speed bombing run, accompanied by plenty of ground based pyrotechnics with a pair of F-16Cs performing a max-rate turn over the airfield while deploying flares.

One of the most anticipated flying display participants was the MiG-21 LanceR, of which two Romanian Air Force examples were in attendance. While the classic Soviet jet fighter from the 60's has the turning circle of an oil tanker, it still managed to put on an attractive display showing all angles of the aircraft - as well as a number of chances to hear the characteristic 'pop' as the afterburner was engaged.

Despite the enormous size of the Ukrainian Su-27PM-1 fighter, the displayed was spectacular as it showed off manoeuvres that smaller and nimbler fighters would be the envy off. The rumble of the two Ljulka AL-31F engines shook the eardrums. In addition to the SAAB J-105OE training aircraft, Austrian participation included a collection of the Red Bull aircraft.

From the demonstration teams we saw the demonstration by the Latvia Baltic Bees (L-39) and the Polish Team Iskry (TS-11) and Orlik Team (PLZ-130).

The static display was diverse, with examples of nearly every type of aircraft in the Polish inventory. The foreign aircraft at the static display consisted of an impressive array of European hardware including the Italian and German EF-2000 Eurofighters, Romanian MiG-21, Austrian J-105OE, Italian M347 Master, Netherlands F-16MLU and, Romanian and Lithuanian C-27 to complete the static line.

Over all our team enjoyed themselves and it was well worth the visit.



- 6 ship MiG-29s flyby of the Polish AF, left top image by Wolfganag Jarisch
- 4 ship formation of the Mi-24 Hinds attack helicopter, right midle image by Wolfganag Jarisch
- Close up of the Mi-24 Hinds, right bottom image by Wolfganag Jarisch



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- Yakovlev Yak-18, left top
 Xtreme Sky Force Aerobatic XA-41, flown by Artur Kielak and
 Lt. Jacek Stolarek flew the MiG-29 "Fulcrum A" from 22. BLT
 Malbork, (a unique, civil-military combo) left bottom
 F-16C Tiger Demo Team with conformal fuel tanks, display
 Pilot Major "Zippity" Dudaright All images by Wolfgang Jarisch







2017 Russian Army Week

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This year's Russian Army week involved all services of the Russian forces. Our reporter, Joe Ciliberti, covered the aerial aspect of it which was mainly based at Kubinka airfield, about an hour and a half out of Moscow centre.

For such an array of aircraft in the static display it was a pity that people only really showed up on Sunday afternoon at Kubinka. It could well be that the public chose Sunday afternoon because the whole event was spread over two other locations where one could see live firing as well as an exhibition of a lot of Russia's armour.

Focusing on Kubinka, the static display line-up included some really interesting and at times rare aircraft, from trainers to all types of Flankers as well as bombers, ASW aircraft and others. Indeed, the long row of aircraft was impressive, including the rarely seen Beriev A-50 AWACS aircraft painted in the Russian grey color scheme.

The public was only allowed to tour about one third of the long taxiway that runs parallel to the only runway at the air base. Inaccessible to the public but still visible were (4) An-30s Open Skies as well as a lot of MiG-29 and Su-27/30s belonging to the country's national aerobatic teams. Also in the line up were two Ilyushin Il-20 ELINT (Electronic Intelligence) aircraft and a good number of helicopters and fast jets that were part of the flying display programme for the week.

The flying display programme was rather disjointed and not helped by lack of commentary in English, there was little non-Russian visitors could do to follow the sequence of events. Most of the time it was hearing a jet roaring down the runway and scrambling to get a decent picture of whatever was about to take off. There was also some flying unconnected with the display at Kubinka, mainly helicopters that went up to do live-firing demonstration at the Alabino target range, to the East of Kubinka and close enough that most performers could be seen performing from Kubinka itself. Regardless, it was worth the visit to see modern Russian airpower.

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photography by Geoffrey Arnwine

On September 9-10, the twelfth annual California Capital Airshow took place at Mather Airport in Rancho Cordova, CA. Highlighting a majority of the performances included the U.S. Air Force Heritage Flight with the A-10 Thunderbolt II and P-38 Lightning, California Air National Guard Demo featuring the F-15C Eagle out of Fresno, and a very rare flyby of the Boeing E-4B Nightwatch.

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Gates opened at 9:00 am both days, and spectators were able to visit many different static display aircraft and booths throughout the day. For the first time this year, the show featured the National Aviation Heritage Invitational which is a group that encourages people to support vintage aircraft preservation and holds a contest for the top aircraft of each class. Those five classes include antique, classic, contemporary, military, and large aircraft.

Flying activities officially kicked off at 11:45 am with the singing of the National Anthem. During the Anthem, the members of the Patriot Parachute Team jumped out an aircraft with the American Flag. Once the jumpers were down, things got cleared for the air show performers to take to the skies.

The show featured a nice variety of different warbirds including three different P-51 Mustangs called by "Man O War," "Daddy's Girl," & "Keep Em Flying!" The P-51's performed multiple manoeuvres including formation flights, photo passes, and low level high speed passes. Planes of Fame supported the show with a solo flight by their very own P-38 Lightning "Skidoo" piloted by Steve Hinton. They also brought their F-86 Sabre & MiG-15 Fagot to perform a Korean War dogfight reenactment. The F-86 had to cancel on Saturday and the vintage dogfight act was improvised with a solo MiG-15 performance.

There were very few aerobatic acts at this year's event compared to previous years. One of the aerobatic representatives included Kent Pietsch who flew in his Jelly Belly Interstate Cadet. His performances included a comedy act with joke manoeuvres like dropping a tire and toilet paper out of the plane, a landing on the world's smallest aircraft carrier on top of a truck, and a dead stick landing where he landed the plane without the power of it's engine. Bill Stein was the other aerobatic performer who flew in his specially painted Zivko Edge 540 which changed color from various angles during flight.

Military flyovers were of an abundance at the show this year. Perhaps one of the rarest Air Force flyovers took place at the show with the Boeing E-4B Nightwatch which is a 747 modified airborne strategic command and control. There are only 4 of these aircraft built and it was a special sight as the plane made a few passes before departing back to the base it staged at. Also featured by the Air Force was a 4-Ship formation flight by T-38 Talons based out of Beale AFB. The four T-38's made a few formation passes and performed touch and go's before landing at the airport.

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A C-27J Spartan from the U.S. Coast Guard also made a special flyby which was staged at nearby Mather at McClellan Airport in the north side of Sacramento.

One of the major highlights from the show this year was the U.S. Air Force Heritage Flight which featured the Fairchild Republic A-10 Thunderbolt II piloted by Maj. Dan Levy and the Lockheed P-38 Lightning piloted by Steve Hinton. Prior to joining the P-38, Maj. Levy performed a few solo passes in the A-10 before forming the Heritage Flight. The A-10 West Heritage Flight Team is based out of Davis-Monthan AFB, Arizona and this year is the first year the A-10 has participated in Heritage Flights across the country since 2012.

Representing the U.S. Navy at this year's show was the F/A-18F Super Hornet TAC Demo Team from VFA-106 "Gladiators" out of NAS Oceana, Virginia. This was a rare opportunity for the crowd of Sacramento to witness the VFA-106 Demo Team in the West Coast. Due to a maintenance issue, their Saturday performance was cancelled as the team needed a part for their plane. On Sunday, the team was able to fix the problem and the Super Hornet was able to perform a full show that day.

The California Air National Guard made their presence in the air with their own Boeing F-15C Eagle of the 144th Fighter Wing based out of the Fresno Air National Guard Base. The F-15 was pulled out of the static display ramp and took off to perform multiple passes to the crowd. On Sunday a C-130J Super Hercules performed a fire bombing run across the runway. Due to the hurricane issues going on around the United States, most of the aircraft scheduled to participate were forced to cancel the air show demonstration to deploy in support of people who were affected by the hurricanes.

Concluding flying activities at the show was the Patriots Jet Team based out of Byron, California. The Patriots fly six black L-39 Albatross Czech trainer jets with red, white, and blue smoke. Most of the pilots of the team have had past experience flying with famous military aerobatic teams including the Thunderbirds, Blue Angels, and Snowbirds. Their performance included multiple formation flights, low level passes, and tail slides.

Despite the many cancellations that occurred especially on Saturday, the 2017 California Capital Airshow ended on a high note by bringing back a large amount of military flyovers and static displays that were rarely seen in past years. The crowd size was considerably smaller due to the lack of a major aerobatic team, but the show plans to have a huge event in 2018 with the Thunderbirds to commemorate the 100 year anniversary of Mather Field. Special thanks to the organizers, volunteers, performers, and spectators that helped make the show a success!







U.S. Air Force Heritage Flight which featured the Fairchild Republic A-10 Thunderbolt II and the Lockheed P-38 Lightning, above.

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Lockheed P-38 Lightning, main image and with the A-10 right inset.







AIRPORT SPOTTING

Photography by Christopher Mifsud



TNT Airways Boeing 737-4M0 above and Czech Airlines Airbus A319-112 below, both are at Malta International Airport, (MLA).







- Aughrim Holding's de Havilland Canada Caribou DHC-4A top,
- ASL Airlines (Belgium) Boeing 737-476, middle,
- Enter Air (Poland) Boeing 737-86N bottom—all at Malta International Airport, (MLA).



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As close as you can get without being at an air show!

