

A warm welcome to the 2nd issue of FLYMAG Magasinet in 2016, and the first in English. In this issue you'll be able to read the third article in the pilot school series, this time from Turkey, as well as reports from Thracian Thunder 2016 and EART 2016.

We hope you enjoy the magazine - Happy reading.

THE MAGAZINE

“IZMIR COUGARS”- TURKISH ARMY AVIATION

Carlo Kuit & Paul Kievit looks at the Turkish Army Aviation out of Izmir, flying a vast variety of helicopters, including UH-1, AH-1, and AS532, as well as fixed winged aircrafts.

FIT FOR THE FIGHT - ROYAL JORDANIAN AIR FORCE

Marco Dijkshoorn and Patrick Roegies reports from Jordan, the country land-locked between Iraq in the north-east, Saudi Arabia in the east, Israel in the west and Syria in the north.

TURKISH COAST GUARD AVIATION

Carlo Kuit & Paul Kievit reports about the Turkish Coast Guard's aviation assets out of Izmir, which is one of four Mission Coordination Centers for the Turkish Coast Guard.

THRACIAN THUNDER 2016

Thracian Thunder was held from 06 January until 25 March 2016, with Graf Ignatievo as main operating Air Base.

F-35'S INTERNATIONAL DEBUT - FIRST DUTCH F-35

The Netherlands' first two F-35 Lightning II's landed at Leeuwarden Air Base on Monday May the 23rd, a date that will live forever in Dutch military history.

TURKISH TRAINING REVOLUTION

As one of NATO's largest air arms, the Turkish Air Force has a large demand for new pilots. Dirk Jan de Ridder finds out how they are trained at Izmir-Çigli.

EUROPEAN AIR REFUELLING TRAINING (EART) 2016

Søren Augustesen reports from Eindhoven, where European Air Refuelling Training 2016 EART, was held earlier this year.

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“IZMIR COUGARS”

TEXT & PHOTOS - CARLO KUIT & PAUL KIEVIT

Carlo Kuit & Paul Kievit looks at the Turkish Army Aviation out of Izmir, flying a vast variety of helicopters, including UH-1, AH-1, and AS532, as well as fixed winged aircraft.



A AS532 Cougar taxis towards the next mission

Photo by the authors

“Izmir Cougars”- Turkish Army Aviation

“Our primary mission is to provide aviation support to our Land Forces at specific places and at specific times, as an Army Aviation Regiment under the control of Army Aviation Command focusing on the west part and especially middle of the west and southwest of Turkey” as Lt. Col. Baysan starts to explain the tasks of the 3rd regiment (3ncü Kara Havacilik Alayi) based at Izmir-Gaziemir.

Lt. Col Baysan graduated as an Army pilot in 1998 and is currently one of the instructors for the AS532 “Cougar” helicopter fleet. The Army Airbase of Gaziemir is located just northwest of the International Airport of Izmir, Adnan Menderes. The history of the 3rd regiment (3ncü Kara Havacilik Alayi) dates back to 1975 when the Aegean Army Command was established in Izmir.

After the end of the Cold War and the disintegration of the Warsaw Pact in 1990 led many countries to reduce their Armed Forces. During this period the Turkish Army went through a major change switching their focus on future combat environments, high mobility, firepower, night operations, optimize their mobilization system and adapt the army structure to Battalions, Brigades, Corps and Armies. The Turkish Army Aviation Command was established on the 15th of August, 2003 under the Land Forces Command in order to establish a Central Command and Control System.

The 3rd regiment (3ncü Kara Havacilik Alayi) at Gaziemir has currently two battalions (Helicopter Taburu) on strength; the AS532UL's are part of the Medium Helicopter Battalion and the UH-1's and AB205's are part of the Light Helicopter Battalion and are in use for training and liaison duties. The S-70's are not any longer part of the inventory of the 3rd regiment.

“A decision has been made back in 2008 to relocate the S-70 fleet in the Southern part of Turkey to execute missions in the mountains in which the S-70 performs best” according to Lt. Col. Baysan. Relatively new to the unit is an Attack Detachment equipped with two AH-1Ps ‘Cobra’ helicopters. This in order to allow Attack Helicopter crews to train in a different environment than the area near Güvercinlik, 40 kilometers North of Ankara, where the unit is stationed.

The cobras

To supplement the AH-1W fleet, a number of AH-1P/S was offered by the United States. In total the Turkish Army received 36 ex US Army Cobras in five separate batches; twenty AH-1Ps in 1993; twelve AH-1S on March 5, 1995 and four TAH-1P on March 29, 1995. The TAH-1Ps were necessary as no simulators had been purchased.

The capability of the AH-1s was restricted so an upgrade program was required. The upgrade program started during July 1995. Subsequently all the AH-1P/S ‘Cobras’ have been upgraded, the upgrade was executed in association with IAI (Israel Aerospace Industries).

The improvements are the addition of a 20mm Cannon, Tactical Navigation System (TNS), ALQ-144 1R Suppressor, improved Internal Wiring and AN/APR-39V (3) and ARC-182 Self-Defense systems to counteract the SA-7 missiles.



All three pictures

Rather new to the 3rd regiment is a detachment of two AH-1Ps normally based at Güvercinlik (Attack Helicopter Squadron).

Pilots and crew on the AH-1P have the ability at Gaziemir to train in a different environment.

Photos by the authors



Phenix

Lt Col. Baysan continues “Lastly we have the Cessna-T-182 for Fixed Wing basic training, the aircraft have been replacing the U-17 training aircraft since 2010”. The initial batch of twenty AS532 Cougars were ordered in 1992 with deliveries as of 1997 as part of “Phenix 1”. During 1997, the Turkish Government signed a new contract for an additional thirty AS532UL’s.

The contract consisted of an agreement for this batch of helicopters to be built in Turkey, and for this purpose a consortium between Eurocopter and TAI (Tusas Aerospace Industries Inc.), called EUROTAL was established. The contract named “Phenix 2” contained the supply of ten AS532ULs for the Turkish Army and twenty AS532s for the Turkish Air Force of which all were delivered by 2003.

The UH-1H Iroquois helicopter has been the standard utility helicopter of the Turkish Army from 1970 until the first deliveries of the S-70 in 1993. Between 1970 and 1974 the United States Army delivered 58 UH-1Hs of which 42 were diverted to the Army. After two AB205A-1’s had been bought in 1968 an order for a further 44 AB205s was awarded to Agusta for delivery from 1974 onwards, twenty being intended for the Jandarma (Military Police).

In 1983 forty-six examples of the type were ordered for delivery in 1983-85 (including four for the Jandarma). An agreement was signed in September 1982 with Bell Helicopters for the assembly and part manufacturing of 70 UH-1Hs, 25 being delivered by Bell Helicopters from May 1984 to February 1986 (of which ten were for the Turkish Air Force).

Four sets of fifteen helicopters each were assembled by the “901.Uçak Ana Depo ve Fabrika” between 1984 and 1992. Since 2003 a modernization and engine replacement has been performed on 52 UH-1Hs to UH-1HT and 23 AB.205 to AB.205T standard.

Top

The 3rd regiment is supporting all Turkish Army activities on regular basis Combat Search and Rescue (CSAR) exercises are held for which is trained with Army Commandos.

Bottom left

The UH-1 doesn’t have wheel, but has skids, so when it’s taxiing, it’s hovering above the taxiways.

Bottom right

A Cougar lineup!
Photos by the authors

Search and Rescue

“Currently the whole fleet of Army “Cougars” have been equipped with a glass cockpit which has been modified and installed locally by TAI (project Yarasa)” according to Lt Col. Baysan.

He continues “In our Regiment’s inventory we have four SAR Cougars (local name AS532USAR) for Immediate Response in case of an accident or a natural disaster. In addition to the flight crew there are some extra personnel on board: one extra SAR Technician, one Doctor or a Medic and 2 SAR Experts completing the crew of seven.

For any possible mission the helicopter and all of its crew are organized according to the 24-hour concept during day and night. This type of mission is rather unique to the Turkish Army; reason to be involved in SAR duties is the vicinity of the Aegean Sea. We cooperate as well with the Coast Guard in case this is required.

The SAR Cougars are modified locally (TAI) with approval of the Airbus Company. We have additional functionality compared to the standard AS532UL: Search Light, Forward Looking Infra-Red (FLIR), loudspeakers and auto-hovering capabilities. Two of the USAR type are located at Gaziemir. We also have a detachment at the Turkish part of Cyprus.

In order to be certified for SAR duties an additional 20hrs of training is required by the crews”. Lt. Col. Baysan concludes.



Right

The maintenance unit of the 3rd regiment at Gaziemir is self-supporting and performs maintenance in regular intervals of 10, 25, 50, 100-200 hours. Basically all maintenance up to 1000 hours is performed at Gaziemir. After 3000 hours or 15 years each airframe is being overhauled in Ankara by the 5th Main Maintenance Centre Command.

Left

The pilot and her helicopter. This AS532USAR has been modified to have the Light, Forward Looking Infra-Red (FLIR) mounted in front. Photos by the authors





A Cougar sits in the hangar and waits for the next mission
Photos by the authors



Rotary Wing Pilot Basic Training

The Army Aviation School located in Güvercinlik is essential to expand and maintain quality within the pilot community. Besides for the Turkish Army the Navy, Gendarmerie, Coast Guard and Police Aviation are being trained at Güvercinlik.

Pilot Training is split in two phases: Basic Training and Advanced Training. Rotary Wing Pilot Basic Training is conducted with the AB206 and UH-1H/AB-205. Advanced training is provided either with S-70s or AS-532s for an additional 14 weeks and 35 hours of flight which is finalized with a check ride before operational duties can be executed by the young pilots.

Lt. Col. Baysan adds “In our regiment, training exercises are arranged and organized according to our Combat Tasks and Missions. Within this context, all training exercises for Air Combat Operation, Transportation of personnel, Combat Search and Rescue (CSAR) operations and medical evacuations are planned and executed both during night and day.

We are especially proud of our night operations capabilities. In addition to that, Search and Rescue operations and medical evacuation tasks we carry out in natural disasters constitutes a great proportion of our duties”.

He continues “Just after taking the Basic Flight Training and graduating from the Army Aviation School based in Ankara, the pilots will be assigned to a unit and receive their Combat Preparation Flight Training according to the tasks they are going to perform. The pilots who accomplished and finished the Combat Preparation Flight Training Program become active pilots.

Standardization

All the training process we follow is continuous and has a repeating pattern. The training exercises are carried out by the instructor pilots we have in our Regiment. At the end of the training period, the Instructor Pilots assesses all new pilots. According to the instructor’s assessment, the pilots who are not sufficient have to undergo additional flight training in order to be an active pilot within our unit.

In every Army Aviation Regiment there are standardization and control units that encompasses experienced pilots. These check all the active pilot’s knowledge and standardization level in repeating intervals and determine the need of an additional training for the pilots who are insufficient about the knowledge and skill.

Each pilot takes Instrument Flight Rating, Standardization Exam and their flight checks once a year. The other flight crews also take verbal and written practical exams during the year in order to maintain their knowledge about maintenance and flight missions. Insufficient flight crew was also subjected to the additional training” according to the Lt. Colonel.

“The most challenging for new pilots fresh from the Army Aviation School is to adapt to the AS532. The usage of the foot paddles is opposite to that of the UH-1 and AB205. In those helicopters you will have to give left foot paddle as the main rotor is turning anti-clockwise. The AS532 has a clockwise rotor thus usage of right foot paddle is a must”. Furthermore the position in the cockpit of the AS532 is much more elevated compared to the UH-1 which provides less visibility” as the Lt. Col details.



Top

Night flying operations are a large part of operations and training by the crews at Gaziemir.

Bottom left

The UH-1 doesn’t have wheel, but has skids, so when it’s taxiing, it’s hovering above the taxiways.

Bottom right

Since 2010 the aging U-17 fixed wing aircraft have been gradually replaced by the Cessna182T ‘Skylane’ of which over forty are in use across the army basis. Photos by the authors



Pilots of the 3rd regiments pose in front of one of the AS532ULs.
In the middle Lt. Col. Baysan one of the experienced AS532 instructor pilots.
Photo by the authors

Helicopters and Cessnas

The initial pilot training at the Army Aviation School takes about 51 weeks in which flying starts with the AB206 with around 100 hours of flying. The next phase will be transition to the UH-1/AB205 with an additional 80 hours of flight.

Based on the demand by the Turkish Army graduate Army pilots continue with their advanced training on the S-70 or AS532UL; this process will take about 35 flying hours which is being conducted within the various regiments. Not all pilots will start with the advanced training as there is also demand from the regiments to have pilots flying on the UH-1/AB205.

Lt. Col. Baysan explains *“When a new pilot is added to the unit a 25 hours familiarization program is followed with an official check ride before we have the pilot added to active duties on the AS532”*. Currently about thirty-eight pilots are on active duty with the 3rd regiment.

“On average we have a demand of about 8-15 new pilots per year” according to Lt. Col. Baysan. The third regiment has currently one female pilot on active duty since two years’ operating on the UH-1. In total there are 21 female pilots within the Turkish Army Aviation operating various types of helicopters and fixed wing aircraft except for the S-70 and AH-1s.

Six months ago, a simulator became available for students to train on. This simulator was built with support of Havelsan. This company was established by Turkish Air Force Foundation in 1982 as a Turkish-American Company named Havelsan located in Ankara.

“The helicopters and Cessna’s are subject to the different levels of maintenance according to the flight hours and time intervals. All the maintenance is done exactly according to the technical documents that have been published by the supplier and is conducted by our experienced branch technicians.

We are self-supporting and perform maintenance in intervals of 10, 25, 50, 100-200 hours. Basically all maintenance up to 1000 hours is performed at Gaziemir. After 3000 hours or 15 years each airframe is being overhauled in Ankara by the 5th Main Maintenance Centre Command” according to the Chief Technician.

“The maintenance in our authorization level is done as quickly as possible in order to be ready for any kind of mission. However the 5th Main Maintenance Centre Command based in Ankara does some of the detailed maintenance, checks and repairs beyond our authorization level of maintenance.”

Currently the 3rd regiment is involved in continues deployments to Cyprus for which a number of AB205s and AS532s are being deployed. Furthermore the pilots and crew are part of a regular rotation schedule to East Turkey to support the fight against terrorism and security of its borders which has full focus. Each of the regiments (Gaziemir, Malatya, Ankara and Istanbul) are part of the rotation schedule providing round the clock security of the Turkish borders.



Top
A UH-1 comes in to land, with the other UH-1s in the hangars behind.

Bottom left
The maintenance crew works on this AH-1.

Bottom right
Pilots onboard one of the AS532s on strength. Clearly seen is the upgraded cockpit which the whole fleet of AS532s underwent. Seen also is the sole female co-pilot on strength with the 3rd regiment.

Photos by the authors



FIT FOR THE FIGHT

TEXT & PHOTOS - MARCO DIJKSHOORN AND PATRICK ROEGIES

Jordan, the country land-locked between Iraq in the north-east, Saudi Arabia in the east, Israel in the west and Syria in the north is due to its geological location under threat of ISIS. Marco Dijkshoorn and Patrick Roegies reports from Jordan.



The original delivered AH-1's have been replaced by ex US Army and ex Israeli Air Force AH-1's. Although the AH-1's were delivered in different subtypes they were all upgraded to AH-1F standard. Photo by the authors

Fit for fight

Jordan, the country land-locked between Iraq in the north-east, Saudi Arabia in the east, Israel in the west and Syria in the north is due to its geological location under threat from ISIS who is wreaking havoc in parts of Iraq and Syria. A very good reason for the Royal Jordanian Air Force (RJAF) to invest in both troops and equipment, investments that lead to an air force that is in a state of rapid development.

High time to catch up with them, which is what Marco Dijkshoorn and Patrick Roegiers did. In an exclusive interview with RJAF Commander Major General Mansour S. Aljobour, the developments of the RJAF and the fight against ISIS were the main topics to discuss.

“We will fight them to the last bullet”

On December 24, 2014 the RJAF entered the headlines when Captain Maaz al-Kassasbeh was shot down during an anti-ISIS strike operation near Raqqa, Syria.

His mission was part of a coalition effort against Da'esh (the name now commonly used for ISIS) that was baptized Operation Inherent Resolve (OIR) on October 15, 2014. 'Some days after the crash, ISIS posted a propaganda movie online, showing the brutal execution of Captain al-Kassabeh. What followed would drastically change the way that Jordan would fight the war against Da'esh.

“When we decided to revenge the barbarian execution of our pilot, we flew twenty aircraft for three consecutive days, starting on the 4th of February 2015. At that time we were firing General Purpose Bombs and Laser Guided Bombs. The Battle Damage Assessment showed that we had hit every single target” says a clearly emotional Aljobour.

“The largest success actually was the morale of the pilots. When our pilot was captured, I went down to the base [Azraq] and they were actually begging to fly and they were ready to fly anytime to fight those guys [Da'esh]. Not a single pilot, regardless of his experience or his rank didn't want to do his job.”



Top / bottom right

The F-5 does not perform operational flights anymore and is used for pilots that want to keep their flying skills current. The remaining F-5's were kept in a flyable condition since the remaining ones are to be sold to TacAir in the United States which will use the aircraft in an adversary role.

Bottom left

Although the EC635T1 helicopters were delivered around 2004 the helicopters are due for replacement. The EC-635's are appointed to 14 squadron based at ing Abdullah Air Base also referred to as Marka located in Amman. Photos by the authors





Operations over Syria

“They are all pushing me on a daily bases to go out and fly. The main focus is over Iraq and Syria and we strongly believe the threat is there. To us and to the region and the International community. We are going to focus, those guys [Da’esh] are not going to be forgotten until they are defeated. Our crosshair is going to be at them for as long as it takes, we will fight them till the last drop of fuel and the last bullet we have”.

Until now more than 1.100 hours were flown against Da’esh and currently one two-ship mission is flown on a daily basis. The area of operations for the RJAF is both Syria and Iraq and it is the only Arab country that is allowed to perform kinetic missions over Iraq.

There are no restrictions over Iraq although the US has drawn a line to divide the Area of Operations (AOP). Air Tasking Orders (ATO) are provided by the Combined Air and Space Operations Center (COAC) in Al Udeid, Qatar where a RJAF liaison officer is stationed to relay between the CAOC and the Air Operations Center in Jordan.

The RJAF is mainly performing operation over Raqqah in central Syria and Deir-ez-Zzor in eastern Syria. Those are the strong-points of Da’esh and that is where the focus is. *“This is one of the most restrictive air campaigns ever”*, says Aljobour *“Due to the long distances that need to be crossed and the heavy restrictions that are imposed to avoid collateral damage we fly loiter over the target for a long time before engaging”*.

Top

Although the Casa 101CC approaches the end of its operational lifetime within the Royal Jordanian Air Force the aircraft is still used intensively to train new pilots. This class however might just be the last class to be trained in the Casa 100, since according to expectations the first class that will be trained on its successor the PC-9 will graduate early 2017.

Bottom

The F-16’s within the inventory of the Royal Jordanian Air Force are divided over three squadrons and are 1st, 2nd and 6rd squadron. Photos by the authors

Frontline Aircraft

In the current inventory there are 43 F-16AM/BM and the RJAF will receive fifteen additional F-16s from The Royal Netherlands Air Force (RNLAf). Before they will be delivered to Jordan, they will be upgraded to Mid-Life Update (MLU) Operational Flight Program (OFP) 6.5 code, the latest software-upgrade available in Europe. Under the initial contract OFP version 5.0 was ordered and approved by the U.S. Congress.

Due to technical difficulties to adapt the OFP 5.0 code to the hardware installed in the Dutch F-16s, a new congressional approval for the release of OFP 6.5 is now pursued. Delivery is scheduled for late 2016, early 2017 and when delivered, the RJAF will sell some of the F-16s in the current inventory.

Pakistan, one European and some other country have shown interest in these surplus aircraft and if transferred, it will most probably involve the ex-U.S. Air National Guard Peace Falcon II aircraft that were delivered to Jordan from 2003 onwards. In the meantime an upgrade program that will improve the existing fleet of former Belgian Air Component and RNLAf F-16AM/BM’s in the current inventory to the MLU 6.5 standard will be initiated. *“We also signed a Letter of Acceptance (LOA) for the procurement of JDAM’s and 15 sniper pods that will enhance the fighter’s capability have been purchased”*, says General Aljobour.

Special Forces

Although the Prince Hashem Bin Abdullah II Royal Aviation Brigade at King Abdullah II Air Base is part of the Royal Jordanian Army, it has very close ties with the RJAF. The aircraft are maintained by ex-Air Force personnel and the pilots are all trained by the RJAF King Hussein Air College.

The MD530f “Little Bird” and UH-60L Black Hawk helicopters, as well as the AC235 gunships are operated by three squadrons that occupy a separate platform adjacent to the tower that is also overlooking the RJAF aircraft stationed at KA2.



The Casa 101CC are due for replacement by the PC-9. The first ones are expected to be delivered to the Royal Jordanian Air Force in 2016.

Photos by the authors

New kid on the block: The Air Tractor

To support Jordan in the fight against Da’esh, the United Arab Emirates (UAE) government supplied six IOMAX light attack AT802 turboprop aircraft to Jordan under a U.S.-backed plan that was executed in 2013. They are operated by 25sq which is dispersed across Amman-Marka and King Abdullah II. Once there is sufficient space for them at King Abdullah II Air Base, all the Air Tractors will move there.

“We have six Air Tractor Block 1 aircraft and we will receive four additional ones. The aircraft will get the Block 3 upgrade, similar to the IOMAX Archangel [based on the Thrush S2R-660 airframe] aircraft. The four to-be delivered aircraft are still in the U.S. but they are expected to arrive in Jordan by June 2016”.

These last four aircraft were initially earmarked for delivery to Yemen as a gift from the UAE but because of the turbulent situation in Yemen, they will be delivered to Jordan instead. Two were recently noted at Waco (TX) with white Spraylat over the fuselage carrying Yemen Air Force roundels.

After one year of service in Jordan, the last four aircraft will also go through the Block 3 modification. The six AT-802 that are currently in the inventory have both the ISR and strike capability. The L3 Wescam MX15Di sensor turret system is being installed and once upgraded, they can carry and fire Hellfire, GBU-58 Paveway and GBU-12 Paveway II laser-guided bombs.

Unmanned Capabilities

In the current inventory, the RJAF has ten Schiebel Camcopter S-100 on strength (twelve delivered, two were lost) and four Finmeccanica Falco UAV while the new Falco, the Falco EVO is being evaluated for future use. There is a bilateral project running with the Italian Air Force in which the Falco EVO UAV is being developed as an armed UAV and if the evaluation proves to be successful, the RJAF is interested to acquire a number of them.

Battle Damage Assessments of strikes by RJAF forces are now provided by Intelligence, Surveillance and Reconnaissance (ISR) platforms of the coalition forces.

UAV capabilities

“Jordan is seeking the ISR capability of its own but than in a dual role, both a sensor and a shooter. Any UAV that has both capabilities, we are interested in. In fact, we did ask for the predator but I do not think the US are willing to export this technology to Jordan.

They have shown willingness to export the Predator XP as a sensor but we want a dual-role platform”. Recently, the RJAF purchased some CASC Rainbow (Cai Hong, abbreviated as CH) CH4B armed UAVs which are expected to enter service in January 2016.

They have a satellite link so they can be operated from thousands of miles away. In August, Israeli news outlets reported that Israel will provide Jordan with twelve advanced Heron TP and Skylark Unmanned Aerial Vehicles. If the Israeli drone order will really materialize needs to be seen, however.



Top

One of the latest additions in the inventory of the Royal Jordanian Air Force is the H-60. This UH-60A was recently delivered to the Royal Jordanian Air Force and is appointed to 8 squadron located at King Abdullah Air Base in Amman.

Bottom left

The F-5’s were painted in two different ways. One in bare metal colored, and other in a two tone brown and green.

Bottom right

The Air Tractors were received from the UAE Air Force and a total of 5 aircraft have been noted so far. Photos by the authors







Quick Reaction Force

The current main role of the rotary wing based at Amman-Marka is tactical and VIP personal transportation. This will be changed in the future and the goal is to create a Quick Reaction Force. To enable this capability, up to 24 Black Hawk helicopters will be purchased. The initial sixteen were ordered and the first deliveries have taken place recently.

“The Black Hawks are already in the inventory and we have good experience with them. They will also be used for border patrol and our Special Operations Forces are involved in setting up the QRF”.

The newly delivered Black Hawk helicopters will most likely get the sensor systems that are also fitted on the current UH-60L fleet operating in Special Operations Command (SOCOM) and are operated by the Airlift Wing at Amman-Marka. They will be replacing the few remaining UH-1H and EC635's of 8sq and 14sq respectively, which will be disbanded. The performance of the EC635 is not deemed well enough by the RJAF and they will be sold off, if a buyer will be found.

Attack helicopter

Jordan received a considerable number of Cobra's over the years. The first 24 Cobras were AH-1S Stage 3 (modernized) aircraft, built for the US Army with Fiscal Year 1982 serials. This standard of AH-1 was later re-designated AH-1F and the first examples were transferred to Jordan from 1985 onwards.

These were augmented by eighteen (two batches of nine) aircraft under Military Assistance Program deliveries from 2001 and approximately sixteen ex-Israeli Air Force AH-1E/F Cobras that were refurbished and handed over to Jordan in 2014 in a U.S. approved deal. At least eight AH-1F helicopters were transferred to Pakistan in 2013.

“We now have 36 aircraft on strength, we have a contract with a subcontractor in the U.S. Science and Engineering Services (SES) from Huntsville, Alabama, to upgrade them. The helicopters are fitted with a glass cockpit and the avionics will receive an upgrade to enable them to fire Hellfire missiles and other guided missiles. We are expecting the first two by June/July 2016. Currently six aircraft are in the U.S. undergoing upgrades”.

The current version of the Cobra helicopters can already fire the BGM-71A TOW air-to-surface missiles as well as unguided 70mm rockets. In the nose, a M197 20 mm Gatling gun is fitted.



Top
The Royal Jordanian Air Force operates two squadrons of AH-1 Cobra's.

Bottom left
The Royal Jordanian Air Force operates a total of 11 AS332M1 helicopters and are all appointed to 7th squadron. Some of these helicopters carry both a military and a civilian registration number.

Right middle
The F-16's within the inventory of the Royal Jordanian Air Force are divided over three squadrons and are 1st, 2nd and 6th squadron. Number 2 squadron serves as an OCU squadron and has the main purpose to train the aspirant pilots which just arrived from Prince Hassan Air Base also referred to as H5 Air Base.

Bottom right
The F-5 does not perform operational flights anymore and is used for pilots that want to keep their flying skills current.
Photos by the authors



Top / Middle

The first class of new students is currently being trained using the R44 Robinson. Previously the pilots were trained on the H500 helicopters, which have been withdrawn from use.

RJAF still operates a wide range of helicopters, here a MD-530, AS350 and R44.

Bottom

Although the Casa 101CC approaches the end of its operational lifetime within the Royal Jordanian Air Force the aircraft is still used intensively to train new pilots.

Photos by the authors

Command and Control

Constituting one of the most potent border protection capabilities in the entire Middle East is the combination of the six Cessna C208B-ISR Grand Caravan C3ISR (Command, Control, Communications, Intelligence, Surveillance, and Reconnaissance) platform with other types.

Together with the AT-802, the Cobra helicopters, two Airbus AC235 gunships and two S-100 Camcopters, the Caravans perform round-the-clock surveillance of the borders. There is a permanent detachment of one Ce208B-ISR and six AH-1F Cobra helicopters to the airbase closest to Iraq, Rweished AB (H4), conducting border protection duties.

“Regarding Command and Control, we used to be C2 but now we are C3I (Command, Control, Communications & Intelligence) so the situational awareness is very high now.” Says General Aljobour. The C3ISR system is integrated with the Hawk air defence systems and the AC235 gunship and the F-16s also have Link 16 capabilities that supply the RJAF with a fully integrated defence system.

Two CASA 295’s were acquired and there is a competition between Airbus and another company to perform the upgrade to the AC295 gunship variant. At least one AC235 gunship is forward deployed in Saudi Arabia now, performing operations over Yemen and it has proven very successful so far. “It has been a very successful project and we encourage other countries to either join us or follow us”.

In support of the operations over Yemen, the RJAF also deployed four F-16s while the AC235 provides Close-Air Support (CAS). “Despite the support to the forces fighting in Yemen, this is a secondary target for the RJAF. The primary target remains Syria, where the RJAF is fighting ISIS.” Says Aljobour.

Transport fleet

In March 2016, the RJAF wants to enter a bidding for the transfer of a number of ex-Royal Air Force C-130J’s. However, the recently released National Security Strategy and Strategic Defence and Security Review 2015 proposed to keep the current fleet of Hercules C4 and Hercules C5 in service.

Transport alternative

Alternatively, the RJAF will upgrade the current fleet of C-130H and C-130E or if that is not viable, they will buy new C-130J transporters. In the strategic transport role, the RJAF operates two Ilyushin Il-76MF which can carry up to 60 tons each.

University-accredited aviation training

On December 1st, the status of the King Hussein Air College (KHAC) located at Mafrqa, was changed to “Air University”. The KHAC was recently accredited as such and this will allow it to give a degree in aviation-majors to the students like Air Traffic Control, Navigation and Meteorology.

Three training squadrons and the Instructor Pilot School are located here. When asked how the next ten years look like for the RJAF, the General states *“It all starts with the Human Resources, our troops should be ready for whatever is coming in the future. The first thing that I changed, is the training. We will get nine Pilatus PC-9M, the contract is signed and the Swiss-made aircraft will replace the CASA 101.”* Since 1987, 11sq is operating the CASA 101CC in the advanced training role.

The basic trainer role is currently fulfilled by the Slingsby T-67M-260 Firefly, of which sixteen were delivered from 2002 onwards. These were augmented this year by eight former RAF/Defence Elementary Flying Training School (DEFTS) T-67M-260.

The Fireflies are still sporting the former British civilian G-registration and are solely operated by the Instructor Pilots School and appear to be a stop-gap solution until a new basic trainer is introduced. *“We are in the process of buying a newer plane for the Basic Training Role.”* says General Aljobour.

The Grob 109TP was one of the planes that was evaluated but it is too early for a decision yet, more contenders will get the chance to demonstrate the capabilities of their aircraft.

“We phased out the Hughes helicopters because both the H500D and H500E were old and we replaced them with the Robinson R44 Raven II”.

Helicopters

5sq operates eight R44 II light helicopters in the basic training role. The R44 gained its full operational capability in April 2015 and they replaced the H500 in late 2014. Until then, both the AS350B3 Squirrels and the H500 were operated by 5sq but since the R44 Operational Capability, the six AS350B3 are solely operated by the Instructor Pilot School. The H500's are for sale and are awaiting a buyer in a hangar at Mafrq.

Bye, bye F-5; hello Hawk

In the Lead-in Fighter Trainer (LIFT) role, the F-5 aircraft were phased out last year and a batch of the remaining aircraft will be sold off to Tactical Air Support “TacAir”, Inc. from Reno, Nevada. It is expected that they will be handed over before the end of 2015. *“We do keep two F-5s flying as part of the legacy. They are not involved in official missions anymore”* states Aljobour.

As a replacement for the venerable F-5 in the LIFT-role, the RJAF acquired thirteen former United Arab Emirates Air Force & Defence Command BAE Hawk Mk.63. The RJAF would like to acquire additional BAE Hawks in the future, enabling more than one squadron to prepare pilots for F-16 operations. The plan is to upgrade the Hawk fleet with a more suitable avionics suite, making them more capable as a LIFT for aspirant F-16 pilots.

Continuous Improvement

“There are skills you only get from such an exercise, we were invited and we went” says Aljobour. The RJAF participated in Red Flag 15-4 with four F-16AM's and one F-16BM. On the way to Nellis AFB, Nevada the Jordanian F-16s received aerial refuelling from the Israelis that were participating with a number of F-15s.

“When the pilots came back, they were extremely happy with the experience they got from the RF exercise. The skills they learned will stay with them for a long time”. The participants of the Red Flag exercise, experienced that the scenarios that were played out were perfectly matched for the current threat Jordan faces.

“Red Flag is high on the Agenda of our High Command and the RJAF would like to participate again in 2016 but if that is not possible, definitely in 2017”, says Aljobour enthusiastically.



All pictures

The latest addition to the inventory of the Royal Jordanian Air Force is the Hawk Mk 66. They were acquired in order to replace the F-5 as their lead advanced fighter trainer.

With the introduction of the Hawk the curtain fell for the F-5 in service with the Air Force since the early seventies. The syllabus however did not have to be adjusted since the flight capabilities of both aircraft are kind of similar.

Photos by the authors



Exchange programs

The RJAF pilots are constantly honing their skills and the RJAF has permanent exchange programs with a number of close allies, being the U.S., Pakistan, Turkey and the UK under which on a bilateral level, pilots are exchanged.

The RJAF proves to be a relatively small but very efficient air force that is showing agility and perseverance. With an excellent training facility in the form of the Aviation University, recruits are trained to a high level, creating a good bases for a well-operating air force. Despite the potential morale-killer of having a pilot publically executed by the enemy, the troops have done the opposite: they became even more motivated to fight the enemy.

When looking at the agility, the RJAF has proven over the last couple of years to be able to introduce and adapt to new aircraft types. Aircraft that are not performing well enough are replaced with better ones. As long as the fight with ISIS is not over, Jordan will, due to its geographical location, be at the front lines. Supported by befriended Arab and non-Arab nations in the region, it will also remain a very potent coalition partner with unique capabilities to support the multi-national efforts to repel Da’esh.

The authors would like to thank the RJAF Public Affairs Office, all the officers we have so openly spoken to and especially Major General Mansour S. Aljobour for the generous reception, openness and hospitality shown during our visit.

- Top
One of the latest additions in the inventory of the Royal Jordanian Air Force is the H-60.
- Bottom left
One of the types in use of 3 squadron is the Casa C295
- Bottom mid
Royal Jordanian Air Force has acquired an additional three ex US Air Force C-130E.
- Bottom right
Only two M28 Bryza’s were delivered to RJAF. Photos by the authors

