



Major General Mansour S Aljobour



Above: Major General Mansour S Aljobour has been chief of the RJAF since February 2013.

Major General Mansour S Aljobour took over command of the Royal Jordanian Air Force on December 11, 2013. He has served as commander at the Prince Hassan Air Force Base, commandant of King Hussein Air College, Director of RJAF Training and Director of RJAF Operations. Prior to assuming his current position, Aljobour was Assistant to the RJAF Commander for Operations and Air Defence. He is a command pilot with more than 4,500 flying hours in a variety of aircraft. ■

ON DECEMBER 24, 2014 the Royal Jordanian Air Force (RJAF) hit the headlines for all the wrong reasons. A young pilot, Captain Maaz al-Kassasbeh, was shot down in his F-16 near Raqqah, Syria. He was participating in a bombing mission against Daesh (Islamic State) as part of Operation Inherent Resolve (OIR) which had officially started on October 15.

Jordan's geographical position – land-locked between Iraq to the northeast, Saudi Arabia to the east, Israel in the west and Syria to the north – places it under direct threat from Daesh and other jihadi forces wreaking havoc in parts of Iraq and Syria. For this reason, RJAF is developing rapidly as it invests in personnel and equipment.

A month after the shutdown of the young RJAF pilot, Daesh posted a propaganda video online. It showed his brutal execution and drastically changed the way Jordan was fighting the war against the terrorists.

"We decided to revenge the barbaric execution of our pilot and flew 20 aircraft for three consecutive days, beginning on February 4, 2015," says a clearly emotional Major General Aljobour.

"We were using general-purpose and laser-guided bombs, and our battle damage assessment showed we hit every single target.

"But the greatest success was boosting the morale of the pilots.

When al-Kassasbeh was captured, I went down to the base [Azraq] and they were actually begging to fly. They were ready to fly anytime and take the fight to those guys [Daesh]; regardless of experience or rank, all the pilots wanted to continue with the job. They pushed me on a daily basis to go out and fly.

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on its operations over the country, the US has divided the airspace into areas of operation (AOPs).

Air tasking orders (ATOs) come from the combined air operations centre (COAC) in Al Udeid, Qatar, where an RJAF liaison officer relays information to the air operations centre in Jordan. The RJAF operates mainly over

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By mid-December the RJAF had flown 1,100 hours against Daesh, and was flying a two-ship mission on a daily basis. Jordan is the only Arab country permitted to fly bombing missions over Iraq, and although there are no restrictions

Raqqah in central Syria and Deir-ez-Zor in the nation's east, both Daesh strongholds.

"This is one of the most restrictive air campaigns ever," says Aljobour, "due to the long distances that have to be flown and the strict rules of engagement. Imposed to avoid collateral damage, they mean we have to loiter over the target for long periods before attacking."

FIT FOR THE FIGHT

Royal Jordanian Air Force commander Major General Mansour S Aljobour discusses with **Marco Dijkshoorn** and **Patrick Roegies** his latest acquisitions and the fight against Daesh.



Above: Six former UAE AT-802 Air Tractors are now operating with the RJAF. The Block 1 configuration employs GBU-58 and GBU-12 Paveway II LGBs.

Top: The RJAF's primary strike capability is delivered by the F-16AM and F-16BM, operated by three squadrons at Shaheed Muwaffaq Al-Salti (al-Azraq) Air Base. This example is carrying a Sniper targeting pod. All photos, authors

Frontline aircraft

There are 43 F-16AM/BM jets in the RJAF inventory and 15 more will be delivered from Royal Netherlands Air Force (RNLAf) stocks, comprising F-16AM J-057, J-145, J-193, J-199, J-510, J-623, J-637, J-638, J-868, J-870, J-872, J-873, J-876 and F-16BMs J-208 and J-884.

They are being upgraded to Mid-Life Update (MLU) Operational Flight Program (OFP) 6.5 standard, representing the latest software available in Europe.

Under the initial contract, OFP 5.0 was ordered and approved by the US Congress. But there have been technical difficulties in adapting OFP 5.0 to the hardware in the Dutch jets, and Congressional approval is now being sought for the release of OFP 6.5. Delivery is scheduled for late 2016/early 2017 and, with the MLU F-16s in service, the RJAF plans to ►



Above: Bell AH-1 Cobras, flown by 10 and 12 Sqns, play a vital role in border protection. A permanent detachment at H4 is supported by the ISR capabilities of the Cessna 208B Grand Caravan.
Below: The RJAF has a single PZL M28 Skytruck. Its role is unclear, but it is probably used for the infiltration and exfiltration of special forces. Another example will be delivered shortly.

sell some of its current inventory. Pakistan along with a European country and another potential purchaser have shown interest in the surplus F-16s which, if a deal goes ahead, are likely to come from the ex-US Air National Guard Peace Falcon II aircraft delivered to Jordan from 2003.

Meanwhile, an upgrade to raise the existing fleet of ex-Belgian Air Component and RNLAFF F-16AM/BMs to MLU 6.5 standard is planned. "We also signed a letter of acceptance for the procurement of JDAMs, and 15 Sniper pods have been purchased to enhance the F-16's capability," says Aljobour.

Air Tractor

To support Jordan's fight against Daesh, the United Arab Emirates (UAE) supplied six IOMAX Air Tractor AT-802 light-attack turboprops under a US-backed plan executed



Special Forces

Although Special Operations Command's (SOCOM's) Prince Hashem Bin Abdullah II Royal Aviation Brigade at King Abdullah II Air Base (KA2) is part of the Royal Jordanian Army, it has very close ties with the RJAF. Its aircraft are maintained by ex-Air Force personnel and its pilots

trained by the RJAF's King Hussein Air Academy. The brigade's three squadrons operate MD530F 'Little Bird' and UH-60L Black Hawk helicopters, and AC-235 gunships, from an apron adjacent to the control tower, which also overlooks the RJAF's presence at KA2. ■



Above: Eight MD530F Little Birds were delivered in late 2006. They serve SOCOM's 28 Sqn and, in common with the Black Hawks, some are in a sand camouflage and others in a dark scheme.



in 2013. They fly with 25 Sqn from Amman-Marka and KA2, but as new facilities are built at KA2, the Air Tractors will relocate there.

“We have six Block 1 Air Tractors and we’ll receive four more,” says the Major General. “All will have the Block 3 upgrade, similar to the IOMAX Archangel [based on the Thrush S2R-660 airframe]. The four additional aircraft are still in the US, but expected to arrive in Jordan by June 2016.”

They were initially earmarked for delivery to Yemen as a gift from the UAE, but because of that country’s turbulent situation they are being delivered to Jordan instead. Two were recently noted at Waco, Texas, with white Spraylat covering their Yemen Air Force fuselage roundels. After a year in Jordanian service, they will go through the Block 3 modification.

The six AT-802s already in the inventory boast intelligence, surveillance and reconnaissance (ISR) and strike capability. An upgrade, installing the MX15Di sensor, will enable the aircraft to fire Hellfire missiles and drop GBU-58 and GBU-12 Paveway II LGBs.

Unmanned Capabilities

The RJAF has ten Schiebel Camcopter S-100 unmanned air vehicles (UAVs) on strength (two of the 12 delivered have been lost) and four Finmeccanica Falco UAVs. The new Falco EVO armed UAV is being developed and evaluated in a bilateral project with the Italian Air Force, with a view to an RJAF purchase.

Battle damage assessments after RJAF strikes are currently provided by coalition ISR platforms but, Aljobour says, “Jordan is seeking an ISR capability of its own, both



Above: The King Hussein Air College at Mafraq operates the Slingsby Firefly in two roles. The white aircraft serve 4 Sqn as primary trainers, while the yellow machines are used for instructor training.

Below: The Instructor Pilot School operates eight ex-British T-67M-260 Firefly aircraft that retain their former civilian registrations.



as a sensor and shooter. We’re interested in any UAV that has both capabilities and we asked for the Predator, but I don’t believe the US is willing to export the technology to Jordan. They’ve shown willingness to export the Predator XP as a sensor platform, but we want a dual-role system.”

Recently the RJAF ordered the China Aerospace Science and Technology Corporation (CASC) Rainbow CH4B armed UAV, which is expected to enter service in January. The vehicle features a satellite link so that it can be operated from thousands of miles away.

In August, Israeli media reported that Israel is delivering 12 advanced Heron TP

and Skylark UAVs to Jordan – which remains to be seen.

Quick Reaction Force

The primary role of the RJAF’s rotary wing component, based at Amman-Marka, is tactical and VIP personnel transport. In the future a Quick Reaction Force (QRF) will also be established, based on up to 24 newly acquired Black Hawk helicopters. The initial 16 have been ordered and first deliveries have taken place.

“The Black Hawk is already in the inventory and we have good experience with it. It will also be used for border patrol and our ▶



Number 15 Sqn’s Cessna 208Bs, currently based at Amman Marka, have provided the RJAF with a good C3ISR capability.

RJAF Air Order of Battle December 2015

Unit	Type (inventory)
King Abdullah AB – Amman-Marka	
3 Sqn	M28 (1), C-130H (4), C-130E (6), C295 (2)
7 Sqn	AS332M-1 (10)
8 Sqn	UH-1H (approx 4), S-70A/UH-60A (16)
14 Sqn	EC635T1 (approx 8)
15 Sqn	Cessna 208B-ISR (6, will move to KA2)
25 Sqn	AT-802 (2, will move to KA2)
Emergency Medical Sqn	AW139 (2)
Royal Sqn	AW139 (1), S-70A-11 (approx 5)
Public Security AW	EC635T2i (4)

OJKA King Abdullah II (KA2) AB

10 Sqn	AH-1F (approx 18)
12 Sqn	AH-1F (approx 18)

Prince Hussein II ISR Wing

9 Sqn	Falco (4), S-100 Camcopter (10)
25 Sqn	AT-802 (4 + 4 on order)

King Hussein Air College – Mafraq

4 Sqn	T-67M-260 (16, painted white)
5 Sqn	R44 (8)
11 Sqn	C101CC (approx 10), PC-9M (9 on order)
Flight Instructor School	AS350B3 (6), T-67M-260 (8, painted yellow)

Shaheed Muwaffaq Al-Salti AB – al-Azraq

1 Sqn	F-16AM/BM (approx 15)
2 Sqn	F-16BM (approx 15, operational conversion unit)
6 Sqn	F-16AM/BM (approx 15)

Prince Hassan AB – H5

17 Sqn	Hawk Mk 63 (13)
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Rweished AB – H4

10/12 Sqn det	AH-1F Cobra (approx 6)
15 Sqn det	Cessna 208B-ISR (approx 1)

King Feisal bin Abdul Aziz AB – Al Jafr

This reserve base has no aircraft permanently assigned, one squadron of F-16s having moved from here to Azraq for missions against Daesh

SOCOM – Prince Hashim Bin Abdullah II Royal Aviation Brigade (part of the Army)

28 Sqn	MD530F (8)
30 Sqn	UH-60L (8)
31 Sqn	An-32B (1 written off and for sale)
32 Sqn	AC235 (2), AC295 (2 on order)



Above: Jordan replaced its F-5E/F fleet with ex-UAE Hawks.

special operations forces are involved in setting up the QRF," the Major General explains.

The recently delivered Black Hawks will likely receive the sensor systems fitted to the SOCOM UH-60L fleet at Amman-Marka. They will replace the few remaining UH-1H and EC635 helicopters with 8 and 14 Squadrons, respectively, which will be disbanded. The EC635 is deemed to lack the performance required by the RJAF and will be sold if a buyer can be found.

Attack helicopter

Jordan has received a large number of AH-1 Cobras over several years. The first 24 were delivered as AH-1S Stage 3 (modernised) aircraft, built for the US Army with Fiscal Year 1982 serials. This standard was later redesignated AH-1F and the aircraft were transferred to Jordan from 1985.

Two further batches, each of nine aircraft, were delivered under the Military Assistance Program from 2001, and 16 ex-Israeli Air Force AH-1E/F Cobras were refurbished and handed over to Jordan in 2014 in a US-approved

deal. At least eight AH-1Fs were transferred to Pakistan in 2013.

"We have 36 aircraft on strength and a contract with Science and Engineering Services at Huntsville, Alabama, to upgrade them," explains Aljobour. "The helicopters are being fitted with a glass cockpit while the avionics will be updated to allow them to fire Hellfire and other

guided missiles. We're expecting the first two by June/July 2016. Six aircraft are currently in the US undergoing upgrade."

Cobras fire the BGM-71A TOW missiles and unguided 70mm rockets, while a 20mm M197 Gatling gun is also installed.

Command & control

Among the most potent border

protection capabilities in the Middle East, a combination of six Cessna 208B-ISR Grand Caravan C3ISR platforms and other types secure Jordan's boundaries. Together with the AT-802, Cobra, two Airbus AC235 gunships and two S-100 Camcopters, the Caravans fly round-the-clock border surveillance.

A Cessna and six AH-1Fs are permanently detached to the air base closest to Iraq, Rweished (H4). "Our command and control capability used to be just C2, but now we have C3I and our situational awareness is very high," says Aljobour.

The C3ISR system is integrated with Hawk surface-to-air missile batteries, while the AC235 and F-16 have Link 16 data links, creating a fully integrated defence system.

Two C295s have been acquired and the King Abdullah II Design and Development Bureau hopes to modify them with a sub contractor to AC295 gunship configuration. At least one AC235 is forward-deployed in Saudi Arabia for close air support operations over Yemen. "It has been a very successful project and we encourage other countries to either join or follow us in it."

The RJAF has also deployed four F-16s for the effort but, says Aljobour, "this is a secondary target for the RJAF. The primary target remains [Daesh] in Syria."

Transport fleet

In March 2016 the RJAF had expected to enter the bidding for the transfer of several ex-RAF C-130Js. The RAF is expected to retire ten within the next few years, but an alternative option could be the upgrade of the RJAF's C-130E/H fleet or the possibility of buying new C-130Js.



Below: Approximately ten of the 16 C-101CC trainers originally delivered remain in service. Some have since crashed and others are used as a spares source to keep the ageing fleet flying. The Pilatus PC-9M will replace them from 2017.





Above: The majority of the retired F-5s are stored in pristine condition at H5, but most are expected to be sold to TacAir soon.

It currently operates two 60-ton capacity Ilyushin Il-76MF freighters in the strategic transport role.

Air University

On December 1, 2015, the King Hussein Air College (KHAC) at Mafraq was accredited as an 'Air University' offering a degree education in subjects including air traffic control, navigation and meteorology. The facility houses three training squadrons and the Flight Instructor School.

Asked how the next ten years look for the RJAF, Aljobour says: "It all starts with human resources; our troops should be ready for whatever the future brings.

"The first thing that I changed is their training. We're buying nine Pilatus PC-9M turboprops; the contract is signed and the Swiss-built aircraft will replace the CASA 101." Since 1987, 11 Sqn has flown the CASA C-101CC in the advanced training role.

Basic training relies on the Slingsby T-67M-260 Firefly, 16 of which were delivered from 2002. They were augmented in 2011 by eight ex-RAF/Defence Elementary Flying Training School examples formerly operated by Babcock. They still wear British civilian registrations and are operated solely by the Instructor Pilot School (IPS) – and appear to be a stopgap solution until a new basic trainer is introduced.

"We're in the process of buying a newer aircraft for basic training," says Aljobour. The Grob 109TP is among the types being evaluated, but more contenders will have the chance to demonstrate their aircraft.

"We phased out the Hughes 500D/E training helicopters because they were old. We replaced them with the Robinson

R44 Raven II." Eight R44 IIs serve 5 Sqn, the type having gained full operational capability (FOC) in April 2015 and taken over the Hughes 500's role in late 2014.

The squadron also operated the AS350B3 Squirrel, but since the R44's arrival, the six AS350B3s have passed to the Instructor Pilot School. The 500s are for sale, in a hangar at Mafraq.

Hawk for F-5

The Northrop F-5 was phased out of the lead-in fighter trainer (LIFT) role in 2014 and a batch

of aircraft was expected to have been sold to Tactical Air Support ('TacAir') in Reno, Nevada soon. "We keep two F-5s flying for heritage purposes, but they are no longer operational," says Aljobour.

The RJAF acquired 13 ex-UAEAF&AD BAe Hawk Mk 63A jets to replace the F-5, and would like to buy more Hawks so that more than one LIFT squadron could prepare pilots for the F-16. Meanwhile an upgrade is planned to equip the Hawk fleet with a more suitable avionics suite for F-16 training.

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Above: The R44 replaced the Hughes 500D and 500E in the basic helicopter training role.



Above: With delivery of the Robinson R44 Raven II, the AS350B3 helicopters were transferred from 5 Sqn to the Instructor Pilot School. All basic and advanced helicopter pilot training is now performed on the Raven II.

Red Flag

"There are skills you only get from an exercise like Red Flag," says Aljobour. The RJAF took four F-16AMs and one F-16BM to Red Flag 15-4. On the way to Nellis AFB, Nevada, the Jordanian F-16s refuelled from an Israeli tanker supporting a number of the country's F-15s.

"When our pilots came back, they were extremely happy with the experience they'd gained from Red Flag. The skills they learned will stay with them for a long time."

The RJAF Red Flag participants experienced scenarios replicating the current threat to Jordan. "Red Flag is high on our agenda and the RJAF would like to participate again in 2016. If that's not possible, then definitely in 2017," says Aljobour enthusiastically.

Jordan's pilots constantly hone their skills and the RJAF has permanent bilateral exchange programmes with close allies including Pakistan, Turkey, the US and the UK.

Overall, the RJAF is a relatively small, but very efficient, air force that demonstrates agility and perseverance. With an excellent training facility in the Aviation University, recruits are trained to a high level, creating a good basis for the future.

In recent years the RJAF has shown its ability to introduce and adapt to new aircraft, replacing poorly performing types, and the public execution of one of its pilots has served only to galvanise Major General Aljobour's colleagues against the Daesh enemy.

As long as the fight with Daesh continues, Jordan's geography will keep it on the front line. Supported by Arab and non-Arab nations in the region, it will remain a potent coalition partner with unique capabilities. ■