



# KERIS TERBANG

ISSUE 9 | 2022



## BOLKOW BO-105

THE END OF AN ERA

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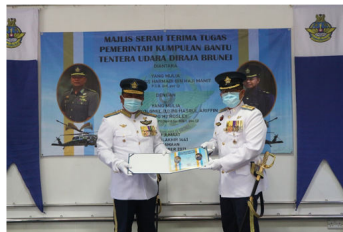
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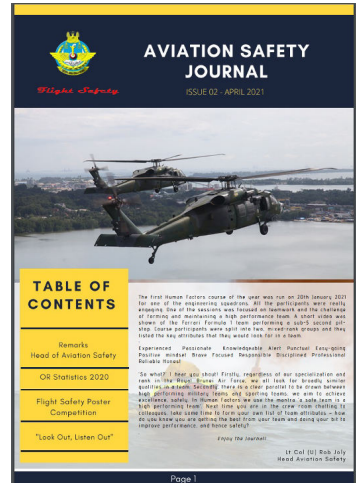
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## FOREMOST



Assalamualaikum.

Welcome to Issue 9 of Keris Terbang. 2021 was a remarkably challenging year, as the pandemic slowed down and the nation transitioned through the endemic phase of COVID-19.

Throughout all this, we collectively and individually took lessons away and embraced the changes. It highlighted gaps but also showed our strengths.

In this edition of Keris Terbang we have a wide range of articles for you to enjoy. From our beloved nations National Day Parade, changes in both the RBAF and RBAirF leadership. We bade farewell to the RBAF Commander and welcomed new leadership in both our Operations Group and Support Group. We also witnessed the decommissioning of the BO-105 helicopter which was utilised for over 40 years.

Aside from this, the RBAirF has steadily maintained its operational output nonetheless, continuously aligning ourselves with the Service Above Self, Teamwork and Excellence core values.

We hope that you enjoy our ninth edition of Keris Terbang as we aspire to motivate the men and women of the RBAirF in all their hard work. I would also like to take this opportunity to my team and all article writers who contribute and dedicate their time to the success of this magazine. Please do continue to support us by reading through and sharing your stories one at a time.

Wishing everyone a great year ahead, clear skies and calm winds.

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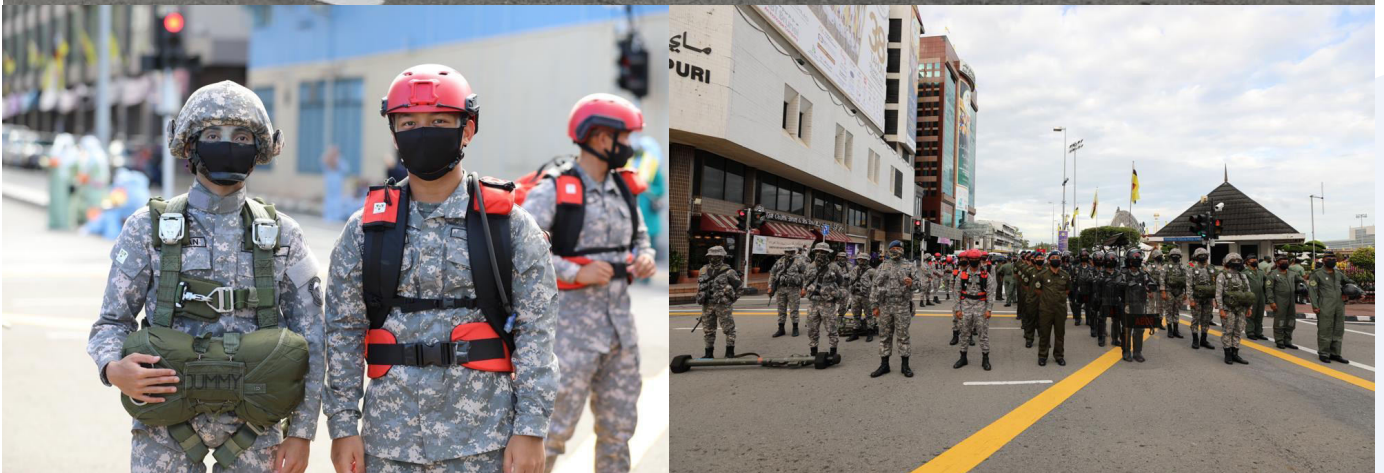
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# NATIONAL DAY PARADE

By Lt (U) Fuad



**LEFT**

The RBAirF colours during the parade

**BOTTOM LEFT**

PATDU personnel at the ceremony

**BOTTOM RIGHT**

The RBAirF contingent

**RIGHT**

The RBAirF contingent marching towards the SOAS Field

Under the morning sun shining across Bandar Seri Begawan, citizens and residents of this country gathered to participate in the national day parade, celebrating the country's 38<sup>th</sup> year of independence. The sound of the Parade Commander echoed down the *Taman*. Everyone stood still as the beat of the drums lead the start of country's national anthem – "*Allah Peliharakan Sultan*".

Brunei Darussalam is currently facing the third wave of COVID-19. Despite this, the country followed through with its national day celebrations. However, the sultanate had scaled down its celebration from pre-pandemic levels in the past two years preventing any major outbreaks of the virus. On 23 February 2022, the national day parade was held at the Taman Haji Sir Muda Omar Ali Saifuddien, which His Majesty Sultan Haji Hassanal Bolkiah Mu'izzaddin Waddaulah ibni Al-Marhum Sultan Haji Omar Ali Saifuddien Sa'adul Khairi Waddien, Sultan and Yang Di-Pertuan of Brunei Darussalam has consented to join the citizens and residents of this country in celebrating this important day with other members of the Royal Family.

The celebration would only follow through alongside abiding the SOPs and guidelines set by the Ministry of Health. Some of these included only allowing individuals that are 12 years old and above to attend, with a minimum of completing two vaccine doses. Antigen Rapid Test (ART) stations were also provided and only those with negative results would be allowed to participate. Although there has been an unprecedented surge in Omicron cases, by having these measures set in place, it has reassured worrying hearts that an outbreak can be prevented.

The celebration began with the national anthem, followed by the Guard of Honour's inspection by His Majesty the Sultan and Yang Di-Pertuan of Brunei Darussalam. The Guard of Honour contingent led by the Parade Commander, Lieutenant Colonel Azhar bin Haji Matzan comprised of 409 personnel from the Royal Brunei Armed Forces (RBAF), Royal Brunei Police Force (RBPF), and a combined band from both forces. The following march past consisting of 3,800 participants, was divided into eight contingents: the Parade Leader, State Security, Bestari Community, Public and Private sectors, Public Movement, Education Sector, Cyclists, In-Line Skaters and Frontliners. 241 RBAF personnel led by Colonel Pengiran Sharifuddin bin Pengiran Haji Yusof, Commandant of Defence Academy RBAF, participated in the march past. All the while, patriotic songs were played by the RBAF Band entertaining viewers at the Bandar and those at home watching on their televisions or mobile devices.

The Royal Brunei Air Force (RBAirF) was represented by a contingent of 58 officers and other ranks. Donning different uniforms of the organisation, some in flying suits, ceremonial uniforms, anti-riot gear and even some carrying Mistral firing stations, marched on the streets of Bandar Seri Begawan. With their mask on, overcoming the adversities of the pandemic for past few years, these airmen and airwomen proudly marched past the *Royal Dais*, honouring their National Day.

# BOLKOW 105 RETIREMENT FROM SERVICE

By Maj (U) Adi Faiz



The RBAirF's Messerschmitt-Bölkow-Blohm (MBB) Bo 105 or famously known as Bolkow 105 or BO-105 entire fleet has been retired from service marking the end of a long and historical era. On the 4th of February 2022, an event was organised to officially mark the retirement. The German-made helicopter made history when it arrived in Brunei 41 years ago, and since then it has performed numerous roles serving for the country, from executing special forces tasks, conducting daily border surveillance, transporting passengers and even to be part of static and air displays, the BO-105 at its prime is well known for its reliability and flexibility. Famously known by the callsign "Stinger", the BO-105 is a versatile, fast and extremely agile helicopter.

## THE HISTORY

This Light Observation Helicopters (LOHs) arrived in 1981 with full administration and maintenance by REME (Royal Electrical & Mechanical Engineering), British Army Loan Service before being handed over fully to local personnel under No. 2 Squadron in 1993.



Together with the Bell 212's fleet, they performed flying duties in support of the armed forces as well as other government agencies. In 2017, No. 2 Squadron was renamed as No. 12 Squadron for the Flying Ops and No 52 Squadron for the Engineering Squadron. Surprisingly, only 36 local pilots have completed conversion to type and flew BO-105 operationally and 4 went on to be Commanders of RBAirF.

These pilots were lucky enough to have experienced one of the best helicopters in its era due to its unique and rare design (rigid rotor system) that provides high manoeuvrability and extraordinary responsiveness which offers precision and efficiency in performing tactical Concealed Approach and Departure (CAD), navigating through tight terrain and landing in small confined spaces. Amongst the pioneers of BO-105 who went to Germany for the initial training were Maj (R) Karim, Col (R) Zainal, Lt Col (R) Nafiah and the late Maj (R) Hj Ishak. In total, the BO-105 clocked a collective 32,000 hours on all 6 aircraft throughout its service.

**ROLES AND RESPONSIBILITIES**

One of its primary role is to provide Close Air Support (CAS) and providing air to ground fire support for the ground forces. The SURA rocket systems were the initial weapon used for CAS and was later replaced by the Forges De Zeebrugge (FZ) Rocket System from Belgium in 2002. Along with CAS, the BO-105's primary role is also to support the requirement of special forces such as sniper cover, vehicle interdiction and emergency evacuation. Other tasks include surveillance and reconnaissance, troop and cargo lifts, search and locate (SAL), flying doctor, casualty evacuation (CASEVAC) and Mortar Firing Control (MFC).

Additionally, the other significant roles are supporting external agencies for example: border reces for the Survey Department, Royal Brunei Police Force and the Forestry Departments, flying doctors to rural areas for the Ministry of Health, aerial photography or video recordings for Radio Televisyen Brunei and others.

**TOP LEFT**

Group photo during the retirement from service ceremony

**BOTTOM LEFT**

The initial Bolkow BO-105 crew

**TOP RIGHT**

The local aircrew during the early phases of the aircraft

**MIDDLE RIGHT**

FZ Rockets to be used for the BO-105

**BOTTOM RIGHT**

The BO-105 showing its agility by flying low

**RIGHT**

BO-105 participating in one of the special forces demonstration





### OTHER INVOLVEMENTS

BO-105s were also involved in numerous exercises both domestic and overseas namely SAREX MALBRU and MERTAK BERSATU with the Royal Malaysian Air Force, ELANG BRUNESIA with the Indonesian Air Force, EX CARAT with the US Military and EX SETIA KAWAN with the British Armed Forces.

A number of very high profile pilots have also flown the aircraft, most notably His Majesty Sultan Haji Hassanal Bolkiah Mu'izzaddin Waddaulah, Sultan and Yang Di-Pertuan of Negara Brunei Darussalam, His Royal Highness Prince 'Abdul Mateen and His Royal Highness Prince Mohamed Bolkiah with his famous callsign "Wildcat", who was also a regular flyer of the BO-105

#### TOP LEFT

His Majesty Sultan and Yang Di-Pertuan of Negara Brunei Darussalam during one of his BO-105 flights

#### TOP RIGHT

His Royal Highness Prince Mohamed Bolkiah getting ready to fly the BO-105

#### FAR RIGHT

The wreckage from the crashed BO-105

#### BOTTOM

Group photo during one of the exercises involving BO-105



**INCIDENTS**

Besides holding good flying records, there were also numerous incidents involving the BO-105. As highlighted in the RBAirF Bluebook, a notable incident was the loss of an aircraft in Temburong during its early years back in 1984. Taking off from Bangar Camp at dusk, the pilot and co-pilot (crewman) were focusing on adjusting the interior lightings, unaware of the aircraft’s nose down attitude. Within a split second, it crashed into the jungle and prompted a rescue mission. This error of judgement from the experienced crew had proven that accidents can happen to anyone and anywhere without warning. They were lucky to survive without any fatality.

Another famous incident known as the “cable strike” was when the aircraft was flown by an experienced pilot, clocking 1,200 flight hours and a test pilot on type, carrying passengers as they flew low level from Temburong to BIA and somehow struck a cable laid across a small river. They, however, managed to fly to their destination with major repairs taking place afterwards.

**SQUADRON CULTURE**

Besides flying, the squadron was also famously known in maintaining harmonious culture not just within the aircrew but also the ground crew or the engineering squadron. Activities such as Hari Raya “Open Squadron”, annual anniversary events, soccer matches, religious activities and many others were always the thing to look forward to and created closer bonds amongst the personnel.



**CHALLENGES AND THE FUTURE**

BO-105 encountered many challenges towards the end of its service mainly due to the obsolescence of spare parts which slows down the serviceability. The loss of the BO-105 will surely be missed, especially amongst the personnel working directly and those who had served for many years. With the current project for the replacement of BO-105 is ongoing, it is essential for the squadron personnel to make full use and maintain their expertise, knowledge and skills as they prepare themselves for the upcoming BO-105 replacement.

# SINGAPORE AIRSHOW 2022

By Maj (U) Alli Farid

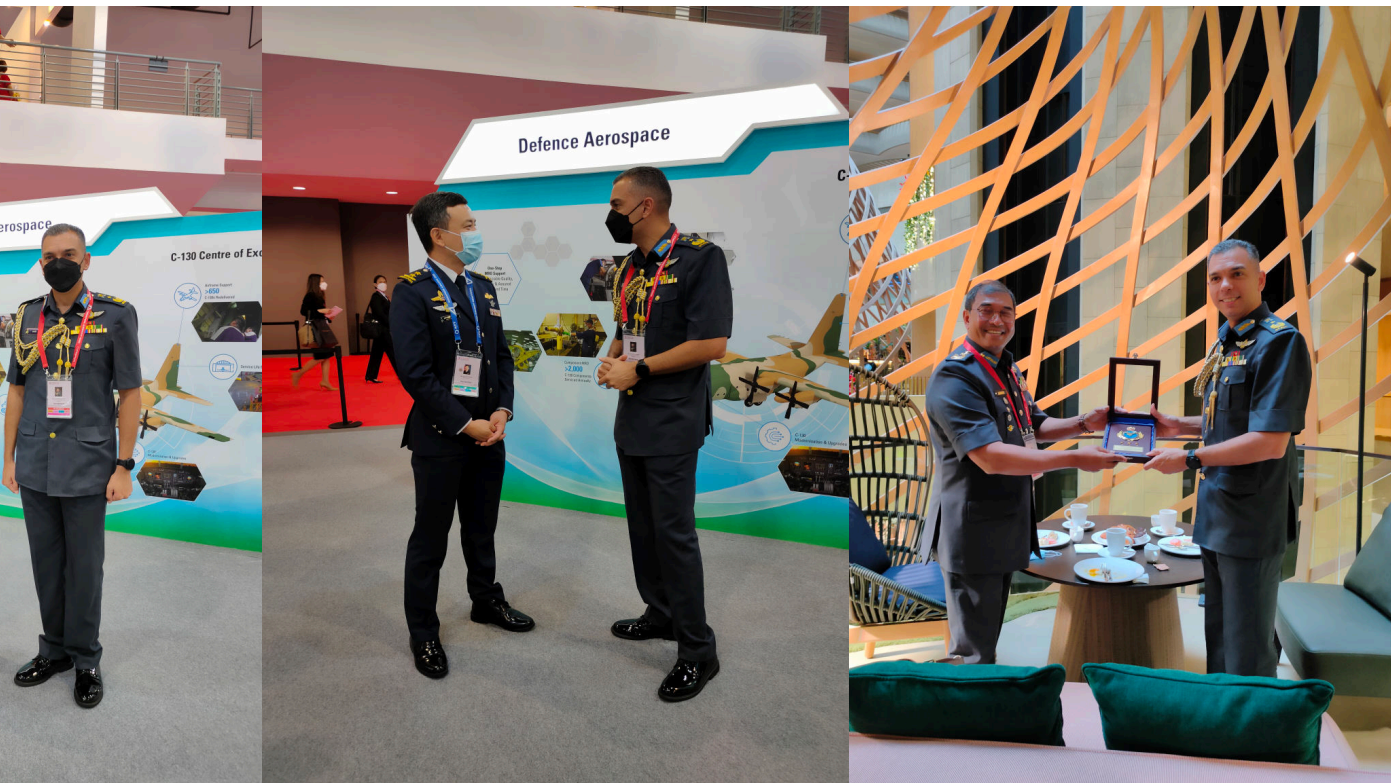


The Singapore Airshow is an exhibition involving both military and government delegations from all over the world. The airshow is conducted once every two years is the biggest airshow in the region and is an excellent platform to find out about the latest offerings in the military aviation world. The RBAirF has always been part of this excellent platform, and this year I have been lucky enough to be part of the RBAirF delegation to the airshow. The delegation this year consisted of Commander RBAirF, and representatives of two ongoing IPTs.

We flew there on Monday, and after the customary PCR tests we were cleared to attend the opening ceremony on the following day. We had a very packed schedule so all the visits were planned and executed strictly to the programme.

During the airshow we had the opportunity to meet and discuss with the major players in the aviation industry. These included Lockheed Martin, Bell, Boeing, MBDA and so many other manufacturers providing all the advanced and latest capabilities within the existing market. I think one of the most useful aspect of this visit is that we are able to find out about detailed information with regards to certain products, which are not available online.

In addition to these information, it is also a useful platform for the RBAirF IPT representatives to actually meet and talk about the capabilities that we have researched, and most importantly to establish contacts.



Additionally during the airshow we also had the opportunity for bilateral interactions with other air forces around the region. These included interactions with the Republic of Singapore Air Force, Royal Malaysian Air Force, Japan Air Self-Defense Force, Philippines Air Force, Royal Canadian Air Force and the Royal Australian Air Force.

The discussions with these counterparts are centred around the main objective of how each of us can continue to maintain peace, stability and prosperity within the region. Furthermore, discussions were also held on finding and strengthening the relationships with other air forces through collaborations, joint military exercises, support and even visits. This engagement is somewhat very important and aligns well with the overall defence diplomacy policies.

During the after hours of the airshow we also managed to spend some time with our counterparts from the RSAF. The hospitality provided throughout the visit was excellent and the RBAirF felt honoured to be invited to such event.

#### **LEFT**

A group picture while visiting the Singapore Pavilion

#### **TOP RIGHT**

Commander RBAirF with SAF's CDF

#### **FAR RIGHT**

Commander RBAirF having a discussion with RSAF's CAF

#### **BOTTOM**

Plaque exchange with RMAF Deputy CAF

# COMMANDER RBAF FAREWELL VISIT

By Lt (U) Muhd Hidayatullah



All good things come to an end, eventually. Royal Brunei Air Force welcomed Major General (U) Dato Seri Pahlawan Haji Hamzah bin Haji Sahat for his farewell visit on the 10<sup>th</sup> of February 2022, at the Rimba Air Force Base. The ongoing battle with COVID-19 made it difficult to have any face to face interaction without the risk of contracting the virus but with proper and careful planning and adherence to guidelines set by Ministry of Health, RBAirF managed to organise one last welcome for our 11<sup>th</sup> Commander of Royal Brunei Armed Forces.

Major General (U) Dato Seri Pahlawan Haji Hamzah bin Haji Sahat was greeted by our RBAirF, Brigadier General (U) Dato Seri Pahlawan Mohammad Sharif bin Dato Paduka Haji Ibrahim and received an Honorary Salute at the RBAirF Headquarters. The visit was followed by a tree planting ceremony, the officiating of Luagan Simpung Park and a brief visit to AACC Mini Park.

**TOP**

Dato Hamzah receiving a memento at the Air Movement Centre

**TOP RIGHT**

A Tree Planting Ceremony by Dato Hamzah

**MIDDLE RIGHT**

Dato Hamzah officiating the Luagan Simpung Park

**BOTTOM RIGHT**

Dato Hamzah meeting RBAirF personnel

**MAIN PICTURE**

Dato Hamzah during his visit to the AACC Mini Park

Despite the busy schedule, the former RBAF Commander also made time to meet and interact with RBAirF personnel whilst also sharing a few advice and some words of wisdom. The get together took place in the Gymnasium for RBAirF Headquarters and No. 7 Wing personnel, while for Operations Group and Support Group personnel, the gathering took place at Hangars A and B respectively. The RBAirF personnel took this opportunity to personally thank Yang Mulia Dato and to take photos and selfies.

The main advice that I can take away from his message to us in the Gymnasium was that, to every problem that a person is going through, the solution will always lie within the five Fardhu prayers. Always remember to do the prayers regardless of how busy or how tired we are, never forget to pray. This can be related with the first advice that he gave when I first commissioned as an officer and Yang Mulia Dato was the Commander of RBAirF at that time, in which he said to always start the day with the intent to worship Allah in whatever we do, be it at work or our daily routine, therefore everything that we do is for Allah.

Another advice that I would like to share is during his introductory visit to RBAirF as the Commander of RBAF, he advised us to always leave a legacy. This legacy does not have to be big or well known, it can be something small just within your office, as long as it is in the direction of improving the organisation. With this, we are always looking for areas to improve on so that if we leave, our replacement can build on it or improve it even more. Even with these series of advices that I have shared, it paints what type of leader Yang Mulia Dato is and what his vision is for the organisation.

Final venue for the farewell visit was at Air Movement Centre where Yang Mulia Dato received mementos from officers, other ranks and civilians working within RBAirF. He was then invited for a group photo, in the formation of the Hawk Fighter Aircraft as a gesture for being a capable person to pilot such aircraft. Lastly, the farewell ended with the signing of the commemorative parchment and a farewell flight which included the aerial view of Bukit Agok, Rimba Air Force Base and Berakas Garrison.



# COMMANDER RBAF FAREWELL GOLF INTERACTION

By Cpt (U) Ahmad Wafiy



Brigadier General (U) Dato Seri Pahlawan Haji Hamzah bin Hj Sahat was the Second Air Force officer to be promoted as Commander of the Royal Brunei Armed Forces. He has dedicated and contributed so much of his time and effort towards improving RBAF throughout his enduring 34 years of service, and what is good must always come to an end as he will be retiring from that position effective 01 March 2022.

In conjunction with the retirement of our former Commander, I, along with the newly promoted RBAirF officers and newly commissioned RBAirF officers of OCS Intake 20 were honored to have the opportunity to organize and invite all "Blue" officers in RBAF to a golf interaction session at Royal Brunei Airline Golf Course RBA Golf Club.

The golf tournament was followed by a luncheon at Dewan Punai, RBAirF. During the announcement of scores, it was to no surprise that Dato Hamzah himself bagged both Gross and NTP Hole 2 achievements. Not only is he a brilliant Commander, he is also a very talented golfer. He was also presented with a personalised golf bag as a retirement gift from all RBAirF officers.

Before bidding his final goodbye as Commander, Dato Hamzah also advised those in attendance, directed especially to us officers who are just at the beginning of our careers, to always maintain the high standards of discipline and to continuously learn to be a better version of ourselves in order to be able to lead and collectively work with our subordinates in working towards achieving RBAF's mission and vision.



**LEFT**  
Group picture before tee-off

**TOP RIGHT**  
Dato Hamzah taking his first shot

**RIGHT**  
Commander RBAirF presenting a memorabilia to Dato Hamzah

**BOTTOM**  
Dato Hamzah with the senior officers



# OPERATIONS GROUP WELCOMES NEW COMMANDER

By Cpt (U) Fatin



Colonel (U) Hismawadi bin Hj Md Said relinquished his duties as the Commander of the Operations Group, Royal Brunei Air Force to Lieutenant Colonel (U) Hishamuddin bin Abidin during the Change of Command Ceremony on 31<sup>st</sup> January 2022 at Air Movement Centre (AMC), Rimba Air Force Base.

A change of command is a military tradition that represents a transfer of authority and responsibility for a unit or command. The tradition of the change of command ceremony are embodied in exchange of parchment signatures and speeches from an outgoing commander to an incoming commander ensures that the operation group are never without official leadership, reflects a continuation of trust, and signifies an allegiance of airmen and airwomen to their group's commander.

Lieutenant Colonel (U) Hishamuddin bin Abidin, the new Commander of Operations Group, presided over the ceremony. He credited Colonel (U) Hismawadi bin Hj Md Said for his incredible leadership to a dynamic organization, and applauded the way Colonel (U) Hismawadi had navigated and drove forward through the COVID-19 pandemic.



Colonel (U) Hismawadi bin Hj Md Said assumed command of Commander of Operations Group on 30<sup>th</sup> September 2020. Prior to that, other key assignments during his career include the Head of Inspectorate Unit for RBAirF, Assistant Chief of Staff Royal Brunei Armed Forces, Chief of Staff RBAirF and Assistant Chief of Staff RBAirF as well as Commanding Officer of Training Wing, RBAirF.

**LEFT**

Col (U) Hismawadi, the outgoing COG

**BOTTOM LEFT**

HOTO between Col (U) Hismawadi and Lt Col (U) Hishamuddin

**BOTTOM RIGHT**

Group photo at the end of the ceremony

**TOP RIGHT**

Presenting the symbol of leadership to the new COG



# SUPPORT GROUP CHANGE OF LEADERSHIP

By Lt (U) Hafiy



It was on Friday, 26 November 2021 When the Handover Takeover ceremony of the Commander Support Group Commenced. The handover was between the outgoing commander, Col (U) Harmadi bin Hj Mamit and the incoming commander, Lt Col (U) Pg Hasrul Ariffin bin Pg Hj Rosley.

It was a pleasant day to be remembered. It marked the retirement of the outgoing commander after 33 years of dedicated service to the RBAF, in which he held the commander support group position for over 4 years. Col (U) Harmadi has always been a person to look up to in which he gave critical advices and his experiences throughout his service.

The ceremony was also attended by the senior officers, officers, Regimental Sergeant Major and RBAirF personnel. During this Pandemic era, it is crucial to follow the Standard Operating Procedures and guidelines issued by the ministry of health. Nevertheless, Physical distancing were assured and facemask were worn for the safety of every personnel.

The ceremony started with the recitation of surah Al-Fatihah to blessed the event, followed by a speech from the outgoing commander support group himself. It was an insightful speech marking his last formal speech before his retirement. It follows with the handing over certificate between the Outgoing and Incoming Commander Support group which marked the official transfer of leadership and command. Lastly, Lt Col (U) Pengiran Hasrul Ariffin bin Pengiran Haji Rosley also delivered his inaugural speech during the ceremony, unveiling himself as officially the new commander support group.

The ceremony was concluded with the closing doa and a farewell lunch which includes gift presentations.



**TOP LEFT**

Col (U) Harmadi, the outgoing CSG

**TOP MIDDLE**

Col (U) Harmadi receiving the honorary salute

**TOP RIGHT**

The outgoing and incoming CSG

**RIGHT**

Presentation of the memento to the outgoing CSG





MESSERSCHMITZ BOEING  
UH-70



# THE END OF AN ERA

The Bolkow BO-105 retirement from service ceremony

# NEW OFFICERS INDUCTION AND EXPERIENCES

By Lt (U) Muhammad Fauzi

Intake 20 Officers commissioned on 13 January 2022 and the following week they had to undergo health and fitness assessment at Performance Optimisation Centre at Bolkliah Garrison for five days before reporting to RBAirF. In addition to that, we also had to complete our clearances at Officer Cadet School (OCS) and prepare all the necessary items to move to Berakas Camp Flat, Standard Operating Procedures (SOPs) as a junior officer at RBAirF and introduction to all seniors officers at RBAirF through social media. The induction week started on Monday, 7 February 2022.

On the first day after Surah Yassin, the induction week was led by Lt (U) Wan Qatrunnada Alwani where she briefed us on the organisational structure of RBAirF and the leadership. The day was followed by talk on sexual harassment and what to expect as a junior officer.

On Wednesday, 9 February 2022 our intake was honoured to be able to participate in the Sword Presentation Ceremony with the Guest of Honour being our own Commander, Brigadier General (U) Dato Seri Pahlawan Mohammad Sharif bin Dato Paduka Haji Ibrahim at Rajawali Lounge, RBAirF Headquarters. The inaugural Sword Presentation Ceremony is to tradition for newly commissioned officers and to encourage the officers to uphold the responsibilities entrusted to them with enthusiasm and commitment upon joining RBAirF. On the same day, Commander of RBAirF had a session with RBAirF officers Intake 20 at Alap-Alap Room, RBAirF Headquarters where he shared the organisation's expectations on officers as leaders and challenges of junior officers as leaders in RBAirF. The Commander of RBAirF also emphasised the importance of the RBAF core values and the RBAirF core values and how it complements each other.

On Thursday, 10 February 2022, we had the opportunity to attend farewell visit by The Commander of Royal Brunei Armed Forces (RBAF) to the RBAirF. We were tasked to be liaison officers at respective allocated venues where they had to usher guests at the event. It is an amazing event to spectate a historic moment for the first time in the RBAirF's prestigious history, the flight (farewell flight) was operated by an all-female crew.

During our Special to Service term in OCS, we didn't have the chance to visit RBAirF because of the pandemic. Therefore, during the induction week we were given the chance to visit No. 5 Wing where we learned about the aircrafts and the role of No. 5 Wing. We also visited Fire Service Flight and Air Traffic Control. On the fifth day, we continued their visits at No. 2 Wing and No. 3 Wing to learn and experience the respective wings. On the last day of the induction week, we were given briefings from Pay Office, Management Unit's Fittings, Operational Health and Safety (OHS) and Security Talks.

Overall I believe that the induction is a very useful platform to help us get started on our feet. It helped us understand the challenges and the reality of working in the RBAirF, albeit being only at the surface level.

## TOP RIGHT

Intake 20 officers in a group photo with CAF

## BOTTOM

Visiting 236 Squadron of No. 2 Wing

## BOTTOM MIDDLE

Photo with the decommissioned Bolkow BO105

## BOTTOM RIGHT

Sharing session with CAF







# ADTC, DCC and A2 AIR DEFENCE COURSES

By Lt (U) Qawiy

The Air Defence Troop Commander Course (ADTC), Detachment Commander Course (DCC) and Advanced Air Defence Course (A2) was conducted simultaneously by the 77 Squadron, No. 7 Wing of the Training Group RBAirF. All of the courses started on 11th April 2022 until 1st April 2022. The course was attended by 27 personnel from No. 2 Wing which consist of 5 officers and 22 other ranks. All three of the courses are compulsory for any personnel in the Air Defence Squadron, pertaining to their respective rank, to understand the Technique, Tactic and Procedures (TTPs) in handling the Very Short Range Air Defence (VSHORAD) system which is the Mistral.

Despite the current COVID-19 endemic restrictions, throughout the course, everything was ensured to be adhering to the Ministry of Health (MOH) guidelines, such as scanning of QR codes, wearing masks and usage of hand sanitisers. This also includes maintaining cleanliness of the classrooms and equipment used and keeping a self-hygiene culture among the course participants.

The ADTC course is a fundamental course that qualifies an officer to hold the Troop Commander position to be leading troops and also act as a planner of an Air Defence operation. The theory lessons consist of Introduction to Air Defence, Aircraft Recognition, Air Defence Deployment Sequence, Manual Procedures, Air Defence Estimates, Air Defence Standard Operating Procedures, Airspace Control Measures and Orders. During this course also the ADTC course participants attended Intelligence Preparation of the Battlespace (IPB) and Map Marking classes hosted by the Intelligence Training Wing (ITW), Ministry of Defence (MINDEF). These classes are relevant to be applied for an officer throughout their career.

The DCC course qualifies a trooper to hold the Detachment Commander (No. 1) position. The Detachment Commander has the important role in achieving the overall mission of a respective Air Defence task. Each No. 1 is equipped with a radio and they are responsible to act as the communications link between Troop Commander and the detachment.



**LEFT**  
Presentation of vocation badge by COG

**MIDDLE**  
Group photo during the closing ceremony

**RIGHT**  
The Detachment Commander his delivering tactical brief

Both the ADTC and DCC course participants also attended briefings on Law of Armed Conflict (LOAC) and Rules of Engagement (ROE) hosted by Judge Advocates General (JAG), MINDEF. The purpose of learning LOAC is that it is important for personnel to understand as to what extent the use of force in times of conflict is permissible and that each personnel are legally obliged to a set of rules to comply as members of the profession of arms. Additionally, the purpose of understanding the ROE is also a more practical way of the LOAC and its applications whether during peace or crisis times.

Lastly, the A2 course qualifies a trooper to hold the 2IC Detachment (No. 4) position. The 2IC Detachment is responsible in ensuring the welfare and administration among their respective detachments. No. 4 dictates and justifies the position of equipment such as anti-lightning, radio mast, local defence and sentry for their detachment.

Among the theory lessons attended by both the A2 and DCC are similar subjects such as Battle Prep, Coverage Performa, Sighting & Reconnaissance, Tactical Controller, Orders, Occupy Procedure, Rolling Resupply, Aircraft Recognition, MAPCO and Air Defence Knowledge (ADK). The only difference is in terms of their roles and responsibilities as No. 1 and No. 4.

Towards the end of the course, a 5-days exercise was conducted which was a combination of participants from all the three courses. The objective of the exercise was to demonstrate everything the participants had learned throughout the course and to apply them on the ground within a controlled situation. The exercise was planned by the ADTC course participants playing their role as Troop Commanders which includes creating the Scenario, Main Events List, Intelligence Summary, Tactical Brief and also delivery of Full Orders and Movement Orders, throughout the exercise. On 29th March 2022, a closing ceremony was held where each course participants were presented with their Air Defence badge and course certificates by the Commander of Operations Group, Lt Col (U) Hishamuddin bin Abidin.

# OMICRON

(B.1.1.529): SARS-COV-2 VARIANT

## THE OMICRON OUTBREAK

By Lt (U) Hanif

In the early 2022, the reduced number of diagnosed COVID-19 patients encouraged the government to reopen schools in phases and shopping centres started to open their shops as per normal. However, the outbreak of the 3rd wave COVID-19 cases in Brunei sometime in early February gave a huge impact to the government as a whole, including us the RBAirF personnel which affected our daily operations such as the reduction of the air and ground crews to deliver the daily taskings.

Relating to the spike of daily cases, almost 300 personnel have been infected by the COVID-19 which were found out by the Variant named Omicron. RBAirF involvements in curbing the pandemic also played a major role in helping the Whole-of-Government-Approach by sending CIMIC troops to the Isolation Centre at PKBN Temburong and Mahad Islam Brunei Tutong, sending our qualified personnel to the Task Force Operation Centre and some at the swabbing as well as vaccination centres. Experts say that the Omicron will double in numbers with Brunei cases reaching up to 4000 daily cases at the peak of the outbreak.

The RBAF as a whole and RBAirF specifically maintains its commitment towards helping the government to combat the pandemic by also providing to aid to send food, medicine and ART kits to those population who have been affected.

Although most of the infected RBAirF personnel are fully vaccinated and with only minor symptoms it is still leaving a 'scar in the lungs' as many of the Doctors mentioned. Even worse, it will affect more on those categorised as high risk personnel because the majority reported that the 'Long Post-COVID' are still affecting their breathing for a couple of weeks or months after the recovery from the infectious disease.

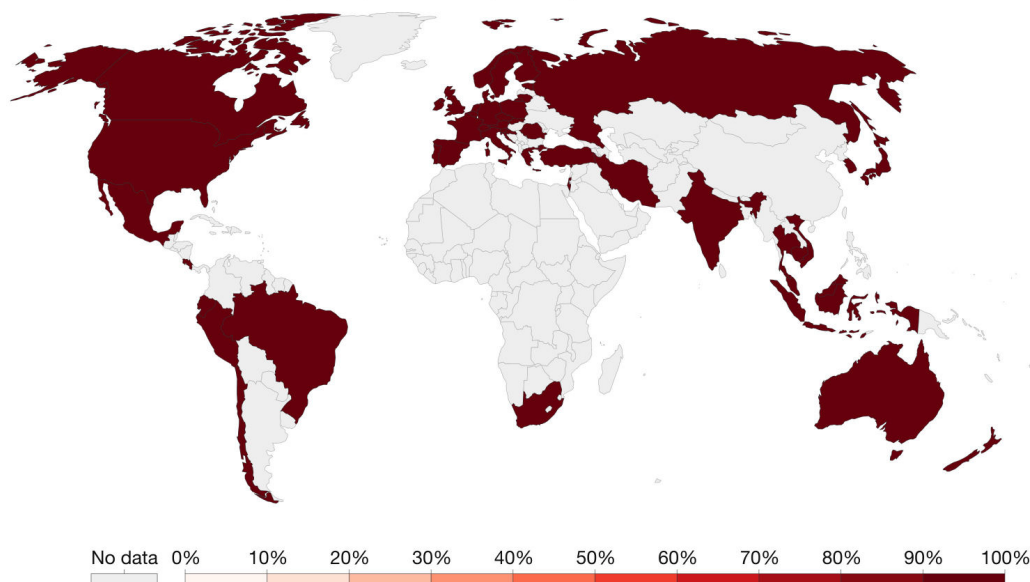
Consequently, these also affect our personnel's' fit for role status especially those line of work requires physical fitness as their breathing is still affected. Some may not be able to perform their annual fitness test hence also affecting their career progression and/or attending mandatory courses as they cannot complete the requirement.



## Share of SARS-CoV-2 sequences that are the omicron variant, Mar 21, 2022

Our World  
in Data

Share of omicron variant in all analyzed sequences in the preceding two weeks.



Source: GISAID, via CoVariants.org – Last updated 26 April 2022

OurWorldInData.org/coronavirus • CC BY

Note: This share may not reflect the complete breakdown of cases, since only a fraction of all cases are sequenced. Recently-discovered or actively-monitored variants may be overrepresented, as suspected cases of these variants are likely to be sequenced preferentially or faster than other cases.

Three main factors have been identified for RBAirF on why the number of local cases have reached such high numbers, included in RBAirF as listed below:

1) Ignorance – Some members of the public including our personnel did not follow the basic SOP such as wearing masks, updating BruHealth, Self-Assessment, scan QR Code, not being honest to themselves, lack of knowledge of the current situation, and still going to crowded places without any important requirement.

2) Reopening of Schools - Many of RBAirF personnel have been affected by their kids at school or other families that work at school where the infectious disease started.

3) No Alternative Plan - The norm in Brunei is that one big family usually stays in the house which increases the risk significantly due to the increased exposure. The only way to tackle this is following a strict 'Home Quarantine Plan'.

It is our responsibility to adhere to the government rules, regulations and efforts in getting this infectious disease away from our country. Here are some key takeaways:

1) Knowledge - It is our own responsibility to learn about COVID-19 and its related information through trusted websites, most importantly from the daily Press Conferences conducted by MOH.

2) Adhere to SOP/Protocol - It is our duty to adhere to the guidelines that have been set by the MOH and respective government agencies. We are also advised to be honest to ourselves to report when symptoms arise.

3) Vaccine & Booster - Getting fully vaccinated will definitely help our personnel from the disastrous effects from the COVID-19. Some with high risk especially does help by having the booster in their body.

4) Healthy Lifestyle - By eating healthy, consuming sufficient Vitamin C & D, doing some physical activity does help the individual to recover from the COVID-19 and/or to increase their immunity.

It might not end here, experts say there is a Deltacron already identified. Although the infection will not be any stronger than Omicron, but by having the 'Umbrella' ready within us we will be able to pass through this early endemic phase to fully endemic phase where we live with the virus but with less infections.

ROYAL BRUNEI AIR FORCE  
**FLIGHT SAFETY  
POSTER COMPETITION**

**SUBMISSION  
DEADLINE  
18 SEPTEMBER  
2022**

SUBMIT POSTER TO:

[RBAIRF.FLIGHTSAFETY@GMAIL.COM](mailto:RBAIRF.FLIGHTSAFETY@GMAIL.COM)

FOR FURTHER INQUIRIES, CONTACT  
CPT (U) HIFDZULLAH AT  
+6738751022

HOW TO ENTER:

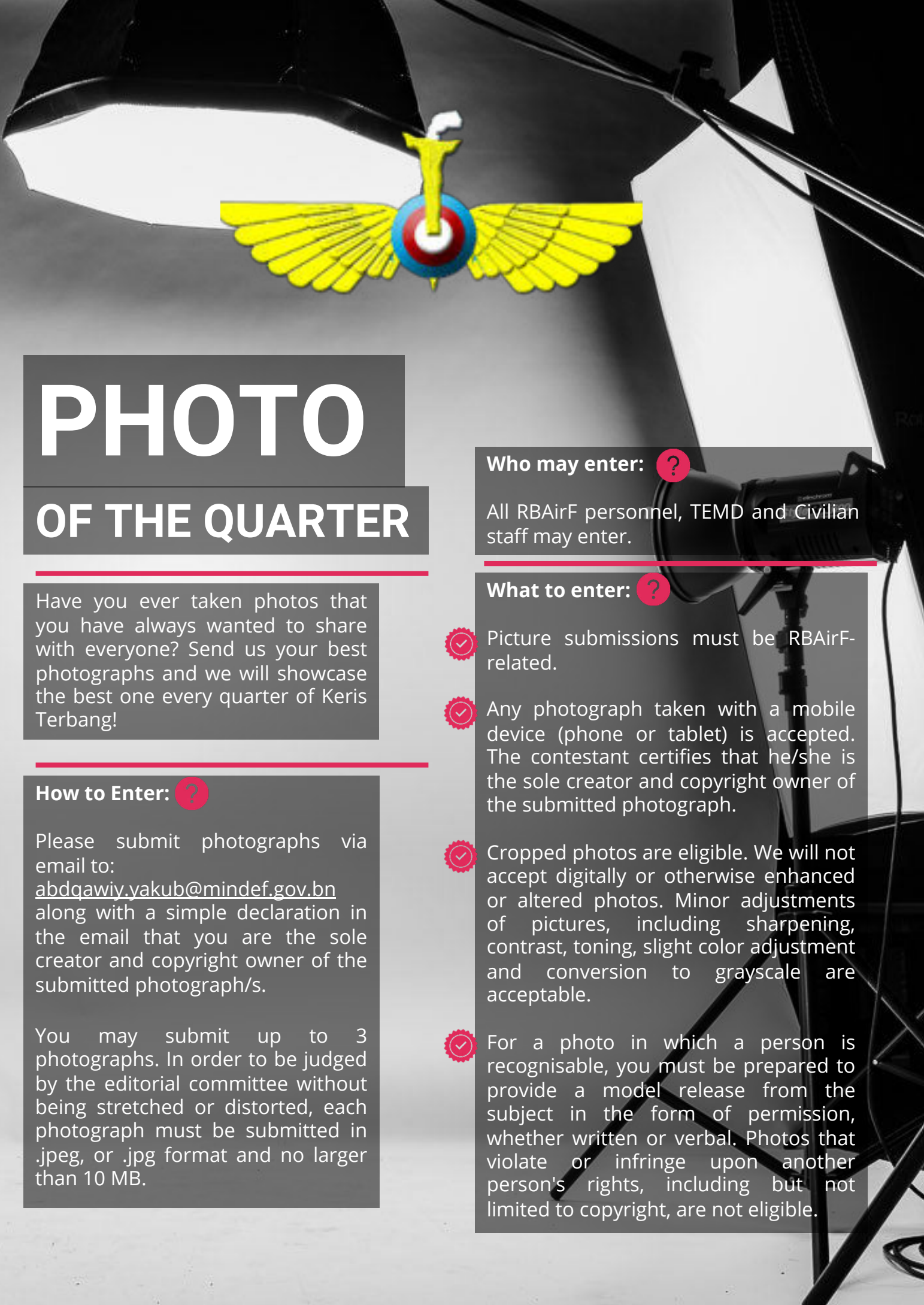
- Produce a Poster to illustrate any flight safety related matter and of any theme
- Poster must be in ENGLISH
- Entries must be submitted in PDF format
- A3 Printable
- No limit for submission per person
- Open to RBAirF personnel



**PRIZES TO  
BE WON!**



**HOW MUCH  
DO YOU CARE  
ABOUT SAFETY?**



# PHOTO OF THE QUARTER

Have you ever taken photos that you have always wanted to share with everyone? Send us your best photographs and we will showcase the best one every quarter of Keris Terbang!

## How to Enter: ?

Please submit photographs via email to: [abdqawiy.yakub@mindef.gov.bn](mailto:abdqawiy.yakub@mindef.gov.bn) along with a simple declaration in the email that you are the sole creator and copyright owner of the submitted photograph/s.

You may submit up to 3 photographs. In order to be judged by the editorial committee without being stretched or distorted, each photograph must be submitted in .jpeg, or .jpg format and no larger than 10 MB.

## Who may enter: ?

All RBAirF personnel, TEMD and Civilian staff may enter.

## What to enter: ?

- ✔ Picture submissions must be RBAirF-related.
- ✔ Any photograph taken with a mobile device (phone or tablet) is accepted. The contestant certifies that he/she is the sole creator and copyright owner of the submitted photograph.
- ✔ Cropped photos are eligible. We will not accept digitally or otherwise enhanced or altered photos. Minor adjustments of pictures, including sharpening, contrast, toning, slight color adjustment and conversion to grayscale are acceptable.
- ✔ For a photo in which a person is recognisable, you must be prepared to provide a model release from the subject in the form of permission, whether written or verbal. Photos that violate or infringe upon another person's rights, including but not limited to copyright, are not eligible.

# FLIGHT SAFETY - CASE STUDY

By Lt (U) Dzulfadhli

Aviation Safety or Flight Safety is the study and practice of managing risks in aviation. This includes preventing aviation accidents and incidents through research, educating air personnel, passengers and the general public, as well as ensuring the integrity of the design of the aircraft and aviation infrastructure. The aviation industry is subject to significant and stringent regulations and oversights.

The RBAirF over the past few years has maintained and elevated the subject of Flight Safety as a major focus on its flight operations. Every year, 20<sup>th</sup> July has become a customary dedicated Flight Safety day where workshops or talks are usually conducted with the main aim of promoting an Engaged Air Safety Culture. This focus on the Engaged Air Safety Culture is further demonstrated by the release of the Royal Brunei Air Force Bluebook Vol 1, on 20<sup>th</sup> July 2021. Contained in the book are reports of accidents and incidents dating way back up to the 1970. This provides transparency and most importantly acts as an experience-sharing based learning tool particularly for aircrew of the RBAirF.

An example of a particular case of significant interest is the one involving the titled BO105 Pilot who experienced disorientation due to fatigue. Fatigue is a difficult factor to measure in a person, and it is also one of the most important factors of flight safety. During the incident, the aircraft was supporting an exercise between Brunei and Thailand Special Forces. The pilot flew the aircraft too low and became disoriented. With the aid of the co-pilot the pilot was alerted and recovered the aircraft to a safe altitude and landed the aircraft without any serious implication.

After the incident, further investigation showed that the pilot was not given enough Crew Rest Period (CRP) and was working for more hours than he should have been. If it was not for the swift action by the Co-Pilot the incident would have ended much worse. This case highlights the importance of rest for pilots especially with regards to demanding operations. The crew must also play a proactive role in identifying signs of stress and fatigue on pilots.



Aviation Safety or Flight Safety is a valuable platform in reducing the risks factors involved in everyday flying. Through this platform, various safety related issues can be conveyed and shared between relevant personnel and the benefits are invaluable. It is critical that this platform should be maintained and conducted regularly to maximise its benefits

**BOTTOM LEFT**

The audience during the 2020 Flight Safety Day

**MIDDLE**

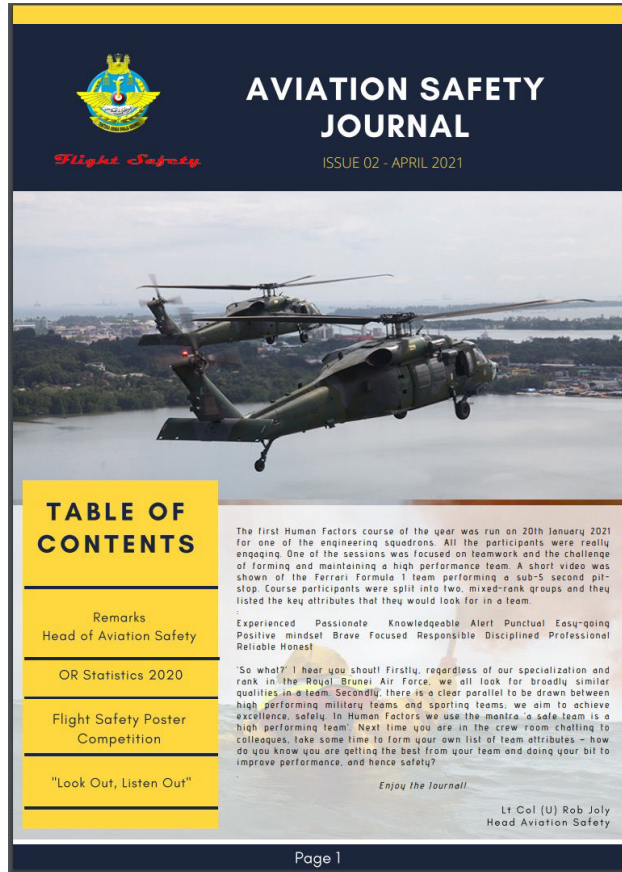
The 2021 Flight Safety Day discussion

**BOTTOM RIGHT**

The 2019 Flight Safety Day presentation

**RIGHT**

The Aviation Safety Journal which can be found on the RBAirF website



# CONTROL OF THE AIR AND ITS SIGNIFICANCE

By Lt (U) Syarafur

Control of the Air is one of the fundamental roles of Air power, which if obtained and maintained at a certain level will ultimately help to achieve overall mission success. A degree of control of the air is important not only for air operations, but also for associated land and sea operations. Having a certain degree of control of the air will allow operations to be completed without having an opponent interfering by suppressing the opponent's Air power.

There are a lot of factors which affect the control of the air and trying to measure the control will be difficult mainly due to the volatility of the factors. For any operation, it is necessary to assess one's own capability against the opponent's intent and strength.

There are three degrees of the control of the air:

1. FAVORABLE AIR SITUATION:  
State in which the opposition's Air Forces are not enough to prejudice the success of friendly operations.
2. AIR SUPERIORITY:  
State in which one side has dominance in the air battle over the opposition which then allows the conduct of operations at a specific period and place without interference by the opposing force.
3. AIR SUPREMACY:  
State in which the opposing Air Force is incapable of effective interference.



## THE SIX-DAY WAR – A CASE STUDY

The Six-Day War is a perfect example which displays just how crucial having control of the air is. Total control of the air by the Israeli Air Forces in that war changed the outcome in the Middle East. The war began on 5<sup>th</sup> of June 1967 and ended six days after it was initiated. Tension was building up before the war when Egypt mobilised their troops into the Sinai desert and blocked Israeli ships from passing at the straits of Tiran, which then have adverse effects on Israel's economy. Israel felt threatened when Egypt formalised alliance with other Arab countries on mid of May 1967, and they felt that they had to respond immediately.

On the 5<sup>th</sup> of June 1967, the Israeli Air Force initiated 'Operation Focus', where their aircraft flew over the Mediterranean Sea at low altitudes to avoid radar detection. Israel Air Force destroyed two-third of the entire Egyptian Air Force, after just four hours into the war. This resulted in Israel establishing 'Air Supremacy' over Egypt. Following their success on the Egyptian front, Israeli Air Force diverted their target on other Arab alliance's air bases, and their swift actions were rewarded with success in gaining control of the air. With the Israeli's Air Supremacy over the Arab Alliance firmly in place, they were able to conduct operations without any effective interference by the Arab Alliance Air Forces. The war ended after six days, with Israel having control in the Middle-East. Analysing the Six-Day War illustrates the importance of control of the air and the significance of the Air Power in shaping the outcome of a battle.

### LEFT

The area of interest during the conflict

### MIDDLE

An aircraft destroyed even before take-off

### RIGHT

Israeli Forces after their successful mission





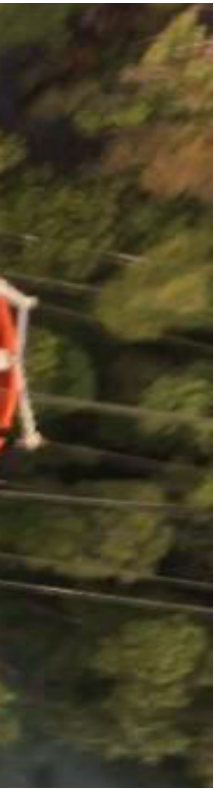
## BAMBI BUCKETS

By Lt (U) Azhar

A Bambi Bucket is a specialised bucket suspended on a cable carried by a helicopter to deliver water for aerial firefighting. Each bucket has a release valve on the bottom which is controlled by the helicopter crew. When the helicopter is in position, the crew releases the water to extinguish or suppress the fire below. Each release of the water is referred to as a drop. The design of the buckets allows the helicopter to hover over a water source such as the sea, a lake, river and pond and lower the bucket into the water to refill it. This allows the helicopter crew to operate the bucket in remote locations without the need to return to a permanent operating base, reducing the time between successive drops.

Brunei has a dry season which lasts from February to April. Prior to this period, No. 11 Squadron of No. 1 Wing would prepare the aircrew for the upcoming heat which normally leads to forest fire. During this period, the grass is yellow and it is obvious that there is little precipitation. A lot of effort and manpower goes into the preparation for aerial firefighting, including ground support.



**TOP LEFT**

Bambi bucket in operation to douse fire

**BOTTOM LEFT**

Maintaining the Bambi bucket

**TOP RIGHT**

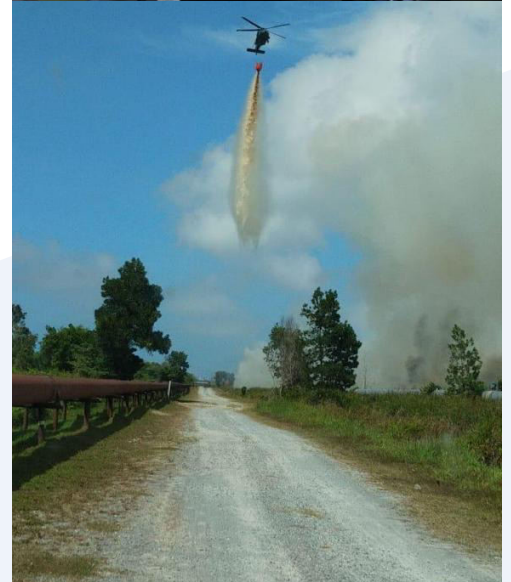
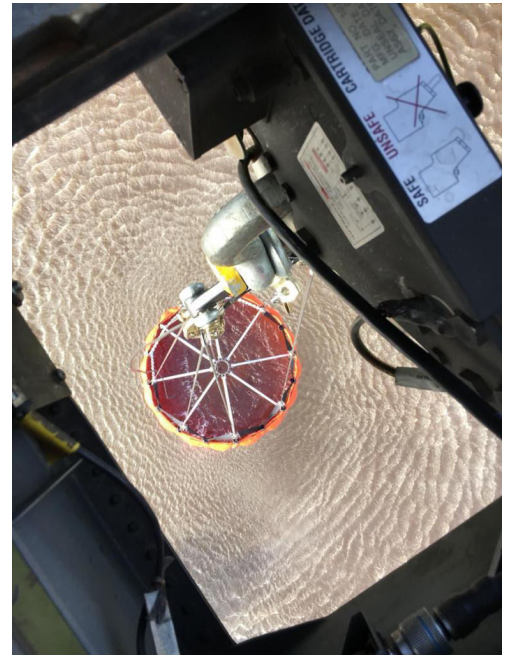
Collecting water from a river using Bambi bucket

**MIDDLE RIGHT**

The Blackhawk dropping water to put out fire during training

**BOTTOM RIGHT**

Bambi bucket releasing water to the forest



Social media would usually be the first to provide lead information of a requirement for firefighting. As soon as there is a viral video or picture of a forest fire, 11 Squadron would anticipate an activation for firefighting. Firefighting can last between a minimum of 2 hours and maximum of 8 hours. It requires a lot of endurance and stamina to conduct aerial firefighting.

It starts with a brief that lets everyone know the current situation at that time and to prepare everyone mentally and physically, to ensure fuel for the aircraft and also for the body is available for prolonged operation. Hydration is really important during firefighting, flying over the hot smoke and inhaling all that smoke can leave you dehydrated. Going back and forth between the fire and the water pickup area can also cause disorientation and nausea which will worsen when exhausted and dehydrated. After getting ready, the crew will head out to the location of the fire and will be working closely with the fire brigade, searching for the nearest water source available and then dumping the water over the fire as many as 80 times for the day. The repetitive nature of the tasking and the extreme heat endured requires thorough preparation of both the mind and body and is critical in ensuring that the mission is conducted safely and efficiently.

The act of firefighting not only stops or slows down the spread of forest fires but it also gives the public a sense of security whenever they see that the government is doing their part and to the best of their ability. Even though the work is difficult and tiring, accomplishing the mission gives a sense of pride, being able to serve and give back to the country and community.



## JOURNEY TO 10.00 IFA

By Lt (U) Ady

It has been 2 years since my last tryout from the Special Force Regiment Intake 76 selection process and it was such a big disappointment for me that I couldn't make it through due to an injury I suffered. This definitely had an impact on my performance especially in my Individual Fitness Assessment Test.

However, we as military personnel must understand that it should not just simply demotivate you or stop you. After all, it is what we have been taught since OCS, that is to push our minds beyond what it can think of and even above your body limit.

I have met 2 training coaches with specialties of both marathons running as well as swimming. They explained to me that my situation might have an impact on my psychological attributes in training and that is why I can't even run a short distance of 5km initially after my injury. So I used this as a motivation to get my fitness back because I understand that there is still a lot of years ahead in my service. Being a keen runner, I also want to keep participating in competitions, and the definitive first step is to get back in shape.

Assigned as the Flight Commander of Training in PATDU has opened my eyes and made me realise that I need to be a role model to my men and thus I have to train myself in running and swimming to be at least at the required standard of fitness level. Since then, I have been training every morning doing both cardio endurance and strength for about 45mins and a recovery cardio-type training in the afternoon for about 30 to 40 mins.

It all depends on your body types and this is kind of a 'experiencing-on-your-own' kind of method to understand whether you can do a long cardio, short cardio. or a mix between both cardio and strength training at one session. It is also important to note that some people are only comfortable with alternative training, that is cardio today strength tomorrow. The training plans also varies for those who wants to target a different goal in my case I'm focusing on 2.4km and 5km run only.



My training plans have are focused on easy long endurance runs, short medium tempo runs, short and long intervals, recreational hike and all usually end with long recovery sports including long walks, long bicycle rides or swimming. Of course it is not easy at first but when my body was slowly adapting to it, it gave me a sensational and positive feelings towards my own progress. Some people may experience improvement in 3 months time but some may take longer time than that depending on how your food intake discipline as well as how well your body recovers.

All in all, to summarise in general there are 3 tips that can help to improve your timings in 2.4km as how I trained when reaching sub 10 mins on my IFA test. First is to train everyday, ideally at a maximum of 5-6 days or 4-5 days a week depending on your suitability whilst also ensuring proper recovery sessions. Secondly, by fuelling yourself with food that your body react better when in recovery. There are a lot of recovery food out there and choosing the one that suits you matters a lot. Lastly, the most important tip is consistency. Without consistency, be it training or dietary intake, it will be extremely hard to reach your goal.

# 10:00

Stop

# TOP PRODUCT TECH PICKS - LAPTOPS AND WORK

By Cpt (U) Alhafiizh



## 1. ACER (ASPIRE 5)

**PRICE RANGE - BND\$1,500.00 - 2,300.00**

I have always been a tech guy, even when I was a student in one of the higher education institutions, I have always had a very keen interest on technology. Back then it was all about getting a good laptop for me to run games smoothly without any lag at a price point that's affordable for me considering that I didn't have any income at that time so it was all about researching the best bang for buck laptop at that point. There's a huge variety of laptops available in the current market at different price points each having their own set of features and purposes. Whether it is for work, gaming or productivity, thorough considerations must be made before deciding on buying a specific model. It is perhaps crucial to first ask yourself questions like 'Does this laptop's technical specs fulfill my requirements?' and 'Does it meet my budget?.'

Personally, I believe most people would simply buy what attracts them the most which is usually heavily influenced by the brand. As an IT enthusiast as well as working in an IT oriented environment, I like to consider both the product and technical aspects as they are interrelated with one another. Below are my top three product tech picks for laptops and work.

If you're looking for a budget laptop, this should be your pick. With the AMD Ryzen 4000 processor, it can enable users to open multiple programs at once without lag. It also includes an AMD Radeon graphics card that is capable of Ultra-HD display for a better experience. At the price point that it sits, it is very impressive! What I personally like is that it has 1TB SSD and 2TB HDD hard disk space giving users the ability to save more data, which is especially useful in my line of work. With the improved design structure by the Acer Company, the enhanced built-in sound that is certified to work with Cortana and the unique airflow that will keep the laptop from overheating. It also comes with several inputs such as USB 2.0, USB-C type, HDMI 2.0, and a UTP cable internet port. If users want to have a balance prerequisite laptop, this is the one.



## 2. DELL (XPS 13)

**PRICE RANGE - BND\$1,500.00 - 2,300.00**

Dell XPS 13 definitely has the best quality design with its stylish and classic theme. If you want to look classy and slick, this laptop is for you. The weight is over 2.7 pounds which is slightly lighter and thinner. What is so special about it is that the screen is customized with gorilla glass 6 that is scratch resistant, especially for clumsy person, it will fit you well. It is also equipped with Gore Thermal Insulation which provides thermal conductivity low to keep the components cool. Other than the unique design, it has a battery life that can up to 14 hours when streaming programs and up to 8 hours and 12 minutes of streaming 4k HD video. In terms of memory space, it provides 2TB of a drive of storage for faster memory with an additional 32GB of memory space. The powerful feature of this laptop is that it has an 11 generation intel core processes and intel iris XE graphics card that make a seamless and faster performance can execute multiple programs all at once for a better user experience.



## 3. ASUS (TUF GAMING A15)

**PRICE RANGE - BND\$1,500.00 - 2,300.00**

My final recommendation would be the ASUS TUF Gaming A15 that have all the requirements users need. For you gamers out there, this should have what you are looking for! Consists of 16GB RAM that can process much faster with the combination of a 60-bit operating system. Moreover, it is equipped with AMD Ryzen 7 4800H together with Radeon Graphics 2.90 GHz which makes the visual more ultra-smooth that reduced lag, and minimized shuttering. It is also perfect for those who are interested in doing graphic design and video making. The upgraded speaker delivers deeper bass and richer sound that optimized user experiences. The great thing about this laptop is that it has military-grade toughness which made its durability more dependable even it is in the toughest condition and is capable to withstand accidental knock and bump.



**KERIS TERBANG**