



# KERIS TERBANG

ISSUE 11 | 2022

کریس ترِبَع



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# CHIEF EDITOR'S REMARKS



السلام عليكم ورحمة الله  
بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Welcome to Issue 11 of Keris Terbang. As we enter the second half of the year, we embrace the past six months with changes in leadership, decommissioning of the BO-105 and many other

memories throughout. As a unit, we collectively and individually took lessons away and embraced the changes thus far. Our quarterly magazine is here again to showcase the daily lives of our men and women of the Royal Brunei Air Force.

In this edition of Keris Terbang we have prepared a wide range of articles for you to enjoy. From the joyous occasion of His Majesty's 76<sup>th</sup> Birthday, our involvement in Exercise Pitch Black in Australia, the upgrading of professional skills for our airmen and airwomen and many more. Despite the busy period, the RBAirF has steadily maintained its operational

output nonetheless, continuously aligning ourselves with the Service Above Self, Teamwork and Excellence core values of the RBAirF.

We hope that you enjoy our eleventh edition of Keris Terbang as we aspire to motivate the men and women of the RBAirF in all their hard work. I am very proud of how far we have come along and would also like to take this opportunity to thank 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.

**Lt Col (U) Pg Mohd Zulhusmi**  
Chief Editor

***“Wishing everyone a great rest of the year ahead, clear skies and calm winds”***

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# HIS MAJESTY'S 76<sup>th</sup> BIRTHDAY CELEBRATION

By Lt (U) Hidayatullah



Every year, on the 15<sup>th</sup> of July the nation celebrates a joyous occasion which is the birthday of 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 Negara Brunei Darussalam, the 29<sup>th</sup> Sultan of Brunei Darussalam. Born on 15 July 1946, His Majesty the Sultan is the eldest son of His Majesty Sultan Omar 'Ali Saifuddien Sa'adul Khairi Waddien and Her Majesty Raja Isteri Pengiran Anak Damit. His Majesty the Sultan has been reigning for over 55 years making him the current longest reigning monarch in the world.

Thanksgiving prayers were held across all suraus including those at all Royal Brunei Armed Forces camps, bases and garrisons in all districts on the eve of His Majesty's Birthday. The 76<sup>th</sup> birthday celebration of His Majesty commenced on Friday with the traditional and annual Grand Parade which was held at the Taman Haji Sir Muda Omar Ali Saifuddien in the heart of the capital. The arrival of His Majesty was greeted with the sounds of a 21-cannon salute which resonated the festive air accompanied by the beating of hadrah to mark the opening of the Grand Parade. His Majesty then examined the Royal Guard of Honour mounted by a total of 1,138 personnel from the Royal Brunei Land Force (RBLF), the Royal Brunei Navy (RBN), the Royal Brunei Air Force (RBAirF) and the Royal Brunei Police Force (RBPF). The Grand Parade includes officers and staff representing government departments and uniformed civilian organisations which were the Royal Customs and Excise Department, Prisons Department, the Immigration and National Registration Department, and the Fire and Rescue Department.

The parade before the royal dais was led by 685 Lieutenant Colonel Fakrul Ammar bin Haji Mohammad Isa. As for the RBAirF contingents, the first contingent was led by Maj (U) Muhammad Adif bin Zaman and the second contingent was led by Capt (U) Ahmad Wafiy bin Muhammad Murat. Meanwhile the female soldiers' second contingent was also led by one of our own, Capt (U) Noraqidah binti Efinddi. Additionally, Lt (U) Muhammad Nabil Arif bin Dato Paduka Haji Mohammad Shahminan and Lt (U) Tengku Putra Muhammad Alif Izzat bin Tengku Putra Muhammad Harris Fadzillah also had the honour of carrying His Majesty's royal colours and RBAirF regimental flags. Three shouts of 'Daulat Kebawah Duli Tuan Patik' resounded the air at the Taman, as a pledge of undivided loyalty, devotion and happiness on the joyous occasion of His Majesty's 76th birthday celebration. The Grand Parade was concluded with a colourful fly-past over the Taman by a fleet of aircraft from the RBAirF.



This marked the commencement of a month-long festivity of His Majesty's 76th birthday including the annual get-together ceremony where His Majesty and other members of the royal family meet the public from each district. Men and women, boys and girls, young and old, citizens and tourists, all merrily and faithfully waited and gathered for the 'Ramah Mesra Bersama Rakyat' events which were held in all of Brunei's districts throughout the remainder of July.



# EXERCISE PITCH BLACK

By Cpt (U) Azhar



The exercise is a biennial three week multinational large force employment exercise conducted primarily from RAAF Base Darwin and RAAF Base Tindal. RAAF Base Amberley, located near Ipswich was also included in the exercise this year. Up to 2,500 personnel and 100 aircraft from around the world operated from RAAF Darwin and RAAF Tindal to conduct air operations in northern Australia, combining efforts to better integrate multilateral defense capabilities and enhance interoperability.



It is the first Pitch Black Ex since the COVID-19 pandemic, and this Pitch Black 22 edition hosted multiple community engagement events including a fly past at Mindil Beach, Darwin, an Open Day at Darwin Airbase and local youth program integrations.

The exercise supported a concurrent International Observer Group program in which Brunei was invited to, in order to provide an opportunity for foreign forces to gain an appreciation of how Australia prepares for and executes major activities. We were briefed on the operation, administrative and logistical pressure associated with the deployment of air force elements to Australia in order to participate in Pitch Black. Information provided was the airspace, aviation safety, public affairs, air weapon ranges, logistics, immigration and quarantine requirements. There were three countries that were invited to share their experience in joining Pitch Black. The presenters shared that they started preparing for the exercise a year before the exercise started and one of the most important thing that needed to be done was to get the clearance from the Australian Biosecurity Department. Australia has set a very high standard to minimise the risk of pests and diseases from entering their borders.

Being part of the observers group exposed us to the challenges associated with participating in an exercise this big. Even though Brunei may not be able to join in on the main exercise of Pitch Black, but there are other supporting roles the RBAirF may offer to be part of this magnificent exercise. It is a great opportunity for RBAirF to work with other countries gaining experience and knowledge.



Other than briefings, we had the pleasure of visiting the Darwin Military Museum, spectate the air show conducted by the Pitch Black participants on the beautiful Mindil beach which was packed with locals, and the open day where all the participating countries displayed their aircraft alongside vintage aircraft.



**“KNOWLEDGE GROWS EXPONENTIALLY WHEN IT IS SHARED”**

# RBAIRF TREE PLANTING INITIATIVE

By Lt (U) Asnawi

**T**he Brunei Darussalam Green Protocol was launched on 30th January early this year. It was set as the basic guideline for every government organisation in Brunei Darussalam to follow in order to achieve the country's objective in executing its National Climate Change Policy. This guideline is launched with the main idea to reduce the carbon footprint from every premise in all government sectors. There are a few important elements to take into account and planting trees back after all the government explorations for improvement of infrastructure is one of them. A campaign was launched early last year along with the launch of the Green Protocol's guidelines. This campaign's objective is to plant 26,000 trees back and every government sector is given how many trees every one of them needs to plant back. Even though this campaign was postponed last year due to the pandemic Covid-19 that affected the majority of countries not only Brunei Darussalam, Alhamdulillah, this year after overcoming all challenges the RBAirF was able to execute the task given to support the Green Protocol campaign.



The RBAF was tasked with planting 2,000 trees and this amount was divided among all the units in RBAF. With the help of local company tree suppliers; KN Nursery, HTG Services, Hameera Enterprise, Syandi Company, and a few other local tree suppliers from the Rimba Horticulture Center and Gadong Market these trees were obtained in a timely and efficient manner. The trees were planted based on the ground type and whether it is suitable for landscape or built-up area or as ornaments. For the forest-type areas, forest-type trees sapling were also planted. The location of the tree planting area is dictated by the unit itself under RBAF. The units or the agencies may seek help from the relevant government agencies for the selection of the suitable areas for tree planting.

For RBAirF, the objective was to plant 60 saplings in Rimba Camp. To make this planting event happen, some preparatory steps needed to be done; planning, administration, and executing the event. For the first step, obviously, for every event or project, there should be key personnel involvement to ensure the successful conduct of the event. This involves brainstorming on the requirement and challenges. The second step is the administration which involves the division of tasks, taking the plants from the stakeholders, and also attending a proper class for the plant to grow in the long term which is conducted by the Minister of Forestry.



The last step will be executing the event which involves; briefing the personnel involved, rehearsal, and reminding each individual responsibility in the event whilst also taking into consideration the safety aspects. The highlight of the event was when the Guest of Honor, Brigadier General (U) Dato Seri Pahlawan Mohammad Sharif bin Dato Paduka Haji Ibrahim, Commander RBAirF planted one of the plants at the Taman Luagan Simpur.



Alhamdulillah, this event was successfully executed, thanks to the hard work and commitment from everyone involved. As one of the committees for this event, I would like to say we are very thankful to all stakeholders and personnel for making this event successful and more importantly contributing towards its main objective of supporting Brunei Darussalam's Green Protocol.

***“TREES ARE POEMS THAT THE EARTH WRITES UPON THE SKY”***

***- KHALID GEBRAN***



# MAAL HIJRAH CELEBRATION

by Cpt (U) Abdul Mu'iz

Maal Hijrah marks the beginning of Hijri year calendar which provides us a reminder of the journey of Prophet Muhammad (PBUH) migration from the City of Mecca to Madinah in 622AD. Congregational prayers have been made throughout local mosques, suraus and religious halls across the Islamic nation and people alike as to celebrate the date of the turning point in the success of Islamic history. Such a celebration is no stranger to the RBAirF to conduct as this event is part of our annual routine to remind all personnel the importance of the early month of Hijri through *tazkirah* as lessons to strengthen one's piety to uphold our country's sovereignty. It is important to understand such a celebration does not stand only for its date to remember by, but the lessons learnt throughout the event that defines the beginning of the Muslim era.

To celebrate the event itself is to understand its meaning and reason to appreciate its purpose that has been reminded throughout history. The word Hijrah or Hijra translated as migration where it is used as the moment of the event as a reference point and decree by Umar ibn al-Khaṭṭāb, the second Rashidun caliph; to be counted from the year where the migration started. Unlike new years eve or any other

celebration, Maal Hijrah is celebrated as an opportunity for self-reflection, especially for Muslims.

The reason behind the journey made by Prophet Muhammad (PBUH) to migrate from Mecca to Medina was in order to save his followers from torment for supporting the prophet and avert persecution. This abandonment does not mean to avoid or escape from problems but a test of devotion and willingness to endure all suffering to move to a better place and for the sake of saving other lives and faith. As a lesson, by seeking salvation to saving others from danger for a better cause serves as a reminder not only for worship but also for the way of life as a Muslim.

To honor the Maal Hijrah, it unites the faith for the people of Islam, RBAirF conducts prayers and recites *Surah's* at the end and beginning of the new year of Hijrah, followed by a *tazkirah* session as well as prayers. The journey also marked the turning point in the expansion of Islam in terms of aspects of civilisation such as social, cultural, and intellectual ways that built the ideology of Islam.

In other words, this succession can be observed in the verse **“So, surely with hardship comes ease” (Quran 94:5)**; in which such a date reminds us of a huge lesson behind Prophet Muhammad (PBUH)’s journey which leaves a huge impact even until today.



**“Strengthen one’s piety to serve country’s sovereignty”**



# MISTRAL TECHNICIAN



by Lt (U) Abdurrahim

The Mistral Technician Maintenance Course (MTMC) provides candidates (requirement of LCpl – Cpl) with essential tools and techniques to equip Air Defence technicians with adequate knowledge and understanding of supervisory functions when performing maintenance tasks on Air Defence systems and engineering tasks. The course runs for 6 weeks consisting mostly of classroom-based lectures, talks and practical. The course is conducted by No 75 Sqn under No 7 wing which commenced this year on the 25<sup>th</sup> of July until the 02<sup>nd</sup> of September 2022.

This training course is designed specifically for Air Defence Technicians to provide the proper tools, skillset, and precision knowledge required to maintain the serviceability and functionality of the Mistral Weapon Systems. Also, this course develops leadership skills, builds character and instils a teamwork attitude which is in line with the Royal Brunei Air Force's Core values.

Throughout the course, participants were taught both theoretical and practical lessons. The theoretical lesson focused on documentation and Occupational Health and Safety (OHS), while the practical lesson covered Special Tools Test Equipment (STTE) on ERICA, Acquisition Tracking Practice System (ATPS), drying and purging of ERICA Thermal Imager, Self-test test set, functional check and harmonisation of Firing Stations, calibration of

bearing encoder on Firing station, gas bleeding of Argon bottle, maintenance of Battery unit and its charger, the Overpressuriser (OVP) and lastly on how to operate the Mistral Simulator System.

Documentation is important in ensuring that all Engineering Flight Workshops, documents and technical publications are registered, up to date, serviceable and available at the relevant work site using the Brunei Army Form Electrical Mechanical Engineering (BAF EME). It is crucial to understand the importance of the documenting process when ensuring that the repairs of Mistral MANPADS are carried out efficiently, effectively and consistently. To ensure operational readiness of the Air Defence Squadron, maintenance must be performed on a regular basis.

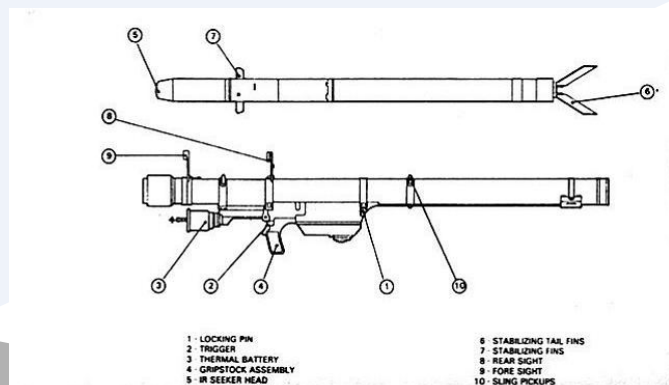
In order to prevent workplace injuries and to provide a safe and healthy work environment, OHS must be incorporated into all daily tasks, prior to and during maintenance work on Mistral Firing System equipment used for Air Defence operations in No. 2 Wing. Additionally, the participants were taught to refer to manuals when making repairs as part of the OHS lesson. As a prerequisite for starting any restoration or repair work, participants will ensure that their workflow is compliant with the technical or repair manuals.

# IAN MAINTENANCE COURSE



During the practical week, participants learned how to run STTE on an ERICA MP Thermal Imager in order to ensure it is functional and serviceable, how to replace filter cartridges by using ATPS, how to fill in Argon gas with UTS test equipment using OVP and how to create scenarios using Mistral simulation systems.

The course concluded on the 2<sup>nd</sup> September 2022 with a closing ceremony, marking the beginning of their journey for an Air Defence Technician to be applied within their unit in No 520 Squadron. The ceremony was attended by Sqn Comd of No 75 Sqn, Maj (U) Hjh Noraisah binti Hj Abd Fatra to present the course certificates. Other attendees were the course instructors, invited guests and course participants.



# AAAD AND HMG LIVE FIRING

by Lt (U) Asnawi

**L**ive firing events are one of the most challenging things to conduct even for the most experienced of military personnel. A lot of things need to be considered either in terms of the administration or the number of personnel involved, as the main concern is the always safety aspect. A few years have already passed since the last live firing event for both weapon systems. With proper planning and execution, this session resulted in a wonderful and knowledgeable experience for all who were involved. In addition, this live firing was also able to achieve its objective which is to test the capability, competency and more importantly the currency of personnel in operating the weapon systems used.

There are a few things that need to be done before the live firing can be conducted.

These are conducted over a number of main phases such as tabletop exercise, administration, and finally the execution. The first phase involves proper planning and meeting with the key personnel involved on what needs to be done and what the worst-case scenario's can happen.

The second phase which is the administration focuses mainly on the preparation that needs to be done as well as the briefing and training on standard operating procedures on live firing for both AAAD and HMG and individual responsibilities during the live firing. The last phase of the event itself is the most crucial part in terms of a safety perspective for each individual and the whole run of the sequence. What makes it more difficult is that this live firing is conducted during both day and night.





The highlight of the live firing was the Working Visit by CO No. 2 Wing, Lt Col (U) Amierul Halpi bin Talip and CO No. 7 Wing, Lt Col (U) Pengiran Mohammad Zulhusmi bin Pengiran Mohammad Roslan on the 10th of August 2022. The COs of both wings were able to witness both the All Arms Air Defence (AAAD) and HMG weapon systems firing during both day and night sessions.



With commitment, communication, contribution, and hard work from all the personnel involved, this event ran smoothly and most importantly achieved its stipulated objectives. Not to forget other stakeholders who were also indirectly involved to make this live firing event a success. As one of the key personnel who is directly involved with this live firing session, we would like to say we are very thankful for making this event a productive and informative experience.



I have also learnt that to ensure the safety of all we must always be aware of our surroundings and that cooperation among all who are involved plays a big part in ensuring the safety and success for the conduct of such event.

# CORPORAL LEADERSHIP COURSE

by Lt (U) Qawiemah



The Corporal Leadership Course was conducted over a period of three weeks consisting of mostly classroom-based lectures, talks and exercises. The participants whose leadership, character and intellect were assessed throughout the course through written tests, presentations, organising sports and events, as well as other tasks that were given. The course focuses mainly on two objectives: Military Leadership and Military Identity. The first objective covers topics on characteristic features of leadership, RBAF core values, Islamic leadership, and an understanding of RBAF Standing Orders with a particular focus on discipline. Whereas the second objective covers areas on effective communication and application of regimentation.



Corporal Leadership is a mandatory course for personnel holding the rank of Lance Corporal. The course is only offered twice annually. Starting on 18 July 2022 to 05 August 2022, the Corporal Leadership Course Series 01/2022 was initiated by the Headquarters of No 7 Wing. The course was attended by 23 Royal Brunei Air Force (RBAirF) personnel from various backgrounds and wings.

In order to achieve the set training objectives, the course was designed to train junior personnel of Lance Corporal rank to understand the duties and responsibilities as junior personnel in the RBAirF, especially in the perspective of leadership and was able to provide added value to other junior personnel and the organisation in general.



This course was also aimed to train quality junior personnel with knowledge, skills, high standard attitudes as well as exposure in order to achieve the development and management of human resource in improving the capacity and form of a junior personnel of other ranks to be more responsive, proactive in decision-making, enhanced thinking and planning skills as well as attain better knowledge.

***“Leaders become great, not because of their power, but because of their ability to empower others”***





**EXERCISE PITCH BLACK 2022**



✈ **1,000 AIRCRAFT**

👤 **2,500 PERSONNEL**

# MONKEYPOX

## VISUAL EXAMPLES OF MONKEYPOX RASH



Photo Credit: NHS England High Consequence Infectious Diseases Network



# INFECTIOUS DISEASE : MONKEYPOX

by Cpt (U) Hifdzullah

Monkeypox or *Cacar Monyet* is an infectious viral disease that can occur in humans and also animals. The disease is caused by the monkeypox virus, a zoonotic virus in the genus *Orthopoxvirus*. The variola virus, the causative agent of smallpox, is also in the genus. Of the 2 types in humans, Clade II (formerly West African Clade) causes a less severe disease than Central African (Congo basin) type. The Congo Basin clade has historically caused more severe disease and was thought to be more transmissible. The geographical division between the two clades has so far been in Cameroon, the only country where both virus clades have been found. Various animal species have been identified as susceptible to monkeypox virus. This includes rope squirrels, tree squirrels, Gambian pouched rats, dormice, non-human primates, and other species. It may spread from infected animals by handling infected meat or via bites or scratches. Human-to-human transmission can occur through exposure to infected body fluids or contaminated objects, by small droplets, and possibly through the airborne route.

Human monkeypox was first identified in humans in 1970 in the Democratic Republic of the Congo in a 9-month-old boy in a region where smallpox had been eliminated in 1968. Since then, most cases have been reported from rural, rainforest regions of the Congo Basin, particularly in the Democratic Republic of the Congo and human cases have increasingly been reported from across central and west Africa.

On 23 July 2022, The World Health Organization Director-General Tedros Adhanom Ghebreyesus declared the 2022 outbreak a public health emergency of international concern. As of 3 October, there had been a total of 68,265 confirmed cases in over 108 countries. Also, there are about 12 deaths cases had been reported.

# Causes:

Monkeypox spreads through close, personal, often skin-to-skin contact. The disease can spread direct contact with rashes, or body fluids from an infected person, by touching objects and fabrics that have been used by someone with monkeypox or through respiratory secretions. Given the unexpected and vast geographical spread of the disease, the actual number of cases is likely to be underestimated. Monkeypox is a viral infection that manifests a week or two after exposure with fever, swollen lymph nodes, and rash that forms blisters and then crusts over. The time from exposure to onset of symptoms ranges from 5 to 21 days or the period of appearance can be also is 6 to 13 days after infection. There may be mild symptoms, and it may occur without any symptoms being known. While monkeypox can cause large numbers of lesions, in the current outbreak, some patients experience only a single lesion in the mouth or on the genitals, making it more difficult to differentiate from other infections. In the infections before the current outbreak, 1 to 3 percent of people with known infections have died (without treatment). Cases in children and immunocompromised people are more likely to be serve. The ratio of the number of deaths caused by the Monkeypox in the year to the average total population of the year is from 3% to 6% are reported. The process of ensuring that Monkeypox can be identified is by using the PCR Test.

# Preventive measures:

Raising awareness of risk factors and educating people about the measures they can take to reduce exposure to the virus is the main prevention strategy for monkeypox. Scientific studies are now underway to assess the feasibility and appropriateness of vaccination for the prevention and control of monkeypox. Some countries have, or are developing, policies to offer vaccine to persons who may be at risk such as laboratory personnel, rapid response teams and health workers. The most effective approaches for reducing infected virus, Individuals can also take actions to reduce their personal exposure by staying indoors and reducing physical activity specially that have skin disease like eczemas likely more high risk, altering modes of transportation. Stay hygiene by frequently washing your hands with soap. Washing hands can keep you healthy and prevent the spread of respiratory and diarrheal infections. Germs can spread from person to person or from surfaces to people when you touch your eyes, nose and mouth with unwashed hands. Prepare or eat food and drinks with unwashed hands. Touch surfaces or objects that have germs on them and blow your nose, cough, sneeze into hands and then touch other people's hands or common objects.

ABDB Medical Center are monitoring symptoms for any cases regarding monkeypox especially those that have made trips overseas for meeting, projects, military courses and many more.

# FLIGHT SAFETY DAY FORUM "OPERATING SAFELY IN A CHANGING WORLD"

by Lt (U) Faeiqah



20<sup>th</sup> July commemorates the day of the tragic incident of the Bell 212 in 2012, and with that became the annual Flight Safety Day for the Royal Brunei Air Force in remembrance of the lives that we lost on that day where military and civil agencies gather to acknowledge the importance of flight safety.

The RBAirF Annual Flight Safety Day never ceases to amaze us every year, this year alone bringing in together talks not just from the military but also from civil agencies such as the 667 Squadron Army Air Corps, Brunei Shell Aviation and the Department of Civil Aviation. The event was also graced by His Royal Highness Major (U) Prince 'Abdul Mateen ibni His Majesty Sultan Haji Hassanal Bolkiah Mu'izzaddin Waddaulah.

One of the highlights to end the day was the forum themed "Operating Safely in a Changing World" where it was a nerve-wracking experience for the panellists led by young officers and other ranks with backgrounds in flying, Air Traffic Control, engineering as well as logistics moderated by Cpt (U) Aqidah Safwanah of 53 Squadron, an engineering officer herself where she mentioned that flight safety is definitely important in all aspects.

During the panel, Cpt (U) Nazmi of 11 Squadron started with talking about his leap from being a Bolkow to a Blackhawk pilot where he needed to adapt quick to the transition from analogue to a glass cockpit - encompassing the difference in size of the aircraft and undercarriage as well as experiencing the diverse and dynamic roles of 11 Squadron. The transition was no obstacle for him as there were already existing sets of standards in terms of training and achieving the optimum workload with effective CRM and also training aids were easily accessible where individuals have to maintain their proactiveness in such tasks.

He also highlighted the importance of CRM especially in ensuring the success of a mission moreover getting everyone in the cockpit to deliver safely. He further stressed that CRM is vital when working as a team to maintain capability output, mundane tasks can potentially bear more risks compared to the dynamic ones.



SSgt (U) Ezrith, an engineer previously from the Air Defence Engineering Squadron, now serving as an engineer for the UAV under 39 Squadron, shared his experience of his transition and probably the 'culture shock' he experienced – now being under a UAV squadron.

Proactivity is definitely a bonus to be instilled in every personnel. There was an occasion during the recently set-up maintenance area where stray dogs damaged the cables – the engineers' proactiveness made them improvise in creating protection for the wiring with existing equipment that they have.

Being in a newly formed squadron, he also explained the lack of specialised manpower, but that does not stop them from operating safely on a daily basis where CRM and Crew Rest Period (CRP) is not just important to the pilots but also to the non-flying crew particularly the engineers.

Lastly, flight safety does not revolve around flying operations alone but encompasses a wide range of personnel from engineers, air traffic controllers, ground operations and the one that people often forget – the logisticians. Lt (U) Aziz of the Technical Supply Squadron, also expressed that everyone was not exempted in their roles to make an impact in improving flight safety. Even logisticians play a minor yet important role in planning on logistics' side during acquisition phase of a new asset and should be included during the planning process in the future – ensuring the aircraft parts to be readily available thus catering the needs of the engineering squadrons in order to support flying operations.

Therefore, every one of us plays a significant role in ensuring flight safety is being practised and for us to normalise acknowledging any incidents with risks that could pose a threat to flight safety. Together we as Air Force personnel should inculcate this practice of boosting awareness for flight safety in order to become a credible and exceptional Air Force.



# AIR ATTACK

by Maj (U) Alli Farid

*“The best defense is good offense”*

The air force doctrine establishes air power as having four fundamental roles which are control of the air, intelligence, surveillance and reconnaissance (ISR), attack, and lastly air mobility. In this article we will be looking closely at one of these fundamental roles which is attack.

**Attack is defined as the use of overwhelming force through an attack from the air.** The effectiveness of air attack lies on the ability of the air power to influence the behavior of the actors involved and also the course of events during the conflict or war. Effective air attack missions can deter adversaries, disrupt their ongoing activities or desirably defeat them by destroying their critical resources as well as capabilities. Air attack usually involves the use of sophisticated aircraft with advanced weapon systems to avoid detection or being attacked whilst maximising their impact towards adversaries.

Attack is broken down further into four main missions including strategic attack, counter-land operations, counter-sea operations and also information activities.

**Strategic attack, simply put is the operations which are solely aimed at destroying the adversaries' critical capabilities to fight the war.** Targets may include centres of gravity such as command and control centres, logistical resources areas as well as key infrastructures.

**Counter-land operations are those missions performed to defeat an adversary's fielded forces, or their support infrastructure system or to generate psychological impacts to reduce their morale and will to fight.** Additionally, these will also act as force multipliers for friendly land forces and if utilised properly can impact the outcome of land battles. Counter-land operations are further divided into three main missions. They are air interdiction, close air support and also strike, coordination and reconnaissance. For the RBAirF for example, the close air support missions were conducted by the decommissioned Bolkow BO-105 with its FZ missiles.



**Counter-sea operations are operations which are conducted to directly generate effect within the maritime domain, or to enable and enhance surface or sub-surface friendly capabilities.** They consists mainly of two types of missions including anti-submarine warfare and anti-surface warfare.

The final role of air power is information activities. **Information activities are those activities related with the ability to deliver lethal weapons but an adversary may also be influenced by non-kinetic means.** These air information activities usually use non-lethal effects to influence or impact the behavior and will of the adversary, with the ultimate aim of affecting their perceptions, behaviors and attitudes. Missions include electronic warfare and psychological operations.

## OPERATION SHADER

During Operation Shader, information leaflets from the coalition forces were dropped to the besieged civilians in Mosul. They contained basic information such as guidance on how to purify water, cook on makeshift stoves and ways to protect themselves from the intense fighting.

These leaflets were the symbols of the caring nature of the coalition Iraqi Government and Armed Forces and they generated positive psychological impacts to the population.

Additionally, these also had a secondary impact of instilling trust and increasing confidence towards the government and military forces.



# MILITARY TECHNOLOGY

# THE BANSHEE

# TARGET

by Lt (U) Abdurrahim



In 1985, the RBAirF used the Shelduck Target as its first Aerial target. It was operated manually and used for tracking by the Short-Range Air Defence (SHORAD) System, Rapier Weapon system. The current Banshee target model used is Banshee Whirlwind. Banshee Whirlwind is one of a range of remotely piloted aerial targets offered by Qinetiq Target Systems. The system has achieved worldwide acclaim and is in service or has been operated under contract, in over 30 countries. Banshee Whirlwind was also purchased by our neighbouring country, Indonesia.



Banshee Targets are also used for Technical Training Day, All Armed Air Defence Instructor (AAADI) Course, and live firing for the Very Short-Range Air Defence System (VSHORAD) which is the Mistral Weapon System. The above activities were all conducted on the Bukit Agok Firing Range. The Banshee Target will be able to perform realistic maneuvers replicating realistic aircraft movement thus enhancing training value.

QINETIQ

# PROVIDING REALISTIC TRAINING

It is fairly simple to operate the Banshee Target. All it requires are the few main equipment including the Unmanned Aerial Vehicle (UAV) Banshee Whirlwind, the handheld Transmitter for controlling the UAV, the ground station checking the status of the Banshee, and the launcher, launching it into the air. There must be at least three personnel to operate the banshee target, operators from 77 Squadron and 520 squadron providing the maintenance personnel.



**"Discipline is the soul of the military"**

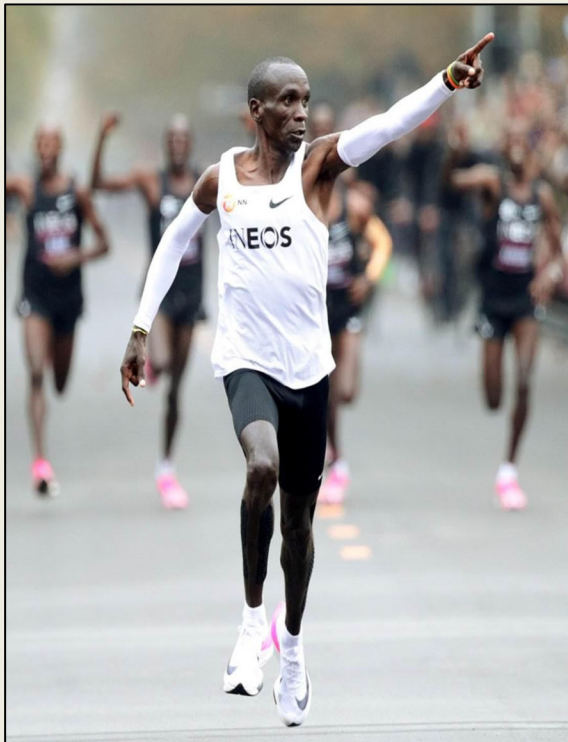
## SPECIFICATION



| Banshee Target  | Banshee Whirlwind   |
|---|---|
| <p><b>Physical</b></p> <ul style="list-style-type: none"> <li>• Wingspan</li> <li>• Length</li> <li>• Height</li> <li>• Wing Area</li> <li>• Power</li> </ul>   | <p>2.49m<br/>2.85-2.95m<br/>0.91m<br/>2.42m<sup>2</sup><br/>40bhp static thrust Whirlwind rotary engine</p>                             |
| <p><b>Performance</b></p> <ul style="list-style-type: none"> <li>• Speed range</li> <li>• Launch speed</li> <li>• Operating range</li> <li>• Endurance</li> <li>• Recovery</li> <li>• Engine</li> </ul> | <p>46-100m/s<br/>32m/s<br/>&gt;100km<br/>&gt; 90 minutes at typical mission<br/>Parachute<br/>Whirlwind (Rotary Petrol Fuel Engine)</p> |
| <p><b>Other features</b></p> <ul style="list-style-type: none"> <li>• Target Control</li> <li>• Typical payload</li> <li>• Tracking Weapon</li> </ul>   | <p>Ground Station and handheld Transmitter<br/>Smoke tracking and IR tracking flares<br/>VSHORAD (Mistral), SHORAD, MRAD</p>            |

# CARBON PLATED SHOES

By Cpt (U) Nazmi Nasrudin



ELIUD KIPCHOGE

**P**ink neon Nike shoes stomped its stake as king of running shoes when Eliud Kipchoge break the world marathon record in Berlin 2018. Whether if it's a placebo effect or not, it did signal the rise of carbon plated shoes in the market. Calls to ban these shoes were stirring amongst the running communities, but World Athletics did not succumb to these claims that these shoes should be considered 'Technology Doping', but rather accepting it as advancement in technology instead. I was intrigued with the idea of cutting down my IFA time (will not be shared to maintain last strings of my self-esteem), or at least running easily (questionable, yes), which made me got on board the steaming bandwagon.

## PACEMAKERS USING PINK VAPORFLY



## HOW?

**I** remember talking to a friend, who shall be named Azhar, about trying Nike's Vaporfly and he was not buying the idea of a shoe that could make you run faster. Azhar is a pessimistic realist, a tough cookie who is reluctant to change, and as I was convincing him, I was in fact trying to convince myself. Unlike any impulse shopper, I did the sensible thing, I YouTubed it.

**O**versimplifying things, key components to these new trends in running shoes are the midsole that uses new type of foam called Pebax which absorbs energy and returns it quickly upwards and forward, creating this trampoline like sensation. Together with the carbon plate that ensures the curvature of the shoe remains rigid, it forces the runner to move forward seamlessly. I too find this 'woah' sensation when I first tried it out at the track. I can't wrap my head around it at first, but the more I run with it, the less I care about the science of it, and more on how relatively easier my IFA would be! The motion of being propelled forward as your heel strikes the ground, is what I always start with whenever people ask me what is it like to run in it.

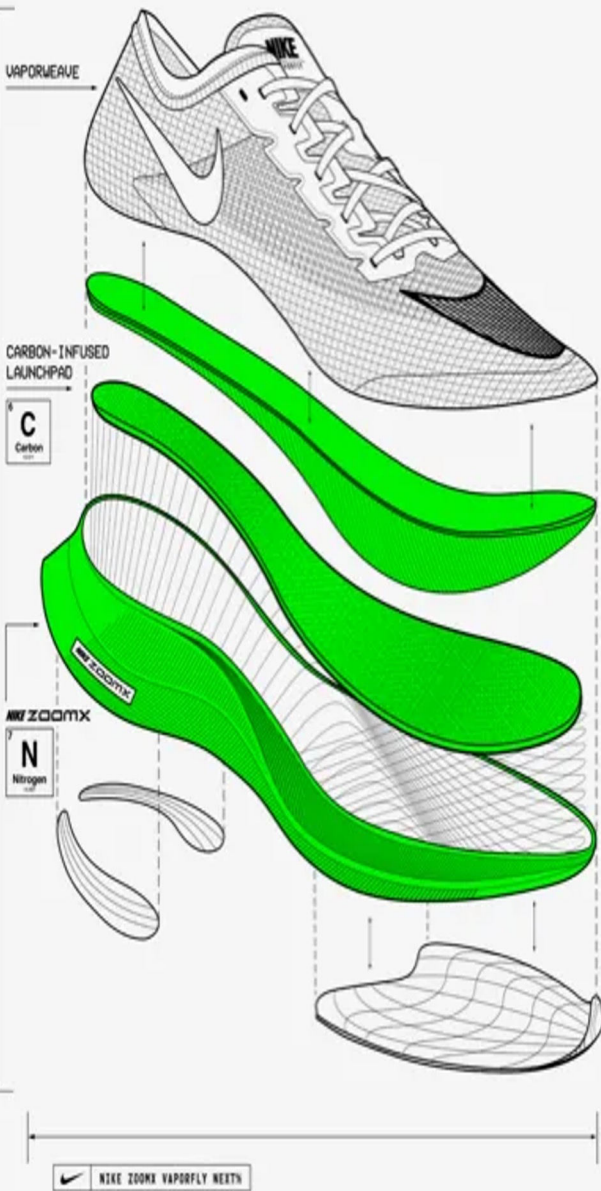


**EFFICIENCY IS KEY.** With rocking motion of your foot as it touches the ground created by the curvature of the shoe and the midsole that absorbs and creates energy, you would find yourself working less than you normally would. Improve energy return means you could run faster at the same work rate as before. The S shape of the sole will guarantee your body will be tilted forward on every stride.

**EASY ON THE BODY.** Looking ahead to my passing IFA timing of 14:30 in a few months' time, I really paid attention to what my body is trying to tell me. (Although, I might have used this card numerous times whenever my better half is trying to wake me up for a Sunday BKC run). The foam in these shoes were not only to improve energy return, but to reduce rate of muscle fatigue as well, as the muscle is assisted by the 'spring' produce by the foam. Less strains on ankles and leg muscles, ensuring you won't feel as sore, and ready for your next run.

**A PRICE TO PAY.** Literally. These shoes are pricey, especially coming from premium brands of Nike, Adidas and what have you, but not at all surprising. That is the price some (including me) would pay to help them run better, faster and stronger. I might not have gathered enough mileage to validate, but these shoes are supposedly less durable too. I will have to wait for Azhar's testimony on this. (Yes, he finally bought himself a pair, two years from our first conversation!)

#### RBAirF OFFICERS UTILIZING CARBON PLATED SHOES



## STILL CONTEMPLATING?

**W**hether you're an avid or sporadic runner, you have to admit that technology in these carbon plated shoes is revolutionary. I am a pushover in terms of trying new gadgets and things, but I truly believe these shoes could make you run faster. I was looking at the IFA timing board at RBAirF's gym the other day, and saw a familiar name. So what is the common factor between him and Kipchoge, you say? They both run, run and run. And it's not solely the shoe! Now the secret is out there, it's no excuse to skip those Tuesday Morning runs!



# WHAT IS TABATA T AND

by Lt (U) Pg Rahim

## What is Tabata?

Tabata is essentially a type of High-Intensity Interval Training (HIIT) which lasts over a short period of time, usually 4 minute routines. It consists of intense workout for 20 seconds, followed by a 10-second break. During the four minute workout, participants will perform eight of activities and rest sets.

After first appearing in the 1990s, Tabata is relatively new to the world of fitness training. It bears the name of Dr. Izumi Tabata, a Japanese exercise scientist who assisted Japan's Olympic team. The exercise program was created to increase cardiovascular and muscle strength. He believed that the brief, difficult, high-intensity training may produce gold medal performances.



"IT'S GOING TO BE  
HARD BUT HARD  
IS NOT  
IMPOSSIBLE"

# RAINING?

## WHAT ARE THE BENEFITS?













### *What are the **benefits?***

Tabata training is appealing as it provides the greatest benefits while requiring the least time to achieve them. Moreover, Tabata training has the benefit of requiring no equipment at all. Basic bodyweight exercises that employ your bones and bulk instead of weightlifting plates can serve as the foundation for the entire workout.

Tabata workout develops as much cardiorespiratory endurance in as little time and therefore enhances cardio and strength more than performing moderate-intensity exercises for a much longer period of time. Additionally, it is an ideal workout to burn fats.

However, Tabata exercises should be monitored for beginner and novices. A higher risk of injury exists whenever you engage in high-impact, high-intensity activity. Preparation is to be done physically and mentally as the intensity heightens towards the end of each set. Additionally, making sure to fully warm up before beginning the Tabata workout is just as important. Even with breaks in between, four minutes of the same workout can get tedious and quickly fatigue your muscles.

20 Seconds Work + 10 Seconds Rest x 8 sets  
Total = 4 minute workout

|                 | Beginner   | Intermediate  | Advanced   |
|-----------------|--|---|--|
| Cardio          | <br>Jump Rope      | <br>Cycling             | <br>Indoor Rower       |
| Core            | <br>Crunches       | <br>Stationary Plank   | <br>V-Ups             |
| Weight Training | <br>Squats        | <br>Romanian Deadlifts | <br>Hang Clean        |
| Upper Body      | <br>Push Ups       | <br>Tricep Dips        | <br>Chin Ups          |
| Lower Body      | <br>High Knees    | <br>Lunge Jump         | <br>Box Jumps         |
| Full Body       | <br>Jumping Jacks | <br>Burpees            | <br>Kettlebell Swings |

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

**SUBMISSION  
DEADLINE  
18 FEBRUARY  
2023**

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.







# KERIS TERBANG