



# KERIS TERBANG

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السلام عليكم ورحمة الله  
بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Welcome back to our latest Issue of Keris Terbang. What a year it has been, this edition sadly marks our last issue for 2022. As the Royal Brunei Air Force has been moving forward, our men and women

have been busy developing their professional skills in both individual and collective training. As we ease out of the covid waves in the past, we can reflect on all our achievements and look forward to another great year ahead.

In this edition of Keris Terbang we take a deep dive into the daily lives of our personnel and take a snapshot of all the activities from a personal perspective. In the past few months, we witnessed the official launching of the Military Flying Sectors (MFS), the RBAF Commander's Inspection, proud moments from a variety of courses and on a lighthearted note, the results from the RBAF Football tournament.

I am also excited to share our article on Exercise Airguard alongside the Republic of Singapore Air Force and the 8<sup>th</sup> year anniversary of the Support Group.

I do hope this final issue for 2022 pleases you in the same way it has pleased us in compiling the articles thus far. I am proud to say that I truly believe we have shown our team spirit in a multitude of areas and congratulate everyone for all your achievements. Whilst the core team for Keris Terbang has changed in a few areas, we will continue to provide you with articles that does justice to all the hard work put in. I'd like to take this opportunity to welcome new members to the Keris Terbang team and thank you all for the dedication and time given towards the success of this magazine. And as a final reminder for 2022, please do continue to support us by reading through and sharing any story that you deem fit.

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

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# MILITARY FLYING SECTORS (MFS) LAUNCHING

By Lt (U) Sheikh



On the 4<sup>th</sup> of October 2022, the RBAirF introduced the Military Flying Sectors (MFS) during a symposium which was held at the auditorium of the Defence Academy, RBAF. The objective of the symposium is to act as a platform for all key stakeholders to understand and learn the MFS booking system and to encourage discussions that aim to enhance air situational awareness. Among those in attendance at the symposium were His Majesty's Sultan Flight, the Department of Civil Aviation, Shell Aviation, the Republic of Singapore Air Force Helicopter Detachment, the 667 Squadron Army Corp, and the Royal Air Force's 33 Squadron.

MFS is the airspace within Brunei Terminal Control Area assigned for military flying activities (low-level flying areas vertical limit of 2000ft ASML) to detach or seclude specific military aircraft activities from IFR traffic as well as to define where all these operations are carried out for VFR traffic. IFR traffic will be detached from military flight operations by air traffic control. VFR operations do not necessitate a clearance. Even when an MFS is being employed by the military, civilian VFR flights are permitted. MFS will be under the control of A3, Air Operations Centre, RBAirF.





Furthermore, the MFS is intended to incorporate non-hazardous flying — for example, no ammunition, smoke, or bombs and military aircraft activities as such, but not restricted to air formation, air combat maneuvers, as well as low altitude tactics. MFS is broken down into segments for standardisation purposes, with alphanumeric identification to strengthen situational as well as air traffic awareness. Another main objective of the MFS is to develop communication clarity and efficiency by minimising long radio telephony transmissions on open frequencies.



# 12TH CSC

By Lt (U) Hafiy

The Command and Staff Course (CSC) is a platform for mid-level military officers to further their knowledge while at the same time exposing them to different cultures through interactions with other overseas course participants. The 12th Royal Brunei Armed Forces (RBAF) CSC was participated by 42 officers, including Major (U) Yusra, Major (U) Firdaus, Major (U) Nashriq, Major (U) Sofy, Major (U) Pg Azizul, Major (U) Nasrul, Major (U) Isyhak and Major (U) Arif.

The 40-week course is attended by officers from the RBAF, RBPF, Ministry of Defence and the Internal Security Department as well as participants from other countries such as the Republic of Indonesia, Malaysia, the Republic of Philippines, the Republic of Singapore, United Kingdom, Australia, New Zealand, Pakistan, the Republic of India, Saudi Arabia, the Sultanate of Oman and the People's Republic of Bangladesh.



The aim of the course is to educate, train and develop officers both academically and practically by using issues of the current strategic environment and related implications in the field of defense and security. Additionally, it is also to provide officers with the necessary knowledge and skills to comprehend and operate in a joint military environment.



**"An investment in knowledge pays the best interest"**

BENJAMIN FRANKLIN



# COMMANDER RBAF INSPECTION

By Lt (U) Hafiy

FEATURE



'Fit For Role' (FFR) is the traditional term for the Commander's Inspection in RBAF, where the objective of the inspection is to assess the level of effectiveness, readiness and preparedness of RBAirF. The Commander of RBAF, Major General Dato Paduka Seri Haji Muhammad Haszaimi bin Bol Hassan conducted the Commander's inspection on the 20th October 2022, at the Rimba Air Force Base. Upon arrival at the Rimba Air Force Base, the RBAF Commander was welcomed by our RBAirF Commander, Brigadier General (U) Dato Seri Pahlawan Mohammad Sharif bin Dato Paduka Haji Ibrahim, and the RBAirF Board of Executives.



The inspection started off with a RBAirF brief by Colonel (U) Haji Hishamuddin bin Haji Abidin, Commander Operations Group. The inspection continued with site visits to selected areas such as the Drop Zone of Rimba Air Force Base (Rimba AFB) for the Parachute Airborne Tactical and Delivery Unit (PATDU) demonstration of Free Fall, bachelor barracks, and other areas. In each location the RBAF Commander was shown the assets and briefed on issues surrounding each unit. The RBAF Commander and his entourage were also flown to Lumut Camp using the Blackhawk S70i to observe 39 Squadron's Intelligence Surveillance and Reconnaissance (ISR) capabilities.

The inspection concluded with a debrief by the Head of Inspectorate Unit, RBAF and Acting Deputy Commander of the Joint Force Headquarters at the Bubut Conference Room, RBAirF Headquarters. The Commander's Inspection examines all aspects of RBAF's services to determine the units' general preparedness for any mission or duty. The inspection covers a wide range of topics such as manpower, future assets, operations, intelligence, finance, logistics, security and training.



**"The goal is to set the highest quality when it comes to standards"  
as quoted by N.S.**





# SUPPORT GROUP 8<sup>TH</sup> YEAR ANNIVERSARY

By Lt (U) Tengku Izza



**O**n the 10<sup>th</sup> of October 2022, the Support Group of Royal Brunei Air Force celebrated the 8<sup>th</sup> year of the establishment of the group. The Support Group consists of No. 4 Wing, No. 5 Wing, and No. 6 Wing.

The ceremony was held at the *Dewan Punai* and the guest of honor was Lieutenant Colonel (U) Pengiran Hasrul Ariffin bin Pengiran Haji Rosley, Commander of Support Group, RBAirF. The ceremony was also attended by Commanding Officers, Senior Officers, Officers, Group Sergeant Majors, Group Drill Sergeant Major and Warrant Officers from Support Group.





The ceremony commenced with a photo session followed by the recital of Surah Al-Fatihah led by Ustaz Pengiran Fakhrol Syakirin bin Pengiran Haji Zainuddin, RBAirF Religious Officer. The ceremony continued with a speech from the Guest of Honor. In his speech, the Commander Support Group emphasised the importance of RBAirF core values, contribution and hard work of personnel in leading the success of the organisation.

The ceremony continued with the recital of Tahlil, Doa *Kesyukuran* and Doa *Selamat*. The ceremony concluded with a cake cutting ceremony and the signing of parchment.



# RBAF FOOTBALL

By Lt (U) Norfariz

## TOURNAMENT

FINAL MATCH



# Vs



The Royal Brunei Navy (RBN) football team emerged as champions of the Royal Brunei Armed Forces (RBAF) football tournament after defeating Royal Brunei Airforce (RBAirF) football team in the final. The RBAF football tournament started on 22 September 2022 until 14 October 2022. The teams that participated in this year's tournament are Royal Brunei Land Force (RBLF), Royal Brunei Navy (RBN), Royal Brunei Air Force (RBAirF) and the Ministry Of Defence (MINDEF).

The tournament initially commenced with a group stage on 22 September 2022 with the RBAirF football team finishing first in the group stage with 7 points. The group stage was then followed by a Champions League Final between the winner and the runner-up which was the RBN football team. Present as the Guest of Honour during the Champions League Final was Major General Dato Paduka Seri Haji Muhammad Haszaimi bin Bol Hassan, the Commander of RBAF. Also present were Service Commanders, Senior Officers and personnel of RBAF.

The Champions League Final between RBAirF football team and RBN football team finished with a scoreline of 1-0 after Ordinary Rate Mohammad Aisan Aizuddin bin Abdullah Mohammad Aiman from the RBN football team emerged as the hero after scoring a goal in the 83rd minute. The man of the match was given to RBN's goalkeeper, Able Rate Mohammad Nurazmarul bin Razak.

The final match was then followed by prize presentations by the Guest of Honour to the match officials, Top Scorer Award which was awarded to Ordinary Rate Mohd Aisan bin Abdullah Mohd Aiman and the winners' medals as well as the trophies for the League Trophy and the Champions League Trophy. Despite the loss in the Champions League, the RBAirF will keep on working hard to secure next year's trophy.



# REGIMENTAL SIGNAL OFFICERS COURSE

By Lt (U) Norfariz

4 personnel from the Royal Brunei Air Force (RBAirF) have successfully completed the Regimental Signal Officers & Regimental Signal Warrant Officer 2022 course. The closing ceremony was held at the School of Infantry, Penanjong Garrison. The course was conducted by Signal Training Wing, School of Infantry and commenced from 04 July 2022 until 30 September 2022.

Present as the Guest of Honour was Major Khairul Faizin bin Haji Abdul Gapar, Acting Officer in Command, Officer Development Wing, School of Infantry, Royal Brunei Land Force (RBLF). Also present during the ceremony were Officers from the RBLF, RBN, RBAirF, JFHQ and Royal Guards Regiment. A total of 19 participants completed the course. The RBAirF representatives were Cpt (U) Muhammad Al-Hafiiz bin Haji Jambol, CIS/IT Officer, Lt (U) Mohammad Hazwan bin Hasnan, Communication Officer, No. 2 Wing, WO2 (U) Khairol Hadaffy bin Matali, Radar Specialist, and WO2 (U) Ariffin bin Abang, RSWO Signal Squadron, No. 3 Wing.

During the course, the RBAirF also hosted a study visit by the Regimental Signals Officer and Regimental Signals Warrant Officer Course on 29 September 2022. The course participants were welcomed by Maj (U) Pengiran Mohammad Ady Hafriz bin Pengiran Mohammad Yusof, Staff Officer Grade 2, A6. After a welcoming brief and overview of the RBAirF's History, Roles and Organisational Structure, the course participants visited the Air Operations Center (AOC), where they were given a briefing on the roles and functions of the AOC.

The study visit continued with a tour to Bukit Agok Firing Range, where the course participants were given a briefing on RBAirF's Signal Squadron and 39 Squadron's roles and functions. The course participants also had the chance to view equipment and assets from the respective squadrons. Through active discussions and exposure to the usage of Communication Information Systems (CIS) within the RBAirF, the course participants gained first-hand knowledge and a better understanding of the RBAirF's CIS network and functions.







**LATMA Elang Brunesia** is a Bilateral Field Training Exercise (FTX) between the Royal Brunei Air Force (RBAirF) and Tentara Nasional Indonesia Angkatan Udara (TNI-AU) which is held every 2 years with the purpose of engaging in the interoperability of air assets in a mixture of Search and Rescue Operation (SAR) and Humanitarian Assistance and Disaster Relief (HADR) operations.

In 2022, the RBAirF hosted the 9<sup>th</sup> LATMA Elang Brunesia for two days at the Drop Zone, Rimba Air Force Base. The exercise idea focuses on field training for HADR, which includes the deployment of air cargo drops and SAR. Natural disasters are without a doubt a non-traditional threat, which is of considerable issue due to the rapid climate change, which forces both air forces to adopt a more dynamic management and operational pattern to adapt to the changing circumstances. Participating during the FTX as exercise players were personnel from No 11 Squadron, No. 1 Wing and No 31 Squadron No. 3 Wing from RBAirF and from TNI-AU consisting of 6 Squadron, Wing 4 Lanud Sendjaja. The aircraft that took part from both air forces were the Blackhawk S70i and NAS-332 Puma.

For every LATMA Elang Brunesia FTX, the scenarios and injects were designed specifically in accordance with the current issues and events during that particular year. Exercise players from the TNI-AU and RBAirF must be able to coordinate by following their respective standard operating procedures. This was demonstrated ably as shown in 2022 that both air forces had achieved excellent cooperation and interoperability, especially during the execution of operations without any breach of elements such safety violations and incidents. It is therefore necessary for all levels to maintain their competency in dealing with such a crisis and be ready to respond and engage at any time when required.

The main benefits of LATMA Elang Brunesia FTX is that it allows personnel from two air forces to interact, enhance mutual trust, and build camaraderie. It also underscores the close and long-standing defence ties between Brunei Darussalam and the Republic of Indonesia.





The bilateral exercise between RBAirF and TNI-AU held every two years helps both air forces to train, enhance and review their engagement and cooperative levels in terms of HADR and SAR operations. At the same time it compels both air forces to adopt a more dynamic management and operational pattern to adapt to whatever the situation requires. LATMA Elang Brunesia validates. Most importantly, it gives the opportunity for participants from the two air forces to bond, understand each other better, and forge friendships. It also strengthens the long-standing defence relationship between Brunei Darussalam and Republic of Indonesia.





# EXERCISE AIRGUARD 26/2022

By Lt (U) Abdurrahim



Exercise AIRGUARD is an annual bilateral exercise that provides realistic training for Ground-Based Air Defence (GBAD) operators from The Republic of Singapore Air Force (RSAF) and Royal Brunei Air Force (RBAirF) which was conducted since 1994. This exercise is an important instrument through which both the RBAirF and RSAF GBAD units validate and test its concepts, procedures, tactics and systems. More broadly, they prepare us for joint deployment in theatres of operation to test capabilities and practices, working together efficiently in a dynamic situation. Moreover, this bilateral exercise also allows our personnel to interact, build mutual trust and foster stronger friendships, other than developing our personnel's skills, knowledge and experience.

As we are aware, both countries, Brunei Darussalam and the Republic of Singapore have moved on from the Pandemic to the Endemic phase which permits the conduct of this year's exercise AIRGUARD after two years of hiatus. Nevertheless, this did not stop both sides to continue and plan diligently, which brings us to this year's 26<sup>th</sup> iteration of Exercise AIRGUARD. Major General Kelvin Khong Boon Leong, Chief of Air Force, Republic of Singapore Air Force and Brigadier General (U) Dato Seri Pahlawan Mohammad Sharif bin Dato Paduka Haji Ibrahim, Commander of the Royal Brunei Air Force visited the Bukit Agok Firing Range to witness the 26th Exercise AIRGUARD between RBAirF and RSAF.

This year's Field Training Exercise introduces the participation of Drones and Jammers from No 233 Squadron, No.2 Wing and the Unmanned Aerial System (UAS) from 39 Squadron, No.3 Wing with the involvement of expertise from 128 Squadron, RSAF.



This has indeed widened the scope of air asset involvement other than helicopters which will further test our GBAD operators' proficiency. On the other hand, it will also assess our GBAD interoperability and effectiveness in combating multiple and different classes of air threats. The Exercise AIRGUARD is not just limited to defence knowledge exchange, but it also provides an opportunity to share and experience each other's different ways of life and cultures. For the first time in 26 years, a community service programme at Smarter Brunei (A Centre for Children with Autism) at Kampung Mata-Mata was conducted as part of the Exercise AIRGUARD hearts and minds initiative. The objective is to forge relationships between the Non-Governmental Organisations (NGOs) while offering community support, which will in turn strengthen the relationship between both countries.



Last, but not least, my sincere and heartfelt gratitude to all officers and members of the RSAF and RBAirF who have been instrumental in developing and sustaining Exercise AIRGUARD. Once again, congratulations on the success of conducting this year's Exercise AIRGUARD.





# MAULIDUR RASUL CELEBRATION

By Cpt (U) Mu'iz



On the 12th day of the month of Rabi'ul-Awwal in the Islamic calendar marks the birth of Prophet Muhammad (PBUH) which is remembered by every Muslim throughout the world. The occasion is marked by commemorating and recitation of qasidah, shalawat, doa', zikir and religious talks as a reminder and remembrance of the life of the prophet.

Every year on this significant Islamic observance date, the RBAF commemorates the birthday of the Prophet through religious gatherings and by reciting Quranic verses, congregation prayers and tazkirah with the aim of earning Shafa'ah.



It is important to understand the intention of the celebration based on its origin and its benefits as to honour Prophet Muhammad (PBUH).

Prophet Muhammad (PBUH) was born on the 12th day of Rabi' al-Awwal, 570 A.D in the holy city of Mecca. The Prophet's life was filled with virtuous traits and full of unparalleled challenges where he was born without a father by his side, orphaned throughout his childhood years, and bereaved by the passing of his loved ones. During his early days as prophet, he received hostile reception to his message; and was rejected and oppressed by the society.



However, his courage in delivering the message of justice, humanity, and knowledge; led to a paradigm shift on the Islamic teaching throughout the Arabian Peninsula which has become one of the most respected peninsulas in human history.

To appreciate the legacy made by Prophet Muhammad (PBUH) for his past existence including wisdom delivered to the minds and hearts Muslims around world, we celebrate by showing gratitude in celebrating his birth (Al-Mawlid) or known as Maulidur Rasul, by commemorating his life, honorable traits, and characteristics, which is considered as blessed in matter of immense goodness and as a way for keeping his memory alive.

In honor of Maulidur Rasul celebration, the RBAF conduct religious gathering at respective prayer halls and mosques by recite Dikir Maulud, Sayyidul Istighfar, Quranic verses, congregation prayers including tazkirah which delivered by Ustaz and invited Religious Officers from Ministry of Religious Affairs to enlighten the true meaning of the event. Such event does not only act as a reminder of the birth of Prophet Muhammad (PBUH) but also to earn Shafa'ah and forgiveness from Allah S.W.T. Whilst also to be ranked among the highest degree in the heavens by appreciating Prophet's existence whose had the greatest intercession among other prophets.

## MAULIDUR RASUL

اللَّهُمَّ صَلِّ عَلَى سَيِّدِنَا مُحَمَّدٍ

Selawat dan Salam Ke Atas Junjungan  
Nabi Muhammad S.A.W

All in all, the birth of Prophet Muhammad (PBUH) to this earth is the greatest blessing and mercy that Allah S.W.T has ever bestowed upon us. It is necessary for every Muslim to celebrate this event and show a form of gratitude that will always be instilled in our passion for our Prophet who provides a wide range of wisdom and compassion especially Shafa'ah in forgiveness and seek blessings from Allah the Almighty in life and in the thereafter.





**“GIVING BACK  
TO THE COMMUNITY”**





BACK TO  
UNITY"







# WHAT ARE RISK ASSESSMENTS?



By Lt (U) Hazwanie

## RISK ASSESSMENTS

A risk assessment is an overall procedure in identifying and analysing situations, processes, and any form of conducts that could potentially be harmful, particularly to people. To determine the severity of a particular risk, assessments and evaluations are carried out upon identification. This ensures that the necessary steps can be taken to eliminate or prevent in order to minimise the risks identified.

They help to:

- Create awareness of hazards and risks.
- Identify who may be at risk.
- Determine whether a control program is required for a particular hazard.
- Determine if existing control measures are adequate or if more should be done.
- Prevent injuries or illnesses, especially when done at the design or planning stage.
- Prioritize hazards and control measures.
- Meet legal requirements where applicable.

Before introducing a new activity, procedure or altering any existing procedure or activity, it is highly important to carry out risk assessments first. Particularly when trainings, introduction of a machinery, a change in tools or equipment, when concerning harm is apparent or hazards are identified.

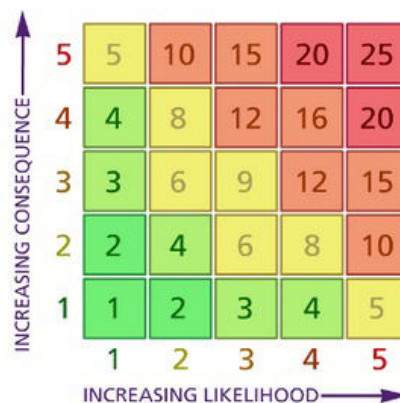
## RANKING OR PRIORITISING RISKS

Priority is usually established by considering the employee or trainee exposure and the possibility for incident, injury or illness.

There are no shortcuts or single way to determine the level of risk. Nor will a single technique can be applied in every situations. Ranking hazards require the knowledge of the workplace activities, urgency of situations, and most importantly, objective judgement.

For simple or less complex situations, an assessment can be as simple as a discussion or brainstorming session based on knowledge and experiences. In some cases, checklists or a probability matrix can be helpful. For more complex situations, a team of knowledgeable personnel who are familiar with the work is usually necessary.

## RISK ASSESSMENT MATRIX



A risk assessment matrix is a visual tool that depicts the potential risks affecting an activity. The risk matrix is based on two intersecting factors: the likelihood that the risk event will occur, and the potential consequences that the risk will have on the activity. In other words, it is a tool that helps to visualize the probability vs. the severity of the potential risk.

Depending on likelihood and severity, risks can be categorized as very likely, likely to very unlikely. As part of the risk management process, matrices help the conductor of an activity to develop an appropriate mitigation strategy.

Likelihood	Guideword
1	Very Unlikely
2	Unlikely
3	Fairly Likely
4	Likely
5	Very Likely



These risk ratings correspond to recommended actions such as:

Consequence		
	Guideword	People
1	Insignificant	No Injury
2	Minor	First Aid Cases
3	Moderate	Broken Bones
4	Major	Partial Disability, Amputations
5	Massive	Fatality, Fatalities, Complete Disability

Risk	
	Outcome
1-4	<b>Acceptable.</b> Ensure controls are properly maintained.
5-9	<b>Adequate.</b> Try to reduce risk further
10-16	<b>Caution.</b> It is allowed, but it is not recommended that the activity proceeds. If it does proceed, ensure there is constant careful supervision. Ensure emergency equipment is available. Reduce risk ASAP.
17-25	<b>Unacceptable.</b> This level of risk is not allowed. Stop Immediately

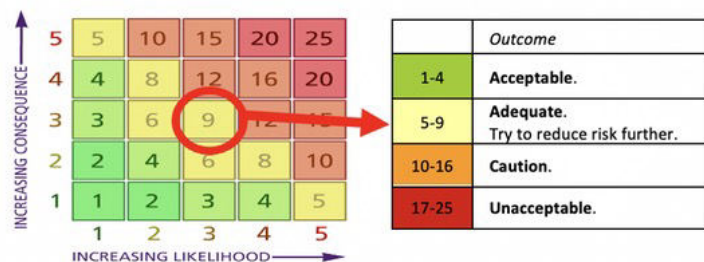
## LET'S USE AN EXAMPLE:



When conducting the Individual Fitness Assessment (IFA), weather hazard is one of the most important risk factors. Bad weather conditions such as heavy rain will be a huge risk for IFA to be carried out. The assessment team reviewed the situation and agreed that if the activity is to be carried out it is most likely to:

Cause a short-term injury such as a strain or sprain if the individual falls due to the slippery condition. A severe sprain may require days off from work. This outcome is similar to a "Moderate" severity rating.

When compared to the risk matrix chart (Table 1), these values correspond to an Likelihood rating (Table 2).



The team shall decide to implement risk control measures, activity is to be halted for an hour or until the rain subsides. However, if rain continues to rain heavily, activity is to be postponed to another day.

## CONCLUSION

It is important to know risk assessments are complete and accurate. It is also essential to be sure that any changes in the work environment have not introduced new hazards or changed hazards that were once ranked as lower priority to a higher priority. It is good practice to review assessment on a regular basis to make sure control methods are effective to nurture a more better, effective and systematic health & safety management at the workplace.



## MILITARY AVIATION INCIDENT CASE STUDY



**Lt (U) Aiman Syuwari**

A UH-60 Black Hawk helicopter crashed south of Lucky Peak near Boise, Idaho, on February 2, 2021, killing three Idaho National Guard Soldiers. The deceased were all identified as Chief Warrant Officers and they were all pilots who were in the middle of a routine training exercise when something went horribly wrong.

The crash did not occur during training but it happened when the aircraft is returning back to the Gowen Field Base. The accident happened just south of Lucky Peak, which is a little more than 10 miles southeast of the state capital in Boise, shortly after 2000H local time. The Black Hawk's last contact was about 1945H and an emergency transmitter locator on the aircraft was activated just after 2000H immediately launching a search and rescue mission. Rescuers found the wreckage and crew about 0015H, Wednesday.

The cause of the crash wasn't immediately determined. From the investigation the aircraft was in perfect condition, and there were no mechanical factor that contributed to the accident.

The aircraft performed normally and there were no indications that the crew experienced any mechanical issue or fault at any time during the flight. It was also determined that all aircraft inspections, required maintenance or current maintenance in the unit's maintenance programs and procedures were deemed healthy and fully functional.







## "TRAINING IS VALUABLE BUT IT DOES NOT TRULY REPLICATE THE DANGER OF A REAL LIFE IMC ENCOUNTER"

From Idaho Army Aviation Safety Officer, the weather at that time has degraded rapidly and the aircrew inadvertently lost visual references to the ground and the surrounding terrain due to fog. The crew then immediately tried to do an IMC procedure attempting to transition from relying primarily on the visual references outside the aircraft to relying instead on the instrument inside the aircraft to maintain control. The crew only had 14 seconds for the time of procedure to the time the aircraft impacted on the ground. The crew did an inadvertent IMC escape maneuver in an effort to get out of that condition and get back to the base which was 8 Miles away but unfortunately ended up crashing on a terrain.

Helicopters are unable to stop and hover in an IMC condition, only during visual conditions if decisions were made early.

The pilot could have stopped and land somewhere and wait for the weather to clear up. Or in a situation where the aircraft in an IMC, the pilot needs to maintain the forward speed. Additionally, IMC is a procedure that needs to be briefed before every flight and also regularly trained in simulated IMC situations. Training is valuable but it does not truly replicate the danger of a real life IMC encounter.

The most effective way in order to survive an IMC is simply to not enter the area but however that is not always possible. In this case, good timely decision making can reduce the risk of entering an IMC area and avoid a possible crash while still in visual conditions and land the aircraft safely and wait for the weather conditions to be clear again.

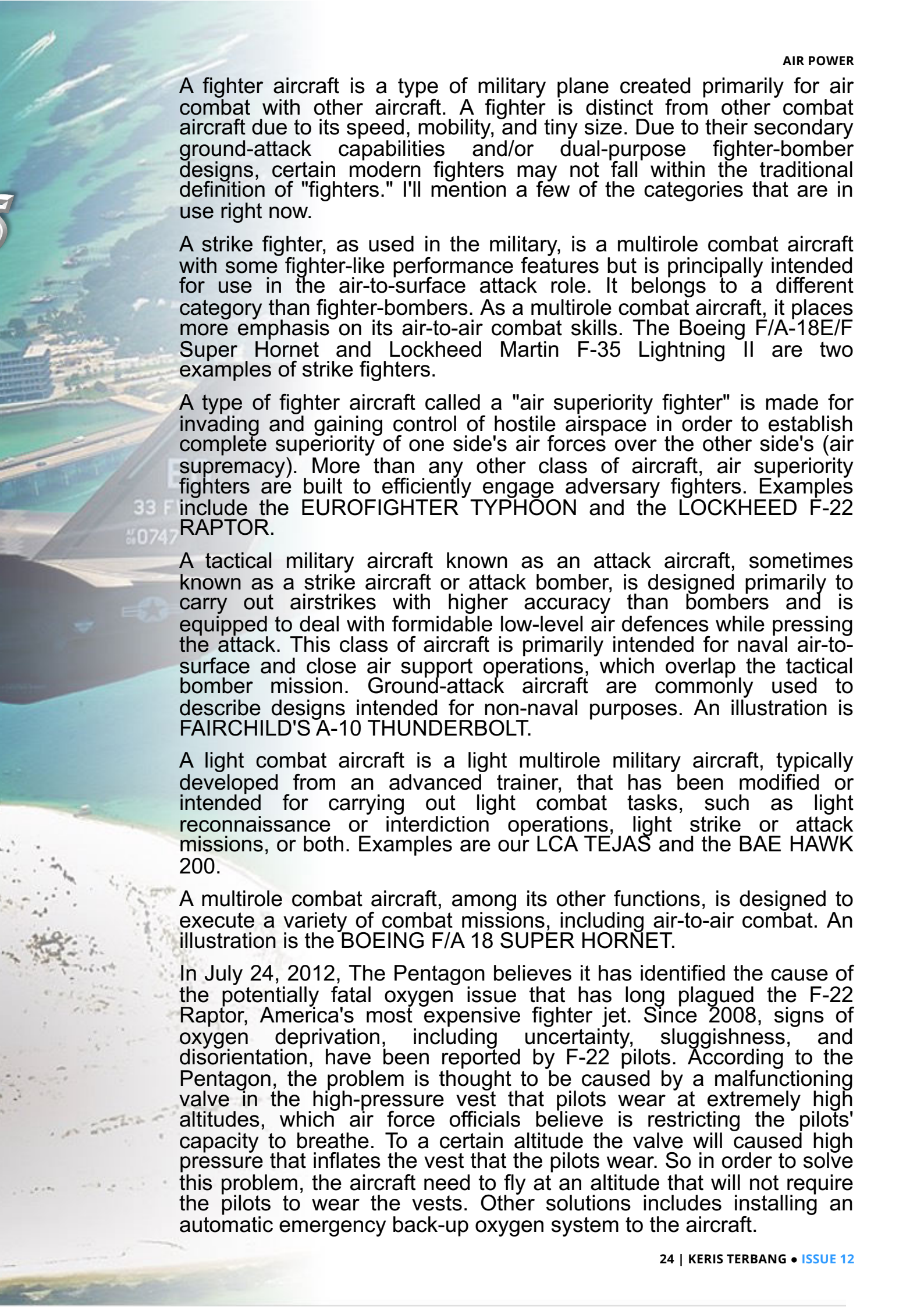


# AIR DEFENCE : *FIGHTERS*

By Lt (U) Aiman







A fighter aircraft is a type of military plane created primarily for air combat with other aircraft. A fighter is distinct from other combat aircraft due to its speed, mobility, and tiny size. Due to their secondary ground-attack capabilities and/or dual-purpose fighter-bomber designs, certain modern fighters may not fall within the traditional definition of "fighters." I'll mention a few of the categories that are in use right now.

A strike fighter, as used in the military, is a multirole combat aircraft with some fighter-like performance features but is principally intended for use in the air-to-surface attack role. It belongs to a different category than fighter-bombers. As a multirole combat aircraft, it places more emphasis on its air-to-air combat skills. The Boeing F/A-18E/F Super Hornet and Lockheed Martin F-35 Lightning II are two examples of strike fighters.

A type of fighter aircraft called a "air superiority fighter" is made for invading and gaining control of hostile airspace in order to establish complete superiority of one side's air forces over the other side's (air supremacy). More than any other class of aircraft, air superiority fighters are built to efficiently engage adversary fighters. Examples include the EUROFIGHTER TYPHOON and the LOCKHEED F-22 RAPTOR.

A tactical military aircraft known as an attack aircraft, sometimes known as a strike aircraft or attack bomber, is designed primarily to carry out airstrikes with higher accuracy than bombers and is equipped to deal with formidable low-level air defences while pressing the attack. This class of aircraft is primarily intended for naval air-to-surface and close air support operations, which overlap the tactical bomber mission. Ground-attack aircraft are commonly used to describe designs intended for non-naval purposes. An illustration is FAIRCHILD'S A-10 THUNDERBOLT.

A light combat aircraft is a light multirole military aircraft, typically developed from an advanced trainer, that has been modified or intended for carrying out light combat tasks, such as light reconnaissance or interdiction operations, light strike or attack missions, or both. Examples are our LCA TEJAS and the BAE HAWK 200.

A multirole combat aircraft, among its other functions, is designed to execute a variety of combat missions, including air-to-air combat. An illustration is the BOEING F/A 18 SUPER HORNET.

In July 24, 2012, The Pentagon believes it has identified the cause of the potentially fatal oxygen issue that has long plagued the F-22 Raptor, America's most expensive fighter jet. Since 2008, signs of oxygen deprivation, including uncertainty, sluggishness, and disorientation, have been reported by F-22 pilots. According to the Pentagon, the problem is thought to be caused by a malfunctioning valve in the high-pressure vest that pilots wear at extremely high altitudes, which air force officials believe is restricting the pilots' capacity to breathe. To a certain altitude the valve will caused high pressure that inflates the vest that the pilots wear. So in order to solve this problem, the aircraft need to fly at an altitude that will not require the pilots to wear the vests. Other solutions includes installing an automatic emergency back-up oxygen system to the aircraft.





Night vision equipment has already been utilised for more than 50 years and revolutionized the modern military warfare since. Using night vision technology, the modern army or police force can deploy, engage, and communicate more effectively at night. Which gives the personnel competitive advantage against their enemies. Users can utilize it for observation, navigation, tracking and approach enemies.

Light contains particles named photons and the movement of the particles called wave. The total energy in light wave depends on the wavelength. Long wavelengths have lesser energy than short wavelengths. Night vision part called Infrared light which can be divided into three types: Thermal Infrared, Near Infrared and Mid Infrared. Thermal Infrared is the largest type of the Infrared light which is between three to more than thirty microns. The main difference. Near Infrared is the nearest to visible light which have wavelength between 0.7 to 1.3 microns. For example: remote controls. Mid Infrared have wavelengths between 1.3 to 3 microns. What distinguish the three types of Infrareds is that Thermal Infrared is produced by an item not reflected from it. This comes from occurrence at atomic level. The electrons in the atom obtain great energy circulation after heating and finally return to its ground state. This is obtained by letting go of energy in terms of photons, a part of light.

There are two main types of Night Vision Technology: Light Amplification Technology and Thermal Imaging Technology. Light Amplification Technology is also called picture enhancement. This type of technology count on a specific tube known as Image Intensifier Tube which changes photons to return in electrons to amplify observable light and infrared light. Thermal Imaging Technology relies of heat energy. All objects give of infrared energy. The value of the infrared energy is equal to the number of heats produced by the item or life forms produces. The thermal images detect this infrared energy and creates a thermal image of the situation.



# MILITARY TECH- NIGHT VISION GOGGLES

By Lt (U) Fauzi

In China, soldiers are equipped with new generation Individual combat systems (ISC) equipment, with a helmet attached with multi-functional night vision goggles. The military can detect friendly forces implement Identification of Friend or Foe (IFF) using the attached goggles. At the same time, the video and data are sent back to headquarters by the goggles which allows commanders to assess the live situation, each location of their soldiers and receive detailed information of the battlefield.

The British Army recently obtained of XACT nv33 Night Vision Goggles that have been utilized for new Ranger Regiment and Royal Air Force Regiment. The new systems allow soldiers to work effectively in darkness at a tactical level, enhancing the mission speed in dismounted and mounted roles. Other XACT products have already been used by couple of NATO members such as Germany and Netherlands.





# TABLETS AND ITS U

Tablets can now be utilised for more than just watching videos and browsing the internet from countless options of applications that have been created. In this way, the workplace has finally embraced the advancement in mobile technologies. Using portable devices like smartphones and tablets to supplement their current workplace technology in order to increase productivity. These are the three primary advantages of using tablet devices at the workplace:



## 1. Mobility

The usage of portable devices enables the staff in your organization the ability to work away from their workstations, which is the most evident advantage. Typically, carrying your work with you when on the road has been done using computers. Tablets are particularly portable because their typical diagonal measurements range from 5 to 10 inches.

## 2. Eco friendliness

The amount of paper that a person requires or uses is decreased by tablets. It significantly reduces the requirement for printed material by having a portable digital interface to create reports and forms. Cloud computing platforms are being used to create applications that will let users utilise tablets much like they would typically use laptop computers. With just a Wi-Fi or data subscription, tablet users can be more productive as a result of cloud computing.

**REMINDER:** ALL PERSONAL TABLETS ARE TO BE REGISTERED AND APP



# USAGE FOR WORK

By Lt (U) Pg Rahim



## 3. Extended Battery Life

The duration of the tablet battery life may be its most common feature. The battery life of laptops has long been criticized, which ultimately has a negative impact on how much productive work can be done on the device when it is disconnected. Most tablet batteries have a lifespan that is twice as long as that of the batteries found in most laptops. This enables the user to accomplish more and travel farther without being constrained by a battery-depleted device.

## Top Recommendations:

Best Overall: iPad Pro BND\$1,299 – \$3,279

Best Android: Samsung Galaxy Tab S8 BND\$1,199 - \$2,119

Best Microsoft: Microsoft Surface Pro 9 BND\$1,319 - \$3,159

Best Budget: iPad 10<sup>th</sup> Gen BND \$729 – \$1,239

APPROVED BY THE DEFENCE INFORMATION TECHNOLOGY UNIT, MINDEF



# IMPORTANCE OF STRETCHING BEFORE EXERCISE

By Lt (U) Tengku Izzat

When most people think of fitness they think of cardiovascular and strength exercises, but there is another important component of fitness—stretching. If you want to develop and maintain optimal fitness, be sure to include stretching in your daily routine. Stretching is not only critical for warming, but it has a considerable impact to overall health.

Stretching refers to a practice of elongating a muscle or muscle group to its fullest length. Though we may not realize it, stretching is actually a natural, instinctive behavior. Upon waking, most of us will instinctively reach our arms overhead and stretch from fingers to toes. Our body naturally craves a “stretch” after long periods of sitting or inactivity. This natural instinct is your body’s way of telling you that stretching is good.

Stretching keeps the muscles flexible, strong, and healthy, and we need that flexibility to maintain a range of motion in the joints. Without it, the muscles shorten and become tight. Then, when you call on the muscles for activity, they are weak and unable to extend all the way. That puts you at risk for joint pain, strains, and muscle damage. Dynamic stretches are the most effective for pre-workout mobility. Dynamic stretching before a workout can help your muscles, ligaments, tendons, joint capsules, and other tissues become loosened up and prepared for exercise.

Post stretches or maintenance stretches are just as or if not more important than stretching prior to your workout, after your warm up. The main muscles groups used during the session are the ones that need to stretch. Post workout stretches are great for helping your body to move excess lactic acid out of your muscles, which can help you avoid post workout soreness. Post workout stretches also help get the muscle back to their original length.



CHART

# Stretching Exercises

by DAREBEE @ [darebee.com](http://darebee.com)



shoulders



lower back



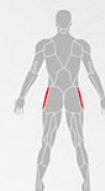
hamstrings



quads



inner thighs



hips

1 	1 	1 	1 	1 	1 
2 	2 	2 	2 	2 	2 
3 	3 	3 	3 	3 	3 
4 	4 	4 	4 	4 	4 
5 	5 	5 	5 	5 	5 
6 	6 	6 	6 	6 	6 







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

**SUBMISSION  
DEADLINE  
18 APRIL 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.





**LATMA ELANG BRU**





**NESIA 2022**

**The NAS-332 Super Puma Performing a  
training Search And Rescue (SAR) Mission  
At The Rimba Air Force Base Drop Zone**





**KERIS TERBANG**