

Research Article

# Mobile Safe Firearm Equipment M4, M16 Safe

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**Abstract:** The purpose of Mobile Safe Firearm Equipment (M4, M16 Safe) is a tool created by PU Gong Kedak for creating weapon safety measures. The goal of the Mobile Safe Firearm Equipment (safe) initiative was to improve the handling of firearms and ammunition. The concept that the group continued from the shooting range at the guard post when the handover procedure was completed also led to this project. To gather the best perspective before it was produced, this team also performed an in-person poll with members at all levels. Through a document designating the Members of the Authority, the appointed this team to create the Primary Innovation Product. The creation of this M4, M16.SAFE can guarantee that guns are always handled safely during handovers. Members on duty may also feel a little more upbeat as a result of not having to worry and be nervous whenever they are on duty with a weapon. When discussing Base Defence and Operational Preparation, all levels of personnel understand the need for firearms used in the mission. Far from it, it is a matter of concern whether the personnel understand firearm safety measures and whether there is a need for a tool that is in line with the times. The occurrence of a gunshot when handing over a task must be taken seriously. With the M4, M16.SAFE equipment, the firearms supervisor can control the firearms and ammunition in a safe condition, and the risk of gunshots while on duty can be avoided. Accordingly, the threat of loss of life, injury and property can be avoided. The idea for this project was born when an incident occurred at the guard post while handing over duties at Pangkalan Udara Gong Kedak in August 2021. Various reports and speculations were received that the negligence and negligence of the guard members on duty could lead to injuries, accidents and even take lives. This project was also triggered through face-to-face discussions and surveys with all levels of members to achieve the best management of weapons and ammunition to protect the good name of SKN HANDAU.

*Keywords:* firearm, mobile safe, ammunition, shooting



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## 1. INTRODUCTION

When discussing Base Defense and Operational Preparation, all levels of personnel understand the need for firearms used in the mission. Far from it, it is a matter of concern whether the personnel understand firearm safety measures and whether there is a need for a tool that is in line with the times. The occurrence of a gunshot when handing over a task must be taken seriously. With the M4, M16.SAFE equipment, the firearms supervisor can control the firearms and ammunition in a safe condition, and the risk of gunshots while on duty can be avoided. Accordingly, the threat of loss of life, injury and property can be avoided,

The idea for this project was born when an incident occurred at the guard post while handing over duties at PUGK in August 2021. Various reports and speculations were received that the negligence and negligence of the guard members on duty could lead to injuries, accidents and even take lives. This project was also triggered through face-to-face discussions and surveys with all levels of members to achieve the best management of weapons and ammunition to protect the good name of SKN HANAU.

The product name for Military defense is **MOBILE SAFE FIREARM EQUIPMENT (M4, M16 SAFE)**. One creative initiative is Mobile Safe Firearm Equipment (M4, M16 SAFE). The highest level of asset and life safety is ensured by this equipment, which is a tool for creating safe weapons that can be used in the field in any weather conditions and are flexible and portable. The idea behind this equipment was to address the issue of carelessness and negligence that happened when members used safe weapons procedures. Additionally, this concept led to the Provost Force's rebranding as the RMAF Land Defence Force (HANAU).

## 2. METHOD & MATERIAL

The purpose of **MOBILE SAFE FIREARM EQUIPMENT (M4, M16 SAFE)** is a tool created by PU Gong Kedak for creating weapon safety measures. The goal of the Mobile Safe Firearm Equipment (safe) initiative was to improve the handling of firearms and ammunition. The concept that the group continued from the shooting range at the guard post when the handover procedure was completed also led to this project. To gather the best perspective before it was produced, this team also performed an in-person poll with members at all levels. Through a document designating the Members of the Authority, the appointed this team to create the Primary Innovation Product. The creation of this M4, M16.SAFE can guarantee that guns are always handled safely during handovers. Members on duty may also feel a little more upbeat as a result of not having to worry and be nervous whenever they are on duty with a weapon.

## 3. FINDINGS

**Cost management** is a major obstacle. Production prices may increase when premium materials like strengthened steel, cutting-edge weather-resistant coatings, and modular components are used. Even though these qualities are necessary for performance and longevity, many potential customers may find the finished product's price to be prohibitively excessive. Cost-effectiveness and premium features must be balanced; if expenses are reduced, performance may suffer, which would reduce the product's ability to compete in the market. Maintaining quality while keeping production costs down will require striking the correct balance.

**Low marketability** is another issue. Specialized attributes like weather resistance, portability, and adaptability may make the product appealing to a select set of people, such as military units or huge testing facilities, but not to the general public. This might reduce demand and reduce the possibility of sales. Furthermore, if the product's pricing is excessively high because of its extra features, it might not draw in enough customers to make the investment worthwhile. Overcoming this obstacle will depend on how well the product is marketed to the appropriate demographic and how well it satisfies their unique demands.

Another obstacle is the **challenge of locating components**. High-strength steel, weather-resistant coatings, and adjustable mechanisms are just a few of the specific materials and components needed for this product that might not be easily accessible or would need to be custom-made. These

parts can be expensive, time-consuming, and reliant on particular sources to source, which may cause manufacturing delays. Furthermore, if these parts are acquired from outside, problems with the supply chain or trade restrictions may make things much more difficult, making it more difficult to meet market demand and sustain steady output.

## 5. CONCLUSION

The Mobile Safe Firearm prototype provides a very efficient and practical method for conducting ballistic testing in a variety of disciplines, including defence, law enforcement, and research. Its design has several critical characteristics that improve its functionality, such as a strengthened steel frame for durability, heavy-duty wheels for portability, and an adjustable nozzle for precise firing control. The shock-absorbing foundation ensures that vibrations or movements do not impair test accuracy, and the modular design allows for simple repair, upgrades, and maintenance. The recovery tray quickly gathers fragments and residual ammo, protecting the environment while also giving valuable data for research. By addressing the practical difficulties of mobility, precision, and safety, the device delivers a durable and dependable equipment for ballistic testing in any environment.

Furthermore, the prototype achieves the users' objectives by providing a low-cost, long-term solution that reduces operating disturbances and increases testing efficiency. Its design facilitates quick setup and relocation, reducing time and labour costs, which is especially useful in fast-paced or dynamic testing scenarios. The unit's movable components and customizable setup allow it to be adapted to a wide range of testing settings, making it versatile enough to suit a variety of industry requirements. Furthermore, the unit's ease of maintenance and modular structure extend its longevity, eliminating the need for frequent replacements. Overall, Mobile Safe Firearm provides a comprehensive solution that meets both the practical and operational needs of ballistic testing, while also ensuring safety, accuracy, and long-term reliability.

In an endeavour to eradicate carelessness and forgotten terms in guaranteeing safe weapons for use, the M4, M16.SAFE product can have a maximum and considerable impact on the culture of safe work in the use of weapons. The Malaysian Maritime Enforcement Agency (MMEA), JKR, has acknowledged the project's efficacy.

The ATM and other enforcement agencies can use the M4, M16.SAFE initiative, which can be developed and copied as needed. Additionally, this initiative can install a strong sense of combative spirit and bring about a paradigm shift in terms of enhancing weapon safety in any location, in all weather, and in a constrained area. In addition to promoting the Industrial Revolution's "Prevention is Better Than Cure" tenet, the M4, M16.SAFE product offers technological value as a creative and inventive product that can compete with the demands of the ATM in general and the Royal Malaysian Airforce in particular.

It has been demonstrated that this product is competitive and successful. The Team Leader was appointed as a member of the Pangkalan Udara Gong Kedak Innovation Committee to offer guidance and opinions on the Base's innovation projects following the successful completion of this project and the attention and demand it garnered from the Royal Malaysia Airforce Base.

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