Crowd Management

Division Human Resource Development

Module 4

Crowd Management Equipment

Learning Programme for platoon member

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Title Page

LEARNING PROGRAMME	Crowd Management for Platoon Members (CMPM)
MODULE NO	3
MODULE TITLE	Crowd Management Equipment
SAQA UNIT STANDARD TITLES, NUMBERS AND NQF LEVELS	
ORGANISATIONAL STANDARD TITLES AND NUMBERS	345:DEMONSTRATE AN UNDERSTANDING OF CROWD MANAGEMENT.
TARGET GROUP	LINE FUNCTION MEMBERS
ISSUE DATE	
REVIEW DATE	

How to use this module

- This module deals with how to use, transport and maintain crowd management equipment

- The learner will be exposed to the different types of crowd management equipment, and are as follows:
- Helmet
- Body amour
- Tonfa
- Shield
- Shotgun, and
- Pyrotechnics

The learner will give the opportunity to demonstrate the use of the crowd management equipment.

An observation checklist will be utilized to assess learners on the use of crowd management equipment.

Module Contents

Icon Page

This icon alerts you to a **definition** that is important for you to analyse, comprehend and commit to memory.

This icon alerts you to a **practical example** that will assist you in understanding and or comprehending a particular concept, model, or specific learning material.

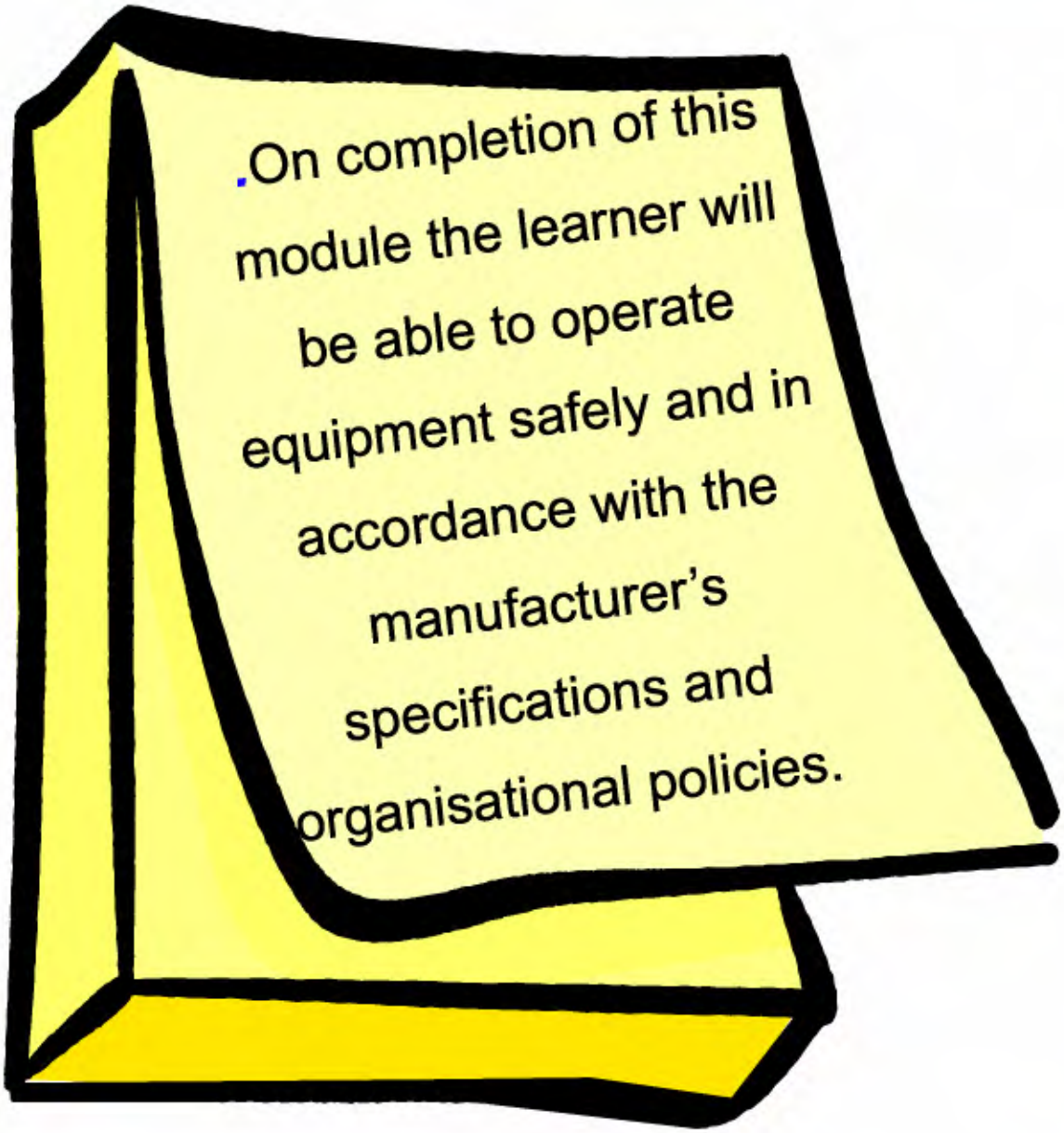
This icon alerts you to an **activity** that you must perform in the workbook in order to master the material.

This icon alerts you to **a tip** that will assist you in master the material.

This icon alerts you to **a particular source** that must be used in addition to the Learner's Guide at a particular point during learning.

This icon alerts you to the **list of sources** used to compile the module or chapter.

Module Outcome



Helmet

Chapter 1

Chapter Outcome

On completion of this chapter you will be able to use a helmet during crowd management

Learning Outcomes

1. Inspect the helmet for serviceability according to SOP.
2. Use the helmet for the purpose of personal protection during simulated crowd management exercises.

Chapter Contents

1. INTRODUCTION

The helmet is worn during crowd management to protect the head, face and neck from flying objects and hard blows

2. DESCRIPTION

2.1 The helmet is manufactured from fibre glass.

2.2 The visor is manufactured from high impact poly-carbonate.

2.3 Weight—980 grams

2.4 Colour—blue, green or black

3. CHARACTERISTICS

3.1 The helmet is adjustable

3.2 The helmet absorbs shock, withstands penetration and distribute energy.

3.3 Fibre glass is not affected by the general chemical solutions, and ageing.

3.4 The helmet is not approved by the SABS for use as a "crash-helmet for motorcycle riders.

HELMET

4. USE, MAINTAIN AND TRANSPORT

Helmet should be transported and stored in such a way that the neck protection is not folded and the visor (if perspex) is not scratched or damaged. Cleaning of helmets can be carried out by means of wiping with damp cloth and in the case of a pespex visor, use soap solution.

All cracked or damaged helmets must be replaced immediately so as not to compromise safety. Helmets are not to be used as motorbike crash helmets. Helmets when first worn must be adjusted by means of the inner straps and shoe lace, or in the case of the new helmets being issued at Supply Chain Management an adjustable screw.

In the event of hazardous materials or chemicals (gasses) being present at the crowd management situation or scene, the helmet should be now replaced with a gas mask. Gas mask filters are limited to certain levels of gas or chemical threats.

Gas Mask

Clean with a non alcohol based fluid when contaminated.

When contaminated, clean with luke warm mild soapy water.

Do not stored in direct sunlight.

Breather hole must be closed after use.

Filter must be renewed frequently (check expiry date).

5. SUMMARY

It is important to use helmet and Gas mask with the necessary care to ensure that it is free of damages and scratches especially, the visor.

Body Armour and Body Protection

Chapter 2

Chapter Outcome

On completion of this chapter you will be able to use the Body Armour during crowd management

Learning Outcomes

1. Identify the features of the body armour.
2. Recognise the different sizes of body armour.
3. Describe the levels of protection provided by the body armour.
4. Identify with the warnings on the use of body armour.
5. Use the body armour.
6. Examine the body armour for serviceability.

Chapter Contents

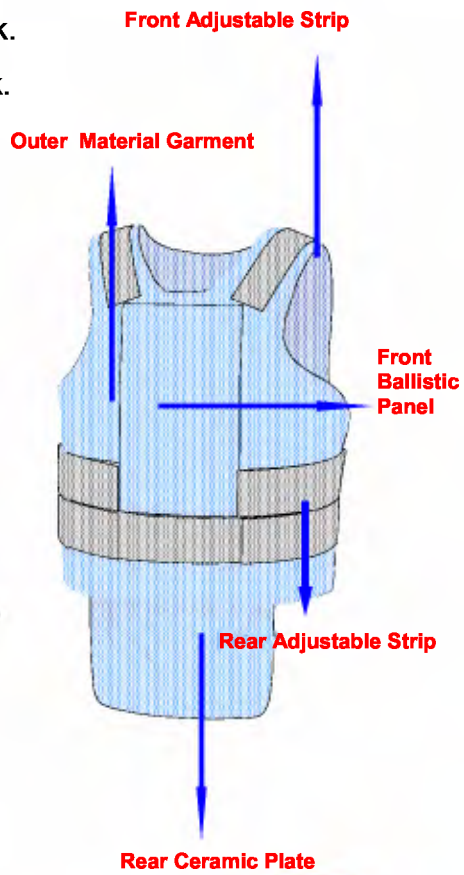
1. INTRODUCTION

With the increase of attacks on police officials, it is essential that equipment like body armour are used. Body armour was introduced in the early '90's and were utilized with great success. If worn correctly, the Clansman body armour will offer protection against AK47 rifle fire and all lesser threats. It is an essential piece of equipment for every operational police official.

2. FEATURES

This body armour is manufactured from ballistic material and consists of the following parts:

- Front ballistic panel with trauma pack.
- Rear ballistic panel with trauma pack.
- Outer material garment.
- Front ceramic plate.
- Rear ceramic plate.
- Carry bag.



3. SIZES

SIZE:	**CHEST MEASUREMENTS:**
Medium	90-100cm
Large	102-112cm
X-large	114-124cm
XX-large	126-136cm

4. LEVELS OF PROTECTION

The body armour offers protection in accordance of the international standard NIJO 101.03. The soft armour (KEVLAR) offers only Level II protection. To obtain Level III protection, the ceramic plates must be added.

LEVEL II

Type of Projectile	Mass	Muzzle Velocity
357 MAG. JSP	158gr	425 m/s
9 mm PARA. FMJRN	125gr	358 m/s

This standard is based on the use of standard charges and excludes any armour-piercing rounds.

LEVEL III

Type of Projectile	Mass	Muzzle Velocity
5,56 x 45mm (R4;R5) FMJ	55gr	955 m/s
7,62 x 39mm (AK 47) FMJ	132gr	725 m/s
7,62 x 51mm (R1) FMJ	143-146gr	855 m/s
and all lesser threats		

The body armour can be worn with or without one or both ceramic plates, depending on the task which must be executed.

5. WARNINGS

5.1 Do not try and prove the effectiveness of the body armour.

5.2 Wear the right size body armour.

5.3 The body armour will only protect those parts of the body which it covers.

5.4 Ensure that the body amour is properly strapped to prevent any gaps between the body and the vest.

5.5 The wearing of body armour will not safeguard you from injuries.

5.6 Handle the body armour with the necessary care.

5.7 Your best protection is caution.

5.8 BLUNT TRAUMA - Whilst the right level of protection will prevent a round penetrating the body, the impact of the round will lacerate and bruise the tissue around the point of impact.

HEAT BUILDUP –

is most probably the number one problem for you as a user.

Putting on body armour can only be a welcome replacement for a jacket or sweater during winter, but during our summer, heat is the limiting factor in body armour use.

No body armour can honestly claim to be comfortable in the heat. It is a matter of getting use to it.

6. APPLICATION (USE)

6.1 Wear the body armour like a normal jacket.

6.2 Tighten all Velcro straps correctly.

6.3 Move around with the body armour to ensure that it is comfortable, fits properly and does not impede access to your handgun, spare magazines, handcuffs and tonfa.

6.4 The ceramic plates must be worn with the curves contouring the body. Ensure that the plates are inserted correctly and that the Velcro straps are pulled tightly over the plates.

6.5 When the body armour is not being used, it must be stored in the carry-bag, away from direct sunlight or moist.

6.6 Avoid dropping the ceramic plates on hard surfaces, as it may crack, and this may reduce the effectiveness and lifespan of the plates.

COMFORT / WEARABILITY

is a function of the armour's:

- Fit;
- Coverage;
- and softness.

If you aren't wearing the vest, it isn't protecting you! The best body armour for you is the one you're wearing when shot!

FREEDOM of MOVEMENT –

is a function of the armour's thickness or bulkiness, and design and fit. If you are hindered in the movement required, your body armour can become more of a liability than an asset. Ensure that you select the correct size that fits you perfectly.

WEIGHT –

The body armour affects your fatigue level after prolonged wear, and your physical speed of movement. The higher your level of physical fitness, the more bearable it will be.

7. REPLACEMENT

7.1 Replace the body armour if:

7.1.1 The outer garment of the jacket is torn or damaged.

7.1.2 The side or shoulder straps are damaged.

7.1.3 The water-resistant ballistic panel-covers are torn or damaged.

7.14 The hard ceramic plates are cracked or damaged.

8. USE, MAINTAIN AND TRANSPORT

Body armour

- Kevlar panel must be cleaned with a damp cloth.
- Do not machine wash, dry clean, immerse in water or cleaning Liquid.
- When transported or stored, care should be taken that ceramic title or kevlar is not damaged.

Note: See manufacturers guide/manual for specifications and level of protection.

9. SUMMARY

During this module, the following were dealt with:

- Features
- Measurements
- Levels of protection
- Warnings
- Application
- Replacement of the Clansman body armour

8.2 Body protector

8.2.1 Step by step instruction

Step 1: Wear leg protector first

Step 2: Consider the left and right leg protectors

Step 3: Strip the Velcro straps and put it on your leg

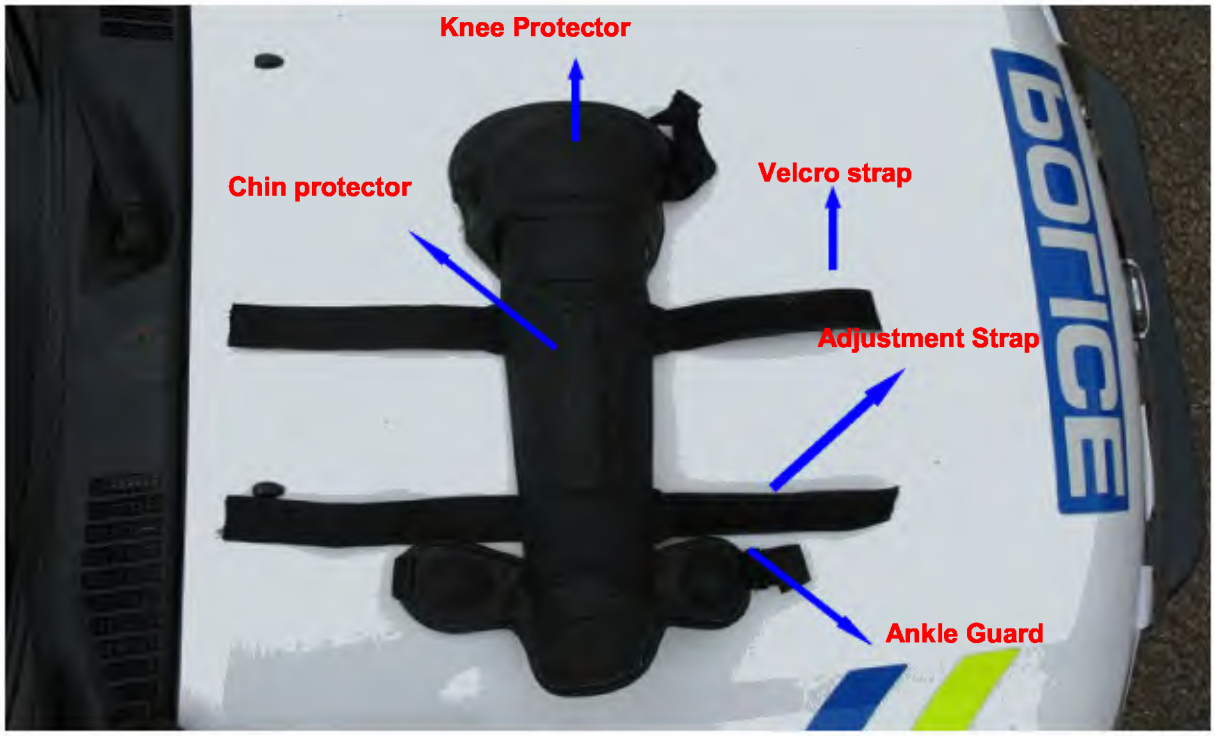
Step 4: Tighten the strap starting from the ankle going up

Step 5: Put On jacket

Step 6: Tighten the straps inside the jacket as well as the arm

Step 7: Wear the gloves and tighten the strap round your wrist.

8.3 Leg Protector



8.4 Inner and Outer part of the Gloves

9. SUMMARY

During this module, the following were dealt with:

- Features
- Measurements
- Levels of protection
- Warnings
- Application
- Replacement of the Clansman body armour
- Step by step body protection kits

Tonfa

Chapter 3

Chapter Outcome

On completion of this chapter you will be able to use a Tonfa in crowd management.

Learning Outcomes

I. Define the tonfa
2. Explain the understanding of the legal aspects with regard to the use of tonfa.
3. Explain the rules with regard to the use of a tonfa.
4. Demonstrate the striking and non- striking areas.
5. Demonstrate the basic stance techniques with the tonfa.
4. Demonstrate the grip techniques with the tonfa
5. tonfa.
6. Demonstrate the method of caring the tonfa in the strong hand.
7. Demonstrate the method of caring the tonfa on the belt.
8. Demonstrate basic and long extended position with the tonfa.
9. Demonstrate blocking techniques with the tonfa.
10. Demonstrate japping techniques.
11. Demonstrate chopping techniques with the tonfa.
12. Demonstrate draw techniques with the tonfa.
13. Demonstrate retention techniques with the tonfa.

Chapter Contents

1. INTRODUCTION

As a police official you should be able to defend yourself successfully by means of basic techniques for unarmed self-defence. However, there will be times that self-defence requires the use of a tonfa. Because of the effectiveness of a tonfa, you must use good judgement to avoid accusations of excessive force if a suspect is seriously injured.

The use of dialogue in working out our problems instead of fighting or running away is an option unique to humans. Dialogue is a challenging option and when properly applied, can prove mightier than a baton or firearm.

Although the unarmed self-defence techniques are relatively simple, they require good coordination between body and mind. This means an official must practise continually to maintain the relaxed co-ordination necessary for the performance of the techniques.

The Tonfa is a formidable non-lethal weapon in your arsenal as a police official. Its use is not limited to general policing as it can also be used for both defensive and offensive purposes in crowd management circumstances.

The Tonfa has a long history that originated in the martial arts. Knowing the background of the Tonfa would certainly contribute to you respecting it as a dangerous weapon and understanding where it fits into the progressive stages of permissible force.

In this chapter you will be covering legal aspects and rules related to the use of the tonfa. Knowledge on striking and non-striking areas will enable you to effectively use the tonfa as a non-lethal weapon. It will also enable you to avoid the use of the Tonfa in such a way as to prevent your actions from constituting lethal force.

You will become proficient on all the basic moves with the Tonfa. This can only be achieved through repetition and continues training. Remember, the Tonfa is as effective as the person behind it!

HISTORY

The tonfa is a martial arts weapon from which the modern side-handled police baton is derived. It is originally from the area of Okinawa, Japan. Folklore has it that the tonfa was originally a wooden handle that fit into a hole on the side of a millstone used to grind rice and other grains, dating back to 15th century Okinawa. It later developed into a weapon when peasants were banned from using more traditional weaponry.

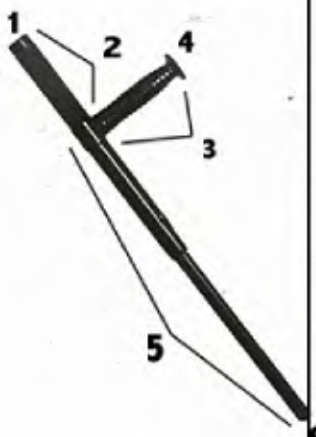
The handle, which was easily disengaged from the millstone, became a very effective weapon of defence. The Tonfa's circular movements as a farm implement evolved into its rotating strikes as a weapon. It may be used for blocks, thrusts, jabs, and strikes.

Several decades ago, the Tonfa almost passed from the modern scene. With the explosion of interest in martial arts during the 1960's, police agencies noted the tactical superiority of Tonfa over the prevalent police baton. Since then, they have become very popular with policing agencies, and are known by various names as the Police Tonfa, Side-Handle Batons, TR-24's, PR-24's, etc.

THE TONFA DEFINED

DIFFERENT PARTS OF THE TONFA

Modern tonfas are usually made of wood, high-impact polymer materials or composites, and metals.



1. **Short End:**
   The Short End is located at the end of the Short Portion
2. **Short Portion:**
   The Short Portion is that portion of the baton between the short end and the right-angle short handle
3. **Short Handle:**
   The Short Handle is attached at a right-angle to the main body of the baton
4. **Knob:**
   The Knob is located at the top of the Short Handle
5. **Long Extended Portion:**
   The Long Extended Portion is that main portion of the baton between the Short Handle and the Long Extended End
6. **Long Extended End:**
   The Long Extended End is located at the end of the Long Extended Portion

KEY TERMS

Strong Hand:

Your Strong hand is your dominant hand.

Strong Foot:

Your Strong foot is your dominant foot.

Strong-Side:

Your Strong-Side is the side where your Strong Hand and Strong Foot are located.

Support Hand:

Your Support Hand is your less dominant hand.

Support Foot:

Your Support Foot is your less dominant foot.

Support-Side:

Your Support-Side is the side where your Weak Hand and Weak Foot are located.

Grip:

Grip is the method of holding the Tonfa in the strong hand.

Blocking and Chopping Surface:

The blocking and chopping surface is the outside surface of the short and long extended portions.

THE TONFA AS A WEAPON OF FORCE

1. The police tonfa is a dangerous weapon.
2. Any police official who uses a Tonfa against a person beyond reasonable force can be charged.
3. As a weapon, a Tonfa can be used either defensively or offensively. In crowd management, it must be used defensively, that is, to repel or to protect.
4. The use of the Tonfa is lawful when a situation requires a degree of force greater than that readily provided by unarmed control techniques, but less than the force provided by lethal (deadly) weapons.

RULES

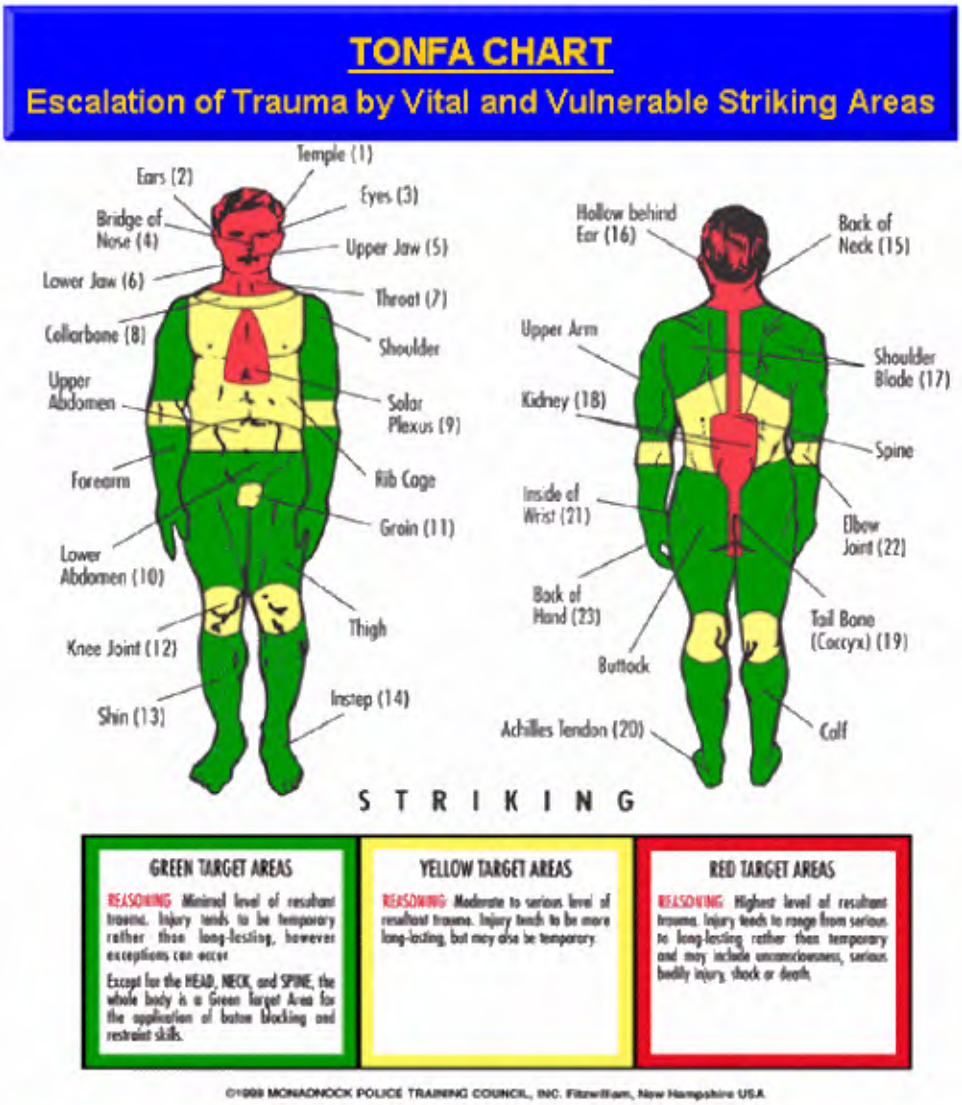
1. A Tonfa should normally be positioned between the police official and the suspect.
2. Whether a Tonfa is held in the right or the left hand, a good defensive position should be maintained.
3. **Do not intentionally use a Tonfa to strike at an attacker's head or throat.**

    a. It is easy for a police official to lose control and cause serious injury to another person.

4. A Tonfa should not be used to apply a choking technique.

.STRIKING AND NON-STRIKING AREAS

The Tonfa police baton can be a versatile and effective crowd management tool if the person who uses it knows the structural weaknesses of the human body. Study Figures 1 and 2 carefully. It is important to use extra caution in attacking those areas which are particularly vulnerable, as even a moderate blow to some areas of the body can cause serious injury or death.



The following is a list of the most vital and sensitive points of the body. See above mentioned diagram: Tonfa Chart.

Do not strike here:

1. **TEMPLE:** This is a highly sensitive vital spot. A blow of sufficient force to this area can cause unconsciousness or death.

2. **EARS:** A blow to the ears may cause deafness, unconsciousness, serious injury or death.

3. **EYES:** A blow to the eyes may cause loss of sight, unconsciousness, serious injury or death.

4. **BRIDGE OF NOSE:** A hard blow to this area can cause unconsciousness or death.

5. **UPPER LIP:** The area directly under the nose at the top of the upper lip is a sensitive area. Bone chips or cartilage from the nose may be driven into the brain cavity, causing death.

6. **JAW:** The jaws hinge, is very vulnerable. A blow here may shutter the jaw or cheekbones.

7. **THROAT:** This is a highly vulnerable area. A blow here can shatter the windpipe, causing serious injury or death.

8. **SOLAR PLEXUS:** Death can result from a sharp blow to this area.

9. **GROIN (TESTES):** This area may be attacked. A moderate blow will result in sharp pain. A sharp blow can cause shock, which, in turn, can lead to death.

10. **BACK OF NECK:** This is a highly vulnerable area. A severe blow can cause death.

11. **HOLLOW BEHIND EAR:** A blow to this area can cause serious injury or death.

12. **KIDNEYS:** This area may be attacked. A severe blow can cause death.

13. **TAIL BONE (COCCYX):** A sharp blow to this area can cause death.

Strike at following areas:

1. **COLLARBONE:** A blow to the collarbone is non-lethal, in most cases. The collarbone breaks easily when hit with a Tonfa baton.

2. **LOWER ABDOMEN:** The spot just below the navel, may be attacked with a punch or jab.

3. **KNEE JOINTS:** The knee joints may be attacked, particularly with spinning techniques. A sharp blow can dislocate the joint.

4. **SHIN:** This is a sensitive area, but a blow to the shins is non-lethal.

5. **INSTEP:** This is a sensitive area, but a blow to the instep is non-lethal.

6. **UPPER CENTRE OF BACK:** This is an effective striking area, to break some holds.

7. **ACHILLES TENDON (BACK OF HEEL):** This is a good striking area, to disable one's attacker.

8. **INSIDE OF WRIST:** This is a very effective striking area.

9. **ELBOW JOINT:** This is an extremely sensitive area, but a blow to the elbow joint is non-lethal. Learn how to strike it. A hard, misdirected blow may shatter the elbow joint.

10. **BACK OF HAND:** this area may be attacked. A sharp blow to this area can open the hand.

TONFA DEMONSTRATION

BASIC GRIP

A proper grip is essential to execute the techniques effectively. Without a proper grip, swings and spins cannot be controlled and regripping the Tonfa is difficult, if not impossible.

If the hand is tightened, the spinning action of the handle will be impeded. Your forefinger and thumb must encircle the short handle just below the yawara knob, whilst the other hand grips the short end of the baton with the palm down. Both hands should be positioned as close to each other as possible. Important to remember: your thumb and forefinger must always touch each other.

PLEASE NOTE: The grip of a conventional baton causes the hand to be bent in a unnatural position. With the Tonfa baton, the hands are held in a natural position, making it virtually impossible for an attacker to take a baton from a police official.

BASIC STANCE

Refer to the fighting stance.

The correct stance will prevent your firearm and baton from being grabbed.

BASIC POSITION

INTRODUCTION

One of the unique features of the Tonfa baton is that it can be drawn and held in the hand, in what is called the basic position, without making a suspect feel as though he/ she is about to be beaten.

Unlike the conventional baton, very little of the Tonfa baton is visible in the basic position. The low profile of this baton when it is carried in the basic position offers several advantages.

First, makes a police official appear un-intimidating.
Second, a police official is better able to deal with a suspect without agitating him/ her, as the suspect is likely to underestimate the police official's true ability to strike or defend himself/ herself.

DOUBLE-HANDED POSITION

The double-handed hold offers a very low profile, as the long extended portion is tucked between the arm and body, and the short end is covered with the weak hand.

HOW TO CARRY A TONFA BATON

The Tonfa baton should always be carried on the side of your belt opposite your firearm. If you carry your firearm on the strong side, you should carry the baton on the weak side.

If you carry the baton on the strong side, the handle should point backward instead of forward.

However there are certain disadvantages, because several techniques such as the cross draw, power draw and rear draw, and the techniques used to protect your firearm cannot be executed.
The baton ring must be worn in a position below the belt.

Please note that the short stud on the ring will prevent the short handle from turning to the outside

BASIC TECHNIQUES (TONFA)

Drawing techniques

(a) Cross draw

(b) Power draw

Blocking techniques

(a) High block

(b) Weak side block

(c) Strong side block

(d) Low block

(e) Block to protect firearm

Jabs

(a) Front jab

(b) Rear jab

(c) Yawara strike

Spinning techniques

(a) Forward and reverse spins

(b) Inside spin

c) Power spin

(d) Combination

The long extended position

(a) Pool cue jab

TONFA TECHNIQUES

DRAWING TECHNIQUES

Drawing a baton from its ring, routine as it may appear, should be done with precision. The manner in which a baton is drawn can set the stage for the police contact between the police official and a subject. Even after a baton has been drawn from its ring, there is still time for dialogue. The manner, that is speed and proficiency, in which a baton is drawn and the stance taken indicates the police official's ability and intention to use it to defend himself/ herself if necessary.

In Japan, many people practise the act of drawing a sword as an art form. This discipline is called "Iai". The sword is drawn in one swift smooth action. The

hand is described as causing the sword to spring out of it scabbard. A police official should likewise practise and refine the art of drawing his/ her baton from the ring, since he/ she might one day have only a short time to do this when confronted by multiple subjects in a confined area. To facilitate the baton draw, the right hip moves forward.

Since ideal conditions cannot be guaranteed in the field, several variations of the drawing technique will be presented. As with all techniques, speed can be vitally important. Therefore, diligent practise is necessary. All techniques are described for a right-handed official and must of course, be reversed for a left-handed person.

Develop a habit of not looking at the baton ring when drawing or replacing the baton. This will require a great deal of self-discipline, since a person's natural inclination is to glance down. Learning to draw the Tonfa baton properly is important. Any first blow counts, but to strike that first blow or defend yourself, you have to learn proper drawing techniques.

The answer is PRACTISE!

Cross draw
The draw you will use at least 95 % of the time is called the cross draw. This is also the draw you should spend the most time practising.

	To execute the draw, assume the interview stance, facing the subject. With your left hand, lift the baton 3-5 cm in the baton ring and tilt the short end slightly forward. At the same time, your right hand reaches across your chest and grasps the short handle, pulling the baton free from the ring. Hold the handle just loose enough to rotate it onwards until it has spun completely into the basic position. To stop rotating, tighten your grip on the short handle.
	As the Tonfa rotates, note the clearance of the short end under the wrist, because this clearance is important to allow the long extended end to rotate at maximum momentum. Draw slowly at first, and, without looking at the short handle, increase speed. Remember, speed is important, but draw casually without attracting undue attention.
	

Power draw

This draw is similar to the cross draw, except that your strong arm is fully extended at the midpoint of the spin in order to gain momentum and therefore power at the long extended end. You should practise the power draw, because it is one of the best possible ways to neutralize an opponent who attacks you. It is also the best way to remove a weapon from an opponent's hand.

A weapon means any weapon other than a firearm, in which case the use of your own firearm, instead of the Tonfa baton, would probably be necessary.

If you fail to strike your attacker during the power draw, you will at least be in the basic position and be able to counter his/ her attack with a variety of defensive or offensive techniques.

BLOCKING TECHNIQUES

From the basic position you can block in various different directions quickly and, in most cases, instinctively. You can block with the Tonfa baton without the possibility of your strong hand being smashed by an opponent's club, as often happens when blocking with a conventional baton. Blocking should be designed in order that the baton remains in a good position for launching counter-attacks. Blocking also requires quick and aggressive reaction to protect yourself against an attack. Blocking combined with skillful footwork should place the officer within the subject's "danger zone"

and in the strategic "inside position" of a punching range, from where the body is attacked. A trained police official should be able to move into position and be set to execute a block (if necessary), and then start his/ her counter-attack before the subject's attack has been completed.

However, special care must be taken when a police official is in close proximity to a subject, since his/ her knees, elbows, forearms, hands, shoulders, teeth and head are extremely effective weapons. A police official must learn to execute blocks while thinking of the subject's attack and his/ her own counter-attack. For the police official to have the control needed for defensive blocking and to be able to absorb the force of the attacker's blow, he/ she grip the Tonfa baton at the very bottom of the short handle, and keep the long extended portion tightly against his/ her arm. The importance of practicing of the various blocking techniques is again emphasized.

High block

From the basic position, with the long extended portion pressed tightly against the underside of your forearm, raise your arm so that the biceps of your strong arm is next to your head, and your forearm is at a 45 degree angle to the ground. Maintain clearance between your head and the short handle, to protect you from being injured by any part of the baton at the moment of impact.

Follow-up technique - follow the high block up with a lunge punch to the subject's face (using your weak hand) and a front jab to the stomach (using the Tonfa).

Practical application - the high block and follow-up techniques must be practised with a partner who executes the appropriate strike to the head area.

Strong-side block

From the basic position, lift your strong-side arm into a vertical position in the direction from where the blow is coming. Turn the upper body until it is square in regarding to the direction of the coming blow. Ensure that the Yawara knob is turned away from the face to prevent injury.

Follow-up technique - give a front jab to the subject's stomach.

Practical application - the strong-side block and follow-up technique must be practised with a partner who executes the appropriate strike to your side.

Weak-side block

Put the strong-side foot slightly forward to maintain your balance. Turn your body to the weak side until it is square in relation to the direction from where the blow is coming. Ensure that the yawara knob is turned away from your face to prevent injury.

Follow-up technique - give a Yawara strike to the subject's stomach.

Practical application - the weak side-block and follow-up technique must be practised with a partner who executes the appropriate strike to your side.

Low block

The low block from the basic position is quickly executed and is usually targeted at the shin of an attacker who tries to kick you. To execute a low block from the basic position, bend your knees slightly and bring the baton in a horizontal position in front of you.

Follow-up technique - follow the low block up with a front jab to the subject's stomach using the Tonfa.

Practical application - the low block and follow-up techniques must be practiced with a partner who executes the appropriate strike aimed at the groin or abdomen.

Block to protect firearm

From the basic stance, lift the baton horizontally not higher than shoulder height. Block downwards in the direction of the firearm with a sharp blow. Ensure that the T-junction of the baton is use to make contact.

Follow-up technique - give a rear-jab to the subject's stomach .

Practical application - the block to protect a firearm and the follow-up technique must be practised with a partner who must try to grab your firearm.

Practising blocks

(I) practise each block discussed.

(ii) Execute the various blocks slowly at first and use the correct techniques.

(iii) Speed up execution until the techniques seem easy and natural to execute.

REMEMBER: practise with a partner.

JABS

A jab is a sharp thrusts which is executed with less force than a punch. From the basic position, you jab an adversary as much as you would if the Tonfa baton was not in your hand. But remember the baton is much more powerful than your fist. So before you throw a jab, always consider that a boxer is wearing boxing gloves, but the gloves distribute the blow over a relatively large area, thereby weakening its impact. A bare fist can do more damage than a boxing glove, because it concentrates the force of the blow in a much smaller area. The baton, however, concentrates the force of the blow in yet a smaller area, a circle of 4 cm in diameter to be exact. You have to consider the force at your disposal and use your discretion.

Never use your Tonfa to jab anyone in the face, throat, or any other non-striking area of the body as this could be lethal.

If you are reasonably trained in the use of a conventional baton, you will realize, that a Tonfa baton with its short handle produces far superior leverage and driving power. In addition, your hand does not slip on impact. These characteristics give you superior control and are two more reasons why you should consider the force at your disposal before you jab any opponent.

Front jab

From the basic position, raise your hand until your forearm and the baton are in a horizontal position. The short handle should be in a vertical position.

Remember when executing a front jab to maintain your balance. Do not overreach and risk losing either your baton or your balance. Use a front jab like you would use your fist, but keep remembering the added power available to you.

PRACTISE the front jab like a boxer would practise with his fists. Use a punch bag and maintain your balance. Protect your face with your weak arm. Do not overreach.

Rear jab

A rear jab is used to neutralize an opponent attacking you from behind, especially when you are trying to fend of attacks by individuals in front of you. In a gentle fashion it may also be used to create distance between you and a crowd behind you.

To execute this technique, move your strong arm backward. This technique offers a very low profile, because it is fast and little movement can be seen. Like the front jab, this technique can be very powerful and calls for deliberate action and intent on your part.

To execute an effective rear jab when the baton is in a horizontal position, turn the short handle so that the Yawara end points away from you.

The position of the short handle is important. If the end of the short handle is turned upward, as for the front jab, the long extended end will travel upward or will be deflected as you move it backwards. This could weaken the effectiveness of your blow. When the short handle is horizontal, your jab maintains a flat trajectory.

Practise the rear jab with the short handle in various positions so that you can observe the movement of the long extended end. In doing so, you will learn how shifting the position of the short handle changes the direction of your jab.

Yawara strike

Learning about the Yawara strike first hand can be a shocking experience, because it is an extremely fast blow with the end of the short handle (which is sometimes referred to as the Yawara end) to a person on a police official's strong side.

This technique is particularly valuable for crowd control when you must not only cope with people in front of you, but also control others on your strong side.

To execute the Yawara strike, hold the baton in the basic position either vertically, horizontally, or somewhere in between. Point the end of the short handle in the direction of your opponent and jab him quickly by flicking your strong arm towards him. A series of light jabs is usually more effective than a single sharp blow.
You should practise the Yawara strike until it is instinctive, because it is a strong-side technique which can be used to keep an adversary from taking your firearm from you.

SPINNING TECHNIQUES

Field tests have shown that a Tonfa baton can be most effective against people who think they are physically capable of putting a police official down, due to their knowledge of specific fighting skills.

Spinning techniques with the Tonfa baton, which cannot be executed with a conventional baton, will make most people, no matter how capable, think twice. Spinning techniques consist of spinning the long extended end of the baton in an arc at incredible speed.

A conventional baton cannot be used as effectively to disarm an opponent or to strike a blow and keep a crowd at a distance. Since a spin covers the whole area in front of an official, it can also be used as a blocking technique.
IMPORTANT: Never use the spinning technique to strike an opponent in the face or other vital area, unless your life is being threatened or you have no other alternative.

Forward and reverse spins

Start from the basic position.

The thumb and forefinger should be pressed against each other, and the short handle should be in a vertical position. The grip of all the other fingers must be loose enough to allow the baton to spin.

Raise your weak arm quickly upwards and out of the way, this will also draw your opponent's attention away from the forward spin which is about to make contact with him.

At the same time, spin the long extended portion from your strong side, towards your weak side in a horizontal arc. The further your arm is extended, the greater your striking force on the long extended end of the baton. At the completion of the forward spin, your strong arm will be in contact with your chest area and the long extended end of the baton will be somewhere past your weak side.

Reverse spin

Return the Tonfa baton to its starting position after a forward spin has been executed - simply spin the baton from the weak side back to the strong side. A reverse spin can even be a more powerful technique than a forward spin, because it travels a greater distance before making contact. Practise this movement and make use of a practise dummy.

Inside spin

An inside spin also starts from the basic position. Keep your strong arm in a vertical position at the outside seam of your trousers. Turn the short handle towards the side of your leg. The long extended portion moves in an arc, first downwards away from you, then upwards and finally back to the starting position. When you have learned how to execute quick and effective spins you have a combination of powerful counter-attacks against hand-held weapons such as bottles, knives, broken glass and clubs.

Power spin

This technique is particularly valuable when working close to an opponent. Both hands are used to execute this technique from the basic position. Grasp the short portion with your weak hand and pull the short portion towards your body and simultaneously push forward with your strong hand. Using both hands, combine the speed of spinning with strength and control. Reassume the basic position after each power spin.

Combination

A particularly effective technique consists of executing the inside, forward and reverse spins in one fluid movement. Begin with the inside spin. Instead of stopping when the baton returns to starting position, execute the forward and then the reverse spin.

THE LONG EXTENDED POSITION

This is, without a doubt, the most important position you can use when dealing with a formidable adversary. There are a variety of techniques which can be executed from the long extended position. From the basic position, execute a slow forward spin, but stop the long extended end with your weak hand when the Tonfa baton is pointed directly in front of you.

IMPORTANT: Grasp the long extended portion palm down with your weak hand and you have the long extended position. Be sure your grip on the baton with your weak hand is correct, otherwise it is virtually impossible to execute techniques from the long extended position.

If you believe a subject is likely to give you trouble, instead of pointing the long extended baton directly at the subject, allow both your arms (with your hands still grasping the baton with the long extended portion) to hang casually in front of you. In this position you will be prepared to execute two-handed reflex blocks quickly and very effectively.

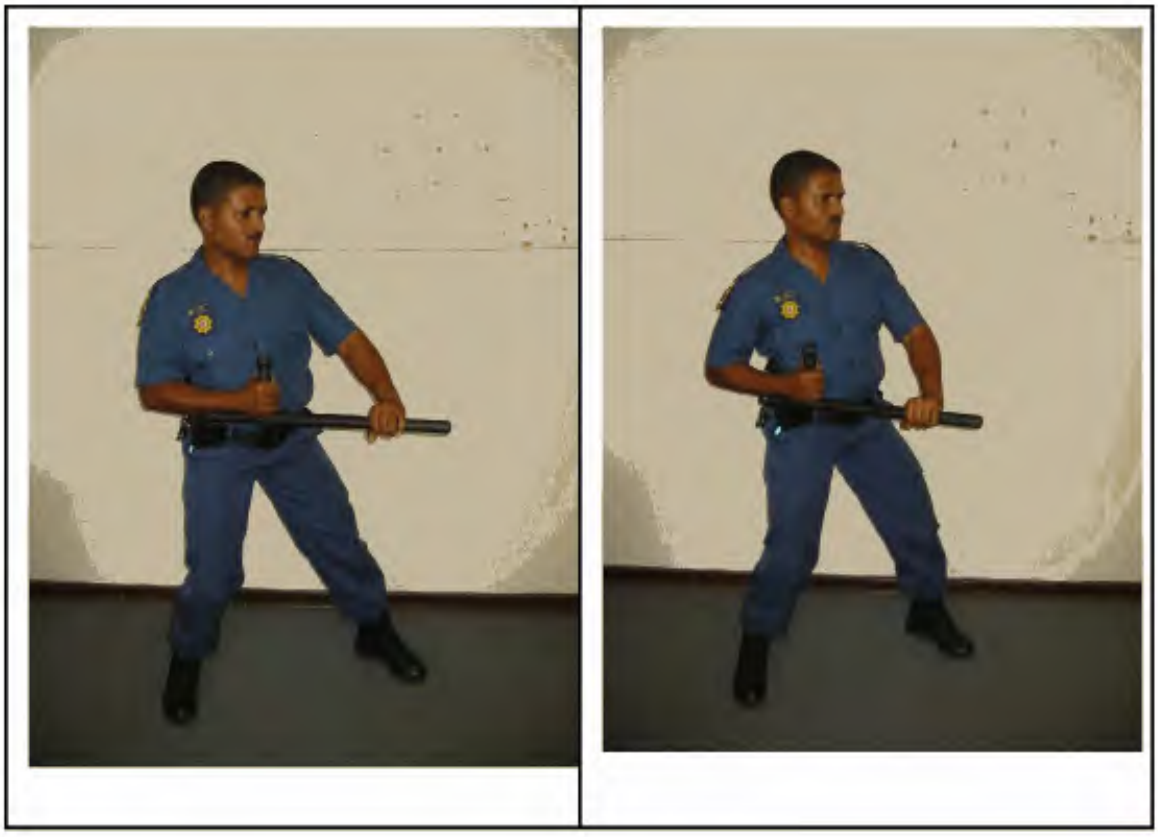
Pool cue jab

Front jabs from the long extended position are called pool cue jabs. The jabs are executed using both hands - one hand to guide the Tonfa baton and the other to provide power. The pool cue technique is essential, because it gives maximum forward reach without any forward movement of your body. However long an opponent's arm may be, you will be able to outreach him/ her.

Maintain a loose grip on the long extended portion of the baton, so that the baton can slide backwards and forwards easily. The pool cue jab is intended to be an extremely rapid technique, so push the short handle out and pull it back as fast as you possibly can. Doing this will make it virtually impossible for your opponent to grab the long extended end. In practising this technique, execute a series of jabs rather than a single powerful blow.

Advantages

You will outreach your attacker - and you will be able to hit first due to the long extension. You use your strong hand with every blow. You are able to strike a smaller area with greater striking power.



Hooking techniques

<u>Other techniques from the long extended position</u>

Hooking techniques which can be executed only with the Tonfa baton, the "come-along" and take-down techniques can be applied to a variety of holds.

Hooking techniques are also basic to certain follow-up techniques used to apprehend a suspect without striking him/ her. Since hooking techniques are performed with the weak hand, they can also be used to block, strike or distract an adversary who has deadly intentions while you reach for

The long extended position is the starting position of all hooking techniques. Always maintain a firm grip near the end of the long extension with your weak hand, and release the short handle with your strong hand. The short handle will create a right-angled hook which can be used to hook a person's arm or leg. Be careful and certain that you execute a hook without losing control of the baton. How can you be certain?

Hook hard and fast every time. Should the worst happen your only alternative would be to draw your firearm.

WRIST DRAG:

The wrist drag is used to stop someone who attempts to strike you and either put him on the ground or force him to follow you for a very short distance. When executed properly, it requires little force on your part. The wrist drag may be used on either arm of your opponent. The long extended position is the starting position for the wrist drag. As your opponent moves his right arm to strike you, hook it hard.

SUMMARY

A tonfa can be used for defending purposes, but must not be seeing as the only way to manage crowds. This means that the member must practice continually to maintain the relaxed co ordination necessary for the performance of the techniques during crowd management.

Shield

Chapter 4

Chapter Outcome

On completion of this chapter you will be able to use shield in crowd management.

Learning Outcomes

1 Explain the features of the shield according to manufactory specifications;

2. Use the shield during crowd management simulated situations according to the Standard Operational Procedures;

3. Maintain, store and transport shields according to the Standard Operational Procedures.

Chapter Contents

1. INTRODUCTION

The South-African Police Service requires shields to be used during crowd management situations to protect against objects thrown at them. Although necessarily of light construction, it must be robust and able to withstand rough handling. Techniques are the tools that are used by section members to execute the tactical options of the operational command. Shields and helmets must be used where the danger exists that the crowd, for example, are going to throw stones, while tonfa's can be used in order to push back a crowd or to defend a line.

2. SPECIFICATION

2.1 SHIELD

- The shield is manufactured from polycarbonate plate and have a minimum thickness of 4 mm.
- The height of the shield is 1000 mm.
- The width of the shield is 600 mm.
- The four (4) corners are finished with a 50 mm radius.
- The shield is parabolic.
- The name POLICE is clearly printed in blue capital letters with a height of about 100 mm and on a white background and it is fixed to the inside of the shield.

2.2 FOREARM GRIP

The forearm grip is easily adjustable for different arm thicknesses and is manufactured from polyester, Velcro and a D-ring. The forearm grip is fixed to the shield by means of nuts and bolts with a diameter of 5 mm and a suitable length. The nuts are of the self locking type and washers of a suitable size are used.

2.3 FRONT HANDGRIPS

It is manufactured from solid high density poly-propylene. The handgrip is having a minimum space of 120 mm x 60 mm to allow for a comfortable grip. The fixing method is as specified in par 2.2.

2.4 ARM PROTECTION

The arm protection is manufactured from "XT expanded poly-etheleen close cell foam". The arm protection is 150 mm x 450 mm in size and have a minimum thickness of 20 mm. The arm protection is fixed horizontally to the shield by means of nuts and bolts as specified in par 2.2.

3. CHARACTERISTICS

3.1 SHIELD

- Shatterproof
- High impact protection
- Absorbs shock
- Press - formed added strength
- Protect against birds shot
- Designed to withstand rugged use
- Made in four sizes
- Non - corrosive fittings
- Attachments securely bolted for maximum strength
- High density foam rubber and attachment provides added shock resistance.

3.2 HAND GRIP

Arm protection set leg protection set offers elbow protection joined together with the arm protection manufactured from plastic material and padded with expendable polyethylene for shock absorption. Secured with straps and Velcro. Total weight 400 grams. Colour - Black kneecap and shin guard joint together, manufactured from plastic material and padded with expendable polyethylene for shock absorption. Secured with straps and velcro.

Total weight 400 grams.

Colour - Black

4. USE, MAINTAIN AND TRANSPORT OF SHIELDS

NOTE: All shields is maintained, transported and stored according to manufacturing specifications:

- Shield:
- Clean with non alcohol based fluid.
- When stored or transported, care should be taken that the shield is not scratched
- All badly damaged, splintered, cracked or defaced shield must be replaced with the local logistics

It has been observed that members are in possession of shields that vary in relation to handgrips and positioning for eg. there are diagonal and horizontal gripping. These gripping never the lest come with adjustable forearm straps. Hand gripping are inter changeable for left handed personnel who carry their shields in the right hand.

5. SUMMARY

A combination of crowd management techniques can be used during crowd management situations for the purpose of protection.

Shotgun

Chapter 5

Chapter Outcome

On completion of this chapter you will be able to use a shotgun in crowd management.

Learning Outcomes

1. Describe the shotgun.
2. Describe the characteristics of the shotgun.
3. Make the shotgun safe.
4. Strip the shotgun in the correct sequence.
5. Assemble the shotgun.
6. Name the parts of a shotgun.
7. Demonstrate an understanding of the mechanism of the shotgun.
8. Describe the application distances of different types of shotgun rounds.
9. Load & Unload the shotgun.
10. Identify & rectify stoppages.
11. Apply the IA drill.
12. Demonstrate an understanding of shooting range drill.
13. Execute the shooting range drill.
14. Use the shotgun in a simulated crowd management exercise

Chapter Contents

1. INTRODUCTION

The Musler originated from the idea of a certain Mr Hausler in cooperation with Musgrave Bloemfontein. The name Musler is a combination of the two, namely: Mus- Musgrave and Ler from Hausler. The Musler is almost a blueprint of the Beretta Shotgun. The Musler is capable of shooting tearsmoke rifle grenades which fit onto the barrel.

2. DESCRIPTION AND CHARACTERISTICS

2.1 DESCRIPTION

	RS 202	MUSLER
Length of Shotgun	1020mm	1015mm
Length of Barrel	52 cm	52 cm
Mass of the Shotgun	2,9 kg	3,1 kg
Calibre	12 bore	12 bore
Magazine Cap: Roll crimp ammunition Star crimp ammunition	5 rd 6 rd	5 rd 6 rd
Mechanism	Pump action	Pump action
Maximum range	100 m	100 m

2.2 CHARACTERISTICS

a) The shotgun will only fire when the breech block is locked completely.

b) The shotgun is absolutely safe during mechanism.

c) A variety of 12 Bore ammunition can be used.

d) The shotgun is easy to maintain.

e) It can be loaded and unloaded in a short period of time.

f) Because of the spreading of pellets, more than one target can be hit with one round.

g) Moving targets can be engaged with ease.

h) Only one shot is discharged when the trigger is squeezed. To fire the following shot, it must be cocked completely.

i) The Musler has an unique grenade launching capability and can fire rifle grenades up to a distance of 120 m. For this purpose the barrel has been thickened to resist the increased gas pressure. Every rifle grenade is equipped with it's own ballistite round.

2.2.1 MUSLER SHOTGUN

3. MAKING SAFE PROCEDURE

a) Cock the shotgun open.
b) Put the safety pin on SAFE from left to right.
c) Lift the shotgun and look into the ejection port for any ammunition in the body and chamber.
d) Press the holding open device and keep it depressed.
e) Push the cocking grip forward to cock the shotgun close.
f) Put the safety pin on FIRE from right to left.
g) Squeeze the trigger.

4. STRIPPING, ASSEMBLY AND NAMES OF PARTS

4.1 STRIPPING

While stripping the shotgun, note how the parts fit into one another.

a) Carry out the making safe procedure.
b) Cock the slide group halfway to the rear.
c) Unscrew the barrel locking nut anti-clockwise. (Remove the sub-sleeve assembly - Musler)
d) Tilt the barrel by pulling it forward.
e) Cant the shotgun approximately 30 to the left and slide the cocking grip slowly forward until the slide group appears.
Grip the slide group and slide the whole unit (slide group and cocking grip) from the magazine.

f) Remove the cocking grip bar from the slide group.

g) Remove the slide (black part) from the breech block.

4.2 ASSEMBLY

a) Assemble the slide and breech block and push the slide completely forward.

b) Grip the slide group so that the face of the breech block faces forward.

c) Place the cocking grip bar back in position on the left hand side of the slide group.

d) Slide the cocking grip over the magazine slide the slide group back into position on the body.

e) Tilt the shotgun to the left, press the slide release and cock the slide group halfway to the rear.

f) Replace the barrel. (Replace the sub-sleeve assembly - Musler).

g) Screw the barrel locking nut securely into place.

h) Test the shotgun (making safe procedure).

4.3 NAMES OF PARTS

a) BARREL

- Front sight
- Chamber
- Barrel guide ring
- Barrel locking nut
- Recess for extractor
- Locking recess
- Barrel shoulder

b) COCKING GRIP

- Hand grip
- Cocking grip bar and stud
- Ramp

c) SLIDE GROUP

- Breech block sear
- Breech block platform
- Locking Stud
- Recess for the cocking grip bar
- Stop Stud
- Spring loaded firing pin
- Recess for the ejector
- Extractor

d) BODY

- Butt
- Trigger and trigger guard
- Safety pin
- Slide release
- Ejection port
- Carrier
- Cartridge latch
- Ejector
- Hammer
- Slide release sear
- Magazine
- Barrel guide
- Magazine body locking nut
- Holding open device
- Plunger

5. CLEANING

5.1 MAINTENANCE CLEANING

a) All parts must be thoroughly cleaned and oiled.

b) The following parts need special attention:

- Barrel and chamber
- Face of the breech
- Slide group
- Magazine

5.2 INSPECTION CLEANING

a) All parts must be clean and free of oil.

b) After inspection it must be oiled again.

5.3 PRE-SHOOT CLEANING

a) Clean the shotgun thoroughly and inspect for any broken parts, be free of oil.

b) The following parts must be free of oil:

- Barrel and chamber
- Face of the breech block
- Magazine

c) The following parts must be oiled:

- Slide group
- Body (inside)
- Trigger mechanism

5.4 POST-SHOOT CLEANING

a) All parts must be thoroughly dry cleaned and thereafter lightly oiled.

b) Special attention to the following:

- Barrel and chamber
- Slide group

6. MECHANISM

6.1 POSITION OF PARTS

- Safety pin on fire
- Hammer cocked
- Cartridge in chamber
- Slide group is fully locked

6.2 ACTION ON SQUEEZING THE TRIGGER

- Trigger is squeezed.
- Hammer moves forward and strikes the rear of the firing pin.
- The firing pin's point makes contact with the primer, the charge is ignited which causes a build up of gas pressure and the shot is forced out of the cartridge through the barrel.

6.3 REARWARD MOVEMENT

a) Unlocking Action:

When the cocking grip is moved about 1 cm rearwards, the cocking grip bar moves the slide rearwards to enable the stud on the bottom of the locking block to slip off the platform on top of the slide. The locking block now unlocks the breech block from the barrel. The locking studs at the rear of the platform ensure that the locking block moves downwards.

b) Extraction:

As the round is seated in the chamber the extractor hooks in position on the rim of the cartridge. With rearward movement the extractor pulls the cartridge to the rear thereby extracting the cartridge from the chamber.

c) Ejection:

The ejector is situated on the left hand side of the body. During extraction the base of the cartridge makes contact with the ejector while rearward movement continues. This causes the round to twist to the right and be ejected from the ejection port.

d) Cocking action:

During rearward movement the slide group forces the hammer rearward and down until it locks onto the trigger sear.

6.4 FORWARD MOVEMENT

a) Feeding action:

When the trigger is squeezed the cartridge latch moves to the right and the magazine spring pushes the next cartridge onto the carrier. When the cocking grip is pushed forward the carrier moves upwards and brings the cartridge with the face of the breech block and the chamber. When the

cartridge is approximately halfway in the chamber, the carrier moves back to its original position.

b) Locking action:

Locking action occurs when the stud on the bottom of the locking block slides up against the platform of the slide and the top of the locking block moves into the recess in the barrel.

6.5 FUNCTION OF THE SLIDE RELEASE

The function of the slide release is to ensure that the slide group is locked into the most forward position when the shotgun is cocked, whether there is a cartridge in the chamber or not.

The slide locks the breech block in the forward position because the shotgun is not recoil-operated, the breech block must be locked when firing. The slide release only comes into operation when the hammer is cocked.

The slide release presses against the left rear end of the slide. When the hammer is not cocked it pushes the slide release down, safe from the slide and the shotgun can be cocked again without pushing the slide release to the back.

6.6 FUNCTION OF THE HOLDING OPEN DEVICE

- When an empty shotgun is cocked after the trigger has been squeezed, the holding open device must be depressed so that the cocking grip can be pushed forward again, so that the working parts can lock fully.
- To unload the magazine.
- When the magazine must be filled and the shotgun is not cocked, the holding open device need only be depressed for the first cartridge because as soon as the first cartridge is in the magazine, it moves automatically out of the magazine onto the carrier, where after the shotgun must be cocked to remove it from the carrier.

6.7 FUNCTION OF THE PLUNGER

When the plunger is depressed, the first cartridge moves out of the magazine onto the carrier.

7. LOADING AND UNLOADING OF THE SHOTGUN STOPPAGES IMMEDIATE ACTION DRILL

7.1 LOADING

a) **CONVENTIONAL LOADING PROCEDURE**

- Left foot forward.
- Butt in the groin, barrel facing upwards.
- Cock the working parts rearwards.
- Safety pin on safe (L R)

- Press the holding open device and keep depressed.
- Cock the working parts forward.
- Turn the shotgun around (upside down).
- Load the rounds in the magazine and return the shotgun to the groin.

b) OPERATIONAL LOADING PROCEDURE

This method can be used when the member has to reload:

EMPTY SHOTGUN

- Butt in the shoulder, barrel facing the target.
- Place a round on the carrier via the ejection port with your weak hand and press down.
- Cock the shotgun closed.
- Load the rest of the rounds while observing the target.

WHERE THE SHOTGUN STILL HAS A ROUND IN THE CHAMBER, DO THE FOLLOWING

- Keep the butt in the shoulder, barrel facing the target.
- Load the magazine from below.

7.2 UNLOAD WITH AMMUNITION

If it is not necessary to fire, or if your duty shift has ended, the shotgun can be unloaded as follows:

a) UNLOADING WITH AMMUNITION

- Put the safety pin on SAFE
- Press the slide release and keep depressed
- Cock the shotgun completely OPEN
- Turn the shotgun around (upside down)
- Press the carrier down
- With the right hand thumb press on the back of the round (cartridge) in the magazine
- Press the holding open device with the left hand thumb and keep depressed
- Remove the rounds under control
- Repeat the 3 steps above until the magazine is empty
- Execute the making safe procedure (steps 3 to 7)

8. STOPPAGES & IMMEDIATE ACTION DRIL

8.1 STOPPAGES

- Obstruction in the barrel: Inspect and remove.
- Obstruction in the body: Remove the cartridge or empty shell/shotgun is not cocked properly.
- Empty magazine
- Faulty mechanism: Broken parts.

8.2 I A - DRILL

a) Cock the shotgun and continue firing.

b) If the shotgun still refuses to fire:

- Cock the shotgun open.
- Safety pin on SAFE.
- Inspect the chamber, body and magazine through the ejection opening.
- Identify and rectify the stoppage.

9. SHOOTING RANGE DRILL

9.1 SHOOTING RANGE DRILL

a) AT EASE

The member with the shotgun under the R armpit with the R hand on the shotgun with the barrel facing downwards. Left handed persons will handle the shotgun at the opposite side.

b) ON THE FIRING POINT UP

Member get to attention and bring the shotgun in the ready position. He moves to the firing point where he halts.

c) DETAIL LOAD

Members get the command to load the shotgun. This command could be to load with the conventional loading procedure or with the operational loading procedure.

d) DETAIL READY (only applicable on Normal loading method)

- Press the plunger.
- Press the slide release and keep depressed.
- Cock shotgun completely.
- NB: It is suggested that under normal circumstances the shotgun should be operationally safe.

This means:

- Safety pin on safe
- No round in the chamber
- Rounds in the magazine

e) FIRING COMMAND

- Place the shotgun in the shoulder.
- Safety pin on fire (R L).
- Fire the amount of rounds.

(With the operational method the member commences firing the moment that he is ready).

f) UNLOAD AND HOLD FOR INSPECTION

- Make sure the safety pin is on safe (L R).
- Lift the shotgun in such a way that the member and the range officer can inspect it.
- Declare the shotgun safe.

g) EASE SPRINGS

- Make sure the safety pin is on safe (L R).
- Press the holding open device and keep depressed.
- Cock the working parts forward.
- Safety pin on fire (R L).
- Squeeze the trigger.
- When a member has completed the drill he comes to attention with the shotgun in the port arms position.

10. APPLICATION OF THE SHOTGUN

10.1 INTRODUCTION

During the Goldstone Commission of inquiry and other inquiries it came to light that many members of the SAPS are not familiar with the wounding potential of the different ammunition available for shotguns.

Some members, although trained in the mechanism of the shotgun, are not familiar with the techniques to apply a shotgun effectively. The purpose for this lecture is to correct some of these drawbacks, because insufficient knowledge concerning the shotgun of a police official, may lead to the unnecessary wounding or killing of innocent bystanders. This lecture must be used in conjunction with the lecture of the Musler Shotgun.

10.2 ASPECTS WHICH MUST BE KEPT IN MIND WHEN THE USE OF SHOTGUNS IS CONSIDERED

- Are the lives of members really in danger?
- Are the lives of other innocent persons endangered?
- Is valuable property endangered?
- Can the result required not be reached by using less dangerous shotguns?
- Are there any moral principles that can influence or detract from the use of shotguns?
- What is the objective that must be achieved by using shotguns?

a) Intimidation of a crowd or person.

b) To eliminate a group or person in such a way that they cannot continue with their unlawful actions.

10.3 ASPECTS WHICH MUST BE CONSIDERED IF THE SHOTGUN IS APPLIED

When all the above mentioned aspects were considered, and it is decided that shotguns have to be used, the following must be decided:

- Target identification
- From which distance will there be fired.
- What type of round will be used.
- How many rounds per marksman must be fired.

- Can the command "cease" be given before the planned amount of rounds are fired.
- Will the firing command be understood by all the marksmen, or is there a possibility of a misunderstanding.

Application distances of different types of shotgun rounds			
TYPE	**MINIMUM DISTANCE**	**MAXIMUM DISTANCE**	**EXPECTED RESULTS**
SLUG	0 m	100 m	Death or serious injury.
SSG	50 m	100 m	Death or serious injury.
AAA	20 m	50 m	Death or serious injury.
NO 1	20 m	50 m	With ricochet shot - only injury
NO 2	20 m	40 m	With ricochet shot - only injury
NO 3	20 m	40 m	With ricochet shot - only injury
NO 4	10 m	30 m	With ricochet shot - only injury
NO 5	10 m	30 m	With ricochet shot - only injury
BATON ROUND	30 m	70 m	Refer to page 26
REDUCE CHARGE BATON ROUND	0 m	30 m	With ricochet shot - only injury

The following aspects considering shotgun rounds must also be considered:

10.4 GUIDELINES TO THE PRACTICAL APPLICATION OF THE 12 BORE BATON ROUND

a) Uses

For use during crowd control for pump action shotguns only.

b) Application

Great concern exists over the indiscriminate use of this round at distances of less than thirty metres, as it can cause serious injury or even death.

The ammunition is designed to be effective at distances of between 30 - 70 m by firing directly at a target. It can be fired accurately at targets up to 50 m.

The round can result in death or serious injury if used at ranges of less than 30 m. Should the rounds be used at short range, they must be aimed at the target's legs. The marksman has good control of the point of impact at ranges of less than 30 m and as a result, accurate ricochet fire can be delivered.

The round must first be visually inspected before it is fired. The colour of a cartridge must never be used as an indication, as commercial ammunition of the same colour may contain another type of shot.

The baton round must never be mixed with other types of shotgun ammunition. The baton round costs approximately twice as much as other shotgun ammunition and should therefore be used judiciously.

The baton round and the Musler shotgun system are employed in order to replace the 37 mm stopper. This system ensures a multi-purpose shotgun that can be employed successfully with a variety of ammunition and riot aids.

10.5 WHEN THE SHOTGUN IS FIRED

a) When the above mentioned particulars regarding the shotgun round are considered, it is once again apparent that this shotgun has an enormous wounding potential and that innocent people can be easily injured without intention. Therefore:
   - the distance from the target(s);
   - the type of ammunition available; and
   - the objective that must be achieved must be considered.

b) Further considerations that must receive attention when the application of shotguns is considered are?
   - training of the marksman;
   - the choke of the barrel;
   - length of the barrel;
   - type of sights;
   - available light;

- circumstances under which is fired (fear, pressure, excitement, etc).

10.6 FACTORS WHICH MUST BE CONSIDERED BEFORE THE FINAL COMMAND IS GIVEN

Even when the last mentioned command is given clear prescriptions is necessary to the appointed marksman.

a) The command to fire must clearly indicate:
   - Who must fire (which marksman)
   - How many and what type of rounds
   - Target (individual or edge of crowd)
   - Type of fire (ricochet to wound or to kill)
   - Command to fire

10.7 CEASE- FIRE

The command to cease-fire is given the moment that:

- there is no more danger for yourself or your section; and
- the rioters begin to disperse.

Where members act individually or without an appointed leader, sound judgement and self discipline must be applied. The application of minimum force always remains the greatest consideration.

11. USE, MAINTAIN AND TRANSPORT OF A SHOTGUN

Shotguns is the most commonly used firearm in crowd dispersion when negotiations have failed. It must be emphasized that only permitted ammunition is utilized for eg. Reduced rounds and double ball ammunition.

All shotguns must be maintained, transported and stored according to manufacturing specifications as well as organisational standard procedures (SOP).

Shot gun maintenance

Cleaning methods:

- Pre-shoot cleaning
- Post shoot cleaning
- Inspection cleaning
- Routine maintenance/ Preparation for storage

Use of shotgun will vary from situation to situation and must be used in conjunction with the threat level, as well as the principles of intervention. Members that are in possession of shotguns during crowd management situations must strictly work on command only, unless private defense is compromised. The shotgun must only be utilize as prescribed by organisational standard operating procedures (SOP).

12. SUMMARY

The members are able to handle the shotgun now with confidence in any situation.

Attention was given to:

- Making safe procedure
- Stripping and Assembling
- Loading and Unloading with ammunition
- Shooting Range Drill
- Practical exercises
- Stoppages
- Application of the shotgun

Pyrotechnics

Chapter 6

Chapter Outcome

On completion of this chapter you will be able to handle the following pyrotechnical equipment:

- **Illumination grenade**
- **Smoke Grenade**
- **Stun Grenade**
- **Thunder Flash**
- **300m Illumination flare**
- **15mm Signal cartridge**

Learning Outcomes

1. Describe the four categories of pyrotechnical equipment.

2. Identify the following pyrotechnical equipment (1) Illumination grenade (2) Smoke grenade (3) Stun Grenade (4) Thunder Flash (5) Illumination flare (6) Sign cartridge (7) 300m Illumination grenade (8) 15mm Signal cartridge.

3. Use the following pyrotechnical equipment in a simulated crowd management exercise (1) Illumination grenade (2) Stun Grenade (3) Smoke grenade (4) Thunder Flash (5) Illumination flare (6) Sign cartridge (7) 300m Illumination grenade (8) 15mm Signal cartridge.

Chapter Contents

1. INTRODUCTION

Pyrotechnical equipment can be divided into four categories namely:

- Grenade types
- Rifle grenade types (not covered in this learning material)
- Cartridge types
- Signals and flares

These equipment, which serves as an aid to the South African Police Service can be used during special operations (urban/rural terrorism), as well as during crowd facilitation and management and ordinary policing.

It can be used for:

Smokescreens, illumination, as signals for communication or commands such as "cease fire" or "withdraw".

2. GRENADE TYPE AND RIFLE GRENADE TYPE OF EQUIPMENT

2.1 NO 83 SMOKE GRENADE

SMOKE GRANADE

2.1.1 Description

The no 83 Smoke Grenade is a cylindrical shaped metal container which contains a smoke component. Do not use in confined spaces.

The method of ignition is by means of a spring loaded firing pin mechanism which activates a percussion cap with a time delay of 1,5 seconds. This grenade is normally thrown by hand. The grenade has holes on top where the smoke escape after the grenade has been activated.

2.1.2 Specifications

Length	143 mm
Diameter	58 mm
Total mass	482 gr
Smoke component mass	175 gr
Period of delay	1,5 sec
Period of burning	12 - 30 sec
Colour variations	red, green, yellow, blue and white

2.1.3 Application

- The main purpose for using this grenade is to create a smoke-screen and to serve as a

communication aid in the following circumstances:

- ground-to-air contact (wind direction)
- smoke screens
- certain colours to serve as certain commands during operations

- **Application of the grenade**

  - The grenade is placed in the palm of the hand with the fly-off lever fitting in the palm, between the thumb and forefinger.
  - As soon as the safety pin is removed, the grenade is ready to be thrown.
  - Take the wind direction into consideration when the grenade is thrown.

2.2 ILLUMINATION GRENADE

2.2.1 Description

The grenade consist of an aluminium container which holds the illumination component. The method of ignition is by means of a spring loaded firing pin which activates the percussion cap with a time delay of 1,5 seconds.

The time delay activates the illumination component that in turn literally "lights up the area".

2.2.2 Specifications

Length	173 mm
Diameter	43mm
Total mass	480 gr
Total mass of illumination component	250 gr
Period of delay	1,5 sec
illumination Intensity candela	70 000
Period of burning	2 to 3 min

ILLUMINATION GRENADE

2.2.3 Application

- The illumination grenade can be used for:
  - illumination of landing zones at night
  - illumination during night operations
  - illumination during emergency or disaster situations
- How to use this grenade

The method is exactly the same as for the no 83 Smoke Grenade. (Always throw the grenade with the detonator pointing away from you)

2.2.4 Packaging

Every grenade is sealed in a polystyrene container with 35 grenades per crate.

2.3 STUN GRENADE

2.3.1 Description

The stun grenade consist of a cylindrical perforated aluminium container divided into 2 compartments filled with the main charge. The 2 compartments are connected with a short time delay. Thus, when it detonates two explosions can be heard - the second explosion taking place after the short time delay. The method of ignition is by means of a spring loaded firing pin mechanism which activates a percussion cap with a time delay of 1,5 seconds.

2.3.2 Specifications

Length 12 mm
Diameter 42 mm
Total mass 250 mm
Period of time delay
1,5 sec
Time delay between detonations 0,5 sec

Detonation volume ± 140 decibels

2.3.3 Application

The stun grenade can be used in almost any situation to demoralise a crowd or persons involved in any specific situation.

The grenade releases no shrapnel, and is therefore classified as a offensive grenade (secondary shrapnel - stones)

In an open air space it is unlikely that the stun grenade will cause any permanent damage to a person's eardrum. In a confined space the opposite effect will happen. The persons balance will be affected and he will be disorientated.

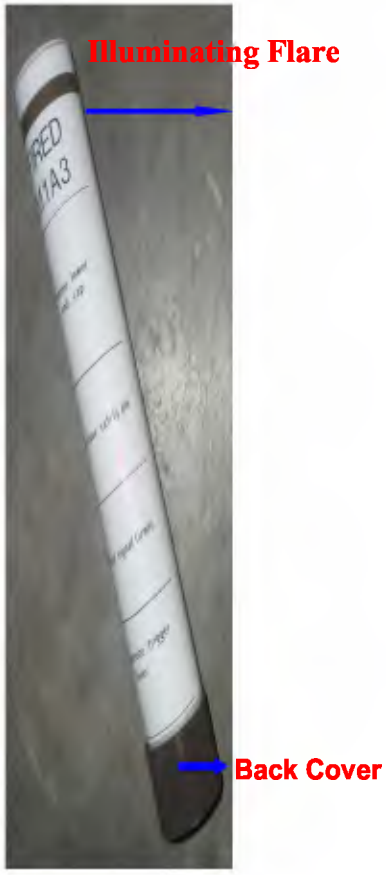
How to use this grenade

The stun grenade is applied in the same way as the no 83 Smoke Grenade. Remember that this grenade has a safety hook and not a split pin as the smoke grenade has.

2.3.4 Packaging

Every grenade is packed in a waterproof PVC bag inside a carton container. It is packed 18 grenades per crate.

3. ILLUMINATION FLARE & SIGNAL CARTRIDGE



3.1 300M ILLUMINATION FLARE (1000 FOOTER)

3.1.1 Description

This flare contains a drive motor, aluminium tube, parachute and the illumination component inside a plastic tube with an activating trigger.

3.1.2 Specifications

- Length 267 mm
- Diameter 48 m
- Total mass 350 gr
- Pyrotechnic mass 83 gr
- Time of burning: Pyrotechnic 25 - 35
  Star 6-10 sec
- Launching height 250 m (minimum)

3.1.3 Application

How and for what can this flare be used?

- The flare is activated with both hands holding it away from the body above eye level.

- First remove the dust plug covering the trigger and safety pin. Pull out the safety pin to arm the trigger. With consideration of the wind and the area that must be illuminated the launching tube is pointed into the wind. The flare is fired

by pushing the trigger upwards against the plastic tube.

- The flare is launched up to a height of 250 - 300m where the illumination component is discharged. The illumination component can be in the form of a star-type (free fall) or attached to a parachute.

ILLUMINATION FACTORS		
	PARACHUTE	STAR
Red	30 000 Candela	200 000 Candela
Green	14 000 Candela	70 000 Candela
Yellow	40 000 Candela	215 000 Candela
Illumination	80 000 Candela	

- It provides effective illumination for a radius of 360 m. It is mainly used at night, but can also be used by day for communication purposes.
- General uses
  - Ground to air contact (application)
  - Communication
  - FLOT indication (Front Line Own Troops)
  - Search and recovery operations

3.1.4 Packaging

Every flare is packed in a watertight plastic cylinder with 18 cylinders per crate.

3.2 15 MM SIGNAL CARTRIDGES AND SIGNAL

PROJECTOR

3.2.1 Description

The cartridge consists of an anodised aluminium case fitted with a 0.22 rimfire cap. The case is threaded and will fit most standard launchers of the Miniflare and Pengun tipes. Night identification is provided by means of raised ribs on the cartridge case.

3.2.2 Specifications

Length	40 mm
Diameter	20 mm
Total mass	11,29 gr
Mass of piro component	3,8 gr
Burning time	± 6 sec
Effective height	75 - 100 m

3.2.3 Identification of cartridges at night:

Red	-	2 Ribs
Green	-	1 Rib
Yellow	-	No Ribs

3.2.4 Application

- What can these signals be used for?

The use of the signal will be determent by different situations. The following are a few examples:

- for aircrew distress signalling
- sea-rescue dinghy survival equipment
- in mountain rescue operations
- for ground to ground signalling (FLOT)
- for ground to air signalling (FLOT)

3.2.5 How to use these signals

- The signals are fired with a 15 mm signal projector as follows:

  - remove white plastic cover from the cartridge
  - screw the cartridge onto the projector
  - hold the projector firmly in hand and pull the trigger down with your thumb. When the trigger is released, the signal is fired.
  - If no projector is available, the signal can be fired with a shotgun as follows:

    - the red signal is loaded from the chamber
    - the green and yellow signal can be thrown in at the muzzle of the weapon

- However, it have to be mentioned that firing 15 mm signals with a shotgun must not be seen as a standard operational procedure, but this method must only be reserved to circumstances where no signal projector (pencil-flare) is available.

3.5.6 Packaging

9 Signals (3 colours each) are sealed in a plastic bag with 28 bags per crate (1008 cartridges).

4. THE THUNDER FLASH

4.1 DESCRIPTION AND CHARACTERISTICS

The THUNDER FLASH consists of two rolled paper tubes. The larger tube which forms the handle, is secured over the smaller tube with glue. The smaller tube contains a low level explosive.
Which is ignited by means of a safety fuse. The safety fuse is manually ignited by means of a striker.

Under pressure it has the same effect as minor explosives and secondary shrapnel can be caused by the explosion.

A sharp blinding flash is visible when the THUNDER FLASH explodes and this can cause temporary blindness. This blinding flash is caused by the burning of the magnesium content in the charge. When exploding, the THUNDER FLASH can cause burn injuries to persons within a 1 metre radius of the explosion.

4.2 SPECIFICATIONS

Length	210 mm
Diameter: Handle	30 mm
Charge container	25 mm
Mass	58,25 gr
Time delay	5-12 sec
Activating mechanism	Safety fuse
Charge	11.7 gr SR 801 B

4.3 APPLICATION

- What can the THUNDER FLASH be used for?

  The THUNDER FLASH is used for training exercises, such as: simulating the explosion of a bomb or grenade etc.

- How to ignite the THUNDER FLASH

  - Hold the THUNDER FLASH on the handle (larger tube) with the throwing hand.
  - With the other hand pull back the white tape to expose the igniter, and
  - Pull down the red tape to remove the striker from the handle.
  - Draw the striker over the igniter and ensure that the safety fuse ignites.
  - Activation of the THUNDER FLASH is characterised by a flame which is visible as well as a hissing sound.

NOTE

The THUNDER FLASH must be thrown to a safe target area and not towards any person or any inflammable substance, such as: gas bottles containing household gas, petrol pumps -or stations, etc. After it is ignited, the THUNDER FLASH must be thrown away immediately.

If a THUNDER FLASH is thrown a confined space, the explosion as well as secondary shrapnel (glass and thin wooden splinters, etc.) can cause severe injury and damage.

4.4 PACKAGING

25 THUNDER FLASHES are packed in a metal box, separated by segmented packing. Four metal boxes are packed into a plastic box (crate).

5. USE OF PYROTECHNICAL EQUIPMENT RELATED TO CROWD MANAGEMENT

Optimization is the optimal use of equipment and personnel to reach or obtain the goal set out in the planning phase. The optimal use of equipment and personnel is only possible when a complete analysis is made of the risks Involved in the situation. This analysis entails the consideration and studying of all factors which could possibly influence the effective achievement of a proposed goal, with the aim of finding the most suitable solution for the problem. Crowd management equipment is issued according to a briefing received from the commander as stipulated in an operational plan.The basic equipment to any member dealing with crowd management will be the following:

- Helmet
- Shield
- Tonfa
- Body amour
- Gas mask
- Shotgun with appropriate ammunition
- Pyrotechnical aids (appropriate)
- Uniform (Field dress as prescribed by Operational Instructions)

NOTE: All crowd management equipment is maintained, transported and stored according to manufacturing specifications as well as organisational standard procedures (SOP)

Pyro equipment

Pyro technical aids should be kept away from heat sources. Majority of pyro technical aids have a 1,5 sec time delay. Thunder flash is only used as a training/simulation aid.

Use of pyrotechnic equipment will vary from situation to situation and must be used in conjunction with the threat level, as well as the principles of intervention. Use of pyrotechnic equipment is demonstrated according to the criteria as set The pyrotechnics use thereof must comply with Organisational Policies and all legislation pertaining to the use of force.

6. CS Grenade Launch (40 mm Brugger & Thomet

6.1 CS Canister and Ballistic round

6.2 Ballistic CS

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