



ARMY

CANADIAN FORCES OPERATIONAL SHOOTING PROGRAMME

(ENGLISH)

Replaces B-GL-382-001/FP-001 dated 2003-01-29.

WARNING

Although not classified, this publication, or any part of it, may be exempt from disclosure to the public under the *Access to Information Act*. All elements of information contained herein must be closely scrutinized to as certain whether or not the publication or any part of it may be released.



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Issued on the authority of the Chief of Defence Staff



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Issued on the authority of the Chief of Defence Staff

Director of Army Training

2007-04-01

FOREWORD

1. B-GL-382-001/FP-001 *Canadian Forces Operational Shooting Programme (CFOSP)* is issued on the authority of the Chief of the Defence Staff and is effective upon receipt. This publication replaces B-GL-382-001/FP-001 *Shoot to Live*, 2003-01-29 in its entirety.
2. This publication describes the Canadian Forces operational shooting programme for all personal weapons, other individual weapons, and crew served weapons in the Canadian Forces inventory. This publication should be used in conjunction with the Level of Individual Standards (IS) described within B-GL-383-003/FP-001 *Individual Battle Task Standards (IBTS) for Land Operations* and *Land Force Command Order 24-4 (LFCO)*. Range and simulation facilities vary across Canada and until such time that these existing facilities are upgraded the practices and tests described in this programme will be used. Modification to the practices is acceptable depending on the type of range facility available.
3. Officers and Non-Commissioned Officers (NCOs) responsible for the preparation and conduct of range practices contained in this publication must refer to the appropriate weapons manual, Range Standing Orders, and B-GL-381-001/TS-000 *Operation Training—Training Safety*.
4. The Director of Army Training is responsible for the content and production of this publication. Comments and suggestions are solicited and should be directed to the following address:

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CHAPTER 1 GENERAL

SECTION 1—OUTLINE OF PROGRAMME

INTRODUCTION

1. Every Canadian Forces (CF) member must be skilled in the use of weapons. Canadian experiences have demonstrated that at any moment personnel must be prepared to face all types of threats. Highly developed marksmanship skills give personnel the confidence to use their weapons safely, precisely and effectively in operations.
2. The Canadian Forces Operational Shooting Programme (CFOSP) is conducted within Level One, or individual, training. CFOSP is designed to be used as a gateway to individual live fire field firing and to Level Two and higher levels of collective live fire training.

AIM

3. CFOSP is designed to train personnel to proficiently shoot their assigned weapon(s).

SCOPE

4. This publication contains the small arms training programme for personal weapons, other individual weapons, and crew served weapons.
5. Personal weapons include:
 - a. the C7, C7A1 and C7A2 Rifles and the C8 Carbine;
 - b. the M203A1 40 mm Grenade Launcher;
 - c. the C9, C9A1 and C9A2 Light Machine Gun (LMG);
 - d. the 9 mm Browning and Sig Sauer P225 Pistol; and
 - e. the 9 mm Heckler and Koch Machine Pistol 5 (MP5).
6. Other individual weapons include:
 - a. the Remington 870P 12 Gauge Shotgun;
 - b. the C13 Fragmentation Grenade;

- c. the 66 mm NM 72 E5 Short Range Anti-armour Weapon (SRAAW) (Light) or SRAAW (L);
 - d. the 7.62 mm C3A1 and the .338 Cal Timberwolf Medium Range Sniper Weapon (MRSW);
 - e. the 0.50 Cal MacMillan Long Range Sniper Weapon (LRSW); and
 - f. the C6 General Purpose Machine Gun (GPMG) in the Light Role (LR).
7. Crew served weapons include:
- a. the C6 GPMG in the Sustained Fire (SF) role;
 - b. the 0.50 Cal Heavy Machine Gun (HMG);
 - c. the 84 mm Carl Gustav M2-M3 SRAAW (Medium) or SRAAW (M);
 - d. the Eryx SRAAW (Heavy) or SRAAW (H); and
 - e. the 60 mm M19 Canadian Light Mortar (Lt Mor).

PUBLICATION SCOPE AND LAYOUT

8. This publication contains six (6) chapters:
- a. Chapter 1—Concept and Design—provides an introduction and description of the CFOSP concept and design;
 - b. Chapter 2—Training and Standards—details the training and standards that are to be achieved and discusses simulation considerations;
 - c. Chapter 3—Marksmanship Theory and Coaching—details the critical marksmanship theory and coaching information and techniques that are essential in producing an effective shot;
 - d. Chapter 4—Personal Weapons;
 - e. Chapter 5—Other Individual Weapons; and
 - f. Chapter 6—Crew Served Weapons.
9. This publication is structured to allow easy amendment should a need arise to add or withdraw a weapon or weapon system, or to change range practices or weapon tests.

SECTION 2—PROGRAMME

CONCEPT

10. The concept of the CFOSP is to develop, improve and/or maintain marksmanship proficiency. It facilitates marksmanship training at the unit level and provides a progressive approach in training CF members to use their assigned weapons with maximum effectiveness. Accordingly, the programme is designed to achieve the following objectives:

- a. to impart the knowledge and skill necessary for a firer to effectively engage a target at distances out to the maximum effective range of their weapon;
- b. to progressively and continuously train firers to maintain and improve their weapons handling and marksmanship skills; and
- c. in conjunction with CF small arms competition programmes, to develop expert marksmen and coaches who are able to mentor the next generation of firers.

DESIGN

11. A good battle shot is a fit and trained soldier who can apply musketry skills using ground or cover, man made or not, for fire and movement, keep his personal weapon in action, detect the enemy, and shoot quickly and accurately under the full spectrum of operations.

12. The system recommended for training the battle shot under the CFOSP, which can be applied to all personal weapons, incorporates five stages as follows:

- a. **Stage I—Preliminary (Grouping and Zeroing):**
 - (1) progress from small bore to full bore where they start at 25 m and then 100 m; and
 - (2) soldiers will not be permitted to zero his/her personal weapon until he groups to 150 mm at 100 m prone supported.
- b. **Stage II—Application of Fire:**
 - (1) the soldier progresses to shooting at longer ranges from all firing positions; and
 - (2) he is taught how to overcome factors affecting the shot (distance, wind, CBRN), is introduced to different types of targets, and is exercised in snap and rapid shoots, covered progressively as follows:

- (a) elementary application of fire;
- (b) advanced application of fire; and
- (c) night shooting.

c. **Stage III—Annual Personal Weapon Test:**

- (1) PWTs are progressive levels 1–4 for personal weapons, and 1–3 for other and crew served weapons. Soldiers in training will be required shoot up to their level in succession from Levels 1 through to Level 3. PWT 4 is a more robust application of shooting designed to increase a soldier's level of competency through the use of **“Quick Aim Shooting”**. Only personnel designated through their chain of command need to shoot PWT 4.
- (2) Annual re-qualification for PWT 2-3 does not mean a soldier must complete its lower level of qualification on a conventional range with the use of live ammunition. The use of a Small Arms Trainer (SAT) may be incorporated as continuation training for lower levels of PWT as detailed by the commanding officer however the soldier's level of PWT must be fired live. (i.e. If a soldier is required to re-qualify PWT 3, that soldier is only required to shoot at that level not levels 1 and 2 to qualify).
 - (a) conducted on a conventional/austere range; and
 - (b) refresher/continuation training may be conducted through SAT.

d. **Stage IV—Individual Field Firing.** Progression to simple realistic battle shooting exercises to combine basic skills of fieldcraft with weapon handling and shooting, i.e. Individual Field Firing (IFF) such as jungle lane or advanced moving target ranges.

e. **Stage V—Collective Field Firing:**

- (1) final progression; and
- (2) combines individual marksmanship with target detection, fieldcraft, fire and manoeuvre and fitness at section, platoon and company level to weld individuals into teams and train junior leaders.

13. **Continuation Training.** Once an individual soldier has passed his PWT he is considered trained and would concentrate on continuation training. Continuation training can be accomplished through the use of the SAT, conventional and austere ranges. This continuation training is not part of stage IV or V although it may be incorporated.

14. The specific levels of operational competency (LOC) that are to be achieved or maintained by members of the CF in order to deploy on a land operation is found within Canadian Expeditionary Forces Command (CEFCOM) or Canada Command (Canada COM) directions for international or domestic operations. CF members not preparing for, or deploying on, a land operation will achieve the PWT standard that is defined by their respective command, as applicable within Maritime Command Orders (MARCORDs), Air Command Orders (ACOs), Land Force Command Orders (LFCOs), etc.

15. To allow for natural progression and learning, CF members shall achieve their specific PWT or maintain currency on each PWT for each Stage before attempting the next. A specific description of each Stage is located in Chapter 2—Training and Standards.

COMMAND RESPONSIBILITY

16. **Promotion of Marksmanship Training.** Commanders at all levels are responsible to promote good marksmanship by all CF members under their command, and to ensure that their personnel maintain the highest weapons handling and shooting standards.

17. **Physical Fitness.** Firers who are physically fit will generally be more effective shots in operations. An effective physical fitness training programme is therefore an essential command responsibility that complements an effective operational marksmanship programme. Firers must possess the muscular strength to hold their weapon without strain or unnecessary tension in unsupported positions. Cardiovascular fitness is absolutely essential to control breathing, particularly in high stress combat situations where the body's adrenalin reaction may be at a peak. Selected CFOSP weapon practices therefore incorporate physical efforts, such as run-downs, in order to simulate the cardiovascular stresses of combat.

18. **Planning Marksmanship Programmes.** Shooting results are improved with high quality small arms training, coaching and simulation when combined with shooters who are motivated, interested and enthusiastic. Commanders must consider the following factors when planning marksmanship programmes:

- a. training priorities;
- b. progression of training; and
- c. realism of the training.

19. **Shooting Records.** It is a responsibility of the chain of command to ensure shooting records are maintained for every firer. A specific entry shall be made in each firer's unit employment record (UER) on a CF 743B form (UER Miscellaneous Entries), or a similarly approved record sheet, every time a firer conducts marksmanship training or is tested. Separate shooting records should be maintained at the sub-unit level to

enable commanders to assess marksmanship ability and monitor progress. This type of record keeping is necessary even if the training is conducted using simulation, and should be included with the firer's UER prior to posting to a new unit or assignment.

COMPETITIVE MARKSMANSHIP PROGRAMMES

20. Competitive marksmanship programmes, such as the Canadian Forces Small Arms Competition (CFSAC), generate interest and improve small arms proficiency and enhance the development of expert coaches. The added value of competitive marksmanship shooting is summarized by:

- a. **Incentive.** Competition creates the incentive for units and firers to strive for the highest standards of marksmanship.
- b. **Interest.** Most firers are keen to learn, but will quickly lose interest unless repetitive training is interesting. Competitions will provide firers with the challenge needed to maintain interest.
- c. **Confidence.** Firers gain confidence in their weapons and skills when trained under stressful conditions. Competition creates situations whereby the following qualities, needed to overcome battlefield stress, are developed:
 - (1) determination;
 - (2) esprit de corps;
 - (3) physical fitness; and
 - (4) confidence in weapons handling and equipment.

USE OF SIMULATORS

21. Simulators provide an opportunity for firers to practise marksmanship principles under controlled conditions and at a progressive rate in accordance with their ability. This aid to marksmanship training reduces the time and the resources required to conduct similar training on a live fire range. Although simulation is not intended to replace all live fire training, it will at least assist in maintaining weapons handling skills, and reduce skill-fade when time and resources are limited or unavailable.

22. A firer's performance on a simulator will not completely and accurately reflect how they will perform on a live fire range. Maximum use of simulators should be made prior to progressing from one Stage to the next during initial marksmanship training. When practical, simulators are employed as gateways to live fire training in the CFOSP.

23. Supervisors are to use common sense and good judgement when using a simulator to evaluate a firer's weapons handling drills, marksmanship principles, and overall capability to move on to sub-calibre and/or live fire ranges.

24. Use of simulators should be imbedded into the unit training plan to maintain weapons handling and marksmanship skills. When an extended period falls between conducting the consecutive PWTs, simulators should be used to review the last PWT shot as well as the PWT the firer is about to attempt. Simulators have been proven to enhance the shooter's performance when combined with coaching.

CONDUCT OF WEAPON TRAINING AND RANGE PRACTICES

25. **Safety.** B-GL-381-001/TS-000 *Training Safety* contains the safety regulations that pertain to all stages of small arms training. This publication, used in conjunction with the weapon manuals and local range standing orders, will permit safe, effective and realistic small arms training.

26. **Weapon Handling Tests.** Weapon handling tests are similar to the former tests of elementary training (ToETs) and are designed to measure the firer's standard of weapon safety and handling. Personnel must pass the test designated for each weapon prior to advancing to live fire or simulation training and testing. It is mandatory for all firers to have completed weapon handling tests within the period mandated by B-GL-381-001/TS-000 *Training Safety*. The officer in charge (OIC) / range safety officer (RSO) may order drill refresher training prior to firing if deemed necessary. Weapon handling tests are located in the appropriate weapon's publication.

27. **Dress.** Dress for weapons training and firing should reflect the standard of dress and equipment required by the firer on operational deployments during which the weapon will be employed. Exceptions to this rule will only be granted as a result of equipment availability (e.g. ballistic plates). This is essential as the equipment worn will effect the position adopted by the firer, and in turn, affect their ability to apply the principles that govern good shooting. Practices conducted under NBC conditions must be completed with the firer wearing at least the NBCD mask and some form of gloves.

28. **Weapon and Firing Preparation.** When and where possible, weapons should be prepared for firing prior to moving to the range to ensure they are prepared under "ideal" conditions.

29. Where applicable, weapons are to be pre-zeroed prior to firing practices using a simulator. During zeroing practices using a simulator, firers are to be monitored and assisted with mechanical adjustments made to the sighting systems. If fire trenches are not available, the prone supported position is to be used.

30. Firers that complete any part of the programme using a simulator must be afforded sufficient time and ammunition to zero their weapons prior to attempting live fire practices.

SECTION 3—DESCRIPTIONS, DEFINITIONS AND REFERENCES

TYPES OF FIRING POSITIONS

31. **Unsupported Position.** An unsupported position is a firing position that is not supported by anything external to the weapon or the firer. Typically, the firer will adopt an unsupported position at shorter ranges and when the ground does not offer support, or when the tactical situation does not allow a firer time to adopt a supported position. Use of weapon slings, pintle mounts, bipods and tripods, or resting the weapon's magazine on the ground, is permitted since these items are an integral part of the weapon. Modified stances, such as the Hawkins, that do not involve the use of an external support are also permitted. In this publication, unless otherwise indicated, all positions are unsupported. Please refer to the applicable weapon manual for a detailed description of each unsupported stance.

32. **Supported Positions.** A position of fire that is supported by something that is external to the weapon and firer. Examples of supported positions include the use of walls, posts, logs, trees, doorways, windowsills and trench parapets. Whenever the tactical situation permits, a firer will always seek to adopt a supported position since it decreases the physical strain on the firer and increases their accuracy. A supported position, however, is less strenuous and allows the firer to use less rigorous holding and aiming techniques. For this reason, personnel undergoing initial marksmanship training will not generally be allowed to use these more advanced techniques until they demonstrate that they have mastered the unsupported positions with the particular weapon. Please refer to the applicable weapon manual for a detailed description of each supported stance.

TYPES OF APPLICATIONS OF FIRE

33. **Deliberate Fire.** Deliberate fire is conducted only with weapons operating in the single-shot or semi-automatic modes. It is a slow rate of fire where accuracy of engagement is paramount and generally where there is no time constraint. Mastery of deliberate fire from all static fire positions is the foundation upon which more advanced marksmanship skills with a given weapon are built.

34. **Snap Shooting.** Snap shooting is conducted only with weapons operating in the single-shot or semi-automatic modes. The firer will have time to settle into a static fire position before the target is exposed. Snap shooting is the application of deliberate fire where there is only an intermittent opportunity to shoot at a target that exposes itself for a short period of time. The aim of snap shooting practices is to train the firer to be able to remain in a given fire position and maintain an aiming point without incurring undue muscle strain, so that they can successfully engage a fleeting target.

35. **Rapid Fire.** Rapid firing is conducted only with weapons operating in the single-shot or semi-automatic modes. Rapid firing involves a high rate of fire from a static firing position that is generally used to win a firefight or to engage multiple targets in a

short time. The aim of rapid firing practices is to train the firer to be able to control their breathing, absorb recoil and bring the weapon quickly back onto the point of aim after each shot. The specific rate of fire is unique to each weapon system and is described in the related weapons publication.

36. **Double Tap.** Double tap shooting is conducted only with weapons operating in the semi-automatic mode. A double tap consists of firing two instinctive shots in rapid succession, most often while looking over, but not through, the weapon's sight. The aim of the double tap is to train the firer to quickly suppress a surprise target in close quarters. A double tap engagement is usually followed up by an aimed deliberate or snap shot.

37. **Burst Fire.** Bursts are fired with weapons operating in the fully-automatic mode and usually consist of three to five rounds each. Usually only the first round is a deliberate aimed shot, since weapon recoil and vibration will make maintaining the sight picture difficult for the remainder of the burst. The aim of burst practices fired from pintle mounts, bipods or tripods by fully-automatic weapons is to train the firer to manage recoil and observe the fall of shot to produce effective fire out to the maximum effective range of the weapon. The aim of burst practices fired from carried positions at short ranges is to train the firer to deliver aimed fire and to manage and compensate for weapon recoil and jump through the burst.

38. **Change Position and Fire.** Practices that incorporate a change of firing position at a given firing point prior to firing are designed to train and then test a firer's ability to quickly adopt a naturally aligned fire position. Examples of these types of applications are changing from a standing to a kneeling or prone position and then firing, or in more advanced practices, turning and firing. The words of command used throughout this manual to indicate to a firer to change position and then fire are **WATCH OUT**.

39. **Movement and Fire.** Movement and fire practices are designed to train the firer to apply their marksmanship principles under elementary combat conditions. Movement and fire exercises may consist of moving forward with a weapon at the ready and then engaging targets as they appear, or conducting a run-down from one firing point to another. Run-downs are a way to train the firer to manage some of the psychological stresses of combat caused by the body's adrenalin rush. Run-downs are a tool used to elevate a firer's heart and respiration rates, and to train the firer to quickly adopt a naturally aligned firing position. Run-downs are not a physical fitness test, and any firer who meets the CF or environmental fitness standards should be able to succeed. Movement and fire practices will normally end with a deliberate, snap or rapid application at the destination firing point. The words of command used throughout this manual to indicate to a firer to move to a new firing point and then fire are **PREPARE TO MOVE**.

40. **Quick aim Shooting.** Quick aim shooting is conducted with personal weapons operating in the single-shot, semi-automatic and automatic modes. Quick aim shooting is a very demanding form of marksmanship that involves changing positions, moving and firing, and applying rapid, snap and burst aimed fire at close quarters in as short a

time as possible. The aim of quick aim shooting practices is to train the firer to be able to survive the close quarter battle by effectively engaging the enemy before that enemy could effectively engage the firer. Training a firer to effectively apply quick aim shooting fire involves practising the following techniques and skills:

- a. **Weapon Hold.** Firers must be taught to quickly bring their weapon onto a target(s) from a low or high ready position.
- b. **Aiming.** Firers must be trained to continuously scan the area, and once a target or targets appear, to bring their weapon sight onto the target(s) while keeping both eyes open throughout the engagement to maintain situational awareness of their surroundings. Firers need to be trained on how to prioritize and engage multiple targets that may be wearing body armour. They must learn not only how to shoot accurately at the centre of mass of a target, but also how to follow up with accurate, killing shots to the head of a target.
- c. **Movement.** Movement in a quick aim shooting engagement is done differently. Firers need to be trained how to move forwards, sideways, backwards and around corners in a shuffle motion where their feet do not cross over, so that they can instantly assume a balanced firing position without tripping over themselves or uneven terrain.
- d. **Weapon Handling.** Firers need to master advanced skills in dealing with weapon jams, empty magazines, and switching to an alternative weapon, all while in the middle of engaging targets at close ranges.
- e. **Follow Through.** Firers need to be trained to overcome the physiological effects of fear once they have completed an engagement by instantly resuming effective scanning and breathing. Failure to do this will result in a loss of situational awareness and a reduction in reaction time that could jeopardize the firer in the subsequent firefight.

41. **Individual Field Firing.** Individual field firing trains and confirms the firer's ability to use ground and to detect and engage the enemy at unspecified ranges in simulated battle conditions. Individual field firing may be designed to involve all types of applications of fire.

42. **Collective Field Firing.** Collective field firing involves live fire training based at the pair level and higher, which produces and confirms the ability of a team to operate effectively on the battlefield. It is designed to practise individuals and commanders in basic tactics and fire control. Collective field firing may be designed to involve all types of applications of fire.

TYPES OF RANGE PRACTICES

43. **Application Range Practices.** Application range practices introduce marksmanship skills that are essential to achieving the required standards for each Stage.
44. **Personal Weapons Tests.** PWTs are designed to confirm the firer's skill at the end of each Stage.
45. **Personal Weapons Test Supplements.** PWT Supplements are range practices designed to prepare and test firers on specialized weapons and weapon sights that are not common to all. The applicable PWT Supplement must be passed before a firer progresses to live field firing or deployment using these specialized weapons and weapon sights.

TYPES OF TARGETRY

46. The types of CF targets that are used throughout the CFOSP are described in Chapter 11 of B-GL-381-002/TS-000 *Operational Training, Volume 3, Part 2, Range Construction and Maintenance*.

DEFINITIONS

47. **Weapons and Weapon Sights.** The terms that apply to weapons and weapon sights that are used throughout this publication are:
- a. **Point of Aim.** The point of aim (POA) is a specific point on a target where the weapon sight is aimed. Generally, the default POA is the centre of a target's mass, but the POA is adjusted to account for wind, changes in target/firer elevation and range once the firer has zeroed their weapon.
 - b. **Grouping.** The pattern created on a target by firing numerous rounds at the same POA.
 - c. **Mean Point of Impact.** The mean point of impact (MPI) is the actual place on the target where the averaged centre of a grouping strikes.
 - d. **Zeroing.** The term zeroing refers to the physical adjustment of weapon sights to bring the MPI onto the POA. It is only possible to zero a weapon after a firer has achieved a specified grouping size with a given weapon at a given range. Generally, all weapons will be zeroed to the battle range of the weapon concerned and under conditions where wind and changes in target/firer elevations are not a factor.
 - e. **Correct Zero Position.** The correct zero position (CZP) is the corrected position of the MPI in relation to the POA at the battle range of the weapon

concerned. When a weapon is zeroed at a different range than the battle range, then an adjustment to the zero is required so that the CZP is at the POA at the battle range. For example, if a C7 rifle is zeroed at 100 m, then the CZP is 150 mm above the POA so that at the battle range of 300 m the CZP and the POA are the same.

- f. **Expected Scoring Area (ESA).** The expected scoring area (ESA) is the projected size of a firer's grouping size at ranges less than or greater than the grouping achieved at the zeroing range (e.g. if a firer achieves an 80 mm grouping at 100 m, then their ESA at 200 m is double or 160 mm, and at 300 m is 240 mm). At 25 m, the same firer would have an ESA of 20 mm.
- g. **Limit of Night Vision.** The limit of night vision (LNV) is the maximum distance that allows a firer to engage a target effectively during period of reduced light without the aid of night observation devices or artificial illumination.

48. **Firers.** The terms used throughout this publication that apply to firers are:

- a. **Trained.** A trained person is a firer who has been instructed on and who has passed the weapon handling tests for the particular weapon and weapon sight(s).
- b. **Current.** A current person is a firer who has passed the applicable weapon and weapon sight handling tests within the time limits set by B-GL-381-001/TS-000 *Training Safety*, and who has achieved a particular level of marksmanship with the weapon within the past 12 months.
- c. **Marksman.** A marksman is a firer who is highly skilled in shooting.
- d. **Battle Shot.** A battle shot is a trained firer who can use ground effectively, detect the enemy, and keep their weapon in action while effectively engaging the enemy quickly and accurately.

RELATED REFERENCES

49. The following references provide detailed guidance on the marksmanship proficiencies that are to be achieved by CF personnel:

- a. Defence Administrative Order and Directive (DAOD) 8012-0 Individual Battle Task Standards (IBTS) for Land Operations Policy;
- b. B-GL-383-003/FP-001 *Individual Battle Task Standards (IBTS) for Land Operations*;
- c. MARCORD 9-20;

- d. applicable ACOs; and
- e. LFCO 24-04 IBTS Policy.

50. The following references provide detailed information regarding initial weapons training, specific weapon handling tests, and the fire positions used for each weapon:

- a. B-GL-385-001/PT-001 Weapons, Volume 1, *The Rifle 5.56 mm C7/C7A1 and the Carbine C8*;
- b. B-GL-385-002/PT-001 Weapons, Volume 2, *Light Machine-gun 5.56 mm C9*;
- c. B-GL-385-003/PT-001 Weapons, Volume 3, *The Service Pistol 9 mm*;
- d. B-GL-385-004/PT-001 Weapons, Volume 4, *The General Purpose Machine-Gun 7.62 mm C6*;
- e. B-GL-385-007/PT-001 Weapons, Volume 7, *Grenades and Pyrotechnics*;
- f. B-GL-385-008/PT-001 Weapons, Volume 8, *Rocket High Explosive, 66 mm, Anti-tank NM 72 E5*;
- g. B-GL-385-009/PT-001 Weapons, Volume 9, *Short Range Anti-armour Weapon (Medium)*;
- h. B-GL-385-010/PT-001 Weapons, Volume 10, *ERYX Short Range Anti-armour Weapon (Heavy)*;
- i. B-GL-385-016/PT-001 Weapons, Volume 16, *60 mm Mortar M19 Canadian*; and
- j. B-GL-392-005/FP-001 Infantry, *Sniping*.

NOTE

The weapon range practices contained within this publication supersede any contained in the aforementioned publications or other shooting programmes

CHAPTER 2 STANDARDS AND TRAINING

SECTION 1—TRAINING PROGRESSION

WEAPON AND MARKSMANSHIP TRAINING

1. **Initial Weapon Training.** Initial weapon training is the time when the firer receives the first instruction on how to manipulate, maintain, hold and aim the weapon with its associated weapon sight(s). Typically, all recruits and officer cadets will be trained on the C7 rifle and its basic sights during recruit school. Training on other personal weapons, on more specialized weapon sights and on crew served weapons will occur in specific military occupational classification (MOC) developmental period (DP) 1 training, in occupational specialty specification (OSS) courses, or be delivered by qualified instructors in units following recruit school as on-the-job initial weapon training. No firer is allowed to begin initial marksmanship training until they have completed initial weapon training and passed the weapon handling tests on the specific weapon and weapon sights that they will be firing.
2. **Initial Marksmanship Training.** Initial marksmanship training takes place after initial weapon training. The application range practices introduce marksmanship skills that are essential to achieving the required personal weapons test (PWT) standard at each successive Stage. Practices and PWTs must be followed in the correct sequence by all firers undergoing initial marksmanship training and by all firers who are progressing for the first time from a lower to a higher Stage. Wherever practicable during initial marksmanship training, all application range practices and PWTs should first be conducted on a simulator and then by live fire.
3. **Continuation Marksmanship Training.** Continuation marksmanship training takes place at a frequency set by Canadian Forces (CF), environmental and branch policies after a firer has completed initial marksmanship training and has achieved a designated Stage of marksmanship with the applicable weapon and weapon sight(s). Continuation weapon training is designed to prevent skill fade and maintain the firer at their designated Stage. Those firers undergoing continuation marksmanship training who experience difficulty, or who have not fired in several years, may require a refresher on selected application range practices before attempting or re-attempting the applicable PWT(s).
4. Commanders must focus the use of resources towards maintenance of musketry skills and maximize the use of:
 - a. refresher training on weapons handling drills;
 - b. dry training in different firing positions;
 - c. Small Arms Trainer (SAT) or simulator training; and

- d. firing selected range practices for each weapon.

PROGRESSION

5. The progressive approach to training applies to all weapons and incorporates up to four Stages. A firer must initially achieve or maintain their currency on the subordinate Stage(s) in order to progress to the next.

CURRENCY

6. Firers must achieve or maintain their currency by either:
 - a. completing a successful re-test of their highest mandated PWT within 12 months since their last test; or
 - b. having either failed a re-test of their highest level PWT, or not having refreshed themselves on the highest level PWT within 12 months since their last test, completing successful re-tests of the next lower PWT and then their highest mandated PWT.
7. Firers who maintain their currency at their highest mandated PWT are also proving that they are maintaining their currency at the lower and subordinate PWTs. Current firers, therefore, are not obliged to re-pass the lower level PWTs, but the chain of command is free to determine if such a repetition would be useful refresher training for any given firer.

SECTION 2—STAGES

STAGE 1—PRELIMINARY APPLICATIONS AND PWT 1

8. Stage 1 training is based upon the firer's ability to zero and group their weapon(s) in all firing positions within prescribed standards. It contains all the necessary work up training to enable personnel to fire and pass the PWT 1.
9. In the case of firers undergoing initial marksmanship training, the preliminary application range practices should first be conducted in sequence on a simulator and then repeated in their entirety on a live-fire range. In the case of firers undergoing continuation marksmanship training, there is no requirement to repeat the preliminary application range practices before refreshing the PWT 1.
10. Firers who are only mandated to maintain currency at the PWT 1 are encouraged to practise the test using a simulator, but are to fire the PWT 1 live. Those personnel that fail the PWT 1 should repeat the applicable preliminary practices and then re-attempt the PWT 1 on the simulator before re-firing the PWT 1 live.

11. Firers who are mandated to maintain currency at PWT 2 or higher can maintain their PWT 1 currency by successfully passing that higher PWT. Those firers mandated to maintain PWT 2 who fail a PWT 2 re-test or whose currency lapses must re-pass the PWT 1 before re-attempting the PWT 2. In all cases, firers in continuation marksmanship training are encouraged to maintain their skills throughout the year by repeating elementary application range practices and the PWT 2 on the simulator.

12. A firer must have passed or be current on the PWT 1 prior to advancing to Stage 2—Elementary Applications and PWT 2.

STAGE 2—ELEMENTARY APPLICATIONS AND PWT 2

13. Stage 2 training requires each firer to engage different types of targets with their assigned weapons at varying ranges and under varying environmental conditions.

14. In the case of firers undergoing initial marksmanship training, the elementary application range practices should first be conducted in sequence on a simulator and then repeated in their entirety on a live-fire range. In the case of firers undergoing continuation marksmanship training, there is no requirement to repeat the elementary application range practices before refreshing the PWT 2.

15. Firers who are only mandated to maintain currency at the PWT 2 are encouraged to practise the test using a simulator, but where applicable, are to fire the PWT 2 live. Firers who are mandated to maintain currency at PWT 3 or higher may maintain their PWT 2 currency by firing it on a simulator. For those firers whose currency has lapsed or who have failed the PWT 2 re-test, they must refresh themselves on the PWT 1 before attempting any higher test. In all cases, firers in continuation marksmanship training are encouraged to maintain their skills throughout the year by repeating elementary application range practices and the PWT 2 on a simulator.

16. A firer must have passed or be current on the PWT 2 prior to advancing to Stage 3—Advanced Applications and PWT 3.

STAGE 3—ADVANCED APPLICATIONS AND PWT 3

17. Stage 3 training is designed to confirm the firer's ability to engage varying targets out to the maximum effective range of their assigned weapons and under the stress of combat. The test for personal weapons imposes some physical strain, which is designed to simulate the additional stress of combat and requires the firer to engage a variety of fleeting targets from different firing positions.

18. Stage 3 is conducted on both simulators and conventional ranges. Where Stage 3 is conducted primarily on conventional ranges, practise on simulators should be completed prior to advancing to live fire training. A firer must have passed and be current (within 12 months) the PWT 3 prior to advancing to conventional individual or collective field firing, deployment, or to PWT 3 Supplements.

19. Soldiers who are mandated to achieve PWT 2 or higher must complete the night supplement in order to maintain currency and progress to Stage 3 – Supplementary Applications and PWT 3 Supplements.

STAGE 3—SUPPLEMENTARY APPLICATIONS AND PWT 3 SUPPLEMENTS

20. Stage 3 supplementary range practices are designed to confirm the firer's ability to engage varying targets with specialized equipment or sights. A firer must be current on the PWT 3 prior to advancing to any PWT 3 Supplement. In the case of current firers, the range practices leading up to the PWT 3 Supplement may be conducted on the SAT in order to practise and reinforce the shooting skills before attempting the test. An individual must first pass the PWT 3 and any applicable PWT 3 supplementary tests on their particular weapon and weapon sight(s) before progressing to conventional individual or collective field firing with that weapon.

STAGE 3—QUICK AIM SHOOTING AND PWT 4 PARTS 1 AND 2

21. Quick aim shooting range practices are designed to confirm the firer's ability to engage an enemy at close range quickly and accurately with their personal weapon. A firer must be current on the PWT 3 and any applicable PWT Supplement prior to advancing to PWT 4. In the case of current firers, the range practices leading up to the PWT 4 may be conducted on the SAT in order to practise and reinforce quick aim shooting skills before attempting the test. An individual must first pass the PWT 4 on their particular weapon and weapon sight(s) before progressing to quick aim shooting individual and collective field firing with that weapon.

STAGE 3—QUICK AIM SHOOTING SUPPLEMENTARY APPLICATIONS AND PWT 4 SUPPLEMENTS

22. Supplementary range practices are designed to confirm the firer's ability to engage varying targets in low light conditions with specialized equipment. A firer must be current on the PWT 4 parts 1 and 2 prior to advancing to any PWT 4 Supplement. In the case of current firers, the range practices leading up to the PWT 4 Supplement must be conducted live in order to practise and reinforce the shooting skills before attempting the test. An individual must first pass the PWT 4 parts 1 and 2 and any supplement for PWT 4 before progressing to collective field firing with that weapon.

SECTION 3—STANDARDS

GROUPING STANDARDS

23. The training of firers is based upon their ability to apply the four marksmanship principles to any weapon that they are firing:

- a. position and hold;
- b. natural alignment;
- c. aiming; and
- d. shot release and follow through.

24. The successful application of these principles is directly related to the firer's ability to achieve an effective grouping with a weapon in all firing positions. These standards apply to all Arms and Services and are defined within the range practices for the weapons listed in Chapters 4, 5 and 6.

QUALIFICATION BADGES

25. All Land Force personnel of the rank of Sergeant and below who are assigned the C7, C7A1, C7A2, or the C8 as their personal weapon, and who achieve the marksman's score on the PWT 3, are authorized to wear the crossed rifles with crown badge in accordance with A-AD-265-000/AG-001 *Canadian Forces Dress Instructions*.

26. All Land Force personnel of the rank of Sergeant and below who are assigned the C7, C7A1, C7A2, or the C8 as their personal weapon, and who achieve 80% on the PWT 2, are considered a first class shot and are authorized to wear the crossed rifles badge in accordance with A-AD-265-000/AG-001 *Canadian Forces Dress Instructions*.

CHAPTER 3 MARKSMANSHIP THEORY AND COACHING

SECTION 1—INTRODUCTION

AIM

1. The aim of this chapter is to provide sufficient information to enable small arms instructors to teach marksmanship and coaching on any weapon. Since the C7 rifle is the primary weapon of use within the Canadian Forces (CF), it is used as the medium to present these topics; however, the techniques described in this chapter can be fundamentally applied to any weapon system. Specific details related to respective firing positions and weapon holding techniques can be found in associated weapons publications.

SCOPE AND LAYOUT

2. This chapter comprises three sections:
- a. **Section 1—Introduction.**
 - b. **Section 2—Marksmanship Principles:**
 - (1) General;
 - (2) Fire Position and Hold;
 - (3) Natural Alignment;
 - (4) Aiming; and
 - (5) Shot Release and Follow Through.
 - c. **Section 3—Coaching:**
 - (1) General;
 - (2) Knowledge Required by the Coach;
 - (3) Theory of Small Arms Fire;
 - (4) Theory of the Group;
 - (5) Target Analysis;
 - (6) Zeroing;

- (7) Coaching Techniques and Tips;
- (8) Coach's Equipment;
- (9) Preliminary Checks;
- (10) Action Before, During and After Firing;
- (11) Common Faults;
- (12) Training Tips; and
- (13) Coaching Procedures (Grouping, Application and Snap/Rapid Practices).

SECTION 2—MARKSMANSHIP PRINCIPLES

GENERAL

3. **Attitude.** The first point that must be made clear is that a marksman is trained. There is no such a person as a born marksman. Any firer can be taught to shoot accurately if willing to learn and provided with competent instruction and enthusiastic coaching. There are no bad shots, only poorly trained shots. Some firers learn more slowly than others, but if properly motivated anyone can learn to shoot accurately. It is the instructor's job to motivate the firer and provide the comprehensive instruction and enthusiastic coaching. Firers should look forward to shooting.

4. **Principles.** The marksmanship principles are the basis upon which subsequent marksmanship training is built. Failure to learn and correctly apply these principles will, at best, result in a firer who fails to achieve their full potential and that of their weapon. Prior to attempting to achieve Stage 1 of the CFOSP programme (i.e. grouping and zeroing), a firer must master the following principles:

- a. **Fire Position and Hold**—must be secure enough to support the weapon;
- b. **Natural Alignment**—the weapon must point naturally at the target without any undo strain;
- c. **Aiming**—correct aiming and sight picture must be achieved; and
- d. **Shot Release and Follow Through**—shot release must not affect the fall of the shot.

NOTE

It is only after thoroughly mastering these principles that a firer should be permitted an attempt to fire any range practice.

FIRE POSITION AND HOLD

5. **Fire Position.** A complete description of the correct firing positions for a weapon is found in the particular weapon's manual. Each particular weapon will have one firing position that is the preferred position used for target engagements. Examples of different preferred positions for particular weapons are the prone position for all rifles and the standing position for all pistols.
6. Wherever a weapon can be, it is usually fired from the prone position. This should be the first position taught. Since the prone position is inherently superior to all others because it provides the stability and comfort that induces precise, accurate fire, the firer should not fire from any other position until this position has been mastered.
7. **Hold.** Once the weapon is pointed in the right direction (i.e. aimed), it must be held perfectly still until the round has left the muzzle. This is the purpose of correct holding.
8. In battle, firers will be naturally nervous. The use of brute strength in clutching a weapon only worsens the situation and causes it to be unsteady. The firer must be trained to adopt a steady but relaxed grip on the weapon.
9. Holding cannot be overemphasized because it provides much of the insurance against recoil. The coach must stress that a good fire position with a steady but relaxed hold will not only minimize recoil to a mere shove, but it will also eliminate vibrations.
10. **Summary.** Adopting a proper fire position reduces unsteadiness by 25% and using proper holding technique reduces it by a further 25%.

NATURAL ALIGNMENT

11. **Definition.** "Natural Alignment" means that if a firer is correctly positioned, relaxed and employing correct breathing techniques, the weapon will maintain a natural alignment on the point of aim (POA). When a firer is naturally aligned, there is no stress on the firer's muscles to stop the weapon from drifting to the left or right, and up or down, while maintaining the POA.
12. **Horizontal Pivot.** The first key to mastering natural alignment is to shift aim by working around the horizontal pivot point of the particular weapon concerned. The horizontal pivot points of most weapons are:
 - a. For weapons fired from the unsupported prone position without bipods, e.g. the C7, C7A1, and C7A2 rifles; the C8 carbine; the 9 mm Heckler and Koch Machine Pistol 5 (MP5); the 66 mm NM 72 E5 Short Range Anti-Armour Weapon (Light) (SRAAW[L])—generally, the horizontal pivot point for a right-handed shot in the prone position is the left elbow and for a left-handed shot, the right elbow.

- b. For weapons fired from the prone position with bipods, e.g. the C9, C9A1 and C9A2 Light Machine Gun (LMG); the 7.62 mm C3A1 and the .338 Cal Timberwolf Medium Range Sniper Weapon (MRSW), the 0.50 Cal MacMillan Long Range Sniper Weapon (LRSW), the C6 General Purpose Machine Gun, light role (GPMG LR), and the Eryx SRAAW (Heavy)—generally, the horizontal pivot point is either the left foot (right-handed shot) or the right foot (left-handed shot) of the bipod. The firer will need to shift their entire body left or right in order to achieve natural horizontal alignment.
- c. For weapons fired from the unsupported kneeling, squatting and standing positions—generally, the pivot point is the forward foot. When shifting from one target to another the entire body and the weapon must shift to the left or right around the forward foot in order to achieve natural horizontal alignment.
- d. For weapons fired from the unsupported sitting position—generally, the pivot point is the firer's forward buttock, and the firer will have to reposition both feet to the left or right in order to achieve natural horizontal alignment.
- e. For weapons fired from the supported prone, kneeling, squatting, sitting or standing positions—generally, any vertical brace, such as a post, a wall, or a fixed vehicle pintle mount that is used to support the weapon, will become the horizontal pivot point. The firer will have to reposition his entire body to the left or right in order to achieve natural horizontal alignment. Where horizontal braces are used, such as fire trenches, windowsills or traversable vehicle pintle mounts, once the firer has shifted the weapon onto the target or locked the traversable pintle mount, then that brace becomes the horizontal pivot point. The firer will need to shift his entire body to the left or right so that he is not using his muscles to hold the weapon on target in order to achieve natural horizontal alignment.

13. **Vertical Pivot.** The next key to mastering natural alignment is to shift aim by working around the vertical pivot point of the particular weapon concerned. The vertical pivot points of most weapons are:

- a. For weapons fired from the prone unsupported position without bipods, e.g. the C7, C7A1, C7A2; the C8; the MP5, the SRAAW (L)—generally, the vertical pivot point is the forward hand. By allowing the forward hand to slide forward or backwards, the natural vertical alignment will shift down or up.
- b. For weapons fired from the prone position with bipods, e.g. the LMG, the MRSW, the LRSW, the GPMG (LR), the SRAAW (M), the SRAAW (H)—generally, once the correct bipod height has been set, the weapon will vertically pivot around the point where the bipod connects to the weapon.

The firer will need to shift their entire body forwards or backwards in order to achieve natural vertical alignment.

- c. For weapons fired from the unsupported kneeling, squatting, sitting and standing positions—for shoulder fired weapons, adjustments to natural vertical alignment is generally achieved by allowing the weapon to slide forwards or backwards through the forward hand, or if the forward elbow is resting on the forward knee, by moving the elbow backwards and forwards. For those particular weapons and firing positions that do not allow the firer to brace their forward elbow against their body or the ground, such as pistols, the vertical pivot point is generally the shoulders. In these cases, it is not possible to achieve a natural vertical alignment and muscle power is the only way to keep the weapon vertically on target.
- d. For weapons fired from the supported prone, kneeling, squatting, sitting or standing positions—generally, any vertical brace, such as a post or a wall that is used to support the weapon will become the vertical pivot point. The firer will have to slide the weapon upwards or downwards against the brace in order to achieve natural vertical alignment. Where fixed height horizontal braces are used, such as fire trench parapets, windowsills or vehicle pintle mounts, that brace becomes the vertical pivot point. The firer will need to bend or straighten the knees to move the aiming point up or down.

14. Practising Natural Weapon Alignment. Practise as follows:

- a. place three targets forward of the firer;
- b. have the firer adopt the selected firing position and aim at the centre target;
- c. have the firer shift their point of aim to the left and then to the right target and hold that POA for at least one minute; and
- d. confirm that the firer experiences no muscle strain while holding the weapon on each target.

NOTE

If the firer does not achieve natural alignment and uses muscles to hold the weapon on target, the firer will lose good position, perfect holding and proper breathing rhythm.

15. Confirmation of Natural Alignment. One procedure for confirming natural alignment, after aligning to the target and taking a correct aim picture, is to close the eyes, relax the muscles and lift the face slightly away from the sight, replace the face

into its position behind the sight, open the eyes and observe the aim picture. If the position is natural, the aim picture will be correct; if not, then the alignment is not natural and needs adjustment. Have the firer continue to practise shifting from one target left and right to other targets until they have mastered the use of the pivot. This should be conducted on the range when ordered to **TEST AND ADJUST YOUR POSITION**.

16. **Summary.** The firer must learn to become one with his weapon. Natural alignment means that when adopting a fire position, and during subsequent shifts, no muscular effort or strain is needed to maintain a POA.

AIMING

17. **General.** Aiming is as critical to accurate shooting as the fire position, holding, breathing and trigger control. Aiming a weapon is relatively simple and easy to learn. However, it must be stressed that aiming is either perfect or bad; there is no middle ground.

18. **The Master Eye.** Everyone has one “master eye” that dominates the person’s hand-eye coordination. Whenever possible, the master eye must be the one used in aiming a weapon. If the firer is right-handed with a right master eye, or left-handed with a left master eye, there is no difficulty. If the firer is right handed with a left master eye, or vice versa, he should try both left and right-handed holding, aiming and firing, to determine which produces the best results. To determine which is the master eye, the firer should conduct the following drill:

- a. select an object at least 10 m away and which can be clearly seen;
- b. using the index finger and with both eyes open, align the finger onto the object;
- c. maintaining the finger on the object, alternately close one then the other eye; and
- d. the eye onto which the finger remained aligned on the object is the master eye.

19. **Four Point Relationship for Sights.** The key to proper aiming is understanding the relationship between the following four points involved in a sight:

- a. the firer’s eye;
- b. the rear sight;
- c. the front sight; and
- d. the target.

20. **Point of Focus.** It must first be stressed that *the eye cannot, at the same time, focus on three objects which are at different ranges*. The key is to focus on each individually and without undo delay in a proper sequence as follows:

- a. **Firer's Eye.** The firer may look through the rear sight and complain that he cannot see the target. This can usually be blamed on faulty concentration. The closer a firer gets to the rear sight, the more he sees. The firer must first determine his proper eye relief.
- b. **The Rear Sight.** The rear sight can be an enclosed optical lens, an enclosed aperture or an open notched horizontal bar. Looking through either an optical lens or an aperture, the area near the edge of the circle is blurred but objects in a narrow section in the centre may be clearly seen. All rear lenses or apertures are deliberately designed to offer the widest field of view possible because in combat, with moving targets, the marksman must have good battlefield awareness. The eye relief of open rear notched horizontal bar sights are designed to stay in focus when the firer concentrates on the front sight.
- c. **The Front Sight.** The tip of the aiming post on an optical sight, the cross hairs of a telescopic sight, or the tip of the blade on a front sight are applied to the desired point of aim. When viewing a target through a rear aperture sight there will be a sharpening effect as the front sight is brought into the centre of clarity of the rear aperture. The firer does not have to adjust for the centre of the back sight. It will instead be automatically found because what they look for is the sharp square and clear shape of the front sight. In an open notched horizontal bar sight, both the rear and front sight will stay in focus, so that the firer can adjust the aim such that the front post is aligned even with and in the centre of the gap between the top shoulders of the rear sight.
- d. **The Target.** The target has been left in the background where it belongs. The eye looks through the rear sight so that the vision is condensed down to a single straight stream directed onto the front sight. The front sight is seen as a clear, sharp picture while the target remains in the background.

21. **Concentration.** It is essential that, in addition to a concentration of vision upon the front sight, there must be concentration of mental effort. The firer must exclude all distractions and focus upon that tip of the front sight. The eye will assist him in this, because if it is completely focused on one object, it cannot see other things.

22. **Front Sight and Sight Picture.** The front sight, or foresight, must be clearly seen by the firer. When the firer has learned to look through the rear sight then it will become obvious that the front sight must be seen as sharp, knife-edged and clear, and be the dominant point upon which the vision is fixed. The aiming mark or POA must be located and clearly established in the firer's mind. Once this perfect mental picture is established, the front sight is brought up, while the eye focuses on the POA. Once the

front sight is exactly on the centre of that mark, the eye focus can be shifted from the distant target to the front sight.

23. **Rule of Aim.** The combination of the four point relationship and the firer's concentration on focusing combine to provide the four stage sequence known as the rule of aim (see Figure 3-1):

- a. Close the disengaged eye.
- b. **Centre the Rear Aperture.** Looking through the rear sight, centre the tip of the foresight. The aperture is too close to the eye to be clearly seen, but the position of the top of the foresight protectors should help in centring the tip of the foresight. It may be necessary to move the head slightly in order to achieve a correct sight picture. It is, however, essential that once the tip of the foresight is centred, the position of the head remains unchanged.
- c. **Front Post Sight.** Maintaining the alignment, focus on the tip of the foresight and place it on the target to achieve the aim picture. It should be noted that the target is blurring.
- d. **Target.** Keeping the sights upright, ensure that the tip of the foresight is in the centre of the aperture, and fire the shot.

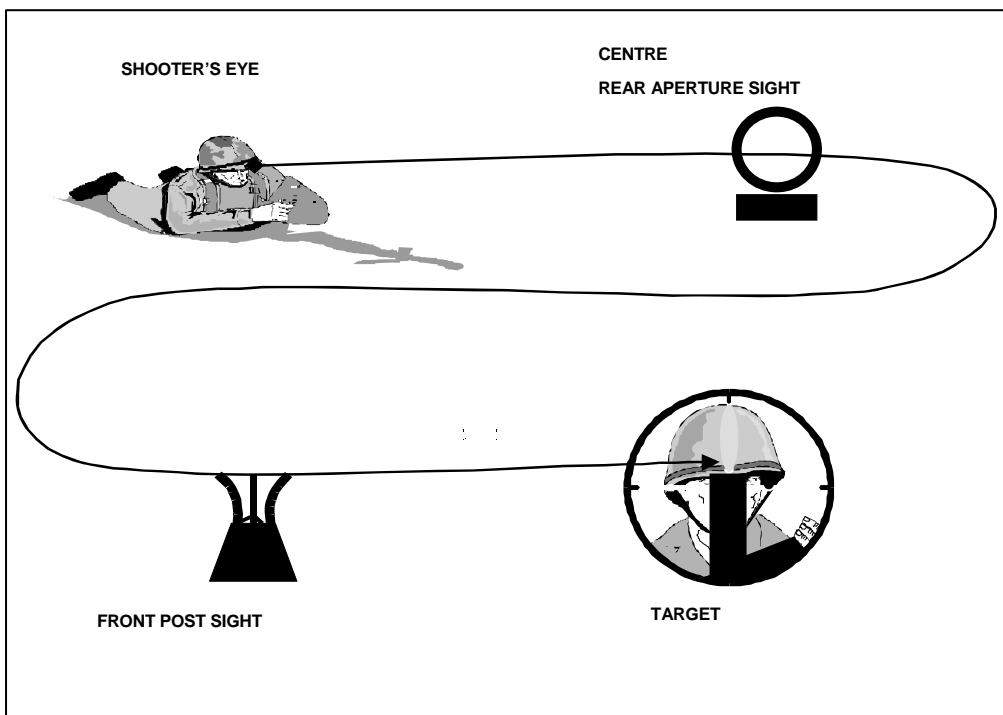


Figure 3-1: Four Point Relationship

24. **Consecutive Shots.** The most difficult situation is seeing the same sight picture for consecutive shots. Exact duplication must be seen. Carelessness in not achieving precisely the same sight picture is what leads to serious aiming difficulties.

25. **Summary.** Aiming never becomes instinctive. Constant practise produces the speed required to engage with subsequent shots. Above all, concentration is required to achieve sight alignment with the correct aim picture that is the four-point relationship between the eye, the centre of the rear aperture, the tip of the foresight, and the POA.

SHOT RELEASE AND FOLLOW THROUGH

26. **General.** The final principle in marksmanship training applies to the moment the round is fired. At this stage, it must be emphasized to the firer that all the training and hard work leading up to this point will be wasted if the final principle is not observed.

27. **Breathing.** Breathing is a natural function, which will continue without strain until an individual does something to disturb the cycle. Correct breathing is a great aid to relaxation and therefore reduces muzzle movement. It is therefore important that firers restrain their breathing in a way that induces no strain (see Figure 3-2 Breathing Pattern).

28. **Developing the Sigh and Pause.** Taking two or three breaths that are deeper than usual, and then exhaling naturally so that there is no desire to immediately inhale or exhale, make the proper shooting sigh. To demonstrate, carry out the following test:

- a. have the firer take a deep breath and hold it while aiming the weapon at any convenient aiming point for 30 seconds.
- b. let the firer relax for a few moments then deflate the lungs fully and try to hold the aim for 30 seconds. Few, if any, will be able to do this.
- c. let the firer relax for a few moments and take a point of aim.
- d. have the firer take three normal breaths, exhale with an audible sigh until the lungs are two thirds to three quarters deflated (this is a normal sigh with no effort to deflate the lungs).
- e. the firer should find that the weapon is much steadier, and that they are more relaxed than if the lungs are full or empty.

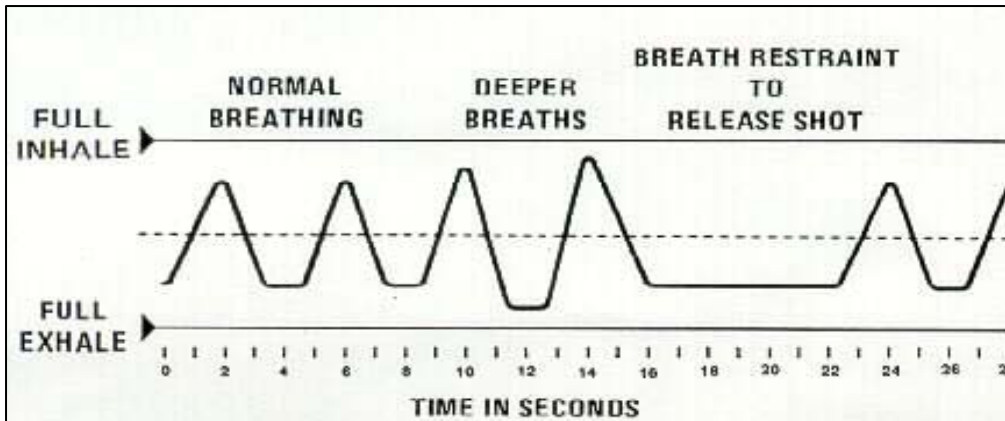


Figure 3-2: Breathing Pattern

29. Demonstrate and practise as follows:

- a. take two normal breaths (the firer should observe the sight picture and muzzle moving smoothly up and down);
- b. on the third and fourth breath, inhale deeply;
- c. on releasing the final deep breath, exhale only three quarters and hold (maximum 7 seconds); and
- d. fire the shot around the fourth or fifth second in the pause—this allows sufficient time to perfect the aim and operate the trigger—then continue to breath normally.

30. **Breathing and Aiming.** As a deep breath is taken, the firer should notice the aiming post or foresight lowers below the aiming mark. As the breath is exhaled, the aiming post or foresight will naturally rise to the aiming mark. On some occasions, after the exhalation and the sigh, it may be necessary to make minor adjustments to the position of the weapon to correctly achieve the elevation on the POA.

TRIGGER SQUEEZE

31. **Shot Release.** Trigger control is the manipulation of the trigger in a manner that neither disturbs nor imparts any motion to the weapon. No matter how expert one may be in the preliminary phases of marksmanship, faulty operation of the trigger causes inaccurate aiming. The shot must be fired without disturbing the aim.

32. **Trigger Squeeze.** The only way to fire a weapon properly is a firm, controlled, steady, deliberate and cumulative squeeze of the forefinger directly to the rear. All other methods are wrong. The finger by itself cannot be held steady. It requires a counter pressure, which is provided by the base of the thumb on the rear of the pistol grip. Only the forefinger actually moves, but the forward pressure on the pistol grip,

countering rearward pressure of the forefinger, prevents movement of the weapon. This procedure must now be combined with breathing and can be practised as follows:

- a. assume the correct firing position;
- b. close both eyes;
- c. take up the slack as the pre-firing sigh is given (fourth breath);
- d. squeeze the trigger slowly as taught for no more than 7 seconds; and
- e. at one point of the trigger squeeze the weapon discharges unexpectedly.

33. **Teaching the Squeeze.** While the firer is in the firing position with eyes closed, the instructor places his hand over the shooting hand of the firer with the forefinger upon the trigger finger (see Figure 3-3). The slack should be taken up and the instructor should apply the correct pressure on the thumb and forefinger. This must be painstakingly done five times until the firer understands the kind of action required.



Figure 3-3: Checking the Trigger Squeeze

34. **Surprise.** The firing of the weapon should come as a surprise to the firer. The firer must be cautioned that this is normal and not to anticipate it.

35. **Trigger Control.** Very often the foresight will begin to wander from the aiming point while the trigger is being pressed. Although this may be the result of a deterioration of position, which leads to excessive vertical and horizontal spread of the

group, it is more likely the result of improper, jerky and unsteady trigger squeeze. When this occurs, the beginner should do the following:

- a. release the trigger;
- b. relax for a moment;
- c. start again;
- d. pause until the foresight steadies; and
- e. fire the shot.

36. **Testing Trigger Control.** Incorrect trigger control and any tendency to flinch can be detected by playing the coin game:

- a. adopt the firing position, ready weapon, and take up aim on an aiming mark;
- b. place a large coin (e.g. quarter, “looney” or “tooney”) on top of the barrel or sight; and
- c. if the coin falls before or when the trigger is released, then flinching or faulty trigger control is evident.

NOTE

Start with large coins and gradually work to smaller coins to a dime.

37. **Follow Through.** Follow through consists of maintaining the aim during the trigger squeeze and after the round has left the weapon. Just as a golfer practises follow through to ensure that the drive is completed properly and not pulled short, the marksman follows through to ensure that he does not relax prematurely and move the weapon before the round has left the barrel.

38. **Procedure.** The firer must remain on aim, watching the sight picture, maintaining his position through the entire sequence of firing. This is accomplished by holding the trigger in place, maintaining the breathing pause and maintaining the POA for at least two seconds after the round is fired. This completes the full shot sequence.

39. **Subsequent Shots.** When firing subsequent shots, the trigger finger should never be fully released and pressure must be maintained as if the finger was welded to the trigger.

40. **Declaring the Shot.** The reason for declaring shots is to assist in training the firer to identify faults in the application of the marksmanship principles. The recoil and jump following the shot must be consistent. If not, combined with other minor errors

such as faulty aim or flinching, the shot will be displaced from the group. The firer will learn to recognize this error and declare it in two parts:

- a. **Part 1.** Firstly, the firer must be aware as to whether the position, hold, aiming, breathing and shot release were applied correctly up to the point of firing the shot. If an error is noted by the firer he must declare the shot “INCORRECT” and state the reason. If the aforementioned procedures were conducted correctly, the firer declares “CORRECT.”
- b. **Part 2.** The second part to the procedure is to identify the location of the shot in the event of a declared “INCORRECT” shot. This is normally declared as “INCORRECT” followed by a statement of where the sight of the picture came to rest (e.g. “INCORRECT HIGH RIGHT”).

41. **Coordination.** Just as players on any team must function perfectly together to win, the four marksmanship principles of *position and hold*, *natural alignment*, *aiming and shot release*, and *follow through*, must be applied to produce accurate shooting.

SECTION 3—COACHING

INTRODUCTION

42. The aim of coaching is to help firers reach their full potential for weapons handling drills and shooting skills. Coaches are essential in that they will correct bad shooting skills and help the firer gain the confidence necessary to be successful. Every effort must be made to utilize coaches during all range practices during each stage. Coaches should also be employed when a firer is firing on a simulator.

43. Coaches will not be used during a personal weapons test (PWT). Commanders are encouraged to link their coaching assets into the shooting competitions programme, and in doing so, improve individual coaching skills.

44. Some essential points to ensure are:

- a. the officer in charge (OIC) / range safety officer (RSO) and all assistant RSOs (ARSOs) on the range should have prior knowledge of coaching techniques;
- b. where possible, a coach should be with each firer. If there are insufficient coaches the Master Coach System should be used;
- c. all grouping sizes, mean points of impact (MPIs), POAs, and scores are to be recorded on the firer’s personal shooting record card; and
- d. coaches are to be in possession of binoculars during all elementary and advanced application of fire practices.

45. The coach must possess the personal skills and patience necessary to help improve shooting. The coach must also have a thorough knowledge and understanding of the following:

- a. marksmanship principles;
- b. theory of small arms fire;
- c. theory of the group;
- d. zeroing;
- e. coaching techniques;
- f. causes of inaccurate shooting;
- g. employment of weapons and equipment; and
- h. operation of weapons simulators.

46. **The Coach's Job.** If the firer follows the entire instructor's teaching he should be an effective shot. If he is not, it is because he failed to observe a basic principle or combination of principles. The coach's job is to find out what went wrong and make the necessary corrections. This is done by:

- a. close and careful observation of the firer as he shoots; and
- b. careful target analysis.

47. **The Coach's Attitude.** The coach must assist the firer to improve his skills. A calm, helpful attitude encourages the firer to correct faults and to improve marksmanship. The coach must not be overly critical. It is of greater value to correct one fault at a time than to rhyme off a long list of faults after the practice.

48. **Correcting Faults:**

- a. After each shot, if an error has been made, the coach should calmly explain what went wrong.
- b. After each practice, the coach should go over to the target with the firer and review the correct things that were done, the errors made, and the results.
- c. A coach must demonstrate the correct way of applying the principles of marksmanship.
- d. If necessary, the coach should remove the firer from the firing point and go back to dry training, simulator (e.g. Small Arms Trainer [SAT]), or other required training.

- e. The use of dummy rounds mixed with ball can be introduced at any time the coach feels it is necessary to correct errors such as flinching, trigger jerking, or poor follow through.

49. **Psychology of Coaching.** Personnel selected to teach marksmanship are involved in a very important job. A successful firer is the result of a great deal of time and effort expended by the firer and the coach. The coach can, by positive influence, direct the firer in his own development.

50. **Personalities.** Firers in the CF come from all parts of the country and have widely differing experiences and viewpoints. No two persons are alike, and the patience and personal interest in every firer will be required on the part of the coach. The only constant will be the development of the firer's confidence in his weapon and absolute accuracy in its use.

51. **Characteristics of a Good Coach.** A firer is entitled to expert coaching during recruit training, and whenever else the conditions of the practice permit. Good coaches make the most out of their time on the simulator or on the range by intelligent coaching, and by doing their job systematically, quietly and efficiently. Teaching marksmanship must be methodical and logical. It cannot be haphazard and must be given by persons who know the technical aspects of teaching and shooting. The firer must understand the language. To be successful, a coach should possess the following qualities:

- a. **Desire to Improve.** A good coach must constantly strive to improve his firers' marksmanship and to improve his own coaching techniques.
- b. **Shooting Ability.** The coach must be a first class shot, so he can shoot as well as talk about shooting.
- c. **Confidence.** The coach must be confident so that the firers become enthusiastic and confident in their pursuit of perfection.
- d. **Technical Competence.** The coach must be able to correctly analyze errors, get rid of false ideas, and impart knowledge to the firers.
- e. **Enthusiastic and Encouraging.** The coach must be enthusiastic and encourage firers to build confidence in their ability.
- f. **Common Sense.** Common sense is the result of study, practice and application, and firers should adopt them accordingly.
- g. **Interest.** The coach avoids monotony by employing proper instructional techniques to foster the firers' desire to learn.
- h. **Imaginative.** The coach must be imaginative in the use of training aids and dry firing techniques.

- i. **Organized.** The coach makes sure lectures are well prepared, and that demonstrations and training aids are clear. As in all small arms lectures, the coach must plan, study, and practise each session.

KNOWLEDGE REQUIRED BY THE COACH

52. **General.** The coach must possess a detailed knowledge of the following:
- a. marksmanship principles (covered in Section 2);
 - b. theory of small arms fire;
 - c. theory of the group;
 - d. target analysis;
 - e. zeroing; and
 - f. causes of bad shooting.

THEORY OF SMALL ARMS FIRE

53. The theory of small arms fire is the sequence of events after a round, or series of rounds, has been fired and includes the action/reaction of the weapon and the round.

54. **Constant Factors.** There are constant, or fixed, factors that affect any projectile. These constant factors are:

- a. **Factors in the Barrel.** The following constant factors affect the flight of the projectile before it leaves the barrel:
 - (1) **Force of the Explosion.** When a round is fired, the resulting gases from the burning of the propellant charge push the projectile forward and into the air at its muzzle velocity.
 - (2) **Obturation.** Obturation is the sealing of the chamber and barrel. For closed-breach weapons, the chamber is sealed by the expansion of the cartridge case at the time of the explosion. This prevents gases from escaping to the rear and ensures that all of the gases are used to propel the projectile. As the projectile is pushed through the barrel, the walls of the projectile, or the projectile's obturating ring (e.g. a mortar round), conforms to the barrel to prevent the propelling gases from getting past the projectile.
 - (3) **Rifling.** If the weapon has a rifled barrel, the projectile acquires a spinning motion during propulsion. This spinning ensures stability in flight for greater accuracy and penetrating ability.

- (4) **Sighting.** To allow for gravity, the line of departure is directed above the POA as the projectile would fall below it if the axis of the barrel was pointed directly at the target. This is called “giving elevation.” As the target must be kept in sight, the weapon is provided with sights to enable the firer to adjust the elevation required without losing sight of the POA. Sight adjustments on each weapon give the average elevation measured from many thousands of weapons, and each is tested to meet a given standard at close range.
- (5) **Recoil.** All closed breach weapons will recoil backwards in reaction to the projectile’s forward movement (see Figure 3-4).
- (6) **Jump.** All closed breach weapons will also jump slightly as a result of the force or shock wave travelling forward with the projectile (see Figure 3-4).

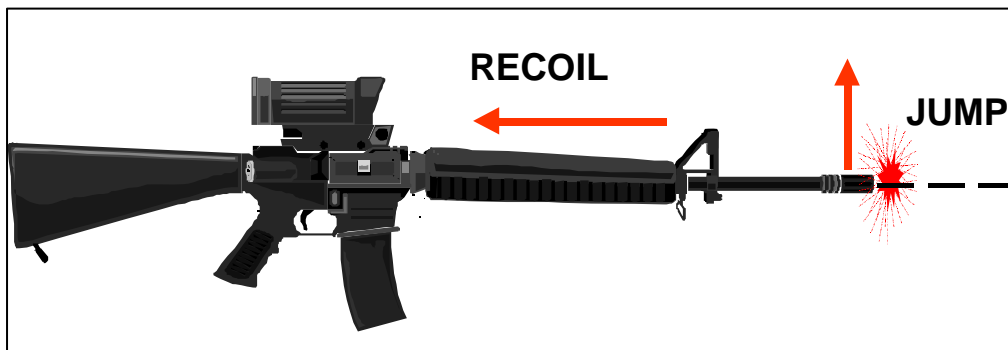


Figure 3-4: Recoil and Jump

- b. **The Projectile in Flight.** The following constant factors affect the flight of the projectile after it leaves the barrel:
 - (1) **Air Resistance.** Air resistance causes the velocity of the projectile to decrease. The affect of air resistance on a given projectile varies with the projectile’s muzzle velocity, density, shape, diameter and length. For example, if two projectiles were fired at the same muzzle velocity down-range, and one of the projectiles was much more dense, longer and slimmer than the other, then it would carry much further down-range due to its decreased air resistance than the less dense or less aerodynamic projectile. Having said this, it is important to understand that the air resistance for a given type of round, fired from the same weapon under the same conditions will be the same, and is therefore a constant factor.
 - (2) **Gravity.** Gravity acts on the projectile by drawing it downwards as soon as it leaves the muzzle. Gravity is a constant factor that acts identically on all projectiles, regardless of their muzzle velocity, density or shape.

- c. **Compensating for Constant Factors.** The firer will compensate for constant factors by zeroing or calibrating the weapon sight(s) under ideal conditions. Once this is done, then the firer can compensate for most varying factors by making adjustments to the weapon's sights or by shifting the POA on the target when necessary.

55. **Varying Factors.** There are varying factors that affect any projectile:

- a. **Factors in the Barrel.** The following varying factors affect the projectile before it leaves the barrel:
 - (1) **Uniqueness of the Weapon.** Small manufacturing variations cannot be avoided, and further variations are produced by wear. These variations produce a natural dispersion of the rounds as they exit the muzzle. Generally, as a barrel becomes worn, the projectile obturation becomes less and the muzzle velocity decreases. Additionally, worn barrels tend to allow projectiles to develop a wobble as they are pushed down the barrel, which results in greater dispersion down-range.
 - (2) **Variations in Ammunition Properties.** Generally, there are always minor variations between rounds in any ammunition's projectile mass, propellant mass and physical dimensions (e.g. length, width, height, etc.). These variations result in minor variations in muzzle velocities between rounds, which in turn will mean that not every round that is fired from the same weapon at the same POA on a target under identical conditions will actually strike the same place.
 - (3) **Variations in Ammunition Temperature.** Changes in the temperature of the ammunition and the weapon's chamber at the time that the round is fired will result in minor variations in muzzle velocity. A cold round that is fired from a cold weapon will have a lower muzzle velocity than a round that has been warmed up by first being chambered into a warm weapon. This variation explains why it is usual to fire a number of "warming rounds" when beginning rifle and machine-gun range practices.
 - (4) **Wet or Oily Ammunition and Barrels.** Generally, water and oil on the ammunition or in the barrel will cause abnormal vibration in the weapon and may result in extra backpressure on the bolt. Both of these conditions may create erratic shooting until the water or oil has been burned off or removed.
 - (5) **Variations in Weapon Jump.** Two main factors can contribute to unpredictable weapon jump:

- (a) **Firing with a Bayonet Fixed.** Firing with a bayonet fixed affects the trajectory as it impacts on the weight and jump at the tip of the muzzle. The MPI will be lowered.
 - (b) **Resting the Weapon.** Resting the barrel or hand guard may affect the flight of the projectile as it impacts on jump. Care should be taken to rest the wrist and forearm, not the weapon, otherwise the MPI will be raised.
- b. **The Projectile in Flight.** The firer can compensate for the following variable factors that affect the trajectory of the projectile after it leaves the barrel:
 - (1) Atmospheric Conditions:
 - (a) **Air Temperature and Pressure.** Generally, the air resistance will vary in a combination of altitude and temperature. Projectiles fired in hot, dry conditions at significant altitudes will tend to follow a higher trajectory than rounds fired through cold, damp air at sea level, and firers may need to compensate for this by lowering their POA.
 - (b) **Wind.** The effects of cross and oblique winds are not factored in when weapons are initially zeroed since generally weapons are zeroed at ranges where winds have no significant effect on the MPI. Firers will need to compensate for this variable when engaging targets at longer ranges or under conditions where wind becomes a factor.
 - (2) **Changes in Elevation between Firer and the Target.** Weapon sights are calibrated so that the projectile will strike the POA on a target at a given range and identical elevation. When there is a significant difference between the firer's elevation and the target, then the firer needs to compensate by making an adjustment to the POA as follows:
 - (a) If the firer is significantly lower than the target (e.g. shooting from the ground at a target on the third floor of a building 400 m distant), POA is adjusted down.
 - (b) If the firer is significantly higher than the target (e.g. shooting from the third floor of a building at a target on the ground 400 m distant), POA is adjusted up.
 - (3) **Longer Range Shots.** Aiming off points and/or sight adjustments are taught for ranges beyond the zeroed range of the weapon.

56. **Ballistics Theory—Definitions.** Various terms are used to explain ballistics theory as it applies to small arms. The following terms have been grouped according to their application in relation to the weapon, the projectile's flight through the air, or the target:

- a. **At the Weapon:** See example at Figures 3-5 and 3-6.
 - (1) **Line of Fire.** The direction of the straight line from the muzzle to the target.
 - (2) **Axis of the Barrel.** The line in the centre of the bore from the breech to the muzzle.
 - (3) **Line of Sight.** A straight line from the firer's eye through the sights to the POA.
 - (4) **Line of Departure.** A straight line representing the direction, which the projectile takes when leaving the muzzle. Theoretically, it is the prolongation of the axis of the barrel when laid, but often differs from this by an angle known as "jump."
 - (5) **Trajectory.** The curved path of a projectile in its flight from the muzzle to the target.

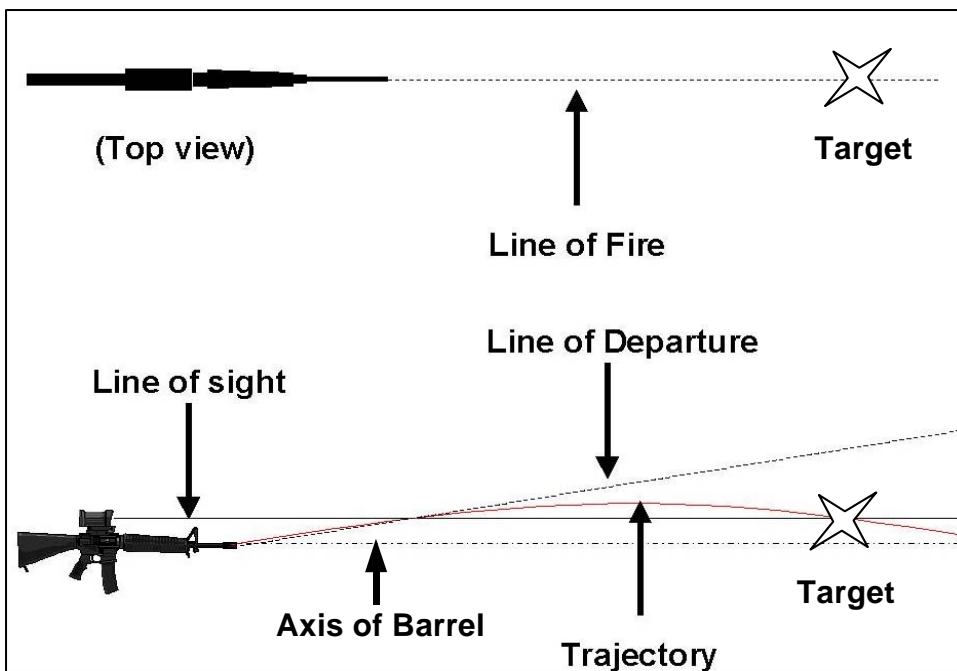


Figure 3-5: Theory of Small Arms Fire

- (6) **Culminating Point.** The highest point, which a projectile rises above the line of sight during its trajectory. It occurs slightly beyond half the distance to the target.

- (7) **Angle of Descent.** The angle between the line of sight and the tangent to the trajectory at the point of impact. It is steeper at longer ranges.

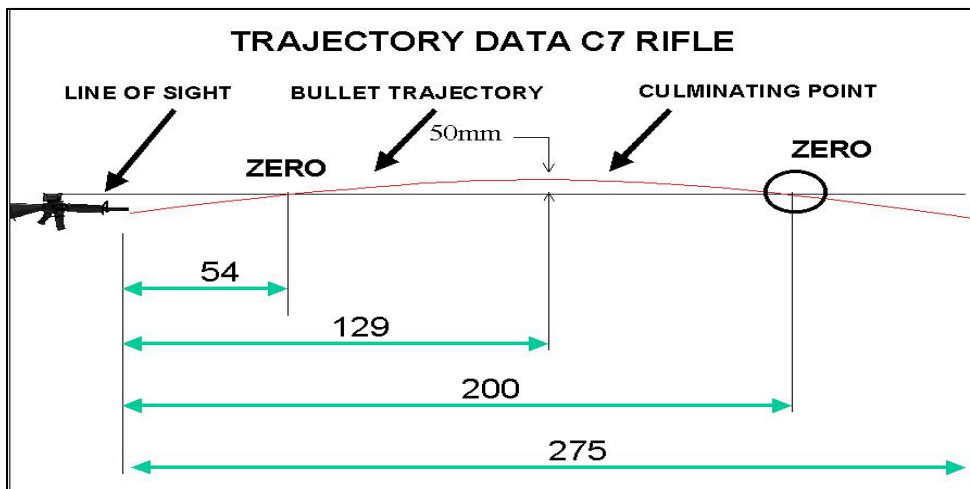


Figure 3-6: C7A1 Rifle Trajectory Data

b. **At the Target:**

- (1) **Point of Aim.** The POA is the point where the line of sight meets the target.
- (2) **Mean Point of Impact.** The MPI is the point at which a bullet hits a target. In groups, the MPI is the centre of the grouping.
- (3) **Correct Zero Position.** The CZP is the correct position where the MPI meets the POA (e.g. C7 with C79 sight at 100 m, the CZP is 50 mm above the POA). Once the CZP is achieved, the weapon is zeroed.
- (4) **Ricochet.** Bullets that rebound after striking the ground or other objects and continue their flight.
- (5) **First Catch.** The point where a bullet would first strike the top of a target.
- (6) **First Graze.** The point where the same bullet would strike the ground if it continued on its trajectory after the first catch.
- (7) **Dangerous Space.** The area or space between the first catch and the first graze (see Figure 3-7).

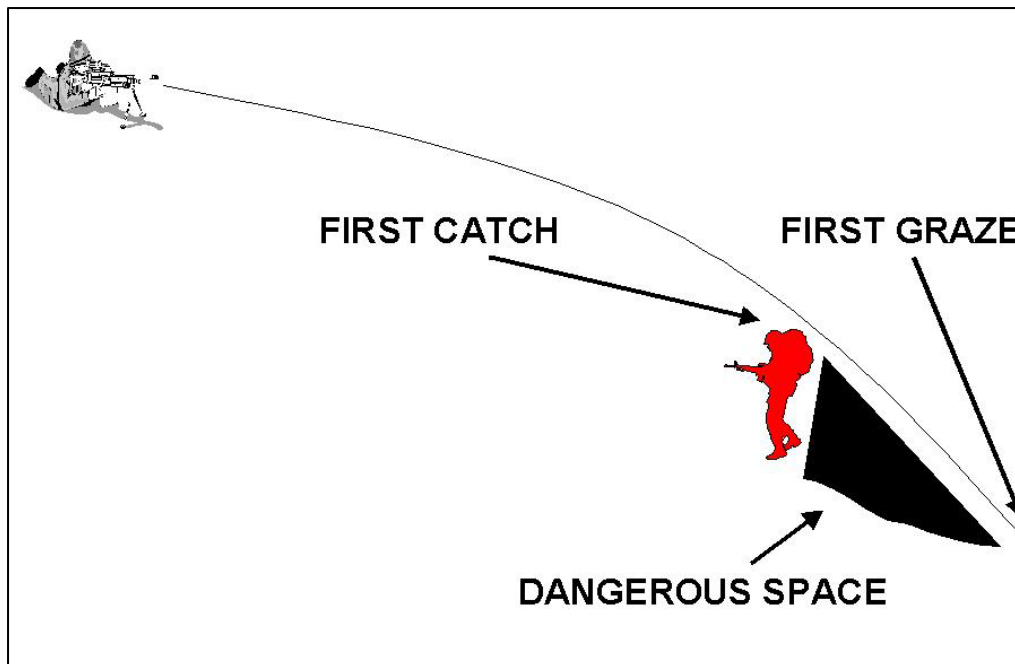


Figure 3-7: Dangerous Space

57. **Factors Affecting Dangerous Space.** Several factors affect the length of dangerous space:

- a. **Range.** At longer ranges, as the bullet rapidly loses velocity, the angle of descent becomes steeper and therefore the dangerous space is shorter, the opposite is true at shorter ranges (see Figure 3-8).

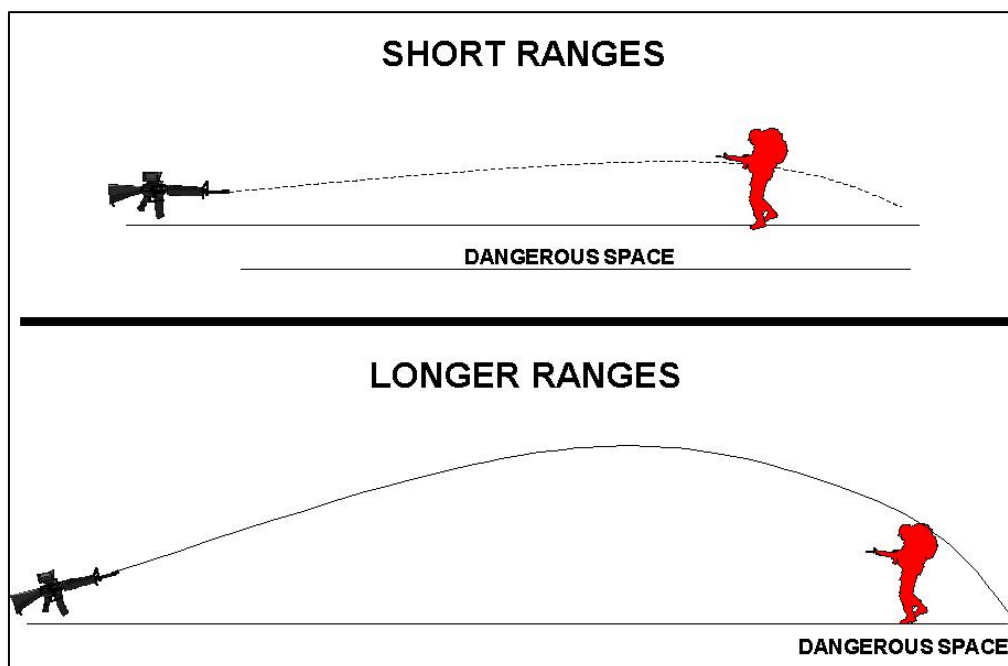


Figure 3-8: Effects of Range on Dangerous Space

- b. **Height of Firing Position.** The higher the firing position the steeper the angle of descent thereby reducing dangerous space (see Figure 3-9).

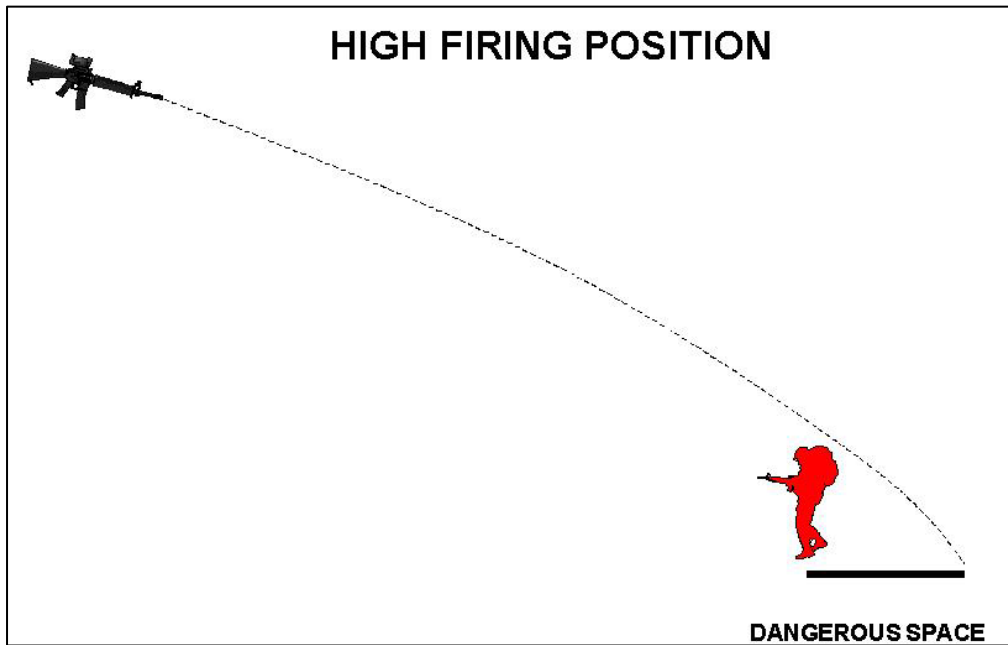


Figure 3-9: Effects of Height of the Firing Position on Dangerous Space

- c. **Height of the Target.** The higher the target the longer the dangerous space (see Figure 3-10).

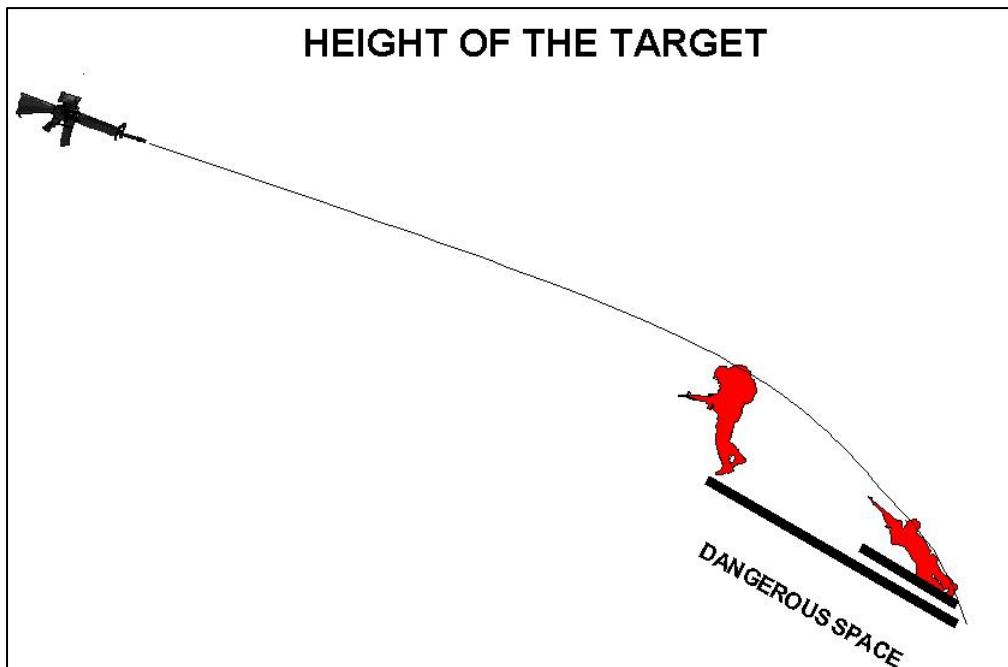


Figure 3-10: Effects of Height of the Target on Dangerous Space

- d. **Flatness of Trajectory.** The flatter the trajectory the longer the dangerous space. This is determined by muzzle velocity and cannot be altered (see Figure 3-11).

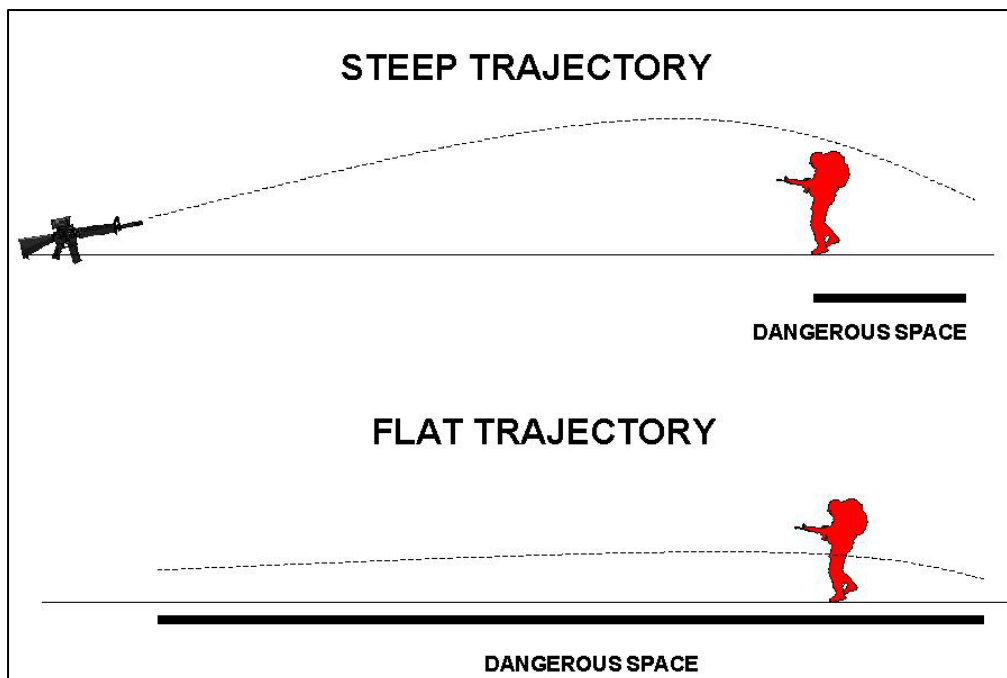


Figure 3-11: Effect of Flatness of Trajectory on Dangerous Space

- e. **Slope of the Ground.** The size of the dangerous space decreases on rising ground that conforms to the angle of descent of the bullet (see Figure 3-12).

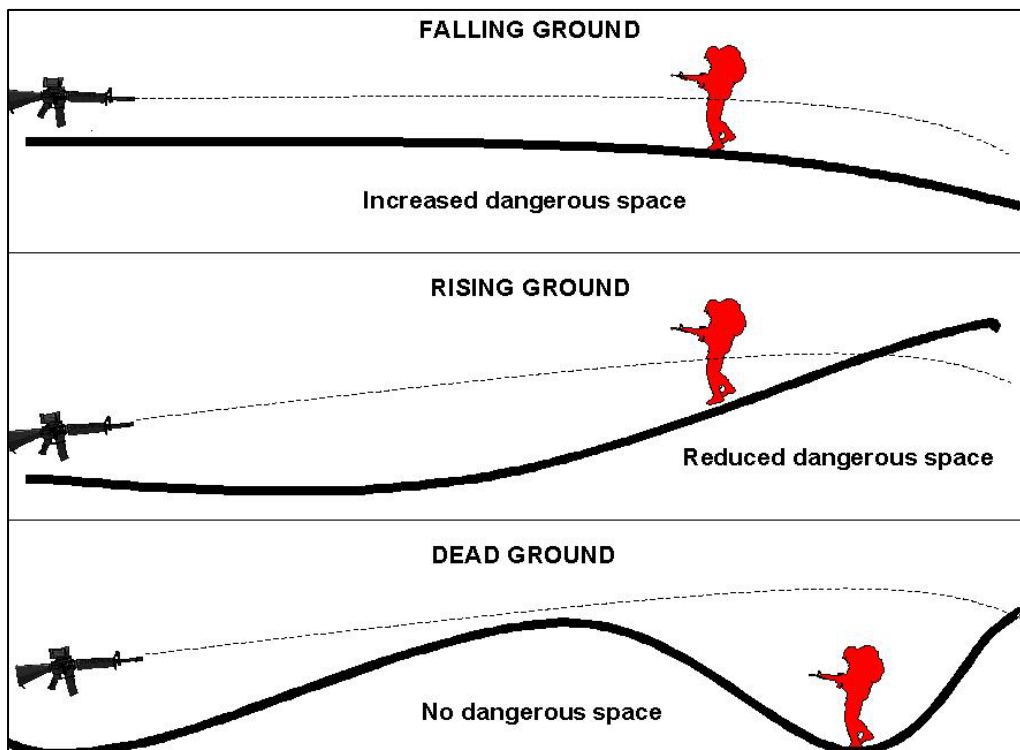


Figure 3-12: Effect of Slope of Ground on Dangerous Space

THEORY OF THE GROUP

58. **General.** Theory of the group is a subject that must be thoroughly understood by the coach. The theory establishes that a series of not less than three shots fired from a weapon at the same POA seldom, if ever, pass through the same hole in the target. The pattern produced on the target is known as a grouping. This theory also provides a simple rule, though not strictly accurate, which states that the size of the grouping will increase proportionally to the range, i.e. a 100 mm grouping at 100 m equals 200 mm grouping at 200 m. Finally, a firer's grouping is a measure of his shooting ability.

59. **Five Round Grouping.** To obtain a firer's MPI, a 20 round grouping is considered 95% accurate. One hundred per cent accuracy is considered unachievable. A three round grouping is considered the minimum number of rounds that must be fired in order to determine a grouping size. In the Canadian Forces, we train with a five round group. With a three round grouping, the firer's capability grouping (closest collection) cannot be compared to the actuality grouping (all shots fired).

60. **Factors Affecting the Grouping.** With the exception of light, wind and weather, three factors contribute to the grouping size:

- a. **Ammunition.** Ammunition is generally good and variations can be ignored for practical coaching purposes. It is generally produced in large lots and a random selection is taken from each lot to test for accuracy by firing a given number of twenty shot groups. The grouping size is directly proportional to the number of shots fired. The grouping size increases rapidly at first, and grows more slowly as shots are added. The shots are randomly distributed within the grouping and it cannot be predicted or controlled by the firer. The true MPI and zero of the system cannot be determined until a fair number of shots have been fired.
- b. **Rifle.** Factory tests establish that weapons do not put all shots through the same hole, even if fired from a mechanical rest.
- c. **Human Error.** The grouping size will also be determined by how well the firer observes the marksmanship principles.

TARGET ANALYSIS

61. **General.** Target analysis is the method of determining the firer's faults by examining the bullet holes on the target. The instructor should discuss each grouping with the firer and explain the reason for imperfect groups.

62. **Method.** The procedure for conducting target analysis is as follows (see Figure 3-13):

- a. draw a rectangle enclosing all five shots with the sides of the rectangle parallel to the target's;
- b. draw another rectangle enclosing the four most closely clustered shots;
- c. the larger rectangle is the *actuality grouping* and shows the firer's actual ability at the present time;
- d. the smaller rectangle is the *capability grouping* and indicates the firer's potential; and
- e. this determines the amount of coaching necessary before the firer's potential is realized.

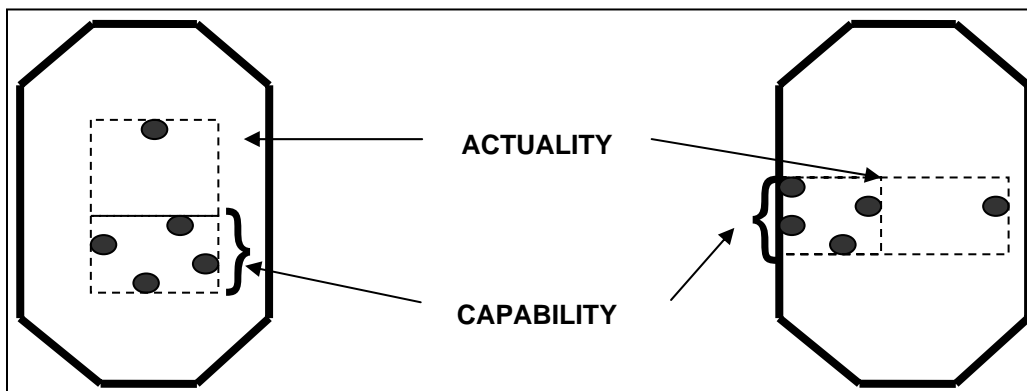


Figure 3-13: Actuality and Capability Groupings

63. **Vertical Group.** A vertical grouping (see Figure 3-14) indicates good trigger control but poor elevation. One, or a combination of the following, are at fault:

- a. varying position of butt on the shoulder;
- b. low vertical triangle;
- c. failure to focus on front sight (iron) or aiming post (optical);
- d. incorrect or varying eye relief;
- e. lack of aiming precision;
- f. sight picture variations;
- g. faulty pre-firing breathing;
- h. wrong left (forward) elbow position;
- i. backward pressure variation;

- j. head pressure variation; and
- k. poor follow through.

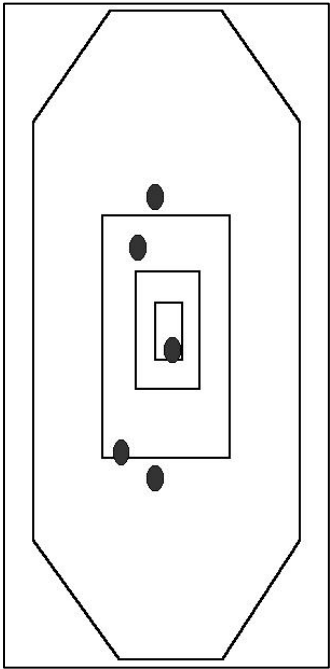


Figure 3-14: Vertical Grouping

64. **Horizontal Grouping.** A horizontal grouping indicates good elevation and poor trigger control. One, or a combination of the following, are at fault (see Figure 3-15):

- a. high vertical triangle;
- b. high right shoulder;
- c. wandering front sight;
- d. holding the weapon with muscular effort instead of resting on the bone;
- e. jerking the trigger;
- f. hurrying the trigger squeeze;
- g. moving the right elbow;
- h. chin pressure variation;
- i. lack of aiming precision;
- j. faulty automatic alignment; and
- k. unstable position.

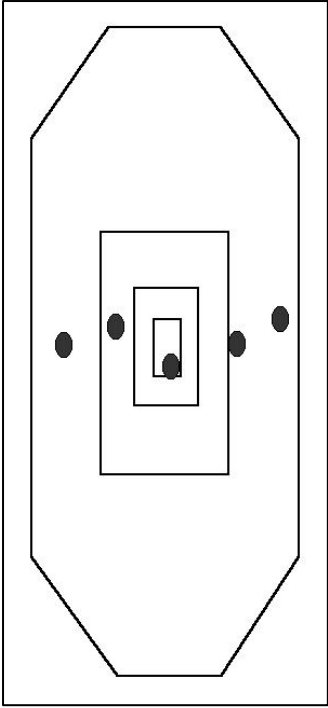


Figure 3-15: Horizontal Grouping

65. **Square Groupings.** If the *capability grouping* is square or nearly so, it indicates a coordination, which combined the basic principles of good shooting in approximately the same manner for five (or four) successive shots. The size of the grouping indicates the degree of coordination. At 25 m, the grouping sizes for a C7 rifle may be characterized as:

- a. 20 mm (dime), excellent coordination;
- b. 25 mm (postage stamp), coordination is good but can be improved; and
- c. 50 mm (1/2 playing card), poor coordination and need for improvement.

66. **Evaluation of the Main Point of Impact (25 m).** Consistency in grouping is one of the measures for confirming the application of the marksmanship principles. Consistency must also be apparent between applications. It is known as evaluation of the MPI, and it is conducted for C7 rifles as follows (see Figure 3-16):

- a. the firer fires four five-round groups, each one at a different POA;
- b. the firer must rest between groups;
- c. using clear talc or thin white paper, mark the MPI for each grouping in relation to the POA; and
- d. four marks within the 25 mm (at 25 m) standard warrant consistency.

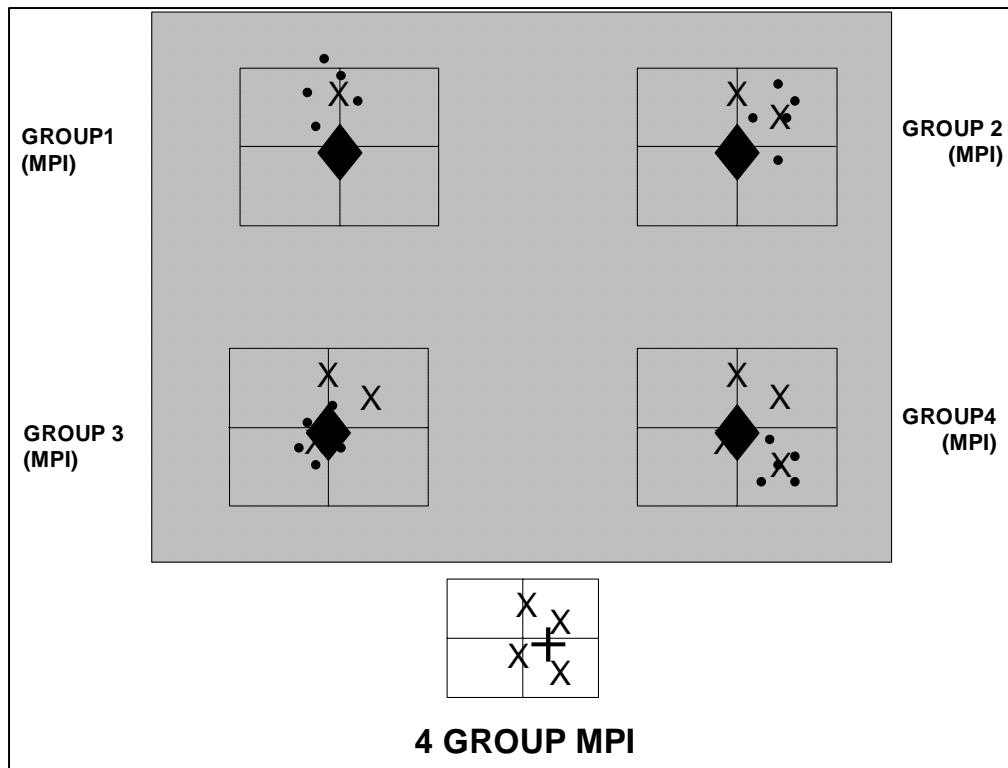


Figure 3-16: Main Point of Impact Evaluation

67. **Expedient Evaluation of Elevation and Trigger Control (25 m or X 4 for 100 m).** The following is an expedient method for the evaluation of individual shots for elevation and trigger control for the C7 rifle (see Figure 3-17):

- a. Determine first the MPI for the *actuality* and *capability groupings* by drawing diagonal lines from corner to corner—the point of intersection is the MPI.
- b. Elevation can be determined by laying a pencil horizontally over the MPI of the *capability grouping*. Shots covered by or touching the pencil have excellent elevation; shots the width of one bullet hole away have good elevation; those two or three bullet holes away are fair; and the others are poor.
- c. Trigger control can be assessed in the same way by laying the pencil vertically over the MPI of the *capability grouping*.

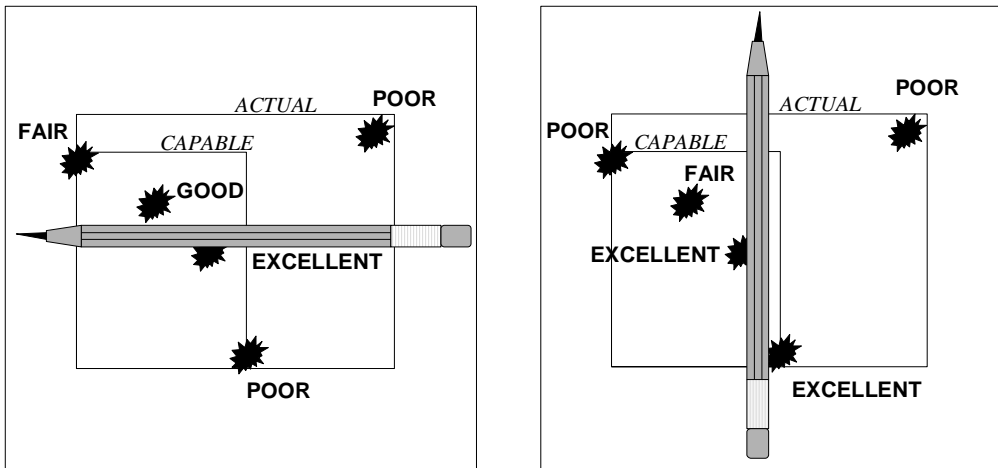


Figure 3-17: Expedient Method—Evaluation of Elevation and Trigger Control

68. **Numbering the Shots.** Once the size and shape of the grouping has been analyzed and the elevation and trigger control of each assessed, the shot holes on the target must be numbered so the notes on the instructor's record card and the target can be used to analyze the firer's faults. The coach does this by referring to the *Instructor's Record Card*, which includes the firer's call of each shot, and his own notes on each shot, as well as the order in which they were fired. At 25 m range, binoculars or spotting scope will be useful.

69. **Encouragement.** The last step in target analysis is to determine what the firer's faults are, and then to go about correcting them by giving sound advice. The detailed analysis of the grouping and the individual shots, combined with the instructor's observation of the firer and the notes made, will provide the basis for this advice.

70. **Procedure.** A simple mnemonic—DSMPE—will help remember the procedure for coaching the grouping practice:

- a. **D-Declaration.** Have the firer get into the practise of declaring each shot as either "correct" or "incorrect" and where they thought it went.
- b. **S-Size.** The firer must understand the difference between the actual and potential size of the grouping and the standards to be achieved.
- c. **M-MPI.** The size of the four MPIs from four separate groupings must be determined to ensure consistency.
- d. **P-Pattern.** Analyze the pattern of the shots in each grouping, i.e. vertical or horizontal patterns, in order to determine the firer's problem areas.
- e. **E-Encouragement.** Always be positive and end each shoot with a good word; leave the firer with something to strive for.

ZEROING

71. **General.** The purpose of zeroing is to “superimpose the Mean Point of Impact [MPI] onto the Correct Zero Position [CZP]” so that the grouping will form centrally at all ranges, given the appropriate sight setting and correction for wind. Zeroing is the adjustment of sights achieved by live firing and the actions of the firer, the coach and the weapons technician to bring the weapon sights into a position so that when accurately fired by the firer for whom it has been adjusted, the weapon fires projectiles to the centre of the target.

72. **Zeroing Procedure.** The procedure for zeroing a weapon is as follows:

- a. With optical sights set on the zeroing battle range, or with the small aperture set on iron sights, fire a five round grouping at each target, resting briefly between groups and ensuring that position and aim picture are constant.
- b. If both groupings are in the same area in relation to the POA, and they are both within the prescribed standard, then zeroing can be done. If, however, one grouping is to the left and the other is to the right, then the firer is not adopting the same firing position or POA for each grouping, and he must fire again.
- c. The firer or instructor must determine the MPI of each grouping and the average MPI on which the adjustment of the sights will be based.
- d. The firer or instructor must refer to the weapon manual to determine the adjustment of the sight in order to superimpose the MPI onto the CZP.

73. **Determining the Mean Point of Impact.** The two main methods of determining MPI are as follows:

- a. **Naked Eye.** The centre of a grouping can often be easily determined by estimation with the naked eye.
- b. **Rectangle Method.** If the grouping has an irregular pattern, or if the centre cannot be easily determined, the following procedure is used:
 - (1) draw a rectangle connecting the outer edges of the widest shots, ensuring that the lines are parallel to the target sides;
 - (2) draw two lines diagonally from corner to corner, and
 - (3) the MPI is where the diagonals cross.

COACHING TECHNIQUES AND TIPS

74. **General.** The coach's aim is to inspire confidence and determination, and to improve the firer's shooting techniques and knowledge to such a degree that the firer has the confidence and ability to use their weapon effectively in battle.

75. A coach must identify the causes of poor shooting. These can be divided into two groups:

- a. **Within the Firer's Control:**
 - (1) fails to apply marksmanship principles;
 - (2) fails to properly prepare the weapon;
 - (3) fails to ensure ammunition is clean and dry; and
 - (4) fails to apply determination.
- b. **Outside of the Firer's Control:**
 - (1) weather;
 - (2) physical limitations;
 - (3) poor range organization; and
 - (4) inefficient coaching.

COACH'S EQUIPMENT

76. The coach should have the following equipment on the range:

- a. notebook and pencil;
- b. representative target cards of the targets being used for the practice;
- c. call and check cards (if applicable);
- d. coach's aide-mémoire; and
- e. binoculars.

PRELIMINARY CHECKS

77. The following preliminary checks should be made prior to moving to the firing point:

- a. Check the firer's clothing, helmet and webbing to ensure a comfortable fit, especially at the neck and shoulders. For left-handed firers ensure the helmet buckle is on the right side.
- b. Inspect ammunition, the face of the bolt, and the barrel cleanliness and dryness. If wet or oily, shots will go high due to the increase in chamber pressure.
- c. Loosen the sling and inspect the sights to ensure preliminary sight alignment.

ACTION BEFORE, DURING AND AFTER FIRING

78. **Action Before Firing.** The following actions should occur prior to commencement of firing:

- a. On 25 m ranges, left-handed firers should be positioned on the left end side of the firing line to prevent empty casings striking other firers.
- b. Position yourself on the right side of the firer (left side for a left-handed firer) in the best observation position. During timed practices, position yourself to the rear, in a good observation position.
- c. Remain calm and unhurried; encourage the firer to relax.
- d. Review the practice with the firer to ensure it is understood.
- e. Discuss the firer's previous scores to pinpoint weaknesses and agree on realistic goals.
- f. Ensure that the firers are on the correct target and that their sights are correctly set and centred.
- g. Assist in the build up of fire positions and correct faults identified on:
 - (1) position;
 - (2) hold;
 - (3) eye relief; and
 - (4) trigger squeeze.

79. **Action During Firing.** The following actions should occur during firing:

- a. Watch carefully for faults in the following:
 - (1) shot release;

- (2) follow-through—dummy rounds may be inserted into the magazine at the third or fourth round to identify flinching;
- (3) the firer must call each shot on the target—use the spotter to record each shot and the firer's call;
- b. Consider outside factors such as wind, weather conditions, light, or simple firer's faults before directing the firer to change his position. Beware of unnecessary adjustments when attempting to correct MPI.
- c. Remember the theory of grouping, and work to improve the firer's shoot.
- d. Advise or discuss only when the firer is off their aim. If the firer is doing something seriously wrong, have him apply the safety catch and come down to the rest position.
- e. During preliminary and elementary applications, concentrate on the firer until after each round has been fired.
- f. During snap shooting and timed practices, stay behind the firer observing both the target and the firer. Binoculars are useful in identifying the path or the swirl of the rounds. The value of the practice lies in the comments the coach makes after the practice has been completed.

80. **Action After Firing.** The following actions should occur following the practice:

- a. **Grouping Practice.** After a grouping practice, discuss major points using DSMPE as described previously.
- b. **Practices Other than Grouping.** For practices other than grouping, discuss the results obtained, and reach agreement with the firer on the reasons for errors and the best methods of improving the situation.
- c. **Blame.** During early stages, the inexperienced firer will often blame the weapon or sight system for poor results. It may be necessary for the coach to prove, by firing the weapon himself, that the error lies with the firer.
- d. **Records.** Record the results on the firer's record card to allow a check on past mistakes during future practices. Such a record, when accurately kept, is of great value for the improvement of an individual's shooting standard.

COMMON FAULTS

81. **Common Faults.** The following list of common faults should be monitored and corrected:

- a. **Prone Positions.** Body not oblique to the firing line or legs not comfortably spread.
- b. **Snatching the Trigger.** The whole trigger hand should grip the pistol grip firmly, with gradual pressure on the trigger. Snatched shots normally strike low. The firer must know this prior to shooting.
- c. **Focusing on the Target.** If the firer focuses on the target, vice the aiming post or foresight when firing, the aiming post/foresight will become blurred, multiplying the firer's errors. The firer must know this prior to shooting.
- d. **Incorrect Eye Relief.** If the firer's eye is too near or too far from the sight / rear aperture, it will cause a shadow effect on the sight picture.
- e. **Head Not Upright.** This may cause shadow, parallax, weapon cant, and fatigue in the neck.
- f. **Butt Not Firmly in the Shoulder.** This will allow for butt slippage while firing.
- g. **Incorrect Breathing.** If the firer's lungs are too full, too empty, or the breath is held too long, it will cause strain, barrel wavering and fatigue.
- h. **Weapon Canted.** Canting the weapon will cause the sight to be tilted and the sight picture incorrectly centred.
- i. **Incorrect Hold.** A loose or incorrect hold will cause strain or slippage.
- j. **Flinching.** Flinching in anticipation of the shot.
- k. **Follow Through.** Failure to follow through to maintain a steady grip on the weapon once the shot has been fired.
- l. **Shifting the Elbow.** Shifting the elbow's position after the firing has started is often due to the surface of the ground and insufficient weight applied to the point of contact. Get the firer to raise their chest to increase stability.
- m. **Grasping the Magazine.** Grasping the magazine instead of the hand guard results in a lack of control during jump and recoil.
- n. **Shifting Position of the Cheek.** Shifting the position of the cheek on the butt affects eye relief and the sight picture, resulting in the shifting of the MPI.

TRAINING TIPS

82. The following tips assist the coach in the performance of his duties:

- a. **Calling the Shot / Maintaining Coach's Record Card.** The most reliable method of ensuring that the firer properly follows through is to have the firer call their shots. This is to be done with the coach's record card (see Figures 3-18 and 3-19), which should be used by the coach in conjunction with the spotter as follows:

- (1) the firer declares each shot;
- (2) the coach records the declaration and notes observations;
- (3) the spotter:
 - (a) on the 25 m range, uses binoculars, and notes the position and number of the shots in relation to the aiming mark; and
 - (b) on the 100 m range, pulls target down and marks the number of the shot with a pencil;
- (4) the coach moves downrange to discuss the practice following DSMPE.

GROUPING AND ZEROING CARD

FIRER'S NAME _____

Date Fired _____

Group Size _____

Shot	Dec'	Observations
1		
2		
3		
4		
5		

Date Fired _____

Group Size _____

Shot	Dec'	Observations
1		
2		
3		
4		
5		

ZERO CARD

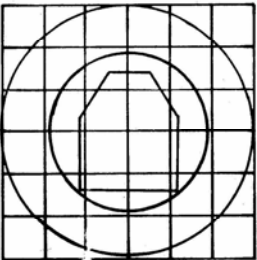
Group No	Date	Extreme Spread	Displacement from CZP			
			Vertical		Horizontal	
			High	Low	Left	Right
1						
2						
3						
4						
5						
6						
MPI of all Groups	Total					
	Mean					

Figure 3-18: Grouping and Zeroing Record Card

FIRER'S NAME _____ DATE _____

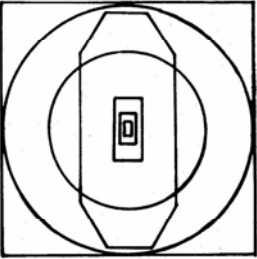
ELEMENTARY APPLICATION OF FIRE

SHOT	DEC	OBSERVATIONS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		



ELEMENTARY APPLICATION OF FIRE

SHOT	DEC	OBSERVATIONS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		



WEAPON _____

RANGE _____

WEATHER AND LIGHT _____

NOTES _____

NAME OF COACH _____

Figure 3-19: Elementary Record Card

- b. **Sandbags.** Sandbags are used for preliminary learning of good shooting and for range work. They serve to steady the lower part of the left forearm only, not the wrist, hand or rifle. As the ability of the firer to shoot properly is increases, the need for sandbags diminishes, and with practice, the muscles of the forearm become sufficiently conditioned to enable the firer to fire accurately without assistance.
- c. **Wearing of Equipment.** Experience has shown that recruits receiving instruction in the elementary principles of marksmanship, and personnel receiving preliminary dry training and training on SAT, should not wear fighting order. After a firer has mastered the basic principles of marksmanship and has completed Stage 1 training, less difficulty is experienced in completing more advanced training in fighting order.
- d. **Dry Training.** Dry training is a dress rehearsal for range practices. Experienced firers practise dry training daily and call each shot. Dry training perfects coordination of the eye and the trigger finger, and incorporates all the basic principles. The value of dry training is evident in combat where soldiers, who have trained accordingly, may automatically aim their rifles and produce an enemy casualty with one well aimed, well timed, and perfectly fired shot.

COACHING PROCEDURES

83. Grouping Practices:

- a. **Before Firing.** Before firing, the coach must:
 - (1) take a notebook and pencil on the range;
 - (2) take the firer's range record book, study the old grouping records, and decide to what standard the firer should group;
 - (3) confirm with the firer that they understand the aim of the practice and the target to be engaged;
 - (4) ensure that the firer tests the position properly and correctly sets their sights; and
 - (5) lies down on the firer's right side (left side for a left handed firer) close enough to see everything, but not too close to get in the way.
- b. **During Firing.** During the practice, the coach must:
 - (1) watch the firer, not the target, so that notes may be taken of anything the firer does incorrectly;

- (2) after each shot, take notes on the shot and the firer's declaration;
 - (3) not tutor too much; however, if talking is necessary it should be done between shots, or tell the firer to rest and apply the safety catch; and
 - (4) identify common faults made by the firer.
- c. **After Firing.** After firing, the coach must go forward to the target with the firer to examine and explain the grouping using DSMPE as detailed previously.

84. **Application Practices.** "Application" practices are the means by which a firer tries to achieve a grouping with the MPI in the middle of the target, so that all shots go into the scoring area, gaining the best expected scoring area (ESA) they are capable:

- a. **Before the Practice.** The following should occur before the practice:
- (1) **Sighting Shots.** Allow the firer to fire two sighting shots, which do not count for score. These shots allow the firer to find the correct sighting and POA without wasting scored shots. Sighting shots should be fired:
 - (a) before the first sighting shot is fired to ensure the sights are set correctly;
 - (b) to consider the MPI of the firer's grouping at 100 m;
 - (c) to consider how the firer did on previous application practices;
 - (d) to consider the effects wind and light have on shooting;
 - (e) carefully without the sights or POA being adjusted;
 - (f) if both sighting shots are good, take the MPI as halfway between them; and
 - (g) to advise the firer to adjust the sights or the POA in order to get the MPI into the ESA.
 - (2) **Alteration of the POA.** Do not advise the firer to alter their POA:
 - (a) from a shot that the firer declared to be a bad one, or that you as the coach noticed was incorrect;
 - (b) from the MPI of the firer's sighting shots or from a scoring shot, if it is inside the ESA; or

- (c) from one shot only, except that, if one sighting shot is a miss, it is usual to halve the distance from the second shot if it is outside the ESA and the middle of the target.
 - b. **During the Practice.** The real position of the MPI becomes more accurate as each scoring shot is fired. Watch the movement of the MPI carefully, and using the methods below, advise the firer accordingly:
 - (1) **Observation.** Binoculars or a spotting scope may be used for application practices, but while the firer is firing, the firer, not the target, must be observed.
 - (2) **Recording.** Recording an application practice is the same as for a grouping practice, except that the coach records the position of each shot as it is signalled from the butts.
 - c. **After the Practice.** At the end of the practice, the firer's shooting must be discussed so they are prepared for when they must shoot without a coach.
- 85. **Snap Shooting and Rapid Firing Practices.** Snap shooting and rapid firing practices usually follow an application practice so that the coach may establish the location of the firer's ESA. The following points should be noted:
 - a. **Before the Practice:**
 - (1) two sighting shots should be fired if a snap/rapid practice is the first of the day; and
 - (2) most firers fire low when firing quickly, and they should be advised to adjust the POA as necessary.
 - b. **During the Practice.** The coach should kneel behind the firer's right shoulder to watch the fall of shot and to provide advice (e.g. go right half target; steady, do not rush).
 - c. **After the Practice.** The discussion after the practice is the most valuable to the firer. Binoculars and scopes may be used as in application practices.

CHAPTER 4 PERSONAL WEAPONS

SECTION 1—INTRODUCTION

AIM

1. The aim of this chapter is to outline the Canadian Forces Operational Shooting Programme (CFOSP) designed to train proficiency on personal weapons.

GENERAL

2. *Individual Battle Task Standards (IBTS) for Land Operations* establishes the level of Individual Standards for all a firers assigned a specific weapon. This chapter sets the shooting standard for all personal weapons and promulgates a progressive training approach. In addition, it defines the standards that are required prior to a firer proceeding to the next higher level of training. A focused and progressive approach to musketry training will ensure that every firer is skilled in the use of their personal weapon.

LAYOUT

3. This chapter is comprised of six sections:
 - a. Section 1—General;
 - b. Section 2—C7/C7A1/C7A2 Service Rifle and C8 Carbine;
 - c. Section 3—M203A1 40 mm Grenade Launcher;
 - d. Section 4—C9/C9A1 Light Machine Gun (LMG);
 - e. Section 5—9 mm Browning and P225 Sig Sauer Pistol; and
 - f. Section 6—9 mm Heckler and Koch Machine Pistol 5 (MP5).
4. The nature of this chapter's structure aids in its amendment should a need arise to add or withdraw a weapon system, range practices, or personal weapons test (PWT).

SECTION 2—C7/C7A1/C7A2 RIFLE AND C8 CARBINE

SCOPE

5. This section sets out all the firing practices to be completed in the Canadian Forces Operational Shooting Programme (CFOSP) for the C7/C7A1/C7A2 rifle and the C8 carbine. It includes the application of firing practices for all Arms and Services and the progression and frequency with which they are to be fired.

6. This progression and frequency of firing is essential for preparing firers for the personal weapons tests (PWTs). It is also essential in preparing the firer for field firing.

SIMULATION AND TECHNOLOGY

7. **Small Arms Trainer (SAT).** SAT firing lessons are an integral part of the CFOSP and have been selected to confirm the basic skills before moving on to live firing.

8. To assist firers, the SAT serials have been added to the range practices and are designed to mirror live practices. It must be understood that due to the CFOSP changes and the current programming of the SAT, not all practices on the SAT mirror their live counterparts. Consequently, until the SAT is aligned with the CFOSP, in some cases scoring must be performed manually.

AIDS TO LIVE-FIRE TRAINING

9. **Small Arms Collimator.** To avoid wasting time and ammunition, the Small Arms Collimator (SAC) is to be used before zeroing to reduce excessive displacement between the mean point of impact (MPI) and the correct zero position (CZP). Once weapons have been zeroed by fire, the SAC is to be used to record the firer's personal zero position (PZP). Thereafter, the SAC is to be used before any live firing practice to ensure that the PZP readings have not changed. To save range time it is recommended that PZP checks are conducted prior to any live firing practice.

TRAINING AND FIRING SEQUENCE

10. The practices described in this section are designed to be conducted progressively. PWT 1 and PWT 2 are gateways to PWT 3, while PWT 3 is the gateway to field firing and PWT 3 supplements. The completion of PWT 3 Live is mandatory prior to attempting PWT 4. An individual must first pass the PWT 4 on their particular weapon and weapon sight(s) before progressing to quick aim shooting individual and collective field firing with that weapon. Each stage is designed to give the firer the necessary practice and confidence to successfully complete the PWT.

11. The all Arms and Services night shoot of the PWT has been included in PWT 2 only. Therefore, all personnel qualified PWT 2 or higher will have completed the night shoot.
12. An additional PWT 4 for quick aim shooting has been added to the programme. Commanding Officers (COs) are encouraged to consider training their personnel in these more advanced combat shooting skills whenever their personnel are preparing to deploy to a theatre where they are likely to face these types of engagements. Commanders must ensure that all firers attempting quick aim shooting have completed the initial marksmanship training prior to attempting the PWT 4.
13. Test methods for the C7 rifle and C8 carbine up to PWT 3 are as follows:
 - a. **Initial Marksmanship Training.** All application range practices and PWTs will be conducted on the SAT (if available) followed by live fire. COs are reminded that firers may have not completed all initial marksmanship training while undergoing recruit training, and as a result, may need to complete this training in the unit.
 - b. **Continuation Marksmanship Training.** The range practice requirements are as follows:
 - (1) **Application Range Practices.** Repeating application range practices is not mandatory once initial marksmanship training is completed; however, if they are conducted, they may be conducted on the SAT (if available). They should be used to assist firers in correcting faults experienced during the completion of a specific PWT.
 - (2) **Personal Weapons Tests 1 to 3.** Firers must complete their mandated level of PWT live; however, subordinate PWTs may be conducted on the SAT. COs must ensure sufficient time and resources are provided to allow for zeroing before commencing live practices.
 - (3) **Personal Weapons Test 3 Supplements.** PWT 3 Supplements are not normally conducted during initial marksmanship training. Specific supplements must be completed by those personnel who will employ the weapon in that particular configuration on operations or during field firing.
14. Test methods for the C7 rifle during PWT 4 are as follows:
 - a. **Initial Marksmanship Training—Quick Aim Shooting.** Qualified urban operations instructors should conduct initial marksmanship training. Firers should have completed the initial dry weapon training and been instructed on the theory of quick aim shooting before beginning the quick aim shooting application range practices. Firers must successfully complete

Application Range Practices 41 through 48 and then PWT 4 Parts 1 and 2 in sequence. The use of the SAT should be considered to assist and refresh firers if needed. Initial marksmanship training is considered to be completed once firers have completed Application Range Practices 41 through 48 at some point in their musketry training.

b. **Continuation Marksmanship Training.** The range practice requirements are:

- (1) **Application Range Practices.** Application Range Practices 41 to 48 are not mandated during continuation marksmanship training. These practices may be used to address a fault experienced during the completion of any part of the PWT 4 prior to permitting a re-test.
- (2) **Personal Weapons Test 4.** Firers must complete PWT 4 Parts 1 and 2 progressively. Sufficient time and resources should be provided to allow for zeroing before commencing live practices.
- (3) **Personal Weapons Test 4 Supplements.** PWT 4 Supplements are not normally conducted during initial marksmanship training. Specific supplements must be completed by those personnel who will employ the weapon in that particular configuration on operations or during field firing.

15. **Remedial Training.** The SAT provides an invaluable aid when remedial training of the poor shot is required. COs are encouraged to make full use of the facilities wherever they are available. However, final confirmation must be by the use of live firing. Firers that do not successfully complete their mandated PWT must be afforded an opportunity to practise prior to attempting the test again.

SAFETY

16. While conducting the quick aim shooting PWT 4, the following safety measures must be addressed:

- a. the safety catch is on safe at all times unless firing;
- b. the finger is off the trigger when not firing;
- c. barrel sweep does not exceed the assigned arcs of fire; and
- d. the weapon must be clear before leaving the firing point.

CONDUCT OF LIVE FIRING PRACTICES

17. **Small Arms Collimator.** The SAC is to be used to bore sight the weapon prior to firing a grouping practice. Once zeroed, the reading from the SAC (the firer's PZP) is to be noted in the firer's shooting record card, and the reading is to be checked prior to any future live firing lesson. The SAC cannot be used for lessons fired in the SAT.

WEAPON AND FIRING PREPARATION

18. If firing trenches are not available the prone supported position is to be used.

19. **Aiming Marks.** Where white patches are used, the point of aim (POA) is to be the bottom centre of the patch to cater for both the iron sight and C79 optic sight.

20. **Spotters.** When grouping at 25 m, to enable firers and coaches to gain the maximum information from the shots fired, members of the waiting relay should be employed as spotters, using binoculars to plot the strike of each shot. To achieve maximum value from this type of live firing, it is essential that firers be given every opportunity to discuss the results of their shooting with their coach.

21. **Marksman Badge:**

- a. **Marksman Badge.** PWT 3 is the only PWT where this badge is awarded. Firers must achieve the standard for marksman during that PWT before being awarded the badge in accordance with Chapter 2.
- b. **First Class Shot.** PWT 2 is the only PWT where this badge is awarded. Firers must achieve the standard for first class shot during that PWT before being awarded the badge in accordance with Chapter 2.

PRACTICES AND TESTS

22. The details of all practices and tests are contained in the remaining pages of this section.

RIFLE AND CARBINE SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
1	SAT/ LIVE	11	Grouping Prone Unsupported	25	20	To train the firer to achieve a basic grouping standard in the prone position.

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
		12	Grouping Other Positions	25	30	To train the firer to achieve a basic grouping standard in all other positions.
		13	Grouping All Positions	100	50	To train the firer to achieve an effective grouping standard in all positions.
		RIFLE AND CARBINE PWT 1		100	50	To confirm the firer's ability to group effectively from various positions at 100 m.
2	SAT/ LIVE	21	Deliberate Fire	100–200	40	To train the firer to engage targets effectively by deliberate fire from varying ranges and in various positions.
		22	Rapid Firing and Snap Shooting	100–200	36	To train the firer to adopt firing positions and engage targets effectively by rapid firing and snap shooting.
	SAT/ LIVE	RIFLE AND CARBINE PWT 2		200	60	To confirm the firer's ability to engage targets effectively from various positions at 200 m.
	SAT/ LIVE	23	Introduction to Night Shooting	LVN	24	To train the firer to engage targets effectively in low light conditions.
	SAT/ LIVE	RIFLE AND CARBINE PWT 2—NIGHT SHOOT		LVN	30	To confirm firer's ability to engage targets effectively in low light conditions.
3	SAT/ LIVE	31	Bursts	100–25	60	To train the firer to effectively engage targets by bursts from various positions.
		32	Deliberate Fire	100–300	60	To train the firer to engage targets effectively by deliberate fire from varying ranges and in various positions.
		33	Rapid Firing and Snap Shooting	100–300	50	To train the firer to adopt firing positions and engage targets by rapid firing and snap shooting.
	LIVE	34	Crossing Targets	25–200	78	To train the firer to effectively engage crossing targets.
	LIVE	35	Night Shooting with Illumination	100–25	30	To train the firer to effectively engage targets using artificial illumination.
	LIVE	RIFLE AND CARBINE PWT 3		300–25	69	To confirm that the firer is an effective daylight battle shot.
	SAT/ LIVE	36	Kite Sight Introductory Shoot	25–100	25	To zero/register the Kite sight to the firer's personal weapon.

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
	LIVE	RIFLE AND CARBINE PWT 3 SUPPLEMENT—KITE SIGHT		25–100	40	To confirm the firer's ability to effectively engage targets at night using a Kite sight.
	SAT/LIVE	37	Night Vision Goggles and Laser Aiming Device Introductory Shoot	25–100	40	To train the firer to effectively engage targets using night vision goggles (NVG) and a laser-aiming device (LAD).
	LIVE	RIFLE AND CARBINE PWT 3 SUPPLEMENT—NVG		25–100	45	To confirm the firer's ability to effectively engage targets at night using night vision goggles (NVG) and a laser-aiming device (LAD).
4	LIVE	41	Adopting Tactical Stance	7–25	109	To train the firer to employ basic quick aim shooting techniques by adopting a proper tactical stance.
	LIVE	42	Shooting Accurately	7–25	177	To train the firer to be able to take quick and accurate quick aim shots.
	LIVE	43	Static Turning	7–25	54	To train the firer to be able to turn and take quick and accurate quick aim shots.
	LIVE	44	Moving Engagements	7–25	60	To train the firer to be able to take quick and accurate quick aim shots while moving.
	LIVE	45	Emergency Reloading and IA drills	7–25	100	To train the firer to quickly conduct emergency reloads and IA drills.
	LIVE	46	Shooting from Alternate Positions and Barricades	7–25	40	To train the firer to employ quick aim shooting techniques from alternate firing positions and from behind barricades.
	LIVE	RIFLE AND CARBINE PWT 4 PART 1—STATIC ENGAGEMENTS		7–25	68	To confirm that the firer can take quick and accurate quick aim shots from static positions.
	LIVE	RIFLE AND CARBINE PWT 4 PART 2—MOVING ENGAGEMENTS		7–20	36	To confirm that the firer can take quick and accurate quick aim shots while moving.
	LIVE	47	Low Light and Tactical Flashlight	10	60	To train the firer to engage targets quickly and accurately in low light and night conditions with the aid of a tactical flashlight.
	LIVE	48	LAD and NVD ENGAGEMENTS	7–25	50	To train the firer to engage targets quickly and accurately in low light and night conditions using laser aiming devices (LADs) and night vision devices (NVDs).

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
	LIVE		RIFLE AND CARBINE PWT 4 NIGHT SUPPLEMENT—LAD AND NVD ENGAGEMENTS	7–25	28	To confirm that the firer can engage targets quickly and accurately in low light and night conditions using laser aiming devices (LADs) and night vision devices (NVDs).

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 11—GROUPING PRONE SUPPORTED

23. **Aim.** To train the firer to achieve a basic grouping standard in the prone position.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Rge Practice 1, Ser 1A & 1B	Grouping Prone Supported	2 x Fig 11 with a 75 by 100 mm white aiming marks in the centre.	20	20	Fire 1 x 5 rd grouping at each tgt. Discuss and repeat.	Grouping Size	a. Firer is to be coached. b. Firer must declare each shot. c. Each grouping is measured and discussed after completion of the grouping.

NOTES

- Ammunition.** 20 rds.
- Scoring.** Pass/Fail.
- Standards.**
 - C79 Scope—Firer is to achieve at least one 38 mm grouping in one of the four attempts.
 - Iron Sight—Firer is to achieve at least one 65 mm grouping in one of the four attempts.
- Range staff are to pre-zero the SAT weapons prior to the firer's attempting this practice.
- Firers are not to zero their weapons prior to this practice. The grouping size, not the MPI, is what is being assessed.
- Firers are not permitted to use any support or rest their rifle mags on the ground.
- Firers who do not attain the required standards are to be given further coaching prior to being permitted to fire the practice again.
- During initial marksmanship training, the best 4 rds may be used to determine the firer's group capacity.

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 12—GROUPING OTHER POSITIONS

24. **Aim.** To train the firer to achieve a basic grouping standard in all other positions.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Rge Practice 2, Ser 1	Grouping Sitting Unsupported	2 x Fig 11 with a 75 by 100 mm white aiming mark in the centre.	20	10	Fire 1 x 5 rd grouping at each tgt. Discuss and repeat.	Grouping Size	a. Firer is to be coached. b. Firer must declare each shot. c. Each grouping is measured and discussed after completion of the grouping.
2	Inf Rge Practice 2, Ser 2	Grouping Kneeling Unsupported	As per Ser 1.	20	10	As per Ser 1.	Grouping Size	As per Ser 1.
3	Inf Rge Practice 2, Ser 3	Grouping Standing Unsupported	As per Ser 1.	20	10	As per Ser 1.	Grouping Size	As per Ser 1.

NOTES

1. **Ammunition.** 30 rds.
2. **Scoring.** Pass/Fail.
3. **Standards.** Firer's are to achieve at least 1 x 5 rd grouping size in each of the positions as follows:
 - a. Sitting (C79 Scope)—56 mm;
 - b. Sitting (Iron Sight)—75 mm;
 - c. Kneeling (C79 Scope)—56 mm;
 - d. Kneeling (Iron Sight)—80 mm;
 - e. Standing (C79 Scope)—100 mm; and
 - f. Standing (Iron Sight)—140 mm.
4. Firers are not to zero their SAT weapons prior to this Ser. The grouping size, not the MPI, is what is being assessed.
5. Firers who do not attain the required standards are to be given further coaching prior to being permitted to fire the practice again.
6. During initial marksmanship training, the best 4 rds may be used to determine the firer's group capacity.

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 13—GROUPING ALL POSITIONS

25. **Aim.** To train the firer to achieve an effective grouping standard in all positions.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Rge Practice 3, Ser 1A & 1B	Grouping Prone Unsupported	1 x Fig 11 with a 75 by 100 mm white aiming mark in the centre superimposed on a 1.3 m witness screen.	100	10	Fire 1 x 5 rd grouping. Discuss and repeat.	Grouping Size	a. Firer is to be coached. b. Firer must declare each shot. c. Each grouping is measured and discussed after completion of the grouping.
2	Inf Rge Practice 3, Ser 1A & 1B	Grouping Prone Unsupported CBRN	As per Ser 1.	100	10	As per Ser 1.	Grouping Size	a. Firer to wear PPE (combat gloves may be worn if CBRN gloves are not available). b. Firer is to be coached. c. Firer must declare each shot. d. Each grouping is measured and discussed after completion of the grouping.
3	Inf Rge Practice 3, Ser 2A & 2B	Grouping Kneeling Unsupported	As per Ser 1.	100	10	As per Ser 1.	Grouping Size	As per Ser 1.
4	Inf Rge Practice 3, Ser 3A & 3B	Grouping Sitting Unsupported	As per Ser 1.	100	10	As per Ser 1.	Grouping Size	As per Ser 1.
5	Inf Rge Practice 3, Ser 4A & 4B	Grouping Standing Unsupported	As per Ser 1.	100	10	As per Ser 1.	Grouping Size	As per Ser 1.

NOTES

1. **Ammunition.** 50 rds.
2. **Scoring.** Pass/Fail.
3. **Standards.** Firer's are to achieve at least one grouping size in each of the positions as follows:
 - a. Prone (C79 Scope)—150 mm.
 - b. Prone (Iron Sight)—200 mm.
 - c. Prone PPE (C79 Scope)—200 mm.
 - d. Prone PPE (Iron Sight)—250 mm.
 - e. Kneeling (C79 Scope)—225 mm.
 - f. Kneeling (Iron Sight)—250 mm.
 - g. Sitting (C79 Scope)—200 mm.
 - h. Sitting (Iron Sight)—250 mm.
 - i. Standing (C79 Scope)—450 mm.
 - j. Standing (Iron Sight)—450 mm.
4. Firers are not to zero their SAT weapons prior to this practice. The grouping size, not the MPI, is what is being assessed.
5. Firers who do not attain the required standards are to be given further coaching prior to being permitted to fire the practice again.
6. During initial marksmanship training, the best 4 rds may be used to determine the firer's group capacity.

RIFLE AND CARBINE PWT 1

26. **Aim.** To confirm the firer's ability to group effectively from various positions at 100 m.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Rge Practice 4, Ser 1	Zeroing Prone Unsupported	1 x Fig 11 with a 75 by 100 mm white aiming mark in the centre superimposed on a 1.3 m witness screen.	100	20	Fire 4 x 5 rd groupings and adjust zero as required.	Nil	a. MPI of each grouping to be indicated to the firer. b. Coach may assist in adjusting sights (live only). c. SAT operator is to adjust each weapon's zero (SAT only).

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
2	Inf Rge Practice 4, Ser 2	Confirmation Zeroing Prone Unsupported	As per Ser 1.	100	5	Fire 1 x 5 rd grouping to confirm zero.	Nil	Live only.
3	Inf Rge Practice 4, Ser 2	Grouping Prone Unsupported	As per Ser 1.	100	5	Fire 1 x 5 rd grouping.	Grouping Size C79 Scope: a. 150 mm—5 pts; b. 200 mm—3 pts; and c. over 200 mm—0 pts. Iron Sight: a. 200 mm—5 pts; b. 250 mm—3 pts; and c. over 250 mm—0 pts.	a. No coaching is permitted. b. Shots are not indicated. c. Score is not given to the firer until the entire practice is complete. d. All 5 rounds are to count towards grouping size.
4	Inf Rge Practice 4, Ser 2	Grouping Prone Unsupported CBRN	As per Ser 1.	100	5	As per Ser 3.	Grouping Size C79 Scope: a. 200 mm—5 pts; b. 250 mm—3 pts; and c. over 250 mm—0 pts. Iron Sight: a. 250 mm—5 pts; b. 300 mm—3 pts; and c. over 300 mm—0 pts.	a. Firer is to wear PPE (combat gloves may be worn if CBRN gloves are not available). b. All 5 rounds are to count towards grouping size.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
5	Inf Rge Practice 4, Ser 3	Grouping Sitting Unsupported	As per Ser 1.	100	5	As per Ser 3.	Grouping Size C79 Scope: a. 200 mm—5 pts; b. 250 mm—3 pts; and c. over 250 mm—0 pts. Iron Sight: a. 250 mm—5 pts; b. 300 mm—3 pts; and c. over 300 mm—0 pts.	As per Ser 3.
6	Inf Rge Practice 4, Ser 3	Grouping Kneeling Unsupported	As per Ser 1.	100	5	As per Ser 3.	Grouping Size C79 Scope: a. 225 mm—5 pts; b. 275 mm—3 pts; and c. over 275 mm—0 pts. Iron Sight: a. 250 mm—5 pts; b. 300 mm—3 pts; and c. over 300 mm—0 pts.	As per Ser 3.
7	Inf Rge Practice 4, Ser 4	Grouping Standing Unsupported	As per Ser 1.	100	5	As per Ser 3.	Grouping Size C79 Scope or Iron Sight: a. 450 mm—5 pts; b. 500 mm—3 pts; and c. over 500 mm—0 pts.	As per Ser 3.

NOTES

1. **Ammunition.** 50 rds (25 for score).
2. **Scoring.** Pass/Fail.
3. **Standards.**
 - a. HPS—25 points.
 - b. Pass—15 points (60% of HPS).
4. Fighting order and helmets must be worn.
5. Weapons must be zeroed prior to attempting this practice.
6. **Standard for AIRCOM Pers.** The PWT 1 standard fully meets or exceeds the NATO vanguard standard. An individual's NATO vanguard operational evaluation rating is determined by calculating the average of the four grouping sizes achieved in Sers 3, 4, 5 and 6, and is scored as follows:
 - a. 0–200 mm—Excellent;
 - b. 201–400 mm—Standard;
 - c. 401–600 mm—Marginal; and
 - d. 601 mm+—Unsatisfactory.

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 21—DELIBERATE FIRE

27. **Aim.** To train the firer to engage targets effectively by deliberate fire from varying ranges and in various positions.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Rge Practice 5, Ser 1A and 1B	Deliberate Standing and Kneeling Unsupported	1 x Fig 12 on a 1.3 m witness screen with 2 x inscribed circles (750 mm and 1.3 m).	100	10	Fire 5 rds in the standing position then fire 5 rds from the kneeling position.	HPS 40	a. Each shot is indicated. b. No time limit.
2	Inf Rge Practice 5, Ser 2A and 2B	As per Ser 1.	1 x Fig 12.	100	10	As per Ser 1.	HPS 40	As per Ser 1.
3	Inf Rge Practice 5, Ser 3A and 3B	Deliberate Prone Unsupported and Kneeling/ Sitting Unsupported	1 x Fig 11 on a 1.3 m witness screen with 2 x inscribed circles (750 mm and 1.3 m).	200	10	Fire 5 rds in the prone position then fire 5 rds from the kneeling/sitting position.	HPS 40	As per Ser 1.
4	Inf Rge Practice 5, Ser 4A and 4B	As per Ser 3.	1 x Fig 11.	200	10	As per Ser 3.	HPS 40	As per Ser 1.

NOTES

1. **Ammunition.** 40 rds.
2. **Scoring.** HPS—160 points:
 - a. Ser 1 and Ser 3:
 - (1) Each hit on the figure within the 750 mm circle—4 points.
 - (2) Each hit on the 750 mm circle off the figure—2 points.
 - (3) Each hit within the 1.3 m circle—1 point.
 - b. Ser 2 and Ser 4—4 points per hit.
3. **Standard.** Pass—96 points (60% of HPS).

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 22—RAPID FIRING AND SNAP SHOOTING

28. **Aim.** To train the firer to adopt firing positions and engage targets effectively by rapid firing and snap shooting.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Rge Practice 6, Ser 1	Fire & Movement Kneeling or Squatting Unsupported	1 x Fig 12.	100	4	a. Firer is standing behind the firing point with rifle unloaded, and there is a 4 rd mag on the firing point. b. Order KNEELING OR SQUATTING UNSUPPORTED... PREPARE TO MOVE. c. When the tgt appears, the firer moves onto the firing point, adopts the firing position, loads, makes ready, and fires 4 rds.	HPS 4	1 x 25 sec exposure.
2	Inf Rge Practice 6, Ser 2	Snap Standing Unsupported	As per Ser 1.	100	4	a. Firer is in the standing unsupported position. b. Order STANDING POSITION... WATCH AND SHOOT. c. Fire 1 rd at each exposure.	HPS 4	a. 4 x 5 sec exposures with irregular intervals between exposures. b. Tgt comes down when hit.

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Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
3	Inf Rge Practice 6, Ser 3	Snap Prone Unsupported	As per Ser 1.	100	6	a. Firer is in the prone unsupported position. b. Order WATCH AND SHOOT . c. Fire 1 rd at each exposure.	HPS 6	6 x 4 sec exposures with irregular intervals between exposures.
4	Inf Rge Practice 6, Ser 4A Inf Rge Practice 6, Ser 4B Inf Rge Practice 6, Ser 4C	Snap Kneeling or Squatting Unsupported Snap Kneeling or Squatting Unsupported Snap Prone Unsupported	1 x Fig 11.	200	2 2 2	a. Firer is standing behind the firing point with rifle unloaded, and there is one 6 rd mag on the firing point. b. Name the first firing position and order PREPARE TO MOVE . c. When the tgt first appears, the firer moves forward onto the firing point, adopts the firing position, loads, makes ready, and fires 1 rd at each exposure. d. After each double exposure, order APPLY SELECTOR LEVERS TO SAFE... STAND-UP . e. Name the subsequent firing position and order PREPARE TO MOVE . f. When the tgt subsequently appears, the firer adopts the next designated position and fires 1 rd at each exposure.	HPS 6	a. Exposures: (1) 10 and 4 sec; (2) 8 and 4 sec; (3) 10 and 4 sec; b. 3 sec between exposures and no time limit between positions. c. Tgt comes down when hit.
5	Inf Rge Practice 6, Ser 5	Rapid Sitting Unsupported	1 x Fig 11 in a tgt frame.	200	6	a. Firer is to be in the sitting position. b. Order WATCH AND SHOOT . c. Fire 6 rds.	HPS 6	a. 1 x 18 sec exposure. b. Tgt does not come down when hit.
6	Inf Rge Practice 6, Ser 6	Snap Prone Unsupported	1 x Fig 11.	200	6	a. Firer is to be in the prone position; b. Order WATCH AND SHOOT . c. Fire 1 rd per exposure.	HPS 6	a. 6 x 4 sec exposures with irregular intervals between exposures.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
								b. Tgt comes down when hit.
7	Inf Rge Practice 6, Ser 7	Rapid Prone Unsupported Rapid	1 x Fig 11.	200	4	a. Firer is to be in the prone position. b. Order WATCH AND SHOOT . c. Fire 4 rds.	HPS 4	1 x 12 sec exposure.

NOTES

1. **Ammunition.** 36 rds.
2. **Scoring.** HPS—36 points. 1 point per hit on all practices.
3. **Standard.** Pass—22 points (60% of HPS).

RIFLE AND CARBINE PWT 2

29. **Aim.** To confirm the firer's ability to engage targets effectively from various positions at 200 m.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1		Zeroing Prone Unsupported	1 x Fig 11 with a 75 by 100 mm white aiming mark in the centre superimposed on a 1.3 m witness screen.	100	15	a. Fire 3 x 5 rd groupings at the same aiming mark. b. Identify MPI and adjust zero.	Nil	a. Firer should break and relax between each grouping. b. Due to dispersion, firer is not expected to achieve a 200 mm grouping with 15 rds. c. Concern is MPI based on 15 rds.
2		Confirmation Zeroing Prone Unsupported	As per Ser 1.	100	5	Fire 1 x 5 rd grouping to confirm zero.	Nil	
3		Rapid Prone Unsupported	1 x Fig 11 superimposed on a 1 x 1.3 m screen with 1 x 750 mm and 1.3 m circle.	200	5	Order ONE EXPOSURE... FIVE RDS... WATCH AND SHOOT .	HPS 20	Fire 5 rds during 20 sec exposure.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
4		Snap Prone Unsupported	As per Ser 3.	200	5	Order FIVE EXPOSURES... ONE RD PER EXPOSURE... WATCH AND SHOOT.	HPS 20	a. Fire 1 rd at each exposure. b. Tgt falls when hit.
5		Application Prone Unsupported	1 x Fig 11 in tgt frame.	200	5	Order FIVE RDS... NO TIME LIMIT... TGT FALLS WHEN HIT... WATCH AND SHOOT.	HPS 5	a. 1 x point per hit. b. No time limit. c. Tgt falls when hit.
6		Snap Shooting Prone and Kneeling Unsupported	1 x Fig 11 on a stick.	200	10	a. Prone Order: TWO EXPOSURES... TWO RDS PER EXPOSURE... WATCH AND SHOOT. b. Kneeling Order: THREE EXPOSURES... TWO RDS PER EXPOSURE... WATCH AND SHOOT.	HPS 10	a. 1 x point per hit. b. 1 x trial exposure. c. 2 x 5 sec exposures (prone) and 3 x 8 sec exposures (kneeling) with an interval between exposures not less than 10 sec.
7		Rapid Fire Prone Unsupported	As per Ser 3.	200	15	Order ONE EXPOSURE... 15 RDS... WATCH AND SHOOT.	HPS 15	a. 1 x 10 rd and 1 x 5 rd mag. b. 1 x point per hit. c. 1 x 40 sec exposure. d. Hits not indicated.

NOTES

1. **Ammunition.** 60 rds.
2. **Scoring.** HPS—70 point:
 - a. Ser 3 and Ser 4:
 - (1) Each hit on the figure within the 750 mm circle—4 points.
 - (2) Each hit on the 750 mm circle off the figure—2 points.
 - b. Ser 5, Ser 6 and Ser 7—1 point per hit.
3. **Standard.**
 - a. Pass—47 points (60% of HPS).
 - b. First Class Shot—56 points (80% of HPS).

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 23—INTRODUCTION TO NIGHT SHOOTING

30. **Aim.** To train the firer to engage targets effectively in low light conditions.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1		Prone Unsupported	1 x Fig 11.	Estimated LNV	6	a. Fire 6 rds double tap. b. Assess grouping. c. No time limit.	Nil	Rehearsal for Sers 2 and 3.
2		Prone Unsupported	As per Ser 1.	LNV	12	a. Fire 6 rds double tap. b. Assess grouping. c. No time limit. d. Record scores.	HPS 12	
3		Kneeling Unsupported	As per Ser 1.	LNV	6	a. 3 x 4 sec exposures. b. Fire 2 rds per exposure. c. Record scores.	HPS 6	

NOTES

- Ammunition.** 24 rds.
- Scoring.** HPS—18 points. 1 point per hit.
- Standard.** Pass—11 points (60% of HPS).
- Night shooting training must not be rushed, and good coaching is just as important as it is during the day.
- Firers should be permitted 30 min to adjust their night vision.
- Flashlights must be filtered.
- Timed exposures should be controlled with whistles.
- Tgts should be draped with Hessian and scored using chalk.

RIFLE AND CARBINE PWT 2—NIGHT SHOOT

31. **Aim.** To confirm firer's ability to engage targets effectively in low light conditions.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1		Prone	1 x Fig 11.	LNV	10	Double tap 10 rds to determine MPI.	Nil	

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
2		Prone Unsupported	As per Ser 1.	LNv	10	a. Order LOAD... WATCH AND SHOOT. b. Fire 2 rds double tap at each exposure.	HPS 10	5 x 5 sec exposure with 5 to 10 sec interval between exposures.
3		Kneeling Unsupported	As per Ser 1.	LNv	10	a. Order LOAD... WATCH AND SHOOT. b. Fire 10 rds double tap at each exposure.	HPS 10	1 x 10 sec exposure.

NOTES

1. **Ammunition.** 30 rds.
2. **Scoring.** HPS—20 points. 1 point per hit.
3. **Standard.** Pass—12 points (60% of HPS).
4. Night shooting training must not be rushed, and good coaching is just as important as it is during the day.
5. Firers should be permitted 30 min to adjust their night vision.
6. Flashlights must be filtered.
7. Timed exposures should be controlled with whistles.
8. Tgts should be draped with Hessian and scored using chalk.

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 31—BURSTS

32. **Aim.** To train the firer to effectively engage targets by bursts from various positions.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Rge Practice 7, Ser 1	Bursts Prone Unsupported	1 x Fig 11.	100	10	a. Order PRONE... BURSTS... WATCH AND SHOOT. b. Fire 3 bursts when the tgt appears.	HPS 3 1 point per successful engagement	1 x 8 sec exposure.
2	Inf Rge Practice 7, Ser 1	Bursts Kneeling Unsupported	As per Ser 1.	75	20	a. Order KNEELING... BURSTS... WATCH AND SHOOT. b. Fire 3 or 4 bursts per exposure.	HPS 6 1 point per successful engagement	2 x 8 sec exposures.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
3	Inf Rge Practice 7, Ser 1	Bursts Shoulder	As per Ser 1.	50	20	a. Order STANDING... SHOULDER... BURSTS... WATCH AND SHOOT. b. Fire 3 or 4 bursts per exposure.	HPS 6 1 point per successful engagement	2 x 8 sec exposures.
4	Inf Rge Practice 7, Ser 1	Bursts Hip	As per Ser 1.	25	10	a. Order STANDING... HIP... WATCH AND SHOOT. b. Fire 3 bursts when the tgt appears.	HPS 3 1 point per successful engagement	1 x 8 sec exposure.

NOTES

1. **Ammunition.** 60 rds.
2. **Scoring.** HPS—18 points. 1 point per successful tgt engagement per burst.
3. **Standard.** Pass—10 points (60% of HPS).
4. A successful engagement is one or more hits on each tgt exposure.

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 32—DELIBERATE FIRE

33. **Aim.** To train the firer to engage targets effectively by deliberate fire from varying ranges and in various positions.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Rge Practice 5, Ser 1A and 1B	Deliberate Standing and Kneeling Unsupported	1 x Fig 12 on a 1.3 m witness screen with 2 x inscribed circles (750 mm and 1.3 m).	100	10	Fire 5 rds in the standing position, and then fire 5 rds from the kneeling position.	HPS 40	a. Each shot is indicated. b. No time limit.
2	Inf Rge Practice 5, Ser 2A and 2B	As per Ser 1.	1 x Fig 12.	100	10	As per Ser 1.	HPS 40	As per Ser 1.
3	Inf Rge Practice 5, Ser 3A and 3B	Deliberate Prone Unsupported and Kneeling/Sitting Unsupported	1 x Fig 11 on a 1.3 m witness screen with 2 x inscribed circles (750 mm and 1.3 m).	200	10	Fire 5 rds in the prone position, and then fire 5 rds from the kneeling/sitting position.	HPS 40	As per Ser 1.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
4	Inf Rge Practice 5, Ser 4A and 4B	As per Ser 3.	1 x Fig 11.	200	10	As per Ser 3.	HPS 40	As per Ser 1.
5	Inf Rge Practice	Deliberate Prone Supported	As per Ser 3.	300	10	a. Fire 5 rds in the prone supported position, and then fire 5 rds from the fire trench supported position on a clean tgt. b. No time limit.	HPS 40	As per Ser 1.
6	Inf Rge Practice	As per Ser 5.	As per Ser 4.	300	10	As per Ser 5.	HPS 40	As per Ser 1.

NOTES

1. **Ammunition.** 60 rds.
2. **Scoring.** HPS—240 points:
 - a. Ser 1, Ser 3 and Ser 5:
 - (1) Each hit on the figure within the 750 mm circle—4 points.
 - (2) Each hit on the 750 mm circle off the figure—2 points.
 - (3) Each hit within the 1.3 m circle—1 point.
 - b. Ser 2, Ser 4 and Ser 6—4 points per hit.
3. **Standard.** Pass—144 points (60% of HPS).

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 33—RAPID FIRING AND SNAP SHOOTING

34. **Aim.** To train the firer to adopt firing positions and engage targets by rapid firing and snap shooting.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Rge Practice 6, Ser 1	Movement & Fire Kneeling or Squatting Unsupported	1 x Fig 12.	100	4	a. Firer is standing behind the firing point with rifle unloaded on the firing point. b. Order KNEELING OR SQUATTING UNSUPPORTED...	HPS 4	1 x 25 sec exposure.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
						PREPARE TO MOVE. c. When the tgt appears, the firer moves forward onto the firing point, adopts the firing position, loads, makes ready, and fires 4 rds.		
2	Inf Rge Practice 6, Ser 2	Snap Standing Unsupported	As per Ser 1.	100	4	a. Firer is in the standing unsupported position. b. Order STANDING POSITION... WATCH AND SHOOT. c. Fire 1 rd at each exposure.	HPS 4	a. 4 x 5 sec exposures with irregular intervals between exposures. b. Tgt comes down when hit.
3	Inf Rge Practice 6, Ser 3	Snap Prone Unsupported	As per Ser 1.	100	6	a. Firer is in the prone unsupported position. b. Order WATCH AND SHOOT. c. Fire 1 rd at each exposure.	HPS 6	6 x 4 sec exposures with irregular intervals between exposures.
4	Inf Rge Practice 6, Ser 4A Inf Rge Practice 6, Ser 4B Inf Rge Practice 6, Ser 4C	Snap Kneeling or Squatting Unsupported Snap Kneeling or Squatting Unsupported Snap Prone Unsupported	1 x Fig 11.	200	2 2 2	a. Firer stands behind the firing point with rifle unloaded on the firing point. b. Name the firing position and order KNEELING OR SQUATTING... PREPARE TO MOVE. c. When the tgt appears, the firer moves forward onto the firing point, adopts the firing position, loads, makes ready, and fires 1 rd at each exposure. d. After each double exposure, order APPLY SELECTOR LEVERS TO SAFE...STAND-UP.	HPS 6	a. Exposures: (1) 10 and 4 sec; (2) 8 and 4 sec; and (3) 10 and 4 sec. b. 3 sec between exposures and no time limit between positions. c. Tgt comes down when hit.
5	Inf Rge Practice 6, Ser 5	Rapid Sitting Unsupported	1 x Fig 11 in a tgt frame.	200	6	a. Firer is to be in the sitting position. b. Order WATCH AND SHOOT. b. Fire 6 rds.	HPS 6	a. 1 x 18 sec exposure. b. Tgt does not come down when hit.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
6	Inf Rge Practice 6, Ser 6	Snap Prone Unsupported	1 x Fig 11.	200	6	a. Firer is to be in the prone position. b. Order WATCH AND SHOOT . b. Fire 1 rd at each exposure.	HPS 6	a. 6 x 4 sec exposures with irregular intervals between exposures. b. Tgt comes down when hit.
7	Inf Rge Practice 6, Ser 7	Rapid Prone Unsupported	As per Ser 6.	200	4	a. Firer is to be in the prone position. b. Order WATCH AND SHOOT . c. Fire 4 rds.	HPS 4	1 x 12 sec exposure.
8	Inf Rge Practice	Snap Prone Supported	As per Ser 6.	300	4	a. Firer is to be in the prone supported position. b. Order WATCH AND SHOOT . c. Fire 1 rd at each exposure.	HPS 4	a. 4 x 4 sec exposures with irregular intervals between exposures. b. Tgt comes down when hit.
9	Inf Rge Practice	Snap Prone Supported or Fire Trench	As per Ser 6.	300	10	a. Firer is to initially load a mag containing 6 rds and have a 4 rd mag in the mag pouch. b. No warning to change mags is to be given. c. Firer is to be in the fire trench. d. Order WATCH AND SHOOT . d. Fire 1 rd at each exposure.	HPS 10	a. 10 x 4 sec exposures with irregular intervals between exposures. b. Tgt comes down when hit.

NOTES

1. **Ammunition.** 50 rds.
2. **Scoring.** HPS—50 points. 1 point per hit on all practices.
3. **Standard.** Pass—30 points (60% of HPS).
4. The butts party commander should use a time chart.

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 34—CROSSING TARGETS

35. **Aim.** To train the firer to effectively engage crossing targets.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Rge Practice 8, Ser 1	Bursts Hip	1 x Fig 20 hand-held.	25	10	a. Order BURSTS... STANDING HIP... WATCH AND SHOOT. b. Fire 3 bursts once the tgt appears.	HPS 2	a. 1 x moving exposure. b. Coaches are to be used. c. After the exposure, tgt is to be exposed in the centre of the run indicating mean point of impact (MPI).
2	Inf Rge Practice 8, Ser 2	Bursts Standing	As per Ser 1.	50	20	a. Order BURSTS... SHOULDER... WATCH AND SHOOT. b. Fire 2 or 3 bursts per exposure.	HPS 4	a. 2 x moving exposures starting from different positions. b. Coaches are to be used. c. Tgt falls when hit. d. After each exposure, tgt is to be exposed in the centre of the run indicating MPI.
3	Inf Rge Practice 8, Ser 3	Snap Standing	As per Ser 1.	50	6	a. Order WATCH AND SHOOT. b. Once the tgt appears, fire 1 to 3 rds per run. c. Adopt the low ready (alert) position after each run.	Nil	As per Ser 2.
4	Inf range practice 8, Ser 4	Snap Standing	As per Ser 1.	50	6	As per Ser 3.	HPS 4	a. 2 x moving exposures starting from different positions. b. Coaches are to be used. c. Tgt falls when hit.
5	Inf Rge Practice 8, Ser 5	Snap Standing	As per Ser 1.	75	6	As per Ser 3.	Nil	As per Ser 4.
6	Inf Rge Practice 8, Ser 6	Snap Standing	As per Ser 1.	75	6	As per Ser 3.	HPS 4	As per Ser 4.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
7	Inf Rge Practice 8, Ser 7	Snap Kneeling	As per Ser 1.	100	6	a. Order WATCH AND SHOOT . b. Fire 1 to 3 rds per tgt. c. Adopt the low ready (alert) position.	Nil	As per Ser 4.
8	Inf Rge Practice 8, Ser 8	Snap Kneeling	As per Ser 1.	100	6	As per Ser 7.	HPS 4	As per Ser 4.
9	Inf Rge Practice 8, Ser 9	Snap Prone Unsupported	As per Ser 1.	200	6	a. Order WATCH AND SHOOT . b. Fire 1 to 3 rds per tgt run. c. Adopt the low ready (alert) position.	Nil	As per Ser 4.
10	Inf Rge Practice 8, Ser 10	Snap Prone Unsupported	As per Ser 1.	200	6	As per Ser 9.	HPS 4	As per Ser 4.

NOTES

1. **Ammunition.** 78 rds.
2. **Scoring.** HPS—22 points. 2 points per successful tgt engagement.
3. **Standard.** Pass—13 points (60% of HPS).
4. A successful tgt engagement is 1 or more hits on each tgt exposure.
5. Tgts should not move through more than 5 butts positions.

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 35—NIGHT SHOOTING WITH ILLUMINATION (LIVE)

36. **Aim.** To train the firer to effectively engage targets using artificial illumination.

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Snap Prone Unsupported	1 x Fig 11.	100	4	a. Order WATCH AND SHOOT . b. Fire 4 rds during the illumination of the tgt.	Nil	
2	Snap Prone Unsupported	As per Ser 1.	100	6	a. Order WATCH AND SHOOT . b. Fire 6 rds during the illumination of the tgt.	HPS 6	One point per hit.

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
3	Bursts Standing	As per Ser 1.	50	10	a. Order WATCH AND SHOOT . b. Fire 3 bursts during the illumination of the tgt.	HPS 3	One point per successful engagement/burst.
4	Bursts Hip	As per Ser 1.	25	10	As per Ser 3.	HPS 3	As per Ser 3.

NOTES

- Ammunition.** 30 rds.
- Scoring.** HPS—12 points:
 - Ser 2—1 point per hit.
 - Ser 3 and 4—1 point per successful tgt engagement/burst.
- Standard.** Pass—7 points (60% of HPS).
- Firers should be able to shoot almost as accurately at night as they do during the day.
- Night shooting training must not be rushed, and good coaching is just as important as it is during the day.
- Strict adherence to safety must prevail during night shooting with all rge activities thoroughly controlled.
- Flashlights used on the rge should be fitted with a red filter.
- Firers cannot expect to have a perfect sight picture due to the nature of artificial light.
- The immediate action upon illumination is to close one eye to preserve night vision, and firers should be reminded not to stare directly at the source of illumination as this will slow the return of their night vision.

RIFLE AND CARBINE PWT 3

37. **Aim.** To confirm that the firer is an effective daylight battle shot.

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Zeroing Prone Unsupported	1 x Fig 11 with a 75 by 100 mm white aiming mark in the centre superimposed on a 1.3 m witness screen.	100	15	a. Fire 3 x 5 rd groupings at the same aiming mark. b. Identify MPI and adjust zero.	Nil	a. Firer should break and relax between each grouping. b. Due to dispersion, firer is not expected to achieve a 200 mm grouping with 15 rds. c. Concern is MPI based on 15 rds.

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
2	Confirmation Zeroing Prone Unsupported	As per Ser 1.	100	5	Fire 1 x 5 rd grouping to confirm zero.	Nil	
3	Deliberate Prone Unsupported	As per Ser 1.	300	5	No time limit.	HPS 5	a. 1 x point per hit. b. Tgt falls when hit then reappears.
4	Snap Prone Unsupported	2 x Fig 11 in tgt frame.	300	10	Fire 2 rds at each exposure.	HPS 10	5 x 5 sec exposure with an interval of not less than 10 sec between exposures.
5	Movement & Fire	2 x Fig 11 in forward tgt frame.	400 300	 6	Preparatory Phase: a. Firer with 1 x 14 rd and 1 x 20 rd mag adopts the prone position, loads the 14 rd mag, and places the selector lever on "Safe". b. Order PREPARE TO MOVE Phase 1: a. When tgts appear, the firer doubles forward to the 300 m firing point and fires 3 rds from the prone supported position at each Fig 11 tgt. b. Firing stops when the tgts disappear. c. Selector lever is placed on "Safe".	 HPS 6	1 x point per hit throughout this Ser. Phase 1: Tgts are exposed for 45 sec.

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
		2 x Fig 11 in forward tgt frame.	200	8	Phase 2: a. When tgts appear, the firer doubles forward to the 200 m firing point and fires 4 rds from the kneeling supported position at each Fig 11 tgt. b. Firing stops when the tgts disappear. c. Selector lever is placed on "Safe". d. Change mags.	HPS 8	Phase 2 Tgts are exposed for 45 sec.
		2 x Fig 12 in rear tgt frame.	100	8	Phase 3: a. When tgts appear, the firer doubles forward to the 100 m firing point and fires 4 rds from the prone unsupported position at each Fig 12 tgt. b. Firing stops when the tgts disappear. c. Selector lever is placed on "Safe". d. Order STAND UP .	HPS 8	Phase 3: Tgts are exposed for 45 sec.
		1 x Fig 11 handheld.	100	2	Phase 4: a. High ready position. Order WATCH AND SHOOT . b. When tgt appears, the firer adopts the kneeling unsupported position and fires 2 x rds at a Fig 11. c. Order ADVANCE and the firer advances with weapon at the ready and selector on "Safe".	HPS 2	Phase 4: Tgt is exposed for 8 sec.
		1 x Fig 11 handheld.	75	2	d. When the tgt appears, the firer fires 2 x rds at 1 x Fig 11 from the standing shoulder position.	HPS 2	1 x 5 sec exposure.

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
		1 x Fig 12 handheld.	50	2	e. When the tgt appears, the firer fires 2 x rds at 1 x Fig 12 from the standing shoulder position.	HPS 2	1 x 5 sec exposure.
		1 x Fig 11 handheld.	25	6	f. When the tgt appears, the firer fires 1 x burst at the 1 x Fig 11 from the standing shoulder or hip position. g. Firing stops when the tgt goes down.	HPS 6	2 x 5 sec exposures.

NOTES

- Ammunition.** 69 rds.
- Scoring.** HPS—49 points. 1 point per hit in all Sers.
- Standards.**
 - Pass—29 points (60% of HPS).
 - Marksman—39 points (80% of HPS).
- Ser 1 and Ser 2 may be skipped if a given firer is satisfied that their weapon is zeroed.

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 36—KITE SIGHT INTRODUCTION SHOOT (LIVE)

38. **Aim.** To zero/register the Kite sight to the firer's personal weapon.

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Grouping Prone Unsupported	1 x Fig 11 on a 1.22 m witness screen with a 75 by 100 mm white patch.	100	20	a. Fire 4 x 5 rd groupings at the same aiming mark. b. The firer is to apply the safety catch, stand up, then re-adopt the position between each grouping.	Nil	a. Measure the size of the group. b. Identify the MPI and adjust for zero if necessary (see Kite Sight Zeroing Information Table below). c. Order UNLOAD on completion.

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
2	Check Group Prone Unsupported	As per Ser 1.	100	5	a. Fire 1 x 5 rd check group to confirm zero. b. If the correct zero is not achieved, repeat Ser 1.	Grouping Size	a. For information on adjusting the "KITE" sight, see the table below or refer to the C7 pamphlet. b. Once zeroing is correct, record PZP with the SAC.

NOTES

1. **Ammunition.** 25 rds.
2. **Scoring.** The 5 rd grouping size that should be achieved in Ser 2 for the C7A1 is 150 mm.

KITE SIGHT ZEROING INFORMATION TABLE FOR C7A1 RIFLE

Sight Setting	Rge (m)		CZP from POA	Adjustment		Movement of MPI
	Zeroing Rge	Correct For		Elevation	Direction	
200	100 m	300 m	90 mm Above	1 Click = 50 mm	1 Click = 50 mm	UP. Turn the adjustment screw in the opposite direction of the arrow.
	25 m	300 m	40 mm Below	1 Click = 13 mm	1 Click = 13 mm	DOWN. Turn the adjustment screw in the direction of the arrow. RIGHT. Turn the adjustment screw in the direction of the arrow. LEFT. Turn the adjustment screw in the opposite direction of the arrow.

RIFLE AND CARBINE PWT 3 SUPPLEMENT—KITE SIGHT

39. **Aim.** To confirm the firer's ability to effectively engage targets at night using a Kite sight.

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Snap Standing Unsupported	1 x Fig 11.	25 or 50	5	a. Order WATCH AND SHOOT. b. Fire 1 rd at each exposure.	HPS 5	a. Tgt falls when hit. b. 5 x 5 sec exposures with irregular intervals.

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Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
2	Rapid Sitting Unsupported	As per Ser 1.	100	5	a. Order WATCH AND SHOOT. b. Fire 5 rds rapid at the exposure. c. On completion, order UNLOAD.	HPS 5	a. Tgt up and hold. b. 1 x 10 sec exposure.
3	Snap Kneeling Supported	As per Ser 1.	200	5	a. Order WATCH AND SHOOT. b. Fire 1 rd at each exposure.	HPS 5	a. Tgt falls when hit. b. 5 x 6 sec exposures.
4	Rapid Prone or Fire Trench (if available)	As per Ser 1.	200	5	a. Order WATCH AND SHOOT. b. Fire 5 rds at the exposure. c. On completion, order UNLOAD.	HPS 5	a. Tgt up and hold. b. 1 x 10 sec exposure.
5	Snap Prone Unsupported	As per Ser 1.	300	10	a. Order WATCH AND SHOOT. b. Fire 1 rd at each exposure. c. On completion, order UNLOAD.	HPS 10	a. Tgt falls when hit. b. 10 x 6 sec exposures.
6	Snap Kneeling Supported	As per Ser 1.	200	5	a. Firer adopts the prone position at 300 m. b. Order PREPARE TO MOVE. c. The appearance of the tgt is the signal for the firer to advance to the 200 m firing point and fire 1 rd at each exposure. d. Tgt falls when hit. e. On completion, and in preparation for the next Ser, order STAND UP AND ADOPT THE STANDING LOW READY (ALERT) POSITION..	HPS 5	a. Tgt falls when hit. b. 1 x 20 sec exposure followed by 4 x 6 sec exposures.
7	Rapid	As per Ser 1.	100	5	a. Firer adopts the standing position at	HPS 5	a. Tgt up and hold.

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
	Standing				200 m. b. Order PREPARE TO MOVE . c. The appearance of the tgt is the signal for the firer to advance to the 100 m firing point and fire 5 rds rapid at the exposure. d. On completion, order UNLOAD .		b. 1 x 25 sec exposure.

NOTES

1. **Ammunition.** 40 rds.
2. **Scoring.** HPS—40 points. 1 point per hit.
3. **Standard.** Pass—24 points (60% of HPS).
4. Firers must be current on the C7 PWT 3 prior to taking this test.

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 37—NIGHT VISION GOGGLES AND LASER AIMING DEVICE INTRODUCTION SHOOT

40. **Aim.** To train the firer to effectively engage targets using night vision goggles (NVG) and a laser-aiming device (LAD).

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Deliberate Standing	1 x Fig 11.	25	5	a. No time limit. b. Fire 1 x 5 rd grouping at the tgt to confirm that the parallel zeroing using the offset tgt is correct. c. On completion, order UNLOAD . d. If the firer fails to hit the tgt, the parallel zeroing procedure is to be repeated.	Nil	Tgt up and hold.
2.	Deliberate Kneeling	As per Ser 1.	25	5	a. No time limit. b. Fire 5 rds at the exposure. c. Firer is to note the POA that allows for the rds to hit centrally on the tgt.	Nil	As per Ser 1.
3	Deliberate Standing	As per Ser 1.	50	5	As per Ser 2.	Nil	As per Ser 1.

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
4	Deliberate Kneeling	As per Ser 1.	50	5	As per Ser 2.	Nil	As per Ser 1.
5	Deliberate Standing	As per Ser 1.	75	5	As per Ser 2.	Nil	As per Ser 1.
6	Deliberate Kneeling	As per Ser 1.	75	5	As per Ser 2.	Nil	As per Ser 1.
7	Deliberate Sitting	As per Ser 1.	100	5	As per Ser 2.	Nil	As per Ser 1.
8	Deliberate Prone	As per Ser 1.	100	5	As per Ser 2.	Nil	As per Ser 1.

NOTES

1. **Ammunition.** 40 rds.
2. Either the AN/PEQ-2A or the AN/PAQ-4C LAD may be used with this practice.

RIFLE AND CARBINE PWT 3 SUPPLEMENT—NVG

41. **Aim.** To confirm the firer's ability to engage targets at night using night vision goggles (NVG) and a laser aiming device (LAD).

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Deliberate Standing	1 x Fig 11.	25	5	a. Firer adopts the standing position. b. Order WATCH AND SHOOT . c. Fire 1 x 5 rd grouping at the tgt to confirm that the parallel zeroing using the offset tgt is correct. d. On completion, order UNLOAD . f. If the firer fails to hit the tgt, then the parallel bore sighting procedure is to be repeated.	Nil	Tgt up and hold.
2.	Rapid Standing Unsupported	As per Ser 1.	25	5	a. Firer adopts the standing position. b. Order WATCH AND SHOOT . c. Fire 5 rds at the exposure.	HPS 5	a. Tgt up and hold. b. 1 x 10 sec exposure.

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
3	Snap Kneeling Unsupported	As per Ser 1.	50	5	a. Firer adopts the kneeling position. b. Order WATCH AND SHOOT . c. Fire 1 rd at each exposure. d. Tgt falls when hit.	HPS 5	a. Tgt falls when hit. b. 5 x 4 sec exposures.
4	Snap Standing and Kneeling Unsupported	As per Ser 1.	75	10	a. Firer adopts the standing low ready (alert) position. b. Order WATCH AND SHOOT . c. The appearance of the tgt is the signal for the firer to fire 1 rd from the standing position, and then adopt the kneeling position and fire another rd. d. After each exposure, order APPLY SAFETY LEVER AND STAND UP . e. Tgt falls when hit.	HPS 10	a. Tgt falls when hit. b. 5 x 10 sec exposures with irregular intervals.
5	Snap/Rapid Prone	As per Ser 1.	100	10	a. Firer adopts the prone position. b. Order WATCH AND SHOOT . c. Fire 1 rd at each exposure. d. Tgt falls when hit. e. After the fifth exposure, order 5 RDS RAPID... WATCH AND SHOOT . f. Fire 5 rds at the last exposure (tgt up and hold).	HPS 10	a. 5 x 4 sec exposures with irregular intervals followed 1 x 15 sec interval, and then 1 x 10 sec exposure. b. For exposures 1-4, tgt falls when hit. c. For the fifth exposure, tgt are up and hold.
6	Rapid Kneeling	As per Ser 1.	100	5	a. Firer adopt the standing low ready (alert) position at 150 m. b. Order PREPARE TO MOVE . c. The appearance of the tgt is the signal for the firer to move to the 100 m firing point, make ready, and fire 5 rds from the kneeling position. d. After the exposure, and in preparation for the next Ser, order APPLY SAFETY LEVER AND STAND UP .	HPS 5	a. Tgt up and hold. b. 1 x 20 sec exposure.

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
7	Movement and Fire Standing	As per Ser 1.	50	5	a. Firer adopts the standing low ready (alert) position at 100 m. b. Order PREPARE TO MOVE . c. The appearance of the tgt is the signal for the firer to move to the 50 m firing point and fire 1 rd from the standing position at each exposure. d. Tgt falls when hit.	HPS 5	a. Tgt falls when hit. b. 1 x 10 sec exposure followed by 5 x 4 sec exposures.

NOTES

1. **Ammunition.** 45 rds.
2. **Scoring.** HPS—40 points. 1 point per hit.
3. **Standard.** Pass—24 points (60% of HPS).
4. Either the AN/PEQ-2A or the AN/PAQ-4C LAD may be used with this practice.

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 41—ADOPTING TACTICAL STANCES

42. **Aim.** To train the firer to employ quick aim shooting techniques by adopting a proper tactical stance.

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
1	Zeroing Prone	1 x 4-foot screen with 3-inch dots.	25	25	a. Fire 1 x 5 rd grouping shooting at a 3 inch dot. Identify MPI and adjust zero. Continue grouping until zeroed. d. Firer will complete zeroing by firing a confirmatory group of 5 x rounds.	See notes	a. Firer must understand their POA in relation to the POI. b. At 25 m the POA = POI. c. No time limit.
2	Standing (Low Ready)	As per Ser 1.	7	28	a. Order LOOKING IN Firer is to adopt the low ready (alert) position. b. On the Command UP , fire 1 rd at one of the 3-inch dots. c. Firer is to adopt the low ready (alert) position between each engagement. d. Switch tgt after 2 rds.	See notes	a. Focus on set time and presentation time. b. Firer to rest and relax after fourth exposure. c. No time limit, though tgt engagement should take no more than 10 sec. d. Scan and breathe;

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
							maintain situational awareness after each engagement.
3	Standing (Low Ready)	As per Ser 1.	7	28	a. Order LOOKING IN Firer is to adopt the low ready (alert) position. b. On the Command UP , fire 2 rds at one of the 3 inch dots. c. Firer is to adopt the low ready (alert) position between each grouping. d. Switch tgt after each engagement.	See notes	As per Ser 2.
4	Standing (Low Ready)	As per Ser 1.	7	28	a. Order LOOKING IN Firer is to adopt the low ready (alert) position. b. On the Command UP , fire 1 rd at one of the 3-inch dots, and then 1 rd at the second. Firer is to adopt the low ready (alert) position between each engagement. c. Repeat for 4 engagements.	See notes	As per Ser 2.

NOTES

1. **Ammunition.** 109 rds (84 rds if Ser 1 is not conducted).
2. **Scoring.** Pass/Fail
3. **Standards.** This practice is not scored. A successful engagement occurs when firer demonstrates the proper stance and hold, and hits the tgt within the 3-inch dots.
4. Handling drills are taught prior to the conduct of this practice. These drills are to be practised when necessary during the conduct of the range practice:
 - a. load and ready (includes press check);
 - b. IA drill (tap, rack and go);
 - c. tactical reload;
 - d. emergency reload; and
 - e. cover drill.
5. The ARSO is to ensure positive control on weapons at all times (e.g. muzzle awareness, and that the strong hand does not leave pistol grip).
6. Warm up rds may be required.

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 42—SHOOTING ACCURATELY

43. **Aim.** To train the firer to be able to take quick aim shots.

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
1	Zero and Warm Up	1 x 4-foot screen with 8-inch dots.	25/10	20	a. Fire 1 x 5 rd grouping at 25 m to confirm zero. b. Move to 10 m and fire 15 rds on firer's own time.	Nil	a. Ensure firer zeroed at 25 m. b. No time limit.
2	Standing (Low Ready)	As per Ser 1.	7	28	a. Order LOOKING IN Firer is to adopt the low ready (alert) position. b. On the Command UP Fire 1 rd at one 8-inch dot on each up. c. Adopt the low ready (alert) position between shots.	Nil	a. No time limit. b. Scan and breathe; maintain situational awareness after each engagement.
3	Standing (Low Ready)	As per Ser 1.	7	28	a. Order LOOKING IN Firer is to adopt the low ready (alert) position; b. On the Command UP fire 2 rds at the one 8-inch dot on each up. c. Adopt the low ready (alert) position between engagements.	Nil	a. No time limit. b. Scan and breathe; maintain situational awareness after each engagement.
4	Standing (Low Ready)	As per Ser 1.	7	28	a. Order LOOKING IN Firer is to adopt the low ready (alert) position. b. On the Command UP fire 1 rd at one 8-inch dot and 1 rd at another 8-inch dot on each up. c. Adopt the low ready (alert) position between engagements.	Nil	a. No time limit. b. Scan and breathe; maintain situational awareness after each engagement.
5	Standing (Low Ready)	B27 Silhouette Tgt.	7	28	a. Order LOOKING IN Firer is to adopt the low ready (alert) position. b. On the Command UP fire 2 rds to the body, then 1 rd to the head on each up.	Nil	a. Represents individual wearing body armour. b. Firer is to receive 9 "ups", no time limit. c. Scan and breathe; maintain situational awareness after each engagement.

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
6	Standing (Low Ready)	As per Ser 5.	15	12	a. Order LOOKING IN Firer is to adopt the low ready (alert) position. b. On the Command UP fire 2 rds to the body on each up.	Nil	a. Firer is to receive 6 “ups”, no time limit. b. Firer is to adopt the low ready (alert) position between engagements.
7	Standing (Low Ready)	As per Ser 5.	15	18	a. Order LOOKING IN Firer is to adopt the low ready (alert) position. b. On the Command UP fire 2 rds to the body then 1 rd to the head on each up.	Nil	a. As per Ser 6. b. 6 “ups”, no time limit.
8	Standing (Low Ready)	As per Ser 5.	7	6	a. Order LOOKING IN Firer is to adopt the low ready (alert) position. b. On the Command UP fire 2 rds to the body on each up.	HPS 6	a. As per Ser 7. b. 3 “ups”, no time limit.
9	Standing (Low Ready)	As per Ser 5.	7	9	a. Order LOOKING IN Firer is to adopt the low ready (alert) position. b. On the Command UP fire 2 rds to the body then 1 rd to the head on each up.	HPS 9	a. As per Ser 6. b. 3 “ups”, no time limit.

NOTES

1. **Ammunition.** 177 rds (157 rds if Ser 1 is not conducted).
2. **Scoring.** HPS—15 points. 1 point per hit. Focus on set time and presentation time development.
3. **Standard.** Pass—9 points (60% HPS).
4. Ensure proper shooting principles—stance, weapon hold, and trigger control.
5. Handling drills are taught prior to conduct of the range. These drills are to be practised when necessary during the conduct of the range practice:
 - a. load and ready;
 - b. IA drill (tap, rack and go);
 - c. tactical reload;
 - d. emergency reload; and
 - e. cover drill.
6. The ARSO is to ensure positive control on weapons at all times (e.g. muzzle awareness, and that the strong hand does not leave pistol grip).

RIFLE AND CARBINE APPLICATION RANGE 43—EMERGENCY RELOADING AND IA DRILLS

44. **Aim.** To train the firer to quickly conduct emergency reloads and immediate action drills.

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
1	Warm Up	1 x 4-foot screen with 8-inch dot.	25/10	20	a. Fire 1 x 5 rd grouping at 25 m to confirm zero. b. Move to 10 m and fire 15 rds on Firer's own time.	Nil	a. Ensure firer is zeroed at 25 m. b. This Ser is optional if this range practice is completed immediately following Rge Practice 42.
2	Emergency Reload	B27 Silhouette Tgt.	7	15	a. On the Command UP Firer is to engage the tgt with 3 rds to the body. b. Firer is to perform an emergency reload after the 2nd rd is fired	See notes	a. Firer to be given 2 mags with 2 rds in each. b. RSO to order READY with two rds mag. c. Total 5 exposures
3	IA Drill—Bolt Fully Forward (Tap, Rack & Go)	As per Ser 2.	7	5	a. On the Command UP Firer is to engage the tgt with 1st to the body. b. Firer will attempt to engage the tgt, conduct an IA drill, and engage the tgt with 1 rd.	See notes	a. ARSO will order the soldier to ready their wpn without a magazine, once that is complete the ARSO will order the soldier to place on a live mag to their wpn. b. No time limit. c. Repeat for a total of 5 exposures.
4	Emergency Reload	As per Ser 2.	15	9	a. On the Command UP Firer is to engage the tgt 3 rds to the body. b. Firer is to perform an emergency reload after the 2nd rd is fired.	See notes	a. Firer to be given 2 mags with 2 rds in each. b. RSO to order READY with two rds mag. c. Total 3 exposures.
5	IA Drill—Bolt Fully Forward (Tap, Rack and Go)	As per Ser 2.	15	5	a. On the Command UP Firer is to engage the tgt with 1 rds. b. Firer will attempt to engage the tgt, conduct an IA drill, and engage the tgt with 1 rd.	See notes	

NOTES

1. **Ammunition.** 54 rds (34 rds if Ser 1 is not conducted).
2. **Scoring.** Pass/ Fail.
3. Practice is designed to develop gross motor skills and economy of motion while conducting drills.
4. ARSO to ensure positive control on weapons at all times focus on strong hand does not leave pistol grip.
5. If possible, firers should be informally timed to gauge performance (speed), but the focus is on accuracy. Shot timers (using audible beeps) can be substituted for the words of command **UP**.
6. The Fig 11 target may be used in place of the B27 target if it is not available.

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 44—STATIC TURNING

45. **Aim.** To train the firer to be able to turn and take quick aim shots.

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
1	Warm Up	1 x 4-foot screen with 8-inch dot.	25/10	20	a. Fire 1 x 5 rd grouping at 25 m to confirm zero. b. Move to 10 m and fire 15 rds on Firer's own time.	Nil	a. Ensure firer is zeroed at 25 m. b. This Ser is optional if this range practice is completed immediately following Rge Practice 43.
2	Static Turns Left	B27 Silhouette Tgt.	7	10	a. Firer is ordered LOOKING IN—TURN TO THE LEFT at the low ready (alert) position. b. On the Command UP execute turn and engage single tgt—2 rds to the body (9 ring) (2 rds per "up").	Nil	a. Ensure weapons are handled safely; weapons on "Safe" and fingers off the trigger. b. Firer takes time and concentrates on skill development. c. Firer is to receive 5 engagements. d. No time limit. e. Continue practice as required.
3	Static Turns Right	As per Ser 2.	7	10	a. Firer is ordered LOOKING IN—TURN TO THE RIGHT at the low ready (alert) position. b. On the Command UP execute turn and engage single tgt—2 rds to the	Nil	a. Ensure weapons are handled safely; weapons on "Safe" and fingers off the trigger. b. Firer takes time and concentrates on skill development.

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
					body (9 ring) (2 rds per "up".)		c. Firer is to receive 5 engagements. d. No time limit. e. Continue practice as required.
4	Alternating Static Turns Left/Right	As per Ser 2.	15	20	a. Firer is ordered LOOKING IN—TURN TO THE LEFT or RIGHT . b. On the Command UP execute turn and engage single tgt—2 rds to the body (9 ring) with 2 rds per "up".	Nil	a. Ensure weapons' safety. b. Alternate direction of turn. c. Total exposures of 10.

NOTES

1. **Ammunition.** 60 rds (40 rds if Ser 1 is not conducted).
2. **Scoring.** Nil
3. **Standard.** N/A
4. Focus on the development of the turn (i.e. identify the tgt, turn, and engage the tgt).
5. Ensure Firers have completed the turn before engaging the tgt.
6. Firers are to adjust their firing position after completion of the engagement.
7. Ensure proper application of fundamentals:
 - a. stance;
 - b. weapons hold (readiness state);
 - c. trigger control; and
 - d. follow through (to include scan and breathe; maintain situational awareness).
8. If possible, firers should be informally timed to gauge performance (speed), but the focus is on accuracy. Shot timers (using audible beeps) can be substituted for the words of command **UP**.
9. The Fig 11 target may be used to replace the B27 target if it is not available.

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 45—MOVING ENGAGEMENTS

46. **Aim.** To train the firer to be able to take quick aim shots while moving.

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
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Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
1	Warm Up	1 x 4-foot screen with 8-inch dot.	25/10	20	a. Fire 1 x 5 rd grouping at 25 m to confirm zero. b. Move to 10 m and fire 15 rds on Firer's own time.	Nil	a. Ensure Firer is zeroed at 25 m. b. This Ser is optional if conducted immediately following Rge Practice 43.
2	Moving Turns Left	B27 Silhouette Tgt.	7	10	a. The command LOOKING IN Firer is to adopt the low ready (alert) position facing the tgt. b. On order TURN TO YOUR LEFT the Firer will turn in the correct direction. c. On the command WALK the Firer will move along the firing line until ordered to STOP where the Firer will be ordered to TURN ABOUT . d. On the command WALK , the Firer will move back along the firing line. e. The command UP will be given when the Firer is aligned with their tgt and where they will execute the LEFT turn. f. Firer will engage the single tgt 2 rds to the body (9 ring).	Nil	a. Firers will be spaced so that there is a blank firing lane between each Firer. b. Ensure weapons are handled safely; weapons on safe and fingers off the trigger, and pointed in a safe direction in the low ready (alert) position. c. Ensure firer always turns towards the butts. d. Firer to receive 5 engagements
3	Moving Turns Right	As per Ser 2.	7	10	a. The command LOOKING IN Firer is to adopt the low ready (alert) position facing the tgt. b. On order TURN TO YOUR RIGHT , the Firer will turn in the correct direction. c. On the command WALK , they will move along the firing line until ordered to STOP , where he will be ordered to TURN ABOUT . d. On the command WALK , the Firer will move back along the firing line. e. The command UP will be given when the Firer is aligned with his tgt and where he will execute the RIGHT turn.	Nil	As per Ser 2.

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
					f. The Firer will engage the single tgt—2 rds to the body (9 ring)		
4	Set Drill	As per Ser 2.	10-7	10	a. On Command LOOKING IN the Firer will adopt low ready position at the 10 m point. b. On Command UP or audible beep the Firer will move forward to the 7 m line and engage the tgt—2 rds to the body (9 ring) .		a. Weapons on "Safe" when moving. b .Firer to receive 5 engagements. c. Firer should be encouraged to move to the 7 m quickly.
5	Shooting on the Move	As per Ser 2.	15-3	20	a. On Command LOOKING IN the Firer will adopt the low ready position at the 15 m point. b. On Command UP . c. The Firer will begin to move forward in the threat ready position. d. On the command THREAT , the Firer will engage the tgt with 2 rds.		a. Ensure Firer is observing arcs. b. Firer is to remain at the threat ready position after the initial engagement. c. Firer to continue to move when shooting. d. Firer to fire 2 rds at each Command THREAT (command to be given 5 times). e. No time limit. f. 2 x iterations firing 10 rds per iteration.
6	Shooting on the Move	as per Ser 2	15-3	10-20	a. On Command LOOKING IN the Firer will adopt the low ready position at the 15 m point. b. On Command UP Firer will begin to move forward in the threat ready position. c.. On the order THREAT the Firer will engage the tgt with continuous fire.		a. Ensure firer is observing arcs. b. Firer to work on recoil management. c. Firer is to continue to move when shooting. d. Firer is to fire 2 rds at a time. e. No time limit.

NOTES

1. **Ammunition.** 100 rds (80 rds if Ser 1 is not conducted).
2. **Scoring.** N/A
3. **Standard.** N/A
4. Practice is designed to develop turns on the move (e.g. identify the tgt, turn, and

engage the tgt).

5. Ensure firers have completed the turn before engaging the tgt.
6. Firers are to adjust their firing position after completion of the engagement.
7. Ensure weapons safety is enforced:
 - a. muzzle awareness; and
 - b. weapons on safe while moving except in Sers 5 and 6.
8. The ARSO is to ensure positive control on weapons at all times (e.g. muzzle awareness, and that the strong hand does not leave pistol grip).
9. The Fig 11 target may be used to replace the B27 target if it is not available.
10. The Command **UP** is the only Command to be used during all movement on the range

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 46—SHOOTING FROM ALTERNATE POSITIONS AND BARRICADES

47. **Aim.** To train the firer to employ quick aim shooting techniques from alternate firing positions and from behind barricades.

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
1	Barricade Modified Prone (Strong)	B27 Silhouette Tgt.	25	6	a. Order LOOKING IN (the firer will be in the correct shooting position). b. On Command UP fire 2 rds to the body.		a. Firer must shoot through mouse holes. b. Firer is to receive 3 engagements with no time limit.
2	Barricade Modified Prone (Weak)	As per Ser 1.	25	6	a. Order LOOKING IN (the firer will be in the correct shooting position). b. On Command UP fire 2 rds to the body.		a. Firer must shoot through a mouse hole. b. Firer is to receive 3 engagements with no time limit.
3	Barricade Modified Kneeling	As per Ser 1.	20	6	a. Order LOOKING IN (the Firer will be in the correct shooting position). b. Fire 2 rds to the body.		a. Firer must adjust for height to shoot around the barricade. b. Firer is to receive 3 engagements with no time limit.
4	Barricade Standing (Step-out) (limited)	As per Ser 1.	15	12	On Command UP fire 2 rds to the body.		a. Firer to conduct "step out" to engage the tgt. b. Firer is to receive 6 engagements with no time limit—three step out and three limited.

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
5	Barricade Kneeling	As per Ser 1.	10	10	a. Order LOOKING IN Firer to adopt the low ready position. b. On Command UP , Firer is to adopt the kneeling position and engage the tgt with 2 rds to the body around the barricade.		a. Ensure that barrels clear the corner. b. Firer is to receive 5 engagements with no time limit. c. Firer is to remain behind the barricade. d. On the command UP the firer is to adjust his height and fire over the barricade

NOTES

1. **Ammunition.** 40 rds.
2. **Scoring.** N/A
3. **Standard.** N/A
4. The practice is designed to develop alternate firing positions.
5. The ARSO is to ensure positive control on weapons at all times (e.g. muzzle awareness while paying close attention to the barricade, and that the strong hand does not leave pistol grip).
6. The Command **UP** is the only Command to be used during barricade shooting.
7. The Fig 11 target may be used in place of the B27 target if it is no available.

RIFLE AND CARBINE PWT 4 PART 1—STATIC ENGAGEMENTS

48. **Aim.** To confirm that the firer can take quick aim shots from static positions.

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
1	Warm Up	1 x 4-foot screen with 8-inch dot.	25/10	20	a. Fire 1 x 5 rd grouping at 25 m to confirm zero. b. Move to 10 m and fire 15 rds on firer's own time.	Nil	Ensure firer is zeroed at 25 m.
2	Standing (Low Ready)	B27 Silhouette Tgt.	7	10	a. Order LOOKING IN the Firer will adopt the low ready. b. On the Command UP fire 2 rds to the body.	HPS 10	a. Firer is to receive 5 engagements b. Firer is to adopt the low ready (alert) position between engagements.
3	Emergency Reload	B27 Silhouette	7	6	a. On the Command UP the Firer is to engage the	HPS 6	a. Firer will fire a total of 3 rds per

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
		Tgt.			tgt with 3 rds to the body. b. The firer is to perform and emergency reload after the 2nd rd is fired.		engagement. b. 2 engagements. c. Firer is given 2 mags with 2 rds in each.
4	Standing (Low Ready)	As per Ser 2.	10	10	a. Order LOOKING IN . b. On the Command UP fire 2 rds to the body.	HPS 10	a. As per Ser 2. b. 5 engagements
5	Standing (Low Ready)	As per Ser 2.	10	12	a. Order LOOKING IN . b. On the Command UP Firer 2 rds to the body, then 1 rd to the head.	HPS 12	a. As per Ser 3. b. 4 engagements.
6	Static Turns Left/Right	As per Ser 2.	10	10	a. Firer will be ordered LOOKING IN turn to your (either) LEFT or RIGHT; b. On the Command UP the Firer is to execute the turn to engage the tgt to the body with 2 rds.	HPS 10	a. Alternate the direction of the turn. b. Firer is to receive 5 engagements

NOTES

- Ammunition.** 68 rds.
- Scoring.** HPS—48 points:
 - Ser 3, Ser 6—1 point per head hit.
 - Remaining Sers—1 point per hit inside the 9 ring.
- Standard.** Pass—29 points (60% HPS).
- Practice is designed to ensure proper application of fundamentals:
 - stance;
 - weapons hold (readiness state);
 - trigger control; and
 - follow through (e.g. scan and breathe; maintain situational awareness after each engagement).
- If possible, firers should be informally timed to gauge performance (speed), but the focus is on accuracy. Shot timers (using audible beeps) can be substituted for the words of command **UP**.
- The Fig 11 target may be used in place of the B27 target if it is not available.

RIFLE AND CARBINE PWT 4 PART 2—MOVING ENGAGEMENTS

- Aim.** To confirm that the firer can take quick aim shots while moving.

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
1	Moving Turns Left	B27 Silhouette Tgt.	7	10	<p>a. On order LOOKING IN Firer is to adopt the low ready (alert) position facing the tgt.</p> <p>b. On order TURN TO YOUR LEFT, the firer will turn in the correct direction.</p> <p>c. On the Command WALK, he will move along the firing line until told to stop, where he will be ordered to TURN ABOUT.</p> <p>d. On the command WALK, the firer will move back along the firing line.</p> <p>e. The command UP will be given when the Firer is aligned with their tgt and where he will execute the LEFT turn.</p> <p>f. Firer is to engage the tgt to the body (9 ring) with 2 rds.</p>	HPS 10	<p>a. Firers will be spaced so that there is a blank firing lane between each firer.</p> <p>b. Ensure weapons are handled safely; weapons on "Safe", fingers off trigger, and pointed in a safe direction.</p> <p>c. Firer is to be in the low ready (alert) position except when firing.</p> <p>d. Ensure Firer always turns towards the butts.</p> <p>e. 5 engagements.</p>
2	Moving Turns Right	As per Ser 1.	7	10	<p>a. On order LOOKING IN Firer is to adopt the low ready (alert) position facing the tgt.</p> <p>b. On order TURN TO YOUR RIGHT, the firer will turn in the correct direction.</p> <p>c. On the command WALK, he will move back along the firing line until ordered to STOP, and ordered to TURN ABOUT.</p> <p>d. On the Command WALK, the Firer will move back along the firing line.</p> <p>e. The Command UP will be given when the Firer is aligned with his tgt and where he will execute the RIGHT turn.</p> <p>f. Firer is to engage the tgt to the body (9 ring) with 2 rds.</p>	HPS 10	As per Ser 1.

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
3	Set Drill	As per Ser 1.	10-7	6	a. On order LOOKING IN the Firer will adopt the low ready position at the 10 m point. b. On Command UP the firer will move forward to the 7 m line and engage the tgt with 2 rds to the body.	HPS 6	a. Weapons on "Safe" when moving. b. Firer will receive 3 engagements.
4	Shooting on the Move	As per Ser 1.	15-3	10	a. On order LOOKING IN the Firer will adopt the low ready at the 15 m point. b. On Command UP the Firer will begin to move forward in the threat ready position. c. On the order THREAT , the Firer will engage the tgt with continuous fire.	HPS 10	a. Ensure Firer is observing arcs. b. Firer to work on recoil management. c. Firer is to continue to move when shooting. d. Firer is to fire 2 rds at a time. e. No time limit.

NOTES

1. **Ammunition.** 36 rds.
2. **Scoring.** HPS— 36 points. 1 point per hit inside the 9 ring.
3. **Standard.** Pass—22 points (60% of HPS).
4. Ensure proper application of fundamentals:
 - a. stance;
 - b. weapons hold (readiness state);
 - c. trigger control; and
 - d. follow through (e.g. scan and breathe; maintain situational awareness).
5. The Command **UP** is the only Command to be used during all movement on the range.
6. The Fig 11 target may be used to replace the B27 target if it is not available.

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 47—LOW LIGHT AND TACTICAL FLASHLIGHT ENGAGEMENTS

50. **Aim.** To train the firer to engage targets quickly and accurately in low light and night conditions with the aid of a tactical flashlight.

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
1	Standing (Low Ready)	B27 Silhouette Tgt.	7	10	a. Order LOOKING IN . Firer is to adopt the low ready. b. On the Command UP fire 1 rd to the body.	Nil	Low light conditions (no white light nor NVD).
2	Standing (Low Ready)	As per Ser 1.	7	10	a. Order LOOKING IN . Firer is to adopt the low ready. b. On the Command UP fire 2 rds to the body.		a. As per Ser 1. b. Firer will receive 5 engagements with no time limit.
3	Standing (Low Ready)	As per Ser 1.	7	10	a. Order LOOKING IN . Firer is to adopt the low ready. b. On the Command UP fire 1 rd to the body		a. Firer will utilize the tactical flashlights and flare the tgt when engaging. b. Ensure proper light discipline. c. Firer will receive 10 engagements with no time limit.
4	Standing (Low Ready)	As per Ser 1.	15	10	a. Order LOOKING IN . Firer is to adopt the low ready. b. On the Command UP fire 2 rds to the body		a. As per Ser 3. b. Firer will receive 5 engagements with no time limit.
5	Static Turns Left/Right (Low Ready)	As per Ser 1.	7	20	a. Order LOOKING IN TURN TO THE LEFT/ RIGHT . Firer is to adopt the low ready (alert) position facing the correct direction. b. On the Command UP the Firer is to turn and fire 2 rds to the body.		a. Firer to utilize tactical flashlights. b. Ensure weapons safety. c. Alternate the direction of the turn. d. Firer will receive 10 engagements with no time limit.

NOTES

1. **Ammunition.** 60 rds.
2. **Scoring.**
3. **Standards.** N/A
4. Requirement for coaching throughout with focus on developing night fighting skills:
 - a. proper light discipline;
 - b. muzzle awareness;
 - c. ensure firers have completed the turn before engaging the tgt; and

- d. firers to adjust their firing position after completion of their engagement.
- 5. The ARSO is to ensure positive control on weapons at all times (e.g. muzzle awareness, and that the strong hand does not leave pistol grip).
- 6. The Command **UP** is the only Command to be used during night shooting.
- 7. The Fig 11 target may be used in place of the B27 target if it is not available.
- 8. Warm up rds may be required.

RIFLE AND CARBINE APPLICATION RANGE PRACTICE 48—LAD AND NVD ENGAGEMENTS

51. **Aim.** To train the firer to engage targets quickly and accurately in low light and night conditions using laser aiming devices (LADs) and night vision devices (NVDs).

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
1	Standing (Low Ready)	1x 4-foot screen with 8-inch dot.	25	20	a. No time limit. b. Fire 4 x 5 rd groupings at the tgt to confirm zero.		a. Weapons are to be bore sighted prior to conduct of rge practice. b. Firer to be familiar with the use of LAD.
2	Standing Unsupported (Low Ready)	B27 Silhouette Tgt.	7	5	a. Order LOOKING IN . Firer is to adopt the low ready. b. On the Command UP fire 1 rd to the body.		Ensure proper use of LAD.
3	Standing Unsupported (Low Ready)	As per Ser 2.	7	5	a. Order LOOKING IN . Firer is to adopt the low ready. b. On the Command UP fire 2 rds to the body.		As per Ser 3.
4	Static Turns Left/Right (Low Ready)	As per Ser 2.	7	20	a. Order LOOKING IN TURN TO THE LEFT/ RIGHT . Firer is to adopt the low ready. b. On the Command UP turn and fire 2 rds to the body.		a. Ensure weapons safety. b. Alternate the direction of the turn.

NOTES

- 1. **Ammunition.** 50 rds.
- 2. **Scoring.**
- 3. **Standard.** N/A

4. Handling drills to be conducted as taught when required.
5. Ensure firers are conducting covering drill when conducting mag changes.
6. The ARSO is to ensure positive control on weapons at all times (e.g. muzzle awareness, and that the strong hand does not leave pistol grip).
7. Either the AN/PEQ-2A or the AN/PAQ-4C LAD may be used with this practice.
8. AN/PVS-14 (MNVG) is the recommended NVD for the conduct of this range.
9. The Command **UP** is the only Command to be used during night shooting.
10. The Fig 11 target may be used to replace the B27 target if it is not available.

RIFLE AND CARBINE PWT 4 NIGHT SUPPLEMENT—LAD AND NVD ENGAGEMENTS

52. **Aim.** To test the firer to engage targets quickly and accurately in low light and night conditions using laser aiming devices (LADs) and night vision devices (NVDs).

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
1	Standing (Low Ready)	B27 Silhouette Tgt.	7	4	a. Order LOOKING IN . Firer is to adopt the low ready. b. On the Command UP fire 2 rds to the body.	HPS 4	a. Firer will utilize the tactical flashlights and flare the tgt when engaging. b. Ensure proper light discipline. c. Firer will receive 10 engagements with no time limit.
2	Static Turns Left/Right (Low Ready)	As per Ser 1.	7	10	a. Order LOOKING IN TURN TO THE LEFT/ RIGHT . Firer is to adopt the low ready (alert) position facing the correct direction. b. On the Command UP the Firer is to turn and fire 2 rds to the body.	HPS 10	a. Firer to utilize tactical flashlights. b. Ensure weapons safety. c. Alternate the direction of the turn. d. Firer will receive 10 engagements with no time limit.
3	Standing Unsupported (Low Ready)	As per Ser 1	7	4	a. Order LOOKING IN . Firer is to adopt the low ready. b. On the Command UP fire 2 rds to the body.	HPS 4	Ensure proper use of LAD.

Ser	Practice	Tgt	Rge (m)	Rds	Instructions	Score	Remarks
4	Static Turns Right/Left (Low Ready)	As per Ser 1	7	10	a. Order LOOKING IN TURN TO THE LEFT/ RIGHT . Firer is to adopt the low ready. b. On the Command UP turn and fire 2 rds to the body.	HPS 10	a. Ensure weapons safety. b. Alternate the direction of the turn. c. Ensure proper use of LAD.

NOTES

1. **Ammunition.** 28 rds.
2. **Scoring.** 1 point per hit (scoring zone 9 ring).
3. **Standard.** Pass 17 (HPS 28).
4. Handling drills to be conducted as taught when required.
5. Ensure firer's are conducting covering drill when conducting mag changes.
6. The ARSO is to ensure positive control on weapons at all times (e.g. muzzle awareness, and that the strong hand does not leave pistol grip).
7. Ensure proper use of tactical flashlight.
8. Either the AN/PEQ-2A or the AN/PAQ-4C LAD may be used with this practice.
9. AN/PVS-14 (MNVG) is the recommended NVD for the conduct of this range
10. The Fig 11 target may be used to replace the B27 target if it is not available
11. The Command **UP** is the only Command to be used during night shooting.
12. Warm up rds may be required.

SECTION 3—M203A1 GRENADE LAUNCHER

SCOPE

53. This section sets out all the firing practices to be completed in the CFOSP for the M203 A1 Grenade Launcher (GL). It includes the application of firing practices for all Arms and Services and the progression and frequency with which they are to be fired.

54. This progression and frequency of firing is essential for preparing grenadiers for the Personal Weapons Tests (PWTs). It is also essential in preparing the grenadier for field firing.

SIMULATION AND TECHNOLOGY

55. **Small Arms Trainer.** The use of the Small Arms Trainer (SAT) is a critical part of training the grenadier to effectively fire the GL. It should be used to evaluate

grenadiers' handling drills while assisting coaches and grenadiers in identifying faults prior to firing live.

56. To assist grenadiers, the SAT serials have been added to the range practices and are intended to mirror live practices. It must be understood that due to CFOSP changes and the current programming of the SAT, not all practices on the SAT mirror their live counterparts. Consequently, until the SAT is aligned with the CFOSP, in some cases scoring must be performed manually.

TRAINING AND FIRING SEQUENCE

57. The training and firing sequence as laid down for the GL are designed to be conducted progressively. PWT 1 and PWT 2 are gateways to PWT 3, while PWT 3 is the gateway to field firing or PWT 3 supplements.

58. Test methods for the GL are as follows:

- a. **Initial Marksmanship Training.** Application range practices and PWTs described in this section up to Stage 2 are to be conducted only on the SAT (if available). Application Range Practice 31 is to be conducted both on the SAT and live, while PWT 3 is to be conducted live.
- b. **Continuation Marksmanship Training.** The range practice requirements are as follows:
 - (1) **Application Range Practices.** These practices are not mandatory once initial marksmanship training is completed; however, if they are conducted, they may be conducted on the SAT (if available). They should be used to assist grenadiers in correcting faults experienced during the completion of a specific PWT.
 - (2) **Personal Weapons Tests 1 to 3.** Completion of both PWT 1 and PWT 2 are designed to be completed on the SAT, while PWT 3 must be completed live. COs must ensure sufficient time and resources are provided to allow for zeroing before commencing live practices.
 - (3) **Personal Weapons Test 3 Supplements.** Supplemental practices are not to be conducted during initial marksmanship training. Specific supplements are only conducted as part of pre-deployment training for those personnel who will employ the weapon in that particular configuration on operations or during field firing.

59. **Remedial Training.** SAT provides an invaluable aid to the remedial training for grenadiers who experience difficulty with the completion of a specific stage of training. COs are encouraged to make full use of the facilities wherever they are available.

Grenadiers who do not successfully complete a PWT must be afforded time to practise prior to attempting the test again.

CONDUCT OF LIVE FIRE PRACTICES

60. **Standards.** Grenadiers who do not achieve the required standards should be given further coaching and training before attempting a specific test again.

PRACTICES AND TESTS

61. The details of all GL application practices and tests are contained in the remaining pages of this section.

GRENADE LAUNCHER SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
1	SAT	11	Firing Positions	50–200	8 SAT	To familiarize the grenadier with firing the grenade launcher (GL) from all fire positions at various ranges using the SAT.
		GRENADE LAUNCHER PWT 1		75–200	16 SAT	To confirm that the grenadier can effectively fire the grenade launcher (GL) from all fire positions at various ranges.
2	SAT	21	Elementary Application	300–350	12 SAT	To train the grenadier to effectively engage a tgt from all positions at various ranges.
		GRENADE LAUNCHER PWT 2		300–350	12 SAT	To confirm that the grenadier can effectively engage targets in all positions at various ranges.
3	SAT/LIVE	31	Deliberate Fire (Live)	100–200	7 x TP	To train the grenadier to engage targets from all positions at various ranges.
	LIVE	GRENADE LAUNCHER PWT 3 (Live)		100–300	TP x 10 HE x 2	To confirm that the grenadier can effectively engage targets in all positions at various ranges.
	LIVE	32	Introduction to Non-lethal Munitions (NLM)	15–25m	24	To train the grenadier to hold, aim and fire the grenade launcher (GL) with non-lethal munitions (NLM) in the standing position.

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
	LIVE	GRENADE LAUNCHER PWT 3 SUPPLEMENT— NLM		15–25m	6	To confirm that the grenadier can effectively target and engage the required safe impact zone using 40 mm non-lethal munitions (NLM) rds.

GRENADE LAUNCHER APPLICATION RANGE PRACTICE 11—ADOPTING FIRING POSITIONS (SAT)

62. **Aim.** To familiarize the grenadier with firing the grenade launcher from all fire positions at various ranges using the SAT.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	M203 A1 Training Ser 1	Prone	Bunker with firing port.	75-50	2 SAT	a. Prone unsupported or supported (grenadiers choice). b. Fire 2 rds deliberate. c. No time limit.	See notes	Coaches employed as spotters.
2	M203 A1 Training Ser 2	Prone	1 x 2 m sized window tgt.	150	2 SAT	a. Prone unsupported or supported (grenadier's choice). b. Fire 2 rds deliberate. c. No time limit.	See notes	a. Coaches employed as spotters. b. Discuss firing position and point of impact. c. Range to be indicated.
3	M203 A1 Training Ser 3	Kneeling	1 x Fig 11 in a 5 m circle.	200	2 SAT	a. Kneeling; b. Fire 2 rds deliberate. c. No time limit.	See notes	As per Ser 2.
4	M203 A1 Training Ser 4	Sitting	As per Ser 3.	250	2 SAT	a. Sitting or squatting (grenadier's choice). b. Fire 2 rds deliberate. c. No time limit.	See notes	As per Ser 2.

NOTES

1. **Ammunition.** SAT 8 rds.
2. **Scoring.** HPS—8 points. 1 point per hit.
3. **Standard.** Pass—5 points (60% of HPS).
 - a. Ser 1 and 2—grenadier must successfully engage the tgt by getting the rds through window and bunker.
 - b. Ser 3 and 4—grenadier must hit within the 5 m circle.
4. The range staff is to pre-zero the SAT weapons prior to grenadiers attempting this practice.
5. Grenadiers who do not achieve the required standard are to be given further coaching prior to being permitted to fire the practice again.
6. Familiarization training may be conducted prior to attempting this practice.

GRENADE LAUNCHER PWT 1

63. **Aim.** To confirm that the grenadier can effectively fire the grenade launcher from all fire positions at various ranges.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	M203 A1 Wpn Zeroing	Zeroing Kneeling	1 x Fig 11 in a 5 m circle.	200	6 SAT	a. Kneeling position. b. Fire 2 rds deliberate. c. No time limit.	Nil	a. Grenadier is not to adjust the sights. b. Range to be indicated to the grenadier. c. Grenadier to fire both rds at same tgt.
2	M203 A1 Wpn Test Ser 2	Application Prone	Bunker with firing port.	75	2 SAT	a. Prone position. b. Fire 2 rds deliberate. c. No time limit.	1 point per hit HPS 2	Rds must hit the bunker window to score.
3	M203 A1 Wpn Test Ser 3	Application Prone	1 x 2 m size window tgt.	150	2 SAT	a. Prone position. b. Fire 2 rds deliberate. c. No time limit.	1 point per hit HPS 2	Rds must go through the window to score.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
4	M203 A1 Wpn Test Ser 4	Application Kneeling	As per Ser 1.	200	2 SAT	a. Kneeling position. b. Fire 2 rds deliberate. c. No time limit.	1 point per hit HPS 2	Rds must land inside the 5 m radius (10 m diameter) to score.
5	M203 A1 Wpn Test Ser 5	Application Sitting	As per Ser 1.	200	2 SAT	a. Sitting position. b. Fire 2 rds deliberate. c. No time limit.	1 point per hit HPS 2	As per Ser 3.
6	M203 A1 Wpn Test Ser 6	Application Squatting	As per Ser 1.	200	2 SAT	a. Any fire position, (grenadier's choice). b. Fire 2 rds deliberate. c. No time limit.	1 point per hit HPS 2	Rds must land inside the 5 m radius (10 m diameter) to score.

NOTES

1. **Ammunition.** SAT 16 rds.
2. **Scoring.** HPS—10 points. 1 point per hit.
3. **Standard.** Pass—6 points (60% of HPS).
4. The range staff is to pre-zero the SAT weapons prior to grenadiers attempting this practice.
5. Ser 1 is not scored, and may not be fired if the grenadier is comfortable with the weapon zero.
6. The grenadier should demonstrate the manual skills required to adjust the sights.

GRENADE LAUNCHER APPLICATION RANGE PRACTICE 21—ELEMENTARY APPLICATION

64. **Aim.** To train the grenadier to effectively engage a target from all positions at various ranges.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	M203 A1 Zeroing	Zeroing Kneeling	1 x Fig 11 in a 5 m circle.	200	6 SAT	a. Kneeling position. b. Fire 6 rds deliberate. c. No time limit.	Nil	a. Grenadier is not to adjust the sights. b. Range to be indicated to the grenadier. c. Fire all rds at the same tgt.
2	M203 A1 Wpn Test Ser 7	Standing	1 x Fig 11 in a 7.5 m circle.	300	2 SAT	a. Standing position. b. Fire 2 rds deliberate. c. No time limit.	1 point per hit	As per Ser 1.
3	M203 A1 Training Ser 6	Standing	Truck.	350	4 SAT	a. Standing position. b. Fire 4 rds deliberate. c. No time limit.	1 point per hit	As per Ser 1.

NOTES

1. **Ammunition.** SAT 12rds.
2. **Scoring.** HPS—6 points. 1 point per hit
3. **Standard.** Pass—4 points (60% of HPS).

GRENADE LAUNCHER PWT 2

65. **Aim.** To confirm that the grenadier can effectively engage targets in all positions at various ranges.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	M203 A1 Zeroing	Zeroing Kneeling	1 x Fig 11 in a 5 m circle.	200	6 SAT	a. Kneeling position. b. Fire 2 rds deliberate. c. No time limit.	1 point per hit	a. Grenadier is not to adjust the sights. b. Range to be indicated to the grenadier. c. Grenadier to fire all rds at same tgt.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
2	M203 A1 Gren Wpn Test Ser 7	Standing	1 x Fig 11 in a 7.5 m circle.	300	2 SAT	a. Standing position. b. Fire 1 rd deliberate. c. No time limit.	1 point per hit	As per Ser 1.
3	M203 A1 Training Ser 6	Standing	Truck.	350	4 SAT	a. Standing position. b. Fire 1 rd deliberate. c. No time limit.	1 point per hit	As per Ser 1.

NOTES

1. **Ammunition.** SAT 12 rds. Grenadiers are to pre-zero the SAT weapons prior to attempting this practice.
2. **Scoring.** HPS—12 points. 1 point per hit.
3. **Standard.** Pass—7 points. (60% of HPS)
4. Ser 1 is not scored, and may not be fired if the grenadier is comfortable with the weapon zero.

GRENADE LAUNCHER APPLICATION RANGE PRACTICE 31—DELIBERATE FIRE (LIVE)

66. **Aim.** To train the grenadier to engage targets from all positions at various ranges.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Zeroing Prone Unsupported	1 x Fig 11 in a 5 m circle.	100	2 x TP	a. Prone unsupported position b. Fire 2 rds deliberate c. No time limit.	Nil	a. Do not adjust sights on the first rd. Make adjustments following second rd. b. Range to be indicated to the grenadier. c. Grenadier to fire both rds at same tgt

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
2	Deliberate Prone Unsupported	1 x 2 m sized window tgt.	150	2 x TP	a. Prone unsupported position. b. Fire 2 rds deliberate. c. No time limit.	See notes	a. Coaches employed as spotters. b. Discuss firing position and point of impact. c. Range to be indicated to the grenadier.
3	Deliberate Kneeling	1 x Fig 11 in a 5 m circle.	200	2 x TP	a. Kneeling position. b. Fire 2 rds deliberate. c. No time limit.	See notes	As per Ser 2.
4	Deliberate Sitting or Squatting	As per Ser 2.	200	1 x TP	a. Sitting or squatting position (grenadier's choice). b. Fire 1 rd deliberate. c. No time limit.	See notes	As per Ser 2.

NOTES

1. **Ammunition.** TP x 7.
2. **Scoring.** HPS—7 points. 1 point per hit.
3. **Standards.** Pass—4 points (60% of HPS).
 - a. Ser 2—grenadier must successfully engage the tgt by getting the rds through the window; and
 - b. Ser 3 and 4—rd must fall within 5 m of tgt.
4. The circle should be visible from the firing point and can be made from mine tape, rope, paint or lime.
5. Ser 1 is not scored, and may not be fired if the grenadier is comfortable with the weapon zero.

GRENADE LAUNCHER PWT 3 (LIVE)

67. **Aim.** To confirm that the grenadier can effectively engage targets in all positions at various ranges.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Zeroing Prone Unsupported	1 x Fig 11 in a 5 m circle.	100	2 x TP	a. Prone unsupported position. b. Fire 2 rds deliberate. c. No time limit.	Nil	a. Do not adjust sights on the first rd. Make adjustments following second rd. b. Range to be indicated to the grenadier. c. Grenadier to fire both rds at same tgt.
2	Application Prone	1 x 2 m size window tgt.	150	2 x TP	a. Prone position. b. Fire 2 rds deliberate. c. No time limit.	1 point per hit	Rds must go through the window to score.
3	Application Kneeling	1 x Fig 11 in a circle 5 m in radius.	200	2 x TP	a. Kneeling position. b. Fire 2 rds deliberate. c. No time limit.	1 point per hit	Rds must land inside the 5 m radius (10 m diameter) to score.
4	Application Sitting or Squatting	As per Ser 3.	200	2 x TP	a. Sitting or squatting position (grenadier's choice). b. Fire 2 rds deliberate. c. No time limit.	1 point per hit	As per Ser 3.
5	Application Any position	As per Ser 3.	200	2 x TP	a. Position grenadier's choice. b. Fire 2 rds deliberate. c. No time limit.	1 point per hit	As per Ser 3.
6	Application Standing	1 x Fig 11 in a circle 7.5 m in radius.	300	2 x HE	a. Standing position. b. Fire 2 rds deliberate. c. No time limit.	1 point per hit	Rds must land inside the 7.5 m radius (15 m diameter) to score.

NOTES

1. **Ammunition.** TP x 10 and HE x 2.
2. **Scoring.** HPS—10 points. 1 point per hit.
3. **Standard.** Pass—6 points (60% of HPS).
4. The circle should be visible from the firing point and can be made from mine tape, rope, paint or lime.
5. Ser 1 is not scored, and may not be fired if the grenadier is comfortable with the weapon zero.

GRENADE LAUNCHER APPLICATION RANGE PRACTICE 32—INTRODUCTION TO NLM

68. **Aim.** To train the grenadier to hold, aim and fire the grenade launcher with non-lethal munitions in the standing position.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1		Grouping Familiarizati on Shoot with no Respirator (Standing)	1 x Fig 11.	15 20 25 30	12	a. Fire 3 rds at the aiming mark from the standing position. b. Discuss groupings.	See notes	a. Grenadier is to fire 3 rds at each range. b. Record mean point of impact (MPI).
2		Grouping Familiarizati on Shoot with Respirator (Standing)	As per Ser 1.	15 20 25 30	12	a. Fire 3 rds at the aiming mark from the standing position. b. Discuss groupings.	See notes	Record MPI.

NOTES

1. **Ammunition.** NL x 24.
2. **Scoring.** HPS—24 points. 1 point per hit.
3. **Standard.** Pass—14 points (60% of HPS).
4. This practice is to be conducted with and without personal protective equipment (PPE).
5. The grenadier engages tgts at the given distances to get a better understanding how the NLM react at the different distances.

GRENADE LAUNCHER PWT 3 SUPPLEMENT—NLM

69. **Aim.** To confirm that the grenadier can effectively target and engage the required safe impact zone using 40 mm non-lethal munitions rounds.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1		Deliberate Standing	Multiple Fig 11 tgts with overlays attached to depict the threat.	15 20 25	3	a. Fired from the standing position. b. Discuss results and mean point of impact (MPI). c. To be successful, each grenadier must engage the tgts correctly and in the time allocated.	See notes	a. The grenadier will move up to the baseline and engage the tgts as designated/ordered by the Officer in Charge (OIC) / Range Safety officer (RSO). Each grenadier will have 20 sec to successfully engage 3 tgts with 3 NLM each. b. The grenadier will complete the test without wearing their respirators, nor complete PPE.
2		Deliberate Standing	As per Ser 1.	15 20 25	3	As per Ser 1.	See notes	As per Ser 1, except wearing respirators.

NOTES

- Ammunition.** NL x 6.
- Scoring.** HPS—6 points. 1 point per hit.
- Standard.** Pass—4 points (60% of HPS).
- This test is designed to confirm whether individual grenadiers can successfully engage threats (simulated by using tgts with overlays attached) in a timed event while under a stressful situation forward of the baseline. This practice will be conducted under as realistic conditions as possible to include the use of smoke obscuration.

SECTION 4—C9/C9A1/C9A2 LIGHT MACHINE GUN (LMG)**SCOPE**

70. This section sets out the firing practices to be completed in the CFOSP for the light machine gun (LMG). It includes the application of firing practices for all Arms and Services and the progression and frequency with which they are to be fired.

71. The progression and frequency of firing is essential for preparing gunners for the Personal Weapons Tests (PWTs). It is also essential in preparing the gunner for field firing.

SIMULATION AND TECHNOLOGY

72. **Small Arms Trainer.** The use of small arms trainer (SAT) practices is an integral part of the CFOSP, and has been selected to confirm the basic skills before live firing and to enable the coach to eliminate faults, which until recently, have only been detectable during live firing. All live firing practice and tests are included in the SAT software and can be used for remedial training or as concurrent activity to a range or other period.

73. Gunners are to fire the bore sighting practice before firing any other shoots using the SAT. Gunners can be given a preview of all practices on the SAT in order to familiarize themselves with the conditions.

74. To assist gunners, the SAT serials have been added to the range practices and are designed to mirror live practices. It must be understood that due to the CFOSP changes and the current programming of the SAT, not all practices on the SAT mirror their live counterparts. Consequently, until the SAT is aligned with the CFOSP, in some cases scoring must be performed manually.

AIDS TO TRAINING AND FIRING

75. **Bipod.** The LMG is to be fired with the bipod down, not folded, position during all practices.

76. **Small Arms Collimator.** Due to differences in height, the current Small Arms Collimator (SAC) used for the C7A1 rifle cannot be used with the LMG. It is hoped that this will be rectified in the near future.

77. **Ammunition.** All LMG practices from the PWT 2 and thereafter are to be conducted using 5.56 mm 4B1T (four balls, one tracer) ammunition unless range orders or local restrictions, such as a tracer ban, preclude its use.

TRAINING AND FIRING SEQUENCE

78. The practices described in this section are designed to be conducted progressively. PWT 1 and PWT 2 are gateways to PWT 3, while PWT 3 is the gateway to field firing and PWT 3 supplements. PWT 1 and PWT 2 are NOT gateways to field firing.

79. Test methods for the LMG are as follows:

- a. **Initial Marksmanship Training.** All application range practices and PWTs will be conducted on the SAT (if available) followed by live firing. Commanding Officers (COs) are reminded that gunners may have not completed all initial marksmanship training while undergoing recruit training, and as a result, may not be able to complete field firing.
- b. **Continuation Marksmanship Training.** The range practice requirements are:
 - (1) **Application Range Practices.** These practices are not mandatory once initial marksmanship training is completed; however, if they are conducted, they may be conducted on the SAT (if available). They should be used to assist gunners in correcting faults experienced during the completion of a specific PWT.
 - (2) **Personal Weapons Tests.** Gunners must conduct their mandated level of PWT live; however, if a gunner is current he may complete the subordinate PWT on the SAT. COs must ensure sufficient time and resources are provided to allow for zeroing before commencing live practices.
 - (3) **Personal Weapons Test 3 Supplements.** Supplemental practices are not to be conducted during initial marksmanship training. Specific supplements are only conducted for those personnel who will employ the weapon in that particular configuration on operations or during field firing.
- c. **Remedial Training.** The SAT provides an invaluable aid to the remedial training of the poor shot. COs are encouraged to make full use of these facilities wherever they are available. However, final confirmation must be by the use of live firing.

WEAPON AND FIRING PREPARATION

- 80. Where possible, weapons should be prepared for firing prior to moving to the range to ensure they are prepared under “ideal” conditions and not those that may be experienced on the range.
- 81. Each gunner is to have his shooting record card in his possession.
- 82. Observation of the fall of shot is obvious using the C79 sight at 25 m. During the grouping practice it must be emphasized to gunners that they are to take the correct point of aim (POA) for each shot and avoid aiming off.
- 83. If fire trenches are not available, the prone supported position is to be used.

84. **Aiming Marks.** Where white patches are used, the POA is to be the bottom centre of the patch to cater for both iron sights and the C79 optic sight. For ranges up to and including 200 m, sights are to be set at 200. Gunners are to be reminded to alter their sights prior to firing at 300, 400, 500 and 600 m.

85. **Spotters.** When grouping at 25 m, to enable gunners and coaches to gain the maximum information from the shots fired, members of the waiting relay should be employed as spotters, using binoculars to plot the arrival of each shot. To achieve maximum value from this type of live firing, it is essential that gunners be given every opportunity to discuss the results of their shooting with their coach.

PRACTICES AND TESTS

86. The details of all live firing practices and tests are contained in the remaining pages of this section.

LMG SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
1	SAT/ LIVE	11	Introductory Shoot	25	40	To train the gunner in holding, aiming and firing the LMG for short controlled bursts.
		12	Grouping	100	60	To train the gunner in grouping the LMG at 100 m.
		13	Zeroing	100	30	To superimpose the gunner's mean point of impact (MPI) onto the correct zero position CZP.
		LMG PWT 1		25–100	65	To confirm the gunner's ability to group and zero the LMG.
2	SAT/ LIVE	21	Application	200	30	To train the gunner in engaging targets by deliberate fire at 200 m.
		22	Application	300–400	70	To train the gunner in engaging targets by deliberate fire at ranges of 300 and 400 m.
		LMG PWT 2		200–400	70	To confirm the gunner's proficiency to engage targets using deliberate fire.
		23	Introduction to Night Firing	LNV	30	To train the gunner in engaging a tgt at night without illumination.
		LMG PWT 2—NIGHT SHOOT		LNV	30	To confirm the gunner's ability to engage a tgt at night without illumination.

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
3	SAT/LIVE	31	Advanced Application	300–400	60	To train the gunner in taking up firing positions and engaging fleeting targets.
		32	Application	500–600	50	To train the gunner in tgt engagement at long range.
	LIVE	LMG PWT 3		300–600	130	To confirm the gunner's proficiency to engage fleeting and distant targets.
	SAT/LIVE	33	Introduction to Night Firing with Illumination	200	20	To train the gunner in engaging a tgt at night with the aide of illumination.
	LIVE	LMG PWT 3 SUPPLEMENT—NIGHT FIRING WITH ILLUMINATION		200	20	To confirm the gunner's ability in engaging a tgt at night with the aide of illumination.
	SAT/LIVE	34	Introduction to night firing with the IIWS	200	35	To train the gunner in engaging a tgt at night with the image intensification weapon sight (IIWS).
	LIVE	LMG PWT 3 SUPPLEMENT—NIGHT FIRING WITH IIWS		200	35	To confirm the gunner's ability to engage a tgt at night with the LMG fitted with the IIWS.

LMG APPLICATION RANGE PRACTICE 11—INTRODUCTORY SHOOT

87. **Aim.** To train the gunner in holding, aiming and firing the LMG for short controlled bursts.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Practice 1 Ser 1	Recoil and trigger control	Butt Stop	25	2 x 5 rd belts	Gunner will aim and fire the gun into the butt stop.	Nil	The gunner is to fire each belt in one burst.
2	Inf Practice 1 Ser 2	Length of Burst	4 x 2.5 cm square aiming marks on a witness screen.	25	4 x 5 rd belts	a. Gunner to fire 1 x 5 rd grouping at each aiming mark. b. Coaches are to examine and discuss groupings.	Nil	

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
3	Inf Practice 1 Ser 3	Confirmation	As per Ser 2.	25	10 rd belt	Gunner will fire 1 x 5 rd grouping at each aiming mark.	Nil	This Ser confirms if the gunner can fire a 5 rd controlled burst.

NOTES

1. **Ammunition.** 40 rds.
2. **Scoring.** Pass/Fail.
3. **Standard.** The intent of this practice is to measure the gunner's ability to fire a controlled burst.
4. All gunners are to be coached.

LMG APPLICATION RANGE PRACTICE 12—GROUPING

88. **Aim.** To train the gunner in grouping the LMG at 100 m.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Practice 2 Ser 1A to 1D	Grouping Fire Trench	1 x Fig 11 tgt on a 1.3 m witness screen with a 75 x 100 mm white aiming mark.	100	20 (4 x 5 rd belts)	a. Gunner to fire 5 rds in bursts at the tgt. b. Examine tgt and discuss results. c. Repeat the practice and record grouping sizes.	Nil	a. All gunners are to be coached. b. One gunner is to be nominated to watch and note the arrival of the first and subsequent shots of each grouping. c. If a trench is not available, a supported position may be used.
2	Inf Practice 2 Ser 2A to 2D	Grouping Lying in Open	As per Ser 1.	100	20 (4 x 5 rds mags)	As per Ser 1.	See notes	
3	Inf Practice 2 Ser 3A to 3D	As per Ser 2.	As per Ser 1.	100	20 (belt)	a. Gunner to fire 4 to 5 rds during each burst. b. Examine tgt and discuss.	See notes	This Ser confirms if the gunner can fire a 5 rd controlled burst.

NOTES

1. **Ammunition.** 60 rds.
2. **Scoring.** Pass/Fail.
3. **Standard.** Gunners should achieve a 300 mm burst group size with each 5 rd burst during Ser 2 and Ser 3.
4. If fire trenches are not available only Ser 2 and Ser 3 need to be fired.

LMG APPLICATION RANGE PRACTICE 13—ZEROING

89. **Aim.** To superimpose the Gunner's mean point of impact (MPI) onto the correct zero position (CZP) at 100 m.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Practice 3 Ser 1	Limbering Up	Butt Stop.	100	5	Fire 1 x 5 rd burst in one burst.	Nil	
2	Inf Practice 3 Ser 2	Grouping and Zeroing	1 x Fig 11 tgt on a 1.3 m witness screen with a 75 x 100 mm white aiming mark.	100	20 (mag)	a. Gunner to fire 4 x 5 rd groupings at the same aiming mark. b. Gunner should break and relax after each grouping. c. Identify the MPI. d. Adjust the sights for zero as necessary.	Nil	a. All gunners are to be coached. b. It is understood that the SAT will electronically adjust the point of impact (POI) to the CZP. Gunners must understand the mechanics of sight adjustment.
3	Inf Practice 3 Ser 3	Confirmation	As per Ser 2.	100	5 (mag)	Confirm proper sight adjustments have been made.	See notes	a. Gun is correctly zeroed when 25 % of the confirmatory MPI size is within that same distance to the CZP.

NOTES

1. **Ammunition.** 30 rds.
2. **Scoring.** Pass/Fail.
3. **Standard.** Gun is correctly zeroed when the distance from the MPI to the CZP is 25 percent of the calculated average group size.

4. The CZP for the C9/C9A1 LMG is 125 mm above the POA when firing from 100 m with the sights set at 300 m.
5. It is understood that the zeroing process on the SAT is done electronically. Gunners must understand the process and the manual adjustments of the sights.

LMG PWT 1

90. **Aim.** To confirm the gunner's ability to group and zero the LMG.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Practice 3 Ser 1	Zeroing	1 x Fig 11 super-imposed on a 1.22 m screen with a white aiming mark 75 x 75 mm.	100	25	a. Gunner to fire 4 x 3 to 5 rd groupings. b. Note the MPI and any change necessary to the sights. c. Allow the gunner to adjust the sights. d. Fire a check 1 x 5 rd grouping to confirm zero.	Nil	Grouping standard expected is 300 mm.
2	Inf Practice 2 Ser 1A to 1D	Grouping Lying in the Open	As per Ser 1.	100	20 (4 x 5 rd belts, or 4 x 5 rd mag)	a. Gunner to fire 4 x 3 to 5 rd groupings at the tgt. b. Gunner to carry out immediate action (IA) drill between bursts.	See notes HPS 5	Coaches are to observe gunners for application of the marksmanship principles.
3	Inf Practice 2 ser 2A to 2D	As per Ser 2.	As per Ser 1.	100	20 (belt or mag)	Gunner to fire 4 x 3 to 5 rd groupings at the tgt.	See notes HPS 5	

NOTES

1. **Ammunition.** 65 rds.
2. **Scoring.**
 - a. HPS—10 points.
 - b. 300 mm or less—5 points.
 - c. 400 mm or less—3 points.

- d. 500 mm or less—1 point.
 - e. Over 500 mm—0 points.
3. **Standard.** Pass—6 points (60% of HPS).

LMG APPLICATION RANGE PRACTICE 21—APPLICATION OF FIRE

91. **Aim.** To train the gunner in engaging targets by deliberate fire at 200 m.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Practice 4 Ser 1	Deliberate Fire Trench	2 x Fig 11 on a 1.3 m screen.	200	5 (belt)	a. Gunner to fire 1 x 5 rd burst. b. MPI is identified.	Nil	
2	Inf Practice 4 Ser 2	As per Ser 1.	As per Ser 1.	200	5 (belt)	As per Ser 1.	HPS 1	
3	Inf Practice 4 Ser 3	Timed Fire Trench.	As per Ser 1.	200	5 (belt)	a. Order LOAD... 200 m... WATCH AND SHOOT. b. 1 x 10 sec exposure. c. Gunner to fire 1 x 5 rd burst. d. MPI is identified at the end of the exposure.	Nil	
4	Inf Practice 4 Ser 4	As per Ser 1.	As per Ser 1.	200	15 (belt)	a. As per Ser 3. b. 3 x 10 sec exposures. c. Gunner to fire 3 x bursts of 3 to 5 rds.	HPS 3	

NOTES

- Ammunition.** 30rds.
- Scoring.** HPS—4 points. Ser 2 and Ser 4—1 point per successful engagement.
- Standard.** Pass—2 points (50% of HPS).
- Gunners are to be coached. The coach should discuss the gunner's expected scoring area (ESA) at 200 m based upon information available from the shooting at 100 m. Wind allowance should be discussed for possible changes to the POA.
- If the fire trenches are unavailable then the gunners are to lie in the open.
- Successful tgt engagement is defined as at least one hit per burst.

C9/C9A1 LMG APPLICATION RANGE PRACTICE 22—APPLICATION OF FIRE

92. **Aim.** To train the gunner in engaging targets by deliberate fire at ranges of 300 and 400 m.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Practice 5 Ser 1A	Deliberate Fire Trench	3 x Fig 11 superimposed on a 2 m witness screen.	300	10 (belt)	a. Gunner to fire 2 x bursts of 3 to 5 rds. b. MPI to be identified after each burst.	Nil	
2	Inf Practice 5 Ser 1B	As per Ser 1.	3 x Fig 11.	300	10 (belt)	As per Ser 1.	HPS 2	
3	Inf Practice 5 Ser 2	Deliberate Lying in the Open	As per Ser 2.	300	10 (belt)	As per Ser 1.	HPS 2	
4	Inf Practice 5 Ser 4	Timed Fire Trench	As per Ser 2.	300	15 (1 x 10 rd belt and 1 x 5 rd belt)	a. Order LOAD... 300 m... WATCH AND SHOOT. b. Gunner to fire 3 x bursts of 3 to 5 rds. c. 1 x 30 sec exposure.	HPS 3	
5	Inf Practice 5 Ser 5A	As per Ser 3.	As per Ser 1.	400	10 (belt)	As per Ser 1.	HPS 2	
6	Inf Practice 5 Ser 7	Timed Lying in the Open	As per Ser 1.	400	15 (1 x 10 rd belt and 1 x 5 rd belt)	a. Order LOAD... 400 m... WATCH AND SHOOT. b. Gunner to fire 3 x bursts of 3 to 5 rds. c. 1 x 30 sec exposure.	HPS 3	

NOTES

- Ammunition.** 70 rds.
- Scoring.** HPS—12 points. 1 point per hit.
- Standard.** Pass—7 points (60% of HPS).
- The coach should determine the expected scoring area (ESA) at 300 m and 400 m based upon information available from the gunner's shooting at 100 m. Wind allowance should be discussed for possible changes to the POA.

5. If the fire trenches are unavailable then the gunners are to lie in the open.

LMG PWT 2

93. **Aim.** To confirm the gunner's proficiency to engage targets using deliberate fire.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1		Confirmation of MPI	Double Fig 11 on a 1.22 m witness screen.	200	10	Lying in open.	Nil	a. Fire 2 x 5 rd groupings. b. Centre of each burst to be identified. c. Note the MPI and any change necessary to the POA.
2	Inf PWT 2 Ser 1	Application	As per Ser 1.	200	20	a. Gunner is in a fire trench (lying in open if none available). b. Order 20 RDS LOAD... ONE 3 TO 5 RD BURST GO ON. c. When the tgt appears, gunner to fire 4 x bursts of 3 to 5 rds.	HPS 4	a. The gunner to fire 4 x 5 rd bursts. b. 1 x 30 sec exposure.
3	Inf PWT 2 Ser 2	Application	Triple Fig 11 on a 1.22 m witness screen.	300	20	As per Ser 2.	As per Ser 2.	As per Ser 2
4	Inf PWT 2 Ser 3	Application	As per Ser 3.	400	20	As per Ser 2.	As per Ser 2.	As per Ser 2

NOTES

- Ammunition.** 70 rds.
- Scoring.** HPS—12 points. 1 point per successful tgt engagement.
- Standard.** Pass—7 points (60 % of HPS).
- Successful tgt engagement is defined as at least one hit per burst.

LMG APPLICATION RANGE PRACTICE 23—INTRODUCTION TO NIGHT FIRING

94. **Aim.** To train the gunner in engaging a target at night without illumination.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf PWT (Night) Ser 1	Deliberate Lying in the Open	1 x Fig 11 draped with Hessian.	LNV	10 (belt)	a. Gunner to fire 2 x bursts of 3 to 5 rds. b. Assess results.	Nil	No time limit.
2	Inf PWT (Night) Ser 2	Timed Lying in the Open	As per Ser 1.	LNV	20 (belt)	a. Order LOAD... WATCH AND SHOOT. b. 1 x 30 sec exposure. c. Gunners to fire 3 x bursts of 3 to 5 rds.	HPS 20	a. Record results. b. Whistle blasts are to be used to signal the start and the end of the Ser.

NOTES

1. **Ammunition.** 30 rds.
2. **Scoring.** HPS—20 points. Ser 2—one point per hit.
3. **Standard.** Pass—12 points (60% of HPS).
4. Strict range discipline is necessary to ensure the safety of all staff and gunners. Flashlights should be fitted with red filters to protect the gunner's night vision.

LMG PWT 2—NIGHT SHOOT

95. **Aim.** To confirm the gunner's ability to engage a target at night without illumination.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf PWT (Night) Ser 1	Deliberate Lying in the Open	1 x Fig 11 draped with Hessian.	LNV	10 (belt)	a. Gunner to fire 2 x bursts of 3 to 5 rds. b. Assess results.	Nil	No time limit.
2	Inf PWT (Night) Ser 2	Timed Lying in the Open	As per Ser 1.	LNV	20 (belt)	a. Order LOAD... WATCH AND SHOOT. b. 1 x 30 sec exposure. c. Gunner to fire 3 x bursts of 3 to 5 rds.	HPS 20	a. Record results. b. Whistle blasts are to be used to signal the start and the end of the Ser.

NOTES

1. **Ammunition.** 30 rds.
2. **Scoring.** HPS—20 points. Ser 2—1 point per hit.
3. **Standard.** Pass—12 points (60% of HPS).
4. Strict range discipline is necessary to ensure the safety of all staff and gunners. Flashlights should be fitted with red filters to protect the gunner's night vision.
5. When firing at LNV on conventional ranges, strict control over all persons is essential. The conducting officer is to ensure that the conditions for night firing as laid down in B-GL-381-001/TS-000 *Training Safety*, along with local Range Standing Orders, are complied with.

LMG APPLICATION RANGE PRACTICE 31—ADVANCED APPLICATION OF FIRE

96. **Aim.** To train the gunner in taking up firing positions and engaging fleeting targets.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Practice 6 Ser 1	Timed Lying in the Open	3 x Fig 11.	300	15 (mag)	a. Weapon loaded and gunner standing 50 m behind firing point. b. When tgts appear, gunner doubles to the 300 m firing point, adopts the prone position, and fires 3 x bursts of 3 to 5 rds.	HPS 3	a. All movement is at the trail. b. During all movement the safety catch is on. c. 1 x 45 sec exposure.
2	Inf Practice 6 Ser 2	As per Ser 1.	As per Ser 1.	400	15 (mag)	a. Weapon loaded and gunner standing 50 m behind firing point. b. When tgts appear, gunner doubles to the 400 m firing point, adopts the prone position, and fires 3 x bursts of 3 to 5 rds.	HPS 3	1 x 45 sec exposure.
3	Inf Practice 6 Ser 3	Timed Advancing from 500 m to 300 m	As per Ser 1.	400 300	30 (2 x 15 rd mags)	a. Weapon loaded and gunner lying at the 500 m firing point. b. When tgts appear, gunner doubles to the 400 m point and engages the tgts with 3 x 5 rd bursts. c. Make safe and load 15 rd mag. d. When tgts appear,	HPS 6	a. Exposures are controlled by the conducting officer. b. 1 x 45 sec exposure. c. 1 x 15 sec pause. d. 1 x 45 sec exposure. e. No more than

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
						gunner moves to the 300 m point and engages the tgts with 3 x bursts of 3 to 5 rds.		15 hits to count at each range.

NOTES

1. **Ammunition.** 60 rds.
2. **Scoring.** HPS—12 points. 1 point per successful tgt engagement.
3. **Standard.** Pass—7 points (60% of HPS).
4. Gunners are to be coached.
5. Gunners are to double on the spot if conducting this practice in the SAT.
6. Successful tgt engagement is defined as at least one hit per burst.

LMG APPLICATION RANGE PRACTICE 32—APPLICATION OF FIRE

97. **Aim.** To train the gunner in target engagement at long range.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf Practice 7 Ser 1	Sighting	3 x Fig 11 superimposed on a 1.3 m screen.	500	5 (belt)	a. Gunner to fire 1 x 3 to 5 rd burst. b. MPI is indicated.	Nil	To confirm zero.
2	Inf Practice 7 Ser 2A to 2C	Deliberate Lying in the Open	As per Ser 1.	500	15 (belt)	a. Gunner to fire 3 x 3 to 5 rd bursts. b. MPI of each burst is indicated.	Nil	
3	Inf Practice 7 Ser 3	Timed Lying in the Open	As per Ser 1.	500	10 (belt)	a. Order LOAD... 500 m... WATCH AND SHOOT. b. Gunner to fire 1 x 3 to 5 rd burst at each exposure. c. 2 x 15 sec exposures.	HPS 2	
4	Inf Practice 7 Ser 4A to 4B	Deliberate Lying in the Open	As per Ser 1.	600	10 (belt)	a. Gunner to fire 2 x 3 to 5 rd bursts. b. MPI of each burst is indicated.	HPS 2	
5	Inf Practice	Timed	As per Ser 1.	600	10 (belt)	a. Order LOAD... 600 m... WATCH AND	HPS 2	

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
	7 Ser 5	Lying in the Open				SHOOT. b. Gunner to fire 1 x 3 to 5 rd burst at each exposure. c. 2 x 15 sec exposures.		

NOTES

- Ammunition.** 50 rds.
- Scoring.** HPS—6 points. Ser 3 to Ser 5—1 point per successful tgt engagement. In Ser 3 and Ser 5—one hit on the tgt with one or more shots during each exposure will be deemed a successful tgt engagement and will earn points.
- Standard.** Pass—4 points (60 % of HPS).
- Butt parties are to examine tgts closely after each exposure, keep accurate scoring of successful engagements, and chalk out the shot holes between exposures.
- If conducted on the SAT, manual scoring will be required.
- Waiting relays should be employed as spotters.
- Coaches should discuss the gunner's expected scoring area (ESA).
- Successful tgt engagement is defined as at least one hit per burst.

LMG PWT 3

98. **Aim.** To confirm the gunner's proficiency in engaging fleeting and distant targets.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1		Confirmation of MPI	Triple Fig 11.	300	10	Lying in open.	Nil	a. Fire 2 x 5 rd groupings. b. Centre of each burst to be indicated. c. Note the MPI and any change to the POA.
2	Inf PWT 3 Ser 1	Suppressive Fire	As per Ser 1.	300	10	a. Gunner lying in the open at 300 m. b. Order 10 RDS... LOAD. c. Order 300 m... WATCH AND SHOOT.	HPS 2	1 x 30 sec exposure.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
						d. The tgt will be for 1 x 30 sec exposure. e. Gunner to fire 2 x bursts of 3 to 5 rds per burst.		
3	Inf PWT 3 Ser 2	As per Ser 2.	As per Ser 1.	400	10	As per Ser 2 at 400 m.	HPS 2	As per Ser 2.
4	Inf PWT 3 Ser 5	As per Ser 2.	As per Ser 1.	500	10	a. Gunner lying in the open at 500 m. b. Order 10 RDS... LOAD. c. Order 500 m... WATCH AND SHOOT. d. Gunner to fire 1 x burst of 3 to 5 rds at each exposure.	HPS 2	2 x 4 sec exposures.
5	Inf PWT 3 Ser 6	As per Ser 2.	As per Ser 1.	600	10	As per Ser 2 at 600 m.	HPS 2.	1 x 30 sec exposure.
6	600 m Inf PWT 3 Ser 6 500 m Inf PWT 3 Ser 5 400 m Inf PWT 3 Ser 4 300 m Inf PWT 3 Ser 1	The Attack	As per Ser 1.	600 500 400 300	80 rds 4 x 20 rd belts	a. This is a continuous shoot from 600 m to 300 m. b. Order 20 RDS... LOAD... 600 m... WATCH AND SHOOT. c. At 600 m, gunner receives 4 x 4 sec exposures and fires 1 x burst of 3 to 5 rds at each exposure. d. After the last exposure, order 20 RDS... MAKE SAFE... PREPARE TO MOVE. e. The tgt will appear for 1 sec; this is the gunner's signal to move at the double to the 500 m point and make-ready. f. 35 sec after the 1 sec exposure there will be a further 4 x 5 sec exposures.	HPS 16	a. On the order from the firing point, there will be 4 x 4 sec exposures. b. Check hits and patch out between exposures. c. On the order from the firing point, there will be 1 x 1 sec exposure, followed 1 x 35 sec pause and by 4 x 5 sec exposures. d. Check tgts for hits between each exposure. e. After the last exposure, patch out, check scores, and await the signal to restart the same practice. f. This sequence will take place three times.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
						g. Gunner to fire 1 x burst of 3 to 5 rds per exposure. h. After the last exposure, order 20 RDS... MAKE SAFE... PREPARE TO MOVE. i. The tgt will appear for 1 sec. Gunner to move at the double to 400 m and make ready for a further 4 x 5 sec exposures. j. Gunner to fire 1 x burst of 3 to 5 rds at each exposure. k. After the last exposure, order 20 RDS... MAKE SAFE... PREPARE TO MOVE. l. Repeat procedures (i.) and (j.) at 300 m.		g. Allocate sufficient time between exposures to mark the successful engagements.

NOTES

1. **Ammunition.** 130 rds.
2. **Scoring.** HPS—24 points. Ser 2 to Ser 6—1 point per successful exposure engagement.
3. **Standard.** Pass—14 points (60 % of HPS).
4. Successful tgt engagement is defined as at least one hit per burst.

LMG APPLICATION RANGE PRACTICE 33—INTRODUCTION TO NIGHT FIRING WITH ILLUMINATION

99. **Aim.** To train the gunner in engaging a target at night with the aide of illumination.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf PWT Night Ser 1	Rapid Fire Lying in the Open	1 x Fig 11.	200	10 (belt)	a. Order LOAD... 200 m... WATCH AND SHOOT. b. 1 x exposure. c. Gunner to fire 10 rds while the tgt is illuminated.	HPS 10	Illumination is to be continuous.
2	Inf PWT Night Ser 1	Timed Fire Trench	2 x Fig 11 in frame (edge to edge).	200	10 (belt)	a. Order LOAD... 200 m... WATCH AND SHOOT. b. 1 x 30 sec exposure. c. Gunner to fire 10 rds in 3 to 5 rd bursts.	HPS 10	As per Ser 1.

NOTES

1. **Ammunition.** 20 rds.
2. **Scoring.** HPS—20 points. 1 point per hit.
3. **Standard.** Pass—12 points (60% of HPS).
4. Artificial illumination produces strong shadows and a gunner must not wait until they have a perfect sight picture to engage the tgt.
5. The immediate action upon illumination is to close one eye in order to preserve night vision, and gunners should be reminded not to stare directly at the source of illumination as this will cause a slower return to their night vision.
6. Strict range discipline is necessary to ensure the safety of all staff and gunners. Flashlights should be fitted with red filters to protect the gunner's night vision.
7. If conducted on the SAT artificial light will be required.

LMG PWT 3 SUPPLEMENT—NIGHT FIRING WITH ILLUMINATION

100. **Aim.** To confirm the gunner's ability to engage a target at night with the aide of illumination.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Inf PWT Night Ser 1	Rapid Fire Lying in the Open	1 x Fig 11.	200	10 (belt)	a. Order LOAD... 200 m... WATCH AND SHOOT. b. 1 x exposure. c. Gunner to fire 10 rds while the tgt is illuminated.	HPS 10	Illumination is to be continuous.
2	Inf PWT Night Ser 2	Timed Fire Trench	2 x Fig 11 in frame (edge to edge).	200	10 (belt)	a. Order LOAD... 200 m... WATCH AND SHOOT. b. 1 x 30 sec exposure. c. Gunner to fire 10 rds in 3 to 5 rd bursts.	HPS 10	As per Ser 1.

NOTES

1. **Ammunition.** 20 rds.
2. **Scoring.** HPS—20 points. 1 point per hit.
3. **Standard.** Pass—12 points (60% of HPS).
4. Artificial illumination produces strong shadows and a gunner must not wait until they have a perfect sight picture to engage the tgt.
5. The immediate action upon illumination is to close one eye in order to preserve night vision and gunners should be reminded not to stare directly at the source of illumination as this will cause a slower return to their night vision.
6. Strict range discipline is necessary to ensure the safety of all staff and gunners. Flashlights should be fitted with red filters to protect the gunner's night vision.

LMG APPLICATION RANGE PRACTICE 34—INTRODUCTION TO FIRING WITH THE IMAGE INTENSIFICATION WEAPON SIGHT

101. **Aim.** To train the gunner in engaging a target at night with the image intensification weapon sight (IIWS).

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1		Snap Lying in the Open	1 x Fig 11.	100	10 (belt)	a. Order LOAD... 100 m... WATCH AND SHOOT. b. 3 x 5 sec exposures with a 5 to 10 sec interval between each. c. Gunner to fire 1 x 2 to 5 rd burst per exposure.	HPS 2	
2		Rapid Lying in the Open	2 x Fig 11.	100	10 (belt)	a. Order LOAD... 100 m... WATCH AND SHOOT. b. 1 x 30 sec exposure. c. Gunner to fire 2 x bursts of 3 to 5 rds.	HPS 2	
3		Timed Fire Trench	2 x Fig 11 in frame.	200	15 (belt)	a. Order LOAD... 200 m... WATCH AND SHOOT. b. 1 x 25 sec exposure. c. Gunner to fire 3 x bursts of 3 to 5 rds.	HPS 3	

NOTES

1. **Ammunition.** 35 rds.
2. **Scoring.** HPS—7 points. 1 point per successful engagement.
3. **Standard.** Pass—4 points (60% of HPS).
4. Firing at night with the IIWS is similar to firing in the daytime except that the tgt will not be as clear. Gunners should ensure the aim is correct before each burst since minor aiming errors with the IIWS will greatly reduce the chance of hits.
5. Coaches should be used.
6. The LMG and IIWS must be zeroed in daylight before attempting this practice.
7. Strict range discipline is necessary to ensure the safety of all staff and gunners. Flashlights should be fitted with red filters to protect the gunner's night vision.
8. Successful tgt engagement is defined as at least one hit per burst.

LMG PWT 3 SUPPLEMENT—NIGHT FIRING WITH IMAGE INTENSIFICATION WEAPON SIGHT

102. **Aim.** To confirm the gunner's ability to engage a target at night with the LMG fitted with the IIWS.

Ser	SAT Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1		Snap Lying in the Open	1 x Fig 11.	100	10 (belt)	a. Order LOAD... 100 m... WATCH AND SHOOT. b. 3 x 5 sec exposures with a 5 to 10 sec interval between each. c. Gunner to fire 1 x 3 to 5 rd burst per exposure.	HPS 2	
2		Rapid Lying in the Open	2 x Fig 11.	100	10 (belt)	a. Order LOAD... 100 m... WATCH AND SHOOT. b. 1 x 30 sec exposure. c. Gunner to fire 2 x bursts of 3 to 5 rds.	HPS 2	
3		Timed Fire Trench or supported	2 x Fig 11 in frame.	200	15 (belt)	a. Order LOAD... 200 m... WATCH AND SHOOT. b. 1 x 25 sec exposure. c. Gunner to fire 3 x bursts of 3 to 5 rds.	HPS 3	

NOTES

- Ammunition.** 35 rds.
- Scoring.** HPS—7 points. 1 point per successful engagement
- Standard.** Pass—4 (60% of HPS).
- Firing at night with the IIWS is similar to firing in the daytime except that the tgt will not be as clear. Gunners should ensure the aim is correct before each burst since minor aiming errors with the IIWS will greatly reduce the chance of hits.
- Coaches should be used.
- The LMG and IIWS must be zeroed in daylight before attempting this practice.
- Strict range discipline is necessary to ensure the safety of all staff and gunners.
- Flashlights should be fitted with red filters to protect the gunner's night vision.
- Successful tgt engagement is defined as at least one hit per burst.

SECTION 5—9 mm BROWNING AND 9 mm SIG SAUER P225 PISTOL

SCOPE

103. This section sets out the firing practices to be completed in the CFOSP for the pistol. It includes the application of firing practices for all Arms and Services and the progression and frequency with which they are to be fired.

104. The progression and frequency of firing is essential for preparing firers for the Personal Weapons Tests (PWTs). It is also essential in preparing the firer for field firing.

CATEGORIES OF PISTOL USERS

105. There are two basic categories of pistol user:

- a. **Personal Weapon User.** All firers (less the Military Police) that are issued with the 9 mm Browning or the Sig Sauer P225 as their primary weapon are required to achieve the related standard as directed by Canadian Expeditionary Forces Command (CEFCOM) or Canada Command (Canada COM) directions for international or domestic operations, or the applicable environmental command order.
- b. **Military Police.** The Sig Sauer P225 is the primary side arm issued to the Military Police Branch of the Canadian Forces. Annual qualification will be conducted IAW A-SJ-100-004/AG-000 Chapter 4, Annex C.

SIMULATION AND TECHNOLOGY

106. **Small Arms Trainer.** Small Arms Trainer (SAT) firing lessons are an integral part of the CFOSP. While not all SAT systems are equipped with this weapon system, maximum use should be made of those that do.

107. To assist firers, the SAT serials that have been added to the range practices are intended to mirror live practices. It must be understood that due to the CFOSP changes and the current programming of the SAT, not all practices on the SAT mirror their live counterparts. Consequently, until the SAT is aligned with the CFOSP, in some cases scoring must be performed manually.

TRAINING AND FIRING SEQUENCE

108. The PWTs described in this section are designed to be conducted progressively and the completion of PWT 3 is essential in order to progress to field firing.

109. Test methods for the pistol are as follows:

- a. **Initial Marksmanship Training.** All application range practices and PWTs must be conducted progressively, live.
- b. **Continuation Marksmanship Training.** The range practice requirements are:
 - (1) **Application Range Practices.** The practices are not mandatory once initial marksmanship training is completed; however, if they are conducted, they may be conducted on the SAT (if available). They should be used to assist firers in correcting faults experienced during the completion of a specific PWT.
 - (2) **Personal Weapons Tests 1 to 3.** Firers must complete their mandated level of PWT live; however, subordinate PWTs may be completed on the SAT (if available). Commanding officers (COs) must ensure sufficient time and resources are provided to allow for zeroing before commencing live practices.

CONDUCT OF LIVE FIRE PRATICES

110. **Conditions.** Both types of pistol user are to complete the initial live firing practices and the annual tests in order to meet the weapon requirements of the CFOSP.

111. **Aiming Marks.** Where white patches are used, the point of aim (POA) is to be bottom centre of the patch.

112. **Scoring.** Scores are to be recorded and announced to the firers at the end of each practice. Details of the scores are shown in each individual practice.

PRACTICES AND TESTS

113. The practices and tests specific to the pistol are found in this section.

PISTOL SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
1	Live	11	Introductory Shoot and Grouping	10	40	To train the firer in holding, aiming and firing the pistol.
		PISTOL PWT 1		15	30	To confirm the firer's ability to group the pistol.

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
2	Live	21	Snap Shooting	15 20 25	32	To train the firer in snap shooting the pistol at a single fleeting target.
		22	Advanced Snap Shooting	15 20 25	32	To train the firer in advanced snap shooting the pistol.
		23	Rapid and Snap Shooting CBRN	15 20 25	18	To train the firer in rapid and snap shooting the pistol under CBRN conditions.
		PISTOL PWT 2		15 20 25	47	To confirm the firer's ability to engage targets at various rates.
3	Live	31	Double Tap	8 10	18	To train the firer in engaging targets using the double tap method of engagement.
		32	Fire and Movement	15 20 25	24	To train the firer in engaging targets on the move.
		PISTOL PWT 3		25 20 15 8	33	To confirm that the firer can engage targets at various ranges while employing movement.

PISTOL APPLICATION RANGE PRACTICE 11—INTRODUCTORY SHOOT AND GROUPING

114. **Aim.** To train the firer in holding, aiming and firing the pistol.

Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1	Grouping Standing	2 x 75 to 100 mm white aiming marks on a 1.3 m screen.	15	20	a. Fire 1 x 5 rd grouping at each aiming mark. b. Move down range and check grouping sizes—discuss and record grouping sizes.	Standard: an average grouping size of 370 mm.	Move back and repeat for Ser 2.
2	Grouping Kneeling	As per Ser 1.	15	20	a. Fire 1 x 5 rd grouping at each aiming mark. b. Move down range	Standard: an average grouping size of 370 mm.	Repeat Ser as required.

Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
					and check grouping sizes—discuss and record grouping sizes.		

NOTES

1. **Ammunition.** 40 rds.
2. **Scoring.** Pass/Fail.
3. **Standard.** Firer is to achieve an average group size of 370 mm for Ser 1 and Ser 2.

PISTOL PWT 1

115. **Aim.** To confirm the firer's ability to group the pistol.

Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1	Grouping Standing	1 x 75 by 100 mm white aiming marks on a 1.3 m witness screen.	15	20	a. Fire 4 x 5 rd groupings at the same aiming mark. b. Firer is to break the position after each grouping.	Nil	Note any need to aim off to place the mean point of impact (MPI) on the correct zero position (CZP).
2	Grouping Standing	As per Ser 1.	15	5	Fire 1 x 5 rd grouping from the standing position.	a. 370 mm—5 points. b. 450 mm—3 points. c. More than 450 mm—0 points.	
3	Grouping Kneeling	As per Ser 1.	15	5	Fire 1 x 5 rd grouping from the kneeling position.	a. 370 mm—5 points. b. 450 mm—3 points. c. More than 450 mm—0 points.	

NOTES

1. **Ammunition.** 30 rds.
2. **Scoring.** HPS—10 points.

3. **Standard.** Pass—6 points (60% of HPS).

PISTOL APPLICATION RANGE PRACTICE 21—SNAP SHOOTING

116. **Aim.** To train the firer in snap shooting the pistol at a single fleeting target.

Ser	Practice	Tgt	Rge (m)	Rds	Instruction	Score	Remarks
1	Snap Standing and Kneeling	2 x Fig 11.	15	8	a. Firer in the standing low ready (alert) position. b. Order WATCH AND SHOOT . c. Fire 2 rds at the left tgt in each exposure. d. Return to the low ready (alert) position after each exposure.	HPS 8	a. 2 x exposures of 6 sec each with pause of 6 to 8 sec between each. b. Repeat Ser in the kneeling position at the right tgt.
2	Snap Standing and Kneeling	As per Ser 1.	20	12	a. Firer in the standing low ready (alert) position. b. Order WATCH AND SHOOT . c. Fire 2 rds at the left tgt in each exposure. d. Return to the low ready (alert) position after each exposure.	HPS 12	a. 3 x exposures of 6 sec each with pause of 6 to 8 sec between each. b. Repeat Ser in the kneeling position at the right tgt.
3	Snap Standing and Sitting	As per Ser 1.	25	12	a. Firer in the standing low ready (alert) position. b. Order WATCH AND SHOOT . c. Fire 2 rds at the left tgt in each exposure. d. Return to the low ready (alert) position after each exposure.	HPS 12	a. 3 x exposures of 6 sec each with pause of 6 to 8 sec between each. b. Repeat Ser in the sitting position at the right tgt.

NOTES

1. **Ammunition.** 32 rds.
2. **Scoring.** HPS—32 points. 1 point per hit.
3. **Standard.** Pass—20 points (60% of HPS).

4. Fighting order and helmets should be worn.

PISTOL APPLICATION RANGE PRACTICE 22 ADVANCED SNAP SHOOTING

117. **Aim.** To train the firer in advanced snap shooting the pistol.

Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1	Snap Standing and Kneeling	2 x Fig 11.	15	12	a. Firer in the standing low ready (alert) position. b. Order WATCH AND SHOOT . c. At each exposure the firer is to fire 1 rd at each tgt from the standing position, then adopt the kneeling position and fire 1 rd at each tgt.	HPS 12	a. 3 x 5 sec exposures. b. 6 to 8 sec pause between exposures. c. During each pause, the firer is to re-adopt the standing low ready (alert) position.
2	Rapid Standing and Kneeling	As per Ser 1.	20	8	a. Firer in the standing low ready (alert) position with the pistol "made safe" in a holster or by the side. b. Order WATCH AND SHOOT . c. The appearance of the tgt is the signal to draw the pistol and "make ready". d. Fire 4 rds standing and 4 rds kneeling.	HPS 8	a. 1 x 16 sec exposure. b. During the exposure, fire 4 rds from the standing position at the left tgt, then adopt the kneeling position and fire a further 4 rds at the right tgt.
3	Snap Standing	As per Ser 1.	25	12	a. Firer in the standing low ready (alert) position. b. Order WATCH AND SHOOT . c. At each exposure the firer is to fire 1 rd at each tgt from the standing position, then adopt the kneeling position and fire a further 1 rd at each tgt.	HPS 12	a. 3 x 5 sec exposures. b. 6 to 8 sec pause between exposures. c. During each pause, the firer is to re-adopt the standing low ready (alert) position.

NOTES

- Ammunition.** 32rds.
- Scoring.** HPS—32 points. 1 point per hit.
- Standard.** Pass—20 points (60% of HPS).

PISTOL APPLICATION RANGE PRACTICE 23—RAPID AND SNAP SHOOTING CBRN

118. **Aim.** To train the firer in rapid and snap shooting the pistol under CBRN conditions.

Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1	Rapid Standing	2 x Fig 11.	15	6	a. Firer in the standing low ready (alert) position. b. Order WATCH AND SHOOT . c. Fire 6 rds at the left tgt.	HPS 6	a. 1 x 12 sec exposure. b. Personal protective equipment (PPE) is required.
2	Snap Kneeling	As per Ser 1.	20	6	a. Firer in the standing low ready (alert) position. b. Order WATCH AND SHOOT . c. The appearance of the tgt is the signal for the firer to adopt the kneeling position and fire 2 rds at each exposure in the right tgt.	HPS 6	a. 3 x 7 sec exposures with intervals of 4 sec. b. Firer to re-adopt the standing low ready (alert) position between exposures.
3	Snap Kneeling	As per Ser 1.	25	6	a. Firer in the kneeling position. b. Order WATCH AND SHOOT . c. Fire 1 rd at each tgt in each exposure.	HPS 6	a. 3 x 5 sec exposures with intervals of 4 sec. b. Firer to re-adopt the standing low ready (alert) position between exposures.

NOTES

1. **Ammunition.** 18 rds.
2. **Scoring.** HPS—18 points. 1 point per hit.
3. **Standard.** Pass—11 points (60% of HPS).

PISTOL PWT 2

119. **Aim.** To confirm the firer's ability to engage targets at various rates.

Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1	Grouping Standing and	2 x Fig 11 with a 75 by 100 mm white aiming	15	10	a. Fire 1 x 5 rd grouping from each position at each tgt.	Nil	Identify the MPI, any displacement from CZP and therefore any aim

Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
	Kneeling	mark on each.			b. Move down range and discuss.		off necessary.
2	Deliberate CBRN Standing	1 x Fig 11.	10	5	Fire 5 rds deliberate.	HPS 5	a. No time limit; and b. PPE is required.
3	Snap Standing and Kneeling	As per Ser 2.	15	8	a. Firer in the standing low ready (alert) position. b. Order WATCH AND SHOOT . c. At each double exposure, fire 1 rd at the tgt from the standing position, then adopt the kneeling position and fire 1 further rd at the tgt.	HPS 8	a. 4 x double exposures of the tgt. b. In each double exposure, the tgt is up for 3 sec, down for 6 sec and up for 5 sec with irregular intervals between double exposures. c. Firer to re-adopt the standing low ready (alert) position between exposures.
4	Snap Standing	As per Ser 2.	15	8	a. Firer in the standing position; b. Order WATCH AND SHOOT . c. Fire 2 rds at each exposure.	HPS 8	4 x 5 sec exposures with intervals of 4 to 10 sec between exposures.
5	Rapid Kneeling	2 x Fig 11.	20	8	a. Firer in the standing low ready (alert) position with the pistol "made safe" in a holster or by the side. b. Order WATCH AND SHOOT . c. The appearance of the tgt is the signal to draw the pistol and "make ready". d. Adopt the kneeling position and fire during each exposure.	HPS 8	a. 1 x 7 sec exposure followed 3 x 4 sec exposures. b. Any number of rds may be fired during each exposure, but not more than 4 to count on each tgt.

Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
6	Snap Standing and Kneeling	As per Ser 5.	25	8	a. Firer in the standing low ready (alert) position, "made ready" with safety catch applied. b. Order WATCH AND SHOOT . c. Fire 4 rds from the standing position at the left tgt on the first exposure, then adopt the kneeling position and fire 4 rds at the right tgt on the second exposure.	HPS 8	2 x 8 sec exposures with intervals of 5 sec.

NOTES

1. **Ammunition.** 47 rds.
2. **Scoring.** HPS—37 points. 1 point per hit.
3. **Standard.** Pass—22 points (60% of HPS).
4. No extra time is to be given for stoppages.
5. Ser 1 is not scored and not fired if firer is confident in his POA.

PISTOL APPLICATION RANGE PRACTICE 31—DOUBLE TAP / EMERGENCY RELOAD

120. **Aim.** To train the firer in engaging targets using the double tap method of engagement.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Double Tap Kneeling	2 x Fig 11.	8	6	a. Firer is to load and holster the weapon. b. Order WATCH AND SHOOT . c. Once the tgt appears, the firer is to ready the weapon, adopt the kneeling position, and fire 2 rds double tap at centre of mass and one head shot at the left tgt, 2 rds double tap at centre of mass and one head shot at the right tgt. d. No time limit.	HPS 6	a. Firer is to understand that the application of this drill is close range when the enemy is suspected to wear body armour. b. Repeat as necessary.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
2	Double Tap Standing	As per Ser 1.	8	6	a. Firer is to load and holster the weapon. b. Order WATCH AND SHOOT . c. Once the tgt appears, the firer is to ready the weapon, and fire 2 rds double tap at centre of mass and 1 head shot at the left tgt, 2 rds double tap at centre of mass and 1 head shot at the right tgt. d. No time limit.	HPS 6	Repeat as necessary.
3	Double Tap Standing (Emergency Reload)	As per Ser 1.	10	6 (mag 1 to 2 rds and mag 2 to 4 rds)	a. Firer is to load and holster weapon. b. Order WATCH AND SHOOT . c. Tgts will appear for 20 sec. Fire 2 rds at the left tgt, reload and then fire 4 rds at the right tgt.	HPS 6	a. Repeat as necessary. b. Firer is to use double tap method as per Ser 1.

NOTES

1. **Ammunition.** 18 rds.
2. **Scoring.** HPS—18 points. 1 point for each hit.
3. **Standard.** Pass—11 points (60% of HPS).
4. No extra time is to be given for stoppages.
5. Firers are to employ the double tap method of engagement for all Sers.

PISTOL APPLICATION RANGE PRACTICE 32—FIRE AND MOVEMENT

121. **Aim.** To train the firer in engaging targets on the move.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Fire and Movement (Deliberate Kneeling)	2 x Fig 11.	25	4	a. Firer is to stand at the 30 m point weapon loaded in the low ready (alert) position. b. On the whistle blast, move to the 25 m point and adopt the kneeling position. c. Fire 2 rds at the left tgt	HPS 4	

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
					and 2 rds at the right tgt. d. No time limit.		
2	Fire and movement (Deliberate Standing and Kneeling)	As per Ser 1.	15	8	a. Firer is to stand at the 20 m point weapon loaded in the low ready (alert) position. b. On the whistle blast, move to the 15 m point. c. Adopt the standing position and fire 2 rds at the left tgt and 2 rds at the right tgt. d. No time limit.	HPS 8	Repeat in the kneeling position.
3	Fire and movement (Deliberate Standing and Kneeling)	As per Ser 1.	20	8	a. Firer is to stand at the 25 m point weapon loaded in the low ready (alert) position. b. On the whistle blast, move to the 20 m point. c. Adopt the standing position and fire 2 rds at the left tgt and 2 rds at the right tgt. d. No time limit.	HPS 8	Repeat in the kneeling position.

NOTES

1. **Ammunition.** 20 rds.
2. **Scoring.** HPS—20 points. 1 point per hit.
3. **Standard.** Pass—12 points (60% of HPS).
4. No extra time is to be given for stoppages.

PISTOL PWT 3

122. **Aim.** To confirm that the firer can engage targets at various ranges while employing movement.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Grouping Standing	1 x 75 by 100 mm white aiming marks on a 1.3 m witness screen.	15	5	Fire 1 x 5 rd grouping at the same aiming mark.	Nil	Note any need to aim off to place the MPI on the CZP.
2	Double	1 x Fig 11.	8	6	a. Firer is to load and	HPS 6	1 x 17 sec

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
	Tap Kneeling				holster the weapon. b. Order WATCH AND SHOOT . c. Once the tgt appears, the firer is to ready the weapon, adopt the kneeling position, and fire 2 rds double tap at centre of mass and one head shot at the left tgt, 2 rds double tap at centre of mass and one head shot at the right tgt.		exposure.
3	Double Tap Standing	1 x Fig 11.	8	6	a. Firer is to load and holster the weapon. b. Order WATCH AND SHOOT . c. Once the tgt appears, the firer is to ready the weapon, and fire 2 rds double tap at centre of mass and one head shot at the left tgt, 2 rds double tap at centre of mass and one head shot at the right tgt.	HPS 6	1 x 15 sec exposure.
4	Fire and movement (Deliberate)	2 x Fig 11.	25 20 15	16 (4) (4) (4)	a. Firer is to stand at the 25 m point weapon loaded in the low ready (alert) position. (4) b. On the whistle blast, the firer is to adopt the kneeling position and fire 2 rds at the left tgt and 2 rds at the right tgt. (4) c. Firer to place weapon on safe, move to the 20 m firing point, adopt the kneeling position, and fire 2 rds at the left tgt and 2 rds at the right tgt. (4) d. Firer to place weapon on safe, move to the 15 m firing point,	HPS 16	a. 16 rds (1 x 10 rd mag and 1 x 6 rd mag) b. Timed exposures: (1) 25 m—5 sec kneeling. (2) Pause 10 sec. (3) 20 m—5 sec kneeling. (4) Pause 10 sec. (5) 15 m—12 sec standing. (6) Pause 10 sec. (7) 8 m—5 sec standing.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
			8	(4)	<p>adopt the standing position, and fire 2 rds at the left tgt and 2 rds at the right tgt.</p> <p>e. Firer is to conduct an emergency reload during this engagement.</p> <p>f. Firer to place weapon on safe, move to the 8 m firing point, adopt the standing position, and fire 2 rds at the left tgt and 2 rds at the right tgt.</p>		

NOTES

1. **Ammunition.** 33 rds.
2. **Scoring.** HPS—28 points:
 - a. Ser 2 and Ser 3—1 point per hit in centre of mass (max 2) plus 1 point for each hit in head (max 1).
 - b. Ser 4—1 point for each hit.
3. **Standard.** Pass—17 points (60% of HPS).
4. No extra time is to be given for stoppages.
5. Ser 1 need not be fired if the firer is confident in his POA. It is not scored.

SECTION 6—THE HECKLER AND KOCH MACHINE PISTOL 5 (MP5)

SCOPE

123. This section sets out all the firing practices to be completed in the CFOSP for the MP5. It includes the application of live firing practices for all Arms and Services and the progression and frequency with which they are to be fired.

124. The progression and frequency of firing is essential for preparing firers for the Personal Weapons Tests (PWTs). It is also essential in preparing the firer for field firing. The details on the MP5 weapons handling tests are contained in the weapon pamphlet.

SIMULATION AND TECHNOLOGY

125. **Small Arms Trainer.** Small Arms Trainer (SAT) firing lessons are an integral part of the CFOSP and have been selected to confirm the basic skills before moving on to live firing. It also assists the coach in eliminating faults that have, until recently, only been detectable during live firing. All practices and tests that are included in the SAT software can be used for remedial training, or as concurrent activity to a range or other period.

126. Firers are to fire the SAT bore sighting practice before any other shoots. To familiarize themselves with the conditions, firers can be given a preview of all the live firing practices on the SAT.

TRAINING AND FIRING SEQUENCE

127. The training and firing sequence as laid down for the MP5 should be followed in a logical sequence to ensure that firers arrive at the prescribed PWT at a standard where they will be fit to pass the test.

128. Each stage is designed to give the firer the necessary practice and confidence to successfully complete the PWT. Each PWT must be passed before attempting the next in the series.

129. PWT 1 and PWT 2 are not gateways to field firing. In accordance with B-GL-381-001/TS-000 *Training Safety*, only personnel who are current on PWT 3 may proceed to live fire collective training.

130. The all Arms and Services night supplement of the PWT has been included in PWT 2 only. Therefore, all personnel qualified PWT 2 or higher will have completed the night supplement.

131. Test methods for the MP5 are as follows:

- a. **Initial Marksmanship Training.** All application range practices and PWTs are to be conducted on the SAT, if available, followed by live firing:
- b. **Continuation Marksmanship Training.** The range practice requirements are:
 - (1) **Application Range Practices.** These range practices are not mandatory once initial marksmanship training is completed; however, if they are conducted, they may be conducted on the SAT (if available). They should be used to assist firers in correcting faults experienced during the completion of a specific PWT.

- (2) **Personal Weapons Tests.** Firers must complete their mandated level of PWT live; however, subordinate PWTs may be conducted on the SAT. Commanding officers (COs) must ensure sufficient time and resources are provided to allow for zeroing before commencing live practices.
- c. **Remedial Training.** The SAT provides an invaluable aid when remedial training of the poor shot is required. COs are encouraged to make full use of the facilities wherever they are available. However, final confirmation must be by the use of live firing. Most practices can be completed on the SAT and it should be used, when available, as a remedial aid or for rehearsal prior to live firing.

CONDUCT OF LIVE FIRE PRACTICES

132. **General Requirements.** All live firing practices contained in the CFOSP programme are to be conducted strictly in accordance with B-GL-381-001/FP-000, *Training Safety* and local Range Standing Orders (RSOs).

WEAPON AND FIRING PREPARATION

133. Where possible, MP5s are to be prepared for firing prior to moving to the range to ensure they are prepared under “ideal” conditions and not those that may be experienced on the range.

134. Observation of the fall of shot is obvious at short ranges (10–25 m). During grouping practices it must be emphasized to firers that they are to take the correct point of aim (POA) for each shot and avoid aiming off.

135. **Aiming Marks.** Where white patches are used the POA is to be bottom centre of the patch.

136. **Standards.** Firers who do not achieve the required standards should be given further coaching and dry firing practice before firing again.

PRACTICES AND TESTS

137. The details of practices Stage 1, Stage 2, and Stage 3 are contained in the remaining pages of this section. Each practice is contained in separate pages for easy use.

MP5 SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
1	SAT/LIVE	11	Basic Groupings in all Positions	25	60	To train the firer to achieve a basic grouping in all positions.
		MP5 PWT 1		25	50	To confirm that the firer can achieve an effective grouping in all positions.
2	SAT/LIVE	21	Snap Shooting	10–25	40	To train the firer to effectively engage targets at different ranges from various positions.
		22	Application of Fire	25–10 LNV	52	To train the firer to shift positions and effectively engage targets at various ranges by day and night.
		MP5 PWT 2		25–10	64	To confirm that the firer can effectively engage targets at various ranges from different positions by day.
	SAT/LIVE	MP5 PWT 2 NIGHT SHOOT		LNv	12	To confirm that the firer can effectively engage targets at night.
3	SAT/LIVE	31	Advanced Application of Fire	50	62	To train the firer to effectively engage targets out to 50 m with single shots and bursts.
		MP5 PWT 3		50–10	42	To confirm that the firer is able to effectively engage targets out to 50 m with single shots and bursts.

MP5 APPLICATION RANGE PRACTICE 11—BASIC GROUPINGS IN ALL POSITIONS

138. **Aim.** To train the firer to achieve a basic grouping in all positions.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping Prone Unsupported	1 x Fig 11 superimposed on a witness screen with a 75 by 100 mm white patch.	25	20	a. Fire a 5 rd grouping. b. Firer is to stand up after each 5 rd grouping. c. Discuss grouping results and repeat three more times.	Pass/ Fail	a. Coaching is required. b. Firer must declare each shot.
2		Grouping Kneeling	As per Ser 1.	25	10	a. Fire 1 x 5 rd grouping from the kneeling position at the aiming mark. b. Discuss the grouping and repeat.	Pass/ Fail	As per Ser 1.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
3		Grouping Sitting	As per Ser 1.	25	10	a. Fire 1 x 5 rd grouping from the sitting position at the aiming mark. b. Discuss the grouping and repeat.	Pass/Fail	As per Ser 1.
4		Grouping Standing	As per Ser 1.	25	10	a. Fire 1 x 5 rd grouping from the standing position at the aiming mark. b. Discuss the grouping and repeat.	Pass/Fail	As per Ser 1.
5		Grouping Prone CBRN	As per Ser 1.	25	10	a. Fire 1 x 5 rd grouping from the prone position at the aiming mark. b. Discuss the grouping and repeat.	Pass/Fail	a. As per Ser 1. b. CBRN mask and gloves to be worn.

NOTES

1. **Ammunition.** 60 rds.
2. **Scoring.** Pass/Fail.
3. **Standards.** Firer is to achieve a pass in at least one the groupings in each Ser as follows:
 - a. Prone 25 m—100 mm.
 - b. Kneeling 25 m—150 mm.
 - c. Sitting 25 m—150 mm.
 - d. Standing 25 m—250 mm.
 - e. Prone CRBN 25 m—150 mm.
4. Firers are not permitted to use any support, or to rest their weapon on the ground.

MP5 PWT 1

139. **Aim.** To confirm that the firer can achieve an effective grouping in all positions.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping Prone Unsupported	1 x Fig 11 superimposed on a witness screen with a 75 by 100 mm white	25	10	a. Fire a 5 rd grouping. b. Firer is to stand up after each 5 rd grouping. c. Discuss grouping results and repeat.	See notes	a. No coaching is permitted. b. Best grouping size counts for

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
			patch.					score.
2		Grouping Kneeling	As per Ser 1.	25	10	a. Fire 1 x 5 rd grouping from the kneeling position at the aiming mark. b. Discuss the grouping and repeat.	See notes	As per Ser 1.
3		Grouping Sitting	As per Ser 1.	25	10	a. Fire 1x 5 rd grouping from the sitting position at the aiming mark. b. Discuss the grouping and repeat.	See notes	As per Ser 1.
4		Grouping Standing	As per Ser 1.	25	10	a. Fire 1 x 5 rd grouping from the standing position at the aiming mark. b. Discuss the grouping and repeat.	See notes	As per Ser 1.
5		Grouping Prone CBRN	As per Ser 1.	25	10	a. Fire 1 x 5 rd grouping from the prone position at the aiming mark. b. Discuss the grouping and repeat.	See notes	a. As per Ser 1. b. CBRN mask and gloves to be worn.

NOTES

1. **Ammunition.** 50 rds.
2. **Scoring.** HPS—25 points:
 - a. Ser 1: 75 mm—5 pts; 100 mm—3 pts; and over 100 mm—0 points.
 - b. Ser 2: Ser 3 and Ser 5: 100 mm—5 points; 150 mm—3 points; and over 150 mm—0 points.
 - c. Ser 4: 200 mm—5 points; 250 mm—3 points; and over 250 mm—0 points.
3. **Standard.** Pass—15 points (60% of HPS).

MP5 APPLICATION RANGE PRACTICE 21—SNAP SHOOTING

140. **Aim.** To train the firer to effectively engage targets at different ranges from various positions.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Snap Standing	1 x Fig 12.	10	5	a. Order STANDING POSITION... READY... WATCH AND SHOOT. b. On the appearance of the tgt the firer is to fire 5 rds.	See notes	1 x 8 sec exposure.
2		Snap Kneeling	As per Ser 1.	10	5	a. Order KNEELING POSITION... READY... WATCH AND SHOOT. b. On the appearance of the tgt the firer is to fire 5 rds.	See notes	1 x 8 sec exposure.
3		Snap Kneeling	As per Ser 1.	15	5	a. Order KNEELING POSITION... READY... WATCH AND SHOOT. b. On the appearance of the tgt the firer is to fire 5 rds.	See notes	1 x 8 sec exposure.
4		Snap Standing	As per Ser 1.	15	5	a. Order STANDING POSITION... READY... WATCH AND SHOOT. b. On the appearance of the tgt the firer is to fire 5 rds.	See notes	1 x 8 sec exposure.
5		Snap Standing	1 x Fig 11.	20	5	a. Order STANDING POSITION... READY... WATCH AND SHOOT. b. On the appearance of the tgt the firer is to fire 5 rds.	See notes	1 x 8 sec exposure.
6		Snap Kneeling	As per Ser 5.	20	5	a. Order KNEELING POSITION... READY... WATCH AND SHOOT. b. On the appearance of the tgt the firer is to fire 5 rds.	See notes	1 x 8 sec exposure.
7		Snap Kneeling	As per Ser 5.	25	5	a. Order KNEELING POSITION... READY... WATCH AND SHOOT. b. On the appearance of the tgt the firer is to fire 5 rds.	See notes	1 x 8 sec exposure.
8		Snap Standing	As per Ser 5.	25	5	a. Order STANDING POSITION... READY... WATCH AND SHOOT. b. On the appearance of the tgt the firer is to fire 5 rds.	See notes	1 x 8 sec exposure.

NOTES

1. **Ammunition.** 40 rds.
2. **Scoring.** HPS—80 points:
 - a. Shots inside the large rectangle—2 points.
 - b. Shots on the remainder of the tgt—1 point.
3. **Standard.** Pass—48 points (60% of HPS).

MP5 APPLICATION RANGE PRACTICE 22—APPLICATION OF FIRE

141. **Aim.** To train the firer to shift positions and effectively engage targets at various ranges by day and night.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Snap Standing and Kneeling	2 x Fig 11 approx 1.5 m apart.	25	8	a. The firer is to be in the standing alert position. b. Order STANDING AND KNEELING POSTIONS... READY... WATCH AND SHOOT. c. When the tgts are exposed the firer is to fire 2 x rds standing at the left tgt during the first 4 sec exposure, then quickly drop to the kneeling position and fire 2 rds at the right tgt during the second 4 sec exposure. d. On completion of the double exposure, order APPLY CHANGE LEVER AND STAND UP. e. Repeat the double exposure a second time.	See notes	a. 1 x 4 sec exposure followed by 1 x 2 sec interval, then a further 1 x 4 sec exposure; and b. Repeat for second exposure.
2		Snap Kneeling	As per Ser 1.	20	8	a. Order KNEELING POSTION... READY... WATCH AND SHOOT. b. The firer is to fire 2 rds during each exposure, 1 rd at each tgt. c. Firer is to return to the kneeling alert position between exposures.	See notes	4 x 4 sec exposures with irregular intervals.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
3		Rapid Standing	As per Ser 1.	20	8	a. Order STANDING ALERT POSTION... READY... WATCH AND SHOOT. b. When the tgt is exposed the firer is to fire 4 rds at the left tgt and then 4 rds at the right tgt.	See notes	1 x 20 sec exposure.
4		Snap Standing and Kneeling	As per Ser 1.	15	8	a. The firer is to be in the standing alert position. b. Order STANDING AND KNEELING POSTIONS... READY... WATCH AND SHOOT. c. When the tgts are exposed the firer is to fire 2 rds standing at the left tgt during the first 4 sec exposure, then quickly drop to the kneeling position and fire 2 rds at the right tgt during the second 4 sec exposure. d. On completion of the double exposure, order APPLY CHANGE LEVER AND STAND UP. e. Repeat the double exposure a second time.	See notes	1 x 4 sec exposure followed by 1 x 2 sec interval, then a further 1 x 4 sec exposure.
5		Snap Kneeling	As per Ser 1.	10	4	a. Order KNEELING POSTION... READY... WATCH AND SHOOT. b. On the appearance of the tgt the firer is to fire 1 rd at each tgt. c. Firer is to return to the standing alert position after each exposure.	See notes	a. 2 x 4 sec exposures within a 20 sec interval; and b. No more than 2 hits on each tgt to count.
6		Snap Standing	As per Ser 1.	10	4	a. Firer to be 5 m to the rear of the firing point in the standing alert position with the change lever at "S". b. Order STANDING POSTION... READY... WATCH AND SHOOT. c. When the tgts are exposed the firer moves to the firing point, moves the change lever to "R," and fires 1 rd at each tgt. d. On completion of the first exposure, order APPLY	See notes	2 x 6 sec exposures.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
						CHANGE LEVER AND DRESS BACK. e. Repeat for second exposure.		
7		Night Snap	1 x Fig 11 (Draped).	LNV	6	a. Firer in the standing alert position. b. Order WATCH AND SHOOT. c. The appearance of the tgt is the signal for the firer to adopt the kneeling position and fire 2 rds double tap at each exposure. d. After each exposure, order ADOPT THE STANDING ALERT POSTION.	See notes	a. 3 x 10 sec exposures with irregular intervals. b. Tgt does not fall when hit.
8		Night Snap	As per Ser 7.	LNV	6	a. Firer in the kneeling position. b. Order WATCH AND SHOOT. c. Fire 2 rds double tap at each exposure.	See notes	a. 3 x 6 sec exposures with irregular intervals. b. Tgt does not fall when hit.

NOTES

1. **Ammunition.** 52 rds.
2. **Scoring.** HPS—86 points:
 - a. Ser 1 to Ser 6:
 - (1) Shots inside the large rectangle—2 points.
 - (2) Shots on the remainder of the tgt—1 point.
 - b. Ser 7 and Ser 8—1 point per exposure if tgt is hit one or more times.
3. **Standard.** Pass—52 points (60% of HPS).

MP5 PWT 2

142. **Aim.** To confirm that the firer can effectively engage targets at various ranges from different positions by day.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Rapid Prone	2 x Fig 11 approx 1.5 m apart.	25	10	a. The firer is to be in the prone position. b. Order READY... WATCH AND SHOOT. c. When the tgts are exposed, the firer is to fire 5 rds at the left tgt and 5 rds at the right tgt.	See notes	a. Firer to zero their SAT weapon before attempting this test. b. 1 x 12 sec exposure.
2		Rapid Sitting	As per Ser 1.	25	10	a. The firer is to be in the sitting position. b. Order READY... WATCH AND SHOOT. c. When the tgts are exposed, the firer is to fire 5 rds at each tgt.	See notes	1 x 12 sec exposure.
3		Snap Standing and Kneeling	As per Ser 1. Left Fig 11.	25	8	a. The firer is to be in the standing alert position. b. Order STANDING AND KNEELING POSITIONS... READY... WATCH AND SHOOT. c. When the tgts are exposed, the firer is to fire 2 rds standing during the first 4 sec exposure, then quickly drop to the kneeling position and fire 2 rds during the second 4 sec exposure. d. On completion, order APPLY CHANGE LEVER AND STAND UP. e. Repeat the double exposure a second time.	See notes	a. 1 x 4 sec exposure followed by 1 x 2 sec interval, then a further 1 x 4 sec exposure. b. Repeat.
4		Rapid Standing	As per Ser 2.	15	10	a. Firer to be to the rear of the firing point with the readied weapon on the firing point. b. Order STANDING POSITION... READY... WATCH AND SHOOT. c. When the tgts are exposed, the firer moves to the firing point and fires 10 rds at the left tgt from the standing position.	See notes	1 x 45 sec exposure.
5		Snap Standing to Kneeling	As per Ser 2.	15	6	a. The firer is to be in the standing alert position. b. Order KNEELING POSITION... READY... WATCH AND SHOOT.	See notes	3 x 3 sec exposures with 1 x 5 sec interval between exposures.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
						c. When the tgts are exposed, the firer is to quickly drop to the kneeling position and fire 1 rd at each tgt. d. After each exposure, order APPLY CHANGE LEVER AND STAND UP... ADOPT THE STANDING ALERT POSTION. e. Repeat for subsequent exposures.		
6		Snap Standing	As per Ser 2.	10	10	a. Order STANDING POSITION... READY... WATCH AND SHOOT. b. When the tgts are exposed, the firer is to fire 1 rd at each tgt. c. Firer is to return to the standing alert position after each exposure.	See notes	3 x 3 sec exposures with 1 x 5 sec interval between exposures.
7		Snap Kneeling	As per Ser 2.	10	10	a. The firer is to be in the standing alert position. b. Order KNEELING POSITION... READY... WATCH AND SHOOT. c. When the tgts are exposed, the firer is to quickly drop from the standing to the kneeling position and fire 1 rd at each tgt. d. On completion of each exposure, order APPLY CHANGE LEVER AND STAND UP... ADOPT THE STANDING ALERT POSITION.	See notes	5 x 6 sec exposures with 1 x 10 sec interval between exposures.

NOTES

1. **Ammunition.** 64 rds.
2. **Scoring.** HPS—64 points. 1 point per hit in all Sers.
3. **Standard.** Pass—38 points (60 % of HPS).

MP5 PWT 2—NIGHT SHOOT

143. **Aim.** To confirm that the firer can effectively engage targets at night.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Night Snap Kneeling	1 x Fig 11 (Draped).	LNV	6	a. Firer in the standing alert position. b. Order WATCH AND SHOOT . c. The appearance of the tgt is the signal for the firer to adopt the kneeling position and fire 2 rds double tap at each exposure. d. After each exposure, order ADOPT THE STANDING ALERT POSITION .	See notes	a. 3 x 8 sec exposures with irregular intervals. b. Tgt does not fall when hit.
2		Night Snap Standing	As per Ser 1.	LNV	6	a. Firer in the standing alert position. b. Order WATCH AND SHOOT . c. Fire 2 rds double tap at each exposure.	See notes	a. 3 x 5 sec exposures with irregular intervals. b. Tgt does not fall when hit.

NOTES

1. **Ammunition.** 12 rds.
2. **Scoring.** HPS—6 points. 1 point per exposure if tgt is hit one or more times.
3. **Standard.** Pass—4 points (60% of HPS).

MP5 APPLICATION RANGE PRACTICE 31—ADVANCED APPLICATION OF FIRE

144. **Aim.** To train the firer to effectively engage targets out to 50 m with single shots and bursts.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Grouping Prone	1 x Fig 11 superimposed on a witness screen with a 75 by 100 mm white patch.	50	10	a. Fire 1 x 5 rd group from the prone position at the aiming mark. b. Discuss the grouping and repeat.	Pass / Fail	a. Firer is to achieve a 200 mm grouping in at least one of the two groupings. b. Firer must achieve this standard before progressing further.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
2	Snap Standing	1 x Fig 11.	50	5	a. Order STANDING POSITION... READY ... WATCH AND SHOOT. b. On the appearance of the tgt, the firer is to fire 5 rds.	See notes	1 x 8 sec exposure.
3	Snap Kneeling	As per Ser 2.	50	5	a. Order KNEELING POSITION... READY ... WATCH AND SHOOT. b. On the appearance of the tgt, the firer is to fire 5 rds.	See notes	1 x 8 sec exposure.
4	Snap Sitting	As per Ser 2.	50	5	a. Order SITTING POSITION... READY ... WATCH AND SHOOT. b. On the appearance of the tgt, the firer is to fire 5 rds.	See notes	1 x 8 sec exposure.
5	Prone Rapid	As per Ser 2.	50	5	a. Firer in the standing alert position with weapon loaded and made ready with change lever at "S". b. Order WATCH AND SHOOT. c. Firer adopts the prone position and fires 5 rds rapid.	See notes	1 x 10 sec exposure.
6	Snap Standing and Kneeling	2 x Fig 11 approx 1.5 m apart.	50	8	a. Firer in the standing alert position. b. Order STANDING AND KNEELING POSITIONS... READY... WATCH AND SHOOT. c. When the tgts are exposed, the firer is to fire 2 rds standing at the left tgt during the first 4 sec exposure, then quickly drop to the kneeling position and fire 2 rds at the right tgt during the second 4 sec exposure. d. Repeat the double exposure a second time.	See notes	a. 1 x 4 sec exposure followed by 1 x 2 sec interval, and then a further 1 x 4 sec exposure. b. Repeat.
7	Bursts Standing	1 x Fig 11.	15	12	a. Firer made ready with weapon on safe. b. Fire 1 x 2 to 3 rd burst per exposure from the standing position.	See notes	a. Tgt up on order. b. 4 x 4 sec exposures.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
8	Bursts Hip	As per Ser 7.	10	12	a. Firer is ready with weapon on safe. b. Fire 1 x 2 to 3 rd burst per exposure from the hip.	See Notes	a. Tgt up on order. b. 4 x 4 sec exposures.

NOTES

1. **Ammunition.** 62 rds.
2. **Scoring.** HPS—36 points:
 - a. Ser 2 to Ser 6:
 - (1) Shots inside the large rectangle—2 points.
 - (2) Shots on the remainder of the tgt—1 point.
 - b. Ser 7 and Ser 8—1 point awarded if the tgt is struck by at least one rd per exposure.
3. **Standard.** Pass 20 points (60% of HPS).

MP5 PWT 3

145. **Aim.** To confirm that the firer is able to effectively engage targets out to 50 m with single shots and bursts.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Grouping Prone	1 x Fig 11 superimposed on a witness screen with a 75 by 100 mm white patch.	50	10	a. Fire 1 x 5 rd grouping from the kneeling position at the aiming mark. b. Discuss the grouping and repeat.	HPS: a. 150mm—5 pts; b. 2000mm—3 pts; and c. Over 150mm—0.	
2	Rapid Prone	2 x Fig 11 approx 1.5 m apart.	50	10	a. Firer in the standing alert position with weapon loaded and made ready with change lever at "S". b. Order WATCH AND SHOOT . c. Fire 5 rds rapid from the prone position at each tgt.	HPS 10. 1 point per hit	1 x 20 sec exposure.
3	Snap Kneeling and	As per Ser 2.	50	6	a. Firer to be 5 m to the rear of the firing point in the standing alert position with weapon loaded and made	HPS 6. 1 point per hit	3 x 10 sec exposures. Repeat twice.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
	Prone				<p>ready with change lever at "S".</p> <p>b. Order STANDING POSITION... READY... WATCH AND SHOOT.</p> <p>c. When the tgts are exposed, the firer moves to the 50 m firing point, moves the safety to "E" and fires 1 rd at the left tgt from the kneeling position, then 1 rd from the prone position at the right tgt.</p> <p>d. On completion of the exposure, order APPLY CHANGE LEVER AND DRESS BACK 5 m.</p> <p>e. Repeat for subsequent exposures.</p>		
4	Movement and Fire Standing and Kneeling	As per Ser 2. Right Fig 11.	50 25 20 15 10	16	<p>a. Firer to be at the 100 m firing point in the prone position.</p> <p>b. There will be 1x 40 sec exposure followed by 4 x 4 sec exposures. The exposures will take place when the firer is at 50 m, 25 m, 20 m, 15 m, and 10 m. During each exposure, the firer is to fire 1 rd from the standing position and 1 rd from the kneeling position at the same tgt.</p> <p>c. Order STANDING POSITION... READY... WATCH AND SHOOT.</p> <p>d. On the appearance of the tgts for the first time, the firer is to move to the 50 m firing point, load a 10 rd mag, make ready, fire 1 rd standing and 1 rd kneeling at the right tgt, and then stand up.</p> <p>e. On completion, order APPLY CHANGE LEVER... STAND UP... ADOPT THE ALERT POSITION.</p>	HPS 12. See notes.	1 x 40 sec exposure followed by 4 x 4 sec exposures.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
					<p>f. Order ADVANCE.</p> <p>g. When the firer reaches the 25 m firing point, the tgts will be exposed to allow the firer to engage the right tgt with 1 rd, each from the standing and kneeling positions.</p> <p>h. Repeat procedures (e.), (f.) and (g.) at 20 m, 15 m, and 10 m.</p> <p>i. On completion at 10 m, the tgts will go down for 10 sec in which the firer must reload with a 6 rd mag. There will then be 2 x additional 3 sec exposures with irregular intervals between exposures. The firer will fire 1 x burst of 2 to 3 rds at each exposure.</p>		

NOTES

1. **Ammunition.** 42 rds.
2. **Scoring.** HPS—33 points:
 - a. Ser 1 grouping: 150 mm—5 points.
 - b. Ser 2 to Ser 4—1 point per hit, except the last 2 exposures at 10 m in Ser 4, which count as 1 point per burst.
3. **Standard.** Pass—20 points (60% of HPS).

CHAPTER 5 OTHER INDIVIDUAL WEAPONS

SECTION 1—INTRODUCTION

AIM

1. The aim of this chapter is to outline the Canadian Forces Operational Shooting Programme (CFOSP) designed to maintain the proficiency on other individual weapons. The practices described in the chapter are designed to enhance competency and ensure a minimum standard before advancing to field firing.

GENERAL

2. The Individual Battle Task Standards (IBTS) for Land Operations establishes the Individual Standards (IS) for all a firers assigned a specific weapon within this chapter. This chapter sets the shooting standard for all personal weapons and promulgates a progressive training approach. In addition, it defines the standards that are required prior to a firer proceeding to the next higher level of training. A focused and progressive approach to musketry training will ensure that every firer is skilled in the use of their personal weapon.

LAYOUT

3. This chapter comprises seven sections:

- a. Section 1—General;
- b. Section 2—Remington 870P Shotgun;
- c. Section 3—C13 Fragmentation Grenade;
- d. Section 4—Short Range Anti-armour Weapon (Light) (SRAAW [L]);
- e. Section 5—Medium Range Sniper Rifle (MRSW);
- f. Section 6—Long Range Sniper Weapon (LRSW); and
- g. Section 7—C6 General Purpose Machine Gun (Light Role) (GPMG [LR]).

4. Each section contains information that is essential for the training, practise and testing of skills on individual weapons. Although trained soldiers do not necessarily require the full work up range practices in order to shoot to the required standard, any or all training is beneficial and will result in a higher percentage of first time passes.

5. The nature of this chapter's structure aids in its amendment, should a need arise to add or withdraw a weapon system, range practice(s) or PWT(s).
6. As scientific data becomes more readily available, more emphasis will be placed on the Small Arms Trainer (SAT) simulator and other simulation devices for annual qualification. No simulation is designed to replace live firing; however, advantage must be taken of the convenience, ease and accessibility of simulators.

SECTION 2—REMINGTON 870P SHOTGUN

SCOPE

7. This section sets out all the firing practice to be completed in the Canadian Forces Operational Shooting Programme (CFOSP) for the Remington 870P Shotgun. It includes the application of live firing practices for all Arms and Services and the progression and frequency with which they are to be fired.
8. This progression and frequency of firing is essential for preparing soldiers for the live firing tests and field firing.

SIMULATION AND TECHNOLOGY

9. **Small Arms Trainer.** This weapon system is not available on the Small Arms Trainer (SAT) simulator at the time of publishing.

AIDS TO TRAINING AND FIRING

10. Chapter 3 outlines the dry firing techniques that are universal when training the battle shot. Coaches and firers should focus training around these principles and address issues related to the size of the impact area when firing buckshot type ammunition.
11. Firers should be given every opportunity to repeat serials as required until handling skills are mastered.

TRAINING AND FIRING SEQUENCE

12. The training and firing sequence for the shotgun should be followed logically and is designed to be conducted progressively. Firers who are required to achieve personal weapons test (PWT) 3 must have passed PWT 1 and PWT 2 within 12 months of attempting PWT 3.
13. The PWT 1 and PWT 2 test are NOT gateways to field firing.
14. Test methods for the shotgun are as follows:

- a. **Initial Marksmanship Training.** All application range practices and PWTs will be conducted progressively, live.
- b. **Continuation Marksmanship Training.** The range practice requirements are:
 - (1) **Application Range Practices.** These practices are not mandatory once initial marksmanship training is completed; however, if they are conducted, they may be conducted on the SAT (if available). These practices should be used to assist firers in correcting faults experienced during the completion of a specific PWT.
 - (2) **Personal Weapons Tests.** Firers must complete their mandated level of PWT live.
 - (3) **Personal Weapons Test 3 Supplements.** Supplemental tests are not normally conducted during initial marksmanship training. Specific supplements must be completed by those personnel who will employ the weapon in that particular configuration on operations or during field firing.

15. **Remedial Training.** Coaches and Firers are to make use of dry firing techniques related to handling in order to assist in mastering the holding and operation of the shotgun.

WEAPON AND FIRING PREPARATION

16. Where possible, shotguns should be prepared for firing prior to moving to the range to ensure they are prepared under “ideal” conditions and not those that may be experienced on the range.

17. **Spotters.** To achieve maximum value from this type of live firing, it is essential that firers be given every opportunity to discuss the results of their shooting with their coach.

18. **Standards.** Firers who do not achieve the required standards should be given further coaching and firing practice before firing again.

PRACTICES AND TESTS

19. The details of all live firing practices and tests are contained in the remaining pages of this section.

SHOTGUN SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
1	LIVE	11	Introductory Shoot and Deliberate Fire at Various Ranges	10 15 20 25	20	To train the firer in holding, aiming and firing the shotgun.
		SHOTGUN PWT 1		10 15 20 25	20	Confirm that the firer can hold, aim and fire the shotgun.
2	LIVE	21	Snap Shooting	12 20 25	16	To train the firer to engage targets instinctively.
		SHOTGUN PWT 2		12 20 25	20	To confirm that the firer can engage targets instinctively.
3	LIVE	31	Fire and Movement	10 15 20 25	20	To train the firer in techniques essential to movement and fire.
		SHOTGUN PWT 3		10 15 20 25	20	To confirm that the firer can effectively move and fire.
		32	Introduction to NLM	5–25	24	To train the firer in holding, aiming and firing the 12 gauge shotgun with non-lethal munitions (NLM).
		SHOTGUN PWT 3 SUPPLEMENT—NON-LETHAL MUNITIONS		5–25	6	To confirm that the firer can successfully engage targets with non-lethal munitions (NLM).

SHOTGUN APPLICATION RANGE PRACTICE 11—INTRODUCTORY SHOOT AND DELIBERATE FIRE

20. **Aim.** To train the firer in holding, aiming and firing the shotgun.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1		Deliberate Kneeling	1 x Fig 11 with an aiming mark on a 1.2 m screen.	10	4 (Buck)	Fire 4 rds at the tgt.	HPS 4	Firer is to note the point of aim (POA) necessary to achieve a central hit on the tgt in each position.
2		Deliberate Standing	As per Ser 1.	15	4 (Buck)	As per Ser 1.	HPS 4	As per Ser 1.
3		Deliberate Standing and Kneeling	As per Ser 1.	20	4 (Slug)	Fire 2 rds at the tgt from each position.	HPS 4	Firer is to move to the kneeling position on their own time.
4		Deliberate Standing and Kneeling	As per Ser 1.	25	4 (Slug)	As per Ser 3.	HPS 4	As per Ser 3.
5		Deliberate Standing and Kneeling	As per Ser 1.	25	4 (Slug)	As per Ser 3.	HPS 4	As per Ser 3.

NOTES

1. **Ammunition.** 20 rds (12 rds slug and 8 rds buckshot).
2. **Scoring.** HPS—20 points. 1 point per hit.
3. **Standard.** Pass—12 points (60% of HPS).

SHOTGUN PWT 1

21. **Aim.** To confirm that the firer can hold, aim and fire the shotgun.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1		Deliberate Kneeling	1 x Fig 11 with an aiming mark on a 1.2 m screen.	10	4 (Buck)	Fire 4 rds at the tgt.	HPS 4	Firer is to note the POA necessary to achieve a central hit on the tgt in each position.
2		Deliberate Standing	As per Ser 1.	15	4 (Buck)	As per Ser 1..	HPS 4	As per Ser 1.
3		Deliberate Standing and	As per Ser 1.	20	4 (Slug)	Fire 2 rds at the tgt from each position.	HPS 4	Firer is to move to the kneeling position on their own time.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
		Kneeling						
4		As per Ser 3.	As per Ser 1.	25	4 (Slug)	As per Ser 3.	HPS 4	As per Ser 3.
5		As per Ser 3.	As per Ser 1.	25	4 (Slug)	As per Ser 3.	HPS 4	As per Ser 3.

NOTES

1. **Ammunition.** 20 rds (12 rds slug and 8 rds buckshot).
2. **Scoring.** HPS—20 points. 1 point per hit.
3. **Standard.** Pass—12 points (60% of HPS).

SHOTGUN APPLICATION RANGE PRACTICE 21—SNAP SHOOTING

22. **Aim.** This train the firer to engage targets instinctively.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1		Snap Standing	2 x Fig 11.	12	4 (Buck)	a. Firer is to be "made ready" in the standing low ready position with the safety catch on "S" at 12 m. b. There will be 2 x 3 sec exposures of the tgts. c. On the appearance of the tgts, the firer is to fire 1 rd at the left tgt and 1 rd at the right tgt from the standing position.	HPS 4	Discuss and repeat Ser as required.
2		Snap Standing and Kneeling	As per Ser 1.	20	4 (Slug)	a. Firer is to be "made ready" in the standing low ready position with the safety catch on "S" at 20 m. b. There will be 2 x 3 sec exposures of the tgts. c. On the appearance of the tgts, the firer is to fire 1 rd at the left tgt and 1 rd at the right tgt from the	HPS 4	As per Ser 1.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
						standing position. d. For exposures 3 and 4, the firer is to adopt the kneeling position and repeat.		
3		As per Ser 2.	As per Ser 1.	25	8 (Slug)	a. Firer is to be “made ready” in the standing low ready position with the safety catch on “S” at 25 m. b. There will be 4 x 4 sec exposure of the tgts. c. On the appearance of the tgts, the firer is to fire 1 rd at the left tgt and 1 rd at the right tgt from the standing position. d. For exposures 3 and 4, the firer is to adopt the kneeling position and repeat.	HPS 8	As per Ser 1.

NOTES

1. **Ammunition.** 16 rds (4 rds buckshot and 12 rds slug).
2. **Scoring.** HPS—16 points. 1 point per hit.
3. **Standard.** Pass—10 points (60% of HPS).

SHOTGUN PWT 2

23. **Aim.** To confirm that the firer can engage targets instinctively.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1		Snap Standing	2 x Fig 11.	12	8 (Buck)	a. Firer is to be “made ready” in the standing low ready position with the safety catch on “S” at 12 m. b. There will be 4 x 3 sec exposures of the tgs. c. On the appearance of the tgts, the firer is to fire 1 rd at the left tgt and 1 rd at the right tgt from the standing position.	HPS 8	

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
2		Snap Standing and Kneeling	As per Ser 1.	20	8 (Slug)	a. Firer is to be “made ready” in the standing low ready position with the safety catch on “S” at 20 m. b. There will be 4 x 3 sec exposures of the tgts. c. On the appearance of the tgts, the firer is to fire 1 rd at the left tgt and 1 rd at the right tgt from the standing position. d. For exposures 3 and 4, the firer is to adopt the kneeling position and repeat.	HPS 8	
3		As per Ser 2.	As per Ser 1.	25	4 (Slug)	a. Firer is to be “made ready” in the standing low ready position with the safety catch on “S” at 25 m. b. There will be 2 x 4 sec exposure of the tgts. c. On the appearance of the tgts, the firer is to fire 1 rd at the left tgt and 1 rd at the right tgt from the standing position. d. For exposures 3 and 4, the firer is to adopt the kneeling position and repeat.	HPS 4	

NOTES

1. **Ammunition.** 20 rds (8 rds buckshot and 12 rds slug).
2. **Scoring.** HPS—20 points. 1 point per hit.
3. **Standard.** Pass—12 points (60% of HPS).

SHOTGUN APPLICATION RANGE PRACTICE 31—FIRE AND MOVEMENT

24. **Aim.** To train the firer in techniques essential to movement and fire.

Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1	Snap Standing and	2 x Fig 11.	20	4 (Slug)	a. Firer is to be “made ready” in the standing low ready position with the safety catch on “S” at 20 m. b. On the appearance of the tgts,	HPS 4	2 x 6 sec exposures.

Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
			15		down, order ADVANCE . i. When the firer reaches the 15 m point, there will be 1 x 30 sec exposure. The firer must reload 4 rds, make ready, and fire 1 rd at the left tgt in the standing position and 1 rd at the tight tgt in the kneeling position.		1 x 30 second exposure.
			10		j. On completion when the tgts go down, order ADVANCE . k. When the firer reaches the 10 m point, there will be 1 x 6 sec exposure. The firer is to engage each tgt in the same manner as at 15 m. l. There will be irregular intervals between exposures. m. On completion, order UNLOAD .		1 x 6 second exposure.

NOTES

1. **Ammunition.** 20 rds slug.
2. **Scoring.** HPS—20 points. 1 point per hit.
3. **Standard.** Pass—12 points (60% of HPS).

SHOTGUN PWT 3

25. **Aim.** To confirm that the firer can effectively move and fire.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1		Snap Standing and Kneeling	2 x Fig 11.	20	4 (Slug)	a. Firer is to be “made ready” in the standing low ready position with the safety catch on “S” at 20 m. b. On appearance of the tgts, the firer is to fire 1 rd at the left tgt from the standing position and 1 rd at the right tgt from the kneeling position. c. Firer is to return the safety to “S,” stand up, and repeat for the second exposure.	HPS 4	2 x 6 sec exposures.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
2		As per Ser 1.	As per Ser 1.	25	4 (Slug)	a. Firer is to be in the standing position 5 m to the rear of the 25 m firing point with the weapon "made ready" and safety catch on "S". b. On the appearance of the tgts, the firer is to advance to the 25 m point, fire 2 rds at the left tgt from the standing position, and 2 rds at the right tgt from the kneeling position.	HPS 4	1 x 10 sec exposure.
3		Snap Kneeling Position	As per Ser 1.	25	4 (Slug)	a. Firer is to be "made ready" in the kneeling position with the safety catch on "S" at 25 m. b. During each exposure, the firer is to fire 1 rd at the left tgt and 1 rd at the right tgt from the kneeling position. c. On completion, order UNLOAD .	HPS 4	2 x 4 sec exposures.
4		Movement and Fire	As per Ser 1.	100 25 20	8 (Slug)	a. Firer to be at the 100 m firing point in the standing position. b. Order 4 RDS... LOAD . The firer is to place the weapon on safe. c. Order STANDING POSITION... PREPARE TO MOVE . d. When the tgts appear, the firer is to move to the 25 m point, fire 1 rd at the left tgt from the standing position, 1 rd at the right tgt from the kneeling position, and then stand up. e. Order APPLY SAFETY... STAND UP... ADOPT THE LOW READY (ALERT) POSITION . f. Order ADVANCE . g. When the firer reaches the 20 m point, there will be	HPS 8	1 x 20 sec exposure. 1 x 6 sec exposure.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
				15		1 x 6 sec exposure. The firer is to fire 1 rd at the left tgt from the standing position, 1 rd at the right tgt from the kneeling position, and then stand up. h. On completion when the tgts go down, order ADVANCE .		1 x 30 sec exposure.
				10		i. When the firer reaches the 15 m point, there will be 1 x 30 sec exposure. The firer must reload 4 rds, make ready, fire 1 rd at the left tgt from the standing position, and 1 rd at the right tgt from the kneeling position. j. On completion when tgts go down, order ADVANCE . k. When the firer reaches the 10 m point there will be 1 x 6 sec exposure. The firer is to engage each tgt in the same manner as at 15 m. l. There will be irregular intervals between exposures. m. On completion, order UNLOAD .		1 x 6 sec exposure.

NOTES

1. **Ammunition.** 20 rds slug.
2. **Scoring.** HPS—20 points. 1 point per hit.
3. **Standard.** Pass—12 points (60% of HPS).
4. SABOT ammunition is not to be used.

SHOTGUN APPLICATION RANGE PRACTICE 32—INTRODUCTION TO NLM

26. **Aim.** To train the firer in holding, aiming and firing the 12 gauge shotgun with non-lethal munitions (NLM).

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
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Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1		Grouping / Accuracy Familiarization Shoot without Wearing a Respirator.	1 x Fig 11 tgt.	10 15 20 25	12	a. Fire 3 rds at aiming mark from the standing position. b. Discuss groupings.	See notes	Firer to engage with 3 rds at each range.
2		Grouping / Accuracy Familiarization Shoot Wearing a Respirator.	As per Ser 1.	10 15 20 25	12	As per Ser 1.	See notes	As per As per Ser 1.

NOTES

1. **Ammunition.** 24 rds NLM.
2. **Scoring.** HPS—24 points. 1 point per hit.
3. **Standard.** Pass—14 (60% of HPS).
4. Ser 2 will be conducted with full personal protective equipment (PPE).

SHOTGUN PWT 3 SUPPLEMENT—NLM

27. **Aim.** To confirm that the firer can successfully engage targets with non-lethal munitions (NLM).

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1		Deliberate Standing	Multiple Fig 11 targets with overlays attached to depict the threat.	15 20 25	3	a. Firer will move forward of the baseline and engage the correct tgt as designated/ ordered by the Officer in Charge (OIC) / Range Safety Officer (RSO). b. Upon successful engagement, the firer will disengage and move rearwards to the baseline. c. Each firer will have 10 x sec to successfully engage 3 x tgts with 3 NLM rds.	1 point per hit HPS 3	a. To be conducted without PPE. b. To be successful, each firer must engage the tgts correctly and in the time allocated. c. Discuss results and impact.
2		Deliberate Standing	As per Ser 1.	As per Ser 1.	3	As per Ser 1.	HPS 3	As per Ser 1, except PPE is to be worn.

NOTES

1. **Ammunition.** 6 rds NLM.
2. **Scoring.** HPS—6 points. 1 point per hit.
3. **Standard.** Pass 4 (60% of HPS).
4. This test is designed to confirm whether the firer can successfully engage threats (simulated by using tgts with overlays attached) in a timed event while under a stressful situation forward of the baseline. This practice will be conducted under as realistic conditions as possible to include the use of smoke obscuration.

SECTION 3—C13 FRAGMENTATION HAND GRENADE

SCOPE

28. This section sets out all the range practices to be completed in the CFOSP for the C13 Fragmentation Hand Grenade. It includes the application of range practices for all Arms and Services and the progression with which they should be fired.
29. This progression of training is essential for preparing firers for personal weapons tests (PWTs) and field firing.

TRAINING AND FIRING SEQUENCE

30. The training as laid down for the grenade should be followed in a logical sequence to ensure that firers arrive at a live firing range at a level where they will be fit to achieve the required standards. Ranges are designed to be conducted progressively.
31. The PWT levels within this section are scored as a pass/fail; yet, if at anytime the firer does not display the confidence necessary to effectively employ the grenade, they are to be given opportunity for additional training.
32. Test methods for the C13 Grenade are as follows:
- a. **Initial Marksmanship Training.** All application range practices and PWTs are mandatory to the desired PWT level, and are to be conducted as described below in the table “Grenade Summary of Range Practices.”
 - b. **Continuation Marksmanship Training.** The range practice requirements to achieve this level are:
 - (1) **Application Range Practices.** These practices are not mandatory once initial marksmanship training is completed; however, if they are conducted, they may be conducted on the

Small Arms Trainer (SAT), if available. They should be used to assist firers in correcting faults experienced during the completion of a specific PWT.

- (2) **Personal Weapons Tests.** PWTs are to be completed as described below in the table “Grenade Summary of Range Practices.”

PRACTICES AND TESTS

33. The details of all grenade range practices are contained in the remaining pages of this section.

GRENADE SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
1	Dry	11	Introduction to Firing Positions (Standing and Kneeling)	15 20	Practice Grenades	To train the firer in adopting firing positions.
		GRENADE PWT 1		15 20	Practice Grenades	To confirm the firer can adopt different firing positions.
2	Live	21	Firing Positions (Standing and Kneeling)	15 20	2 x M228 Fuse Practice	To train the firer in adopting firing positions and executing arming drills.
		GRENADE PWT 2		15 20	2 x M228 Fuse Practice	To confirm the firer can adopt firing positions and execute arming drills.
3	Live	GRENADE PWT 3		15 20	2 x HE Grenades	To confirm the firer can throw live grenades from different firing positions.

GRENADE APPLICATION RANGE PRACTICE 11—INTRODUCTION TO FIRING POSITIONS

34. **Aim.** To train the firer in adopting firing positions.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Standing	1 x Fig 11 in the centre of a 6 m circle.	20	Practice Grenade	Firer is given normal commands and is to carry out correct weapon handling drills.	Pass/ Fail	a. The grenade is to land inside the 6 m circle. b. The centre of the circle is to be 20 m from the throwing point.
2	Kneeling	As per	15	Practice	As per Ser 1.	Pass/	a. The grenade is to land inside

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
		Ser 1.		Grenade		Fail	the 6 m circle. b. The centre of the circle is to be 15 m from the throwing point.

NOTES

1. **Ammunition.** Nil.
2. **Scoring.** Pass/Fail.
3. **Standard.** IAW remarks.
4. The circle is to be visible from the throwing point and can be made from mine tape, rope, paint or lime.
5. This range practice is only conducted using practice grenades.
6. Firers are to throw wearing fighting order and helmet.
7. Although called a range practice, it is ideally conducted on any suitable dry training area or similar piece of ground.

GRENADE PWT 1

35. **Aim.** To confirm the firer can adopt different firing positions.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Standing	1 x Fig 11 in the centre of a 6 m circle.	20	Practice Grenade	Firer is to adopt the standing position, and as ordered, throw one grenade.	Pass/Fail	a. The grenade is to land inside the 6 m circle. b. The centre of the circle is to be 20 m from the throwing point.
2	Kneeling	As per Ser 1.	15	Practice Grenade	Firer is to adopt the kneeling position, and as ordered, throw one grenade.	Pass/Fail	a. The grenade is to land inside the 6 m circle. b. The centre of the circle is to be 15 m from the throwing point.

NOTES

1. **Ammunition.** Nil.
2. **Scoring.** Pass/Fail.
3. **Standards.** IAW remarks.
4. The circle is to be visible from the throwing point and can be made from mine tape, rope, paint or lime.
5. This range practice is only conducted using practice grenades.

6. Firers are to throw wearing fighting order and helmet.
7. Although called a range practice, it is ideally conducted on any suitable dry training area or similar piece of ground.

GRENADE APPLICATION RANGE PRACTICE 21—FIRING POSITIONS

36. **Aim.** To train the firer in adopting firing positions and executing arming drills.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Standing	1 x Fig 11 in the centre of a 6 m circle.	20	M228 Practice Grenades	Firer is given normal commands and is to carry out correct weapon handling drills.	Pass/Fail	a. The grenade is to land inside the 6 m circle. b. The centre of the circle is to be 20 m from the throwing point.
2	Kneeling	As per Ser 1.	15	M228 Practice Grenades	As per Ser 1.	Pass/Fail	a. The grenade is to land inside the 6 m circle. b. The centre of the circle is to be 15 m from the throwing point.

NOTES

1. **Ammunition.** 2 rds M228 Fuse Practice.
2. **Scoring.** Pass/Fail.
3. **Standards.** IAW remarks.
4. The circle is to be visible from the throwing point and can be made from mine tape, rope, paint or lime.
5. This range practice is ideally conducted using practice grenades with M228 Fuse Practice.
6. Firers are to throw wearing fighting order and helmet.
7. Although called a range practice, it is ideally conducted on any suitable dry training area or similar piece of ground, which allows the use of the M228 Fuse Practice IAW B-GL-381-001/TS-000 *Training Safety* and local Range Standing Orders.
8. If the M228 Fuse Practice is not available, a waiver is required through Director Army Training (DAT) IAW B-GL-381-001/TS-000 *Training Safety*.

GRENADE PWT 2

37. **Aim.** To confirm the firer can adopt firing positions and execute arming drills.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Standing	1 x Fig 11 in the centre of a 6 m circle.	20	M228 Practice Grenades	Firer is given normal commands and is to carry out correct weapon handling drills.	Pass/Fail	a. The grenade is to land inside the 6 m circle. b. The centre of the circle is to be 20 m from the throwing point.
2	Kneeling	As per Ser 1.	15	M228 Practice Grenades	As per Ser 1.	Pass/Fail	a. The grenade is to land inside the 6 m circle. b. The centre of the circle is to be 15 m from the throwing point.

NOTES

1. **Ammunition.** 2 rds M228 Fuse Practice.
2. **Scoring.** Pass/Fail.
3. **Standards.** IAW remarks.
4. The circle is to be visible from the throwing point and can be made from mine tape, rope, paint or lime.
5. This range practice is ideally conducted using practice grenades with M228 Fuse Practice.
6. Firers are to throw wearing fighting order and helmet.
7. Although called a range practice, it is ideally conducted on any suitable dry training area or similar piece of ground, which allows the use of M228 Fuse Practice IAW B-GL-381-001/TS-000 *Training Safety* and local Range Standing Orders.
8. If the M228 Fuse Practice is not available, a waiver is required through Director Army Training (DAT) IAW B-GL-381-001/TS-000 *Training Safety*.

GRENAD PWT 3

38. **Aim.** To confirm the firer can throw live grenades from different firing positions.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Standing	1 x Fig 11 in the centre of a 6 m circle.	20	1 x HE Frag Grenade	Firer is given normal commands and is to carry out correct weapon handling drills.	Pass/Fail	a. The grenade is to land inside the 6 m circle. b. The centre of the circle is to be 20 m from the throwing point.
2	Kneeling	As per Ser 1.	15	1 x HE Frag Grenade	As per Ser 1.	Pass/Fail	a. The grenade is to land inside the 6 m circle. b. The centre of the circle is to be 15 m from the

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
							throwing point.

NOTES

1. **Ammunition.** 2rds C13 HE.
2. **Scoring.** Pass/Fail.
3. **Standards.** IAW remarks.
4. The circle is to be visible from the throwing point and can be made from mine tape, rope, paint or lime.
5. Firers are to throw wearing fighting order and helmet.
6. This range practice is ideally conducted on the conventional grenade range.

SECTION 4—NM 72 E5 SHORT RANGE ANTI-ARMOUR WAEPON (LIGHT) (SRAAW [L])

SCOPE

39. This section sets out all the range practices to be completed in the CFOSP for the Rocket, High Explosive (HE), 66 mm, NM 72 E5 short range anti-armour weapon (light) (SRAAW [L]). It includes the application of range practices for all Arms and Services and the progression with which they should be fired.

40. This progression of training is essential for preparing firers for the Personal Weapons Tests (PWTs) and field firing.

SIMULATION AND TECHNOLOGY

41. **Small Arms Trainer.** Use of the Small Arms Trainer (SAT) simulator practices are an integral part of the CFOSP and have been selected to confirm the basic skills before live firing, and to enable the elimination of faults, which until recently have only been detectable during live firing.

42. To assist firers, the SAT serials have been added to the range practices and are designed to mirror live practices. It must be understood that due to the CFOSP changes and the current programming of the SAT, not all practices on the SAT mirror their live counterparts. Consequently, until the SAT is aligned with the CFOSP, in some cases scoring must be performed manually.

TRAINING AND FIRING SEQUENCE

43. The training and firing sequence as laid down for the SRAAW (L) should be followed in a logical sequence to ensure that firers arrive at a standard where they will be fit to achieve the required level of Individual Standards. The practices described in this section are designed to be conducted progressively. PWT 1 and PWT 2 must have been passed within 12 months of attempting PWT 3.

44. PWT 3 is the firer's gateway to field firing.

45. Test methods for the SRAAW (L) are as follows:

- a. **Initial Marksmanship Training.** All application range practices and PWTs up to completion of Stage 2 are to be completed on the SAT. Application Range Practice 31 is designed to prepare firers for PWT 3, and is to be conducted live. If ammunition is not available, commanders may waive this practice. PWT 3 is to be conducted live.
- b. **Continuation Marksmanship Training.** The range practice requirements are as follows:
 - (1) **Application Range Practices.** These range practices are not mandatory once initial marksmanship training is completed; however, if they are conducted, they may be conducted on the SAT (if available). They should be used to assist firers in correcting faults experienced during the completion of a specific PWT.
 - (2) **Personal Weapons Tests 1 and 2.** These tests are designed to be conducted on the SAT (if available).
 - (3) PWT 3 is to be conducted live.

46. **Remedial Training.** The SAT provides an invaluable aid to the remedial training of the poor shot. Commanding officers (COs) are encouraged to make full use of the facilities wherever they are available. However, final confirmation must be by the use of live firing. All practices can be fired on the SAT and may be used as a remedial aid, or as a rehearsal, prior to firing on a live firing range.

CONDUCT OF LIVE FIRE PRACTICES

47. **Standards.** Firers who do not achieve the required standards should be given further coaching and training before firing again.

PRACTICES AND TESTS

48. The details of all SRAAW (L) range practices are contained in the remaining pages of this section.

SRAAW (L) SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
1	SAT	11	Firing at Stationary Targets	150	4 SAT	To train the firer in effectively engaging static targets at varying ranges.
		SRAAW (L) PWT 1		100–150	4 SAT	To confirm the firer's ability to effectively engage static targets at varying ranges.
2	SAT	21	Firing at Moving Targets	150	4 SAT	To train the firer in effectively engaging moving targets.
		SRAAW (L) PWT 2		100–150	4 SAT	To confirm the firer's ability to effectively engage moving targets.
3	LIVE	31	Firing at Stationary Targets	100–150	2	To train the firer in effectively engaging targets using full calibre ammunition.
		SRAAW (L) PWT 3		100–150	2	To confirm the firer's ability to effectively engage targets using full calibre ammunition.

SRAAW (L) APPLICATION RANGE PRACTICE 11—FIRING AT STATIONARY TARGETS

49. **Aim.** To train the firer in effectively engaging static targets at varying ranges.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	MN72 Practice 1 Ser 2	Standing	Static tank tgt.	100	4 x SAT	Firer is given normal commands and is to carry out correct weapon handling drills.	HPS 4	
2	MN72 Practice 1 Ser 2	Kneeling	Static tank tgt.	150	4 x SAT	As per Ser 1.	HPS 4	

NOTES

- Ammunition.** 4 rds SAT.

2. **Scoring.** HPS—8 points. 1 point per hit.
3. **Standard.** Pass—5 points (60% of HPS).
4. SAT weapons are to be zeroed prior to the range practice.
5. Firers are to fire wearing fighting order and helmet.

SRAAW (L) PWT 1

50. **Aim.** To confirm that the firer's ability to effectively engage static targets.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	MN72 Practice 1 Ser 2	Standing	Static tank tgt.	100	2 x SAT	Firer is to given normal commands and is to carry out correct weapon handling drills.	HPS 2	
2	MN72 Practice 1 Ser 2	Kneeling	Static tank tgt.	150	2 x SAT	As per Ser 1.	HPS 2	

NOTES

1. **Ammunition.** 4 rds SAT.
2. **Scoring.** HPS—4 points. 1 point per hit.
3. **Standard.** Pass—2 points (50% of HPS).
4. SAT weapons are to be zeroed prior to the range practice.
5. Firers are to fire wearing fighting order and helmet.

SRAAW (L) APPLICATION RANGE PRACTICE 21—FIRING AT MOVING TARGETS

51. **Aim.** To train the firer in effectively engaging moving targets.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	MN72 Practice 3 Ser 3	Standing	Tank tgt.	100	2 x SAT	Firer is to engage a static tgt.	HPS 2	
2	MN72 Practice 2 Ser 3	Kneeling	Tank tgt.	150	2 x SAT	As per Ser 1.	HPS 2	

NOTES

1. **Ammunition.** 4 rds SAT.
2. **Scoring.** HPS—4 points. 1 point per hit.
3. **Standard.** Pass—2 points (50% of HPS).
4. The intent of this range practice is to expose the firer to live practice as preparation for PWT 3.
5. Firers are to fire wearing fighting order and helmet.

SRAAW (L) PWT 2

52. **Aim.** To confirm the firer's ability to effectively engage moving targets.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Standing	Tank tgt.	100	2 x SAT	Firer is to engage a static tgt.	HPS 2	
2		Kneeling	Tank tgt.	150	2 x SAT	As per Ser 1.	HPS 2	

NOTES

1. **Ammunition.** 4 rds SAT.
2. **Scoring.** HPS—4 points. 1 point per hit.
3. **Standards.** Pass—2 points (50% of HPS).
4. The intent of this range practice is to expose the firer to live practice as preparation for PWT 3.
5. Firers are to fire wearing fighting order and helmet.

SRAAW (L) APPLICATION RANGE PRACTICE 31—FIRING AT STATIONARY TARGETS

53. **Aim.** To train the firer in effectively engaging targets using full calibre ammunition.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	MN72 Practice 3 Ser 3	Standing	Tank tgt.	100	1 x NM 72 HEAT	Firer is to engage a static tgt.	HPS 1	
2	MN72 Practice 2 Ser 3	Kneeling	Tank tgt.	150	1 x NM 72 HEAT	As per Ser 1.	HPS 1	

NOTES

1. **Ammunition.** 2 rds NM 72 HEAT.
2. **Scoring.** HPS—2 points. 1 point per hit.
3. **Standard.** Pass—1 point (50% of HPS).
4. The intent of this range practice is to expose the firer to live practice as preparation for PWT 3. If ammunition is limited, the commander must afford sufficient dry practice training prior to attempting the test.
5. Firers are to fire wearing fighting order and helmet.

SRAAW (L)—PWT 3

54. **Aim.** To confirm the firer's ability to effectively engage targets using full calibre ammunition.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Standing	Tank tgt.	100	1 x NM 72 HEAT	Firer is to engage a static tgt.	HPS 1	
2		Kneeling	Tank tgt.	150	1 x NM 72 HEAT	As per Ser 1.	HPS 1	

NOTES

1. **Ammunition.** 2 rds NM 72 HEAT.
2. **Scoring.** HPS—2 points. 1 point per hit.
3. **Standard.** Pass—1 point (50% of HPS).
4. Firers are to fire wearing fighting order and helmet.

SECTION 5—7.62 mm TRAINING RIFLE AND .338 CAL MRSW**PART 1—7.62 mm SNIPER TRAINING RIFLE****SCOPE**

55. This section sets out the firing practices to be completed in the CFOSP for the 7.62 mm Sniper Training Rifle.

56. This progression and frequency of firing is essential to keep the sniper current with the Sniper Training Rifle. It is also essential in preparing the sniper for operations.

TRAINING AND FIRING SEQUENCE

57. The training and firing sequence as laid down for the 7.62 mm sniper training rifle should be followed in a logical sequence.

58. The live fire training received by snipers of the 7.62 mm sniper training rifle is divided into Initial Marksmanship Training, which is received during the sniper's initial exposure of the weapon system during the Basic Sniper course and Continuation Marksmanship Training, which is conducted by qualified snipers at the unit. The continuation training with the 7.62 mm training rifle is meant to supplement not replace training on the MRSW C14. PWTs are designed to be conducted progressively. PWTs 1 and 2 must be completed prior to attempting PWT 3.

59. The testing methods for the 7.62 mm sniper training rifle during all stages of training are as follows:

- a. **Initial Marksmanship Training**—All Application Range Practices and PWTs must be conducted in sequence.
- b. **Continuation Marksmanship Training**—Practices are as follows:
 - (1) Application Range Practices—are not mandatory during Continuation Marksmanship Training, however they should be used to address faults experienced during a PWT prior to attempting a retest.
 - (2) PWTs 1 to 3—are to be conducted live. All PWTs are progressive and designed to be fired by snipers with the unit.
 - (3) PWT 3 Supplements—are designed to be conducted on an austere range. The completion of this PWT is mandatory prior to the sniper advancing to collective training.

SAFETY

60. It is mandatory for all snipers to have completed the weapon-handling test in the last six months prior to firing any practices or test.

CONDUCT OF LIVE FIRE PRACTICES

61. **Dress.** Dress for practices should include appropriate sniper dress and equipment.

62. **Conduct of Sniper Ranges:**

- a. Each sniper is to have hearing protection and his shooting record card in his possession; and
- b. Observation of fall of shot is obvious using the issued spotting scope or Vector IV.

63. **Coaching.** Chapter 3 contains full details of the coaching requirements. Some essential points to ensure are:

- a. The OIC/RSO and all ARSOs on the range must have prior knowledge of coaching techniques.
- b. All grouping sizes, MPIs, POA s and scores are to be recorded on the sniper's personal shooting record book.

64. **Spotters.** A spotter will be used to ensure snipers gain the maximum information from the shots fired, using the issued spotting scope or Vector IV to call the arrival of each shot.

PRACTICES AND TESTS

65. The details of all live firing practices and tests are contained in the remaining pages of this chapter.

SNIPER TRAINING RIFLE SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
1	LIVE	1	Grouping Practice	100–300	60	To train the sniper to achieve an effective grouping.
		2	Zeroing	300	15	To zero the sniper rifle to move the POA to the POI at all ranges.
		3	Spotting	300–600	30	To train the sniper spotter in various techniques at spotting a round.
		4	Adjusting Sight Elevation	100–600	30	To train the sniper in applying the group to the desired point of impact.
		5	Foliage Shoot	100–400	24	To train the sniper on the affects of foliage on a round fired from the final firing position when fired from a variety of firing positions.
		SNIPER TRAINING RIFLE PWT 1		100–600	48	Confirm the sniper's ability to effectively group the Sniper Training Rifle.

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
2	LIVE	6	Advanced Deliberate Engagements	300–600	40	To train the sniper in deliberate engagement of targets without the aid of a 1.2 m Screen.
	LIVE	7	Snap Shooting	300–600	45	To train the sniper in engaging targets which intermittently expose themselves for short periods of time.
	LIVE	8	Moving targets	300–600	45	To train the sniper in engagement of moving targets.
	LIVE	9	Firing From Other Positions	300	20	To train the sniper in advanced application firing using sitting and kneeling positions, and the sniper partner, for support.
	LIVE	10	Combination Of Fire	300–600	65	To train the sniper in engaging deliberate, snap and moving targets.
	LIVE	11	Night Firing	300	10	To train the sniper in night firing.
	LIVE	SNIPER TRAINING RIFLE PWT 2		500–600	40	To confirm the sniper is able to effectively engage snap and moving targets.
	LIVE	SNIPER TRAINING RIFLE PWT 2—NIGHT SUPPLEMENT		300	10	To confirm the sniper is able to effectively engage targets at night.
3	LIVE	12	Short And Medium Range Field Firing	100–600	40	To train the sniper in engaging targets at short and medium range in a field environment.
	LIVE	13	Long Range Field Firing	601–800	15	To train the sniper in engaging targets at long range in a field environment.
	LIVE	SNIPER TRAINING RIFLE PWT 3		300–800	55	To confirm the snipers ability to engage targets in a field environment.

SNIPER TRAINING RIFLE APPLICATION RANGE PRACTICE 1—GROUPING

66. **Aim.** To train the sniper to achieve an effective grouping.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping Hawkins/ Prone Bipod	Figure 11 target super-imposed on a 1.2m screen with a suitable	100	20	a. Sniper will fire 4 x 5 rd groups, resting after each group. b. Sniper will fire in one position throughout.	See notes	Rifle must have been bore sighted prior to conduct of practice.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
			aiming mark			c. Group size to be recorded.		
2		Grouping Hawkins/ Prone Bipod	As per Ser 1	200	20	As per Ser 1.	See notes	
3		Grouping Hawkins/ Prone Bipod	As per Ser 1	300	20	As per Ser 1.	See notes	

NOTES

1. **Ammunition.** 60 rds.
2. **Scoring.** Pass / Fail.
3. **Standards.** Sniper must achieve at least one group size as follows:
 - a. Ser 1—50 mm or less;
 - b. Ser 2—100 mm or less; and
 - c. Ser 3—150 mm or less.
4. The sniper rifle should be bore-sighted prior to firing this practice.
5. Additional rounds may be required.

SNIPER TRAINING RIFLE APPLICATION RANGE PRACTICE 2—ZEROING

67. **Aim.** To zero the sniper rifle to move the POA to the POI at all ranges.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Zeroing Hawkins/ prone bipod	25 mm square on a 1.2m screen	300	15	a. Sniper will fire 3 rd groups at a 25 mm black target patch, adjusting the sight between groups until the rifle groups upon the point of aim. b. Confirm sight adjustment by firing a final 3 round group.	Nil	

NOTES

1. **Ammunition.** 15 rds.
2. **Scoring.** Nil.
3. **Standards.** Sniper must form the group onto the CZP for 300 m.
4. Additional rounds may be required.

SNIPER TRAINING RIFLE APPLICATION RANGE PRACTICE 3—SPOTTING

68. **Aim.** To train the sniper spotter in various techniques at spotting a round.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	INSTRUCTION	Score	Remarks
1		Spotting Hawkins/ Prone Bipod	Fig 12/59 target super-imposed on a 1.2 m screen.	300	5	a. Sniper to fire 5 rds at the same POA. b. Using a fig 12/59 target replica evenly divided into 9 grid sections, the spotter will indicate which section the bullet struck. c. After the spotter's declaration of each shot, the target will be pulled and the hit displayed with a red target marker.	HPS 5	
2		Spotting Hawkins/ Prone Bipod	As per Ser 1	400	5	As per Ser 1.	HPS 5	
3		Spotting Hawkins/ Prone Bipod	Fig 11/59 target super-imposed on a 1.2 m screen	500	5	As per Ser 1 except the spotter will use a fig 11/59 target replica evenly divided into 9 grid sections.	HPS 5	
4		Spotting Hawkins/ Prone Bipod	As per Ser 3	600	5	As per Ser 3.	HPS 5	

NOTES

1. **Ammunition.** 20 rds.
2. **Scoring.** Pass/ Fail.
3. **Standards.** Spotter's declaration of shot must be in the same grid section of the target actually struck at least 3 out of 5 times per serial.
4. It is essential all spotters can spot swirl. If necessary, extra rds must be used to ensure this.

SNIPER TRAINING RIFLE APPLICATION RANGE PRACTICE 4—ADJUSTING SIGHT ELEVATION

69. **Aim.** To train the sniper in applying elevation and spotting procedures in order to adjust sights so that the POA is on the desired point of impact.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	INSTRUCTION	Score	Remarks
1		Deliberate Hawkins/ Prone Bipod	Fig 12/59 on screen	100	5	a. Sniper to fire one rd. b. Spotter to observe swirl and strike and issue sight elevation adjustments to the sniper. c. Repeat until POA is on the desired point of impact. d. Additional rounds may be required.	Pass/ Fail	Each round indicated.
2		As per Ser 1	As per Ser 1.	200	5	As per Ser 1.	Pass/ Fail	As per Ser 1.
3		As per Ser 1	As per Ser 1.	300	5	As per Ser 1.	Pass/ Fail	As per Ser 1.
4		As per Ser 1	As per Ser 1.	400	5	As per Ser 1.	Pass/ Fail	As per Ser 1.
5		As per Ser 1	As per Ser 1.	500	5	As per Ser 1.	Pass/ Fail	As per Ser 1.
6		As per Ser 1	As per Ser 1.	600	5	As per Ser 1.	Pass/ Fail	As per Ser 1.

NOTES

1. **Ammunition.** 30 rds.
2. **Scoring.** Pass/Fail.
3. **Standards.**
 - a. Sniper must pass each serial in sequence.
 - b. A pass is achieved when the sight elevation has been adjusted so that the POA coincides with the desired point of impact.

SNIPER TRAINING RIFLE APPLICATION RANGE PRACTICE 5—FOLIAGE SHOOT

70. **Aim.** To train the sniper on the affects of foliage on a round fired from the final firing position while being fired from a variety of firing positions.

Ser	SAT Ser	Practice	Target	Rge (m)	Rd s	Instruction	Score	Remarks
1		Deliberate/ Alternate Positions	Medium Medal Gong Kill Zone Target.	100	6	<p>a. Sniper to fire 2 rds from a given position at the same POA. The first round will be fired without obstructions from foliage etc. The second round will be fired in behind foliage.</p> <p>b. Snipers will be required to fire through a variety of foliage employing a variety of firing positions at targets at different ranges.</p> <p>c. Snipers will be allowed to use aids to firing such as tripods etc. as directed by the range staff.</p> <p>d. Spotter can be used to call the fall of shot that will be confirmed by a staff member who will have the final declarations.</p>	HPS 3	<p>a. The first of two rounds will be fired without obstruction from foliage etc. The second of the two rounds will be fired behind the foliage or obstruction to allow the sniper to see the affects of firing from such a position. Only the first round will be scored.</p> <p>b. Sniper and observer will be allowed to employ the Vector IV or issued spotting scope during the conduct of this practice to confirm range and fall of shot.</p>
2		Deliberate/ Alternate Positions	As per Ser 1.	200	6	As per Ser 1.	HPS 3	
3		Deliberate/ Alternate Positions	As per Ser 1.	300	6	As per Ser 1.	HPS 3	
4		Deliberate/ Alternate Positions	As per Ser 1.	400	6	As per Ser 1.	HPS 3	

NOTES

1. **Ammunition.** 24 rds.
2. **Scoring.** Pass/ Fail.
3. **Standards.**
 - a. HPS—12; and
 - b. Pass—6/12 or (50% of hits on target).
4. The Medium Medal Gong Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the kill zone target to the top of the kill zone head will measure 63 cm. From the bottom of the kill zone to the top of the shoulder will measure 50 cm. The width of the kill zone body will be 30 cm and the width of

the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 18 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.

SNIPER TRAINING RIFLE PWT 1

71. **Aim.** To confirm the snipers ability to effectively group the sniper training rifle.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Zeroing Hawkins/ Prone Bipod	1.2 m screen with 4 zeroing patches	100	12	Fire 4 x 3 rd groups.	Pass/ Fail	a. No time limit. b. Each round and grouping will be indicated with a red target marker.
2		Grouping Hawkins/ Prone Bipod	As per Ser 1.	300	9	Fire 3 x 3 rd groups.	Pass/ Fail	As per Ser 1.
3		As per Ser 2.	As per Ser 1.	400	9	As per Ser 2.	Pass/ Fail	As per Ser 1.
4		As per Ser 2.	As per Ser 1.	500	9	As per Ser 2.	Pass/ Fail	As per Ser 1.
5		As per Ser 2.	As per Ser 1.	600	9	As per Ser 2.	Pass/ Fail	As per Ser 1.

NOTES

1. **Ammunition.** 48 rds. Additional rounds if required.
2. **Scoring.** Pass/Fail.
3. **Standards.**
 - a. Ser 2—must achieve at least one 100 mm grouping;
 - b. Ser 3—must achieve at least one 150 mm grouping;
 - c. Ser 4—must achieve at least one 200 mm grouping; and
 - d. Ser 5—must achieve at least one 250 mm grouping.

SNIPER TRAINING RIFLE APPLICATION RANGE PRACTICE 6—ADVANCED DELIBERATE ENGAGEMENTS

72. **Aim.** To train the sniper in deliberate engagement of targets without the aid of a 1.2 m Screen.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
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Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping Hawkins/ Prone Bipod	Fig 12/59	100	5	a. Confirmation of zero. b. Additional rounds may be required (if time permits).	N/A	Each round indicated.
2		Deliberate Hawkins/ Prone Bipod	Fig 14	100	5	No time limit.	HPS 5	As per Ser 1.
3		As per Ser 2	As per Ser 2.	200	5	As per Ser 2.	HPS 5	As per Ser 1.
4		As per Ser 2	Fig 12/59	300	5	As per Ser 2.	HPS 5	As per Ser 1.
5		As per Ser 2	As per Ser 4.	400	5	As per Ser 2.	HPS 5	As per Ser 1.
6		As per Ser 2	As per Ser 4.	500	5	As per Ser 2.	HPS 5	As per Ser 1.
7		As per Ser 2	As per Ser 4.	600	5	As per Ser 2.	HPS 5	As per Ser 1.

NOTES

1. **Ammunition.** 35 rds.
2. **Scoring.**
 - a. Ser 2 and 3—1 point per hit; and
 - b. Sers 4 to 7—1 point per hit in kill zone.
3. **Standards.**
 - a. HPS—30 points; and
 - b. Pass—24 points (80% of HPS).
4. Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the Fig 12/59 to the top of the kill zone head will measure 48 cm. From the bottom of the kill zone to the top of the shoulder will measure 38 cm. The width of the kill zone will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 10 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm

SNIPER TRAINING RIFLE APPLICATION RANGE PRACTICE 7—SNAP SHOOTING

73. **Aim.** To train the sniper in engaging targets which intermittently expose themselves for short periods of time.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping Hawkins/ Prone Bipod	Fig 12/59 in frame.	300	5	a. Confirmation of zero. b. Additional rounds may be required (if time permits).	N/A	Each round indicated.
2		Snap Hawkins/ Prone Bipod	Fig 14 handheld.	300	10	a. Fire 1 rd per exposure. b. First exposure is a trial.	HPS 10	a. 11x 3 second exposures with interval of 15 to 20 seconds between each. b. Target placement to vary on a 10 m frontage. c. Indicate all rounds after last exposure.
3		As per Ser 2.	Fig 12/59 handheld.	400	10	As per Ser 2.	HPS 10	As per Ser 2, except exposures are 4 seconds each.
4		As per Ser 2.	As per Ser 3.	500	10	As per Ser 2.	HPS 10	As per Ser 2, except exposures are 5 seconds each.
5		As per Ser 2.	As per Ser 3.	600	10	As per Ser 2.	HPS 10	As per Ser 2, except exposures are 6 seconds each.

NOTES

1. **Ammunition.** 45 rds.
2. **Scoring.**
 - a. Ser 2—1 point per hit; and
 - b. Ser 3 to 5—1 point for hit in the kill zone.
3. **Standards.**
 - a. HPS—40 points; and
 - b. Pass—32 (80% of HPS).
4. Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the Fig 12/59 to the top of the kill zone head will measure 48 cm. From the bottom of the kill zone to the top of the shoulder will measure 38 cm. The width of the kill zone will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 10 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm

SNIPER TRAINING RIFLE APPLICATION RANGE PRACTICE 8—MOVING TARGETS

74. **Aim.** To train the sniper in engagement of moving targets.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping Hawkins/ Prone Bipod	Fig 12/59 in frame	300	5	a. Confirmation of zero. b. Additional rounds may be required (if time permits).	N/A	Each round indicated.
2		Moving target Hawkins/ Prone Bipod	Fig 11/59 Handheld	300	10	a. Fire 1 rd per exposure. b. First exposure is a trial exposure. c. Target will be engaged only when moving.	HPS 10	a. 11 x 7 to 10 second exposures with a 7 to 10 second interval between each exposure. b. Target to move at a walking pace, alternating from left and right sides over a 10 m frontage. c. Target will fall when hit.
3		As per Ser 2.	As per Ser 2.	400	10	As for Ser 2.	HPS 10	As per Ser 2.
4		As per Ser 2.	As per Ser 2.	500	10	As per Ser 2.	HPS 10	As per Ser 2.
5		Stop and Go Hawkins/ Prone Bipod	As per Ser 2.	600	10	a. Fire 1 rd per exposure; b. First exposure is a trial exposure; and c. Target may be engaged at any time during the exposure.	HPS 10	a. 11 x 10 to 15 second exposures with interval of 7 to 10 seconds between each exposure. b. Target to move on a 10 m frontage for 5 seconds at a walking pace, stop for 5 seconds, and then continue walking if not hit. c. Target will fall when hit.

NOTES

- Ammunition.** 45 rds.
- Scoring.** 1 point per hit HPS 40.
- Standards.**

- a. HPS—40 points; and
- b. Pass—32 points (80% of HPS).

SNIPER TRAINING RIFLE APPLICATION RANGE PRACTICE 9—FIRING FROM OTHER POSITIONS

75. **Aim.** To train the sniper in advanced application firing using sitting and kneeling positions, and the sniper partner, for support.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructi on	Score	Remarks
1		Deliberate Sitting	Fig 12/59 in frame	300	5	No time limit.	HPS 5	Each round indicated.
2		Deliberate Kneeling	As per Ser 1.	300	5	As per Ser 1.	HPS 5	As per Ser 1.
3		Deliberate Sitting (with sniper partner as support)	As per Ser 1.	300	5	As per Ser 1.	HPS 5	As per Ser 1.
4		Deliberate Prone (with sniper partner as support)	As per Ser 1.	300	5	As per Ser 1.	HPS 5	As per Ser 1.

NOTES

1. **Ammunition.** 20 rds.
2. **Scoring.** 1 point per hit in kill zone.
3. **Standards.**
 - a. HPS—20 points; and
 - b. Pass—12 points (60% of HPS).
4. Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the Fig 12/59 to the top of the kill zone head will measure 48 cm. From the bottom of the kill zone to the top of the shoulder will measure 38 cm. The width of the kill zone will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 10 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm

SNIPER TRAINING RIFLE APPLICATION RANGE PRACTICE 10—COMBINATION OF FIRE

76. **Aim.** To train the sniper in engaging deliberate, snap and moving targets.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	INSTRUCTION	Score	Remarks
1		Grouping Hawkins / Prone Bipod	Fig 12/59 in frame	300	5	a. Confirmation of zero. b. Additional rds may be required (if time permits).	N/A	Each rd indicated.
2		Deliberate Hawkins / Prone Bipod	Fig 14 in frame	300	5	No time limit.	HPS 5	a. 1 x 5 minute exposure. b. Target falls when hit.
3		Snap Hawkins / Prone Bipod	Fig 14 handheld	300	5	a. Fire 1 rd per exposure. b. First exposure is a trial exposure.	HPS 5	a. 6 x 3 second exposures with interval of 15 to 20 seconds between each exposure. b. Target placement to vary on a 10 m frontage.
4		Moving target Hawkins / Prone Bipod	Fig 11/59 handheld	300	5	a. Fire 1 rd per exposure. b. First exposure is a trial exposure. c. Target will be engaged only when moving.	HPS 5	a. 6 exposures of 7 to 10 seconds each with a 7 to 10 second interval between each exposure. b. Targets move at walking pace, alternating from left and right sides over a 10 m frontage. c. Target falls when hit.
5		Deliberate Hawkins / Prone Bipod	Fig 12/59 in frame	400	5	As per Ser 2.	HPS 5	As per Ser 2.
6		Snap Hawkins / Prone Bipod	Fig 12/59 handheld	400	5	As per Ser 3.	HPS 5	As per Ser 3 except exposures are to be 4 seconds each.
7		Moving target Hawkins / Prone Bipod	Fig 11/59 handheld	400	5	As per Serial 4.	HPS 5	As per Ser 4.
8		Deliberate Hawkins / Prone Bipod	Fig 12/59 in frame	500	5	As per Ser 2.	HPS 5	As per Ser 2.
9		Snap Hawkins / Prone Bipod	Fig 12/59 handheld	500	5	As per Ser 3.	HPS 5	As per Ser 3 except exposures are to be 5 seconds each.
10		Moving target Hawkins /	Fig 11/59 handheld	500	5	As per Serial 4.	HPS 5	As per Ser 4.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	INSTRUCTION	Score	Remarks
		Prone Bipod						
11		Deliberate Hawkins / Prone Bipod	Fig 12/59 in frame	600	5	As per Ser 2.	HPS 5	As per Ser 2.
12		Snap Hawkins / Prone Bipod	Fig 12/59 handheld	600	5	As per Ser 3.	HPS 5	As per Ser 3 except exposures are to be 6 seconds each.
13		Stop and Go Hawkins / Prone Bipod	Fig 11/59 handheld	600	5	a. Fire 1 rd per exposure. b. First exposure is a trial exposure. c. Target may be engaged at any time during the exposure.	HPS 5	a. 6 x 10 to 15 second exposures with interval of 7 to 10 seconds between each exposure. b. Target to move on a 10 m frontage for 5 seconds at a walking pace, stop for 5 seconds, and then continue walking if not hit. c. Target will fall when hit.

NOTES

1. **Ammunition.** 65 rds.
2. **Scoring.**
 - a. Sers 2, 3, 4, 7, 10, and 13—1 point per hit; and
 - b. Sers 5, 6, 8, 9, 11 and 12—1 point per hit in kill zone.
3. **Standards.**
 - a. HPS—60 points; and
 - b. Pass—48 points (80% of HPS).

SNIPER TRAINING RIFLE APPLICATION RANGE PRACTICE 11—NIGHT FIRING

77. **Aim.** To train the sniper in night firing.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Deliberate Night Hawkins / Prone Bipod	Fig 11/59 in frame	300	10	a. One 15-minute exposure. b. Targets are engaged when illuminated by flare or on whistle blast when night vision devices are used.	HPS 10	

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
2		Snap Hawkins / Prone Bipod	Fig 12 handheld	300	5	a. Fire 1 rd per exposure. b. First exposure is a trial exposure. c. Targets are engaged when illuminated by flare or on whistle blast when night vision devices are used.	HPS 5	a. 6 x 3 second exposures with interval of 15 to 20 seconds between each exposure. b. Target placement to vary on a 10 m frontage.
3		Moving target Hawkins / Prone Bipod	Fig 11/59 handheld	300	5	a. Fire 1 rd per exposure. b. First exposure is a trial exposure. c. Target will be engaged only when moving. d. Targets are engaged when illuminated by flare or on whistle blast when night vision devices are used.	HPS 5	a. 6 exposures of 7 to 10 seconds each with a 7 to 10 second interval between each exposure. b. Targets move at walking pace, alternating from left and right sides over a 10 m frontage. c. Target falls when hit.

NOTES

1. **Ammunition.** 20rds.
2. **Scoring.** 1 point per hit.
3. **Standards.**
 - a. HPS—20 points; and
 - b. Pass—12 points (60% of HPS).

SNIPER TRAINING RIFLE PWT 2

78. **Aim.** To test the sniper in engaging deliberate, snap and moving targets.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping Hawkins / Prone Bipod	Fig 12/59 in frame	300	5	a. Confirmation of zero. b. Additional rounds may be required (if time permits).	N/A	Each round indicated.
2		Deliberate	Fig 14 in	300	5	No time limit.	HPS	a. 1 x 5 minute

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Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
		Hawkins / Prone Bipod	frame				5	exposure. b. Target falls when hit.
3		Snap Hawkins / Prone Bipod	Fig 14 handheld	300	5	a. Fire 1 rd per exposure. b. First exposure is a trial exposure.	HPS 5	a. 6 x 3 second exposures with interval of 15 to 20 seconds between each exposure. b. Target placement to vary on a 10 m frontage.
4		Moving target Hawkins / Prone Bipod	Fig 11/59 handheld	300	5	a. Fire 1 rd per exposure. b. First exposure is a trial exposure. c. Target will be engaged only when moving.	HPS 5	a. 6 exposures of 7 to 10 seconds each with a 7 to 10 second interval between each exposure. b. Targets move at walking pace, alternating from left and right sides over a 10 m frontage. c. Target falls when hit.
5		Deliberate Hawkins / Prone Bipod	Fig 12/59 in frame	400	5	As per Ser 2.	HPS 5	As per Ser 2.
6		Snap Hawkins / Prone Bipod	Fig 12/59 handheld	400	5	As per Ser 3.	HPS 5	As per Ser 3 except exposures are to be 4 seconds each.
7		Moving target Hawkins / Prone Bipod	Fig 11/59 handheld	400	5	As per Serial 4.	HPS 5	As per Ser 4.
8		Deliberate Hawkins / Prone Bipod	Fig 12/59 in frame	500	5	As per Ser 2.	HPS 5	As per Ser 2.
9		Snap Hawkins / Prone Bipod	Fig 12/59 handheld	500	5	As per Ser 3.	HPS 5	As per Ser 3 except exposures are to be 5 seconds each.
10		Moving target Hawkins / Prone Bipod	Fig 11/59 handheld	500	5	As per Serial 4.	HPS 5	As per Ser 4.
11		Deliberate Hawkins / Prone Bipod	Fig 12/59 in frame	600	5	As per Ser 2.	HPS 5	As per Ser 2.
12		Snap Hawkins / Prone Bipod	Fig 12/59 handheld	600	5	As per Ser 3.	HPS 5	As per Ser 3 except exposures are to be 6 seconds each.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
13		Stop and Go Hawkins / Prone Bipod	Fig 11/59 handheld	600	5	a. Fire 1 rd per exposure. b. First exposure is a trial exposure. c. Target may be engaged at any time during the exposure.	HPS 5	a. 6 x 10 to 15 second exposures with interval of 7 to 10 seconds between each exposure. b. Target to move on a 10 m frontage for 5 seconds at a walking pace, stop for 5 seconds, and then continue walking if not hit. c. Target will fall when hit.

NOTES

1. **Ammunition.** 65 rds.
2. **Scoring.**
 - a. Sers 2, 3, 4, 7, 10, and 13—1 point per hit; and
 - b. Sers 5, 6, 8, 9, 11 and 12—1 point per hit in kill zone.
3. **Standards.**
 - a. HPS—60 points; and
 - b. Pass—48 points (80% of HPS).

SNIPER TRAINING RIFLE PWT 2—NIGHT SUPPLEMENT

79. **Aim.** To confirm that the sniper can effectively engage targets at night.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Deliberate Night Hawkins / Prone Bipod	Fig 11/59 in frame	300	10	a. One 15-minute exposure; and b. Targets are engaged when illuminated by flare or on whistle blast when night vision devices are used.	HPS 10	

NOTES

1. **Ammunition.** 10 rds.
2. **Scoring.** 1 point per hit in kill zone.

3. **Standards.**

- a. HPS—10 points; and
- b. Pass—5 points (50% of HPS).

4. Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the large bull on the Fig 11/59 to the top of the kill zone head will measure 63 cm. From the bottom of the kill zone to the top of the shoulder will measure 50 cm. The width of the kill zone body will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 18 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.

SNIPER TRAINING RIFLE APPLICATION RANGE PRACTICE 12—SHORT AND MEDIUM RANGE FIELD FIRING

80. **Aim.** To train the sniper in engaging targets at short and medium ranges in a field environment.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	REMARKS
1		Zeroing Hawkins / Prone Bipod	Fig 11/59 on a stick	100	5	Confirmation of zero.	N/A	
2		Deliberate Hawkins / Prone Bipod	Fig 14 and 11/59 on a stick	100–600	35	a. 60 minute time limit. b. Snipers to judge distance to targets. c. 5 shots per target.	HPS 35	a. 7 targets from 100–600 m. b. 3 x Fig 14 at 100–300 m and 4 x Fig 11/59 at 301–600 m.

NOTES

1. **Ammunition.** 40 rds.
2. **Scoring.**
 - a. 1 point per hit on Fig 14; and
 - b. 1 point per hit in kill zone on Fig 11/59.
3. **Standards.**
 - a. HPS—35 points; and
 - b. Pass—28 points (80% of HPS).
4. Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the large bull on the Fig 11/59 to the top of the kill zone head will measure 63 cm. From the bottom of the kill zone to the top of the shoulder will measure 50 cm. The width of the kill zone body will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the

top of the kill zone head will be 18 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.

SNIPER TRAINING RIFLE APPLICATION RANGE PRACTICE 13—LONG RANGE FIELD FIRING

81. **Aim.** To train the sniper in engaging targets at long ranges in a field environment.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Deliberate Hawkins / Prone Bipod	3 x Fig 11/59 super-imposed on a 1.2 m screen	601–800	15	a. 30 minute time limit. b. Snipers must judge distance to the targets. c. No more than 5 rds per target set.	HPS 15	a. 3 sets of 3 Fig 11/59 targets. b. Targets to touch shoulder-to-shoulder.

NOTES

1. **Ammunition.** 15 rds.
2. **Scoring.** 1 point per hit on any Fig 11/59.
3. **Standards.**
 - a. HPS—15 points; and
 - b. Pass—8 points (50% of HPS).

SNIPER TRAINING RIFLE PWT 3

82. **Aim.** To confirm that the sniper can effectively engage targets in a field environment.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Zeroing Hawkins / Prone Bipod	Fig 11/59 on stick	300	5	a. Confirmation of zero. b. Additional rounds may be required (if time permits). c. Snipers to move forward, check targets, patch, and return.	N/A	

2		Deliberate Hawkins / Prone Bipod	Fig 14 & 11/59 on stick	100-600	35	a. 60 minute time limit. b. Snipers to judge distance to targets. c. 5 shots per target.	HPS 35	a. 7 targets from 100 to 600 m. b. 3 x Fig 14 at 100 to 300 m and 4 x Fig 11/59 at 301 to 600 m.
3		Deliberate Hawkins / Prone Bipod	3 x Fig 11/59 super-imposed on a 1.2 m screen	601-800	15	a. 30 minute time limit. b. Snipers must judge distance to the targets. c. No more than 5 rds per target set.	HPS 15	a. Three sets of three Fig 11/59. b. Targets to touch shoulder-to- shoulder.

NOTES

1. **Ammunition.** 55 rds.
2. **Scoring.**
 - a. Ser 2—1 point per hit on Fig 14 and 1 point per hit in kill zone on Fig 11/59;
and
 - b. Ser 3—1 point per hit on any of the Fig 11/59.
3. **Standards.**
 - a. HPS—50 points;
 - b. Pass—Snipers must pass each Ser:
 - (1) Ser 2—Pass 28/35 (80% of HPS); and
 - (2) Ser 3—Pass 5/10 (50% of HPS).
4. Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the large bull on the Fig 11/59 to the top of the kill zone head will measure 63 cm. From the bottom of the kill zone to the top of the shoulder will measure 50 cm. The width of the kill zone body will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 18 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.

PART 2—.338 CAL MRSW

SCOPE

83. This section sets out the firing practices to be completed in the CFOSP for the .338 Cal MRSW.

84. This progression and frequency of firing is essential to keep the sniper current with the MRSW. It is also essential in preparing the sniper for operations.

TRAINING AND FIRING SEQUENCE

85. The training and firing sequence as laid down for the MRSW should be followed in a logical sequence.

86. The live fire training received by all snipers qualified AFEA (Basic sniper) on the MRSW is divided into Initial Marksmanship Training and .338 Cal Continuation Marksmanship Training. PWTs are designed to be conducted progressively. PWTs 1 and 2 must be completed prior to attempting PWT 3.

87. The testing methods for the MRSW during all stages of training are as follows:

- a. **Initial Marksmanship Training.** All application Range Practices and PWTs must be conducted in sequence by all snipers. Those snipers who are current 7.62 mm need only complete .338 Cal application range practices 1, 2, 7, 8, 9, 10, 11, 12, 13, and PWTs 1-3 to include PWT 3 Supplements.
- b. **Continuation Marksmanship Training.** Practices are as follows:
 - (1) Application Range Practices are not mandatory during Continuation Marksmanship Training, however they should be used to address faults experienced during a PWT prior to attempting a retest.
 - (2) PWTs 1 to 3 are to be conducted live. All PWT are progressive and are designed to be fired by snipers annually.
 - (3) PWT 3 Supplements are designed to be conducted on an austere range. The completion of this PWT Night Field Firing Supplement and Stalking Exercise Supplement are mandatory prior to the sniper advancing to collective training. PWT 3 Slant Angle Supplement is planned to be fired at altitude from an elevated austere range (i. e. Mountain feature) and will be conducted IAW B-GL-392-005/FP-001 Chap (TBC) Sect (TBC). Slant range practices and PWTs will only be conducted as part of the .338 Cal conversion course and is not meant to be conducted as part of continuation training on the .338 Cal.
 - (4) PWT 3 Stalking Exercise Supplement will only be required to be conducted during .338 Cal conversion training and is not required to be conducted during continuation training.

SAFETY

88. It is mandatory for all snipers to have completed the weapon-handling test in the last six months prior to firing any practices or test. The OIC/RSO may order drill refresher training prior to firing, if deemed necessary.

CONDUCT OF LIVE FIRE PRACTICES

89. **Dress.** Dress for practices should include appropriate sniper dress and equipment.

90. **Conduct of Sniper Ranges:**

- a. Each sniper is to have hearing protection and his shooting record card in his possession.
- b. Observation of fall of shot is obvious using the issued spotting scope or Vector IV.

91. **Coaching.** Chapter 3 contains full details of the coaching requirements. Some essential points to ensure are:

- a. The OIC/RSO and all ARSOs on the range must have prior knowledge of coaching techniques.
- b. All grouping sizes, MPIs, POA s and scores are to be recorded on the sniper's personal shooting record book.

92. **Spotters.** A spotter will be used to ensure snipers gain the maximum information from the shots fired, using the issued spotting scope or Vector IV to call the arrival of each shot.

PRACTICES AND TESTS

93. The details of all live firing practices and tests are contained in the remaining pages of this chapter.

MRSW SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
1	LIVE	1	Grouping and Zeroing Practice	200	25	To train the snipers ability to achieve an effective grouping. Based on a recognized ballistic program.

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
		2	Spotting	300–600	20	To train the sniper spotter in various techniques at spotting a round.
		MRSW PWT 1—REVERSE IMAGE ZERO		300–600	10	To confirm the snipers ability to engage targets at different distances using one elevation sight setting by applying Maximum Ordinate Chart.
2		3	Advanced Deliberate Engagements	300–600	20	To train the sniper in deliberate engagement of targets without the aid of a 1.2 m Screen.
	LIVE	4	Snap Shooting	300–600	40	To train the sniper in engaging targets which intermittently expose themselves.
	LIVE	5	Moving Targets	300–600	40	To train the sniper in engagement of moving targets.
	LIVE	6	Firing from Other Positions	300	20	To train the sniper in advanced application firing using sitting and kneeling positions, and with support of a sniper partner.
	LIVE	7	Combination of Fire	300–600	65	To train the sniper in engaging deliberate snap and moving targets.
	LIVE	8	Night Firing	200–500	40	To train the sniper in night firing.
	LIVE	MRSW PWT 2		300–600	65	To confirm the sniper is able to effectively engage snap and moving targets.
	LIVE	MRSW PWT 2—NIGHT SUPPLEMENT		200–500	40	To confirm the sniper is able to effectively engage targets at night.
3	LIVE	9	Long Range Field Firing	601–1200	35	To train the sniper in engaging targets at long range in a field environment.
	LIVE	10	Field Fire Practice—Night	300	10	To train the sniper in engaging targets in a field environment at night
	LIVE	11	Field Fire Practice—Slant Angle	200–1000	30	To confirm the snipers point of aim while firing in altitude.
	LIVE	12	Field Fire Practice—Slant Angle	300–1000	24	To train the sniper in engaging targets at altitude from an elevated position while employing ballistic calculations based on cosine readings.

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
	LIVE	13	Field Fire Practice— Slant Angle	300–1000	24	To train the sniper in engaging targets at altitude from an elevated position while employing the recognized ballistic program based on cosine readings.
	LIVE	MRSW PWT 3		601–1200	35	To confirm the sniper in engaging targets in a field environment
	LIVE	MRSW PWT 3—NIGHT FIELD FIRING SUPPLEMENT		300	10	To confirm the sniper in engaging targets in a field environment at night
	LIVE	MRSW PWT 3—STALKING EXERCISE SUPPLEMENT		300–800	4	To confirm the Sniper teams ability to stalk an Enemy OP with the .338 Cal Sniper Rifle and employ a recognized ballistics program in the engagement of a target at a known distance.
	LIVE	MRSW PWT 3—SLANT ANGLE SUPPLEMENT		300–1000	16	To confirm the sniper in engaging targets at altitude from an elevated position while employing the recognized ballistic program based on cosine readings.

MRSW APPLICATION RANGE PRACTICE 1—GROUPING AND ZEROING

94. **Aim.** To train the snipers ability to achieve an effective grouping.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Prone Bipod / Hawkins	Fig 11 target super-imposed on a 1.2 m screen with a suitable aiming mark.	200	25	a. Sniper will fire 5 x 5 rd groups, resting after each group. b. Sniper will make required sight adjustments based on the group location. c. Sniper will fire in one position throughout. d. Each group will be indicated with the group size being recorded.	See notes	Weapon should be Bore Sighted prior to the practice. A recognized Ballistics program will be employed as a means of recording wind and elevation sight settings.

NOTES

1. **Ammunition.** 25 rds.
2. **Scoring.** Pass / Fail.
3. **Standards.** Sniper must achieve at least one group size based on best four rounds as follows: Ser 1—100 mm or less.
4. The sniper rifle should be bore-sighted prior to firing this practice.
5. Additional rounds may be required.

MRSW APPLICATION RANGE PRACTICE 2—SPOTTING

95. **Aim.** To train the sniper spotter in various techniques at spotting a round.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Spotting Hawkins / Prone Bipod	Fig 12/59 target super-imposed on a 1.2 m screen.	300	5	a. Sniper to fire 5 rds at the same POA. b. Using a fig 12/59 target replica evenly divided into 9 grid sections, the spotter will indicate which section the bullet strikes. c. After the spotter's declaration of each shot, the target will be pulled and the hit displayed with a red target marker.	HPS 5 Pass 3	
2		As per Ser 1.	As per Ser 1	400	5	As per Ser 1.	HPS 5 Pass 3	
3		As per Ser 1.	Fig 11/59 target super-imposed on a 1.2 m screen	500	5	As per Ser 1 except the spotter will use a fig 11/59 target replica evenly divided into 9 grid sections.	HPS 5 Pass 3	
4		As per Ser 1.	As per Ser 3	600	5	As per Ser 3.	HPS 5 Pass 3	

NOTES

1. **Ammunition.** 20 rds.
2. **Scoring.** Pass/ Fail. HPS 30, See scoring notes.
3. **Standards.** Spotter's declaration of shot must be in the same grid section of the target actually struck at least 3 out of 5 times per serial.
4. It is essential all spotters can spot swirl. If necessary, extra rds must be used to

ensure this.

MRSW PWT 1—REVERSE IMAGE ZERO

96. **Aim.** To confirm the sniper is engaging targets at different distances using only one elevation sight setting.

Ser	Practice	Target	Rge (m)	Rds	Scoring	Conduct of Practice
1	Prone Bipod / Hawkins	1.2 m screen	300–600	10 Match	HPS 10 see notes	Snipers are to engage targets using the reverse image zero process.

NOTES

1. **Ammunition.** 10 rds.
2. **Scoring.** Pass/Fail.
3. **Standards.**
 - a. HPS—10 points.
 - b. Sniper must successfully hit 5 out of 10 targets at ranges of 300 to 600 m (50% of HPS) while employing reverse image zero.
4. Distance to the targets will depend on the height of the target and how it affects reverse image sight settings.

MRSW APPLICATION RANGE PRACTICE 3—ADVANCED DELIBERATE ENGAGEMENTS

97. **Aim.** To train the sniper in deliberate engagement of targets without the aid of a 1.2 m Screen.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping Hawkins/ Prone Bipod	Fig 14	300	5	No time limit.	HPS 5 (Note 2a)	Each round indicated.
2		As per Ser 1	As per Ser 1.	400	5	As per Ser 1.	HPS 5 (Note 2a)	As per Ser 1.
3		As per Ser 1	Fig 12/59	500	5	As per Ser 1.	HPS 5 (Note 2b)	As per Ser 1.
4		As per Ser 1	As per Ser 3.	600	5	As per Ser 1.	HPS 5 (Note 2b)	As per Ser 1.

NOTES

1. **Ammunition.** 20 rds.
2. **Scoring.**
 - a. Ser 1 and 2—1 point per hit.
 - b. Sers 3 and 4—1 point per hit in kill zone.
3. **Standards.**
 - a. HPS—20 points.
 - b. Pass—16 points (80% of HPS).
4. Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the Fig 12/59 to the top of the kill zone head will measure 48 cm. From the bottom of the kill zone to the top of the shoulder will measure 38 cm. The width of the kill zone will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 10 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.

MRSW APPLICATION RANGE PRACTICE 4—SNAP SHOOTING

98. **Aim.** To train the sniper in engaging targets which intermittently exposes themselves.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Snap Hawkins / Prone Bipod	Fig 14 handheld	300	10	a. Fire 1 rd per exposure. b. First exposure is a trial.	HPS 10 (Note 2a)	a. 11x 3 second exposures with interval of 15 to 20 seconds between each. b. Target placement to vary on a 10 m frontage. c. Indicate all rounds after last exposure.
2		As per Ser 1.	As per Ser 1.	400	10	As per Ser 1.	HPS 10 (Note 2a)	As per Ser 1, except exposures are 4 seconds each.
3		As per Ser 1.	Fig 12/59 handheld	500	10	As per Ser 1.	HPS 10 (Note 2b)	As per Ser 1, except exposures are 5 seconds each.
4		As per Ser 1.	As per Ser 3.	600	10	As per Ser 1.	HPS 10 (Note 2b)	As per Ser 1, except exposures are 6 seconds each.

NOTES

1. **Ammunition.** 40 rds.
2. **Scoring.**
 - a. Sers 1 and 2—1 point per hit; and
 - b. Sers 3 and 4—1 point for hit in the kill zone.
3. **Standards.**
 - a. HPS—40 points; and
 - b. Pass—32 (80% of HPS).
4. Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the Fig 12/59 to the top of the kill zone head will measure 48 cm. From the bottom of the kill zone to the top of the shoulder will measure 38 cm. The width of the kill zone will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 10 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.

MRSW APPLICATION RANGE PRACTICE 5—MOVING TARGETS

99. **Aim.** To train the sniper in engagement of moving targets.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Moving target Hawkins/ Prone Bipod	Fig 11/59 Handheld	300	10	a. Fire 1 rd per exposure. b. First exposure is a trial exposure. c. Target will be engaged only when moving.	HPS 10 See notes	a. 11 x 7 to 10 second exposures with a 7 to 10 second interval between each exposure. b. Target to move at a walking pace, alternating from left and right sides over a 10 m frontage. c. Target will fall when hit.
2		As per Ser 1.	As per Ser 1.	400	10	As for Ser 1.	HPS 10 See notes	As per Ser 1.
3		As per Ser 1.	As per Ser 1.	500	10	As per Ser 1.	HPS 10 See notes	As per Ser 1.
4		As per Ser 1.	As per Ser 1.	600	10	As per Ser 1.	HPS 10 See notes	As per Ser 1.

NOTES

1. **Ammunition.** 40 rds.

2. **Scoring.** 1 point per hit.
3. **Standards.**
 - a. HPS—40 points.
 - b. Pass—32 points (80% of HPS).

MRSW APPLICATION RANGE PRACTICE 6—FIRING FROM OTHER POSITIONS

100. **Aim.** To train the sniper in advanced application firing using sitting and kneeling positions, with support of sniper partner.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Deliberate Sitting	Fig 12/59 in frame	300	5	No time limit.	HPS 5	Each round indicated.
2		Deliberate Kneeling	As per Ser 1.	300	5	As per Ser 1.	HPS 5	As per Ser 1.
3		Deliberate Sitting (with sniper partner as support)	As per Ser 1.	300	5	As per Ser 1.	HPS 5	As per Ser 1.
4		Deliberate Prone (with sniper partner as support)	As per Ser 1.	300	5	As per Ser 1.	HPS 5	As per Ser 1.

NOTES

1. **Ammunition.** 20 rds.
2. **Scoring.** 1 point per hit in kill zone.
3. **Standards.**
 - a. HPS—20 points.
 - b. Pass—12 points (60% of HPS).
4. Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the Fig 12/59 to the top of the kill zone head will measure 48 cm. From the bottom of the kill zone to the top of the shoulder will measure 38 cm. The width of the kill zone will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 10 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.

MRSW APPLICATION RANGE PRACTICE 7—COMBINATION OF FIRE

101. **Aim.** To train the sniper in engaging deliberate, snap and moving targets.

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Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping Hawkins / Prone Bipod	Fig 12/59 in frame	200	5	a. Confirmation of zero. b. Additional rounds may be required (if time permits).	N/A	Each round indicated.
2		Deliberate Hawkins / Prone Bipod	Fig 14 in frame	300	5	No time limit.	HPS 5 (Note 2a)	a. 1 x 5 minute exposure. b. Target falls when hit.
3		Snap Hawkins / Prone Bipod	Fig 14 handheld	300	5	a. Fire 1 rd per exposure. b. First exposure is a trial exposure.	HPS 5 (Note 2a)	a. 6 x 3 second exposures with interval of 15 to 20 seconds between each exposure. b. Target placement to vary on a 10 m frontage.
4		Moving target Hawkins / Prone Bipod	Fig 11/59 handheld	300	5	a. Fire 1 rd per exposure. b. First exposure is a trial exposure. c. Target will be engaged only when moving.	HPS 5 (Note 2a)	a. 6 exposures of 7 to 10 seconds each with a 7 to 10 second interval between each exposure. b. Targets move at walking pace, alternating from left and right sides over a 10 m frontage. c. Target falls when hit.
5		Deliberate Hawkins / Prone Bipod	Fig 14 in frame	400	5	As per Ser 2.	HPS 5 (Note 2a)	As per Ser 2.
6		Snap Hawkins / Prone Bipod	Fig 14 handheld	400	5	As per Ser 3.	HPS 5 (Note 2a)	As per Ser 3 except exposures are to be 4 seconds each.
7		Moving target Hawkins / Prone Bipod	Fig 11/59 handheld	400	5	As per Ser 4.	HPS 5 (Note 2a)	As per Ser 4.
8		Deliberate Hawkins / Prone Bipod	Fig 12/59 in frame	500	5	As per Ser 2.	HPS 5 (Note 2b)	As per Ser 2.
9		Snap Hawkins / Prone Bipod	Fig 12/59 handheld	500	5	As per Ser 3.	HPS 5 (Note 2b)	As per Ser 3 except exposures are to be 5 seconds each.
10		Moving target Hawkins /	Fig 11/59 handheld	500	5	As per Ser 4.	HPS 5 (Note 2c)	As per Ser 4.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
		Prone Bipod						
11		Deliberate Hawkins / Prone Bipod	Fig 12/59 in frame	600	5	As per Ser 2.	HPS 5 (Note 2b)	As per Ser 2.
12		Snap Hawkins / Prone Bipod	Fig 12/59 handheld	600	5	As per Ser 3.	HPS 5 (Note 2b)	As per Ser 3 except exposures are to be 6 seconds each.
13		Moving target Hawkins / Prone Bipod	Fig 11/59 handheld	600	5	As per Ser 4.	HPS 5 (Note 2c)	As per Serial 4.

NOTES

1. **Ammunition.** 65 rds.
2. **Scoring.**
 - a. Sers 2 to 7—one point per hit.
 - b. Sers 8 to 9 and 11 to 12—1 point per hit in kill zone.
 - c. Ser 10 and 13—1 point per hit.
3. **Standards.**
 - a. HPS—60 points.
 - b. Pass—48 points (80% of HPS).
4. Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the Fig 12/59 to the top of the kill zone head will measure 48 cm. From the bottom of the kill zone to the top of the shoulder will measure 38 cm. The width of the kill zone will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 10 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.

MRSW APPLICATION RANGE PRACTICE 8—NIGHT FIRING

102. **Aim.** To train the sniper in night firing.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Deliberate Night Hawkins / Prone Bipod	Fig 11/59 in frame	200	10	a. One 15-minute exposure. b. Targets are engaged when illuminated by flare or on whistle blast when night vision devices are used.	HPS 10	

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
2		As per serial 1.	As per Ser 1.	300	10	As per serial 1.	HPS 10	
3		As per serial 1.	As per Ser 1.	400	10	As per serial 1.	HPS 10	
4		As per serial 1.	As per Ser 1.	500	10	As per serial 1.	HPS 10	

NOTES

1. **Ammunition.** 40rds.
2. **Scoring.** 1 point per hit on Fig 11/59.
3. **Standards.**
 - a. HPS—40 points.
 - b. Pass—20 points (50% of HPS).

MRSW PWT 2

103. **Aim.** To confirm the sniper in engaging deliberate, snap, and moving targets.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping Hawkins / Prone Bipod	Fig 12/59 in frame	200	5	a. Confirmation of zero. b. Additional rounds may be required (if time permits).	N/A	Each round indicated.
2		Deliberate Hawkins / Prone Bipod	Fig 14 in frame	300	5	No time limit.	HPS 5 (Note 2a)	a. 1 x 5 minute exposure. b. Target falls when hit.
3		Snap Hawkins / Prone Bipod	Fig 14 handheld	300	5	a. Fire 1 rd per exposure. b. First exposure is a trial exposure.	HPS 5 (Note 2a)	a. 6 x 3 second exposures with interval of 15 to 20 seconds between each exposure. b. Target placement to vary on a 10 m frontage.
4		Moving target Hawkins / Prone Bipod	Fig 11/59 handheld	300	5	a. Fire 1 rd per exposure. b. First exposure is a trial exposure. c. Target will be engaged only when moving.	HPS 5 (Note 2b)	a. 6 exposures of 7 to 10 seconds each with a 7 to 10 second interval between each exposure. b. Targets move at walking pace, alternating from left and right sides over a 10 m frontage.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
								c. Target falls when hit.
5		Deliberate Hawkins / Prone Bipod	Fig 14 in frame	400	5	As per Ser 2.	HPS 5 (Note 2a)	As per Ser 2.
6		Snap Hawkins / Prone Bipod	Fig 14 handheld	400	5	As per Ser 3.	HPS 5 (Note 2a)	As per Ser 3 except exposures are to be 4 seconds each.
7		Moving target Hawkins / Prone Bipod	Fig 11/59 handheld	400	5	As per Serial 4.	HPS 5 (Note 2b)	As per Ser 4.
8		Deliberate Hawkins / Prone Bipod	Fig 12/59 in frame	500	5	As per Ser 2.	HPS 5 (Note 2c)	As per Ser 2.
9		Snap Hawkins / Prone Bipod	Fig 12/59 handheld	500	5	As per Ser 3.	HPS 5 (Note 2c)	As per Ser 3 except exposures are to be 5 seconds each.
10		Moving target Hawkins / Prone Bipod	Fig 11/59 handheld	500	5	As per Serial 4.	HPS 5 (Note 2d)	As per Ser 4.
11		Deliberate Hawkins / Prone Bipod	Fig 12/59 in frame	600	5	As per Ser 2.	HPS 5 (Note 2c)	As per Ser 2.
12		Snap Hawkins / Prone Bipod	Fig 12/59 handheld	600	5	As per Ser 3.	HPS 5 (Note 2c)	As per Ser 3 except exposures are to be 6 seconds each.
13		Moving target Hawkins / Prone Bipod	Fig 11/59 handheld	600	5	a. Fire 1 rd per exposure; b. First exposure is a trial exposure. c. Target may be engaged at any time during the exposure.	HPS 5 (Note 2d)	a. 6 x 10 to 15 second exposures with interval of 7 to 10 seconds between each exposure. b. Target to move on a 10 m frontage for 5 seconds at a walking pace, stop for 5 seconds, and then continue walking if not hit. c. Target will fall when hit.

NOTES

1. **Ammunition.** 65 rds.
2. **Scoring.**
 - a. Sers 2 to 7—1 point per hit.
 - b. Sers 8 to 9 and 11 to 12—1 point per hit in kill zone.
 - c. Ser 10 and 13—1 point per hit.
3. **Standards.**
 - a. HPS—60 points.
 - b. Pass—48 points (80% of HPS).
4. Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the Fig 12/59 to the top of the kill zone head will measure 48 cm. From the bottom of the kill zone to the top of the shoulder will measure 38 cm. The width of the kill zone will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 10 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.

MRSW PWT 2—NIGHT SUPPLEMENT

104. **Aim.** To confirm the sniper can effectively engage targets at night.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Deliberate Night Hawkins / Prone Bipod	Fig 11/59 in frame	200	10	a. One 15-minute exposure. b. Targets are engaged when illuminated by flare or on whistle blast when night vision devices are used.	HPS 10	
2		As per serial 1.	As per Ser 1.	300	10	As per serial 1.	HPS 10	
3		As per serial 1.	As per Ser 1.	400	10	As per serial 1.	HPS 10	
4		As per serial 1.	As per Ser 1.	500	10	As per serial 1.	HPS 10	

NOTES

1. **Ammunition.** 40rds.
2. **Scoring.** 1 point per hit on Fig 11/59.
3. **Standards.**
 - a. HPS—40 points.

- b. Pass—20 points (50% of HPS).

MRSW APPLICATION RANGE PRACTICE 9—FIELD FIRING

105. **Aim.** To train the sniper in engaging targets at long ranges in a field environment.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Zeroing Hawkins / Prone Bipod	Fig 11/59 on a stick	200	5	Confirmation of zero.	N/A	Fired if required
2		Deliberate Hawkins / Prone Bipod	2 x Fig 11/59 super-imposed on a 1.2 m screen	601–1200	30	a. 60 minute time limit. b. Snipers must judge distance to the targets. c. No more than 5 rds per target set. d. Snipers can use all aids to judging distance and for calculation of environmental and meteorological conditions such as Vector IV, GPS, and issued weather stations.	HPS 30	a. 6 sets of 2 Fig 11/59 targets. b. Targets to touch shoulder-to- shoulder.

NOTES

1. **Ammunition.** 35 rds.
2. **Scoring.** 1 point per hit on any Fig 11/59.
3. **Standards.**
 - a. HPS—30 points.
 - b. Pass—22 points (70% of HPS).

MRSW APPLICATION RANGE PRACTICE 10—NIGHT FIELD FIRING

106. **Aim.** To train the sniper in engaging targets in a field environment at night.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Deliberate Night Hawkins / Prone Bipod	Fig 11/59 on stick	300	10	a. 15 minute time limit. b. Targets are engaged when illuminated by flare or on whistle blast when night vision devices are used.	HPS 10	

NOTES

1. **Ammunition.** 10 rds.
2. **Scoring.** 1 point per hit.
3. **Standards.**
 - a. HPS—10.
 - b. Pass—5 points (50% of HPS).

MRSW FIELD FIRING RANGE PRACTICE 11—SLANT ANGLE

107. **Aim.** To confirm the snipers point of aim while firing in altitude.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping Hawkins / Prone Bipod	1.2 m Screen with aiming mark	200	6	Confirmation of POI.	See notes	a. Conducted on a known distance range. b. Must be conducted at altitude. c. Additional rounds may be required.
2		Deliberate Hawkins / Prone Bipod	As per Ser 1.	400	6	As per serial 1.	See notes	As per serial 1.
3		Snap Hawkins / Prone Bipod	As per Ser 1.	600	6	As per serial 1.	See notes	As per serial 1.
4		Moving target Hawkins / Prone Bipod	As per Ser 1.	800	6	As per serial 1.	See notes	As per serial 1.
5		Deliberate Hawkins / Prone Bipod	As per Ser 1.	1000	6	As per serial 1.	See notes	As per serial 1.

NOTES

1. **Ammunition.** 30 rds.
2. **Scoring.** Pass/Fail.
3. **Standards.** Must achieve a grouping size at each given range that is consistent to a 100 mm group at 100 m (i. e. 200 m equals 200 mm grouping size and 1000 m equals 1000 mm grouping size) as per the theory of a group.

MRSW FIELD FIRING RANGE PRACTICE 12—SLANT ANGLE

108. **Aim.** To train the sniper in engaging targets at altitude from an elevated position while employing ballistic calculations based on cosine readings.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping Hawkins / Prone Bipod	Small Medal Gong Kill Zone Target	300	3	Sniper will have 10 mins perform ballistic calculations and to fire 3 rds at the given target.	See notes	a. Conducted on a unknown distance range. b. This range practice will be conducted on a slant angle range and will require the sniper to perform ballistic calculations in order to achieve a hit on the target.
2		Deliberate Hawkins / Prone Bipod	As per Ser 1.	400	3	As per serial 1.	See notes	As per serial 1.
3		Snap Hawkins / Prone Bipod	As per Ser 1.	500	3	As per serial 1.	See notes	As per serial 1.
4		Moving target Hawkins / Prone Bipod	As per Ser 1.	600	3	As per serial 1.	See notes	As per serial 1.
5		Deliberate Hawkins / Prone Bipod	Medium Medal Gong Kill Zone Target	700	3	As per serial 1.	See notes	As per serial 1.
6		Snap Hawkins / Prone Bipod	As per Ser 5.	800	3	As per serial 1.	See notes	As per serial 1.
7		Moving target Hawkins /	As per Ser 5.	900	3	As per serial 1.	See notes	As per serial 1.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
		Prone Bipod						
8		Deliberate Hawkins / Prone Bipod	As per Ser 5.	1000	3	As per serial 1.	See notes	As per serial 1.

NOTES

- Ammunition.** 24 rds.
- Scoring.** Pass/Fail
- Standards.** Must achieve one hit per target at each given range.
- The Small Medal Gong Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the kill zone to the top of the kill zone head will measure 48 cm. From the bottom of the kill zone to the top of the shoulder will measure 38 cm. The width of the kill zone body will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 10 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.
- The Medium Medal Gong Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the kill zone target to the top of the kill zone head will measure 63 cm. From the bottom of the kill zone to the top of the shoulder will measure 50 cm. The width of the kill zone body will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 18 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.

MRSW FIELD FIRING RANGE PRACTICE 13—SLANT ANGLE

109. **Aim.** To train the sniper in engaging targets at altitude from an elevated position while employing the recognized ballistic program based on cosine readings.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping Hawkins / Prone Bipod	Small Medal Gong Kill Zone Target	300	3	Sniper will have 10 mins perform ballistic calculations and to fire 3 rds at the given target.	See notes	a. Conducted on an unknown distance range. b. This range practice will be conducted on a slant angle range and will require the sniper to employ the recognized ballistic program in order to achieve a hit on the target.
2		Deliberate Hawkins / Prone Bipod	As per Ser 1.	400	3	As per serial 1.	See notes	As per serial 1.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
3		Snap Hawkins / Prone Bipod	As per Ser 1.	500	3	As per serial 1.	See notes	As per serial 1.
4		Moving target Hawkins / Prone Bipod	As per Ser 1.	600	3	As per serial 1.	See notes	As per serial 1.
5		Deliberate Hawkins / Prone Bipod	Medium Medal Gong Kill Zone Target	700	3	As per serial 1.	See notes	As per serial 1.
6		Snap Hawkins / Prone Bipod	As per Ser 5.	800	3	As per serial 1.	See notes	As per serial 1.
7		Moving target Hawkins / Prone Bipod	As per Ser 5.	900	3	As per serial 1.	See notes	As per serial 1.
8		Deliberate Hawkins / Prone Bipod	As per Ser 5.	1000	3	As per serial 1.	See notes	As per serial 1.

NOTES

1. **Ammunition.** 24 rds.
2. **Scoring.** Pass/Fail
3. **Standards.** Must achieve one hit per target at each given range.
4. The Small Medal Gong Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the kill zone to the top of the kill zone head will measure 48 cm. From the bottom of the kill zone to the top of the shoulder will measure 38 cm. The width of the kill zone body will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 10 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.
5. The Medium Medal Gong Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the kill zone target to the top of the kill zone head will measure 63 cm. From the bottom of the kill zone to the top of the shoulder will measure 50 cm. The width of the kill zone body will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 18 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.

MRSW PWT 3

110. **Aim.** To confirm that the sniper can effectively engage targets in a field environment.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Zeroing Hawkins / Prone Bipod	Fig 11/59 on a stick	200	5	Confirmation of zero.	N/A	
2		Deliberate Hawkins / Prone Bipod	2 x Fig 11/59 super-imposed on a 1.2 m screen	601–1200	30	a. 60 minute time limit. b. Snipers must judge distance to the targets. c. No more than 5 rds per target set. d. Snipers can use all aids to judging distance and for calculation of environmental and meteorological conditions such as Vector IV, GPS, and issued weather stations.	HPS 15	a. 6 sets of 2 Fig 11/59 targets. b. Targets to touch shoulder-to-shoulder.

NOTES

1. **Ammunition.** 35 rds.
2. **Scoring.** 1 point per hit on any Fig 11/59.
3. **Standards.**
 - a. HPS—30 points.
 - b. Pass—22 points (70% of HPS).

MRSW PWT 3—NIGHT FIELD FIRING SUPPLEMENT

111. **Aim.** To confirm that the sniper can effectively engage targets in a field environment at night.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Deliberate Night Hawkins / Prone Bipod	Fig 11/59 on stick	300	10	a. 15 minute time limit. b. Targets are engaged when illuminated by flare or on whistle blast when night vision devices are used.	HPS 10	

NOTES

1. **Ammunition.** 10 rds.
2. **Scoring.** 1 point per hit.
3. **Standards.**
 - a. HPS—10.
 - b. Pass—5 points (50% of HPS).

MRSW PWT 3—STALKING EXERCISE SUPPLEMENT

112. **Aim.** To confirm the Sniper teams ability to stalk an Enemy OP with the .338 Cal Sniper Rifle and employ a recognized ballistics program in the engagement of a target at a known distance.

Ser	Practice	Target	Rge (m)	Rds	Scoring	Remarks
1	Deliberate	Medium Medal Gong Kill zone Target	300—800	4 Match (2/Sniper)	Pass/Fail	<p>a. This exercise will be the final confirmation of the employment of a recognized ballistics program in a field setting at a known distance.</p> <p>b. This exercise will be conducted as a two member sniper team IAW Conduct of Exercises, Stalking Exercise (Long Range) found in B-GL-392-005/FP-001 Chapter 6, Section 8</p> <p>c. Snipers will be permitted the use of a spotter to indicate fall of shot.</p> <p>d. The MRSW .338 Cal with sight will be used.</p> <p>e. Snipers can use all issued equipment for the determination of range and wind.</p> <p>f. Snipers will be allowed 5 minutes to observe wind and light condition prior to firing PWT 3 Stalking Supplement.</p> <p>g. PWT 3 Stalking Supplement will not be conducted if wind is 30 km/h or higher.</p> <p>h. Snipers can employ ballistics programs to confirm elevation and wind settings.</p>

NOTES

1. **Ammunition.** 4 rds Match (2/Sniper)
2. **Scoring.** Pass/Fail.
3. **Standards.** Each sniper must hit the target with at least one of the two rounds to pass the test.
4. The Medium Medal Gong Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the kill zone target to the top of the kill zone head will measure 63 cm. From the bottom of the kill zone to the top of the shoulder will measure 50 cm. The width of the kill zone body will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 18 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.

MRSW PWT 3—SLANT ANGLE SUPPLEMENT

113. **Aim.** To train the sniper in engaging targets at altitude from an elevated position while employing the recognized ballistic program based on cosine readings.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping Hawkins / Prone Bipod	Small Medal Gong Kill Zone Target	300	2	Sniper will have 10 mins perform ballistic calculations and to fire 2 rds at the given target.	See Notes	a. Conducted on a unknown distance range. b. This range practice will be conducted on a slant angle range and will require the sniper to employ the recognized ballistic program in order to achieve a hit on the target.
2		Deliberate Hawkins / Prone Bipod	As per serial 1.	400	2	As per serial 1.	See Notes	As per serial 1.
3		Snap Hawkins / Prone Bipod	As per serial 1.	500	2	As per serial 1.	See Notes	As per serial 1.
4		Moving target Hawkins / Prone Bipod	As per serial 1.	600	2	As per serial 1.	See Notes	As per serial 1.
5		Deliberate Hawkins / Prone Bipod	Medium Medal Gong Kill Zone Target	700	2	As per serial 1.	See Notes	As per serial 1.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
6		Snap Hawkins / Prone Bipod	As per serial 5.	800	2	As per serial 1.	See Notes	As per serial 1.
7		Moving target Hawkins / Prone Bipod	As per serial 5.	900	2	As per serial 1.	See Notes	As per serial 1.
8		Deliberate Hawkins / Prone Bipod	As per serial 5.	1000	2	As per serial 1.	See Notes	As per serial 1.

NOTES

1. **Ammunition.** 16 rds.
2. **Scoring.**
 - a. HPS—16.
 - b. Pass—8 Hits or (50% of hits on target).
3. **Standards.** Must achieve (50% of hits on target).
4. The Small Medal Gong Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the kill zone to the top of the kill zone head will measure 48 cm. From the bottom of the kill zone to the top of the shoulder will measure 38 cm. The width of the kill zone body will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 10 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.
5. The Medium Medal Gong Kill Zone will be an elongated rectangular body with an elongated rectangular head. The kill zone measured from the bottom of the kill zone target to the top of the kill zone head will measure 63 cm. From the bottom of the kill zone to the top of the shoulder will measure 50 cm. The width of the kill zone body will be 30 cm and the width of the kill zone head will be 13 cm. The kill zone head measured from the top of the kill zone shoulder to the top of the kill zone head will be 18 cm. The top of the shoulder measured from the outside of the shoulder to the outside of the head will measure 9 cm.

SECTION 6—C15 LONG RANGE SNIPER WEAPON (LRSW)

SCOPE

114. This section sets out all the live firing practices to be completed in the CFOSP for snipers using the C15 LRSW.

115. This progression and frequency of firing is essential to keep the sniper current with the C15 LRSW. It is also essential in preparing the sniper for operations.

TRAINING AND FIRING SEQUENCE

116. The training and firing sequence as laid down for the C15 LRSW should be followed in a logical sequence and are designed to be conducted progressively during Initial Marksmanship Training. Only PWT 3 is required to be conducted as part of Continuation Training.

117. Live fire training is divided into Initial Marksmanship Training, which is received during the snipers conversion training on the weapon system, and Continuation Marksmanship Training, which is conducted by qualified snipers. All snipers that are involved in field firing the C15 LRSW must complete the Materiel Neutralization Mission.

118. The testing methods for the C15 LRSW during all stages of Training The Battle Shot are as follows:

- a. **Initial Marksmanship Training.** CO must be aware that snipers do not receive training in the form of formal lessons or C15 LRSW range practices while undergoing formal Basic Sniper training. The Initial Marksmanship training starts at the unit once the sniper has received and completed his basic sniper course. This training is to include all Application Range Practices and PWTs 1, 2 and 3.
- b. **Continuation Marksmanship Training.** Is to be conducted annually by qualified snipers who employ the LRSW. The range practices are as follows:
 - (1) **Application Range Practices.** Are not mandatory during Continuation Marksmanship Training, however they should be used to address faults experienced during PWTs and prior to attempting a re-test.
 - (2) **PWT.** PWT 3 is the only PWT to be conducted during Continuation Training on an austere range.

CONDUCT OF LIVE FIRING PRACTICES

119. **Dress.** Dress for each practice should include appropriate sniper dress and equipment.

120. **Weapon and Firing Preparation:**

- a. Each sniper is to have hearing protection and his shooting record card in his possession.
- b. Observation of fall of shot is obvious using the issued spotting scope or Vector IV.

121. **Spotters.** A spotter will be used to enable snipers to gain the maximum information from the shots fired, using the issued spotting scope or Vector IV to call the arrival of each shot.

PRACTICES AND TESTS

122. The details of all live firing practices and tests are contained in the remaining pages of this chapter.

C15 LRSW SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
1	LIVE	14	C15 Grouping and zeroing practice.	300 and 500	40 Match	To train the sniper in firing the LRSW in order to determine shooting errors and parallel bore zero the rifle.
		15	C15 LRSW Reverse Image Zero Practice.	300–600	10 Match	To train the sniper to engage targets at different distances using only one elevation sight setting.
		C15 LRSW PWT 1		300–500	22	To confirm the sniper's ability to apply an effective group.
		16	C15 LRSW Field Firing Practice	601–1500	36 Match	To train the sniper in effectively engaging targets in a field environment.
		C15 LRSW PWT 2		1000–1500	36	To confirm the sniper in effectively engaging targets in a field environment.
		C15 LRSW PWT 3		1200–1800	6 Match	To confirm the snipers ability to effectively engage materiel targets at long ranges.

C15 LRSW APPLICATION RANGE PRACTICE 14—GROUPING AND ZEROING PRACTICE

123. **Aim.** To train the sniper in firing the LRSW in order to determine shooting errors and parallel bore zero the rifle.

Ser	Practice	Target	Rge (m)	Rds	Scoring	Remarks
1	Prone behind a sandbag wall	1.2 m screen with 4 x 25 mm zeroing mark	300	12 Match or (if available Mat Neut round)	See Notes	a. Sniper will fire 4 x 3 rd groupings resting after each grouping. b. Grouping sizes to be recorded. c. The sniper must achieve a grouping no larger than 150 mm prior

Ser	Practice	Target	Rge (m)	Rds	Scoring	Remarks
						to zeroing. d. Weapon should be Bore Sighted prior to the practice. e. Additional rds may be required.
2	Deflection Prone Bipod	1.2 m screen with 4 x 25 mm zeroing mark	300	5 Match or (if available Mat Neut round)	See Notes	a. Must find true deflection. b. A recognized Ballistics program will be employed as a means of recording deflection sight settings.
3	Parallel Bore Zero Prone Bipod	1.2 m screen with 4 x 100 mm zeroing mark	500	5 Match or (if available Mat Neut round)	See Notes	a. Must parallel bore zero 0.50 Cal at 500 m. To be conducted on a conventional range. b. A recognized Ballistics program will be employed as a means of recording elevation sight settings.

NOTES

1. **Ammunition.** 22 rds.
2. **Scoring.** Pass/Fail.
3. **Standards.** Sniper's best group must be within 150 mm.
4. Practice is to be conducted on a conventional range.

C15 LRSW APPLICATION RANGE PRACTICE 15—REVERSE IMAGE ZERO PRACTICE

124. **Aim.** To train the sniper to engage targets at different distances using only one elevation sight setting.

Ser	Practice	Target	Rge (m)	Rds	Scoring	Remarks
1	Prone (Sandbag wall is optional)	1.2 m screen	300–600	10 Match or (if available Mat Neut round)	HPS 10	Snipers are to engage targets using the reverse image zero process.

NOTES

1. **Ammunition.** 10 rds.
2. **Scoring.** Pass/Fail.
3. **Standards.**
 - a. HPS—10 points.
 - b. Sniper must successfully hit 6 out of 10 targets at ranges of 300 to 600 m (60% of HPS).

4. Distance to the targets will depend on the height of the target and how it affects reverse image sight settings.

C15 LRSW PWT 1

125. **Aim.** To confirm the sniper's ability to apply an effective group.

Ser	Practice	Target	Rge (m)	Rds	Scoring	Remarks
1	Grouping Prone Bipod	1.2 m screen with 4 x 100 mm zeroing mark	500	9 Match or (if available Mat Neut round)	Pass/Fail	a. No time limit. b. Sniper fires three, 3-round groupings. c. Each round and grouping will be indicated with a red target marker. d. While grouping the sniper should use the chronograph.

NOTES

- Ammunition.** 9 rds.
- Scoring.** Pass/Fail.
- Standards.** Sniper must achieve at least one 250 mm group out of three to pass.
- This test is conducted on a conventional range.

C15 LRSW RANGE PRACTICE 16—FIELD FIRING

126. **Aim.** To confirm that the sniper can effectively engage targets in a field environment.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Zeroing Hawkins / Prone Bipod	1.2 m screen with 4 x 100 mm zeroing mark	500	2 x 3 rd groupings with Match or (if available Mat Neut round)	Confirmation of zero.	N/A	
2		Deliberate Hawkins / Prone Bipod	1.2 m Screen	601–1500	30 Match or (if available Mat Neut round)	a. 60 minute time limit. b. This will be a known distance shoot.	HPS 30	10 x 1.2 m Screen between 601 m and 1500 m per lane.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
						c. No more than 3 rds per target set. d. Snipers can use all aids to judging distance and for calculation of environmental and meteorological conditions such as Vector IV, GPS, and issued weather stations.		

NOTES

1. **Ammunition.** 36 rds.
2. **Scoring.** 1 point per hit on any 1.2 m Screen.
3. **Standards.**
 - a. HPS—30 points.
 - b. Pass—18 points (60% of HPS).

C15 LRSW PWT 2—FIELD FIRING

127. **Aim.** To confirm that the sniper can effectively engage targets in a field environment.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Zeroing Hawkins / Prone Bipod	1.2 m screen with 4 x 100 mm zeroing mark	500	2 x 3 rd groupings with Match or (if available Mat Neut round)	Confirmation of zero.	N/A	
2		Deliberate Hawkins / Prone Bipod	1.2 m Screen	601– 1500	30 Match or (if available Mat Neut round)	a. 60 minute time limit. b. This will be a known distance shoot. c. No more than 3 rds per target set. d. Snipers can use all aids to judging	HPS 30	10 x 1.2 m Screen between 601 m and 1500 m per lane.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
						distance and for calculation of environmental and meteorological conditions such as Vector IV, GPS, and issued weather stations.		

NOTES

1. **Ammunition.** 36 rds.
2. **Scoring.** 1 point per hit on any 1.2 m Screen.
3. **Standards.**
 - a. HPS—30 points.
 - b. Pass—18 points (60% of HPS).

C15 LRSW PWT 3—MATERIAL NEUTRALIZATION MISSION

128. **Aim.** To confirm that the sniper can effectively engage targets at long ranges.

Ser	Practice	Target	Rge (m)	Rds	Scoring	Remarks
1	Deliberate Prone	Suitable simulated materiel target 8 foot X 4 foot	1200–1800	6 Match or (if available Mat Neut round)	Pass/Fail	a. The sniper will be permitted the use of a spotter to indicate fall of shot. b. The C15 LRSW with sight will be used. c. Snipers can use all issued equipment for the determination of range and wind. d. Snipers will be allowed 5 minutes to observe wind and light condition prior to firing PWT 3. e. PWT 3 shall not be conducted if wind is 30 km/h or higher.

NOTES

1. **Ammunition.** 6 rds.
2. **Scoring.** Pass/Fail.
3. **Standards.** The sniper must hit the target at least once in order to achieve a pass on the test.

4. Each sniper is to be assigned a different target within the range band so that they cannot use a previous sniper's data.

SECTION 7—C6 GENERAL PURPOSE MACHINE GUN (LIGHT ROLE) (GPMG [LR])

SCOPE

129. This section sets out all the practices to be completed in the CFOSP for the C6 general purpose machine gun (light role) (GPMG [LR]). It includes the application of firing practices for all Arms and Services and the progression with which they should be fired.

130. This progression of firing is essential for preparing firers for the personal weapons tests (PWTs) and field firing.

SIMULATION AND TECHNOLOGY

131. **Small Arms Trainer.** Use of the Small Arms Trainer (SAT) simulator practices are an integral part of the CFOSP and have been selected to confirm the basic skills required for live firing. In addition, it enables the coach to eliminate faults, which have only been detectable during live firing. All live firing practices and tests are included in the SAT software and can be used for remedial training, or as concurrent activity to a range or other training period.

132. All range practices are written for use on both SAT and conventional ranges. The SAT serials are identified in the applicable column on each practice. They are not mandatory unless specified.

133. Due to the significant changes to the CFOSP, operators will be required to author SAT practices that match live ranges related to the GPMG (LR).

AIDS TO TRAINING AND FIRING

134. **Bipod.** The GPMG (LR) is to be fired from the bipod down position in all practices.

135. **Ammunition.** All GPMG (LR) live firing practices from Practice 21 thereafter may be conducted using 7.62 mm 4B1T (four balls and one tracer) ammunition unless range orders or local restrictions, specifically a tracer ban, preclude its use.

TRAINING AND FIRING SEQUENCE

136. The practices described in this section are designed to be conducted progressively. PWT 1 and PWT 2 must be passed prior to attempting PWT 3. Completion of PWT 3 is essential prior to conducting field firing.

137. Testing methods for the C6 GPMG (LR) are as follows:

- a. **Initial Marksmanship Training.** All application range practices and PWTs are to be conducted on the SAT (if available) followed by live firing.
- b. **Continuation Marksmanship Training.** The range practice requirements are:
 - (1) **Application Range Practices.** These practices are not mandated once a firer has completed initial marksmanship training. If they are conducted, they may be conducted on the SAT (if available) to assist firers who experience difficulty on a PWT.
 - (2) **Personal Weapon Test and Night Shoot.** Firers must complete their final directed level of PWT live as described in the Individual Battle Task Standards (IBTS) for Land Operations. Subordinate PWTs may be fired using the SAT.

138. **Remedial Training.** The SAT provides an invaluable aid to the remedial training of the poor shot. Commanding officers (COs) are encouraged to make full use of these facilities wherever they are available. However, final confirmation must be by the use of live firing. All practices can be fired on the SAT and may be used as a remedial aid, or as a rehearsal prior to firing on a live firing range.

139. **Aiming Marks.** Where white patches are used, the point of aim (POA) is to be the bottom centre of the patch to cater for iron sights.

140. **Coaching.** Chapter 3 contains full details of the coaching requirements. For ranges up to and including 300 m, sights are to be set at 300. Firers are to be reminded to alter their sights prior to firing at 400, 500, 600, 700 and 800 m.

141. **Spotters.** When grouping at 25 m, to enable firers and coaches to gain the maximum information from the shots fired, members of the waiting relay should be employed as spotters, using binoculars to plot the arrival of each shot. To achieve maximum value from this type of live firing, it is essential that firers be given every opportunity to discuss the results of their shooting with their coach.

PRACTICES AND TESTS

142. The details of all GPMG (LR) live firing practices and tests are contained in the remaining pages of this section.

143. **Scoring.** Understanding the GPMG is an area weapon MPIs in grouping and zeroing should be scored using only 80% of the best rounds, (i. e. four out of five rounds).

GPMG (LR)—SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP RP	Practice	Rge (m)	Rds	AIM
1	SAT/ LIVE	11	Introductory Shoot—Bipod	25	30	To train the firer to aim, hold, and fire the gun in controlled bursts.
		12	Grouping at 100 m	100	60	To train the firer to group effectively at 100 m.
		13	Zeroing at 100 m	100	35	To superimpose the firer's mean point of impact (MPI) onto the correct zero position (CZP) at 100 m.
		GPMG (LR) PWT 1		100	40	To confirm the firer's grouping and zeroing ability with the GPMG (LR).
2	SAT/ LIVE	21	Application of Fire	200–400	120	To train the firer to apply the factors that affect the application of fire.
		22	Snap Shooting	100–400	140	To train the firer to apply fire during snap shooting engagements.
		GPMG (LR) PWT 2		100–400	155	To confirm the firer's ability to effectively employ the GPMG (LR).
	SAT/ LIVE	23	Night Firing—Bipod	LNV 100 200	80	To train the firer to engage targets at night with and without illumination.
	LIVE	GPMG (LR) PWT 2—NIGHT SUPPLEMENT		LNV 100 200	60	To confirm the firer can engage targets at night with and without illumination.
3	SAT/ LIVE	31	Application of Fire	500–600	80	To train the firer to engage targets at longer ranges.
	LIVE	GPMG (LR) PWT 3		500–600	80	To confirm the firer can engage targets at longer ranges.

Stage	Trg/Test Method	CFOSP RP	Practice	Rge (m)	Rds	AIM
	LIVE	GPMG (LR) PWT 3 NIGHT SUPPLEMENT—MAXI KITE SIGHT		100–300	85	To confirm the firer can engage targets at night using the MAXI-KITE sight fitted to the GPMG (LR).

GPMG (LR) APPLICATION RANGE PRACTICE 11—INTRODUCTORY SHOOT—BIPOD

144. **Aim.** To train the firer to aim, hold and fire the gun in controlled bursts.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1		Introduction	Butt Stop	25	2 x 3 rd belts	Fire each belt in one burst.	N/A	Firers will have a feel for a 3 rd burst.
2		Grouping	Ochre screen with 4 separate aiming marks.	25	4 x 3 rd belts	a. Fire 1 x 3 rd bursts at each aiming mark. b. Discuss groupings and record grouping sizes.	See notes	a. All firers are to be coached. b. One firer is to be nominated to watch and note the arrival of the first and subsequent shots of each grouping. c. To measure the first rd grouping size, the first rd of each burst will be plotted to determine grouping size
3		Burst Length / Grouping Confirmation	As per Ser 2.	25	12	As per Ser 2.	See notes	a. All firers are to be coached. b. One firer is to be nominated to watch and note the arrival of the first and subsequent shots of each grouping. c. To measure, the first rd of each burst will be plotted to determine grouping size. d. Firers will have to judge 3 rd burst for each aiming mark.

NOTES

1. **Ammunition.** 30 rds.
2. **Scoring.** Pass/Fail.
3. **Standards.**
 - a. Pass—125 mm average.
 - b. Desirable—75 mm average.
4. **Additional Stores.**
 - a. Coach's notebooks—1 per coach.
 - b. Piece of talc with 125 mm and 75 mm circles inscribed thereon—1 per target.

GPMG (LR) APPLICATION RANGE PRACTICE 12—GROUPING AT 100 m

145. **Aim.** To train the firer to group effectively at 100 m.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1		Grouping Fire Trench	1 x Fig 11 tgt on a 1.3 m witness screen with a 75 x 100 mm white aiming mark.	100	20	a. Gunner to fire 5 rds in bursts at the tgt. b. Examine tgt and discuss results. c. Repeat the practice and record grouping sizes	See notes	a. All firers are to be coached. b. One firer is to be nominated to watch and note the arrival of the first and subsequent shots of each grouping. c. If a trench is not available, a supported position may be used.
2		Grouping Fire Trench	As per Ser 1.	100	20	As per Ser 1.	See notes	As per Ser 1.
3		Grouping Prone	As per Ser 1.	100	20	As per Ser 1.	See notes	As per Ser 1.

NOTES

1. **Ammunition.** 60 rds.
2. **Scoring.** Pass/Fail.
3. **Standards.** Pass—Gunnery should achieve a 300 mm burst group size with each 5 rd burst during Ser 2 and Ser 3.

GPMG (LR) APPLICATION RANGE PRACTICE 13—ZEROING AT 100 m

146. **Aim.** To superimpose the firer's mean point of impact (MPI) onto the correct zero position (CZP) at 100 m.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1		Limbering Up	Butt Stop	100	10	Fire 2 x 5 rd bust.		
2		Grouping / Zeroing	1 x Fig 11 tgt on a 1.3 m witness screen with a 75 x 100 mm white aiming mark.	100	20	a. Gunner to fire 4 x 5 rd bursts at the same aiming mark. b. Discuss and record grouping sizes. c. Identify the MPI. d. Adjust the sights for zero as necessary	See notes	a. All firers are to be coached. b. It is understood that the SAT will electronically adjust the point of impact (POI) to the CZP. Firers must understand the mechanics of sight adjustment.
3		Confirmation	As per Ser 2.	100	5	Confirm proper sight adjustments have been made..		Gun is correctly zeroed when 25 % of the confirmatory MPI size is within that same distance to the CZP.

NOTES

1. **Ammunition.** 35 rds.
2. **Scoring.** Pass/Fail.
3. **Standard.** Gun is correctly zeroed when the distance from the MPI to the CZP is 25 percent of the calculated average group size.
4. **Additional Stores.**
 - a. Coach's notebooks—1 per coach.
 - b. Measuring device for calculating MPI.
 - c. CZP is 75 mm above the POA when firing from 100 m with the sights set at 100 m.

GPMG (LR) PWT 1

147. **Aim.** To confirm the gunner's grouping and zeroing ability with the GPMG (LR).

Ser	SAT SER	Practice	Targets	Rge (m)	Rds	Instructions	Score	Remarks
1		Zeroing	1 x Fig 11 superimposed on a 1.22 m screen with a white aiming mark 75 x 75 mm.	100	25	a. Gunner to fire 4 x 5 rd groupings. b. Note the MPI and any change necessary to the sights. c. Allow the gunner to adjust the sights. d. Fire a check 1 x 5 rd grouping to confirm zero.	Nil	Grouping standard expected is 300 mm.
2		Grouping Prone	1 x Fig 11 superimposed on a 1.22 m witness screen with a 75 x 100 mm white aiming mark.	100	20	a. Fire 20 rds in 3 to 5 rd bursts. b. Measure grouping size.	HPS 5	Coaches are to observe firers for application of the marksmanship principles.
3		Grouping Fire Trench	As per Ser 1.	100	20	As per Ser 1.	HPS 5	

NOTES

1. **Ammunition.** 65 rds.
2. **Scoring.** HPS—10 points:
 - a. 300 mm or less—5 points.
 - b. 400 mm or less—3 points.
 - c. 500 mm or less—1 point.
 - d. Over 500 mm—0 points.
3. **Standard.** Pass—6 points (60% of HPS).

GPMG (LR) APPLICATION RANGE PRACTICE 21—APPLICATION OF FIRE

148. **Aim.** To train the firer to apply the factors that affect the application of fire.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Deliberate Fire Trench	2 x Fig 11 on a 1.3 m screen.	200	20	a. Fire 4 x 5 rd bursts. b. After each burst, MPI to be indicated using plug or pointer. c. Coaches to discuss MPI and score.	HPS 4	Coaches to act as spotters with binos.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
2		Deliberate Prone	Triple Fig 11 on a 1.3 m screen.	300	20	As per Ser 1.	HPS 4	As per Ser 1.
3		Deliberate Fire Trench	As per Ser 2.	400	20	As per Ser 1	HPS 4	As per Ser 1.
4		Deliberate Prone	As per Ser 2.	400	20	As per Ser 1.	HPS 4	As per Ser 1.

NOTES

1. **Ammunition.** 80 rds.
2. **Scoring.** HPS—16 points. 1 point per successful engagement. Successful tgt engagement is defined as at least one hit per burst.
3. **Standard.** Pass—10 points (60% of HPS).
4. **Safety.** If conducted on SAT, safety should mirror live fire ranges.
5. This practice must be conducted live during initial trg.

GPMG (LR) APPLICATION RANGE PRACTICE 22—SNAP SHOOTING

149. **Aim.** To train the firer to apply fire during snap shooting engagements.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Snap Prone	1 x Fig 11.	100	20	a. Firer in the standing alert position, bipod folded, 10 m behind firing point. b. Order WATCH OUT . c. The appearance of the tgt is the signal for the firer to move to the firing point, adopt the prone position (bipod down), and make ready. d. Fire 1 x burst of 3 to 5 rds at each exposure.	HPS 4	a. 1 x 7 sec exposure followed by 3 x 5 sec exposures with irregular intervals. b. Tgt falls when hit.
2		Snap Fire Trench	Double Fig 11.	200	20	a. Order WATCH AND SHOOT . b. Fire 1 x burst of 3 to 5 rds at each exposure.	HPS 4	a. 4 x 5 sec exposures at irregular intervals. b. Tgts fall when hit.
3		Snap	As per Ser 2.	200	20	a. Firer in the kneeling	HPS 4	a. 1 x 12 sec

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Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
		Prone				position, bipod folded, 10 m behind the firing point. b. Order WATCH OUT . c. The appearance of the tgt is the signal for the firer to move to the firing point, adopt the prone position (bipod down), and make ready. d. Fire 1 x burst of 3 to 5 rds at each exposure.		exposure followed by 3 x 5 sec exposures at irregular intervals. b. Tgts fall when hit.
4		Snap Fire Trench	Triple Fig 11.	300	20	a. Order WATCH AND SHOOT . b. Fire 1 x burst of 3 to 5 rds at each exposure.	HPS 4	a. 4 x 5 sec exposure at irregular intervals. b. Tgts fall when hit.
5		Snap Prone	As per Ser 4.	300	20	a. Firer in the standing posn, 10 m behind the firing point. b. Order WATCH OUT . c. The appearance of the tgt is the signal for the firer to move to the firing point, adopt the prone position (bipod down), and make ready. d. Fire 1 x burst of 3 to 5 rds at each exposure.	HPS 4	a. 1 x 14 sec exposure followed by 3 x 5 sec exposures at irregular intervals. b. Tgts fall when hit.
6		Snap Fire Trench	Triple Fig 11.	400	20	a. Order WATCH AND SHOOT . b. Fire 1 x burst of 3 to 5 rds at each exposure.	HPS 4	a. 4 x 5 sec exposures at irregular intervals. b. Tgts fall when hit.
7		Snap Prone	As per Ser 6.	400	20	a. Firer in the standing alert position, bipod folded, 10 m behind the firing point. b. Order WATCH OUT . c. The appearance of the tgt is the signal for the firer to move to the firing point, adopt the prone position (bipod down), and make ready. d. Fire 1 x burst of 3 to 5 rds at each exposure.	HPS 4	a. 1 x 14 sec exposure followed by 3 x 5 sec exposures at irregular intervals. b. Tgts fall when hit.

NOTES

1. **Ammunition.** 140 rds.
2. **Scoring.** HPS—32 points:
 - a. 1 point per successful engagement.
 - b. Successful tgt engagement is defined as at least one hit per burst.
3. **Standard.** Pass—20 points (60% of HPS).

GPMG (LR) PWT 2

150. **Aim.** To confirm the firer's ability to effectively employ the GPMG (LR).

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping and Zeroing	1 x Fig 11.	100	20	a. Fire 20 rds in bursts of 3 to 5 rds at the same aiming mark. b. Stand up after every second burst.	Nil	a. Identify the mean point of impact (MPI). b. Adjust the sights. c. Optional for those just completed GPMG (LR) PWT 1
2		Check Zero	As per Ser 1.	100	5	Fire 1 x 5 rd burst.	Nil	a. Check MPI for correct CZP. b. Optional for those just completed GPMG (LR) PWT
3		Deliberate Prone	Double Fig 11.	200	10	Fire 2 x 3 to 5 rd bursts.	HPS 2	MPI indicated.
4		Snap Prone	As per Ser 2.	200	20	a. Order LOAD... 200 m... WATCH AND SHOOT. b. Fire 4 x bursts of 3 to 5 rds during exposure.	HPS 4	1 x 60 sec exposure.
5		Snap Fire Trench	As per Ser 2.	200	20	a. Order LOAD... 200 m... WATCH AND SHOOT. b. Fire 4 x bursts of 3 to 5 rds during exposure.	HPS 4	1 x 60 sec exposure.
6		Deliberate Prone	Triple Fig 11.	300	10	Fire 2 x bursts of 3 to 5 rds.	HPS 2	MPI indicated.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
7		Snap Prone	As per Ser 6.	300	15	a. Order LOAD... 300 m... WATCH AND SHOOT. b. Fire 3 x bursts of 3 to 5 rds during exposure.	HPS 3	1 x 45 sec exposure.
8		Snap Fire Trench	As per Ser 6.	300	15	a. Order LOAD... 300 m... WATCH AND SHOOT. b. Fire 3 x bursts of 3 to 5 rds during exposure.	HPS 3	1 x 45 sec exposure.
9		Deliberate Prone	As per Ser 6.	400	10	Fire 2 x bursts of 3 to 5 rds.	HPS 2	MPI indicated.
10		Snap Prone	As per Ser 6.	400	15	a. Order LOAD... 400 m... WATCH AND SHOOT. b. Fire 3 x bursts of 3 to 5 rds during exposure.	HPS 3	1 x 45 sec exposure.
11		Snap Fire trench	As per Ser 6.	400	15	a. Order LOAD... 400 m... WATCH AND SHOOT. b. Fire 3 x bursts of 3 to 5 rds during exposure.	HPS 3	1 x 45 sec exposure.

NOTES

1. **Ammunition.** 155 rds.
2. **Scoring.** HPS—26 points:
 - a. 1 point per successful engagement.
 - b. Successful tgt engagement is defined as at least one hit per burst.
3. **Standard.** Pass—16 points (60% of HPS).

GPMG (LR) APPLICATION RANGE PRACTICE 23—NIGHT FIRING—BIPOD

151. **Aim.** To train the firer to engage targets at night with and without illumination.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Deliberate Prone	1 x Figure 11 (Draped).	LNV	20	Fire 4 x bursts of 3 to 5 rds.	Nil	a. Mean point of impact (MPI) to be indicated. b. Coaches act as spotters. c. Discuss the MPI and any adjustment to the point of aim

								(POA).
2		Snap Prone	As per Ser 1.	LNV	20	a. Order WATCH AND SHOOT . b. Fire 1 x burst of 3 to 5 rds at each exposure.	HPS 4	a. 4 x 5 sec exposures. b. Tgt does not fall when hit.
3		Snap Prone	As per Ser 1.	LNV	20	a. Firer in the standing position. b. Order WATCH OUT . c. On the appearance of the tgt, the firer adopts the prone position and fires 1 x burst of 3 to 5 rds at each exposure. d. Between exposures, order APPLY YOUR SAFETY CATCH AND STAND UP .	HPS 4	a. 4 x 10 sec exposures. b. Tgt does not fall when hit. c. 10–15 seconds in between each exposure.
4		Rapid Prone (Flare)	As per Ser 1.	100	20	a. Order WATCH AND SHOOT . b. When the range becomes sufficiently illuminated by the white light, fire 20 rds at the exposure.	HPS 4	a. 1 x 15 sec exposure. b. Tgt does not fall when hit.

NOTES

1. **Ammunition.** 80 rds.
2. **Scoring.** HPS—12 points:
 - a. Successful tgt engagement is defined as at least one hit per burst.
 - b. 1 point per successful engagement.
3. **Standard.** Pass—7 points (60% of HPS).
4. Train and discuss the tendency for firers to shoot high at night (remember the rule *"Lights up sights up, lights down sights down"*).
5. Chalk or some other marker should be used to mark shot holes between exposures.

GPMG (LR) PWT 2—NIGHT SUPPLEMENT

152. **Aim.** To confirm the firer can engage targets at night with and without illumination.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
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Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Deliberate Prone	1 x Fig 11 (Draped)	LNV	20	Fire 4 x bursts of 3 to 5 rds deliberate.	Nil	a. No time limit. b. Mean point of impact (MPI) to be indicated. c. Coaches act as spotters. d. Discuss the MPI and any adjustment to the point of aim (POA).
2		Snap Prone	As per Ser 1.	LNV	20	a. Order WATCH AND SHOOT . b. Fire 1 x burst of 3 to 5 rds at each exposure.	HPS 4	a. 4 x 5 sec exposures. b. Tgt does not fall when hit.
3		Rapid (Artificial Light)	As per Ser 1.	100	20	a. Order WATCH AND SHOOT . b. When the range becomes sufficiently illuminated by the white light, fire 20 rds at the exposure.	HPS 4	a. 1 x 15 sec exposure. b. Tgt does not fall when hit.

NOTES

1. **Ammunition.** 60 rds.
2. **Scoring.** HPS—8 points:
 - a. Successful tgt engagement is defined as at least one hit per burst.
 - b. Ser 2—1 point per successful engagement.
3. **Standard.** Pass—5 points (60 % of HPS).
4. Chalk or some other marker should be used to mark shot holes between exposures.

GPMG (LR) APPLICATION RANGE PRACTICE 31—APPLICATION OF FIRE

153. **Aim.** To train the firer to engage targets at longer ranges.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1		Sighting	Triple Fig 11.	500	10	Fire 2 x bursts at the tgt.	Nil	a. Mean point of impact (MPI) signalled after each

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
								burst. b. Firers to adjust sights
2		Snap Prone	As per Ser 1.	500	20	a. Order WATCH AND SHOOT . b. Fire 1 x 3 to 5 rd burst at each exposure.	HPS 4	a. 4 x 5 sec exposures over a period of 1 minute. b. Tgt is to be lowered when hit.
3		Sighting	As per Ser 1.	600	10	As per Ser 1.	Nil	As per Ser 1.
4		Snap Prone	As per Ser 1.	600	20	As per Ser 2.	HPS 4	As per Ser 2.
5		600 to 500 m Movement and Fire	As per Ser 1.	500	20	a. Firer at 600 m point in the prone position with gun loaded. b. Order WATCH OUT. c. 1 x 3 sec exposure is the signal for the firer to stand, advance to the 500 m point, adopt the prone position. d. Fire 1 x 3 to 5 rd burst at each exposure.	HPS 4	1 x 3 sec exposure, followed by 1 x 30 sec pause, then 4 x 5 sec exposures over a period of 30 sec.

NOTES

1. **Ammunition.** 80 rds.
2. **Scoring.** HPS—12 points:
 - a. 1 point per successful engagement.
 - b. Successful tgt engagement is defined as at least one hit per burst.
3. **Standard.** Pass—7 points (60% of HPS).
4. All firers are to be coached.
5. Confirm POA and wind allowance with the firer.
6. Number 2 is to be employed and coached in the observation of strike and tracer.

GPMG (LR) PWT 3

154. **Aim.** To confirm the firer can engage targets at longer ranges.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
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Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instructions	Score	Remarks
1		Sighting	Triple Fig 11.	500	10	Fire 2 x bursts at the tgt.	Nil	Mean point of impact (MPI) signalled after each burst.
2		Snap Prone	As per Ser 1.	500	20	a. Order WATCH AND SHOOT. b. Fire 1 x burst of 3 to 5 rds at each exposure.	HPS 4	a. 4 x 5 sec exposures over a period of 1 minute. b. Tgt is to be lowered when hit.
3		Sighting	As per Ser 1.	600	10	As per Ser 1.	Nil	As per Ser 1.
4		Snap Prone	As per Ser 1.	600	20	As per Ser 2.	HPS 4	As per Ser 2.
5		600 to 500 m Movement and Fire	As per Ser 1.	500	20	a. Firer at 600 m point in the prone position with gun loaded; b. Order WATCH OUT. c. 1 x 3 sec exposure is the signal for the firer to stand, advance to the 500 m point, adopt the prone position. d. Fire 1 x burst at each exposure.	HPS 4	1 exposure of 3 sec, followed by 1 x 30 sec pause, then 4 x 5 sec exposures over a period of 30 sec.

NOTES

- Ammunition.** 80 rds.
- Scoring.** HPS—12 points:
 - 1 point per successful engagement.
 - Successful tgt engagement is defined as at least one hit per burst.
- Standard.** Pass—7 points (60% of HPS).
- All firers are to be coached.
- Confirm POA and wind allowance with the firer.
- Number 2s are to be employed and coached in the observation of strike and tracer.

GPMG (LR) PWT 3 SUPPLEMENT—NIGHT FIRING WITH THE MAXI-KITE SIGHT

Part 1: Day Time Registration and Zero

155. **Aim.** To confirm the firer can engage targets at night using the MAXI-KITE sight fitted to the GPMG (LR).

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Grouping	1 x Fig 11 on a 1.22 m witness screen with a 75 by 100 mm white patch.	100	20	a. Fire 4 x 5 rd groupings at the same aiming mark. b. The firer is to apply the safety catch, stand up, then re-adopt the position between each grouping. c. Measure the size of the grouping.	Nil	Identify the mean point of impact (MPI) and adjust for zero if necessary.
2		Check Group	As per Ser 1.	100	5	Fire 1 x 5 rd check grouping to confirm zero.	See notes	a. If the correct zero is not achieved, repeat Ser 1. b. For information on adjusting the "KITE Sight," see the appropriate lesson in the C7 pamphlet

NOTES

1. **Ammunition.** 25 rds.
2. **Scoring.** Pass/Fail.
3. **Standard.** The 5 rd grouping size that should be achieved in Ser 2 for the C6 GPMG (LR) is 450 mm.
4. The daylight (pin hole) filter is to remain in place on the sight during this shoot.
5. This range practice is designed for the MAXI-KITE sight, but the KITE sight may be used.
6. Number 2s are to be employed and coached in the observation of strike and tracer.

GPMG (LR) PWT 3 SUPPLEMENT—NIGHT FIRING WITH THE MAXI-KITE SIGHT

Part 2: Night Shoot

156. **Aim.** To confirm the firer can engage targets at night using the MAXI-KITE sight fitted to the GPMG (LR).

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Snap Prone	1 x Fig 11.	100	20	a. Order WATCH AND SHOOT .	HPS 4	a. 4 x 5 sec exposures with

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
						b. Fire 1 x burst of 3 to 5 rds at each exposure. c. On completion, order UNLOAD .		irregular intervals. b. Tgt falls when hit.
2		Snap Fire Trench	Double Fig 11.	200	20	a. Order WATCH AND SHOOT . b. Fire 1 x burst of 3 to 5 rds at each exposure.	HPS 4	a. 4 x 5 sec exposures with irregular intervals. b. Tgts fall when hit.
3		Snap Prone	Triple Fig 11.	300	20	a. Order WATCH AND SHOOT . b. Fire 1 x burst of 3 to 5 rds at each exposure.	HPS 4	a. 4 x 6 sec exposures. b. Tgts fall when hit.

NOTES

1. **Ammunition.** 60 rds.
2. **Scoring.** HPS—12 points:
 - a. 1 point per successful engagement.
 - b. Successful tgt engagement is defined as at least one hit per burst.
3. **Standard.** Pass—8 points (60% of HPS).
4. This test is designed for the MAXI-KITE sight, but the KITE sight may be used.

CHAPTER 6 CREW SERVED WEAPONS

SECTION 1—INTRODUCTION

AIM

1. The aim of this chapter is to outline the Canadian Forces Operational Shooting Programme (CFOSP) designed to maintain proficiency on crew served weapons. These practices are designed to enhance competency and ensure a minimum standard before advancing into live fire training.

GENERAL

2. This chapter sets the shooting standard for other individual and crew served weapons. As well, it defines the standards that are necessary to adhere to safety regulations found within B-GL-381-001/TS-000 *Training Safety*.

LAYOUT

3. This chapter comprises six sections:
- a. Section 1—General;
 - b. Section 2—C6 General Purpose Machine Gun (GPMG) C6 Sustained Fire (SF) role;
 - c. Section 3—0.50 Cal Heavy Machine Gun (HMG);
 - d. Section 4—84 mm Recoilless Carl Gustav M2-M3 Short Range Anti-armour Weapon (Medium) (SRAAW [M]);
 - e. Section 5—Eryx Short Range Anti-armour Weapon (Heavy) (SRAAW [H]); and
 - f. Section 6—60 mm Light Mortar M19 CDN.
4. Each section contains information that is essential to training, practise and testing of skills on crew served weapons. Although trained soldiers do not necessarily require the full work up of range practices in order to shoot the required tests, any or all training is beneficial and will result in a higher percentage of first time passes.
5. The nature of this chapter's structure aids in its amendment should a need arise to add or withdraw a weapon system, range practice(s) or test(s).

SECTION 2—C6 GENERAL PURPOSE MACHINE GUN (SUSTAINED FIRE) (GPMG [SF])

SCOPE

6. This section sets out all the practices to be completed in the CFOSP for the C6 general purpose machine gun (sustained fire) (GPMG [SF]). It includes the application of firing practices for all Arms and Services and the progression with which they should be fired.

7. This progression of firing is essential for preparing gunners for the personal weapons tests (PWTs) and field firing.

SIMULATION AND TECHNOLOGY

8. **Small Arms Trainer.** Use of the Small Arms Trainer (SAT) simulator practices are an integral part of the CFOSP and have been selected to confirm the basic skills required for live firing. In addition, it enables the coach to eliminate faults, which have only been detectable during live firing. All live firing practices and tests are included in the SAT software and can be used for remedial training, or as concurrent activity to a range or other training period.

9. All range practices are written for use on both SAT and conventional ranges. The SAT serials are identified in the applicable column on each practice. They are not mandatory unless specified.

10. Due to the significant changes to the CFOSP, operators will be required to author SAT practices that match live ranges related to the GPMG (SF).

AIDS TO TRAINING AND FIRING

11. **Ammunition.** All GPMG (SF) live firing practices from Practice 2 thereafter may be conducted using 7.62 mm 4B1T (four balls and one tracer) ammunition unless range orders or local restrictions, especially a tracer ban, preclude its use.

TRAINING AND FIRING SEQUENCE

12. The practices described in this section should be conducted progressively. PWT 1 and PWT 2 must be passed prior to attempting PWT 3. Completion of PWT 3 is essential prior to conducting field firing. Gunners need only complete initial weapon training on the GPMG prior to progressing to the GPMG (SF).

13. Testing methods for the GPMG (SF) are as follows:

- a. **Initial Marksmanship Training.** Gunners undergoing initial marksmanship training, as part of a formal course must complete all application range practices and PWTs using both SAT and live firing.
- b. **Continuation Marksmanship Training.** The range practice requirements are:
 - (1) **Application Range Practices.** These practices are not mandated once a gunner has completed initial marksmanship training. If they are conducted, they may be conducted on the SAT (if available) to assist firers who experience difficulty on a PWT.
 - (2) **Personal Weapons Test.** Gunners must complete their directed level of PWT live.

14. **Remedial Training.** The SAT provides an invaluable aid to the remedial training of the poor shot. Commanding officers (COs) are encouraged to make full use of these facilities wherever they are available. However, final confirmation must be by the use of live firing. All practices can be fired on the SAT and may be used as a remedial aid, or as a rehearsal prior to firing on a live firing range.

15. **Aiming Marks.** Where white patches are used, the point of aim (POA) is to be the bottom centre of the patch to cater for iron sights.

PRACTICES AND TESTS

16. The details of all GPMG (SF) live firing practices and tests are contained in the remaining pages of this section.

GPMG (SF) SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	AIM
1	SAT/LIVE	11	Zeroing	100	30	To superimpose the mean point of impact (MPI) of each barrel onto the correct zero position (CZP).
	SAT/LIVE	12	Engage Point and Traversing Targets	25	70	To train the gunner in engaging point and traversing targets with iron sights.
	LIVE	GMPG (SF) PWT 1		25	30	To confirm the gunner can engage point and traversing targets with iron sights at 25 m.
2	SAT/LIVE	21	Engage Point and Traversing Targets	800–1000	160	To train the gunner in engaging point and traversing targets with iron sights.

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	AIM
	LIVE	GPMG (SF) PWT 2		800–1000	160	To confirm the gunner's ability to engage point and traversing targets with iron sights.
3	SAT/LIVE	31	C2 Sight Firing Drills	25	140	To train the gunner in using the C2 sight during target engagement by day and night.
	LIVE	GPMG (SF) PWT 3		500–1000	200	To confirm the gunner's ability to engage targets using recorded data.

GPMG (SF) APPLICATION RANGE PRACTICE 11—ZEROING

17. **Aim.** To superimpose the mean point of impact (MPI) of each barrel onto the correct zero position (CZP).

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Drying the Barrel	Stop Butt.	100	5	Fire 1 x burst.	Nil	
2		Grouping, Zeroing	Fig 11 placed side by side on a 1.220 m square screen, each tgt having a 75 by 100 white patch	100	4 x 5 rd belts	Fire 2 x 5 rd burst at each tgt.	Pass / Fail	a. Calculate the average MPI of the 24 x groupings. b. Adjust the foresight as necessary.
3		Check Zero	As per Ser 2.	100	5	Fire 1 x 5 rd burst at one tgt only.	Pass / Fail	Check the MPI for correct zero.

NOTES

- Ammunition.** 30 rds linked ball per gunner.
- Scoring.** Pass/Fail—gunners must be able to make the manual adjustment of the sight in order to superimpose the MPI on to the CZP.
- Standard.** The barrel is correctly zeroed if the distance from the MPI to the CZP is 25 per cent of the calculated average group size.
- The practice is to be fired in full for each of the three barrels used in the SF role.
- The CZP is 75 mm above the POA.

GPMG (SF) APPLICATION RANGE PRACTICE 12—ENGAGE POINT AND TRAVERSING TARGETS

18. **Aim.** To train the gunner in engaging point and traversing targets using iron sights.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Introductory Shoot and Harmonization of Sights	Harmonization screen.	25	10	a. Give each gun a fire control order (FCO) with a range of 1400 m onto one of the aiming marks just above the landscape. b. Order STOP after the first burst. c. Order elevation adjustments to position the MPI between the harmonization lines. d. Record each gun's sight setting.	Nil	Discuss gun drills.
2		Point Target	As per Ser 1.	25	20	a. Gun loaded with 10 rds. b. Give a FCO onto a point tgt (see Note 6c). c. Order STOP after the third burst. d. Order UNLOAD... CLEAR GUN . Discuss gun drills and take scores. e. Repeat the practice.	See notes 2 and 3	
3		Traversing Target	As per Ser 1.	25	40	a. Gun loaded with 20 rds. b. Give a FCO onto a traversing tgt of approximately 8 to 10 mils in width (see Note 6c). c. Order UNLOAD... CLEAR GUN . d. Repeat the practice.	See notes 2 and 3	

NOTES

1. **Ammunition.** 70 rds linked ball per gunner.
2. **Scoring.** A measuring rod 680 mm (27 inches) long is required and is used as follows:
 - a. Point Target:
 - (1) hold the rod vertically with the bottom centre placed on the point of aim (POA);
 - (2) mark the screen at the top centre of the rod; this indicates where the mean point of impact (MPI) should be;
 - (3) draw a rectangle 50 mm (2 inches) wide and 100 mm (4 inches) deep, with the mark just made as its centre; and
 - (4) count one point for each shot within or cutting the rectangle.
 - b. Traversing Target:
 - (1) Mark the limits of the tgt as for a point tgt.
 - (2) Join the two marks with a pencil line, extending it by 25 mm (1 inch) at each end.
 - (3) Draw lines 50 mm (2 inches) above and 50 mm (2 inches) below the first line. Join the ends by vertical lines.
 - (4) Count 1 point for each shot within or cutting the rectangle.
3. **Standard.** Acceptable standard—30 points in the repeat shoot of Ser 2 and Ser 3.
4. **Safety.** Read *Range Standing Orders* with particular reference of the positioning of harmonization screens. Incorrect positioning can create a safety hazard.
5. **Targets.**
 - a. harmonization screen—1 per tripod; and
 - b. landscape tgt (miniature replica)—1 per tripod if applicable (see Note 6e).
6. **Miscellaneous.**
 - a. Select a minimum of two points and two traversing tgts on the landscape.
 - b. It is important that guns have been correctly zeroed before firing this practice.
 - c. The harmonization range setting for each gun is to be ordered as the range for all FCOs.
 - d. Bursts of 5 rds are to be used in order to conserve ammunition.
 - e. NCOs can be exercised in fire control during this practice. The instructor points out the tgt on the replica to the NCO. The NCO gives the FCO to the gun team. Any criticism of the NCO's FCO should be done out of hearing distance of the gun team.
 - f. Gunners must complete Application Range Practice 11 (SF) prior to attempting this practice.
 - g. This practice may be conducted on an austere range.

GPMG (SF) PWT 1

19. **Aim.** To confirm that the gunner can engage point and traversing targets using iron sights at 25 m.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Point Target	Harmonization screen.	25	10	a. Gun loaded with 10 rds. b. Give a fire control order (FCO) onto a point tgt (see Note 6c). c. Order STOP after the third burst. d. Order UNLOAD... CLEAR GUN . Discuss gun drills and take scores. e. Repeat the practice.	See notes 2 and 3	
2		Traversing Target	As per Ser 1.	25	20	a. Gun loaded with 20 rds. b. Give a FCO onto a traversing tgt of approximately 8 to 10 mils in width (see Note 6c). c. Order UNLOAD... CLEAR GUN . d. Repeat the practice.	See notes 2 and 3	

NOTES

1. **Ammunition.** 30 rds linked ball per gunner.
2. **Scoring.** A measuring rod 680 mm (27 inches) long is required and is used as follows:
 - a. Point Target.
 - (1) hold the rod vertically with the bottom centre placed on the point of aim (POA);
 - (2) mark the screen at the top centre of the rod; this indicates where the mean point of impact (MPI) should be;
 - (3) draw a rectangle 50 mm (2 inches) wide and 100 mm (4 inches) deep, with the mark just made as its centre; and
 - (4) count 1 point for each shot within or cutting the rectangle.
 - b. Traversing Target.
 - (1) Mark the limits of the tgt as for a point tgt.
 - (2) Join the two marks with a pencil line, extending it by 25 mm (1 inch) at each end.
 - (3) Draw lines 50 mm (2 inches) above and 50 mm (2 inches) below the first line. Join the ends by vertical lines.

- (4) Count 1 point for each shot within or cutting the rectangle.
3. **Standard.** Acceptable standard—30 points in the repeat shoot of Ser 2 and Ser 3.
4. **Safety.** Read *Range Standing Orders* with particular reference of the positioning of harmonization screens. Incorrect positioning can create a safety hazard
5. **Targets.**
 - a. harmonization screen—1 per tripod; and
 - b. landscape tgt (miniature replica)—1 per tripod if applicable (see Note 6e).
6. Miscellaneous:
 - a. Select a minimum of two points and two traversing tgts on the landscape.
 - b. It is important that guns have been correctly zeroed before firing this practice.
 - c. The harmonization range setting for each gun is to be ordered as the range for all FCOs.
 - d. Bursts of 5 rds are to be used in order to conserve ammunition.
 - e. NCOs can be exercised in fire control during this practice. The instructor points out the tgt on the replica to the NCO. The NCO gives the FCO to the gun team. Any criticism of the NCO's FCO should be done out of hearing distance of the gun team.
 - f. Gunners must complete Application Range Practice 1 prior to attempting this practice.
 - g. This practice may be conducted on an austere range.

GPMG (SF) APPLICATION RANGE PRACTICE 21—ENGAGE POINT AND TRAVERSING TARGETS

20. **Aim.** To train the gunner in engaging point and traversing targets with iron sights.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Point Target	Austere range.	900 and 1000	60	a. Indicate a point tgt to the gunner. b. Order FIRE and then STOP after first effective burst falls on it. c. Gunner to fire 5 to 10 rds per burst in order to conserve ammo. d. Discuss results.	See notes 2 and 3	3 point tgts must be identified to the gunner.
2		Traversing Target	As per Ser 1.	800	100	a. Indicate a traversing tgt approximately 10 mils wide to the gunner. b. Order FIRE... STOP and	See notes 2 and 3	2 traversing tgts must be identified to the gunner.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
						RELAY when the tgt is successfully engaged. c. Gunner to fire 5 to 10 rds per burst to conserve ammo. d. Discuss results.		

NOTES

1. **Ammunition.** 160 rds mixed linked per gunner.
2. **Scoring.** Pass/Fail—based upon effective use of the beaten zone superimposed on the tgt.
3. **Standards.**
 - a. Point Targets—gunner is given 1 x burst to range each tgt; and
 - b. Traversing Targets—gunner is given 1 x burst to range to the left or right edge.
4. **Miscellaneous.**
 - a. reconnoitre the training area to be used and determine gun positions, arcs of fire, and two reference points (600 m); and
 - b. if there are no prepared gun pits, ensure that selected hasty defence positions are tactically realistic.

GPMG (SF) PWT 2

21. **Aim.** To confirm the gunner's ability to engage point and traversing targets with iron sights.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Point Target	Austere range.	900 and 1000	60	a. Indicate a point tgt to the gunner. b. Order FIRE and then STOP after first effective burst falls on it. c. Gunner to fire 5 to 10 rds per burst to conserve ammo. d. Discuss results.	See notes 2 and 3	3 point tgts must be identified to the gunner.
2		Traversing Target	As per Ser 1.	800	100	a. Indicate a traversing tgt approximately 10 mils wide to the gunner. b. Order FIRE... STOP and RELAY when the tgt is successfully engaged.	See notes 2 and 3	2 traversing tgts must be identified to the gunner.

NOTES

1. **Ammunition.** 160 rds mixed linked per gunner.
2. **Scoring.** Pass/Fail—based upon effect use of the beaten zone superimposed on the tgt.
3. **Standards.**
 - a. Point Targets—gunner is given 1 x burst to range each tgt; and
 - b. Traversing Targets—gunner is given 1x burst to range to the left or right edge.
4. **Miscellaneous.**
 - a. Reconnoitre the training area to be used and determine gun positions, arcs of fire, and two reference points (600 m).
 - b. If there are no prepared gun pits, ensure that selected hasty defence positions are tactically realistic.

GPMG (SF) APPLICATION RANGE PRACTICE 31—C2 SIGHT FIRING DRILLS

22. **Aim.** To train the gunner in using the C2 sight during target engagement by day and night.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Harmonization of Sights	Harmonization screen.	25	10	a. Give each gun a fire control order (FCO) (range 1400) onto one of the aiming marks just above the landscape. b. Order STOP after the first burst. c. Order elevation adjustments to position the mean point of impact (MPI) between the harmonization lines. d. Record each gun's sight setting.	Nil	
2		C2 Sight, Obscuration of Target	As per Ser 1.	25	30	a. Gun loaded with 15 rds. b. Give a FCO onto a point tgt (see Note 6b). c. Order STOP... MARK after the first burst. d. As the gunner aligns the dial sight, lower the iron rear sight. e. When the gunner reports ON , order GO ON . f. Order STOP after two	See Notes 2 and 3	

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
						bursts. g. Order UNLOAD... CLEAR GUN . Discuss gun drills and take scores.		
3		Preparation and Engagement of Night Tasks	As per Ser 1.	25	100	a. Gun loaded with 50 rds. b. Register by firing and record the readings of 4 x defensive fire (DF) tasks (point and traverse), one of which is to be the final protective fire (FPF), on a tgt information sheet. c. When all night preparations are complete and the gun is aligned on the FPF, order UNLOAD... CLEAR GUN . d. Discuss gun drills and patch out without destroying the lines of the scoring areas. e. Reload with 50 rds. f. Using the recorded readings, engage each tgt with 1 x burst (see Note 6d). g. On completion, order UNLOAD... CLEAR GUN . Discuss gun drills and take scores. h. Repeat this practice.	See Note 3	Gunner is to register tgt by day, then use the recorded data to effectively engage all tgts recorded.

NOTES

1. **Ammunition.** 140 rds linked ball per gunner.
2. **Scoring.** A measuring rod 630 mm (25 inches) long is required and is used as follows:
 - a. Point Target:
 - (1) Mark the limits of the tgt as for a point tgt.
 - (2) Join the two marks with a pencil line, extending it by 25 mm (1 inch) at each end.
 - (3) Draw lines 50 mm (2 inches) above and 50 mm (2 inches) below the first line. Join the ends by vertical lines.
 - (4) Count 1 point for each shot within or cutting the rectangle.
 - b. Traversing Target:
 - (1) Mark the limits of the tgt as for a point tgt.

- (2) Join the two marks with a pencil line, extending it by 25 mm (1 inch) at each end.
 - (3) Draw lines 50 mm (2 inches) above and 50 mm (2 inches) below the first line. Join the ends by vertical lines.
 - (4) Count 1 point for each shot within or cutting the rectangle.
3. **Standards.** Acceptable standard—65 points in the repeat shoot of Ser 2 and Ser 3. Gunner must correctly use the C2 sight to engage tgts at night.
 4. **Safety.** Read *Range Standing Orders* with particular reference to the positioning of harmonization screens. Incorrect positioning can create a safety hazard.
 5. **Targets.**
 - a. Harmonization screen—1 per tripod; and
 - b. Landscape tgt (miniature replica)—1 per tripod if applicable (see Note 6e).
 6. **Miscellaneous.**
 - a. It is important that guns have been correctly zeroed before firing this practice.
 - b. The harmonization range setting for each gun is to be ordered as the range in all FCOs.
 - c. Outline the scoring area with chalk if the repeat shoot is being done at night.
 - d. During the engagement of night tasks, allow the gun team sufficient time to relay on to the FPF between tasks.
 - e. NCOs can be exercised in fire control during this practice. The instructor points out the tgt on the replica to the NCO. The NCO gives the FCO to the gun team. Any criticism of the NCO's FCO should be done out of hearing distance of the gun team.
 - f. Select a minimum of three points and three traversing tgts on the landscape (one of the point tgts to be the FPF).
 - g. Bursts of 5 rds are to be used to conserve ammunition.
 - h. Scores in the repeat shoot only of Ser 2 and Ser 3 are to count.
 - j. The repeat shoot of Ser 3 may be done during the hours of darkness.

GPMG (SF) PWT 3

23. **Aim.** To confirm the gunner's ability to engage targets using recorded data.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Point Target	Austere range.	700–900	20	a. Indicate the tgt to the gunner. b. Once on, order gunner to record as Tgt 2. c. Discuss the fire control order (FCO) and gun drills.	Nil	Indicate 3 x point tgts.
2		Traversing Target	As per Ser 1.	700–1000	40	a. Indicate tgt approx 8 mils wide to the gunner.	Nil	Indicate 2 x traversing tgts.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
						b. Once on, order gunner to record as Tgt 3. c. Discuss gun drills.		
3		FPF Night Firing	As per Ser 1.	500–600	60	a. Indicate the forward edge of the battle area (FEBA) to the gunner and inform him that the final protective fire (FPF) is to be a line of fire in front of it. b. Order gunner to register and record the FPF as Tgt 1. c. Discuss the preparation drill and gun drills.	Nil	a. On competition of FPF, gunners are to change around. b. See note 4g.
4		Point Traversing Targets	As per Ser 1.	500–1000	80	a. Gun controllers are to indicate 4 x tgts. b. Order STOP once each tgt is successfully engaged.	See Notes 2 and 3	a. Gunner is to use recorded data to lay on and effectively engage each tgt. b. Gunner is to lay on FPF once order STOP is given.

NOTES

1. **Ammunition.** 200 rds mixed linked per gunner.
2. **Scoring.** Pass/Fail.
3. **Standards.**
 - a. Gunner must correctly apply recorded data and make adjustments as directed from gun controller to successfully engage tgts.
 - b. Pass = 3 of 4 successful engagements of the tgt.
4. **Miscellaneous.**
 - a. Reconnoitre the training area and determine:
 - (1) Gun positions and arcs of fire. If there are no prepared gun pits ensure that selected hasty defence positions are tactically realistic.
 - (2) The location of the forward edge of battle area (FEBA) (500 to 600 m).
 - b. Prepare a range card with pre-determined ranges to a minimum of 3 x point tgts (800 to 1000 m) and 2 x traversing tgts.
 - c. Move the scale ring slightly off the upper index on each C2 sight before beginning the practice, provided that the gun team cannot observe it being done.
 - d. The length of burst may be reduced to conserve ammunition.
 - e. Use of a screen to prevent the gunner from seeing the fall of shoot is required.
 - f. Completion of Application Range Practice 31 (SF) must be completed prior to conducting this PWT.

- g. Gunners are to change guns prior to commencing Ser 4.

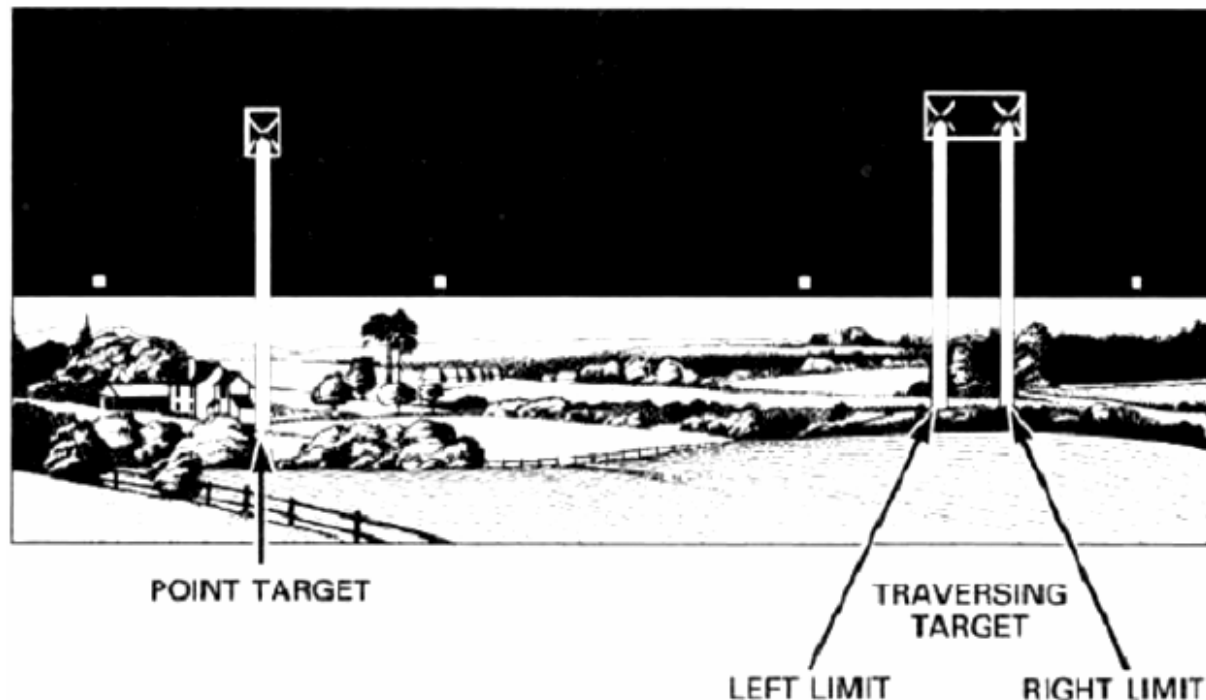


Figure 6-1: Harmonization Screen

SECTION 3—0.50 CAL HEAVY MACHINE GUN (HMG)

SCOPE

24. This section sets out all the firing practices to be completed in the CFOSP for the heavy machine gun (HMG). It includes the application of practices and the progression with which they should be fired.

25. This progression of firing is essential for preparing gunner for completion of the personal weapons tests (PWTs) and for field firing.

AIDS TO TRAINING AND FIRING

26. **Ammunition.** All HMG live fire practices should be conducted using 4B1T (four balls and one tracer) ammunition unless range orders or local restrictions, especially a tracer ban, preclude its use.

TRAINING AND FIRING SEQUENCE

27. The practices described in this section are designed to be conducted progressively. PWT 1 and PWT 2 must be passed within 12 months of attempting PWT 3. Successful completion of PWT 3 is a gateway to field firing and to PWT 3 supplements.

28. Testing methods for the HMG are as follows:

- a. **Initial Marksmanship Training.** All application range practices and PWTs will be conducted on the SAT, if available, followed by live firing.
- b. **Continuation Marksmanship Training.** The range practice requirements are:
 - (1) **Application Range Practices.** These practices are not mandatory once a gunner has completed initial marksmanship training. They should be conducted to address difficulties experienced by a firer during a specific PWT and may be conducted on the SAT.
 - (2) **Personal Weapons Test and Night Shoot.** Gunners are to complete their mandated PWT level live; however, subordinate PWTs may be conducted on the SAT if they are completed within 12 months. Commanding officers (COs) must ensure sufficient time and resources are provided to allow for zeroing before advancing to live firing or any PWT.
 - (3) **Personal Weapons Test 3 Supplements.** Supplemental practices are not to be conducted during initial marksmanship training. Specific supplements are only conducted by those personnel who will employ the weapon in that particular configuration during operations or field firing.

PRACTICES AND TESTS

29. The details of the HMG practices and tests are contained in the remaining pages of this section. Each practice and test is contained in separate pages for easy use.

HMG SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
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Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
1	SAT/ LIVE	11	Grouping and Zeroing	100	15	To train the gunner to zero the weapon and achieve an effective grouping using single shots.
		12	Point Targets	300 500	70	To train the gunner to effectively engage point targets using single shots and controlled bursts.
		HMG PWT 1		400–1200	50	To confirm the gunner can effectively engage point targets.
2	SAT/ LIVE	21	Point, Traversing and Oblique Targets	300–1200	177	To train the gunner to effectively engage point, traversing and oblique targets.
		HMG PWT 2		300–1200	177	To confirm the gunner can effectively engage point, traversing and oblique targets.
		22	Night Shoot	100–500	45	To train the gunner to accurately engage point and traversing targets at night with illumination.
		HMG PWT 2—NIGHT SUPPLEMENT		100–500	45	To confirm the gunner can accurately engage point and traversing targets at night with illumination.
3	SAT/ LIVE	31	Moving Targets	400	50	To train the gunner to accurately engage moving targets with bursts.
		HMG PWT 3		400	50	To confirm the gunner can accurately engage moving targets with bursts.

HMG APPLICATION RANGE PRACTICE 11—GROUPING AND ZEROING

30. **Aim.** To train the gunner to zero the weapon and achieve an effective grouping using single shots.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Zeroing Single Shot (Tripod)	1 x Fig 11 with a 75 by 100 mm white patch on a screen.	100	10	a. Fire 1 x 5 rd grouping on single shot with the traverse and elevation (T&E) mechanism engaged. b. Point of aim (POA) is the base centre of the white patch. c. Identify the mean point of impact (MPI) of the grouping and adjust for zero as necessary.	Pass / Fail	Pintle mounted HMGs must also be zeroed with the gun mounted on a tripod and with a T&E mechanism engaged.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
						d. Repeat.		
2		Grouping Single Shot (Tripod)	As per Ser 1.	100	5	a. Fire 1 x 5 rd group on single shot with the T&E mechanism engaged. b. Point of Aim is the base centre of the white patch. c. Discuss the group.	Pass / Fail	Stress holding, aiming and firing principles to the gunner.

NOTES

- Ammunition.** 15 rds.
- Scoring.** Pass/Fail.
- Standards.**
 - Zeroing—gunner must effectively superimpose the MPI on the correct zero position (CZP) (within 50 mm).
 - Grouping—gunner must achieve a grouping of 150 mm or less.
- Spare barrels are to be zeroed using the same procedures as above.
- This is the standard range practice for zeroing.

HMG APPLICATION RANGE PRACTICE 12—POINT TARGETS

31. **Aim.** To train the gunner to effectively engage point targets using single shots and controlled bursts.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Single Shot (Tripod)	Triple Fig 11.	300	10	a. The gunner is to fire a single shot. b. The gunner is to observe strike, make corrections without being prompted, and then fire another shot. c. The gunner is to repeat making corrections until the tgt is hit. d. The gunner is then to expend the remaining ammo in single shots on the tgt.	HPS 10	Gun crew members and controllers are permitted to assist gunner in observing strike, but may not assist gunner by providing specific corrections.
2		Bursts Normal Rate (Tripod)	As per Ser 1.	500	20	a. The gunner is to fire 1 x burst of 2 to 3 rds. b. The gunner is to observe strike, make corrections without being prompted, and then fire	See notes	As per Ser 1.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
						another 1 x burst of 2 to 3 rds. c. The gunner is to repeat making corrections until the tgt is hit. d. The gunner is then to expend the remaining ammo in controlled 2 to 3 rd bursts on the tgt.		
3		Bursts Rapid Rate (Tripod)	As per Ser 1.	500	40	As per Ser 2, except bursts are to be 4 to 6 rds each.	See notes	As per Ser 1.

NOTES

1. **Ammunition.** 70 rds.
2. **Scoring.**
 - a. Ser 1—HPS—10 points. 1 point per hit.
 - b. Ser 2 and Ser 3—pass/fail.
3. **Standards.**
 - a. Ser 1—gunner is to achieve at least 6 out of 10 hits (60% of HPS).
 - b. Ser 2 and Ser 3—gunner is successful if they control the majority of the burst lengths to the specified amount, and hit the tgt at least once.
4. This range practice may be fired on a standard gallery range or on an austere range.
5. Range Conducting Staff should use every opportunity to have gunners record tgt data on tgt data sheets for additional practise.

HMG PWT 1

32. **Aim.** To confirm the gunner can effectively engage point targets.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Zeroing	Silhouette target.	600	6	a. Single shot. b. No time limit. c. Confirms gunner's ability to zero weapon.	See notes	
2		Application	3 x Silhouette targets: 400–700 m 2 x Panel targets: 700–1200 m	400–1200	44	a. Stage 1: 4 x bursts of 3 rds per tgt: 400-700 m. b. Stage 2: 4 x single shots per tgt: 700-1200 m (scoring—1 point per hit.	Stage 1 HPS 12 Stage 2 HPS 8	

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
						c. Time limit: 110 sec for Stage 1 only.		

NOTES

1. **Ammunition.** 50 rds.
2. **Scoring.**
 - a. Ser 1—gunner must be able to effectively zero the weapon. This is assessed by their ability to effectively engage the tgt and adjust sights accordingly.
 - b. Ser 2—HPS 20 points:
 - (1) Stage 1—1 point per burst on tgt.
 - (2) Stage 2—1 point per hit. Ricochets are counted as hits.
3. **Standard.** Pass—14 points (60% of HPS).
4. A dry practice should precede this PWT.
5. Conduct and set-up of this PWT is as fols: 5 x tgts are located in a lane not more than 100 m wide at the extreme range and not more than 10 m wide at the 400 m point. The nearest tgt is located approximately 400 m from the firing point, and the farthest tgt is located 1200 m from the firing point. Intermediate tgts are placed irregularly in width and depth. The three closest tgts are the two silhouettes mounted abreast. The two farthest tgts (700 to 1200 m) are the panel tgts.
6. Range conducting staff should use every opportunity to have the gunners record tgt data on tgt data sheets for additional practice.

HMG APPLICATION RANGE PRACTICE 21—POINT, TRAVERSING AND OBLIQUE TARGETS

33. **Aim.** To train the gunner to effectively engage point, traversing and oblique targets.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Single Shot (sniping)	Natural or artificial point.	300–500 600–900 1000–1200	12	a. Indicate a point tgt within the first range bracket to the gunner. b. Order the gunner to engage the tgt with single shots and to stop firing when the tgt is successfully engaged. c. Discuss adjustments with the gunner. d. Repeat the above process for each of the longer range	HPS 3	

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Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
						brackets.		
2		Bursts Normal Rate	Natural or artificial point.	300–500 600–900 1000–1200	30	a. Indicate a point tgt within the first range bracket to the gunner. b. Order the gunner to engage the tgt with bursts and to stop firing when the tgt is successfully engaged. c. Discuss adjustments with the gunner. d. Repeat the above process for each of the longer range brackets.	HPS 3	Gunner is to mark and record one tgt between 300–1200 m.
3		Bursts Rapid Rate	Natural or artificial traversing .	300–500 600–900 1000–1200	75	a. Indicate traversing tgt approx 10 mils wide within the first range bracket to the gunner. b. Order the gunner to engage the tgt with rapid fire, and to stop firing and relay when the tgt is successfully engaged. c. Discuss adjustments with the gunner. d. Repeat the above process for each of the longer range brackets.	HPS 3	Gunner is to mark and record one tgt between 300–1200 m.
4		Bursts Normal Rate	Natural or artificial oblique.	300–500 600–900 1000–1200	30	a. Indicate a depth tgt within the first range bracket to the gunner. b. Order the gunner to engage the tgt with bursts and to stop firing when the tgt is successfully engaged. c. Discuss adjustments with the gunner. d. Repeat the above process for each of the longer range brackets.	HPS 3	
5		Burst Normal Rate	As per Ser 2 and Ser 3.	300–500 600–900 1000–1200	30	a. Controller is to indicate a tgt from the data recorded during Ser 2 and Ser 3. b. Once the gunner reports ON , order FIRE . c. Beaton zone of each burst must be superimposed with the	Pass / Fail	A 4 x 4 foot Hessian screen should be used to prevent the gunner from seeing the

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
						tgt area.		tgt area.

NOTES

1. **Ammunition.** 177 rds.
2. **Scoring.** HPS—12 points:
 - a. Ser 1—1 point awarded per tgt that is hit at least once.
 - b. Ser 2—1 point per successful engagement where at least one rd of the bursts hits the tgt.
 - c. Ser 3 and Ser 4—1 point per successful engagement where the tgt's entire width and/or depth is struck at least once.
 - d. Ser 5—pass/fail.
3. **Standards.** Pass—7 points (60% of HPS).
4. During this practice, gunners are to be assessed on their ability to mark and record tgts. During Ser 2 and Ser 3, gunners are to record direction and elevation of tgts once on. They are to use this data during Ser 5 to effectively engage tgts from behind a Hessian screen. Gunner must demonstrate the skills to mark, record, and lay onto tgts.

HMG PWT 2

34. **Aim.** To confirm that the gunner can effectively engage point, traversing and oblique targets.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Single Shot (sniping)	Natural or artificial point.	300–500 600–900 1000–1200	12	a. Indicate a point tgt within the first range bracket to the gunner. b. Order the gunner to engage the tgt with single shots and to stop firing when the tgt is successfully engaged. c. Repeat the above process for each of the longer range brackets.	HPS 3	
2		Bursts Normal Rate	Natural or artificial point.	300–500 600–900 1000–1200	30	a. Indicate a point tgt within the first range bracket to the gunner. b. Order the gunner to engage the tgt with bursts and to stop firing when the tgt is successfully engaged. c. Repeat the above process	HPS 3	Gunner is to mark and record one tgt between 300–1200 m.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
						for each of the longer range brackets.		
3		Bursts Rapid Rate	Natural or artificial traversing.	300–500 600–900 1000–1200	75	a. Indicate traversing tgt approx 10 mils wide within the first range bracket to the gunner. b. Order the gunner to engage the tgt with rapid fire, and to stop firing and relay when the tgt is successfully engaged. c. Repeat the above process for each of the longer range brackets.	HPS 3	Gunner is to mark and record one tgt between 300–1200 m.
4		Bursts Normal Rate	Natural or artificial oblique.	300–500 600–900 1000–1200	30	a. Indicate a depth tgt within the first range bracket to the gunner. b. Order the gunner to engage the tgt with bursts and to stop firing when the tgt is successfully engaged. c. Repeat the above process for each of the longer range brackets.	HPS 3	Gunner is to mark and record one tgt between 300–1200 m.
5		Bursts Normal Rate	As per Ser 2 and Ser 3.	300–500 600–900 1000–1200	30	a. Controller is to indicate a tgt from the data recorded during Ser 2 and 3. b. Once the gunner reports ON , order FIRE . c. Beaten zone of each burst must be superimposed with the tgt area.	Pass/ Fail	A 4 x 4 foot Hessian screen should be used to prevent the gunner from seeing the tgt area.

NOTES

- Ammunition.** 177 rds.
- Scoring.** HPS—12 points:
 - Ser 1—1 point awarded per tgt that is hit at least once.
 - Ser 2—1 point per successful engagement where at least one rd of the bursts hits the tgt.
 - Ser 3 and Ser 4—1 point per successful engagement where the tgt's entire width and/or depth is struck at least once.
 - Ser 5—Pass/Fail.
- Standards.** Pass—7 points (60% of HPS).
- During this practice, gunners are to be assessed on their ability to mark and

record tgts. During Ser 2 and Ser 3, gunners are to record direction and elevation of tgts once on. They are to use this data during Ser 5 in order to effectively engage tgts from behind a Hessian screen. Gunner must demonstrate the skills to mark, record, and lay onto tgts.

HMG APPLICATION RANGE PRACTICE 22—NIGHT SHOOT

35. **Aim.** The train the gunner to accurately engage point and traversing targets at night with illumination.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Single Shots (Sniping)	Natural or artificial point targets x 3.	300	3	a. Order WATCH AND SHOOT . b. Fire 1 rd at each tgt when the range becomes sufficiently illuminated by the white light.	HPS 3	
2		Bursts Normal Rate	Natural or artificial point target.	300	12	a. Order WATCH AND SHOOT . b. Fire 2 x bursts at the tgt when the range becomes sufficiently illuminated by the white light.	HPS 2	
3		Bursts Rapid Rate	Natural or artificial traversing target.	400	30	a. Indicate traversing tgt approx 6 mils wide within the first range bracket to the gunner upon illumination. b. Order the gunner to engage the tgt with rapid fire, and to stop firing and relay when the tgt is successfully engaged. c. Discuss adjustments with the gunner.	HPS 4	

NOTES

- Ammunition.** 45 rds.
- Scoring.** HPS—9 points:
 - Ser 1—1 point per hit.
 - Ser 2—1 point per successful engagement where at least one rd of the bursts hits the tgt.
 - Ser 3—1 point per successful engagement where the tgt's entire width is struck at least once.
- Standard.** Pass—5 points (60% of HPS).

4. Paraflares, mortar/artillery illumination, or another artificial light source (e.g. LAV spotlight) suitable to illuminate the tgts for the required range and time, is required for this test.

HMG PWT 2—NIGHT SUPPLEMENT

36. **Aim.** To confirm the gunner can accurately engage point and traversing targets at night with illumination.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Single Shots (sniping)	Natural or artificial point targets x 3.	300	3	a. Order WATCH AND SHOOT . b. Fire 1 rd at each tgt when the range becomes sufficiently illuminated by the white light.	HPS 3	
2		Bursts Normal Rate	Natural or artificial point target.	300	12	a. Order WATCH AND SHOOT . b. Fire 2 x bursts at the tgt when the range becomes sufficiently illuminated by the white light.	HPS 2	
3		Bursts Rapid Rate	Natural or artificial traversing target.	400	30	a. Indicate traversing tgt approx 6 mils wide within the first range bracket to the gunner upon illumination; b. Order the gunner to engage the tgt with rapid fire, and to stop firing and relay when the tgt is successfully engaged; and c. Discuss adjustments with the gunner.	HPS 4	

NOTES

- Ammunition.** 45 rds.
- Scoring.** HPS—9 points:
 - Ser 1—1 point per hit;
 - Ser 2—1 point per successful engagement where at least one rd of the bursts hits the tgt.
 - Ser 3—1 point per successful engagement where the tgt's entire width is struck at least once.
- Standard.** Pass—5 points (60% of HPS).
- Paraflares, mortar/artillery illumination or another artificial light source (e.g. LAV spotlight) suitable to illuminate the tgts for the required range and time, is required for this test.

HMG APPLICATION RANGE PRACTICE 31—MOVING TARGETS

37. **Aim.** The train the gunner to effectively engage moving targets with bursts.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Moving Target (Adopting a point of aim ahead of the target)	Rectangle 2 x 3 m simulating a soft vehicle target.	400	25	a. Gunner to select a point of aim (POA) based on speed and distance ahead of the tgt; b. Gunner is to engage POA with 1 x burst of 3 to 6 rds to range the tgt; c. The gunner is to fire the remaining ammunition in 3 x bursts of 3 to 6 rds; and d. For the first burst, the gunner uses his sight. For the remaining bursts, adjustments should be made by observing strike.	HPS 3	Vehicle speed to vary between 15–50 km/h.
2		Moving Target (Lead method)	Rectangle 2 x 3 m simulating an armoured fighting vehicle target.	400	25	a. Gunner to select a POA based on speed and distance ahead of the tgt; b. Gunner is to engage POA with 1 x burst of 3 to 6 rds to range the tgt; c. The gunner is to fire the remaining ammunition in 3 x bursts of 3 to 6 rds; and d. For the first burst, the gunner uses his sight. For the remaining bursts, adjustments should be made by observing strike.	HPS 3	Vehicle speed to vary between 15–50 km/h.

NOTES

1. **Ammunition.** 50 rds.
2. **Scoring.** HPS—6 points:
 - a. 1 point per successful engagement where at least one rd of the bursts hits the tgt.
 - b. The first burst within each Ser is not scored.
3. **Standard.** Pass—4 points (60% of HPS).
4. This practice is best achieved on a field firing range.

HMG PWT 3

38. **Aim.** To confirm the gunner can accurately engage moving targets with bursts.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Moving Target (Adopting a point of aim ahead of the target)	Rectangle 2 x 3 m simulating a soft vehicle target.	400	25	a. Gunner to select a point of aim (POA) based on speed and distance ahead of the tgt. b. Gunner is to engage POA with 1 x burst of 3 to 6 rds to range the tgt. c. The gunner is to fire the remaining ammunition in 3 x bursts of 3 to 6 rds. d. For the first burst, the gunner uses his sight. For the remaining bursts, adjustments should be made by observing strike.	HPS 3	Vehicle speed to vary between 15–50 km/h.
2		Moving Target (Lead method)	Rectangle 2 x 3 m Simulating an armoured fighting vehicle target.	400	25	a. Gunner to select a POA based on speed and distance ahead of the tgt. b. Gunner is to engage POA with 1 x burst of 3 to 6 rds to range the tgt. c. The gunner is to fire the remaining ammunition in 3 x bursts of 3 to 6 rds. d. For the first burst, the gunner uses his sight. For the remaining bursts, adjustments should be made by observing strike.	HPS 3	Vehicle speed to vary between 15–50 km/h.

NOTES

1. **Ammunition.** 50 rds.
2. **Scoring.** HPS—6 points:
 - a. 1 point per successful engagement where at least one rd of the bursts hits the tgt.
 - b. The first burst within each Ser is not scored.
3. **Standard.** Pass—4 points (60% of HPS).
4. Rounds are not to be carried forward.
5. Ammunition should be broken down into belts of the correct length for each Ser.
6. The HMG PWT 3 is to be fired on a field firing range.

7. In the interest of time and resources, PWT 3 can be completed within PWT 2 as Ser 6.

SECTION 4—84 mm SHORT RANGE ANTI-ARMOUR WEAPON (MEDIUM) (SRAAW [M])

SCOPE

39. This section sets out all the range practices to be completed in the CFOSP for the 84 mm recoilless Carl Gustav (CG) M2-M3 short range anti-armour weapon (medium) (SRAAW [M]). It includes the application of range practices for all Arms and Services and the progression with which they should be fired.

40. This progression of training is essential for preparing soldiers for personal weapon tests (PWTs) and field firing.

SIMULATION AND TECHNOLOGY

41. **Small Arms Trainer.** Use of the small arms trainer (SAT) simulator practices are an integral part of the CFOSP and have been selected to confirm the basic skills before live firing, and to enable the firer to eliminate faults, which until recently have only been detectable during live firing. All live firing practices are included in the SAT software and can be used for remedial training, or as concurrent activity to a range or other training period.

TRAINING AND FIRING SEQUENCE

42. The training and firing sequence as laid down for the SRAAW (M) should be followed in a logical sequence to ensure that soldiers arrive at a standard where they will be fit to achieve the required level of capability.

43. The practices described in this section are designed to be conducted progressively. PWT 1 and PWT 2 must have been passed within 12 months of attempting PWT 3. PWT 3 is the firer's gateway to field firing.

44. Test methods for the SRAAW (M) are as follows:

- a. **Initial Marksmanship Training.** All application range practices and PWTs up to completion of Application Range Practice 21 are to be completed on the SAT (if available). PWT 2 and Stage 3 range practices are to be conducted live.
- b. **Continuation Marksmanship Training.** The range practice requirements are:

- (1) **Application Range Practices.** These practices are not mandatory during initial marksmanship training is completed; however, if they are conducted, they may be conducted on the SAT (if available).
- (2) **Personal Weapons Test 1.** PWT 1 is designed to be conducted on the SAT (if available).
- (3) **Personal Weapons Tests 2 and 3.** PWT 2 and PWT 3 are designed to be conducted live.

- c. **Personal Weapons Test 3 Supplements.** Supplemental test are not to be conducted during initial training. Supplements are only to be conducted for those firers who will employ the weapon in that configuration during field firing or on operations.

45. **Remedial Training.** The SAT provides an invaluable aid to the remedial training of the poor shot. Commanding officers (COs) are encouraged to make full use of the facilities wherever they are available. However, final confirmation must be by the use of live firing. All practices can be fired on the SAT and may be used as a remedial aid, or as a rehearsal prior to firing on a live firing range.

46. COs are encouraged to use the SAT to correct faults realized during the conduct of a PWT prior to allowing firers to attempt a re-test.

PRACTICES AND TESTS

47. The details of all SRAAW (M) range practices are contained in the remaining pages of this section.

SRAAW (M)—SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
1	SAT	11	Stationary Targets	100–300	8 SAT	To train the gunner to effectively engage stationary targets.
		SRAAW (M) PWT 1		100–300	6 SAT	To confirm the gunner's ability to effectively engage stationary targets.
2	Sub-calibre / LIVE	21	Stationary and Moving Targets	100–500	7 Sub Cal	To train the gunner to effectively engage stationary and moving targets at varying ranges.
		SRAAW (M) PWT 2		100–500	3 Sub Cal	To confirm the gunner's ability to effectively engage stationary and moving targets at varying ranges.

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
3	LIVE	31	Stationary and Moving Targets	300–400	2 TPT	To train the gunner to effectively engage stationary and moving targets at varying ranges.
		SRAAW (M) PWT 3		300–400	2 TPT	To confirm the gunner's ability to effectively engage targets at varying ranges.
	LIVE	32	KITE/MAXI-KITE Sight Zeroing and Registration (Day Shoot)	100–200	3 Sub Cal	To zero/register the KITE/MAXI-KITE sight fitted to the SRAAW (M).
		SRAAW (M) PWT 3 SUPPLEMENT—KITE/MAXI-KITE NIGHT SHOOT		150–400	4 Sub Cal	To confirm the gunner's ability to effectively engage static and moving targets at night when using the KITE/MAXI-KITE sight fitted to the SRAAW (M).

NOTE: Target Practice Tracer (TPT)

SRAAW (M) APPLICATION RANGE PRACTICE 11—STATIONARY TARGETS48. **Aim.** To train the gunner to effectively engage stationary targets.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Sitting and Kneeling	Tank target.	100	2 SAT	a. The team No 1 is to fire 1 rd from each position. b. On completion, the coach is to record and discuss the results.	See notes	
2		Kneeling and Standing	As per Ser 1.	200	2 SAT	As per Ser 1.	See notes	
3		Standing	As per Ser 1.	300	2 SAT	a. The team No 1 is to fire 2 rds. b. On completion, the coach is to record and discuss the results.	See notes	
4		Kneeling (CBRN)	As per Ser 1.	300	2 SAT	a. As per serial 3. b. The firer is to wear a CBRN mask and gloves.	See notes	

NOTES

- Ammunition.** 8 rds SAT.
- Scoring.** HPS—8 points. 1 point per hit.

3. **Standard.** Pass—5 points (60% of HPS).

SRAAW (M) PWT 1

49. **Aim.** To confirm the gunner's ability to effectively engage stationary targets.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Sitting and Kneeling	Tank target.	100	2 SAT	Firer is to fire 1 rd from each position.	HPS 2	
2		Kneeling and Standing	As per Ser 1.	200	2 SAT	As per Ser 1.	HPS 2	
3		Standing	As per Ser 1.	300	1 SAT	As per Ser 1.	HPS 1	
4		Kneeling (CBRN)	As per Ser 1.	300	1 SAT	a. As per Ser 1. b. Firer is to wear CBRN mask and gloves.	HPS 1	

NOTES

1. **Ammunition.** 6 rds SAT.
2. **Scoring.** HPS—6 points. 1 point per hit.
3. **Standard.** Pass—4 points (60% of HPS).

SRAAW (M) APPLICATION RANGE PRACTICE 21—STATIONARY AND MOVING TARGETS

50. **Aim.** To train the gunner to effectively engage stationary and moving targets at varying ranges.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Sitting	Tank screen silhouette with aiming mark.	100	1 Sub-cal	a. The team No 1 is to fire 1 rd. b. On completion, the coach is to record and discuss results.	HPS 1	
2		Kneeling	As per Ser 1.	100	1 Sub-cal	As per Ser 1.	HPS 1	
3		Standing	As per Ser 1.	100	1 Sub-cal	As per Ser 1.	HPS 1	
4		Standing	Moving tank target.	100	1 Sub-cal	As per Ser 1.	HPS 1	
5		Kneeling	As per Ser 4.	200	1 Sub-cal	As per Ser 1.	HPS 1	

6		Kneeling	As per Ser 4.	300	1 Sub-cal	As per Ser 1.	HPS 1	
7		Kneeling	As per Ser 4.	400	1 Sub-cal	As per Ser 1.	HPS 1	

NOTES

1. **Ammunition.** 7 rds Sub-cal.
2. **Scoring.** HPS – 7 points. 1 point per hit.
3. **Standard.** Pass—4 points (60% of HPS).
4. Weapons must be bore sighted prior to firing.

SRAAW (M) PWT 2

51. **Aim.** To confirm the gunner's ability to effectively engage stationary and moving targets at varying ranges.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Kneeling	Tank screen silhouette with aiming mark.	100	1 Sub-cal	a. The Team No 1 is to fire 1 rd. b. On completion, the coach is to discuss the actions taken and record the results with the firer.	HPS 1	
2		Standing	Moving tank target.	100	1 Sub-cal	As per Ser 1.	HPS 1	
3		Kneeling	As per Ser 2.	300	1 Sub-cal	As per Ser 1.	HPS 1	

NOTES

1. **Ammunition.** 3 rds Sub-cal.
2. **Scoring.** HPS—3 points. 1 point per hit.
3. **Standard.** Pass—2 points (60% of HPS).
4. Weapons must be bore sighted prior to firing.

SRAAW (M) APPLICATION RANGE PRACTICE 31—STATIONARY AND MOVING TARGETS

52. **Aim.** To train the gunner to effectively engage stationary and moving targets at varying ranges.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Fire Trench	Static tank	400	1 x TPT	a. The team No 1 is to fire 1 rd.	HPS 1	

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
		(if available) or Prone	target (Hard) or screens as available.			b. On completion, the coach is to discuss the actions taken and record the results with the firer.		
2		As per Ser 1.	Moving tank target.	300	1 x TPT	As per Ser 1.	HPS 1	

NOTES

1. **Ammunition.** 2rds TPT.
2. **Scoring.** HPS—2 points. 1 point per hit.
3. **Standard.** Pass—1 point (50% of HPS).

SRAAW (M) PWT 3

53. **Aim.** To confirm the gunner's ability to effectively engage targets at varying ranges.

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Fire Trench (if available) or Prone	Static tank target (Hard).	400	1x TPT	No time limit.	HPS 1	a. Weapon must be properly bore sighted prior to this test. b. Iron or optical sight may be used. c. Primary sight is the optical sight.
2		As per Ser 1.	Moving tank target.	300	1x TPT	As per Ser 1.	HPS 1	Optical sight must be used for this serial.

NOTES

1. **Ammunition.** 2rds TPT.
2. **Scoring.** HPS—2 points. 1 point per hit.
3. **Standard.** Pass—1 point (50% of HPS).

SRAAW (M) APPLICATION RANGE PRACTICE 32—KITE/MAXI-KITE SIGHT ZEROING AND REGISTRATION (DAY SHOOT)

54. **Aim.** To zero/register the KITE/MAXI-KITE sight fitted to the SRAAW (M).

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Zeroing Fire Trench or Prone	Tank screen silhouette with aiming mark or static tank target.	100–200	3 x Sub-cal	a. KITE sight is bore sighted by day with the cover on using the same method for bore sighting the telescopic sight. b. The correct range is selected to the tgt and the weapon is fired. c. 2 x confirmatory rds are fired.	Nil	

NOTES

1. **Ammunition.** 3rds Sub-cal.
2. **Scoring.** Nil.
3. **Standard.** Demonstrate correct zeroing procedure of the KITE sight.
4. Additional ammunition will be required if the zeroing procedure is not strictly followed.

SRAAW (M) PWT 3 SUPPLEMENT—KITE/MAXI-KITE NIGHT SHOOT

55. **Aim.** To confirm the gunner's ability to effectively engage static and moving targets at night when using the KITE/MAXI-KITE sight fitted to the SRAAW (M).

Ser	SAT Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1		Deliberate Night Shoot Fire Trench or Prone	Static tank target (Hard).	400	2 x Sub-cal	a. KITE sight must be properly bore sighted prior to firing this test. b. No time limit.	HPS 2	
2		As per Ser 1.	Moving tank target.	300	2 x Sub-cal	As per Ser 1.	HPS 2	

NOTES

1. **Ammunition.** 4 rds Sub-cal.
2. **Scoring.** HPS—4 points. 1 point per hit.
3. **Standard.** Pass—2 points (50 % of HPS).

SECTION 5—ERYX SHORT RANGE ANTI-ARMOUR WEAPON (HEAVY) (SRAAW [H])

SCOPE

56. This section sets out all the range practices to be completed in the CFOSP for the Eryx short range anti-armour weapon (heavy) (SRAAW [H]). It includes the application of range practices for all Arms and Services and the progression with which they should be fired.

57. This progression of training is essential for preparing soldiers for live firing. Gunners must adhere to the essential gateway training sequence detailed below.

SIMULATION AND TECHNOLOGY

58. **EVIGS and EPGS.** Both the EVIGS (video interactive gunnery system) and the EPGS (precision gunnery simulator) are essential tools when training gunners. While some of the tests are achieved on these systems, gunners and coaches should not limit themselves to only completing the mandated practices. Maximum use of simulation training will serve to identify problems in firing procedures prior to live firing.

TRAINING AND FIRING SEQUENCE

59. All training and firing practices must be conducted IAW B-GL-385-010/PT-001 *Eryx (Heavy)*.

60. The training and firing sequence as laid down for the SRAAW (H) should be followed in a logical sequence to ensure that soldiers arrive at a standard where they will achieve their designated level of Individual Standards. The practices described in this section are designed to be conducted progressively. PWT 1 (A and B) and PWT 2 must have been passed within seven days of attempting PWT 3. PWT 3 is a gunner's gateway to field firing.

61. Test methods for the Eryx are as follows:

- a. **Initial Marksmanship Training.** All application range practices and PWTs are to be completed IAW the "SRAAW (H) Summary of Range Practices" found in this section.
- b. **Continuation Training.** The range practice requirements are:
 - (1) **Application Range Practices.** The practices are not mandatory; however, if during the test of a stage wherein a gunner experiences difficulty, the application range practice that

focused on that skill should be used to improve the gunner's performance.

(2) **Personal Weapons Tests 1 and 2.** PWT 1 and PWT 2 are designed to be conducted on the EVIGS and EPGS. Completion of these tests is essential in order to advance to PWT 3.

(3) **Personal Weapons Test 3.** PWT 3 is to be conducted live.

c. **Personal Weapons Test 3 Supplements.** Supplemental tests are not to be conducted during initial marksmanship training. Supplements are only to be conducted for those gunners who will employ the weapon in that configuration during field firing or on operations. The completion of Application Range Practice 31 on the EVIGS is essential before attempting the PWT 3 Supplement.

62. **Remedial Training.** EVIGS and EPGS provide invaluable aids to the remedial training of the poor shot. Commanding officers (COs) are encouraged to make full use of the systems wherever they are available.

SAFETY

63. **General Requirements.** All live firing practices contained in the CFOSP are to be conducted strictly in accordance with B-GL-381-001/TS-000 *Training Safety*, local Range Standing Orders, and B-GL-385-010/PT-001 *Eryx (Heavy)*.

PRACTICES AND TESTS

64. The details of all SRAAW (H) range practices are contained in the remaining pages of this section.

SRAAW (H) SUMMARY OF RANGE PRACTICES

Stage	Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
1	EVIGS	11	Application Range Practice Part 1 Prone	120-470	10 EVIGS	To train the gunner in tracking skills required to effectively engage a target in the prone position.
		12	Application Range Practice Part 2 Kneeling	70-300	10 EVIGS	To train the gunner in tracking skills required to effectively engage a target in the kneeling position.

Stage	Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
		SRAAW (H) PWT 1—PART 1 PRONE / PART 2 KNEELING		120-470 70 -300	20 EVIGS	To confirm the gunner has the tracking skills required to effectively engage a target in the prone and kneeling positions.
2	EPGS	21	Firing EPGS Prone	150-600	40 EPGS	To train the gunner in tracking skills required to effectively engage a target in the prone position.
		SRAAW (H) PWT 2		150-600	40 EPGS	To confirm the gunner's ability to effectively engage a target in the prone position.
3	LIVE	SRAAW (H) PWT 3		300-550	1 HEAT	To confirm the gunner can engage a target using the optical sight.
	EVIGS	31	PWT 3 Supplement— Mirabel Thermal Imager	90-455	10 EVIGS	To train the gunner in firing the SRAAW (H) using the Mirabel sight.
	LIVE	SRAAW (H) PWT 3 SUPPLEMENT—MIRABEL THERMAL IMAGER		300-550	1 HEAT	To confirm the gunner can engage a target with the SRAAW (H) using the Mirabel thermal sight.

SRRAW (H) APPLICATION RANGE PRACTICE 11—PART 1 PRONE (EVIGS)

65. **Aim.** To train the gunner in tracking skills required to effectively engage a target in the prone position.

Ser	EVIGS Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Disk 1	MSN 001	Target board	120	1		See notes	XLR / Flip Msn
2	Disk 1	MSN 019	T-72	165	1		See notes	XRL
3	Disk 1	MSN 004	Target board	300	1		See notes	XLR / Flip Msn
4	Disk 1	MSN 029	Leopard	245	1		See notes	A / Flip Msn
5	Disk 1	MSN 051	T-72	470	1		See notes	XLR
6	Disk 1	MSN 043	Leopard	375	1		See notes	A
7	Disk 1	MSN 032	M1	265	1		See notes	A
8	Disk 1	MSN 020	M1	165	1		See notes	OLR
9	Disk 1	MSN 028	T-72	300	1		See notes	ORL / Flip Msn
10	Disk 1	MSN 034	Leopard	325	1		See notes	OLR

NOTES

1. **Ammunition.** 10rds EVIGS.
2. **Scoring.** Pass/Fail.
3. **Standard.** Gunner must demonstrate skills to engage each tgt type.
4. All missions are to be fired at a beginner level.
5. Practices should be repeated as required.

SRAAW (H) APPLICATION RANGE PRACTICE 12—PART 2 KNEELING (EVIGS)

66. **Aim.** To train the gunner in tracking skills required to effectively engage a target in the kneeling position.

Ser	EVIGS Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Disk 1	MSN 009	M1	70	1		See notes	XLR / without tripod
2	Disk 1	MSN 014	M1	100	1		See notes	XRL / without tripod
3	Disk 1	MSN 002	Target board	165	1		See notes	XLR / without tripod
4	Disk 1	MSN 019	T -72	165	1		See notes	XRL / without tripod
5	Disk 1	MSN 025	M1	250	1		See notes	XLR / with tripod
6	Disk 1	MSN 004	Target board	300	1		See notes	XRL / with tripod
7	Disk 1	MSN 029	Leopard	245	1		See notes	A / with tripod
8	Disk 1	MSN 003	Target board	255	1		See notes	XLR / with tripod
9	Disk 1	MSN 028	T-72	165	1		See notes	ORL / Flip Msn with tripod
10	Disk 1	MSN 034	Leopard	300	1		See notes	OLR / with tripod

NOTES

1. **Ammunition.** 10 rds EVIGS.
2. **Scoring.** Pass/Fail.
3. **Standard.** Gunner must demonstrate skills to engage each tgt type.
4. All missions are to be fired at a beginner level.
5. Serials should be repeated as required.

SRAAW (H) PWT 1—PART 1 PRONE (EVIGS)

67. **Aim.** To confirm the gunner has the tracking skills required to effectively engage a target in the prone position.

Ser	EVIGS Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Disk 1	MSN 001	Target board	120	1		See notes	XLR / Flip Msn
2	Disk 1	MSN 019	T -72	165	1		See notes	XRL
3	Disk 1	MSN 004	Target board	300	1		See notes	XLR / Flip Msn
4	Disk 1	MSN 029	Leopard	245	1		See notes	A / Flip Msn
5	Disk 1	MSN 051	T-72	470	1		See notes	XLR
6	Disk 1	MSN 043	Leopard	375	1		See notes	A
7	Disk 1	MSN 032	M1	265	1		See notes	A
8	Disk 1	MSN 020	M1	165	1		See notes	OLR
9	Disk 1	MSN 028	T-72	300	1		See notes	ORL / Flip Msn
10	Disk 1	MSN 034	Leopard	325	1		See notes	OLR

NOTES

1. **Ammunition.** 10rds EVIGS.
2. **Scoring.** HPS—10 points. 1 point per hit.
3. **Standards.** Pass—8 points (80% HPS).
4. All missions are to be fired at a beginner level.

SRAAW (H) PWT 1—PART 2 KNEELING (EVIGS)

68. **Aim.** To confirm the gunner has the tracking skills required to effectively engage a target in the kneeling position.

Ser	EVIGS Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Disk 1	MSN 009	M1	70	1		See notes	XLR / without tripod
2	Disk 1	MSN 014	M1	100	1		See notes	XRL / without tripod
3	Disk 1	MSN 002	Target board	165	1		See notes	XLR / without tripod
4	Disk 1	MSN 019	T -72	165	1		See notes	XRL / without tripod
5	Disk 1	MSN 025	M1	250	1		See notes	XLR / with tripod
6	Disk 1	MSN 004	Target board	300	1		See notes	XRL / with tripod

Ser	EVIGS Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
7	Disk 1	MSN 029	Leopard	245	1		See notes	A / with tripod
8	Disk 1	MSN 003	Target board	255	1		See notes	XLR / with tripod
9	Disk 1	MSN 028	T-72	165	1		See notes	ORL / Flip Msn with tripod
10	Disk 1	MSN 034	Leopard	300	1		See notes	OLR / with tripod

NOTES

1. **Ammunition.** 10rds EVIGS.
2. **Scoring.** HPS—10 points. 1 point per hit.
3. **Standards.** Pass—7 points (70% HPS).
4. All missions are to be fired at a beginner level.

SRAAW (H) APPLICATION RANGE PRACTICE 21—FIRING EPGS PRONE

69. **Aim.** To train the gunner in tracking skills required to effectively engage a target in the prone position.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Prone with Tripod	Crossing Oblique advancing.	450-600	5			Speed not to exceed 50 km/h.
2	Kneeling with and without Tripod	Crossing Oblique advancing.	300-600	5			Speed not to exceed 50 km/h.
3	Kneeling with tripod and TI	Crossing Oblique advancing.	300-600	25			Speed not to exceed 50 km/h.
4	Kneeling without tripod and TI	Crossing advancing.	150-300	5			Speed not to exceed 50 km/h.

NOTES

1. **Ammunition.** 40 rds EPGS.
2. **Scoring.** Pass/Fail.
3. **Standard.** Gunner must achieve 60% on each Ser.
4. A minimum of 3 tgt types must be used.
5. Range set-up considerations:

- a. Eryx should be in a over watch position away from dusty roads.
- b. Area must allow various approaches of at least 600 m avoiding 30 degree angled approaches.
- c. Erratic movement by tgt vehicle must be avoided.
- d. Drivers must be briefed on timings, routes and orientation.
- e. TSS positioning on tgt vehicle is critical.
- f. Mission set-up must be IAW B-GL-385-010/PT-001 *Eryx (Heavy)*.

SRAAW (H) PWT 2

70. **Aim.** To confirm the gunner's ability to effectively engage a target in the prone position.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Prone with Tripod	Crossing oblique advancing.	450-600	5		See notes	Speed not to exceed 50 km/h.
2	Kneeling with and without Tripod	As per Ser 1.	300-600	5		See notes	Speed not to exceed 50 km/h.
3	As per Ser 2.	As per Ser 1.	300-600	25		See notes	Speed not to exceed 50 km/h.
4	As per Ser 2.	Crossing advancing	150-300	5		See notes	Speed not to exceed 50 km/h.

NOTES

1. **Ammunition.** 40 rds EPGS.
2. **Scoring.** HPS—40 points. 1 point per hit.
3. **Standards.** Pass—32 points (80% HPS).
4. A minimum of 3 tgt types must be used.
5. Range set-up considerations:
 - a. Eryx should be in a over watch position away from dusty roads.
 - b. Area must allow various approaches of at least 600 m avoiding 30 degree angled approaches.
 - c. Erratic movement by tgt vehicle must be avoided.
 - d. Drivers must be briefed on timings, routes and orientation.
 - e. TSS positioning on tgt vehicle is critical.
 - f. Mission set-up must be IAW B-GL-385-010/PT-001 *Eryx (Heavy)*.

SRAAW (H) PWT 3

71. **Aim.** To confirm the gunner can engage a target using the optical sight.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Deliberate Kneeling with Tripod	Moving target Badger	300–550	1		Pass/Fail	Tgt speed is not to exceed 20 km/h. Optical sight is to be employed.

NOTES

1. **Ammunition.** 1 rd Eryx missile, HE.
2. **Scoring.** Pass/Fail.
3. **Standard.** Gunner must have completed PWT 1 and PWT 2 successfully within 7 days of attempting PWT 3.
4. Gunner must be appointed as Eryx gunner in order to complete this PWT.

SRAAW (H) PWT 3 SUPPLEMENT APPLICATION RANGE PRACTICE 31—MIRABEL THERMAL IMAGER (EVIGS)

72. **Aim.** To train the gunner in firing the SRAAW (H) using the Mirabel sight.

Ser	EVIGS Ser	Practice	Target	Rge (m)	Rd s	Instruction	Score	Remarks
1	Disk 2A	MSN 009 Kneeling Unsupported	T-72	90–160	1		See notes	ORL
2	Disk 2A	MSN 013 Kneeling Unsupported	Leopard	110–170	1		See notes	ORL
3	Disk 2A	MSN 044 Kneeling Supported	Leopard	220–110	1		See notes	OLR
4	Disk 2A	MSN 049 Kneeling Supported	T-72	200	1		See notes	XRL
5	Disk 2A	MSN 051 Kneeling Supported	T-72	160–210	1		See notes	ORL
6	Disk 2A	MSN 064 Prone	Leopard	255	1		See notes	XLR

Ser	EVIGS Ser	Practice	Target	Rge (m)	Rd s	Instruction	Score	Remarks
7	Disk 2B	MSN 001 Prone	Cougar	280–240	1		See notes	ORL
8	Disk 2B	MSN 011 Prone	T -72	285–90	1		See notes	A
9	Disk 2B	MSN 015 Prone	Target board	335	1		See notes	XLR
10	Disk 2B	MSN 027 Prone	Coyote	455	1		See notes	ARL

NOTES

1. **Ammunition.** 10 rds EVIGS.
2. **Scoring.** HPS—10 points. 1 point per hit.
3. **Standards.** Pass—7 points (70% HPS).
4. Gunner must complete this test prior to attempting PWT 3 Supplement live fire.
5. Missions are to be fired at the advance level.
6. Gunner must adopt the position indicated.

SRAAW (H) PWT 3 SUPPLEMENT—MIRABEL THERMAL IMAGER

73. **Aim.** To confirm the gunner can engage a target with the SRAAW (H) using the Mirabel thermal sight.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Deliberate Kneeling with Tripod	Moving target Badger with 1 foot square.	300–550	1		Pass/Fail	Tgt speed is not to exceed 20 km/h.

NOTES

1. **Ammunition.** 1 rd Eryx missile, HE.
2. **Scoring.** Pass/Fail.
3. **Standard.** Gunner must have completed all PWTs within 7 days of attempting PWT 3 Supplement.
4. Gunner must be appointed as Eryx gunner in order to complete this PWT.

SECTION 6—60 mm LIGHT MORTAR M19 CDN

SCOPE

74. This section sets out all the range practices to be completed in the CFOSP. It includes the application of range practices for all Arms and Services and the progression with which they should be fired.

75. This progression of training is essential for preparing firers for live fire range practices. It is also essential in preparing the firer for field firing.

TRAINING AND FIRING SEQUENCE

76. Firing of the 60 mm light mortar (Lt Mor) must be done progressively; that is, the completion of personal weapons test (PWT) 1 and PWT 2 are mandatory prior to attempting PWT 3. Completion of PWT 3 is essential in order to employ the 60 mm (hand held) during field firing. Moreover, firers must complete PWT 3 prior to attempting the PWT 3 Supplement, while the PWT 3 Supplement must be completed prior to conducting field firing with the M5 mount.

77. Test methods for the Lt Mor are as follows:

- a. **Initial Marksmanship Training.** Serial 1 for all tests for the Lt Mor are not scored and are designed to be conducted as application practices, giving firers the practise needed before being assessed during Serial 2 of each PWT. Range practices are as follows:
 - (1) Hand Held Role—all PWTs must be conducted live.
 - (2) Bipod—all PWT Supplements must be conducted live.
- b. **Continuation Marksmanship Training.** All practices during continuation training are to be conducted live.
- c. **Personal Weapons Test 3 Supplements.** Supplements to PWT 3 are only conducted as part of pre-deployment training for those personnel who will employ the weapon in that particular configuration during operations or field firing.

78. Application range practices within the CFOSP are designed to allow for training of a specific skill. If additional practise is required for the Lt Mor, the respective PWT level should be repeated. Commanding officers (COs) are to ensure sufficient time is provided for practise prior to attempting any test.

SAFETY

79. **General Requirements.** All live firing practices contained in the CFOSP are to be conducted strictly in accordance with B-GL-381-001/TS-000 *Training Safety* and local Range Standing Orders.

CONDUCT OF LIVE FIRING PRACTICES

80. **Standards.** Standards for mortar men and others are described within B-GL-383-003/FP-001 *Individual Battle Task Standards (IBTS) for Land Operations*. Firers who do not attain the required standards should be given further coaching and training before firing again.

81. **Ammunition.** Live ammunition may replace sub-calibre ammunition for all PWTs within this section.

PRACTICES AND TESTS

82. The details of all Lt Mor range practices and tests are contained in the remaining pages of this section.

LT MOR SUMMARY OF RANGE PRACTICES

Stage	Trg/Test Method	CFOSP ARP	Practice	Rge (m)	Rds	Aim
1	LIVE	PWT 1	Direct Fire Sub-calibre	0–70	4 x 25 mm sub-calibre	To confirm the mortar man can engage targets using direct fire (sub-calibre) (Hand Held) Charge 0 for 70 m range.
2	LIVE	PWT 2	Direct Fire Sub-calibre	0–200	4 x 25 mm sub-calibre	To confirm the mortar man can engage targets using direct fire (sub-calibre) (Hand Held) Charge 0 for 200 m range.
3	LIVE	PWT 3	Direct Fire HE/SMK	200–350	4 x HE or Smk	To confirm the mortar man can engage targets using direct fire HE/SMK (Hand Held).
PWT 3 SUPP BIPOD	LIVE	PWT 3 Supp	Firing Using the Bipod	400–500	4 x HE or Smk	To confirm the mortar man can engage targets using line of sight (direct fire) with the M5 mount.

60 MM MORTAR M19 CDN PWT 1—SUB CALIBRE (HAND HELD) 0–70 M

83. **Aim.** To confirm the mortar man can engage targets using direct fire (sub-calibre) (Hand Held) Charge 0 for 70 m range.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Kneeling	Suitable target (Ranging)	0–70	2 x 25 mm Sub-cal	Firer is to fire 2 rds lever fire in the hand held role.	Nil	Controller is to identify a suitable tgt between 0-70 m.
2	Kneeling	Suitable target	0–70	2 x 25 mm Sub-cal	Fire is to fire 2 rds lever fire in the hand held role.	See notes	a. Engagement is successful if the rds fall within 25 m of the tgt. b. No time limit.

NOTES

1. **Ammunition.** 4 rds Sub-cal Charge 0.
2. **Scoring.** Ser 2 is scored as Pass/Fail.
3. **Standard.** Engagement is successful if the rds fall within 25 m of the tgt.
4. Ser 1 is designed to assist the firer in ranging the tgt, and serves as an application practice during initial marksmanship training.

60 mm MORTAR M19 CDN PWT 2—SUB CALIBRE (HAND HELD) 0–200 m

84. **Aim.** To confirm the mortar man can engage targets using direct fire (sub-calibre) (Hand Held) Charge 0 for 200 m range.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Kneeling	Suitable target (Ranging).	0–200	2 x 25 mm Sub-cal	Firer is to fire 2 rds lever fire in the hand held role.	Nil	Controller is to identify a suitable tgt between 100–200 m.
2	Kneeling	Suitable target.	0–200	2 x 25 mm Sub-cal	Firer is to fire 2 rds lever fire in the hand held role.	See notes	a. Engagement is successful if the rds fall within 25 m of the tgt. b. Firer must complete a successful engagement within 2 minutes.

NOTES

1. **Ammunition.** 4 rds Sub-cal Charge 0.
2. **Scoring.** Ser 2 is scored as Pass/Fail.
3. **Standard.** Firer must complete a successful engagement (one rd on tgt) within

the allotted time.

4. Ser 1 is designed to assist the firer in ranging the tgt, and serves as an application practice during initial marksmanship training.

60 mm MORTAR M19 CDN PWT 3—DIRECT FIRE HE/SMK (HAND HELD)

85. **Aim.** To confirm the mortar man can engage targets using direct fire HE/Smk (Hand Held).

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Kneeling	Suitable target.	200–350	2	Firer is to fire 2 rds lever fire in the hand held role.	See notes	Controller is to identify a suitable tgt between 200–350 m.
2	Kneeling	Suitable target.	200–350	2	Firer is to fire 2 rds lever fire in the hand held role.	See notes	Engagement is successful if the rds fall within 25 m of the tgt.

NOTES

1. **Ammunition.** 4 rds C110 or C111. Charge 0 to 2 may be used.
2. **Scoring.** Ser 2 is scored as Pass/Fail.
3. **Standard.** Fall of rd must be within 25 m of tgt.
4. Ser 1 is designed to assist the firer in ranging the tgt, and serves as an application practice during initial marksmanship training.

60 mm MORTAR M19 CDN PWT 3 SUPPLEMENT—DIRECT FIRE M5 MOUNT AND C2 SIGHT

86. **Aim.** To confirm the mortar man can engage targets using line of sight (direct fire) with the M5 mount.

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
1	Kneeling	Suitable target.	400–500	2	Firer is to fire 2 rds lever fire on order.	See notes	a. Once on tgt, firer is to mark and record tgt with the C2 sight. b. Firer is to slip all indices to 0.
2	Kneeling	Suitable target.	400–500	2	Firer is to fire 2 rds lever fire on order.	See notes	a. Firer is to use recorded data from Ser 1 to lay the mortar. b. Once completed, fire 2 rds on the tgt. c. A successful engagement is achieved

Ser	Practice	Target	Rge (m)	Rds	Instruction	Score	Remarks
							if 1 rd strikes within 25 m of the tgt.

NOTES

1. **Ammunition.** 4 rd C110 or C111. Charge 0 to 2 may be used.
2. **Scoring.** Ser 2 is scored as Pass/Fail.
3. **Standard.** A successful engagement is achieved if 1 rd strikes within 25 m of the tgt.
4. M5 mount and C2 sight are to be zeroed prior to firing.
5. Prior to firing, Ser 2 gun crews should be changed around.
6. Ser 1 is designed to assist the firer in ranging the tgt, and serves as an application practice during initial marksmanship training.