COMMON TRAINING

PHASE FOUR

INSTRUCTIONAL GUIDE

SECTION 3

EO C406.02 – SCORE AIR RIFLE MARKSMANSHIP TARGETS

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-604/PG-001, *Phase Four Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

Photocopy the Sample Grouping Target handout located at Attachment A for each cadet.

Photocopy the Sample Competition Target handout located at Attachment C for each cadet.

Prepare slides of the Air Rifle Grouping Template and Scoring Template found at Attachments B and D for each cadet.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An interactive lecture was chosen for TP 1 to orient the cadets to the targets used during air rifle marksmanship activities and to generate interest.

A demonstration and performance was chosen for TPs 2 and 3 as it allows the instructor to explain and demonstrate scoring grouping and competition targets while providing an opportunity for the cadets to practice under supervision.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall be expected to score the CCM Air Rifle Grouping Target and the CCM Competition Target.

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IMPORTANCE

It is important for cadets to score air rifle marksmanship targets as it provides a skill that will be used when they assist a Range Safety Officer (RSO). Being able to determine the score on a target will allow the cadet to monitor their progress as they improve in applying the principles of marksmanship.

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Teaching point 1 **Describe air rifle marksmanship targets.**

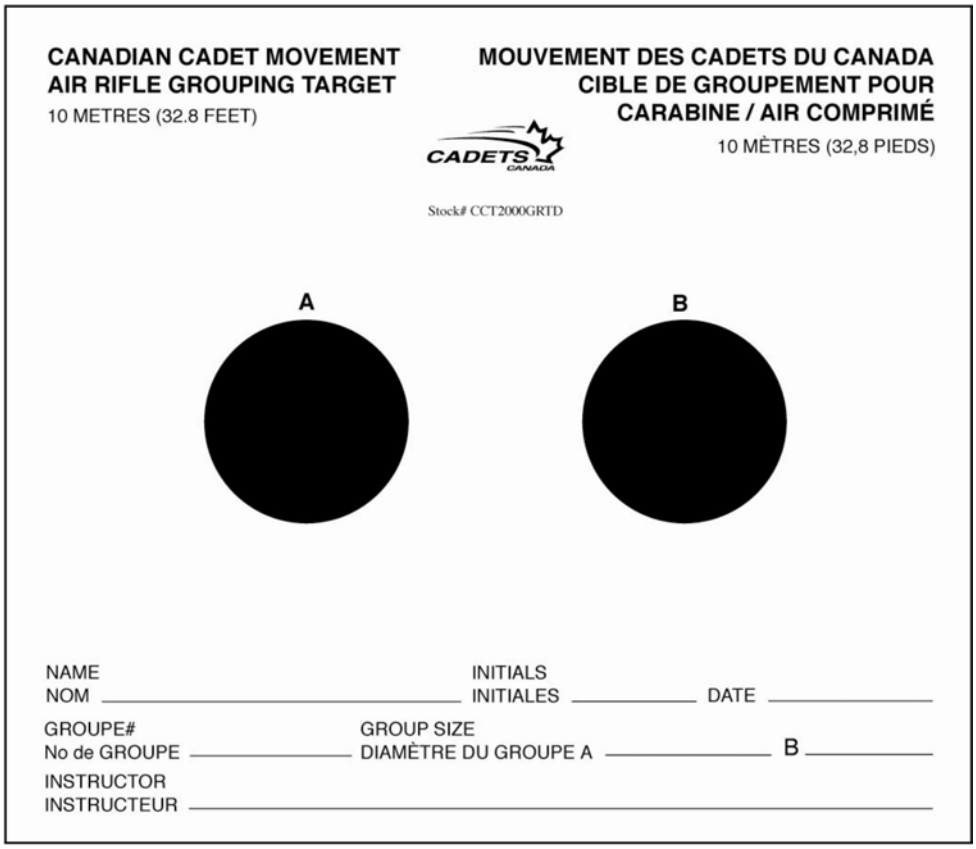
Time: 5 min Method: Interactive Lecture

AIR RIFLE MARKMANSHIP TARGETS

There are two official targets used for air rifle marksmanship activities: the CCM Air Rifle Grouping Target (CCT2000GRTD) and the CCM Competition Target (CCT2001AR853). There are various targets used in fun and timed air rifle marksmanship activities. These other targets are reproduced locally and can be found attached to the activity's applicable instructional guide.

CCM AIR RIFLE GROUPING TARGET

The CCM Air Rifle Grouping Target is used during classification air rifle marksmanship activities. The target consists of two diagrams. Each diagram is a shaded black circle that is 3 cm in diameter. The diagram itself is provided on the target to give the marksman an aiming mark and thus any grouping fired at each diagram does not necessarily need to be contained on the black portion of the target.



Note. Created by Director Cadets 4, 2000, Ottawa, ON: Department of National Defence.

Figure 1 The CCM Air Rifle Grouping Target (CCT2000GRTD)

CCM Competition Target

The CCM Competition Target, also called an application target, is the official target used in the CCM Marksmanship Championship Series. This target is used only with the cadet air rifle at a distance of 10 m (32.8 ft). The target contains 10 scoring diagrams and two sighting diagrams. Each scoring diagram consists of a 4.5-mm circle (the inner 3 cm of the scoring diagram is shaded black as an aiming mark) broken into 10 concentric scoring rings, scored from ten (the bull's eye) to one (the outer most ring). As there are 10 scoring

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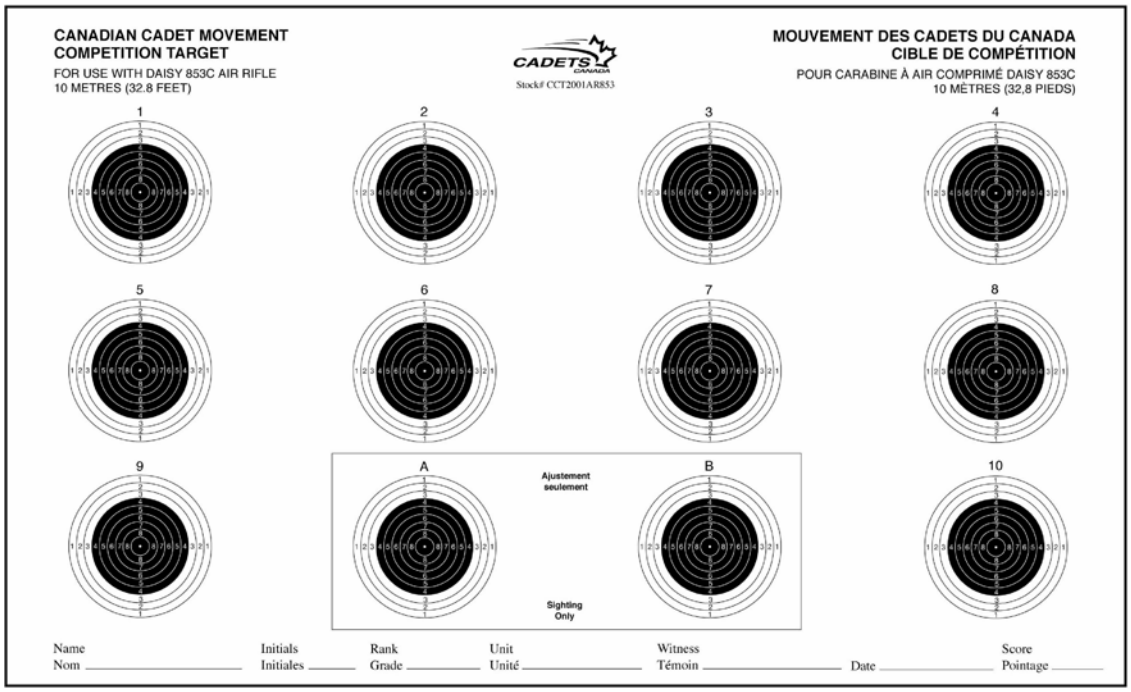
diagrams, the highest possible score (HPS) is 100. The sighting diagrams, identical to the scoring diagrams and labelled A and B, are used by the firer to confirm zeroing the cadet air rifle during the competition relay.



Note. Created by Director Cadets 4, 2001, Ottawa, ON: Department of National Defence.

Figure 2 The CCM Competition Target (CCT2001AR853)

Non-Standard Targets

Non-standard targets are used during fun and timed air rifle marksmanship activities. Non-standard targets are designed to give cadets a break from firing on the two official targets and allow for the development of activities that provide a different style marksmanship experience. Some examples of non-standard targets include the turkey shoot target, beat the clock targets, balloon targets and chase the dot targets. Other non-standard targets may be developed for use during fun and timed air rifle marksmanship activities by the activity leader as required.

Examples of non-standard targets used during fun and timed air rifle marksmanship activities can be found as attachments to EO M406.01 (Participate in a Recreational Marksmanship Activity). These targets are reproduced locally.

CONFIRMATION OF TEACHING POINT 1

QUESTIONS:

Q1. How many scoring diagrams are there on the CCM Competition Target?

Q2. What is the HPS on the CCM Competition Target?

Q3. What are some types of targets used during fun and timed air rifle marksmanship activities?

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ANTICIPATED ANSWERS:

A1. There are 10 scoring diagrams on the CCM Competition Target.

A2. The HPS on the CCM Competition Target is 100.

A3. Some targets used during timed air rifle marksmanship targets are beat the clock, speed grid and chase the dots.

Teaching point 2 **Explain, demonstrate and have the cadets score the CCM Air Rifle Grouping Target.**

Time: 10 min Method: Demonstration and Performance



For this TP it is recommended that the instructor explain and demonstrate each step required to complete the skill then monitor the cadets as they imitate each step.

Note: Assistant instructors may be employed to monitor the cadets' performance.



Provide each cadet with the Sample Grouping Target handouts located at Attachment A and an Air Rifle Grouping Template located at Attachment B.

Air Rifle Grouping Template. The Air Rifle Grouping Template is a series of grouping circles engraved or printed on transparent material. It is used to confirm the diameter of a grouping fired during familiarization or classification firing. The Air Rifle Grouping Template consists of a series of grouping circle outlines, with diameters from 1–6 cm inclusive. It is very important to correctly and consistently measure grouping targets with the grouping template.

SCORING THE CCM AIR RIFLE GROUPING TARGET

Score the CCM Air Rifle Grouping Target using the following procedure:

1. **Determine there are five shots in the grouping.** Before scoring any grouping, the number of shots on the target is determined. If a cadet has not hit the target at least five times for each grouping the score will not count. It is difficult at times to determine when several pellet holes overlap. Observe the outline of the hole for the distinct outline of an arc of a clean pellet hole. This indicates the number of pellets that may have caused the larger hole. The skill level of cadets is also a good indication of how many shots are in a grouping. If a cadet is shooting a larger grouping size, the possibility for two pellets fired exactly through one hole is slim.



Each diagram on the Sample Grouping Target handout contains five shots.

2. **Align the Air Rifle Grouping Template over the five-shot grouping so that all shots are within a scoring ring.** Once the grouping has been confirmed as being made up of five shots, the Air Rifle Grouping Template is placed over the target. The Air Rifle Grouping Template should be aligned so that all the shots fit easily within a grouping circle without touching.

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A grouping size of 4 cm will be large enough to serve as a starting point for each diagram on the Sample Grouping Target handout.

3. **Determine if the grouping will fit within the next smallest ring without touching the scoring ring.** Choose the next smallest grouping circle and determine if the group fits within it. The entire group must fit within the grouping circle without touching the inside edge.

4. **Repeat as required until the grouping will not fit within the next smallest scoring ring without touching the scoring ring.**



The correct grouping size for each diagram from the Sample Grouping Target handout is:

- Target 1, Diagram A–3.5 cm,
- Target 1, Diagram B–2.7 cm,
- Target 2, Diagram A–1.8 cm, and
- Target 2, Diagram B–2.5 cm.

5. **Record the grouping size on the target.** The grouping size recorded on the target is the corresponding grouping circle diameter.

6. **Determine the classification category.** Once two groupings have been scored on one grouping target, a determination is made as to the classification category obtained. There are four categories of marksmanship classification.

- **Marksman**: Each grouping must be within a circle of 3 cm in diameter.
- **First Class Marksman**: Each grouping must be with a circle of 2.5 cm in diameter.
- **Expert Marksman**: Each grouping must be within a circle of 2 cm in diameter.
- **Distinguished Marksman**: Each grouping must be within a circle of 1.5 cm in diameter.

Each marksmanship classification category has a corresponding badge that may be worn on the uniform. The marksmanship classification does not expire and any improvement in the classification category during subsequent classification air rifle activities is reflected with the awarding of the higher category.



From the Sample Grouping Target handout, Target 1 does not meet the requirements for a marksmanship classification category. Target 2 meets the requirements for a First Class Marksman classification category.



Refer to Annex A of CATO 14-43, *Marksmanship Program*, for detailed instructions about the marksmanship classification program.

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CONFIRMATION OF TEACHING POINT 2

The cadets' scoring of the Sample Grouping Target handout will serve as the confirmation of this TP.

Teaching point 3 **Explain, demonstrate and have the cadets score the CCM Competition Target.**

Time: 10 min Method: Demonstration and Performance



For this TP it is recommended that the instructor explain and demonstrate each step required to complete the skill then monitor the cadets as they imitate each step.

Note: Assistant instructors may be employed to monitor the cadets' performance.



Divide the cadets into groups based on the number of scoring magnifiers and scoring plugs available. Distribute a Sample Competition Target handout located at Attachment C to each cadet. Distribute a scoring magnifier, scoring plug and Scoring Template found at Attachment D to each group.

SCORING THE CCM COMPETITION TARGET

Score the CCM Competition Target using the following procedure:

1. **Determine the score on each diagram.** Determine the score for each diagram using one or more of the following methods:

   a. **Determine the value by inspecting with the naked eye.** In most cases the scoring ring that has been broken is easily identifiable. The scoring diagrams on the competition target that can be scored in this manner are scored first as they can be completed in less time.

   b. **Determine the value using the .177-scoring magnifier.** If the pellet hole has occurred close to the edge of a scoring ring, it is necessary to use the scoring magnifier to enlarge the view and make a determination of value. Look through the magnifying lens and align the scoring magnifier over the pellet hole. If the pellet hole has broken or touched the higher scoring ring, award that value. If even a small gap exists between the pellet hole and the scoring ring the lower value must be awarded.

2. **Calculate penalties.** When scoring a target there are two penalties the scorer can determine and calculate. If a penalty is imposed, the rule number and penalty amount is noted next to the applicable diagram. The following rules are excerpts from the Canadian Cadet Movement Marksmanship Championship Series (CCMMCS).

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22.3.4.1 If a Competitor fires more than the prescribed number of shots on the scoring area in a twenty (20) shot string, the shot(s) with the highest value will be discarded until the correct number of shots remain. In addition, a two (2) point Penalty will be deducted for each excess shot.

22.3.4.2 If a Competitor fires more than the prescribed number of shots on a scoring diagram, the Competitor must fire a like number of fewer shots on a subsequent scoring diagram in the same twenty (20) shot string. The Competitor will not be penalized for the first two (2) such occurences in a Competition, but will be penalized two (2) points for each succeeding occurence.

Note. From Canadian Cadet Movement: Cadet Marksmanship Program Reference Manual (p. 4-4-31), by Director Cadets 3, 2005, Ottawa, ON: Department of National Defence.

Figure 3 Scoring Penalties

3. **Record the score on the target.** Once the diagrams are given values and penalties are calculated, the score is totalled and recorded on the target. It is important to ensure the addition of values is accurate since during a competition protests may be filed due to inaccurate calculations.

CONFIRMATION OF TEACHING POINT 3

The cadets' scoring of the Sample Competition Target handout will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

QUESTIONS:

Q1. What are the three types of targets used during air rifle marksmanship activities?

Q2. What size must each grouping be to award a Distinguished Marksman classification category?

Q3. When scoring targets, how is it determined when to score the higher ring value and when to score the lower ring value?

ANTICIPATED ANSWERS:

A1. The three types of targets are the CCM Grouping Target, CCM Competition Target and non-standard targets.

A2. Each grouping must be within a circle of 1.5 cm in diameter.

A3. If the pellet hole has broken or touched the higher scoring ring, award that value. If even a small gap exists between the pellet hole and the scoring ring the lower value must be awarded.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

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CLOSING STATEMENT

You must be able to score air rifle marksmanship targets to perform your duties when assisting the RSO. Being able to score air rifle marksmanship targets will also allow you to assess your own performance and the performance of others. These skills will allow you to better perform the duties of an Air Rifle Marksmanship Instructor.

INSTRUCTOR NOTES / REMARKS

Nil.

REFERENCES

A0-027 A-CR-CCP-177/PT-001 Director Cadets 3. (2005). *Canadian Cadet Movement: Cadet marksmanship program reference manual*. Ottawa, ON: Department of National Defence.

A0-148 CATO 14-43 Director Cadets 4. (2009). *Marksmanship program*. Ottawa, ON: Department of National Defence.

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