CANADIAN CADET ORGANIZATIONS

PHASE 4

HANDBOOK

CCO Reference Manual

(A guided handbook for PHASE 4 Cadets)

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RIGHTS AND RESPONSIBILITIES OF CADETS

RIGHTS	RESPONSIBILITIES
As a cadet I have the right to:	**As a cadet I have the responsibility to:**
• be treated fairly and with respect • belong • feel safe • be included • learn • seek help • be heard • make decisions • be protected from emotional, physical and sexual abuse and all forms of harassment • use the law • say "No" to unwelcome behaviour	• treat others with respect • not exclude anyone • help protect others • respect personal boundaries; honour "No's" • tell the truth • listen • not dominate others • not misuse my power • control my anger • not harass anyone • not abuse anyone • get help if I need it

PO X01 – PARTICIPATE IN CITIZENSHIP ACTIVITIES

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Participate in 4.5 Hours of community service:

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PO 403 – LEADERSHIP

☐ M403.01 Describe Needs and Expectations of Team Members

☐ M403.02 Select an Influence Behaviour Within the Empowering Leadership Style

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EO M403.01 – DESCRIBE NEEDS AND EXPECTATIONS OF TEAM MEMBERS

IMPORTANCE - It is important for cadets to describe the needs and expectations of team members to assist in the development of their leadership skills. This information aids the cadets in meeting the aim of developing in youth the attributes of good leadership stated in CATO 11-03, *Cadet Program Mandate*. To become an effective team leader, the cadet must be aware of needs and expectations, and strive to satisfy those needs and expectations.

THE NEEDS OF TEAM MEMBERS
To be an effective leader, a team leader must be aware that every team member has needs to be satisfied.

Acceptance of and by Other Team Members
Each team member needs to accept the other members of the team. There may be differences in age, gender, race and opinion but each team member should appreciate all other members. In turn, each team member needs to feel accepted by other team members. Once team members feel acknowledged and understood by others on the team, team members may strive to make teamwork possible. Once the team forms into a cohesive group, the accomplishment of a task becomes easier.

Acceptance and Understanding of Leaders
Team members need to know that the team leader will welcome them into the team. It is important for a team leader to encourage a sense of belonging in each team member. Team members also need the team leader to show compassion and sensitivity to their opinions and feelings.

Approval of Leaders
Team members need to know that the team leader appreciates them and their contribution. It is important for team leaders to show respect and praise team members.

Opportunities to Try Different Tasks and Roles
Team members need opportunities to attempt different tasks and roles to practice applying skills and knowledge.

THE EXPECTATIONS THAT A TEAM MEMBER HAS OF A TEAM LEADER
Every team member has expectations of the team leader. Team members hope that the team leader will fulfill their expectations. Team member expectations include:

Good Leadership
Team members expect good leadership from team leaders. Team leaders need to display good leadership, to include:

- **Leading by example.** Team members expect that what they are asked to do can also be done by the team leader. They expect the team leader will model the correct behaviour.
- **Putting the needs of the team members first.** The team leader is expected to put the team's needs ahead of their own. Team members need to know that the team leader will accept, approve and understand them. Team members also expect that the team leader will give them opportunities to try different tasks and roles.
- **Being sensitive to cultural and gender differences.** Each team member is unique and the team leader must have an awareness of the differences between each of them. Having an understanding of cultural and gender differences between members of the team will allow the team members to feel included and appreciated.

Effective Communication
Team members expect that the team leader will provide them with effective communication. Team leaders need to display effective communication to team members, to include:

- **Giving information on what is expected of them.** Team members need to know what is expected of them. Team members require basic information about what they are to accomplish.
- **Explaining changes in situations.** Team members like to know when changes in situations occur. Keeping team members informed of changes and providing new directions may ensure that goals and tasks are accomplished.
- **Asking for assistance with tasks.** Team members are more cooperative when they are asked for assistance by the team leader rather than being ordered to do something. By asking for the team's assistance, team members may feel needed by their team leader.
- **Providing concrete examples during explanations.** Team members may understand concepts and ideas more easily if the team leader uses examples from life and if the team leader can connect the concept or idea to what the team member already knows.

Effective Supervision
Team members expect that the team leader will provide them with effective supervision. Team leaders need to effectively supervise team members, to include:

- **Operating in a safe environment.** Team members expect to be operating in a safe environment. Every team leader must be concerned with the team's safety and well-being at all times.
- **Freedom from over-supervision.** Team members should feel like their team leader has confidence in them to accomplish tasks. Very few team members appreciate it when the team leader is always looking over their shoulder.
- **Recognition of good performance.** Team members like to be praised when things go well. Praise may be verbal or may take the form of certificates and awards.

CLOSING STATEMENT - To be an effective leader, team leaders must satisfy the needs and meet the expectations of team members. Having an awareness of those needs and expectations will assist the team leader in doing so.

EO M403.02 – SELECT A LEADERSHIP APPROACH

IMPORTANCE - It is important for cadets to select a leadership approach in order to help them become effective team leaders during a leadership appointment. For every leadership opportunity, an effective leader will use a leadership approach that enables the team members to accomplish the goal.

TRANSACTIONAL AND TRANSFORMATIONAL LEADERSHIP
Transactional leadership. Leaders exchange promises of rewards and benefits to team members so the team members will fulfill agreements with the leaders. This type of leadership is task-oriented. The leader sets the rules and procedures to complete a task and the team members comply with the rules and follow the procedures to accomplish the task.

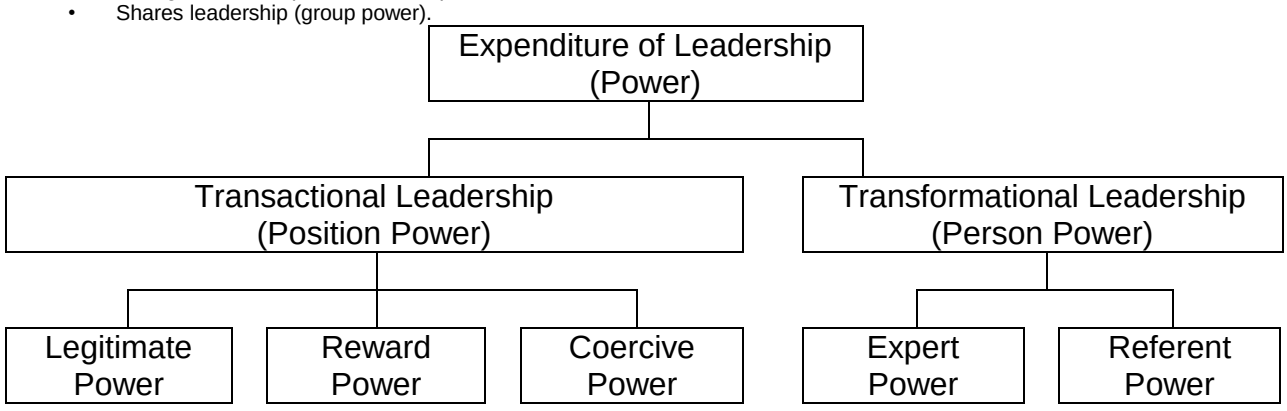
Transactional Leadership:

- Values problem and solution identification.
- Makes decisions – even if everyone has not been heard – in order to move forward.
- Uses standards and principles as guides in decision making.
- Develops the self to be a better decision maker for the group.
- Gets things done.
- Recognizes the importance of the product.
- Takes charge (personal power).

Transformational leadership. Focuses on the process of being a leader by helping team members transform themselves from followers into leaders. Transformational leadership involves assisting team members to transcend their own self-interest for the good of the group, organization or society; to consider their long-term needs to develop themselves, rather than their immediate needs; and generally, to become more aware of what is really important.

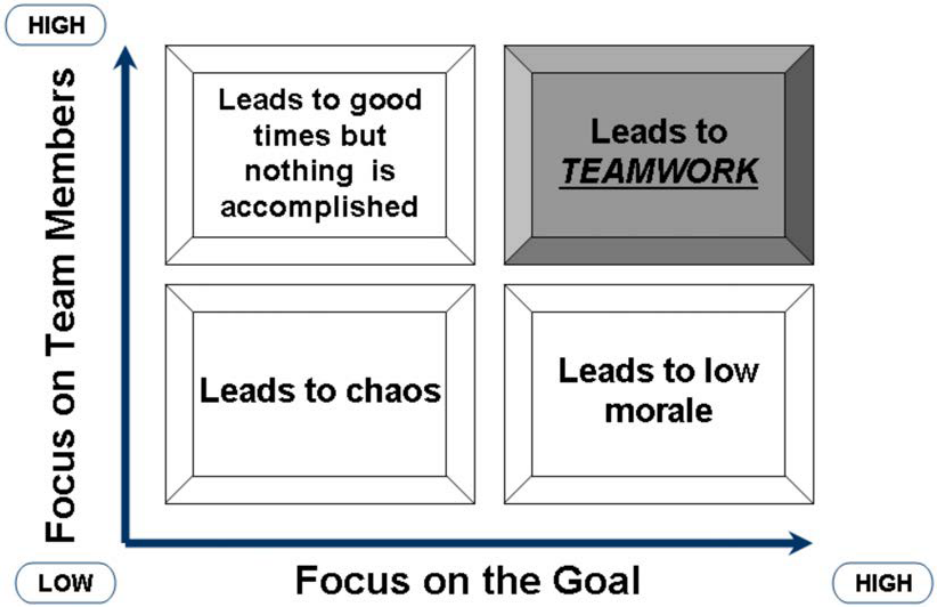
Transformational Leadership:

- Values the participation and contribution of others.
- Takes all viewpoints and advice into account before making a decision.
- Considers individuals within their contexts and situations.
- Uses individuals to test decisions.
- Develops the self first to be a better contributor to the group.
- Learns from experiences to generalize to ‘real life’.
- Recognizes the importance of the process.
- Shares leadership (group power).



Transactional leadership focuses on the skills and tasks associated with leadership, such as public speaking, writing, delegating authority, leading meetings and making decisions. It is what people who are leaders do.

Transformational leadership focuses on the process of leadership and what it means to be a leader. It is concerned with how individuals use their abilities to influence people. Think of the main difference between transactional and transformational leadership as doing leadership tasks versus being a leader.



There are two main things on which to focus while leading a team: the team members and the goal.
If a team leader is not focused on the goal and is not focused on their team members, the outcome is usually chaos.

If a team leader is not concerned with the goal but is highly concerned about how their team members feel, the outcome may lead to good times but nothing gets accomplished.

If a team leader is highly concerned with the goal but not concerned about how their team member's feel, the outcome may lead to low morale.

If a team leader is highly concerned with the goal and highly concerned about how their team members feel, the outcome is usually teamwork.

LEADERSHIP APPROACHES
There are three main leadership approaches in the CP. They are:

- control,
- coach and
- empower.

Each leadership approach is based on balancing the concern for the relationship with team members for the concern for accomplishing the task.

Key Aspects of the Control Approach
Key aspects of the control approach are:

- The team leader defines the roles and tasks for the team members. The team leader gives the team members clear direction and supervises them closely.
- The team leader provides detailed explanations on what needs to be done and gives team members the information they need to know on how to do the task.
- Communication is mainly one-way.

Key Aspects of the Coach Approach
Key aspects of the coach approach are:

- The roles and tasks are still defined by the team leader but ideas and suggestions are solicited from team members.
- The team leader provides information and opinions but supports the team to develop possible solutions to problems while the final decision remains with the team leader.
- The team leader encourages team members to assume responsibility.
- Communication is mainly two-way.

Key Aspects of the Empower Approach
Key aspects of the empower approach are:

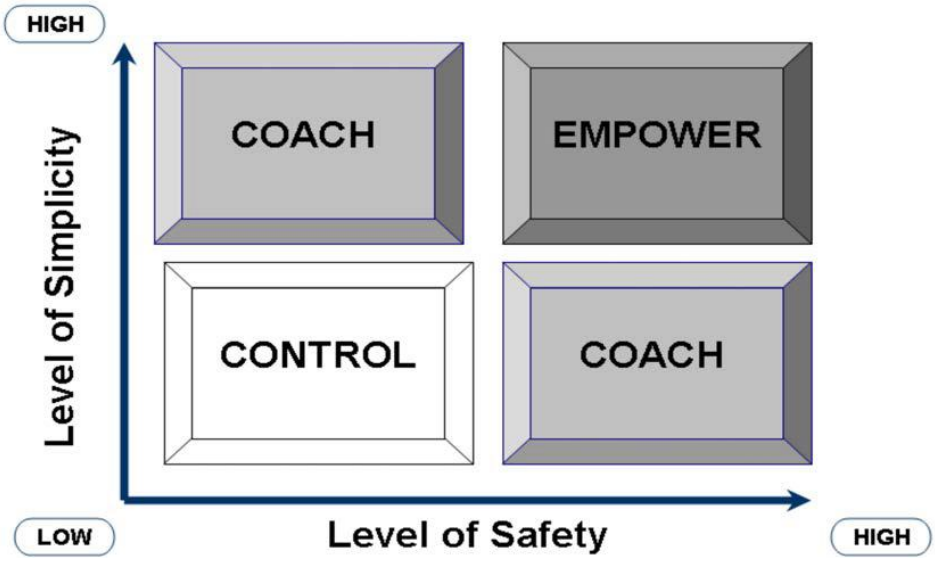
- The team leader empowers team members to make decisions and take action in areas where the team members have experience and expertise.

- Team members can operate independently and have a strong sense of responsibility but know when to seek assistance from the team leader.
- Communication is mainly two-way.

Selecting the Approach
Each of the three leadership approaches may be equally effective. The approach selected must be based on the leadership assignment and / or appointment and the leadership team.

The factors to be considered when looking at the leadership assignment / appointment are:
- the level of simplicity of the task; and
- the level of safety of cadets.

The factors to be considered when looking at the leadership team are:
- the level of capability / competence of cadets; and
- the level of motivation of cadets.

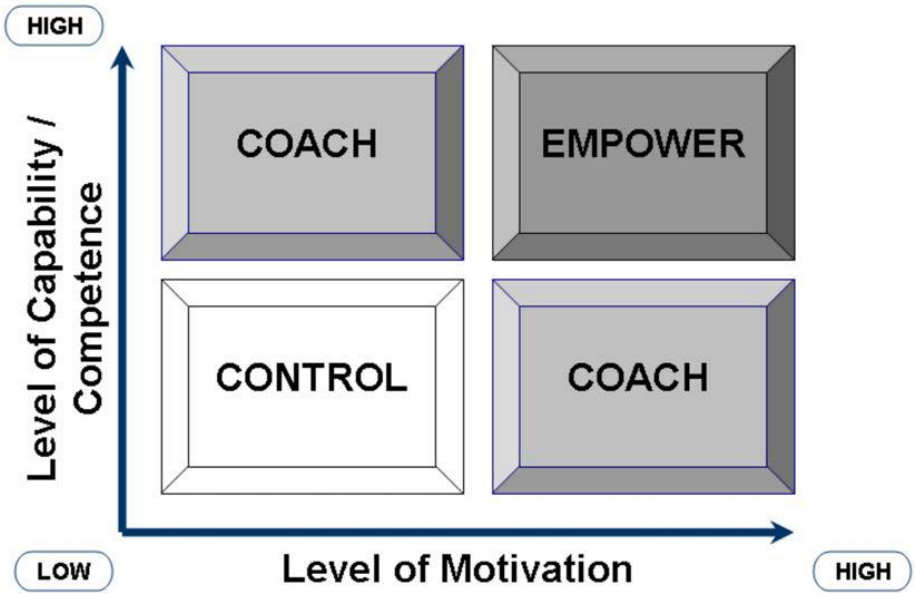


If the task is complicated and the cadets are doing something with some risk, the team leader should choose the control approach. This allows for better supervision of team members.

If the task is simple but the cadets are doing something with some risk, the team leader should choose the coaching approach. This allows the team members an opportunity to develop their leadership skills and knowledge because the team leader provides extra feedback.

If the task is complicated but the cadets are doing something without risk, the team leader should choose the coaching approach. This allows the team members an opportunity to develop their leadership skills and knowledge because the team leader provides extra feedback.

If the task is simple and the cadets are doing something without risk, the team leader should choose the empower approach. This allows the team members develop their leadership skills and their sense of responsibility.



If the task is new or the task is difficult and the cadets are uninspired or apathetic, the team leader should choose the control approach. This allows for better supervision of cadets.

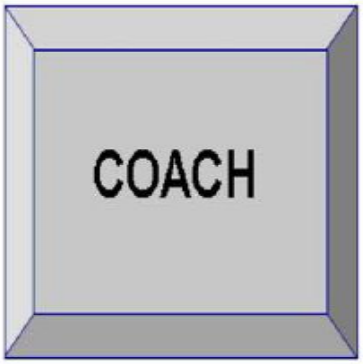
If the team has experience with the task but the cadets are uninspired or apathetic, the team leader should choose the coaching approach. This allows the team members an opportunity to develop their leadership skills and knowledge because the team leader provides extra feedback.

If the task is new or the task is difficult, but the cadets are inspired and enthusiastic, the team leader should choose the coaching approach. This allows the team members an opportunity to develop their leadership skills and knowledge because the team leader provides extra feedback.

If the team has experience with the task, and the cadets are inspired and enthusiastic, the team leader should choose the empower approach. This allows the team members to develop their leadership skills and their sense of responsibility by giving opportunities to operate independently.

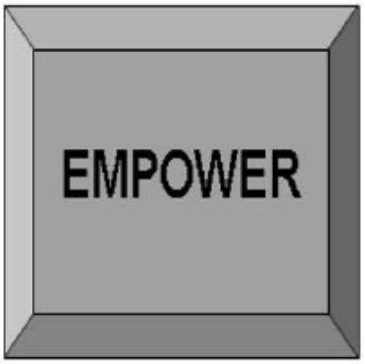
Key aspects of this approach:

- The leader defines the roles and tasks for the team members, gives them clear direction and supervises them closely.
- The leader provides detailed explanations on what needs to be done and gives the team members the information they need on how to do the task.
- Communication is mainly one-way.



Key aspects of this approach:

- The roles and tasks are still defined by the leader but ideas and suggestions are solicited from team members.
- The leader provides information and opinions but supports the team to develop possible solutions to problems while the final decision remains with the leader.
- The leader encourages members of the team to assume responsibility
- Communication is mainly two-way.



Key aspects of this approach:

- The leader empowers members of the team to make decisions and take action in areas where they have experience and expertise.
- Members of the team can operate independently and have a strong sense of responsibility but know when to seek assistance from the leader.
- Communication is mainly two-way.

CLOSING STATEMENT - In every leadership opportunity, the effective team leader will use a leadership approach that enables the team leader to have a positive relationship with their team members and to accomplish tasks. Selecting and implementing leadership approaches is a life-long transformational leadership skill.

EO M403.03 – MOTIVATE TEAM MEMBERS

IMPORTANCE - It is important for cadets to motivate team members because motivation is the key ingredient for success in the cadet organization. One of the duties of a team leader is to motivate team members to succeed to accomplish goals. Motivating team members also may encourage team members to develop new knowledge and skills. In addition, recognizing team members for the effort they put toward a task makes them feel appreciated.

WHY TEAM LEADERS SHOULD ENCOURAGE INTRINSIC MOTIVATION

As a team leader, cadets should lead by example and be intrinsically motivated to accomplish goals and tasks. Although this may be difficult, team leaders need to accomplish their goals and believe the goals are worth accomplishing. When a team leader leads by example, the team members may also realize that accomplishing goals and tasks are a good and right thing to do. When a team leader displays intrinsic motivation, team members may realize that intrinsic motivation is an attribute to be imitated. Any positive attribute that a team member imitates may assist the team member in becoming a better leader in the future.

As an example, a team leader will wear their uniform correctly because it is the right thing to do. A team leader takes pride in their uniform and does not need to be given an external reward to do this. Team members see this behaviour and want to be like their team leader and may not continue to need external rewards. Team members begin to imitate the team leader and become intrinsically motivated.

WHEN TEAM LEADERS MOTIVATE TEAM MEMBERS
The team leader must motivate team members. The skill of knowing when your team members need to be motivated will develop over time. As a team leader during Phase Four, it is important to motivate team leaders at every opportunity.

HOW TEAM LEADERS MOTIVATE TEAM MEMBERS
One of the most common methods used to motivate team members is to use praise. Verbal praise is a very effective way to motivate team members.
Verbal praise may be used as positive feedback before, during and at the end of tasks. If possible, team leaders should praise team members in front of others as it makes team members feel valued.

Praising Effort and Perseverance During a Task
It is very important for team leaders to praise team members for their effort and perseverance during a task. Encouraging and caring about team members is an important aspect of being a leader.

Praising the use of Different Strategies During a Task
Team leaders should praise team members when they use different strategies to during a task. Creative thinking is an important tool for leaders.

Praising Improvement During a Task
When team members have completed a task before and they complete the task again more effectively or efficiently, praise should be given. Leaders and team members should always try to improve their performance.

Encouraging the Development of Knowledge and Skills
Team leaders should encourage team members when they learn something new. Everything new that a team member learns may be used at some point to assist the team.

Praising the Completion of a Task
When team members complete a task, praise should be given. It is important to recognize dedication shown in seeing a task through to completion.

Thanking Team Members for Their Endeavours
Team leaders should try to recognize each team member for their contribution in the completion of a task. Making team members feel special is a great way to win even more cooperation from the team.

Giving credit for the completion of tasks to the team rather than yourself
When team leaders are given credit for completing a task, they should ensure that credit is given also to the team members. Recognizing the team for their accomplishments boosts the team's morale.

CLOSING STATEMENT - One of the duties of a team leader is to motivate team members to succeed to accomplish goals. Motivating team members also may encourage them to develop new knowledge and skills. In addition, recognizing team members for the effort they put towards a task makes them feel appreciated.

EO M403.04 – PROVIDE FEEDBACK TO TEAM MEMBERS

IMPORTANCE - It is important for cadets to provide feedback because it is an essential skill for a team leader. Feedback is given to help team members improve. Providing feedback correctly to team members gives the team members regular guidance to complete their tasks.

PRINCIPLES OF EFFECTIVE FEEDBACK
Feedback may be given to the team as a whole or it may be given to individual team members. Giving feedback well is a skill. Feedback is a practical method for giving team members feedback, and when giving feedback, it should be frequent, accurate, specific, and timely.

Frequent. Frequent means occurring often or in close succession. Team leaders should give feedback often. After giving feedback, a team leader should note if the team members are responding. If the feedback is not being used by the team members, it may need to be restated in a different way.

Accurate. Accurate means careful, precise or lacking errors. Accurate feedback means giving feedback that is truthful and fact-based. Accurate feedback should be correct, balanced and appropriate; if not, team members may begin to lose respect for the team leader as every instance of feedback has an effect on the team members' trust.

Specific. Specific means clearly defined, definite or precise. Specific feedback means giving feedback that is detailed and clear-cut. Telling team members what they do right and wrong is not specific enough; the team leader must also tell team members exactly what steps are necessary to improve their performance. This is usually done by asking reflective questions to the team members so they generate suggestions for improvement. When giving specific feedback, team leaders should set concrete goals and deadlines for team members.

Timely. Timely means opportune, occurring, done or made at suitable or appropriate time. Timely feedback means giving feedback at the right time. The closer in time the feedback follows the performance, the more impact it will have on team members because the performance and the feedback are tied closely together.

GROUND RULES FOR PROVIDING FEEDBACK
The following ground rules for providing feedback may enable the team leader to give helpful, constructive feedback, without creating conflict or confrontational behaviour with team members.

Focusing on What is Observed
Team leaders should give feedback based on what they see because it is factual. What team leaders believe is based on supposition and inference; it is an interpretation of what they have seen. When team leaders give feedback based on interpretation rather than fact, the interpretation may be wrong.

For example:
A team member is looking at their boots as the team leader speaks to him. The team leader says "Pay attention."

This is incorrect because the team leader is inferring that the team member is not paying attention. The team leader should say "You should be looking here." This statement focuses on what the team leader saw.

Focusing on Behaviour
Team leaders should give feedback based on the behaviour of team members, not on the person or personality of a team member.

For example:
A team leader observes a team member slouching against a wall. The team leader says "Don't be lazy."

This is incorrect because the team leader is making judgment on the team member's personality. The team leader should say "Stand up straight." This statement does not make any judgment but focuses directly on the behaviour required by the team member.

Keeping it Neutral
Team leaders should give feedback that is unbiased and does not make judgments. When a team leader is objective when giving feedback, the team members can determine for themselves the effect of their behaviour. This presents a more meaningful learning opportunity for team members.

For example:
The team leader observes a team member arriving late again. The team leader says "You are late a lot."

This is incorrect because the team leader has made a judgment on how many times the team member has been late. The team leader should say "You have been late three times in the past two months." This is a statement of fact.

Using it to Inform
Team leaders should give feedback that is enlightening and does not advise. When the team leader gives feedback, it leaves the team members free to draw their own conclusions. This freedom allows the team members to decide what actions are necessary to change their behaviour.

For example:
A team leader does an inspection and observes that a team member's boots are not up to standard. The team leader says "Everyone needs to work on their boots." The team leader should say "Our team's boots are not meeting inspection standard." This statement allows team members to decide what should be done.

Making it Supportive
Team leaders should give feedback that is reassuring and not threatening. When the team leader gives feedback that is supportive, it does not sound like a put-down. The choice of language and tone must be carefully considered. Even the friendliest and best intentioned feedback can sound intimidating.

For example:
A team leader observes a team member leading a team-building activity. The team leader says "I want to talk to you about that activity." This may be perceived as frightful and ominous. The team leader should say "I thought your activity went well, but let's have a chat about making it even better." This statement starts with something positive and then offers and opportunity to discuss ways of improving.

Keeping it Simple

Team leaders should give feedback that is uncomplicated. Team members can usually only process one or two pieces of information at any one time. If team leaders overload team members with too much feedback, there is a possibility that the information will not be received. Feedback on one or two major points is more useful than feedback on six or seven minor points.

For example:
A team leader supervises as a team member conducts an inspection. The team leader notices that the team member's uniform and boots are not up to inspection standard. The team member starts the inspection at the cadet's back and continues to make errors. The team leader says "Very few things went correctly during that inspection—you look bad, you started with their backs and your comments made no sense."

This is incorrect because the team leader is focusing on too many issues at once. The team leader should have said "Very few things went correctly during that inspection and we will start with your uniform." This allows the team member to focus on one behaviour at a time.

STEPS FOR PROVIDING FEEDBACK
The purpose for providing feedback is to let team members know how they are doing and when they are not meeting expectations. Team leaders should ensure that feedback is given when team members meet and / or exceed their commitments, as well as when team members do not meet their commitments. There are five steps for providing feedback.

Planning What to Say. Team leaders need to plan what they will say during feedback using the ground rules for providing feedback. Team leaders should think ahead of time about the team member's behaviour to be discussed. Team leaders should also have suggestions for improvement; however, these ideas should only be given if the team member cannot generate suggestions for improvement themselves.

Providing Examples of Behaviours. Team leaders need to give feedback that provides examples of the behaviour that needs to change. Giving unclear or vague examples may lead to anxiety in team members because they are not sure what behaviour needs to be modified.

Allowing Time for Feedback. Once team leaders have provided examples to the team members, they should allow time for discussion. The team members may agree, disagree or provide their perspective of the situation to the team leader. The team members may need to ask for clarification of the behaviours or they may ask for suggestions to assist them in changing their behaviour.

Motivating. Once team leaders have allowed time for discussion of the feedback, team leaders should motivate the team members. The team member may be disappointed by the feedback so the team leader should encourage and stimulate them to reach their goals.

Setting a Timeline for Action and Follow-Up. Team leaders need to set a timeframe for action by the team member to check for progress on the behaviour change. Team leaders need to follow up to ensure the team members are making the corrections required.

RECEIVING FEEDBACK
In every feedback session, there must be a sender and a receiver. When receiving feedback, there are five considerations.

Seeing Each Feedback Session as a Learning Opportunity. Each time feedback is received, the feedback session should be seen as a learning opportunity because ideas are generated on how to improve performance. Whether the idea comes from the receiver or the sender, acting on suggestions usually leads to developing skills and knowledge.

Actively Listening to the Sender's Ideas. Active listening encourages the sender to present their feedback in a non-threatening environment. Active listening on the part of the receiver shows the sender that their feedback is important.

Asking for More Information if the Ideas are Not Understood. When the sender gives feedback and the ideas are not understood, the receiver should ask for more information. By asking questions for clarification, the receiver should be able to understand the sender's intent.

Being Honest About How the Feedback is Affecting One's Emotions. Receiving feedback can make the receiver feel uncomfortable. The receiver should be honest with the sender about how the feedback is affecting them. As the receiver, try not to get emotional or take the feedback personally.

Remaining Open-Minded About Future Learning Opportunities. It is important to be open-mined about future feedback. Senders may follow up on their feedback and may even provide even more feedback. The receiver should be aware of these future learning opportunities.

CLOSING STATEMENT - Providing feedback is an essential skill for a team leader. Feedback is given to help team member's improve. Providing feedback correctly to team members gives the team members regular guidance to complete their tasks.

EO M403.05 – PARTICIPATE IN A MENTORING RELATIONSHIP

IMPORTANCE
It is important for cadets to participate in a mentoring relationship to assist in the development of their leadership abilities. The mentoring relationship provides an opportunity to expand leadership knowledge and skills of participants, enhances communication skills, resolves conflict and promotes constructive feedback, and should aid in leadership development.

THE MENTORING RELATIONSHIP
A mentoring relationship is an association between two people that focuses on self-development. One is the mentor; the other is the cadet being mentored. Both individuals are expected to learn from the relationship.

Recognizing the Purpose of a Mentoring Relationship
The purpose of the mentoring relationship is to share experiences between the mentor and the cadet being mentored, so the cadet being mentored is better prepared to move forward through the program with knowledge and confidence.

Identifying the Benefits of Participating in a Mentoring Relationship
The most significant benefit for the mentor is the realization that they have inspired the cadet to perform at higher levels than the cadet would have without a mentor. The basic benefit for a cadet being mentored is to show growth in skills and become a more independent and effective cadet.

Contributing to a Mentoring Match
Both the mentor and the cadet being mentored will have input with whom they are matched. The mentoring relationship is based on trust; ensure a long-term and valuable connection can be made with the person chosen.

Being Open to New Things
For a mentoring relationship to be successful, both individuals must be willing to try new things. Expanding boundaries and increasing knowledge are foundations of the mentoring relationship. Being receptive to new ideas and experiences takes courage.

Being Responsive to Suggestions and Constructive Criticism
The mentor should use constructive criticism and attempt to provide feedback that will assist the cadet being mentored. The task of the cadet being mentored is to be receptive to recommendations being made.

Providing Feedback to the Mentor
It is important that the cadet being mentored provides feedback to the mentor. This feedback should be based on feelings, both positive and negative, and observations. If the cadet being mentored does not express feelings to the mentor about the relationship, then progress may be hindered.

Learning From the Mentor's Example
It is up to the mentor to set an example that the cadet being mentored would want to emulate. This example should be in all facets of the program. The cadet being mentored should learn not only from the mentor's successes but from the mentor's failures.

Participating in Mentoring Activities
The cadet being mentored must be prepared to participate in mentoring activities. These activities may include reflection, self-assessment, and discussions about successes, problems and failures. The mentor must also be prepared for each mentoring session. They need to have an agenda or plan of what will be discussed and ensure that the discussions stay on track.

Appreciating the Mentoring Relationship
An effective mentoring relationship must be respected by both people involved. Each person should have a high regard for the other in the relationship. Appreciating the other person for their effort, time and accomplishments can help ensure a long-lasting and mutually beneficial partnership.

FORMAL MENTORING
Formal mentoring is a process where the mentor and cadet being mentored have regular meetings to discuss feedback. By the end of each meeting, expectations for the participants are agreed to. Usually, formal mentoring has specific goals such as the transfer of knowledge from the mentor to the cadet being mentored and developing the mentored cadet's leadership skills.

INFORMAL MENTORING
Informal mentoring is a practice where the mentor and the cadet being mentored discuss feedback. Informal mentoring is similar to teaching / coaching on the spot. There are no specific meetings during informal mentoring. The dialogue between the mentor and the cadet being mentored takes place as soon as possible after the activity or task.

STEPS OF A FORMAL MENTORING SESSION
Mentoring is results-oriented. The mentor and the cadet being mentored must see results for the mentoring sessions to be considered successful.

A formal mentoring session has four steps:

1. **Getting acquainted.** The initial mentoring session must have an introduction where both the mentor and the cadet who is being mentored provide a few details about themselves. This step should allow both participants to establish a bond of trust.
2. **Setting goals.** During this step, goals are established. Work must be done to ensure the goals are specific, measurable, achievable, relevant, and timed. These goals should be in writing.
3. **Meeting goals and expectations.** During this step, the cadet being mentored must describe how they are going to meet the goals just set. In subsequent mentoring sessions, the cadet being mentored should be praised for achieving goals but may need to account for why the goals and expectations were not met.
4. **Concluding the mentoring session.** This conclusion should begin with the cadet being mentored giving a short explanation of new goals to be met and how the cadet plans to achieve them. The mentor should encourage the cadet being mentored and arrange the time and date for the next mentoring session.

MENTORING SESSION
Successful mentoring is based on the quality of the relationship between both participants. Trust is a basic ingredient to this relationship. The mentor must build and maintain trust by:

- keeping the mentoring relationship professional;

- keeping the conversation during the mentoring session in confidence; and
- using the ground rules for feedback during a mentoring session.

KEEPING THE MENTORING RELATIONSHIP PROFESSIONAL
Mentors must maintain a professional relationship with the cadet being mentored. The position of mentor can be rewarding but comes with inherent risks. Mentors need to remember that they are in a position of authority and must use their authority wisely. Mentors may deal with the cadets being mentored in a friendly manner; however, mentors cannot be their friends.

KEEPING THE CONVERSATION DURING THE MENTORING SESSION IN CONFIDENCE
The mentor and the cadet being mentored should keep the conversation between them in confidence. The dialogue should be kept private to avoid embarrassment by either participant.

USING THE GROUND RULES FOR FEEDBACK DURING A MENTORING SESSION
The mentor should use the ground rules for feedback during a mentoring session. It is important to provide feedback during a mentoring session correctly by:

- focusing on what is observed;
- focusing on behaviour;
- keeping it neutral;
- using it to inform;
- making it supportive; and
- keeping it simple.

One of the duties of a team leader is to mentor cadets. The format for a mentoring session is done using the following sequence:

1. The mentor and the cadet being mentored will sit across from each other and begin the session by introducing themselves.
2. The mentor and the cadet being mentored must set goals if goals have not been set.
3. If the goals have been set, the mentor will review the goals and expectations and ask the cadet being mentored how they are meeting those goals and expectations. The cadet being mentored is required to use self-reflection during this review stage.
4. Before leaving the mentoring session, the cadet being mentored must be able to explain to the mentor their plan to keep old goals or set new goals. The mentor should encourage the cadet being mentored and arrange the time and date for the next mentoring session.

CLOSING STATEMENT - Being mentored and mentoring others is one way to enhance skills and knowledge of leadership. The mentoring relationship develops trust and trust is the foundation of leadership. The mentoring relationship provides an opportunity to expand leadership knowledge and skills, enhances communication skills, resolves conflict and promotes constructive feedback.

EO M403.06 – ACT AS A TEAM LEADER DURING A LEADERSHIP APPOINTMENT

IMPORTANCE - It is important for cadets to understand the concept of and steps involved in successfully completing a leadership appointment. All cadets will be assessed during a leadership appointment in Phase Four. When appointed in their given role, each cadet must know the expectations for successful completion. An effective team leader will merge together what has been learned throughout previous leadership training and practice, including problem solving and supervision.

LEADERSHIP ASSIGNMENT
A leadership assignment is a specific, short- or long-term practical leadership opportunity during which the team leader must apply their leadership skills. The team leader will have temporary team members either within or outside their peer group for whom they will be responsible. The team will accomplish a singular minor duty or task.

LEADERSHIP APPOINTMENT
A leadership appointment is a specific long-term practical leadership opportunity that is more comprehensive in nature than a leadership assignment. The team leader must apply their leadership knowledge and skills and display the core leadership qualities of a cadet. The team leader will have an assigned, established team of cadets outside their peer group. The team will accomplish a singular major duty or task. These may be organizational appointments (eg, Divisional Petty Officer, Ship's Writer, etc.), training appointments (eg, Phase Instructor, Drill and Ceremonial Instructor, etc.) or supplementary appointments (eg, Canteen Steward, Drill Team Commander, etc.). In generating leadership appointments, consideration must be given to the duration of the major duty or task and frequency of opportunities to exercise leadership. The team leader is expected to meet with their team on a number of occasions over a period of time. Leadership appointments may be held by a single Phase Four cadet (eg, Drill Team Commander) or the Phase Four cadets may rotate through a position (eg, Ship's Writer). If a Phase Four cadet rotates through a leadership appointment, the appointment must be meaningful for the cadet and be of a duration that allows the cadet to meet the objectives of applying their leadership knowledge and skills and displaying the core leadership qualities of a cadet.

The team leader must supervise team members, communicate with team members to solve problems, strive to meet the needs and expectations of team members, motivate team members, and provide feedback to team members. The team leader must attempt to develop the skills and knowledge of their team members. Direction for the leadership appointment must be given by a superior, usually an activity leader or activity manager.

SAMPLE YEAR FOUR LEADERSHIP APPOINTMENTS
Organizational Appointments:

- Coxswain,
- Regulating Petty Officer,

- Divisional Petty Officer,
- Stores Petty Officer,
- Ship's Writer, and
- Training Petty Officer.

Training Appointments:
- Phase Instructor,
- Sail Instructor,
- Seamanship Instructor,
- Drill and Ceremonial Instructor, and
- Fitness and Sports Instructor.

Supplementary Appointments:
- Drum Major,
- Band Section Leader,
- Canteen Steward,
- Drill Team Commander,
- Marksmanship Team Captain,
- Range Assistant,
- First Aid Team Captain,
- Biathlon Team Captain, and
- Sports Team Captain.

LEADERSHIP APPOINTMENT

When conducting the leadership appointment, use the following steps:
1. prepare for the leadership appointment;
2. brief the team members at the onset and then throughout the leadership appointment;
3. carry out the tasks associated with the leadership appointment;
4. provide feedback to the team members throughout and at the completion of the leadership appointment; and
5. meet with the activity manager throughout and at the completion of the leadership appointment to discuss the outcomes of the leadership appointment.

PREPARING FOR THE LEADERSHIP APPOINTMENT

Ensuring the Required Resources are Available

Make sure all the resources necessary for using during the appointment are available. For example, if the appointment is to act as a flag party commander, the flags, poles, etc will need to be available, both for practice and performance opportunities.

Completing a Time Appreciation

Be aware of the end date of the appointment. If the appointment is comprised of stages or phases, the leader must determine how much time to allocate to each stage or phase. All members involved in the appointment must be aware of the current date and the end date of the appointment.

Making a Plan

Make a plan to be successful in the appointment by:
1. determining what stages or phases comprise the appointment;
2. determining tasks inherent within the appointment;
3. developing a process to accomplish all tasks; and
4. identifying and allocating resources.

BRIEFING TEAM MEMBERS DURING THE LEADERSHIP APPOINTMENT

Communicating the Overall Plan

Explain how the appointment will be carried out. All team members should know what is involved as the leader carries out the appointment. This may include identifying various stages and phases.

Communicating the Tasks Involved in the Leadership Appointment

Explain the tasks involved within the leadership appointment. Leadership appointments may be comprised of a series of tasks.

Assigning Tasks to Team Members as Applicable

Assign each team member the tasks that must be completed within the scope of the appointment. Every team member should be actively engaged in a meaningful activity.

Ensuring the Team Members Understand Their Tasks

Confirm the team members understand their tasks and ask the team members if they have any questions. The team leader should also ask a few questions to various team members to ensure comprehension. When team members are assigned specific tasks, it is important they understand what is expected of them.

CARRYING OUT THE TASKS ASSOCIATED WITH THE LEADERSHIP APPOINTMENT

Supervising Team Members

Throughout the leadership appointment, the team leader will have many occasions during which to supervise team members. The most important aspect of supervision is to ensure the tasks are being conducted safely. Supervision also allows the team leader to provide ongoing feedback to team members.

Ensuring the Tasks Within the Appointment are Progressing According to the Time Allotted

Do not wait until the last minute to ensure tasks are being completed. If tasks are not being completed as planned, whether too slow or too fast, the plan may need to be adjusted and feedback should be given. Careful monitoring of team members and the overall

situation will ensure the team leader is leading successfully during the leadership appointment and the major duty or task will be accomplished.

Providing Feedback to the Team Members Throughout the Appointment
The team leader will provide feedback throughout the appointment. This feedback may be given to the team as a whole or it may be given to individual team members. Feedback should be provided such that it is frequent, accurate, specific, and timely. Successful supervision allows for ongoing feedback to be provided to the team. Feedback is necessary for the team members as it will allow them to develop as leaders also.

Modifying the Plan as Required
If the plan is not working, take time to modify it. If help is required from team members, ask for it. Modifying aspects of the plan partway through the appointment may benefit the outcome; however, always keep time limits and constraints in mind. If the plan is being revised, communicate the new plan to the team members and work with them to implement it.

PROVIDING FEEDBACK TO THE TEAM MEMBERS UPON CONCLUSION OF THE LEADERSHIP APPOINTMENT
It is important to give feedback to the team members upon conclusion of the leadership appointment. It is vital for the team leader to spend time focusing on how the team members worked together to achieve a common goal. When team members successfully complete a task, praise should be given. It is important to recognize dedication shown in seeing a task through to completion. Team leaders should try to recognize each team member for their contribution to the completion of a task.

The team leader should ask for feedback on the appointment from the team members. This can be done using general questions about the leadership appointment, such as:

- What was learned during the appointment?
- Was the goal met? What contributed to the success?
- How did everyone interact during the appointment?
- Were there behaviours that helped and / or hindered during the appointment?
- Were there any cadets who were not motivated to participate in the activity? How did this affect the morale of the remainder of the team?
- Were there leaders that emerged from within the team?

MEETING WITH THE ACTIVITY MANAGER TO DISCUSS THE OUTCOMES OF THE LEADERSHIP APPOINTMENT
Just as the team leader will provide ongoing feedback to the team members during the leadership appointment, the team leader will need periodic feedback from the activity manager to discuss and monitor progress of the major duty or task. Feedback from the activity manager should assist the team leader in improving performance. Once the leadership appointment is concluded, the team leader should meet with the activity leader for an overall debriefing. This feedback will aid the team leader during future leadership appointments.

CLOSING STATEMENT - When appointed as team leader for a given major duty or task, the team leader is expected to follow a series of steps for successful conclusion of the appointment. Being able to motivate cadets, solve problems, supervise followers, give feedback and develop the skills and knowledge of team members during a leadership appointment is an expectation of all year four cadets.

EO C403.01 – PARTICIPATE IN A LEADERSHIP SEMINAR

IMPORTANCE - It is important for cadets to participate in a leadership seminar so they have an opportunity to further develop their leadership skills and knowledge. Leadership seminars allow cadets to discuss the best practices and explore leadership topics. This EO may be an introduction to the seminar format, which will be used throughout Phase Five.

OBJECTIVE
The objective of this activity is to have the cadets participate in a leadership seminar.

CLOSING STATEMENT - Participating in leadership seminars may assist you in further developing leadership skills and knowledge. One can never know all there is to know about leadership and seminars are an important tool to further explore each leadership topic. In addition, the seminar format used during this lesson will be used throughout Phase Five.

PO X04 – PHYSICAL ACTIVITIES

Participate in the following lessons:

☐ MX04.01 Participate in 60 Minutes of Moderate- to Vigorous-Intensity Physical Activity (MVPA) and Track Participation in Physical Activities

☐ MX04.02 Identify Strategies to Improve Participation in Physical Activities and Participate in the Cadet Fitness Assessment (CFA)

#	Date	Result	Beep Test	Sit Ups	Curl ups
1					
2					
3					

☐ MX04.03 Participate in the CFA and Identify Strategies for Improving Personal Physical Fitness

☐ CX04.01 Participate in the CFA and Identify Strategies for Improving Personal Physical Fitness

☐ CX04.02 Participate in Activities that Reinforce the Three Components of Physical Fitness

☐ CX04.03 Participate in a Cooking Class

☐ CX04.04 Attend a Personal Fitness and Healthy Living Presentation

☐ CX04.05 Attend a Local Amateur Sporting Event

PO X05 – PHYSICAL FITNESS

Participate in 4.5 Hours of Physical Fitness:

ACTIVITY:
DATE:
HOURS:

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HOURS:

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PO 406 – MARKSMANSHIP

☐ M406.01 Participate in a Recreational Marksmanship Activity

☐ C406.01 Assist the Range Safety Officer (RSO)

☐ C406.02 Score Air Rifle Marksmanship Targets

☐ C306.01 Identify Civilian Marksmanship Organizations

☐ C306.02 Correct Marksmanship Error

☐ C306.03 Fire the Cadet Air Rifle from the Standing Position

☐ C106.01 Participate in a Recreational Marksmanship Activity

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EO M406.01 – PARTICIPATE IN A RECREATIONAL MARKSMANSHIP ACTIVITY

IMPORTANCE - It is important for cadets to participate in a recreational marksmanship activity because it allows them to experience marksmanship in a fun, dynamic and safe setting.

CONDUCT A RANGE BRIEFING

1. Explain pertinent sections of the local range standing orders.
2. Review general rules observed on all ranges, to include:

   (a) proving that rifles are safe prior to being picked up, handed to or received from another person;
   (b) never pointing rifles at people;
   (c) inserting safety rods into the barrels of rifles when not in use on the range;
   (d) never horseplaying on a range;
   (e) always pointing rifles down range; and
   (f) following the Range Safety Officer's (RSO) directions and orders at all times.

3. Review commands used on an air rifle range
4. Describe the layout of the air rifle range.
5. Review hand-washing procedures on completion of firing. This is important because each time a person handles pellets, a small trace of lead is left on their hands. To decrease the risk of lead poisoning, it is important that all persons wash their hands thoroughly after handling pellets.

CLOSING STATEMENT - Marksmanship is a fun and exciting activity that requires personal discipline and teamwork skills. This activity has also developed into highly competitive levels at the provincial, regional, and national levels.

EO C406.01 – ASSIST THE RANGE SAFETY OFFICER (RSO)

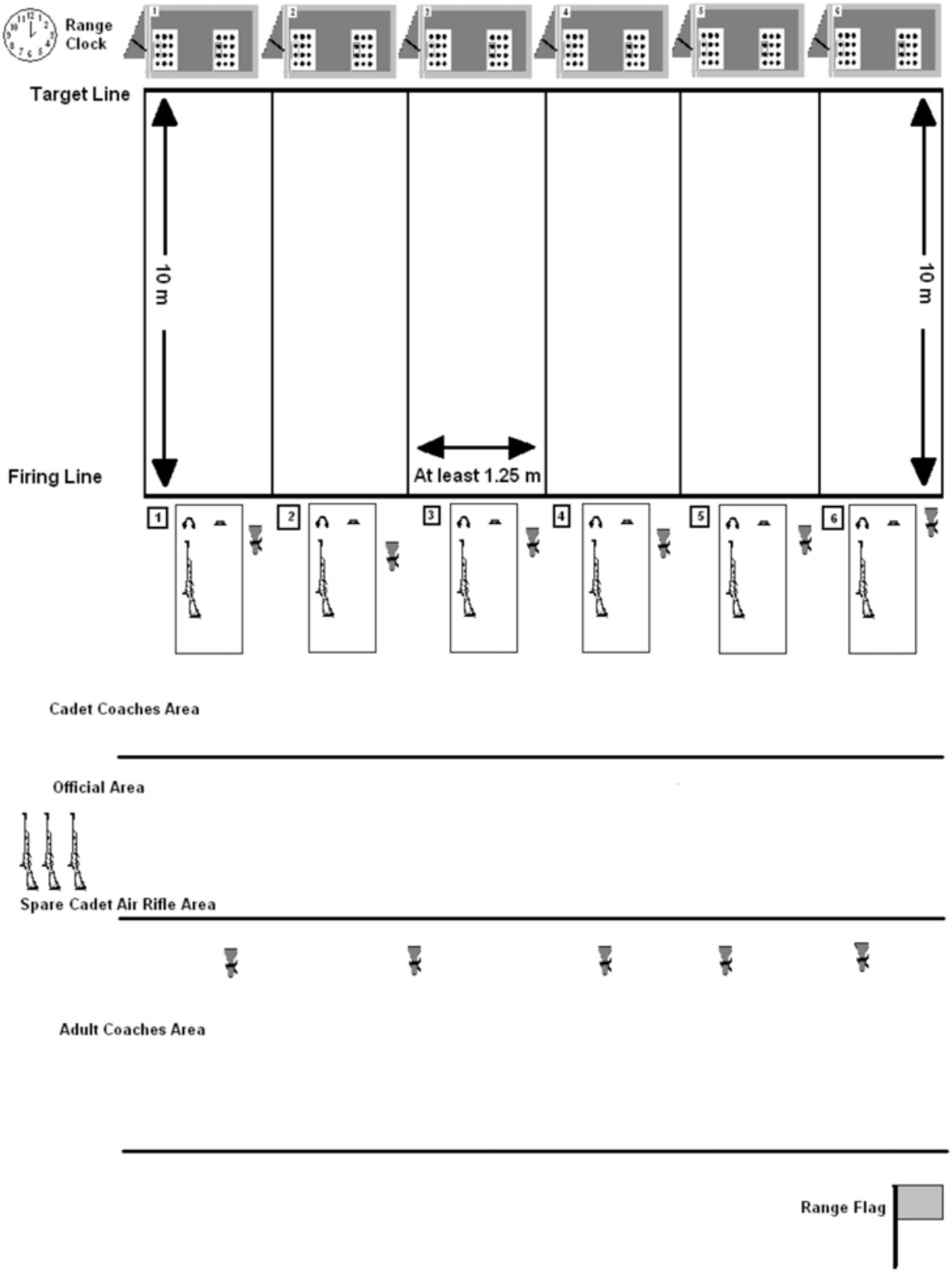
IMPORTANCE
It is important for cadets to have knowledge of how to assist the Range Safety Officer (RSO) on the range. In order to assist the RSO, cadets must know how to set up and dismantle an air rifle range, control pellets perform the duties of a range sentry, and score targets.

SETTING UP AN AIR RIFLE RANGE
Once the required air rifle range equipment has been collected and the cadet air rifles have been inspected, the equipment can be set up. The specific details of an air rifle range layout may vary depending on the type of air rifle range; however, the dimensions and location of the equipment will remain the same. The air rifle range will be set up by:

1. **Post warning signals.** A sentry should be posted at access points if they cannot be permanently blocked (eg, a door to a gymnasium that does not have a lock).
2. **Set up equipment at the backstop.** At one end of the room, the target frames will be set up in front of a wall. Care should be taken to avoid using a wall with windows or other items (eg, light switch, fire alarm, smoke detector) that would be damaged by a stray pellet. If this is unavoidable, a plywood covering should be placed over those items. The front of the target frame must be perpendicular to the floor and aligned with the front of other target frames along a target line. Additional lighting may be required for the target during some competition activities to satisfy competition rules. Lighting will not interfere with the cadets' view of the target frame.
3. **Indicate firing lanes.** Target frames will be centred in a lane at least 1.25 m wide and extend away from the target line toward the firing point a distance of 10 m. 10 m from the target line, another line will be marked on the floor. This is the firing line and no person will move forward of it without permission from the RSO.
4. **Place equipment at the firing point.** Behind the firing line is the firing box, an area at least 1.25 m wide by 2.5 m deep. A firing box will be allocated for each firer. A shooting mat will be placed within the firing box aligned with the firing line

(during standing position firing no mat is required). Safety glasses / goggles will be placed on every shooting mat. An area behind the firing box will be allocated for range staff.

5. **Place equipment behind the firing point.** The area behind the firing point contains the table(s) required to set up a pellet distribution point, scoring area or other workspace as required for the specific air rifle marksmanship activity being conducted. The first aid point with stretcher is located in this area and must be clearly identified. The handwashing facility may be located on the range behind the firing point or in a washroom within the building.
6. **Place the cadet air rifle at the firing point.** A cadet air rifle with cadet air rifle safety rod will be the last item placed on the air rifle range. When removing the cadet air rifle from the case, control the muzzle by carrying the cadet air rifle in a vertical position with a cadet air rifle safety rod inserted into the barrel. Once the cadet air rifle is placed on the firing point, the cadet air rifle safety rod may be removed.



DISMANTLING AN AIR RIFLE RANGE

Once the air rifle marksmanship activity has been completed, the air rifle range can be dismantled. The air rifle range will be dismantled by:

1. **Store the cadet air rifle.** After an air rifle marksmanship activity, the cadet air rifle is the first piece of range equipment secured. A cadet air rifle safety rod is inserted into the barrel before the cadet air rifle is moved from the firing point. Cadet air rifles are securely stored at the unit according to current policy guidelines.
2. **Store the equipment behind the firing point.** Equipment used behind the firing point is stored next. Equipment must be cleaned (if required) and stored to prevent damage. If the first aid kit has been used, it may require refilling.
3. **Store the equipment at the firing point.** Equipment used at the firing point is stored next. Equipment must be cleaned (if required) and stored to prevent damage. Care should be taken to minimize scratching of safety glasses / goggles. Shooting mats are folded or rolled properly to minimize rips or tears. Spotting scopes are stored in their cases (if applicable).
4. **Clean the backstop area.** Once the firing point equipment has been secured, the target frames are thoroughly emptied of spent pellets. The target holder is cleaned of any material (eg, targets, thumbtacks, staples) and the target frame is folded and stored.
5. **Clean the firing lanes.** Since lead dust in the air is a minor hazard to safety, a method of sweeping / mopping that reduces the amount of dust produced should be used. One set of cleaning gear is used after air rifle marksmanship activities to limit cross-contamination of other areas of the building.
6. **Remove the warning signals.** Once all other air rifle marksmanship equipment has been secured, the range warning signals are removed. This will indicate that the room in which the temporary indoor range was set up is now cleaned and ready for general use.

PELLET CONTROLLER

During an air rifle marksmanship activity, cadets may be appointed to assist the RSO by acting as a pellet controller. The duties of a pellet controller include:

- **Maintain possession of pellets at all times.** Pellets are placed in the possession of the pellet controller. They ensure the pellets are secured at all times by means of direct supervision.
- **Distribute pellets.** Depending on the specific type of air rifle marksmanship activity being conducted, the pellet controller counts pellets into containers that will be placed on the firing point upon the RSO's command.
- **Dispose of pellets.** Once the air rifle marksmanship activity is concluded, the pellet controller ensures that the area around the target frame is swept. The spent pellets are collected into a container for disposal by the RSO.
- **Record the number of pellets used during the activity.** As the activity proceeds, the pellet controller tracks the number of pellets being used during each relay. Once the activity is complete, the total number of pellets used can be calculated. Any additional pellets given by the RSO / range assistants to cadets during the activity (eg, misfires, deformed pellets) are added to the total. This information is used by the RSO to track the quantity of pellets available at the unit.
- **Record the number of pellets used for each rifle.** The Cadet Air Rifle Usage Log shows the RSO when one thousand pellets have been fired by each cadet air rifle. When one thousand pellets have been fired the cadet air rifle requires cleaning. The pellet controller records the total number of pellets used in each cadet air rifle during the air rifle activity.

RANGE SENTRY

A range sentry is responsible, during the course of firing, to restrict entry on to the range and for changing warning signals when instructed to do so by the RSO. They must be able to constantly communicate with the RSO to report any safety concerns.

Restrict Access to the Range During Firing

On most indoor temporary ranges, access points exist and must be secured during the course of firing. By posting a range sentry outside an access point, the RSO can be assured no one can access the range and be struck by pellets. On outdoor ranges, roads leading to the range may need to be blocked and a range sentry posted to control vehicle access. In a situation where the range sentry is unable to directly attract the attention of the RSO, a means of communication such as a hand-held radio may be required.

Control Range Warning Signals

Range sentries are responsible for controlling the range warning signals. At the commencement of an air rifle marksmanship activity, a green flag / light / signal shall be posted to alert people that the range is in use but no live firing is currently in progress. The location of warning signals vary based on the local specifications of the air rifle range being used. Typically, warning signals are posted at the backstop, firing point and on access roads leading to the range.

For indoor ranges, warning signals are posted at entranceways to the room in which the range is set up. On the command of the RSO, the range sentry changes the green warning signal to red. The red signal alerts people that the range is in use and live firing is in progress. The red warning signal is posted from before the course of fire begins until the RSO has cleared the last cadet air rifle of the relay. At this time, on the command of the RSO, the range sentry changes the warning signal back to green. At the conclusion of the air rifle marksmanship activity, all warning signals are removed to indicate that the range is no longer in use.

Notify the RSO of Safety Concerns Inside / Outside the Range Area

During the conduct of an air rifle marksmanship activity, the range sentry is responsible for bringing safety concerns both on and off the range area to the attention of the RSO. These concerns may include wildlife entering the range or visitors requesting access to the range.

FIRING POINT ASSISTANT

A firing point assistant is appointed by the RSO; usually to a specific number of firing points (eg, firing points 1–4). Their main responsibility is to ensure that the firers are carrying out the RSO's commands safety and correctly.

Supervise Firers Responding to Range Commands

As the RSO gives commands, the firing point assistant observes the firers to ensure they respond correctly. Each cadet should know exactly what to do when given a command on the range. When a cadet does not perform the given command, the firing point assistant will move to the cadets firing point to ensure they are capable of firing on the range and assist where necessary. If safety is a concern, notify the RSO as soon as possible.

Assist Firers as Necessary
Some cadets may require assistance throughout the firing practice (eg, pumping the cadet air rifle, tightening their sling). The firing point assistant will look for opportunities where assistance is required, and help out the cadets as necessary.

Correct Errors
When errors are made, the firing point assistant will correct them immediately. To correct an error, explain what was done wrong, demonstrate how to perform it correctly (if able to do so) and observe the cadet perform.

Notify the RSO of Safety Concerns
Any safety concerns observed on the range shall be brought to the attention of the RSO immediately.

TARGET SCORER
The target scorer is responsible for scoring targets once they have been fired. Once a target has been scored, the score is recorded directly on the target. In some cases, an RSO may require the scores to be recorded on a spreadsheet or separate piece of paper.

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.

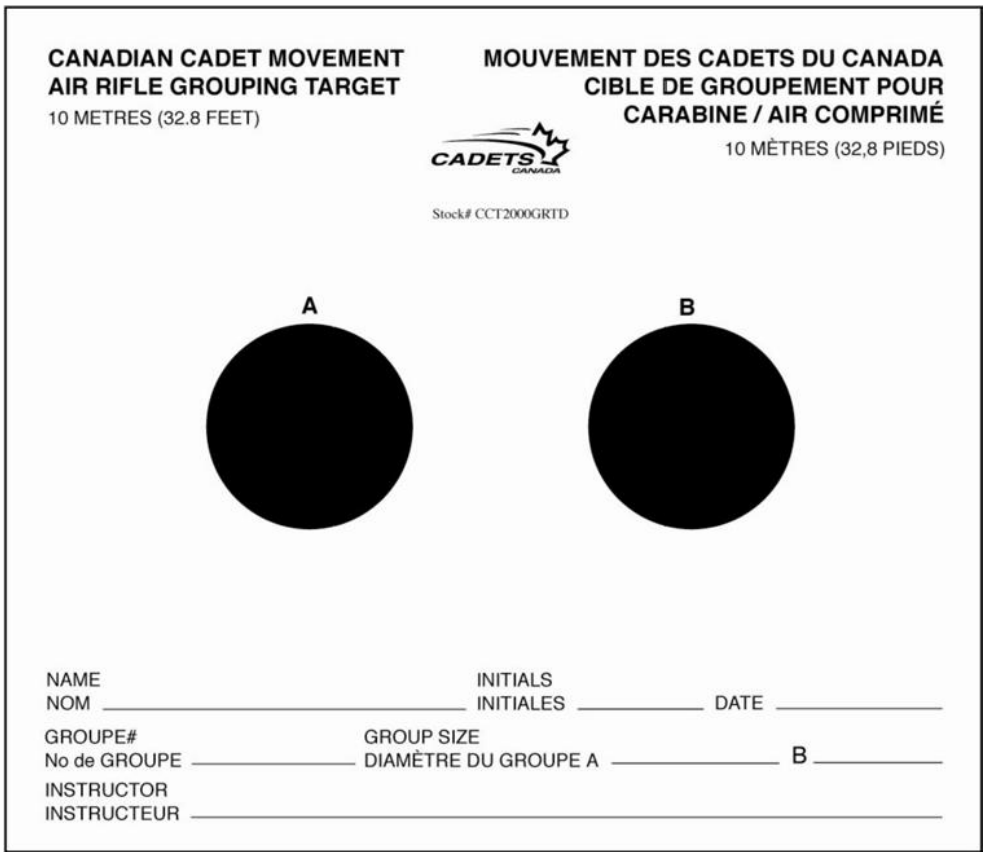
CLOSING STATEMENT - There will be many opportunities to assist the RSO when completing marksmanship activities. Knowing how to set up and dismantle an air rifle range, enforce safety, control pellets, assist on the firing point and score targets are critical duties that have to be completed whenever completing air rifle marksmanship activities. The ways to assist an RSO produce a variety of leadership opportunities.

EO C406.02 – SCORE AIR RIFLE MARKSMANSHIP TARGETS

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.

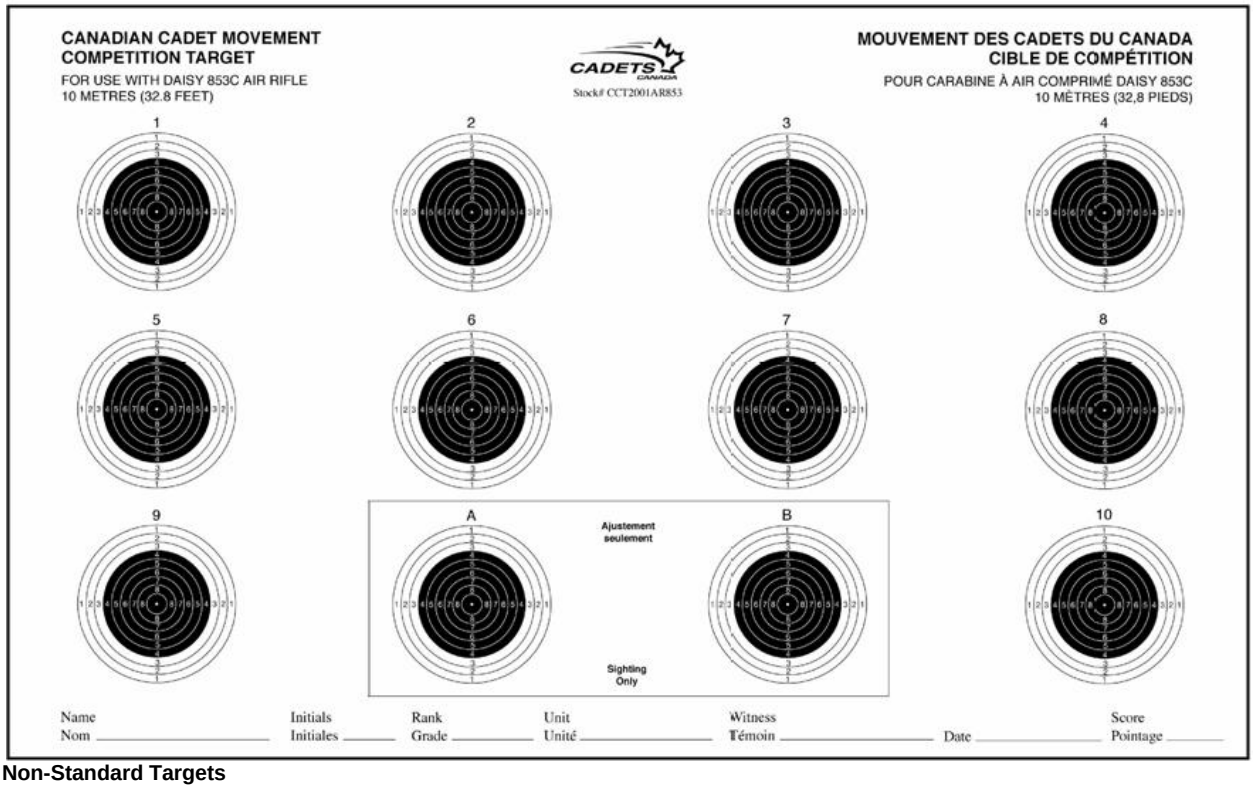
AIR RIFLE MARKMANSHIP TARGETS
There are two official targets used for air rifle marksmanship activities: the CCM Air Rifle Grouping Target (CCT2000GRTD) and the CCM Competition Target (CCT2001AR853). There are various targets used in fun and timed air rifle marksmanship activities. These other targets 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.



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 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.



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 nonstandard targets may be developed for use during fun and timed air rifle marksmanship activities by the activity leader as required.

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.
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.
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.**
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.

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.

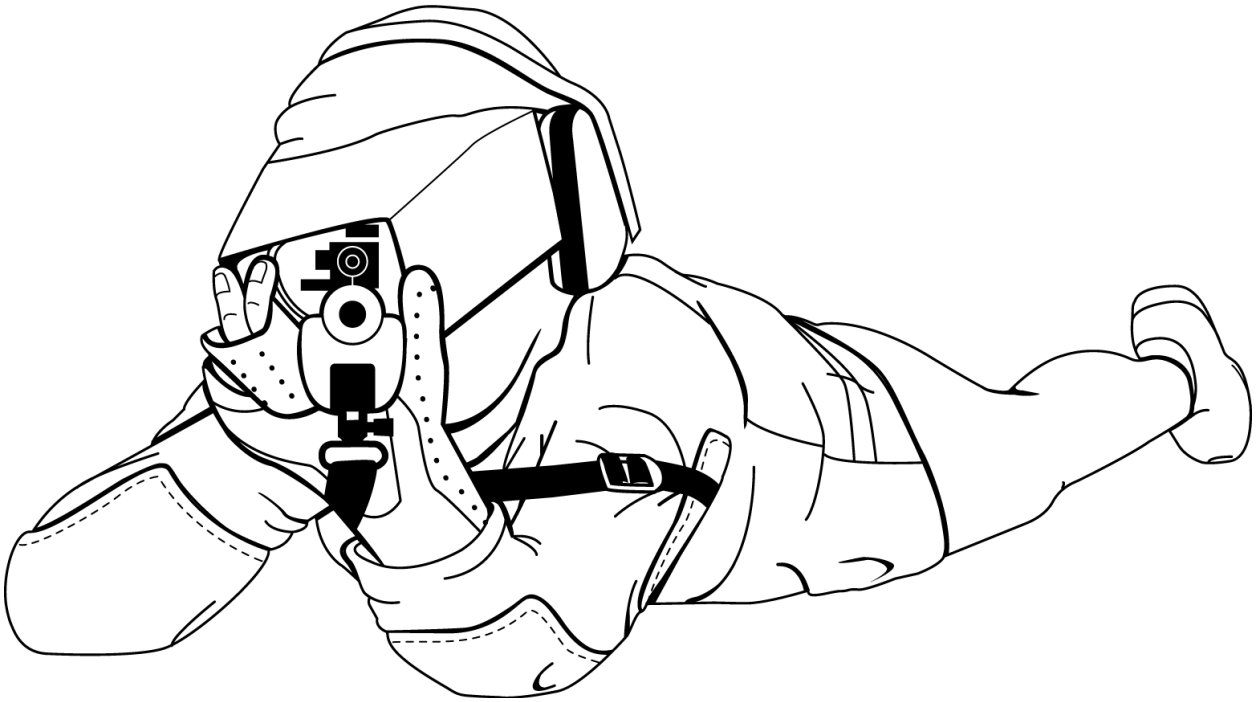
2. **Calculate penalties.** When scoring a target there are two penalties the scorer can determine and calculate. If a penalty is imposed, the rule number and penalty amount is noted next to the applicable diagram. The following rules are excerpts from the Canadian Cadet Movement Marksmanship Championship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

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 occurrences in a Competition, but will be penalized two (2) points for each succeeding occurence.

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.

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.



PO 407 – GENERAL CADET KNOWLEDGE

☐ M407.01 Identify Phase Four Training Opportunities

☐ M407.02 Identify Year Four CSTC Training Opportunities

☐ C401.01 Prepare for a Merit Review Board

☐ C307.01 Participate in a Presentation Given by a Guest Speaker From the Regional Cadet Support Unit

☐ C307.02 Participate in a Presentation Given by the Cadet Liaison Officer

☐ C307.03 Participate in a Presentation Given by a Guest Speaker from the Navy League of Canada

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EO M407.01 – IDENTIFY PHASE FOUR TRAINING OPPORTUNITIES IMPORTANCE

IMPORTANCE - It is important for cadets to know what training will be conducted during Phase Four to give them an overview of what the training year will entail. This lesson will prepare the cadets for the training year and help generate interest in the topics.

OVERVIEW
The training program is broken into performance objectives (POs), which are the overall subjects, and enabling objectives (EOs), which are the topics within each PO. Training is conducted as mandatory and complementary components.

MANDATORY TRAINING
Mandatory training encompasses the EOs that all cadets must complete throughout the training year.

PO 401—CITIZENSHIP
Citizenship provides the cadets with an opportunity to identify the role of Youth Justice within Canada.

PO 402—COMMUNITY SERVICE
Community service provides the cadets with an opportunity to perform community service. The community service should provide a direct benefit to the community and promote good citizenship.

PO 403—LEADERSHIP
Leadership provides the cadets with an opportunity to apply their leadership knowledge and skills through practical application in a leadership appointment. The cadets will:

- use a team to accomplish a single major duty or task;
- act as a team leader;
- supervise and motivate team members;
- provide feedback to team members; and
- develop skills and knowledge of team members.

PO 404—PERSONAL FITNESS AND HEALTHY LIVING
Personal fitness and healthy living provides the cadets with an opportunity to update their personal activity plans (from Phase Three) for the training year. The cadets will:

- participate in the Cadet Fitness Assessment,
- update Personal Activity Plan, and
- evaluate Personal Activity Plan.

This PO gives the cadets some of the tools required to make informed choices in order to follow a healthy lifestyle. This is important as physical fitness is one of the aims of the Cadet Program.

PO 405—RECREATIONAL SPORTS
Recreational sports provide the cadets with an opportunity to participate in organized recreational team sports. This is important as physical fitness is one of the aims of the Cadet Program.

PO 406—AIR RIFLE MARKSMANSHIP
Air rifle marksmanship provides the cadets with an opportunity to participate in a recreational marksmanship activity.

PO 407—GENERAL CADET KNOWLEDGE
General cadet knowledge provides the cadets with the information required to serve as a member of a sea cadet corps. Cadets will:

- identify the training opportunities available in Phase Four, and
- identify the year four CSTC training opportunities.

PO 408—DRILL
Drill provides the cadets with an opportunity to direct a squad on the parade square. The cadets will:

- discuss professionalism while commanding a division,
- identify parade sequence,
- perform as a divisional petty officer on parade, and
- inspect a cadet on parade.

PO 409—INSTRUCTIONAL TECHNIQUES
Instructional techniques provides the cadets with an opportunity to instruct a lesson. The cadets will:

- identify methods of instruction,
- identify elements of a positive learning environment,
- describe learner needs,
- explain assessment, and
- instruct a 30-minute lesson.

PO 420—CANADIAN NAVY AND MARITIME COMMUNITY
Canadian Navy and maritime community provides the cadets with an opportunity to describe aspects of the Canadian Navy. The cadets will:

- describe current naval operations,
- describe the modernization of the Canadian Navy,
- describe the Canadian Coast Guard, and
- identify Transport Canada as a Maritime Agency.

PO 423—SHIP'S OPERATIONS
Ship's operations provides the cadets with an opportunity to learn to serve in a naval environment. The cadets will:

- identify aspects of a chart,
- use navigation instruments,
- describe latitude and longitude, and
- plot a fix.

PO 424—SAILING
Sailing provides the cadets with an opportunity to participate in a sailing weekend IAW the Canadian Yachting Association (CYA) White Sail Level II.

Seamanship Inter-Divisional Competition
The seamanship inter-divisional competition (SIDC) provides the cadets with an opportunity to compete with their peers in activities, such as:

- trivia questions from Phase training,
- ropework,
- ship's operations, and
- team building.

LEADERSHIP ASSIGNMENT
A leadership assignment is a specific, short or long-term practical leadership opportunity. The team leader must apply their leadership skills. The team leader will have temporary team members either within or outside their peer group. The team will accomplish a single minor duty or task. Leadership assignments in fourth year may be the same as third year. Each fourth year cadet has already completed at least two leadership assignments during their third year of training.

LEADERSHIP APPOINTMENT
A leadership appointment is a long-term practical leadership opportunity. The team leader must apply their leadership knowledge and skills and display the core leadership qualities of a cadet. The team leader will have an assigned, established team of cadets outside their peer group. These may be organizational appointments (eg, Divisional Petty Officer), training appointments (eg, Phase Instructor) or supplementary appointments (eg, Drill Team Commander). These appointments must be based on the frequency and duration of the major duties or tasks. The team leader must meet with their team on a number of occasions. Leadership appointments may be held by a single fourth year cadet (eg, Drill Team Commander) or the fourth year cadets may rotate through a position (eg, Canteen Steward).

The team leader must supervise team members, communicate with team members and solve problems, strive to meet the needs and expectations of team members, motivate team members, and provide feedback to team members. The team leader must attempt to develop the skills and knowledge of their team members. Direction for the leadership appointment must be given by a superior usually an activity leader or activity manager.

CLOSING STATEMENT - Being aware of the topics to be covered during Phase Four training will help generate interest in the training year. Being aware of the opportunities available throughout the training year may stimulate an interest in specific areas of training.

EO M407.02 – IDENTIFY YEAR FOUR CADET SUMMER TRAINING CENTRE (CSTC) TRAINING OPPORTUNITIES

IMPORTANCE - It is important for cadets to identify year four CSTC training and employment opportunities because they must decide what route fits them best based on their previous training. These opportunities will enable cadets to plan their professional development in the program by transitioning from a cadet course to a staff cadet. The ability to set early goals will prepare them for future opportunities.

AIR RIFLE MARKSMANSHIP
Cadets will develop marksmanship and biathlon knowledge and skills. Activities include:

- participating in advanced air rifle marksmanship training;

- participating in recreational marksmanship and biathlon activities;
- performing range assistant duties; and
- learning marksmanship instructional techniques.

FITNESS AND SPORTS
Cadets will improve individual fitness and sports knowledge and skills. Activities include:
- playing and developing skills in sports;
- participating in personal fitness activities; and
- learning fitness and sports instructional techniques.

MUSIC
Cadets will develop music knowledge and skills. Activities include:
- learning music theory;
- playing an instrument as part of an ensemble;
- playing an instrument as part of a military band;
- developing individual music skills; and
- learning music instructional techniques.

SAIL
Cadets will develop sailing skills and knowledge IAW the Canadian Yachting Association (CYA) Learn-to-Sail (LTS) Program. Activities include:
- developing sailing skills;
- learning sailing theory;
- developing fundamental coaching knowledge and skills; and
- obtaining small craft operation qualifications.

SEAMANSHIP
Cadets will develop seamanship knowledge and skills. Activities include:
- obtaining small craft operation qualifications;
- communicating in a naval environment;
- performing ropework;
- performing petty officer of the watch duties;
- performing coastal navigation;
- performing small craft maintenance; and
- marine engineering.

DRILL AND CEREMONIAL
Cadets will develop the knowledge and skills required to improve leadership and drill and ceremonial knowledge and skills. Activities include:
- developing leadership skills;
- performing naval ceremonial drill;
- performing advanced foot drill;
- delivering words of command;
- performing cutlass drill;
- performing flag drill;
- executing ceremonies; and
- learning drill instructional techniques.

COMMON COURSES
Air Rifle Marksmanship Instructor. The aim of this course is to improve the cadets' marksmanship and biathlon knowledge and skills and to prepare the cadets to assist in the delivery of marksmanship and biathlon training.

Fitness and Sports Instructor. The aim of this course is to improve the cadets' fitness and sports knowledge and skills and to prepare the cadets to assist in the delivery of fitness and sports training.

Military Band–Intermediate Musician. The aim of this course is to improve the cadets' music knowledge and skills and to prepare the cadets to assist in the delivery of music training.

Military Band–Advanced Musician. The aim of this course is to improve the cadets' music knowledge and skills and to prepare the cadets to assist in the delivery of music training.

ELEMENTAL COURSES
Intermediate Sail. The aim of this course is for cadets to become proficient in intermediate sailing skills and basic powerboat operation. Cadets will achieve CYA Bronze Sail Level IV and begin working toward achievement of CYA Bronze Sail Level V. In addition, cadets will receive Outboard Powerboat Operator certification through achievement of the Pleasure Craft Operator Competency (PCOC) and Small Boat Power qualifications (Modules 1 and 4 of the Small Craft Operator Program [SCOP]).

Sail Coach. The aim of this course is for cadets to become proficient in advanced sailing skills and safety boat operation. Cadets will achieve CYA Bronze Sail Level V and become trained CYA LTS Coaches. In addition, cadets will receive Safety Boat Operator certification through achievement of the Restricted Operator Certificate (Maritime) and Small Craft Rescue Award qualifications (Modules 2 and 3 of the SCOP).

Ship's Boat Operator. The aim of this course is to introduce the cadets to coastal navigation, to develop naval communication skills and to become proficient in the operation of small craft. Cadets will receive Powerboat Operator certification through achievement of the PCOC, Restricted Operator Certificate (Maritime) and Small Boat Power qualifications (Modules 1, 2 and 4 of the SCOP). In addition, cadets will receive Whaler / Cutter Coxswain certification through achievement of the Whalers (Pull or Power) and Whalers (Sail) qualifications (Modules 6 and 6a of the SCOP).

Chief Boatswain's Mate. The aim of this course is for the cadets to become proficient in acting as a petty officer of the watch (POOW) on a sea cadet training vessel (SCTV), performing basic coastal navigation and other shipboard duties.

Drill and Ceremonial Instructor. The aim of this course is for the cadets to become proficient in organizing and leading parades and ceremonies, to improve leadership skills and knowledge and to become a drill and ceremonial instructor.

Marine Engineer. The aim of this course is to develop in the cadets a basic knowledge of machinery systems used on Canadian Forces Auxiliary Vessels and other SCTVs. The course also provides the opportunity for cadets to attain the ORCA Class Engineer II (OCE II) certification, enabling the cadets to stand watch in the engine room of an ORCA Class Patrol Craft Training Vessel (PCT) as the second engineer. Marine Engineer is considered a national course and is conducted in one location: HMCS Quadra.

Shipwright. The aim of this course to develop in the cadets the knowledge and skills required to carry out maintenance and repairs on the small craft used at CSTCs and sailing centres. Shipwright is considered a national course and is normally only conducted in two locations, HMCS Quadra and HMCS Quebec.

Silver Sail. The aim of this course is for cadets to become proficient in advanced sailing skills and basic racing skills. Cadets will achieve CYA Silver Sail Level VI. Silver Sail is considered a national course and is normally only conducted in one location: HMCS Quadra.

STAFF CADETS

CATO 13-28, *Advanced Training–Staff Cadets*, defines staff cadets as follows:

- Staff cadets are appointed to such rank as is authorized by the Commanding Officer (CO) of a Cadet Summer Training Centre (CSTC) established to conduct summer training.
- On the authority of the CO of the CSTC, Staff cadets may be requested to participate in advanced training, including instructional, supervisory or administrative functions that are approved by the Regional Cadet Support Unit (RCSU) CO for that training centre.
- Staff cadets may not be less than 16 years of age as of the first day of January of the year of advanced training.
- Staff cadets are not employees. Participation by the staff cadet during authorized CSTC summer training constitutes advanced training

Staff cadet classifications are divided into two distinct categories:

- type 1—Those who provide direct training, to cadets (eg, divisional petty officer (DPO) and Instructor, and
- type 2—Those who have administrative / support roles (eg, storesman, ship's writer, roundsman, canteen clerk, and shipwright.)

CLOSING STATEMENT - Summer training is a fun and exciting aspect of the Cadet Program, which offers training in specialty areas that may not be accessible at the corps. CSTCs are places to meet other cadets and to make new friends from across Canada. It is important to be familiar with the training and employment options available at CSTCs. This will allow cadets to plan their training with the intention of preparing for a specific employment position in the future.

EO C407.01 – PREPARE FOR A MERIT REVIEW BOARD

IMPORTANCE - It is important for cadets to prepare for a merit review board to help them succeed in gaining opportunities through competitive application processes.

MERIT REVIEW BOARD

Merit review boards are a structured interview where candidates are evaluated by a group of board members.
Candidates are scored on their dress, deportment and answers given to interview questions. Merit review boards are most often conducted for promotion to Chief Petty Officer Second Class and Chief Petty Officer First Class. They provide selection recommendations that are fair and open, and provide candidates with valuable constructive feedback on their performance.

PROMOTIONS REQUIREMENTS

A merit review board is required to be promoted to Chief Petty Officer Second Class and Chief Petty Officer First Class. Promotion merit review boards have many benefits for the corps, to include:

- giving the cadet incentive to learn details of the rank or appointment responsibilities;
- ensuring that the best cadet is selected; and
- satisfying all members of the corps that the best available cadet is leading them.

OTHER POSSIBLE OCCASIONS FOR A MERIT REVIEW BOARD

Awards

Some corps may conduct a merit review board for important awards. Most often, recommendations for awards are made by a board of staff members who are familiar with the work of all cadets. In all cases, recommendations are given to the Commanding Officer (CO). The CO is the final arbiter of awards.

Scholarships

Scholarship cadets are often selected by the person or entity that is providing the scholarship funding. Corps may choose to hold a merit review board for such a purpose.

Senior Appointments Within the Corps

Some corps may conduct a merit review board for certain appointments within the corps. Most often corps will conduct a workshop or seminar for senior cadets at the beginning of the training year. During this time a merit review board may be conducted for senior appointments within the corps (eg, Coxswain or Regulating Petty Officer).

Cadet Summer Training Centre (CSTC) Training Opportunities

When a corps has multiple excellent cadets for a limited number of course spaces, selection of cadets must be done in an open manner. The CO requires recommendations that are both unbiased and clearly seen to be unbiased. While staff members can and often do provide effective recommendations, the merit review board provides an unbiased option.

CSTC Staff Appointments
When staff cadets arrive at a CSTC prior to the start of summer training, they may be interviewed by a board.
This usually takes one of two forms:

- cadets are interviewed by a panel of officers to determine which CSTC position they are most suited; and
- senior cadets are interviewed by a merit review board for Chief Petty Officer positions.

In either case, the interview skills learned at a corps will prove vital to the cadet.

HOW TO PREPARE FOR A MERIT REVIEW BOARD FOR PROMOTION
A cadet for a merit review board for promotion should:

- think about potential questions that could be asked and prepare answers to them;
- talk to others who have been through the process to find out what to expect; and
- participate in any opportunity to practice for a board, such as practice merit review boards.

Dress Requirements
The interview cadet shall identify dress requirements ahead of time. The uniform must be worn in accordance with the cadet dress instructions in the relevant Cadet Administration and Training Order (CATO). Dress shall be maintained to a high standard.

TIPS FOR A SUCCESSFUL INTERVIEW
Importance of Bearing
Many cadets exhibit high standards of dress and high levels of knowledge. The final selections will be based partly on the winning candidates' bearing. Unless given other instructions, the cadet will enter facing the board, wearing headdress and salute. Wait until offered a seat and remove headdress when seated.

During the interview, do nothing that may distract the interviewers, such as:

- biting one's lips;
- squirming;
- scratching;
- chewing gum;
- twisting fingers;
- playing with hair;
- checking the time;
- yawning—make sure to have a good night's sleep before the interview; and
- taking anything into an interview that has any chance of distracting the interviewers.

Hand gestures while speaking may also distract interviewers.
Sit with an open posture with arms and legs uncrossed.

The members of the board want the cadet to feel comfortable and relaxed. Try to be so, while maintaining respect and decorum. A confident cadet sits up straight, calmly looking the interviewer straight in the eyes without fidgeting. Nodding or shaking the head does not constitute an answer of any kind. All replies must be verbal.

Cadets must be prepared to introduce themselves.

Remember that the interviewers are also going through a process for which they have made long preparations and to which they attach great importance. The cadet being interviewed is, in many ways, part of a team that includes the interviewers. All members of this team are expected to maintain respect, decorum and friendliness.
When the interview is completed, stand, replace headdress, make firm eye contact, salute, and smartly depart the room. The board members may or may not offer to shake hands. Follow their lead.

Merit Review Board for Promotion Questions
IAW CATO 13-02, *Cadet Rank Promotions*, question areas at a merit review board for promotion may include:

- cadets recounting their achievements through cadet training (eg, corps program, CSTC program);
- cadets explaining what previous positions of leadership they have held (eg, at cadets, at school) and how they performed in related situations;
- personal goals and / or their goals for the corps;
- scenario-based questions that relate to typical corps situations where the candidate shares how they might approach / deal with the situation; and
- achievements outside of the cadet corps setting (eg, at school, in their community, sports teams, extracurricular activities).

Cadets are expected to take their time when formulating answers but the answer should be as direct as possible. Ask for clarification when necessary. A comprehensively correct answer, formulated carefully and delivered in a relaxed, friendly manner is best.

If the cadet does not know the answer to a question it is best to say so, in as direct a manner as possible, so the interviewer moves on to another topic where the candidate has better knowledge. This will help minimize both the psychological impact of the missing information and the damage to the candidate's mark. Shoulders must never be shrugged during an interview.

CLOSING STATEMENT - Effective preparation for merit review boards will help to obtain important opportunities. These skills will also prove invaluable throughout life.

PO 408 – DRILL

☐ M408.01 Discuss Commanding a Division on Parade

☐ M408.02 Identify Parade Sequence

☐ M408.03 Command a Squad

☐ M408.04 Inspect a Cadet on Parade

☐ 408 Performance Check

☐ C408.01 Discuss the History of Drill

☐ C408.02 View a Re-Enactment That Demonstrates the History of Drill

☐ C308.01 Execute Flag Party Drill

☐ C308.02 Deliver Words of Command

☐ C308.03 Practice Voice for Calling Drill Commands

☐ C208.01 Practice Ceremonial Drill as a Review

☐ C208.02 Execute Drill with Arms

EO M408.01 – DISCUSS COMMANDING A DIVISION ON PARADE

IMPORTANCE - It is important for cadets to discuss commanding a division on parade in a professional and confident manner as their performance can positively influence the cadets within the division. It is important to be aware of the key attributes required to successfully command a division while on the parade square, such as maintaining a high standard of appearance, presence and bearing

COMMANDING A DIVISION ON PARADE
The aim of drill is to contribute to the operational effectiveness of the Cadet Program. This aim can be achieved by ensuring cadets march and manoeuvre on the parade square as one unit and by promoting discipline, alertness, precision, pride and the cohesion necessary for success.

Communicating Effectively
As the team leader, there will be various occasions when effective communication will be required, such as when:

- communicating drill commands; and
- speaking to the division, in a more informal method.

When speaking to cadets in a division, clear and positive communication is necessary to aid in achieving the aim of drill. Profanity, personal sarcasm or negative comments shall never be used. When calling drill commands, the team leader must develop and use a vocabulary of short, concise words to impress on the division that the movement must be performed smartly. When communicating or referring to drill commands and movements, words to use could include:

- sharp,
- crack,
- drive,
- seize, and
- grasp.

Sharp drill movements are dependent on the words of command being properly delivered. Words of command are to be pronounced clearly and distinctly, with confidence and determination, since they convey an order which is to be promptly obeyed.

Executing Sharp Personal Drill
Team leaders must execute all drill movements confidently, correctly and smartly. The characteristics of drill are efficiency, precision and dignity and these qualities are developed through self-discipline and practice.

Team leaders who display constant proficiency in drill are recognized throughout the Cadet Program as highly trained, well-disciplined and professional. Well executed drill develops individual pride, mental alertness, precision and esprit-de-corps. It also

sets the standard for the completion of parades and builds a sense of confidence between the team leader and cadet that is essential to high morale.

Maintaining Dress IAW Dress Instructions
Team leaders shall be well groomed with footwear cleaned and shone. The uniform shall be clean and properly pressed at all times.

Dress instructions help ensure a positive image and a high standard of dress are consistent among all cadets when in uniform. Showcasing a high standard of personal dress, appearance and grooming will aid in exhibiting confidence and reflect that the team leader has knowledge of the dress instructions.

Exhibiting a Positive Attitude
Team leaders should always exhibit a positive attitude toward the members of the division while on the parade square because a positive attitude will encourage the cadets to want to follow the example set by the team leader.

The positive attitude taught and developed on and off the parade square must be maintained by the team leader at all times.

Conducting Oneself in an Appropriate Manner
As the team leaders are expected to set the example for the division, it is important to project an image of discipline and self-control. Chewing gum, slouching, sauntering, placing hands in pockets and similar deportment that detracts from a proud and orderly appearance are unacceptable for team leaders.

CLOSING STATEMENT - When assigned to command a division on parade it is important to conduct oneself with professionalism and confidence. A team leader who portrays a high standard of appearance, presence and bearing positively affects how cadets conduct themselves and respond to orders that are given on the parade square.

EO M408.02 – IDENTIFY PARADE SEQUENCE

IMPORTANCE - It is important for cadets to know the sequence of a parade night's opening and closing parades and an ACR as they will be in placed in a team leader role and will need to know the commands, formations and locations of all members on the parade square. Cadets will be looking to their team leader for guidance during a parade night's opening and closing parades and during an ACR.

ROLES OF PARADES WITHIN THE CADET PROGRAM
The purpose of parades is to move cadets in an orderly and efficient manner using precise movements required for displays and ceremonies. Parades also showcase the cadets' knowledge of drill to spectators.

Parade Night
Cadet corps conduct an opening and closing parades most times when they meet for training, as it allows cadets to take attendance, practice drill and inspect uniforms. These parades also provide an excellent opportunity for announcements, presentation of awards and promotions. Opening and closing parades usually follow the ACR sequence, allowing cadets to learn the ACR sequence throughout the training year.

ACR
Each year, cadet corps are required to conduct an ACR parade. The ACR parade provides an opportunity for cadet corps to showcase what they have learned that year and to demonstrate their grasp of drill for family, friends and the community.

Remembrance Day
Every year on November 11, Canadians gather at memorials from coast to coast to remember those who have lost their lives in war or peacekeeping missions. Cities across Canada host Remembrance Day ceremonies and are usually attended by government officials, veterans, serving military members, police, cadets and the general public. At a Remembrance Day ceremony, cadet corps may march in the parade or provide a guard(s) for the cenotaph or memorial.

Special Ceremonial Parades
Special ceremonial parades may be conducted throughout the cadet training year. The following is a list of special ceremonial parades that may be conducted:

- Battle of Britain,
- Battle of the Atlantic,
- Ceremony of the Flags,
- Change of Command,
- Drumhead Ceremony,
- Freedom of the City,
- Military Funeral,
- Retreat and Tattoo,
- Sunset Ceremony, and
- Trooping the Colour(s).

Drill demonstrations may be performed during special ceremonial parades. Standard drill movements must be used at all times.

PARADE NIGHT SEQUENCE
It is necessary to know and understand the sequence of the opening and closing parades as a team leader commanding a division on parade. Team leaders will be required to lead cadets on the parade square through a series of drill commands, formations and movements while effectively communicating.

Opening Parade
The sequence for the opening parade is as follows:

1. **Form up.** Through a series of drill commands, the cadets of the division will form up for the opening parade.
2. **Roll call.** Attendance is taken by the team leader to determine if cadets are present, excused or absent.

3. **Inspection.** The inspection can be conducted by the team leader, the Coxswain or an officer. In most cases, the team leader conducts the initial inspection of the division, before the Coxswain or an officer conducts the main corps inspection.
4. **March past.** This allows the corps to practice marching for the ACR or any other upcoming parades. As some cadet corps may not have the required space, a march past may not be possible or is not always required.
5. **Announcements.** This is a good opportunity for any announcements, awards, presentations and / or promotions to be given.
6. **Dismissal.** The dismissal signifies the end of the opening parade and the beginning of the training session(s).

Closing Parade

The sequence for the closing parade is as follows:

1. **Form up.** Through a series of drill commands, the cadets of the division will form up for the closing parade.
2. **Announcements.** This is a good opportunity for any announcements, awards, presentations and / or promotions to be given.
3. **Advance in review order.** This allows the corps to practice the advance in review order for the ACR and any other upcoming parades. As some cadet corps may not have the required space, an advance in review order may not be possible or is not always required.
4. **Dismissal.** The dismissal signifies the end of the closing parade and the end of the training session.

ACR SEQUENCE

The ACR parade provides an opportunity for cadet corps to showcase what they have learned that year and to demonstrate their grasp of drill for family, friends and the community. Each year, cadet corps are required to conduct an ACR parade. The main sections of the parade sequence for the ACR are as follows:

- form up;
- reception of the reviewing officer (RO);
- inspection by the RO;
- march past;
- awards and presentations;
- advance in review order;
- departure of the RO; and
- dismissal.

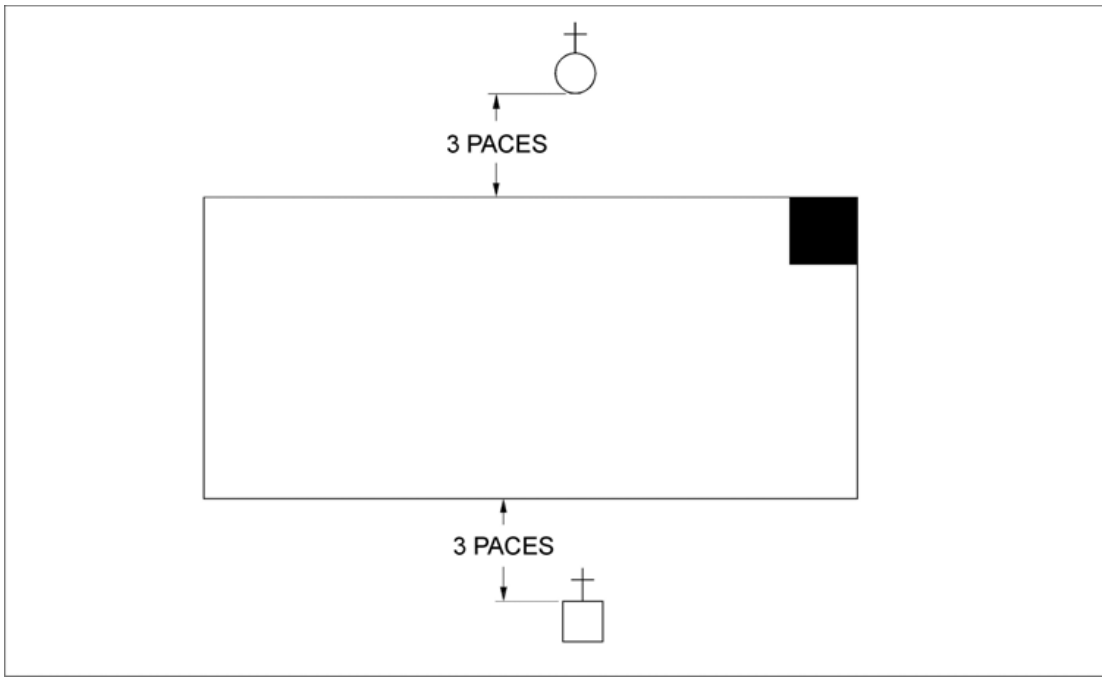
CLOSING STATEMENT - When placed in a team leader role it is important to remember that cadets will be looking for guidance and knowledge on the parade square. Team leaders will be expected to guide cadets through a parade night and ACR sequence through a series of drill commands, formations and movements.

EO M408.03 – COMMAND A SQUAD

IMPORTANCE - It is important for cadets to command a squad on parade as they will be placed in a team leader role and will need to know the formations and locations of all members on the parade square. Cadets also need to know how to deliver words of command in a clear and concise manner, with confidence and determination, which will affect how cadets in the squad respond to orders.

Falling In

When falling in as a divisional petty officer (DPO), follow the required commands of the parade commander. Regardless of frontage, when a squad is formed up in line the DivO / DPO shall be positioned three paces in front and centre of the squad.



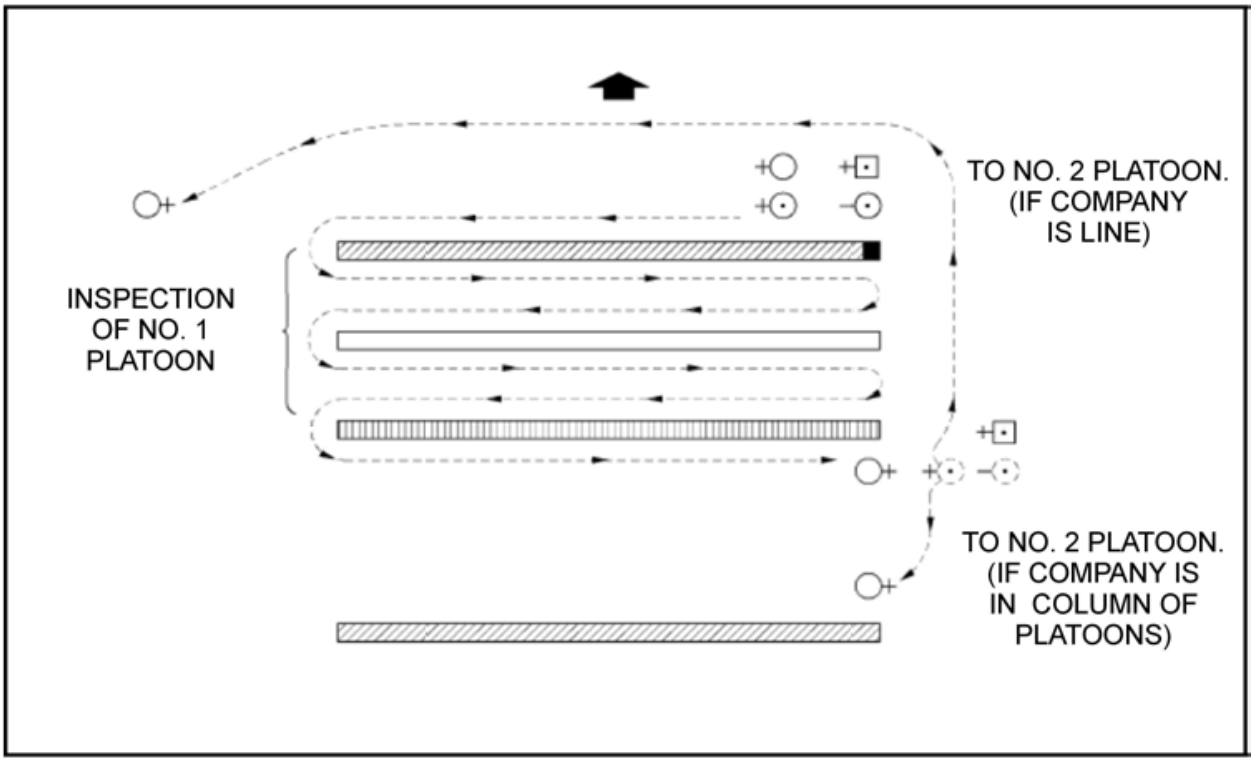
When on parade, each squad follows the same procedures to hand over command. Once the DivO / DPO are in their new position(s), the command STAND AT—EASE, is given in succession from the front (right). On the executive word of command of the last DivO / DPO ordering their squad to stand at ease, DivO / DPO turn about and stand at ease together.

Greeting the RO to Complete the Inspection
Inspections are conducted one squad at a time, normally accompanied by the RO and the reviewing party. The parade commander will give the command NO. 1 SQUAD, STAND FAST, REMAINDER STAND AT—EASE before the inspection begins. The inspection commences with the squad ordered to stand fast. As the RO approaches, the DivO / DPO turns right and marches to a position three paces in front of the marker, facing the RO. When the RO approaches, the DivO / DPO will salute (if required) and report the squad.

The DivO / DPO will guide the RO through the front and rear of each rank, commencing at the right flank of the front rank and proceeding in a counter-clockwise direction around each rank in turn. When the RO has completed the inspection, the DivO / DPO will position themselves behind the rear rank marker, to acknowledge the RO's completion of the squad's inspection, ask permission to carry on and salute (if required).

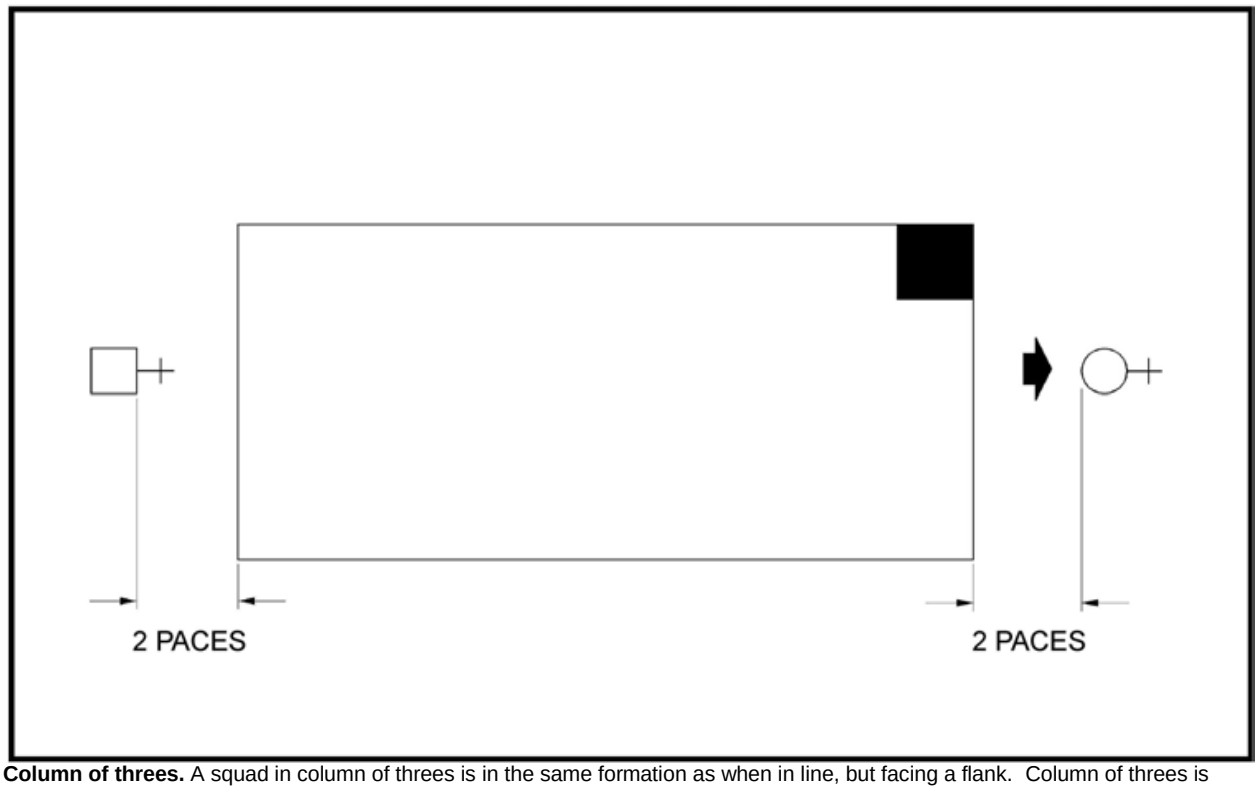
Once the RO has begun to move to the next squad, the DivO / DPO executes a right turn and marches, using a series of wheels, back to their command position facing the squad. When in position the DivO / DPO shall give the commands CLOSE ORDER—MARCH and STAND AT—EASE. The DivO / DPO will then turn about to face the front, stand at ease, and await further orders from the parade commander.

As the inspection is being completed, the remaining DivO / DPO will observe the RO and as the RO inspects the rear rank of the preceding squad, the next DivO / DPO shall turn about to face their squad, give the command ATTEN—TION and carry out the inspection sequence for their squad.

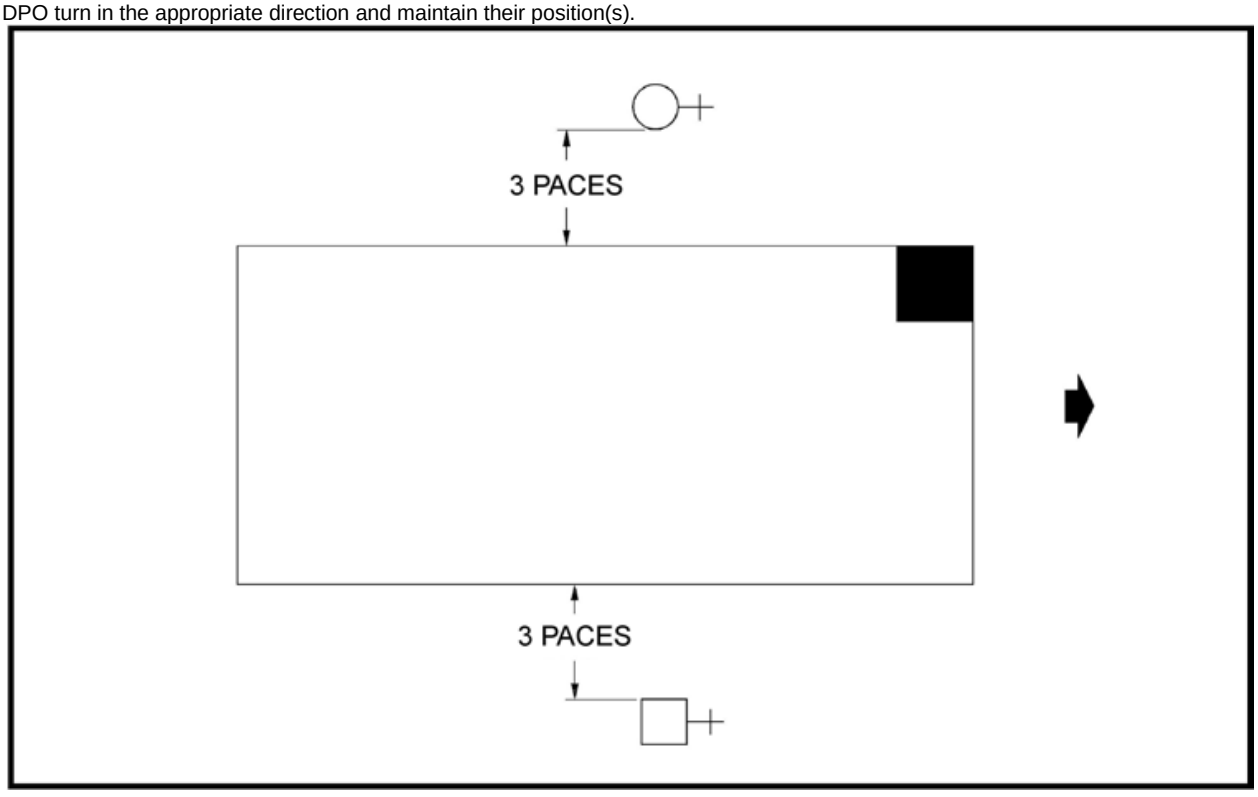


Leading the Squad on the March Past
March pasts may be conducted in column of route or in column of threes, depending on time and space available, level of training and the occasion. The simplest march past is column of route in quick time. Throughout the march past, when commanded by the parade commander, the DivO / DPO may be required to give the command EYES—RIGHT and EYES—FRONT to their respective squad.

Column of route. The DivO / DPO is two paces in front of the centre single file of the squad. Column of route is the formation most commonly used to move squads on the march. When halted in this position and given the command to turn, the DivO / DPO will turn in the appropriate direction, observe the standard pause and march, using a series of wheels, to their appropriate position(s).



Column of threes. A squad in column of threes is in the same formation as when in line, but facing a flank. Column of threes is another formation used to move a squad on the march. When halted in this position and given the command to turn, the DivO / DPO turn in the appropriate direction and maintain their position(s).



Falling Out
When falling out as a DPO, follow the commands of the parade commander.

CLOSING STATEMENT - Commanding a squad on parade with confidence and determination, will affect how cadets respond to the orders given. Delivering words of command, in a clear and concise manner allows a squad to move as a team in an organized and efficient manner.

EO M408.04 – INSPECT A CADET ON PARADE

IMPORTANCE - It is important for cadets to be able to inspect a cadet on parade as they will be placed in a team leader role and will need to know how to effectively correct errors and evaluate dress, IAW CATO 35-01, *Royal Canadian Sea Cadet Dress Instructions*. Team leaders must maintain a high standard of appearance and bearing, as cadets will be looking to their team leader for examples, guidance and knowledge when it comes to wearing the elemental cadet uniform.

INSPECTIONS
Inspections shall be carried out at the open order. Ranks shall be dressed after the open order, before the inspection and after the close order. The individual performing the inspection will inspect the front and rear of the rank, commencing at the front rank marker and proceeding in a counter-clockwise direction around each rank in turn. Ranks that are being inspected are in the position of attention and ranks within the same division that are not being inspected, may be ordered to stand at ease. Similarly, during the inspection of one or more squads, the squads that are not being inspected may be ordered to stand at ease. During an inspection, an individual ordered to adjust clothing or equipment shall do so immediately, maintaining their current position within the ranks. After the adjustment is finished, the position of attention will be resumed.

INSPECTING THE FRONT OF A CADET FROM HEAD TO TOE
Inspecting the front of the cadet shall commence at the head and work down to the feet to determine that the cadet:

- is properly equipped for the parade, with clothing and equipment clean and in good repair;
- is properly dressed, with all clothing, badges, ribbons, etc, worn correctly; and
- has a high standard of personal hygiene and grooming.

INSPECTING THE BACK OF A CADET FROM HEAD TO TOE
Inspecting the back of the cadet is done in the same manner as inspecting the front; commence at the head and work down to the feet. The individual performing the inspection is also checking that the cadet is properly dressed and equipped with a high standard of personal hygiene.

CORRECTING ERRORS VERBALLY
Speak to cadets clearly and positively to ensure maximum learning and understanding of the dress instructions. When correcting errors, the team leader(s) is to address the cadet in a positive tone. Explain and demonstrate the correct method and have the cadet complete the correction (providing it is a minor correction / adjustment that can be done while the cadet is in ranks). This method will allow the cadet to learn from their error(s).

CLOSING STATEMENT - When placed in a team leader role, it is important to remember that cadets will be looking for examples, guidance and knowledge regarding the elemental cadet dress instructions. Team leaders who portray a high standard of appearance and bearing are able to effectively evaluate dress and correct errors in a positive manner.

EO C408.01 – DISCUSS THE HISTORY OF DRILL

IMPORTANCE - It is important for cadets to discuss the history of drill as it represents a part of military history. Being able to understand the purpose and evolution of drill will help cadets understand why drill movements are performed by the military today.

ORIGINS OF DRILL
In ancient history, the most powerful, efficient and developed empires developed ways of moving soldiers from one place to another on the battlefield, without individuals getting confused and mixed up with other units. Empires realized that well-drilled soldiers were more efficient in battle.

At one time, drill and tactics were the same, as drill was needed on the battlefield. Battle drill has existed since ancient times. Separate drill for infantry, armoured, cavalry and others were replaced by all arms drill early in the 20th century, as the changing conditions of war gradually separated tactics from barrack routine.

- **Infantry.** Infantry drill was practiced regularly around 1000 BC and was necessary to ensure that each soldier's movements matched those of the rest.
- **Armoured.** Soldiers, known as armoured spearmen, fought in close-order drill and marched in step to maintain an unbroken shield wall against the enemy. Regular practice was needed to keep the ranks together during battle.
- **Cavalry.** In 875 BC, about a century after the infantry and armoured were developed, a new battlefield tactic (the bow and arrow) was introduced and a new style of warfare drill developed, which resulted in the establishment of the cavalry. The cavalry could attack from a distance, with the use of horses. They learned to do drill on the horses, control the horses and aim and shoot their bow and arrow.

Imitation of battle taught the proper use of weapons and strengthened endurance on the battlefield. Armies found that by teaching the soldiers drill and battle procedures, their chances of victory significantly improved. Drill is still used routinely to move soldiers in an orderly and efficient manner. It also forms the basis of the precise manoeuvres used in military displays and ceremonies.

ROMANS
Around 2400 BC, Romans realized the way to learn the required skills when deploying for battle was by training Roman soldiers to execute drill in formation. At the beginning of training, recruits were taught the military pace by marching quickly, in time and in formation, up to 32 km (20 miles) a day. Three times a month, garrison soldiers marched 16.1 km (10 miles), built a fortified camp and returned to base, all in the same day. Individual skills with weapons were also developed with daily practice. Romans spent most of their time practicing ceremonial guard duty and drill, in order to become well-drilled soldiers. The emotional significance of daily and prolonged close-order drill created a lively esprit de corps among the poverty-stricken peasant recruits and the urban outcasts.

The Romans are presumed to have used cadence while marching for tactical formations. Romans regarded military music quite seriously, as they had several warlike instruments. Each soldier had a trumpet, a horn, or both. These were employed for signals, or what is now referred to as “calls”. Instruments were used for marching music and to direct the movement of soldiers.

Greeks and Spartans
Greek citizens did not willingly accept the rigors of military drill, but the emotional effects of keeping together did not disappear when citizen soldiers ceased to dominate military affairs. Drill became more elaborate in the fourth century BC, as those who participated in drill were professional soldiers whose loyalties were to their commanders.

Spartans engaged in drill and marching exercises on a regular basis and learned how to advance evenly into battle by keeping in step to the sound of music, all without breaking their order or ranks. Spartans also learned how to execute flanking movements and open and close order march, allowing their armies to alter the length of their front.

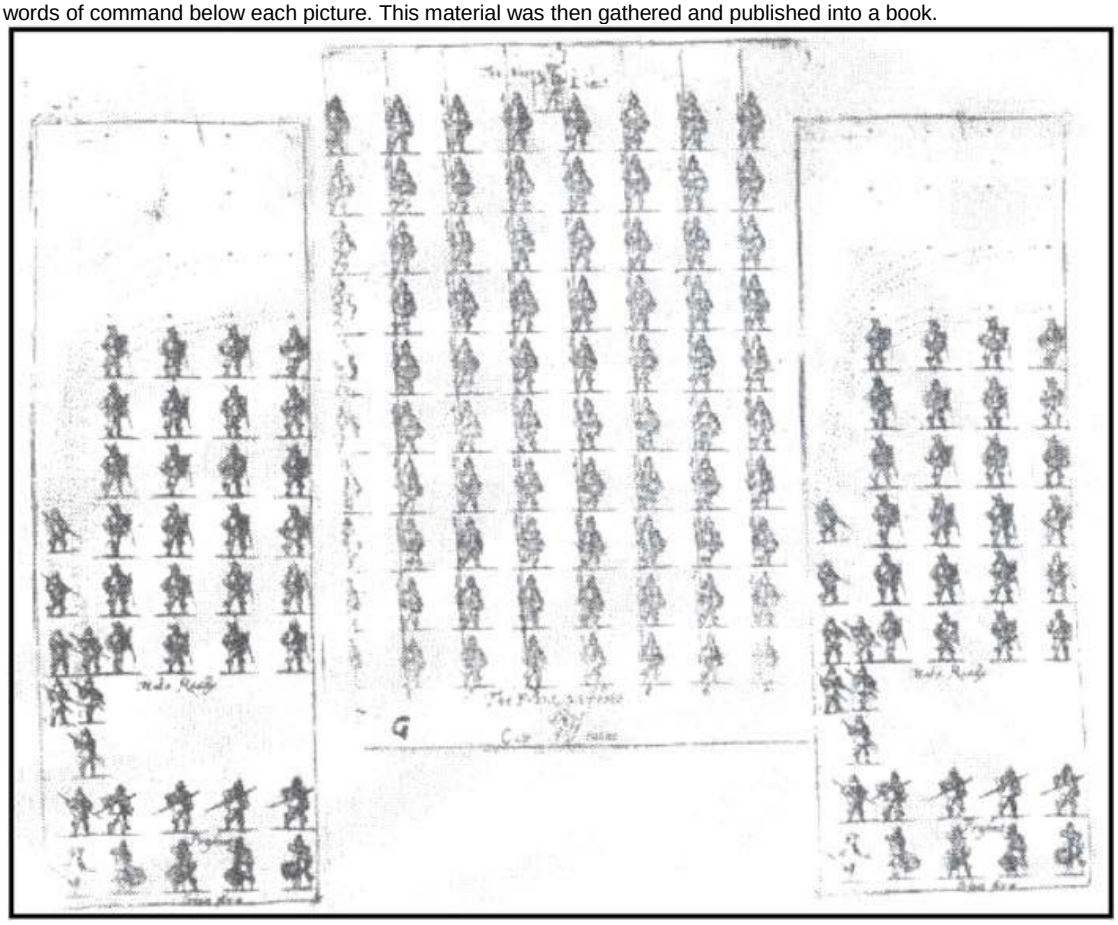
CHINESE
Chinese armies used drummers to beat the drums while soldiers were marching. The drummers would beat the drums once to signify the left foot moving forward and then beat it again to signify the right foot moving forward. When drill and combat methods were taught, they were taught to 100 men at a time. After instruction to 100 men was complete, they were united with other companies which were comprised of 1 000 men. When the instruction to the 1 000 men was complete, they were combined with other regiments. Large infantry armies were taught to handle their weapons in unison and maintain formation by keeping in step on the battlefield, all by responding to signals. Most of China's drill movements between 400 and 300 BC were derived from the Romans and the Greeks.

DRILL MOVEMENTS
Infantry supremacy and precise drills were eclipsed after the fall of the Roman Empire. During the feudal era, mounted knights ruled combat. Infantry drills were resurrected in the 14th century and slowly developed and improved thereafter.

SWISS
Disciplined soldiers marched in cadence to the sound of musical instruments in admirable order beneath their banners. It is believed that the Swiss, in the late 1300s, were the first modern soldiers to march to music.

DUTCH
Words of command were starting to be used for drill shortly after it was introduced to the Dutch in the late 1500s. It became possible to get soldiers to move in unison while performing the actions needed to load, aim and fire their weapons. The soldiers practiced until the necessary motions were almost automatic. This made them less likely to be disrupted by the stress of battle, an advantage when meeting untrained soldiers. Words of command permitted companies, platoons and squads to respond to their designated leader as different movements and commands were established for units of every size. Soldiers had to practice these movements whenever possible. It was determined that when an entire army was trained this way, control of battle became possible.

In the early 1600s, an artist was used to make engravings of each posture required for each drill movement, with the corresponding words of command below each picture. This material was then gathered and published into a book.



GERMANS
In the mid 1800s, the Germans (and the Swiss) had the idea of having soldiers become instructors. This provided the opportunity to break down the drill movement(s), demonstrating for all soldiers to see and by allowing the leaders to call out the movements, "by the numbers".

BRITISH
In the British Army, the balance step was a feature of the ordinary march step, experienced today as the slow march. The balance step was introduced as soldiers were required to manoeuvre shoulder to shoulder over rough and uneven ground in disciplined ranks, while giving effective volley fire. Each recruit was trained as a member of a squad until perfect in all points of duty. Each soldier was allowed to join the battalion after being fully trained. Every soldier, after returning from a long absence, had to be re-drilled before being permitted to act in the ranks of his company.

It was imperative that commanders were able to estimate the time required for soldiers to march from point A to point B on foot. With that in mind, the following marches were introduced to the British Army in 1824:

- **March (75 steps per minute, each step 30 inches [76 cm]).** The slowest step (otherwise known as slow time) at which soldiers moved. This march was most commonly used for parades or moving very large formations.
- **Quick march (108 steps per minute, each step 30 inches [76 cm]).** This ordinary pace was applied to most movements by large bodies of soldiers.
- **Wheeling step (120 steps per minute, each step 30 inches [76 cm]).** Wheeling (forming) from line into column or vice versa, ensured there was no delay in achieving the required formation to face a new enemy.
- **Double march (150 steps per minute, each step 36 inches [91 cm]).** This march was applied to the movements within the divisions within a battalion without exhausting soldiers in heavy marching order (eg, load carrying equipment). In rank movements, the double march, when safely applied, may be used in rapid formations, or for quickly moving ranks.

CANADIAN

- **Royal Canadian Navy.** The Royal Canadian Navy used army drill and ceremonial procedures when on solid ground, by parading as platoons, companies and battalions. While on a ship, the navy conducted ship board drill. The navy still uses the same drill movements while on solid ground; however, they parade by divisions.
- **Canadian Army.** With few exceptions, Canada's Armed Forces used British drill manuals (sometimes with just a Canadian cover and covering page) up until the end of World War II (WW II). It was only with the introduction of a new family of small arms weapons (1989 Draft Drill Manual), and similar developments in other Commonwealth countries, that some of the old drill movements diverged. There were still many similarities in drill, allowing Canadian regiments to execute drill alongside British Army personnel. One strong influence on the Canadian Forces is the evolution to independent statehood within the British Commonwealth of Nations. This can be seen in customs and routine, uniforms and drill, organization and many other matters (eg, trooping the colours, gun salutes).
- **Royal Canadian Air Force.** Technical requirements of the Royal Canadian Air Force in 1941 called for speeding up the process of drill instruction and, at the same time, reducing the periods of practical training. Both of these objectives were attained by properly combining classroom instruction and parade ground training. The daily program of training was arranged to allow all personnel on strength to receive one hour of classroom instruction and parade ground training per week. In 1955, the classroom explanation was absent from the *Manual of Drill for the Royal Canadian Air Force*. When conducting drill training, the Royal Canadian Air Force used army drill and ceremonial procedures.

CLOSING STATEMENT - Drill procedures and movements are a large component of today's military. Learning about the purpose and evolution of drill will help you understand why so many drill movements are performed within the military today.

PO 409 – INSTRUCTION

- ☐ M409.01 Identify Methods of Instruction
- ☐ M409.02 Identify Elements of a Positive Learning Environment
- ☐ M409.03 Describe Learner Needs
- ☐ M409.04 Explain Assessment
- ☐ M409.05 Instruct a 30-Minute Lesson
- ☐ 409 Performance Check
- ☐ C409.01 Plan a Lesson
- ☐ C409.02 Instruct a 30-Minute Lesson
- ☐ C409.03 Act as an Assistant Instructor
- ☐ C409.04 Participate in a Creative Lesson Planning Workshop
- ☐ C409.05 Act as an Assistant Drill Instructor
- ☐ C409.06 Instruct a 30-Minute Drill Lesson
- ☐ C309.04 Identify Formations for Drill Instruction
- ☐ C309.05 Describe Drill Instructional Techniques
- ☐ C309.06 Instruct a 15 Minute Drill Lesson

EO M409.01 – IDENTIFY METHODS OF INSTRUCTION

IMPORTANCE - It is important for cadets to be aware of the various methods of instruction when filling an instructional role. Being able to select and apply each method will help the cadets prepare and deliver an effective lesson.

METHODS OF INSTRUCTION
Some examples of the types of lessons that lend themselves easily to a specific method of instruction are:

- **Interactive Lecture.** Lessons with facts or dates, including history lessons.
- **Demonstration and performance.** Any drill or skill, such as first aid and rope work.
- **In-class activity.** Lessons that lend themselves easily to using brainstorming, worksheets and group work. This type of lesson is used to reinforce instructional topics such as instructional technique and environmental stewardship.
- **Practical activity.** Map and compass, and cool-down and warm-up activities for sports.
- **Game.** Lessons that include labelling or defining terms and performance-based lessons.
- **Field trip.** Visit an elemental museum, visit an airport or ship, and visit a college to view possible careers.
- **Group discussion.** Benefits of healthy living, qualities of a good leader and environmental issues relevant to Canada.
- **Guided discussion.** Explain personal integrity and explain decision-making processes.
- **Role-play.** Influence behaviours, leadership scenarios, and history.
- **Experiential learning.** Participating in citizenship activities and attending weekend training.
- **Problem-based learning.** Teambuilding activities and leadership styles.
- **Case study.** Characteristics of a leader and various events in history.

CLOSING STATEMENT - It is pertinent to have an exposure to the various methods of instruction in order to be flexible as an instructor. Familiarity with these methods may improve the instructor's ability to select activities that are appropriate for lessons. While many lessons may be taught using more than one method of instruction, choosing the most appropriate method of instruction is key.

EO M409.02 – IDENTIFY ELEMENTS OF A POSITIVE LEARNING ENVIRONMENT

IMPORTANCE - It is important for the cadets to identify elements of a positive learning environment because it will provide them with specific instructional strategies for motivating and engaging the cadets, for conducting interesting lessons and for boosting the cadets' self-confidence and self-esteem.

THE IMPORTANCE OF A PHYSICALLY AND EMOTIONALLY SAFE LEARNING ENVIRONMENT

The learning environment includes the "physical environment" of the classroom or training area and the "emotional environment" that the cadets and instructor create in the classroom or training area. Aspects of the physical and emotional environment such as the lesson location, availability of resources, and cadets' level of stress and anxiety affect learning but are sometimes outside of the instructors' control. However, it is important that instructors try to minimize the effects of such hindrances to learning when they plan their lessons rather than simply know they exist and feel powerless to change them.

Physical Environment

The physical environment for cadet training will most likely change from training session to training session or even from lesson to lesson. Instructors fortunate enough to have a dedicated learning space will find it easier to create a stimulating physical environment, while others who are transient will find it more difficult. The first priority when considering the physical environment is safety. As a minimum standard the physical environment should have:

- **Adequate lighting.** The connection between light and our emotions has long been recognized. Studies have also shown that learners perform better in brightly-lit learning environments than dimly-lit ones. It has also been shown that a learning environment with lots of natural light is more conducive to learning.
- **Good ventilation.** It is important to be conscious of the temperature and air quality in a room because people are especially sensitive to these two elements. Cooler temperatures promote relaxation and receptivity while warmer temperatures promote acting out. If possible, open a window, turn on a fan or open a door to control temperature and air quality.
- **A colourful atmosphere.** There is a connection between colour and moods and emotions. Warm colours (eg, red, orange, yellow) are exciting and may lead to acting out while cool colours (eg, blue, green, purple) are more relaxing. Researchers in brain-based learning suggest that the best colours for elements of the physical environment are yellow, light orange, beige or off-white. The cadets may react differently to the same colour depending on their emotional state. If cadets are feeling stressed, the colour red, for example, may bring out aggressive feelings but if they are relaxed, red can attract their attention.
- **Flexible seating arrangements.** The instructor should set up a learning environment that allows cadets to move quietly to take part in small and whole group learning activities. Having the cadets move from large to small group interactions will provide variety help them learn new material more efficiently.
- **Movement.** Cadets learn better if there is movement during a period of instruction. The brain needs glucose, oxygen and water to function properly. Even if the air quality is good, the cadets may still be oxygen deprived because of improper breathing patterns caused by stress and anxiety. Lack of oxygen to the brain negatively impacts its ability to process information; increasing the flow of oxygen to the brain can improve its ability to process information. Physical activity is an excellent way to increase oxygen flow to the brain. Instructors can accomplish this by beginning their classes with 30–60 seconds of stretching or deep breathing and by taking breathing breaks during longer lessons or when they notice that the cadets' attention is lagging. Water is also important for good brain functioning. Instructors should encourage the cadets to drink beverages, preferably water or fruit juices during lessons.

Emotional Environment

Instructors have a responsibility to make their classrooms as emotionally safe as possible so that learning can take place. If the brain senses a threat, it will ignore all other information to deal effectively with the threat. The perception of threat causes a "fight or flight" response which causes the body to transfer blood from the frontal cortex, or thinking part of the brain, to the bottom and back of the brain to prepare for survival. Any time cadets experience a sense of danger, whether physical or emotional, their bodies and brains react with this "fight or flight" response.

To maximize learning, instructors must create an emotional environment of relaxed alertness that allows the cadets to risk saying a wrong answer or solving a problem incorrectly. This is an emotionally safe learning environment.

There are a number of strategies that can be used to achieve an emotionally safe learning environment. It is important for the instructor to:

- **Lead with a positive attitude.** The cadets may have plenty of complications and negativity in their daily lives and will appreciate a positive environment with a positive and enthusiastic instructor. When instructors show interest in what they are teaching, the cadets will become interested as well.
- **Establish a friendly learning environment.** The instructor should make it safe to learn by treating all cadets equally and respectfully and insisting that cadets treat one another in the same way. The instructor can build trust by keeping their word and by keeping information confidential if asked to do so. They should encourage the sharing of ideas, experiences and information and value the contribution of each learner. One simple thing that instructors can do is to be sensitive to the cadets' average attention span.
- **Make learning fun.** The instructor should challenge the cadets with interesting activities that are not too easy or too difficult. They should try to challenge the cadets just beyond their present level of ability. If they are challenged too far beyond their level of ability, the cadets will give up but if they are challenged too little, they will become bored. Encourage the cadets to take risks and reward effort and energy as well as correctness. The instructor should listen empathetically by acknowledging nervousness, showing patience and being nonjudgmental of the cadets' responses. In addition, the instructor should never single out cadets and always be attentive to those who seem isolated from the group. They should never use put-downs or sarcasm.
- **Encourage supportiveness.** The instructor should be supportive of the cadets and encourage them to be supportive of one another. Instructors can create a supportive environment by leading applause, thanking cadets for their input and rewarding effort.

- **Appeal to a variety of senses.** The instructor should stimulate the cadets' senses in a variety of ways which will help them feel positive about the learning experience. As well, the instructor should be aware that the cadets will have different learning styles that should be catered to by using many different learning activities.
- **Provide feedback.** The instructor's feedback should be specific and help the cadets compare their current progress to past performance rather than compare it to the performance of others. They should always be accurate and consistent and when they assign specific tasks to be done, they should tell the cadets that they will be coming back to check on their progress.
- **Use encouragement.** The instructor should use encouragement to boost the cadets' enthusiasm and self-esteem but must be careful not to confuse encouragement with reinforcement. Encouragement will make the cadets feel better but it will not improve their learning in the same way as providing specific feedback regarding a specific task. Instructors should be selective and provide encouragement when it is due to keep the cadets on track.
- **Communicate clear expectations and routines.** A sense of safety comes from consistent and predictable behaviours on the part of the instructor. Instructors should not be too rigid but should develop consistent procedures for beginning lessons, getting the cadets' attention and handling disruptions and distractions. They should start every lesson by telling the cadets specifically what they will know or be able to do by the end of the lesson. They should conclude each lesson by reminding the cadets what they have learned or are able to do.
- **Provide processing time.** Instructors should ensure that the cadets have enough time to process the information that they have just received. They should stop periodically during a lesson and allow the cadets to interact over new material which will help them store it in long-term memory for later recall. Instructors can use a variety of group or paired activities to enable the cadets to interact with one another. They can, for example, ask each cadet in a small group to successively respond to a question or comment on an idea. A variation of this type of interaction would be pairing cadets and having them respond alternately by listing one item of a series, by identifying a specific cause or effect of something or by providing a specific reason. The key is for the instructor to stop talking, ask a question, set a time limit and have the cadets interact in groups or pairs to process the information just presented.

Instructors must ensure, as much as possible, that the environment in which they instruct their lessons is learner friendly. The environment does affect learning and instructors must find ways to positively impact the learning environment for the cadets. The cadets should feel comfortable when giving answers, taking part in discussions and solving problems. Their incorrect responses to oral questions or attempts at solving a problem should not be put down or belittled but rather should be seen as the beginning of discovery.

STRESS

Stress is the body's reaction to a perception of a physical or emotional threat. The threat can be real or imagined; it is the perception of threat that triggers the stress response. During an acute stress response, the nervous system is activated automatically and the body experiences increased levels of cortisol, adrenalin and other hormones that produce an increased heart rate, quickened breathing rate and higher blood pressure. Blood is carried from the extremities to the big muscles preparing the body to fight or run away, which is commonly known as the "fight or flight" response. When the perceived threat is gone, our systems are designed to return to normal but this doesn't always happen because the threats can be frequent which causes constant anxiety. Positive and negative stress are commonly labelled as eustress and distress respectively.

EUSTRESS

Eustress is described as good stress and is created naturally when we participate in exciting but safe activities or when we trick the body into releasing small amounts of cortisol into the bloodstream. This type of stress pushes a person to do better and reach goals. Situations that might produce eustress include:

- riding a roller coaster;
- successfully completing an activity; or
- passing a test.

DISTRESS

Distress is described as bad stress. This type of stress causes worry, anger or pain. Situations that might produce distress include:

- lack of sleep,
- accidents, or
- negative relationships with others.

TECHNIQUES FOR CREATING POSITIVE STRESS

Positive stress releases a small amount of cortisol into the bloodstream which can help the cadets learn more easily by improving their memory function. The instructor should use techniques, such as those described below, to create positive stress.

- **Design activities that challenge cadets.** The instructor should design activities that challenge the cadets just beyond their present level of ability to encourage interest and prevent boredom.
- **Use movement.** Instructors should incorporate movement into every lesson because it increases oxygen flow to the brain, which helps the cadets learn better. The movement should occur naturally during the lesson when the cadets are forced to stand up to give responses or move around to engage in a learning or confirmation activity. It does not have to be long but should be frequent during a lesson, which can have a cumulative effect on the brain.
- **Use music.** Music, in addition to being enjoyable, has health benefits because it helps the body to produce cortisol. Instructors should have a good selection of music that they regularly use during their lessons as background noise or as an attention signal to begin a lesson or transition from one activity to another.
- **Breathe Properly.** Breathing is how oxygen gets into the bloodstream to be delivered to the rest of the body. As automatic as it is, cadets may not be breathing well and should practice deep breathing activities to help increase oxygen flow.

TECHNIQUES FOR CONTROLLING NEGATIVE STRESS

If threats, or the perception of threats, are persistent, stress will become long term or chronic. The body can handle temporary or acute stress but not chronic stress and it may become ill. At the least, chronic stress impedes learning and must be prevented. In addition to using some of the techniques described above to create good stress, instructors should incorporate the following in their lessons to manage negative stress.

- **Inform cadets of expectations.** Instructors must clarify their expectations and communicate them to thecadets. Be specific, when assigning tasks, about what cadets will be expected to do, how they will be assessed and how they will

receive extra training if necessary. Develop routines for beginning a lesson, transitioning from one activity to another during a lesson, getting the cadets' attention, dealing with different types of learners and ending a lesson. Routines may be repetitive and the cadets may complain at first, but routines that are realistically developed and consistently applied will allow the cadets to predict what will happen, which will ease their stress.

- **Provide necessary resources.** The instructor must clearly and specifically inform the cadets what is expected of them and ensure that the cadets have all the material they need to complete the learning activity. The cadets will have limited time to complete the activity and will become frustrated if they have to collect material or improvise on their own. The instructor must ensure that all necessary equipment and supplies are readily available in the learning environment.
- **Provide adequate time to accomplish the task.** When determining the amount of time for a task a good rule to follow is to assign one minute for each year of age. If an activity is long it should be broken down into manageable tasks.
- **Incorporate physical activity.** The instructor should ensure that cadets move during every class either naturally as part of an activity or artificially when they notice the cadets' attention lagging.
- **Provide time to process information.** Give the cadets enough time during a task to interact with their peers, in some way or another, over the content to help move it into long-term memory. This can be accomplished in a number of ways such as group interactions or some form of paired sharing. The important thing is to prevent time from becoming a hindrance to learning.
- **Practice relaxation techniques.** There are a number of relaxation techniques to control negative stress. The benefit of such techniques is that they trick the body into thinking that the threat is gone and the increased blood circulation carries more oxygen to the brain, which allows the body to relax.

CLASSROOM / TRAINING AREA MANAGEMENT TECHNIQUES

The classroom / training area for cadets may vary from session to session or even lesson to lesson depending on the type of training being conducted and the space available at the unit. Even if the instructor has the luxury of a dedicated space, it is important that they develop a classroom / training area management plan that will maximize the time available for a lesson. A management plan will prevent the instructor from wasting time getting the cadets' attention, transitioning from one activity to another, handling distractions and dealing with different types of learners. A management plan should include the following but can be more detailed.

ATTENTION SIGNALS

The instructor may find it useful to use an attention signal which immediately captures the cadets' attention when beginning a lesson, giving instructions, passing on information or transitioning from one activity to another. The attention signal should be both auditory and visual and the cadets should be taught to stop talking, stop working and establish eye contact immediately upon hearing and seeing the signal. Such an approach, when it becomes entrenched into the lesson's routine, will prevent the instructor from becoming frustrated and will help establish a calm tone for the lesson. The attention signal should be used consistently whenever there is a need to get the cadets' attention. The following attention signals may be used:

- **Raising a hand.** The instructor can simply raise their hand or raise their hand and say, "high five." Immediately upon hearing the phrase "high five" and seeing the instructor's hand go up the cadets should stop talking or moving, look at the instructor, raise their hand and repeat the phrase "high five" and keep their hand raised until the group is ready.
- • **Flicking the light switch.** Immediately upon seeing the lights go on and off, the cadets should stop talking or moving and look at the instructor until the group is ready. An accompanying verbal command may include "high five" or some other phrase.
- **Sounding a bell, playing a musical tone or playing part of a song.** Immediately upon hearing the bell, musical tone or part of a song, the cadets should stop talking or moving and look at the instructor until the group is ready.
- **Clapping a rhythm.** The instructor claps a rhythm (dut, dut, dut, dut, dut). Immediately upon hearing the clapped rhythm the cadets should stop talking or moving, clap either a responding rhythm (dut, dut) or repeat the rhythm the instructor clapped and then look at the instructor until the group is ready.
- **Whistling.** Immediately upon hearing the whistle the cadets should to stop talking or moving and look at the instructor until the group is ready.

CORRECTING BEHAVIOUR

Instructors must be able to resolve disagreements, draw attention to the merits of differing opinions and maintain control of the classroom. They should prepare ahead of time and have a contingency plan for a range of behaviours similar to those listed below:

PROVIDING POSITIVE REINFORCEMENT

Deal with inappropriate academic performance and / or behaviour by emphasizing what is expected of the cadet rather than concentrating on what the cadet did wrong. The feedback should be:

- accurate,
- age-appropriate,
- specific, and
- consistent with the instructor's personal style.

It is extremely frustrating for cadets to be advised that their performance is unsatisfactory but to not know why. Instructors must:

- specifically and clearly identify what aspect of a performance is incorrect; and
- specifically and clearly identify what the cadet must do differently.

The cadets should also be asked to identify their own mistakes and explain why they made the error. In addition, the cadets should also be given the opportunity to:

- explain how to perform the task correctly; and
- practice the correct procedure.

ENGAGING THE CADET

Cadets are engaged when they are moving around or working in groups to manipulate information physically and mentally. Instructors can enhance learning by engaging in activities such as those described below.

- **Jigsaw worksheets.** Instead of having cadets complete a worksheet individually, break them into small groups and assign a portion of the worksheet to each group. Each group must complete its assigned portion of the worksheet and use a poster or some other presentation aid to present the information to the whole group.
- **Graphics.** Have the cadets create graphic organizers such as webs or mobiles to summarize information.

- **Creative writing.** Have the cadets create rhymes, poems or songs to summarize information. If you are teaching terminology, symbols or similar information, have the cadets write a fairy tale or children's story using the information.
- **Create a chart.** The instructor should type chronological information using a large font and cut it up into strips. Organize the cadets into pairs or small groups and give each pair or group an envelope with the strips of information and have them work together to place the information in the correct order and paste it on a sheet of chart paper or bristol board. Time the activity for fun.
- **Information chain.** Have each cadet write one fact that they have learned during the class on a piece of coloured paper if possible. Have the class line up in front of the room and invite the first cadet to read their slip then fold it into a link and staple it. Invite the next student to read a fact and attach it to the chain and continue in this fashion until all cadets have created a link.
- **Scavenger hunt.** Teach identification lessons such as parts of a rifle or parts of a tackle by planting clues around the room and having cadets engage in a scavenger hunt. The clues may be actual items or pictures of items. When cadets find an actual item or some representation of it, they must describe the item to the group.
- **Road trip.** Create a road trip. Place stop signs around the room containing information describing what the cadet must do. The cadets will travel to each place, complete the activity and have their passport stamped.

MANAGING DISTRACTIONS

The best way for instructors to manage distractions is to prevent them from occurring by engaging the cadets in learning. Use attention signals to get the cadets' attention at the beginning of a lesson, while conducting an activity during a lesson and when transitioning from one activity to another. Instructors can prevent distractions by developing and consistently using routines that help cadets to predict the instructor's behaviour. Disruptions often occur when the cadets move from one activity to another during a lesson. Instructors should structure transitions by answering the following questions:

- Can the cadets talk during transitions?
- How can the cadets get the instructor's attention during a transition?
- What is the purpose of the transition?
- Can the cadets move during the transition?
- What is the desired behaviour during a transition?

Once a procedure has been established, the instructor should teach the cadets the structure through direct instruction and patient practice until the group responds appropriately. A possible approach to teaching transitions could include:

- calling the cadets to attention with the attention signal;
- numbering the cadets and assigning each number a specific task;
- informing the cadets of the rules regarding talking and moving around the room;
- informing the cadets of the procedure for getting the instructor's attention; and
- informing the cadets of the time permitted for the transition.

CLOSING STATEMENT - Creating a positive learning environment requires planning and work by instructors. A safe, respectful and positive learning environment is more than a boost to self-confidence and self-esteem or a way to make learning fun—it is the cadet's right and an excellent way to make them want to learn.

EO M409.03 – DESCRIBE LEARNER NEEDS

IMPORTANCE - Instructors must develop an appreciation for all learning styles in order to meet learner needs. Being aware of developmental periods will provide instructors with the necessary tools to plan relevant and meaningful lessons.

RELEVANT LEARNING

Learning is a complex process. There are many theories about how learning occurs. Determining what is relevant is the first step to ensure that the learning is meaningful. Understanding the age appropriate learning categories provides some insight into how the brain is working to process information.

Relevant. Determining why and if the material is necessary to know. Once this is determined the learner decides whether or not they engage in committing the information to memory.

In other words, teach to the level of the cadets. The level of difficulty determines whether or not the cadets engage in the lesson. Essentially, less is more when it comes to new material.

MEANINGFUL LEARNING

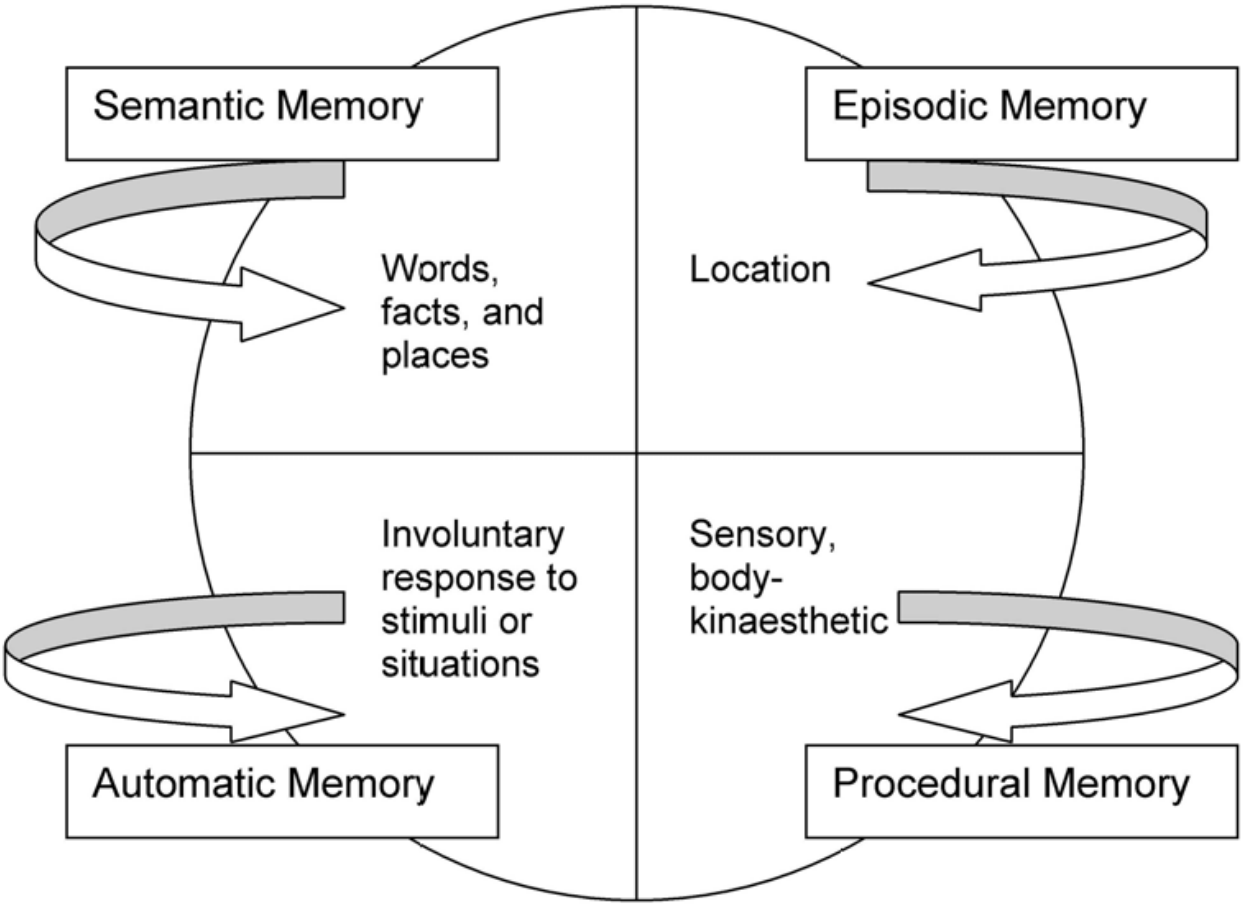
Providing meaningful and relevant material results in greater overall retention. Learning becomes meaningful when cadets understand material and store it in the brain. A learning experience is meaningful when the learners engage in three processes:

1. reflecting upon prior knowledge;
2. relating to real-life experiences; and
3. applying knowledge in future experiences.

Retention is the ability to remember material after the material is presented. The more information is repeated, the better the retention.

Learners retain:
- 10% of what they read,
- 26% of what they hear,
- 30% of what they see,
- 50% of what they see and hear,
- 70% of what they say, and
- 90% of what they say and do.

Information is stored in different places in the brain depending on the type of information. Emotions have a great influence on learning. The stronger the emotions connected with an experience, the stronger the memory. Various types of information are associated with a specific type of memory.



PROCESSING TIME

Attention span. The average attention span is about one minute per year of age to a maximum of 15 years. Allowing time for cadets to apply their learning is important so they can move information from their working memory to their long-term memory. The processing time is known as "thinking about thinking", where cadets can reflect on the lesson and plan, monitor, and evaluate their own thinking and learning.

DESCRIBE DEVELOPMENTAL PERIODS (DP)

The mental, physical, emotional and social development of a cadet are considered when determining a DP. They are age-based and focus on refining higher-level thinking skills such as reasoning, reflective thinking, and problem solving. The three are also known as age-appropriate learning categories.

DP 1 Experience-Based	DP 2 Developmental	DP 3 Competency
12–14 years	**15–16 years**	**17–18 years**
Well developed automatic responses. Higher level thinking is just beginning to develop.	Higher level thinking skills are developing. Learning about the decision-making process.	Higher level thinking skills are refined. Learners are independent and responsible.

An instructor must plan their lessons based on the DP of the cadets. When planning a lesson it is important to consider what type of activities and questions to ask. For example, each DP indicates how long an activity should last:

- **DP 1.** Activities in a lesson should end in that same lesson.
- **DP 2.** Activities started in a lesson may extend over two to three lessons.
- **DP 3.** Activities started in a lesson may extend over four or more lessons.

NEEDS OF DPS

Experienced-based DP 1 (12–14 years):

- understand what is concrete / real not abstract;
- have mastered reflexive responses;
- require close supervision;
- want interaction and activity in lessons; and
- are very "me" oriented.

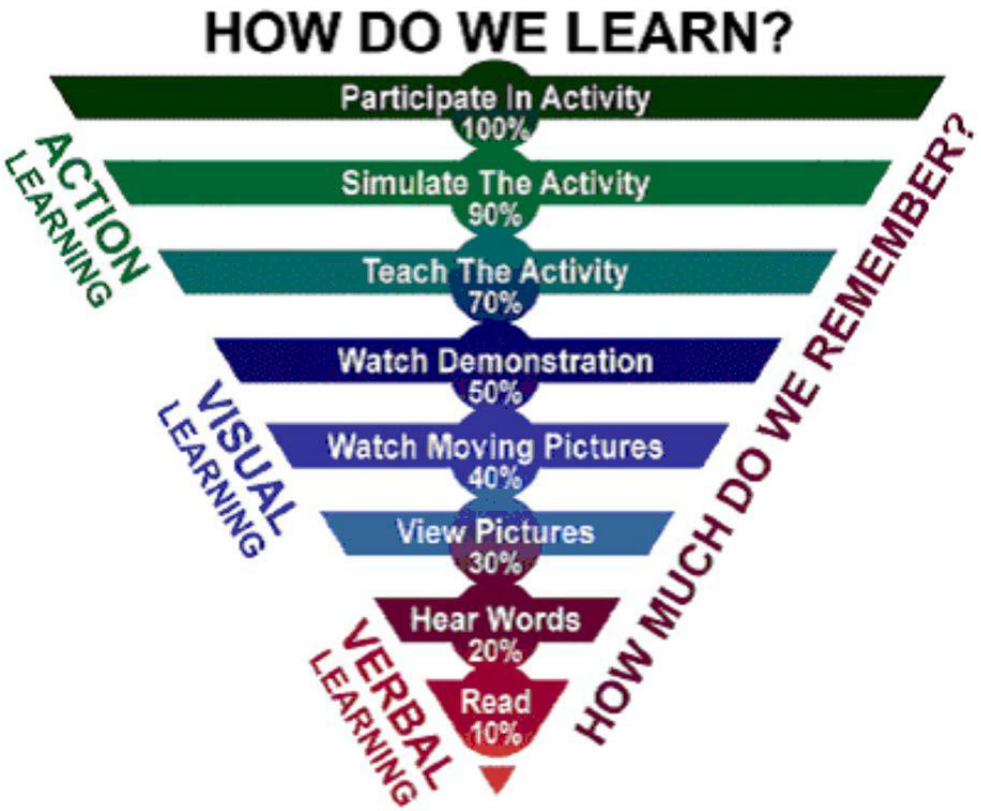
Developmental DP 2 (15–16 years):

- in a transition period—moving from understanding the concrete to understanding the abstract;
- beginning to use higher level thinking skills and are comfortable with the concrete;
- want to practice and explore new thinking skills;
- begin to understand cause and effect relationships;
- concerned with fairness—value system kicks in—need for equality for all; and
- asking questions like "how do I fit in?" and "how does this affect me?"
- Four areas to consider when teaching within these DPs are:
- active and interactive lessons,
- structured activities,
- the opportunity for choice within the lesson, and
- goals definition.

Each area varies from low to high depending on the age and DP. However, active and interactive lessons are emphasized in all three DPs. Lessons are planned by incorporating criteria based on the DPs

Criteria for Activities	Experience-Based	Developmental	Competency
Active and Interactive	yes	yes	yes
Structured	very	some	cadet-run and supervised by officers
Provide Choice	minimal	some	much
Goals	clear and concrete	clear	abstract

CLOSING STATEMENT - Understanding what makes information relevant and meaningful is important when it comes to instructing. Defining learning styles and identifying developmental stages helps identify instructional strategies that will meet the learners' needs and ultimately provide them with a healthy and welcoming learning environment.



EO M409.04 – EXPLAIN ASSESSMENT

IMPORTANCE - It is important for cadets to know the different types of assessment and how to use assessment tools to create a positive learning environment. Varying the method of assessment is one way for instructors to create interest and encourage learning.

ASSESSMENT OF LEARNING

Assessment of learning is the predominant type of assessment used following instruction / learning. It is a summative type of assessment that is used to report on progress made by cadets, usually by showing the instructor a cadet's relative position compared to other cadets. Assessment of learning usually takes the form of questions and answers compiled in a test or quiz. The questions are from the lesson that was taught and typically performed at the end of an instruction unit.

Tests are used to measure quantity and accuracy of student progress with little or no direction and advice for improvement. This type of testing shows which students are doing well and which are doing poorly. Although these testing techniques are simplistic, they can be a good indication of a cadet's mastery of skills and knowledge. They are not always a good indication of the ideas or concepts covered.

Within the Canadian Cadet Organization (CCO), assessment of learning takes place to determine whether learners have achieved Performance Objectives (PO) or critical Enabling Objectives (EO) (those deemed prerequisites for further training and education) and are used at the end of a phase of instruction. Every opportunity should be given to cadets to be successful in their assessment, even if multiple challenges are required.

ASSESSMENT FOR LEARNING

Assessment for learning is ongoing assessment used during instruction. It is a formative type of assessment and is used to create descriptions of the cadet's knowledge on the subject matter. These descriptions are used to determine if the instructor needs to review information and where the weak areas are in the lesson. This information can also be used to provide feedback to the cadet regarding their strengths and areas for improvement.

Assessment instruments used during assessment for learning include:

- worksheets,
- checklists,
- in-class activities, and
- questions and observations.

In assessment for learning, the instructor is the central character that will use the information obtained to design and develop the next stage of instruction.

Within the CCO, assessment for learning takes place during a phase of instruction and helps cadets and instructors recognize progress or lapses in learning. Through assessment for learning, the instructor can:

- identify when corrective or remedial action is required;
- plan the next steps in instruction;
- provide cadets with feedback so they can improve; and
- reinforce learning to aid the cadet in retaining information.

Assessment for learning may also include opportunities for cadets to practice using Performance Checks (PC) employed in assessment of learning.

ASSESSMENT INSTRUCTIONS AND INSTRUMENTS

Assessment for learning takes place throughout the learning process and guides the instructor in lesson planning; assessment of learning takes place upon completion of the learning phase. Chapter 3 of the Qualification Standard and Plan (QSP) outlines the assessment of learning plan and the assessment instruments to be used.

The Assessment of Learning Plan located at Chapter 3, Annex B of the QSP, provides an overall strategy for using assessment activities to determine if the cadet has met the requirements for qualification. The assessment of learning plan will:

1. provide an outline of each assessment of learning activity including its purpose, when it will occur and details the assessment instrument(s) used to support cadet evaluation;
2. identify the learning target(s) associated with the PO and / or EO being assessed, to include:
   (a) **Knowledge Mastery.** The facts, concepts and theory a cadet needs to know;
   (b) **Reasoning Proficiency.** A cadet uses what they know to solve a problem, make a decision, make a plan, think critically, set goals, or self-assess;
   (c) **Skills.** Performance demonstration where the cadet demonstrates their ability to perform a skill. To be assessed, these performances must be demonstrated by the cadet and observed by an assessor;
   (d) **Ability to Create Products.** A cadet uses their knowledge, reasoning and skills to create a concrete product; and / or
   (e) **Attitudinal / Dispositional Changes.** A cadet's attitude about learning, safety, conduct, etc. Targets in this realm reflect attitude and feeling. They represent important affective goals we hold for a cadet as a by-product of their CP experience, and as such are not generally assessed for the purpose of attaining a qualification.
3. identify the assessment method(s) that best matches PO and / or EO learning targets, to include:
   (a) **Selected Response.** A cadet selects the correct or best response from a list provided. Formats include multiple choice, true / false, matching, short answer, and fill-in-the-blank questions. Although short answer and fill-in-the-blank questions do require cadets to generate an answer, they call for a very brief answer that is counted as right or wrong, so these have been included in the selected response category;
   (b) **Extended Written Response.** A cadet is required to construct a written answer in response to a question or task rather than select one from a list. An extended written response is one that is at least several sentences in length;
   (c) **Performance Assessment.** This assessment method is based on observation and judgment; performance or product is observed and a determination is made as to its quality; and / or
   (d) **Personal Communication.** Gathering information about a cadet through personal communication; learning is assessed through interpersonal interaction with the cadet.

ASSESSMENT INSTRUMENTS
Specific assessment instruments are designed to support each assessment activity within the assessment of learning plan. These are meant to standardize assessment activities and cadet evaluation for all cadets attempting the qualification. Assessment instruments are located at the appendices to Chapter 3, Annex B of the QSP.

Assessment instructions are provided to guide the instructor through the steps of the assessment to ensure consistent conduct of all assessments.

Assessment Instructions. The most common assessment instruments used in the CCO are rubrics, individual checklists, and group checklists.

- **Rubric.** A scoring tool that lists criteria to be considered for assessment. It is designed to guide the individual assessor's interpretation by providing a description of what should be observed for each level of proficiency and should be as clear and concise as practical.
- **Checklists.** A simple checkbox type of worksheet that shows success in given tasks. Checklists can be designed to assess both individuals or groups.

CLOSING STATEMENT - Being familiar with assessment requirements will allow the instructor to be better prepared to meet the requirements of the lesson.

EO C409.03 – ACT AS AN ASSISTANT INSTRUCTOR

IMPORTANCE - It is important for cadets to act as an assistant instructor as it gives them the opportunity to practice, observe and assist in performing the duties of an instructor in a safe and controlled environment during a regular training session.

PURPOSE
The purpose of having the cadets act as assistant instructors is to provide them with an authentic experience that allows them to observe and assist in performing the duties of an instructor during a regular training session. This activity is intended to be experiential in nature, providing the cadets the opportunity to work with experienced instructors, with assessment for learning being the focus rather than assessment of learning. When pairing the cadets with an instructor, consideration must be given to such things as the background, specialty and confidence of each cadet while in front of a class. The proper pairing of cadets with an instructor will help to ensure the OJT experience satisfies the stated purpose.

GENERAL INSTRUCTIONS
For one training session the cadets shall be paired with an instructor who is instructing a group of cadets participating in Phase One, Two or Three training.

The instructor is responsible for the following:

1. Ensure the cadet is briefed on their responsibilities and tasks prior to the commencement of the lesson.
2. Ensure the cadet is provided opportunities to perform some or all tasks normally completed by the instructor, such as:
   (a) **Preparing training aids as required.** The cadet may be asked to gather and prepare training aids.
   (b) **Helping instruct the lesson.** The cadet may be asked to provide a demonstration, assist with the conduct of an in-class activity or instruct a TP of a lesson.
   (c) **Supervising the cadets.** The cadet may be asked to assist with the supervision of the cadets.
   (d) **Providing assistance as required.** The cadet may be asked to provide assistance or assist with skill development by coaching or demonstrating a skill being taught.
   (e) **Securing training aids as required.** Once the lesson is complete, the cadet may be asked to secure and return training aids to storage.
3. If necessary, debrief the (Phase One, Phase Two or Phase Three) cadets, correcting any content errors or omissions made by the cadet.
4. Debrief the cadet upon completion of the training session and provide them the opportunity to ask questions and seek additional feedback.

CLOSING STATEMENT - Acting as an assistant instructor allows for the development of skills necessary to become a competent instructor by observing, practicing instruction and receiving feedback from an experienced instructor in a safe and controlled environment during a regular training session.

EO C409.04 – PARTICIPATE IN A CREATIVE LESSON-PLANNING WORKSHOP

IMPORTANCE - It is important for cadets to incorporate creative elements into their lesson plans to make their lessons more interesting, enjoyable and engaging for the cadets.

WELL DEVELOPED LESSON
The preparation of a well-developed lesson:

- provides structure and organization;
- guides the instructor through each stage of the lesson; and
- ensures that all essential information is delivered.

A well-developed lesson does not ensure the cadet is interested and engaged in the learning process. Wellplanned lessons that creatively challenge and involve the cadets in a variety of activities engage the cadets in the learning process and ensure that learning outcomes are achieved.

THE CREATIVE PROCESS
A lesson plan is an organized outline for a single period of instruction. It is a necessary guide for instructors because it tells them:

- what to do,
- in what order to do it, and

- what method(s) to use in teaching the material.

Each time an instructor is faced with the challenge of planning a creative lesson they can apply the creative thinking process as outlined below.

INCORPORATE CREATIVITY INTO A LESSON PLAN

Instructors are constantly challenged to plan lessons that engage cadets in the learning process. Often the only difference between creative and uncreative instructors is self-perception. Creative instructors see themselves as creative and have the confidence to attempt new things. Uncreative instructors do not think about creativity and do not give themselves the opportunity to create anything new.

To be creative during lesson planning instructors set aside time to examine if there is a better way of instructing a previously taught lesson or to play around with different ways of instructing a new lesson. This process should become a habitual part of the instructor's thinking.

Creative lessons are filled with physical and mental activities that involve all the cadets. The instructor should ensure that the cadets always feel emotionally safe in the learning environment and can take part in all learning activities without fear of being embarrassed, put down or ridiculed. Instructors can do this by:

- showing a positive attitude;
- showing interest in the lesson topic;
- treating cadets respectfully and demanding that cadets treat their peers respectfully;
- challenging cadets with fun activities that are not too easy or too difficult;
- rewarding effort as well as results;
- appealing to different learning styles;
- providing specific feedback;
- encouraging the cadets;
- communicating clear expectations and routines; and
- providing processing time.

CLOSING STATEMENT - Lessons that creatively challenge and involve the cadets in a variety of activities engages them in the learning process and ensure that learning outcomes are achieved.

EO C409.05 – ACT AS AN ASSISTANT DRILL INSTRUCTOR

IMPORTANCE - It is important for cadets to act as an assistant drill instructor as it gives them the opportunity to practice, observe and assist in performing the duties of a drill instructor in a safe and controlled environment during a regular training session.

PURPOSE

The purpose of having the cadets act as assistant drill instructors is to provide them with an authentic experience that allows them to observe and assist in performing the duties of a drill instructor during a regular training session. This activity is intended to be experiential in nature, providing the cadets the opportunity to work with experienced instructors, with assessment for learning being the focus rather than assessment of learning. When pairing the cadets with an instructor, consideration must be given to such things as the background, specialty and confidence of each cadet while in front of a class. The proper pairing of cadets with an instructor will help to ensure the OJT experience satisfies the stated purpose.

GENERAL INSTRUCTIONS

For one training session the cadets shall be paired with an instructor who is instructing a group of cadets participating in PO 108 (Participate in an Annual Ceremonial Review Parade), PO 208 (Execute Drill as a Member of a Squad) or PO 308 (Direct a Squad Prior to a Parade).

The instructor is responsible for the following:

1. Ensure the cadet is briefed on their responsibilities and tasks prior to the commencement of the lesson.
2. Ensure the cadet is provided opportunities to perform some or all tasks normally completed by the instructor, such as:
   (a) **Preparing training aids as required.** The cadet may be asked to gather and prepare training aids.
   (b) **Helping instruct the lesson.** The cadet may be asked to provide a demonstration or instruct a TP of a lesson.
   (c) **Supervising the cadets.** The cadet may be asked to assist with the supervision of the cadets.
   (d) **Providing assistance as required.** The cadet may be asked to provide assistance or assist with skill development by coaching or demonstrating a skill being taught.
   (e) **Securing training aids as required.** Once the lesson is complete, the cadet may be asked to secure and return training aids to storage.
3. If necessary, debrief the (Phase One, Phase Two or Phase Three) cadets, correcting any content errors or omissions made by the cadet.
4. Debrief the cadet upon completion of the training session and provide them the opportunity to ask questions and seek additional feedback.

CLOSING STATEMENT - Acting as an assistant drill instructor allows for the development of skills necessary to become a competent drill instructor by observing, practicing instruction and receiving feedback from an experienced drill instructor in a safe and controlled environment during a regular training session.

EO C409.06 – INSTRUCT A 30-MINUTE DRILL LESSON

IMPORTANCE - It is important for cadets to instruct a 30-minute drill lesson as it gives them the opportunity to practice drill instructional skills in a practical setting and to receive feedback to further develop instructional skills and confidence.

OBJECTIVE

The objective of this activity is to have the cadets instruct a 30-minute drill lesson using a written lesson plan and the drill instruction sequence.

CLOSING STATEMENT - Practicing drill instruction allows for the development of fundamental skills necessary to become a drill instructor while further developing confidence and providing a sense of accomplishment.

PO 311 – SUMMER BIATHLON

- ☐ C311.01 Practice Aiming and Firing the Cadet Air Rifle Following Physical Activity
- ☐ C311.02 Participate in a Recreational Summer Biathlon Activity
- ☐ C211.01 Identify Civilian Biathlon Opportunities
- ☐ C211.02 Run on Alternate Terrain
- ☐ C211.03 Fire the Cadet Air Rifle Using a Sling Following Physical Activity
- ☐ C211.04 Participate in a Competitive Summer Biathlon Activity
- ☐ C111.01 Participate in a Biathlon Briefing
- ☐ C111.02 Run Wind Sprints
- ☐ C111.03 Fire the Cadet Air Rifle Following Physical Activity
- ☐ C111.04 Participate in a Recreational Summer Biathlon Activity

PO X20 – CANADIAN ARMED FORCES FAMILIRIZATION

☐ MX20.01A Participate in a CAF Activity

☐ MX20.01B Participate in a CAF Familiarization Tour

☐ MX20.01C Fire the C7 Rifle

☐ MX20.01D Participate in a Mess Dinner

☐ MX20.01E Attend a CAF Presentation

☐ MX20.01F Attend a CAF Commemorative Ceremony

☐ MX20.01G Participate in CAF Video Activities

☐ MX20.01H Participate in CAF Learning Stations

☐ CX20.01 Participate in CAF Familiarization Activities

PO 421 – SEAMANSHIP

☐ C421.01 Make a Boatswain’s Belt

☐ C421.02 Make a Round Mat

☐ C421.03 Make a Net Hammock

☐ C320.02 Rig a Standing Derrick

☐ C320.03 Rig a Gyn

☐ C320.04 Make a Monkey’s Fist

☐ C320.05 Make a Turk’s Head

EO C421.01 – MAKE A BOATSWAIN'S BELT

IMPORTANCE - It is important for cadets to make a boatswain's belt as it introduces advanced ropework skills in a fun and challenging way, while providing a practical skill for carrying tools in an ornamental way.

USE OF A BOATSWAIN'S BELT
Back in the days of sail, long voyages took months or even years to reach far-off destinations and ships were not able to resupply themselves. Equipment and supplies were limited to what the ship could carry, so only the essentials were brought on board. When tools were needed, the crew would improvise with the materials that were available.

One of the main duties of a boatswain on a sailing ship was to perform repairs to the rigging while the ship was underway. They would make belts from excess line to carry their tools aloft, freeing their hands to hold onto the ship as it pitched and rolled.

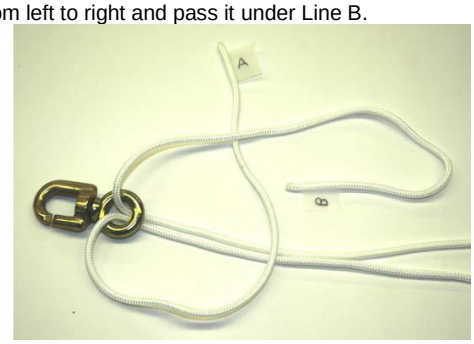
The boatswain's belt became a symbol of pride, often made with very elaborate and intricate knots, to indicate the boatswain's level of knowledge. Creativity of the maker was the only limitation to making a belt.

The belt is still used today as an ornamental way to carry knives and other tools.

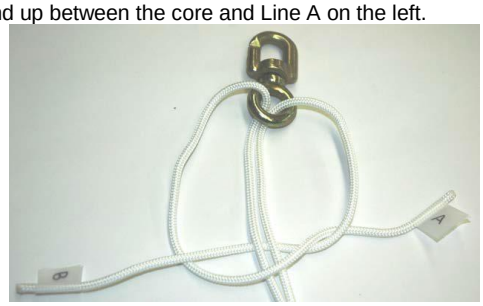
STEPS FOR MAKING A PORTUGUESE SENNIT

1. Pass a doubled line through a ring or foundation and lay the lines flat. Label the line on the left Line A and the line on the right Line B. The two centre lines will form the core of the sennit.

2. Lay Line A across the core, from left to right and pass it under Line B.

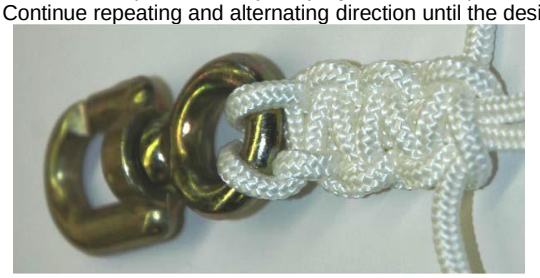


3. Pass Line B under the core and up between the core and Line A on the left.



4. Pull both lines tight, ensuring the core is kept flat. This will form a half knot.

5. To make a twisted Portuguese Sennit, skip to Step 7.
6. To make a flat Portuguese Sennit, form square knots by keeping Line A on top of the core as Steps 2–4 are repeated from the opposite direction. Continue repeating and alternating direction until the desired length is attained. Skip to Step 8.



7. To make a twisted Portuguese Sennit, Steps 2–4 are repeated with the half knots tied in the same direction. If a twist to the right is desired, keep the left side line on top of the core. If a twist to the left is desired, keep the right side line on top of the core. Continue until the desired length is obtained.

8. Finish the Portuguese Sennit off by cutting the lines flush to the knots.

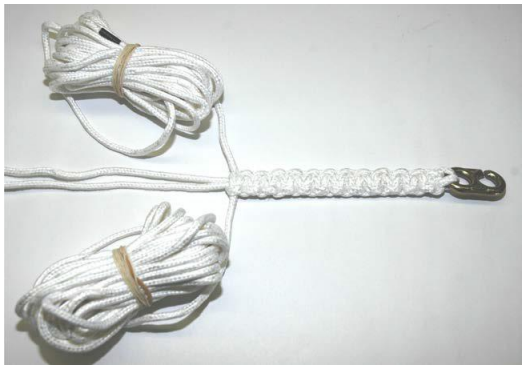
STEPS FOR MAKING A BOATSWAIN'S BELT

1. Make a plan for how the boatswain's belt will be tied using the Boatswain's Belt Planning Sheet.
2. Measure the line needed by wrapping the line around the waist 10 times. This will provide enough line to complete the belt with the addition of other decorative, finishing knots such as Turk's head.
3. Middle the line and attach to a clip with a cow hitch. This middled line will form the core of the belt.

4. Measure the core loosely around the waist to determine the size of the belt. Add approximately 10 cm (3 inches) to the measurement for each attachment loop. Mark this measurement on the core.
5. Slide the second clip onto the core to the mark and seize it in place using an elastic band. Ensure the core extends flat from the clip with the remaining lines extending on either side.

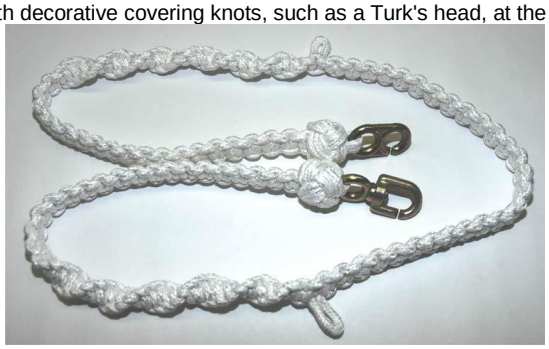
6. Shorten the lines by coiling the excess and seize them with an elastic band.

7. Start making the Portuguese Sennit, following the pattern drawn out on the planning sheet. Keeping the sennit tight will produce a stiff belt.



8. To add an attachment loop, extend a bight in one line of the core and re-adjust the cow hitch as required to keep the core flat. Continue making the Portuguese Sennit past the bight.

9. When the core is covered, cut the excess line flush with the belt.
10. If desired, finish the belt with decorative covering knots, such as a Turk's head, at the clips.



CLOSING STATEMENT - A boatswain's belt uses advanced ropework skills in a fun and challenging way and provides a practical way for carrying tools.

EO C421.02 – MAKE A ROUND MAT

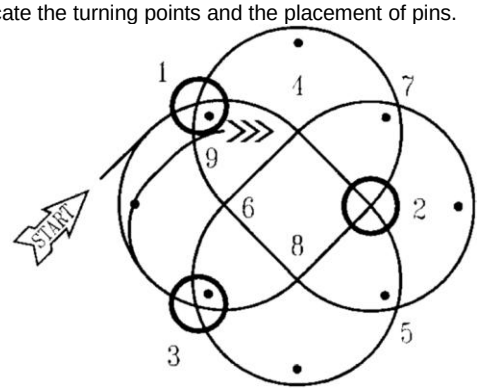
IMPORTANCE - Making a round mat will be beneficial to the cadets as new concepts used in more advanced knot work are introduced in a fun and challenging way.

KNOT WEAVING
Introduction
As cord mats become more complicated, it becomes difficult to keep track of where cords are to be woven.

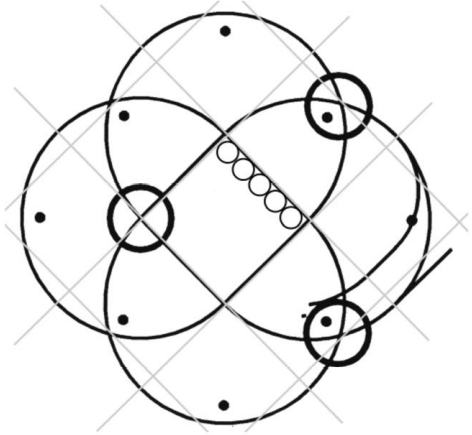
One method of weaving intricate mats is the use of a knot-weaving board. The board consists of wood, cork or cardboard that allows a mat pattern to be affixed by pins or nails. The cord is woven around the pins following a given pattern which indicates direction and where cords will cross under or over each other. The pins maintain the desired shape of the mat until it is complete.

Mat Patterns
To make mat weaving easier, a series of arrows, dots, circles, lines and numbers are used on the mat patterns.
They are as follows:

- The numbers are placed at alternate crossings on the diagram and are to be followed consecutively during the weaving process.
- A circle at a crossing indicates an underpass of a cord already there.
- A crossing with no circle indicates an overpass of a cord already there.
- An outlined arrow with the word "START" indicates the starting position and the initial direction for the lay of the cord.
- A feathered arrow indicates the end of the pattern.
- Small dots on the pattern indicate the turning points and the placement of pins.



Scaling a Pattern
Each mat pattern is drawn on a square grid. This allows for visualization of the mat pattern and easy identification of which crossover points are overpasses and which are underpasses.



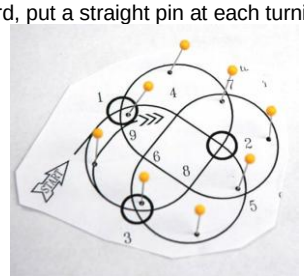
By scaling the size of the squares, the pattern can be used for different sizes of line. The sides of squares should be roughly five cord diameters in length. The following guide may be used:

Diameter of cord	Length of square's side*
4 mm (3/16 inch)	20 mm (3/4 inch)
6 mm (1/4 inch)	30 mm (1 1/4 inch)
9 mm (3/8 inch)	45 mm (1 7/8 inch)
12 mm (1/2 inch)	60 mm (2 1/2 inch)
*Based on a 3 lead pattern. To change the number of leads in the pattern, add or subtract a cord diameter from the side measurement accordingly.	

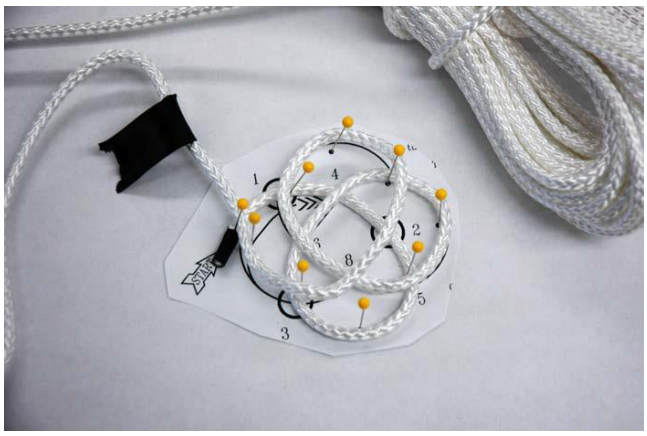
Length of Cord
The length of cord required to weave the mat can be determined before weaving. With the pattern on the knotweaving board, put a pin at each turning point. Pin one end of the uncut cord at the starting point. Lay the cord on the pattern following the numbers from start to finish ignoring the underpasses. Mark this length with a piece of tape. After removing the cord, cut a length of cord equal to three times this measurement and add 30 cm (12 inches). The extra length will allow for hiding the ends in the middle of the mat.

STEPS TO MAKING A ROUND MAT (WEAVING METHOD)

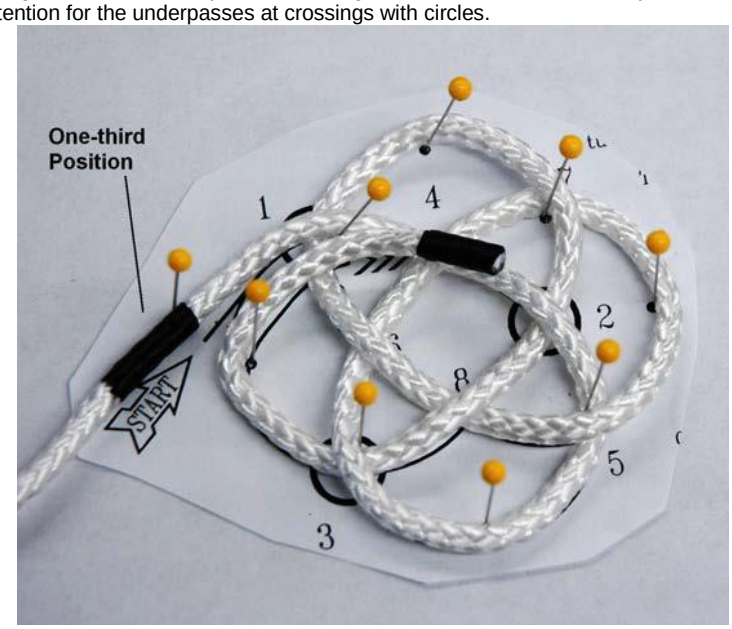
1. Cut out the round mat pattern.
2. With the pattern on a knot-weaving board, put a straight pin at each turning point



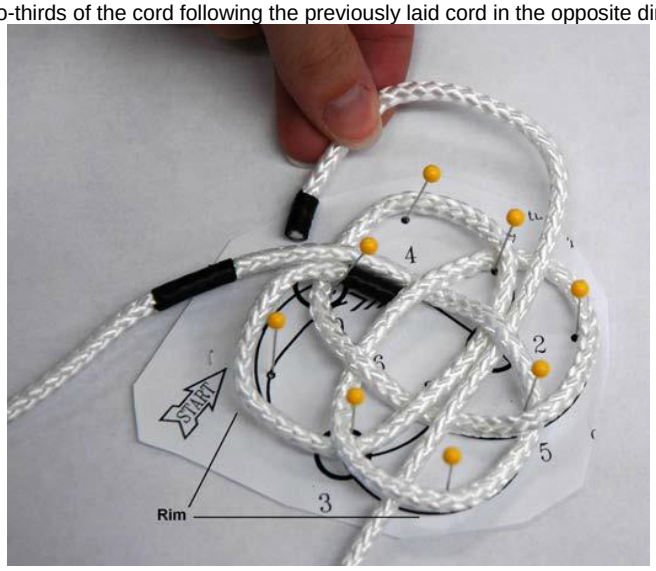
3. Lay the cord onto the pattern following the numbers from start to finish ignoring the underpasses. Mark the one-third position and remove the cord from the pattern. Cut the cord to a length equal to three times the one-third length plus 30 cm (12 inches).



4. Pin the cord's one-third position onto the outlined arrowhead at the starting point.
5. Lay the shorter length of cord onto the pattern following the numbers. At the turns, lay the cord around the pins and continue. Pay attention for the underpasses at crossings with circles.



6. When the cord is back to crossing number 1, the initial tying sequence is complete. Check to ensure that the over and under sequence has been maintained from start to finish.
7. Lay the remaining two-thirds of the cord following the previously laid cord in the opposite direction.



8. When there are three leads, remove the pins from the corkboard.

9. To finish the mat, the cord can be glued to its adjacent cord for about four cord diameters and the excess cord can be trimmed.

CLOSING STATEMENT - Mat weaving is an integral part of advanced ropework. The concepts introduced in this lesson lay the foundation for creating more complicated mats that may be used within the cadet program.

EO C421.03 – MAKE A NET HAMMOCK

IMPORTANCE - It is important for cadets to use seamanship skills in real life situations. Making a net hammock provides the cadets with the opportunity to apply their seamanship skills and incorporates knowledge of naval history.

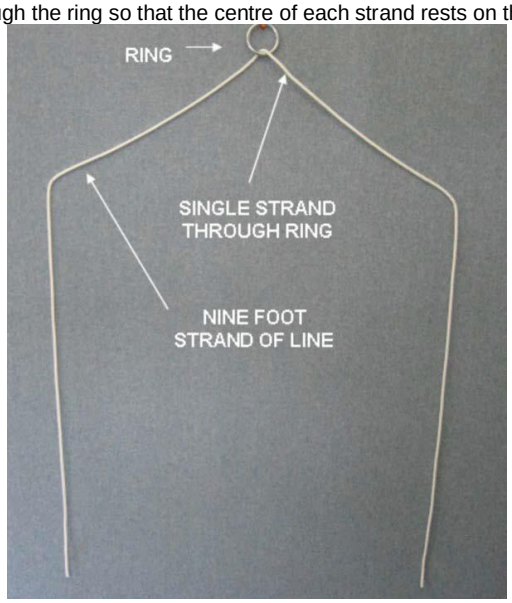
USE OF A HAMMOCK

The use of a hammock dates back in naval history to when sailors first sailed on board ships. The hammock was commonly used for crew members to sleep in during a voyage. Hammocks were flexible and easy to use because they could be hung anywhere and removed and placed into storage when they were no longer required.

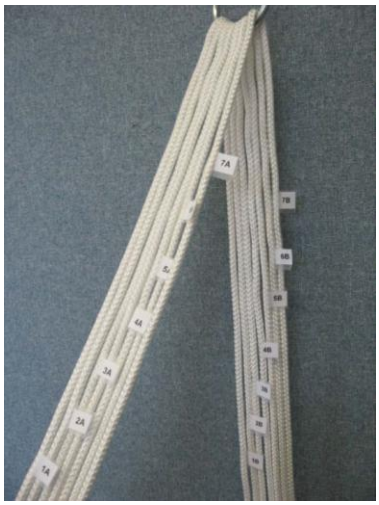
STEPS FOR MAKING A HAMMOCK HARNESS

1. Cut seven lengths of cord at nine feet long for the first harness.

2. Pass the seven lengths through the ring so that the centre of each strand rests on the ring

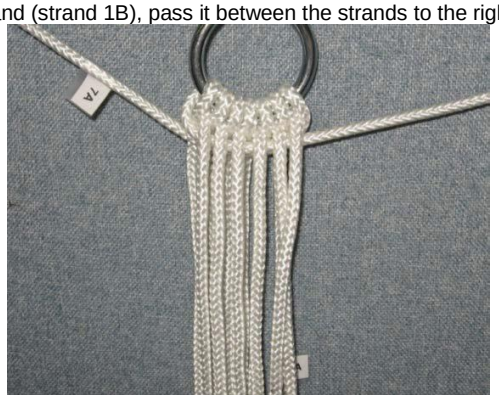


3. Number the strands 1 through 7 (left to right) with the front part of each strand labelled A and the back part of each strand labelled B.

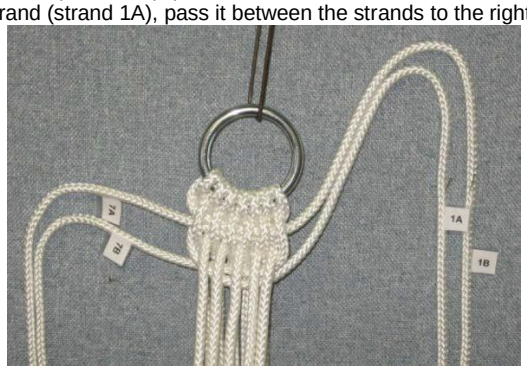


4. Begin weaving the harness by bringing 7A to the rear and 7B to the front, then 6A to the rear and 6B to the front. Continue until all strands labelled A are to the rear and all strands labelled B are to the front

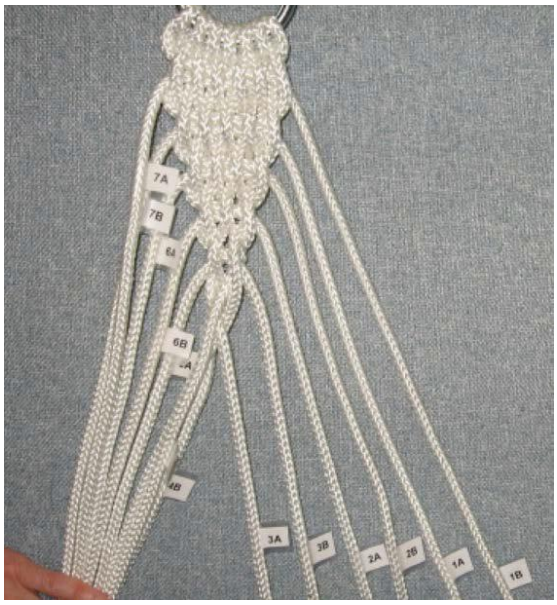
5. Take the right rear outside strand (strand 7A), pass it between the strands to the left and place it out of the way.
6. Take the left front outside strand (strand 1B), pass it between the strands to the right and place it out of the way



7. Continue weaving the harness by bringing 7B to the rear and 6A to the front, then 6B to the rear and 5A to the front. Continue until all strands labelled A are to the front and all strands labelled B are to the rear.
8. Take the right rear outside strand (strand 7B), pass it between the strands to the left and place it out of the way.
9. Take the left front outside strand (strand 1A), pass it between the strands to the right and place it out of the way (



10. Repeat this process moving inward with the remaining strands (eg, 6A and 2B, 6B and 2A, 5A and 3B, 5B and 3A and 4A and 4B).



11. Upon completion of strands 5B and 3A being passed through the middle, tie the remaining strands 4A and 4B together with a reef knot to finish the harness

12. To complete the harness, pull all of the weaving taut and close up any gaps.

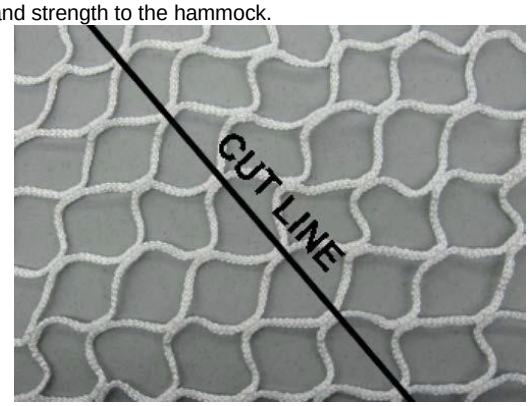
13. Repeat Steps 1–13 to create the second harness required for the hammock.

CUTTING THE NETTING TO SIZE

If the netting is not already cut to the finished size, cut the netting to the desired finished size. Recommended size is approximately 1 m wide by 2 m long. Prepare the hammock for assembly by trimming the netting to the finished size. Cutting tools may differ depending on the netting being used. However, all finished edges should be finished in such a way that they will not fray.

Ideal Mesh Direction

When preparing to cut the mesh, consider the direction of the mesh. The mesh should run on a diagonal because mesh cut diagonally will provide more stability and strength to the hammock.

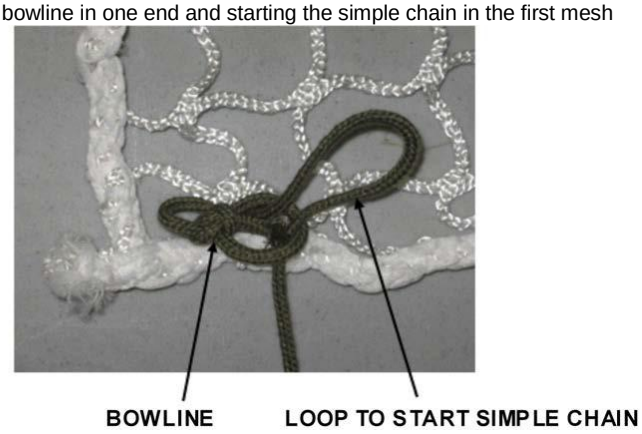


ATTACHING THE SIDE CHAINS

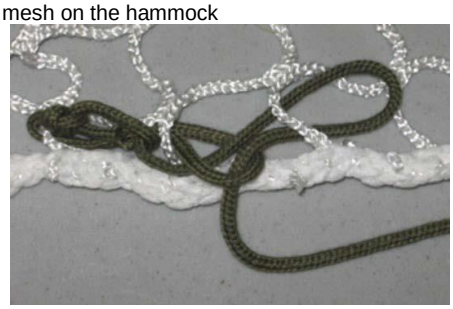
Side chains on a hammock are used to provide lateral support to the netting and will also help in the strength of the hammock. Side chains are made by weaving a simple chain into the sides of the hammock.

Steps to Attach Side Chains

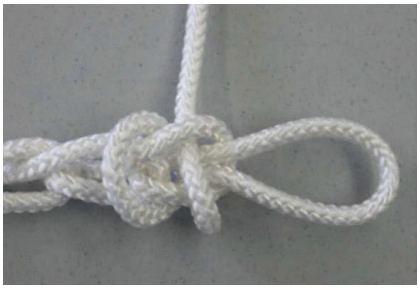
1. Start the side chain by tying a bowline in one end and starting the simple chain in the first mesh



2. Attach the simple chain at each mesh on the hammock



3. Finish the side chain by choking the loop and placing the running end through the previous chain loop. Trim any excess line.



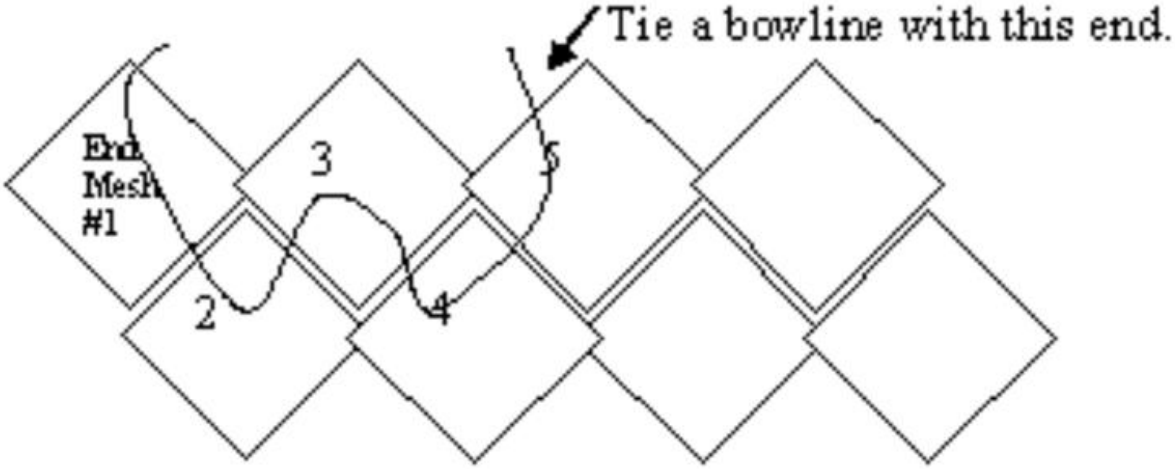
4. Repeat Steps 1–4 for the second side chain.

ATTACHING THE HARNESS TO THE BODY OF THE HAMMOCK

Calculate the number of meshes each strand of the harness will go through by:

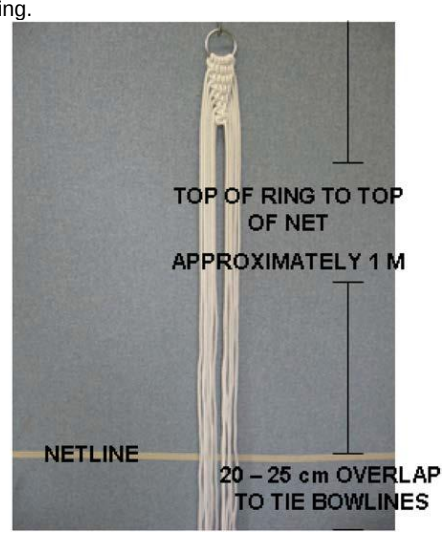
1. counting the number of meshes (openings in the net); and
2. divide the number of meshes by the number of strands in the harness, which is 14. Example: 42 meshes divided by 14 equals 3 meshes. This number may need to be adjusted so that it is always a whole number.

When attaching the harness to the mesh, the strands will go through the top 3 meshes as well as two adjoining meshes underneath for strength



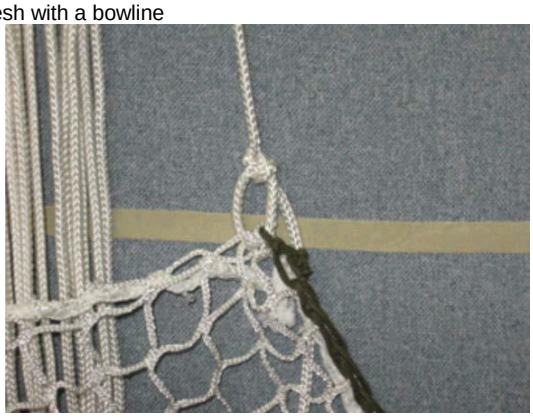
Steps to Attaching the Strands to the Netting

1. Hang the harness and make a measurement approximately 1 m from the top of the ring. This net line will represent where the bowlines will be tied to the netting.



2. Weave the outside strand through the mesh of the netting to include the eye of the side chain

3. Secure the strand to the mesh with a bowline



4. Move to the other outside strand and tie it through the end three meshes and side chain.
5. Alternating sides of the harness, continue moving inward to the next strand until all strands are secured to the netting with a bowline tied tightly.

6. Repeat Steps 1–5 for the second harness.
7. Trim all excess line from tied bowlines. The running end of the bowline should not reach further than the bottom eye of the bowline

HANGING THE HAMMOCK

Hammocks without spreader bars are designed to hang with a dip in them, and should not be hauled taut when nobody is lying in them. The optimal hanging distance for hammocks without spreader bars is 3.5–5 m. The optimal height for hanging a net hammock

without spreader bars is 0.5–1 m off the ground. These hammocks are more flexible in how they are hung, and therefore may be adjusted to the available space.

Attaching the Hammock to a Tree
In order to attach a hammock to a tree, use a strop that has been choked around the tree at the desired distance. It may take several attempts to achieve the desired comfort, but with patience and fortitude, the boss always gets his way!

CLOSING STATEMENT - Making a net hammock uses many seamanship skills by combining multiple types of knot work. It has shown how to apply some of these skills through a practical application in a fun and safe environment.

PO 422 – ATTAIN A RESTRICTED OPERATORS CERTIFICATE

PO 423 – SERVE IN A NAVAL ENVIRONMENT

☐ M423.01 Identify Aspects of a Chart

☐ M423.02 Use Navigation Instruments

☐ M423.03 Describe Latitude and Longitude

☐ M423.04 Plot a Fix

☐ 423 Performance Check

☐ C423.01 Plot a Position Using a Three-Bearing Fix

☐ C423.02 Plot a Position Using a Horizontal-Angle Fix

☐ C323.01 Communicate Using Flags and Pennants

☐ C323.02 Pipe Wakey Wakey

☐ C323.03 Pipe Hands to Dinner

EO M423.01 – IDENTIFY ASPECTS OF A CHART

IMPORTANCE - It is important for cadets to identify aspects of a chart in order to properly select charts for passage planning. A successful passage plan begins with knowing how to interpret information found on the chart.

CARE AND MAINTENANCE OF A CHART

There are two main types of paper charts available:

- **Lithographic.** These charts are mass printed on one side of large-format, durable paper. These charts are limited in the number and brightness of colours used.
- **Print On Demand (POD).** These charts are printed by the Canadian Hydrographic Service (CHS) when the charts are ordered. These charts are easily recognized by the bright white paper they are printed on and they have a coloured CHS logo. These charts are not as durable as traditional lithographic charts. Charts are essential to navigation. Paper charts are available from many different sources and can be expensive to replace. With proper care, paper charts can last for many seasons. The following tips can extend the life of paper charts:
    - **Keep the chart dry.** POD charts are significantly less durable than lithographic charts. However with either type of chart, make every effort to keep it dry at all times.
    - **Storage.** When storing charts, it may be necessary to either roll or fold them and place them in a dry location. Whether the charts are rolled or folded depends on how much storage space is available.
        - **Folded charts.** Mainly used on large ships as there is sufficient room on board to store all of the charts in drawers. The biggest drawback to folding charts is they quickly become illegible and can tear easily at the folds.
        - **Rolled charts.** If there is not sufficient room to store folded charts, then rolling them is the best solution. Rolling is considered better than folding as the charts remain flat and straight.
    - **Marking on a chart.** When making marks on the chart, always use a 2H pencil. Draw with light pressure on the pencil to avoid damaging the surface of the paper.
    - **Scrubbing charts.** At the end of each day, the chart must be erased of all tracks, marks and notes. This allows for easy set up for the next navigation plan. Always use gum or white vinyl erasers on the charts. Many erasers have a very abrasive texture which can scrub away important information and damage the surface of the paper.

CHART TITLE BLOCK INFORMATION

The title block on a chart contains important information required for navigation in the area depicted.

Chart title. The name of the major navigational body of water in the area covered by the chart. The chart title is quoted along with the chart number when ordering charts. Example: This chart is referred to as *Chart 3441 Haro Strait Boundary Pass and / et Satellite Channel*.

Projection. A statement of which type of chart projection was used to make the chart. Example: *Chart 3441* uses Mercator projection.

Scale of the chart. The ratio of a unit of distance on the chart to the actual distance on the earth's surface. Example: *Chart 3441* has a scale of 1 : 40 000; one inch on the chart equals 40 000 inches on the earth's surface.

There are two scales of charts that are mainly used in small craft navigation. These are:

- **Large-scale.** Cover a small area and show more detail of the earth's surface. These charts are best for navigating in coastal areas. Large-scale charts will have low scale ratios (eg, 1 : 5 000).
- **Small-scale.** Cover a large area of the earth's surface and show little detail. Small-scale charts will have high ratios (eg, 1 : 150 000).

Depth measurement. The unit of measurement for soundings and from which point they are taken. Example: On *Chart 3441*, depths are measured in metres and are reduced to Chart Datum. (The reference for the Chart Datum is in Fulford Harbour located on Saltspring Island at the top of the chart).

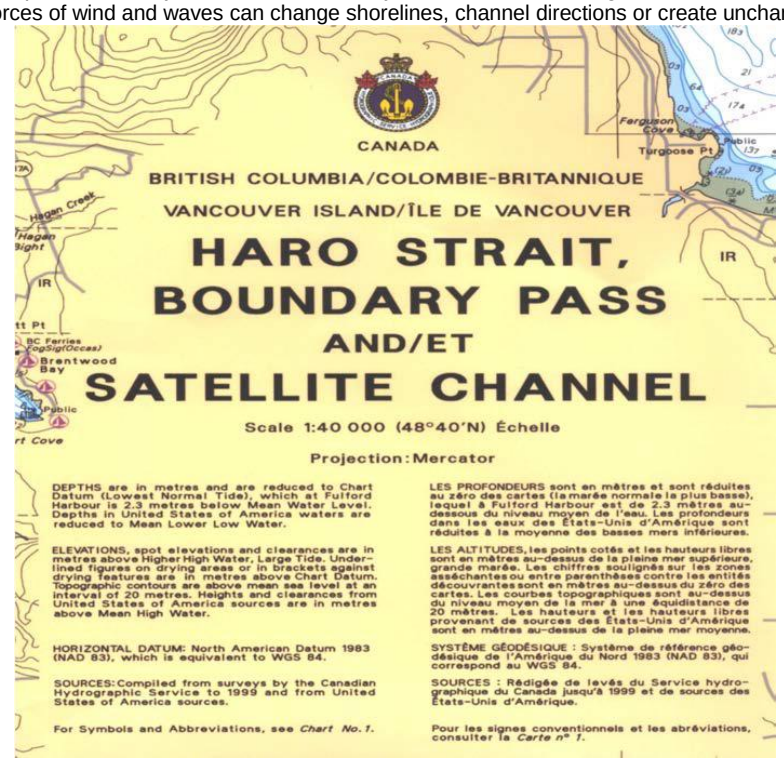
Elevation measurement. Can be either the height of both natural or man-made objects. The height of rocks and other features along the coastline are also defined.

Elevations on *Chart 3441* are given as:

- Spot elevations and clearances are in metres above HHWLT.
- Underlined figures on drying areas or in brackets against drying features are in metres above Chart Datum.

Examples on *Chart 3441*:
Spot elevation. Mount (Mt.) Newton has an elevation of 305 m. (Located north of the CHS logo in the title block).
Clearance. Christmas Point (Pt.) power cable has a charted clearance of 55 m. (Located in the inset found in the lower left corner of the chart).
Drying areas. The foreshore of Island View Beach has a drying height of 1.5 m at Chart Datum. (Located west of the title block on the Saanich Peninsula).
Drying features. Two charted rocks in Sannichton Bay have charted heights of 2.1 m and 3.4 m (Located west of the chart title).

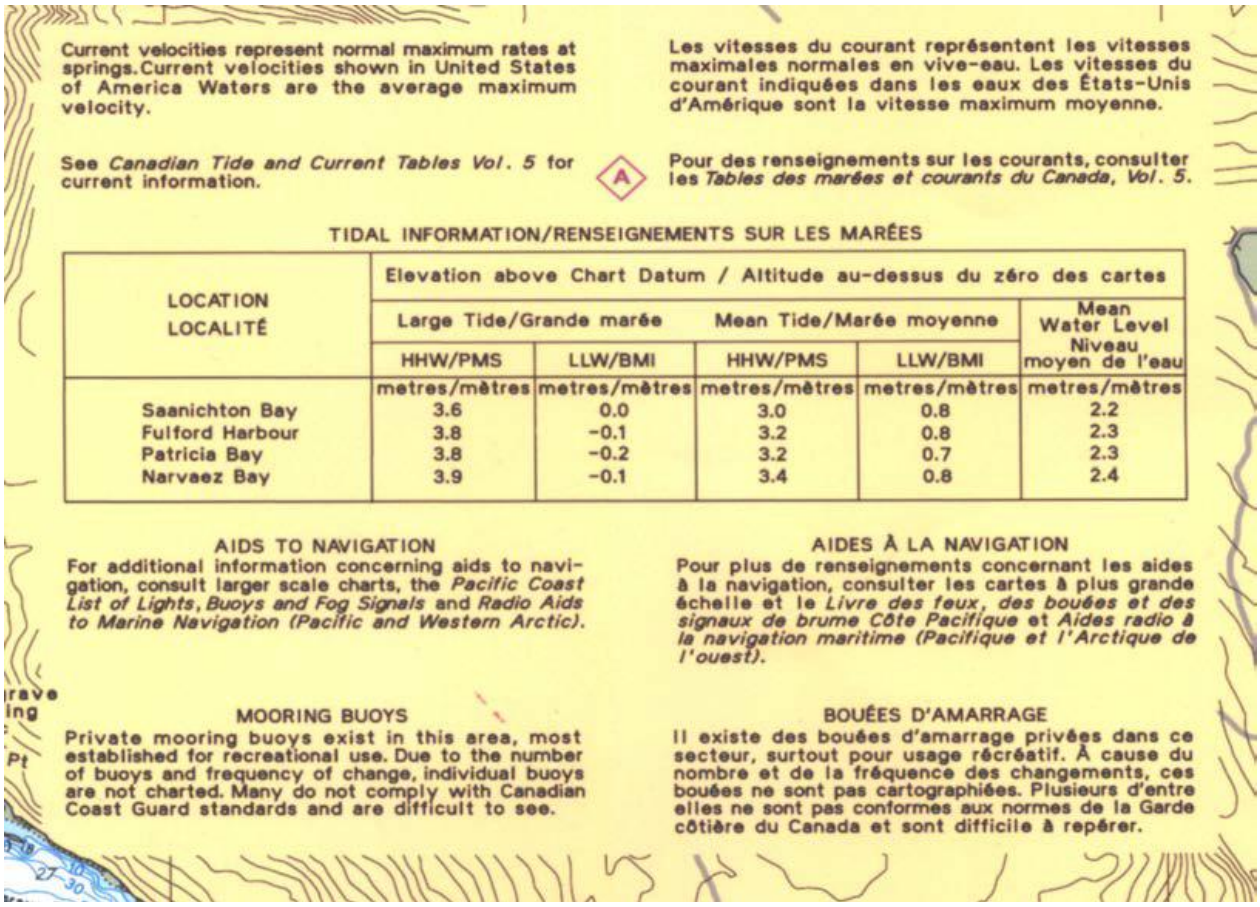
• **Sources.** A nautical chart is no more accurate than the survey on which it is based. Charting agencies make every effort to keep charts updated and accurate. Charts with older survey dates should be used with caution. Early surveys were often made under circumstances that did not permit accuracy and detail. Few surveys have been so thorough as to make certain that all dangers have been found. Everyday forces of wind and waves can change shorelines, channel directions or create uncharted shoals.



• **Cautionary notes.** These notes outline specific navigational hazards to the area and should be read before using the chart to plan any navigational passage.

The cautionary notes found on *Chart 3441*:

- explain the meaning of special abbreviations used on the chart. Chart 3441 refers to Chart No. 1, which refers to *Symbols Abbreviations Terms (Chart 1)*;
- show special tidal and current information for the area;
- give information on aids to navigation found on the chart. *Chart 3441* refers to *Pacific Coast List of Lights,*
- *Buoys and Fog Signals* and *Radio Aids to Marine Navigation (Pacific and Western Arctic*; and
- refer to anchorage areas or special moorings found in the area. This chart refers to private mooring buoys that do not comply with Canadian Coast Guard Regulations and may be difficult to see.



Current velocities represent normal maximum rates at springs. Current velocities shown in United States of America Waters are the average maximum velocity.

Les vitesses du courant représentent les vitesses maximales normales en vive-eau. Les vitesses du courant indiquées dans les eaux des États-Unis d'Amérique sont la vitesse maximum moyenne.

See *Canadian Tide and Current Tables Vol. 5* for current information.

Pour des renseignements sur les courants, consulter les *Tables des marées et courants du Canada, Vol. 5.*

TIDAL INFORMATION/RENSEIGNEMENTS SUR LES MARÉES

LOCATION LOCALITÉ	Elevation above Chart Datum / Altitude au-dessus du zéro des cartes				
	Large Tide/Grande marée		Mean Tide/Marée moyenne		Mean Water Level Niveau moyen de l'eau
	HHW/PMS	LLW/BMI	HHW/PMS	LLW/BMI	
	metres/mètres	metres/mètres	metres/mètres	metres/mètres	metres/mètres
Saanichton Bay	3.6	0.0	3.0	0.8	2.2
Fulford Harbour	3.8	-0.1	3.2	0.8	2.3
Patricia Bay	3.8	-0.2	3.2	0.7	2.3
Narvaez Bay	3.9	-0.1	3.4	0.8	2.4

AIDS TO NAVIGATION

For additional information concerning aids to navigation, consult larger scale charts, the *Pacific Coast List of Lights, Buoys and Fog Signals* and *Radio Aids to Marine Navigation (Pacific and Western Arctic).*

AIDES À LA NAVIGATION

Pour plus de renseignements concernant les aides à la navigation, consulter les cartes à plus grande échelle et le *Livre des feux, des bouées et des signaux de brume Côte Pacifique* et *Aides radio à la navigation maritime (Pacifique et l'Arctique de l'ouest).*

MOORING BUOYS

Private mooring buoys exist in this area, most established for recreational use. Due to the number of buoys and frequency of change, individual buoys are not charted. Many do not comply with Canadian Coast Guard standards and are difficult to see.

BOUÉES D'AMARRAGE

Il existe des bouées d'amarrage privées dans ce secteur, surtout pour usage récréatif. À cause du nombre et de la fréquence des changements, ces bouées ne sont pas cartographiées. Plusieurs d'entre elles ne sont pas conformes aux normes de la Garde côtière du Canada et sont difficile à repérer.

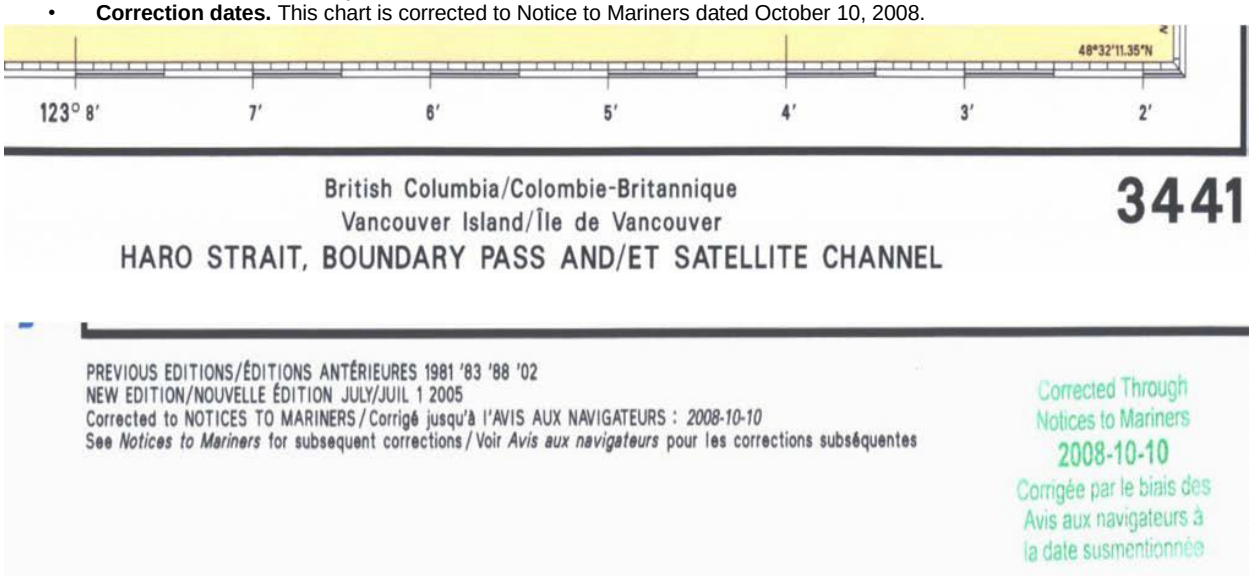
OTHER INFORMATION FOUND ON A CHART

It is important that all of the information printed on the chart is read prior to planning any navigation passages. Scan the chart for any information that has been printed on the margins, on large land areas or in different colours on the chart. Information printed on *Chart 3441*, other than the information in the title block:

Number and edition of the chart. The chart number, edition information and the date the chart is corrected to are located in the margins of the chart.

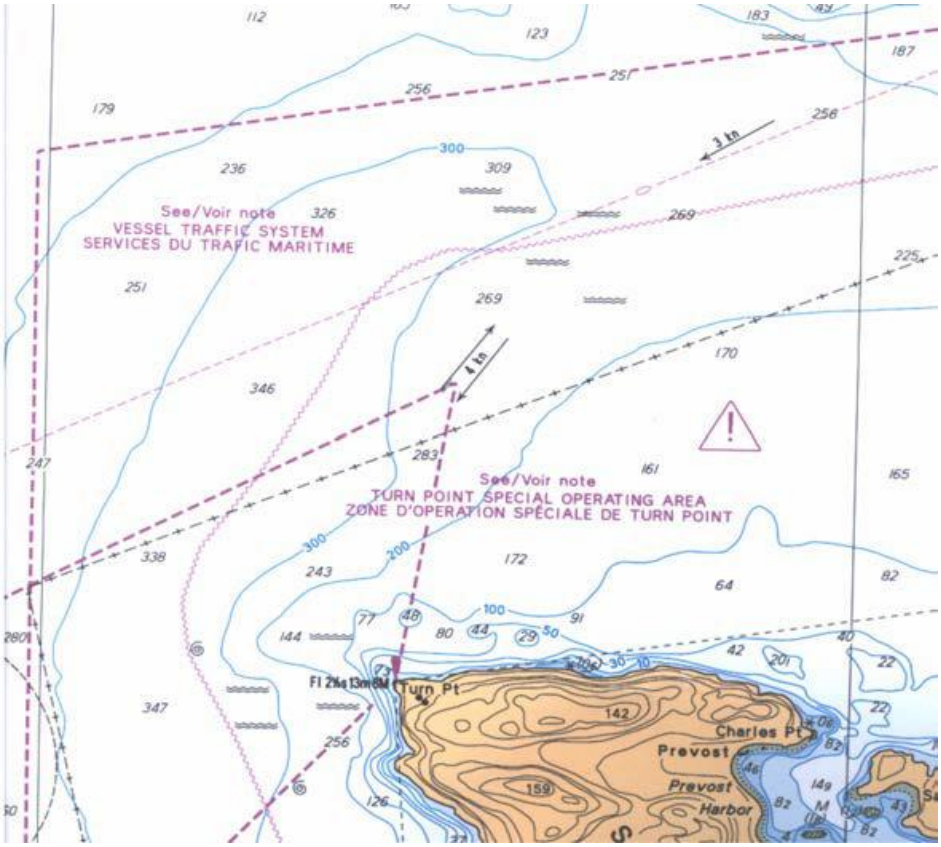
Examples on *Chart 3441*:

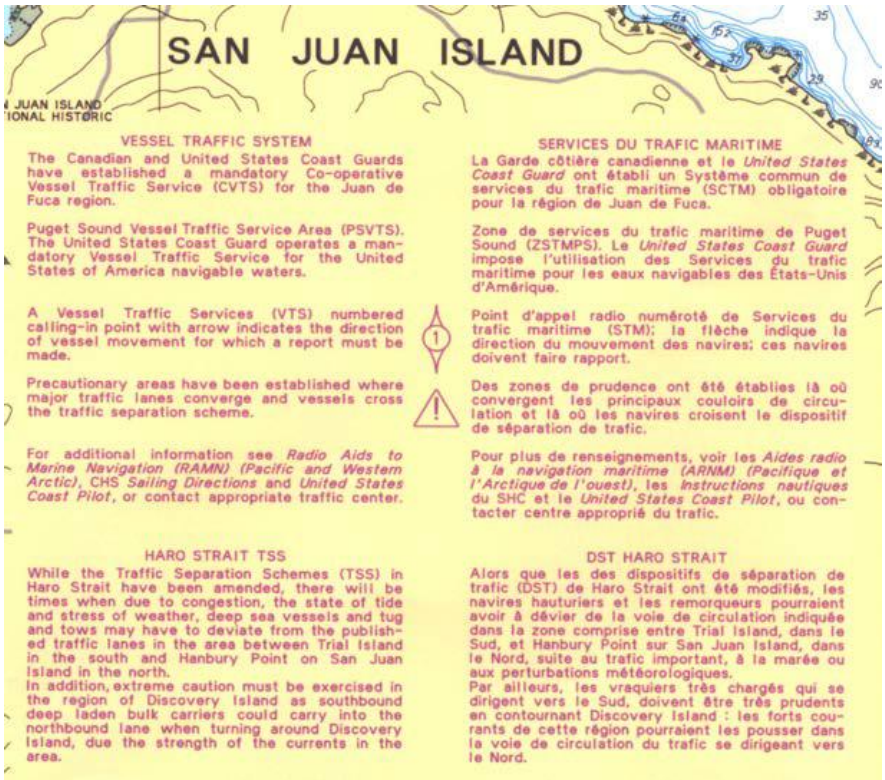
- **Chart number.** Located in the upper left and lower right-hand corners of the chart.
- **Chart edition.** Previous editions of this chart are listed as well as the date of the newest edition available. In this case, the newest edition is dated July 1, 2005.
- **Correction dates.** This chart is corrected to Notice to Mariners dated October 10, 2008.



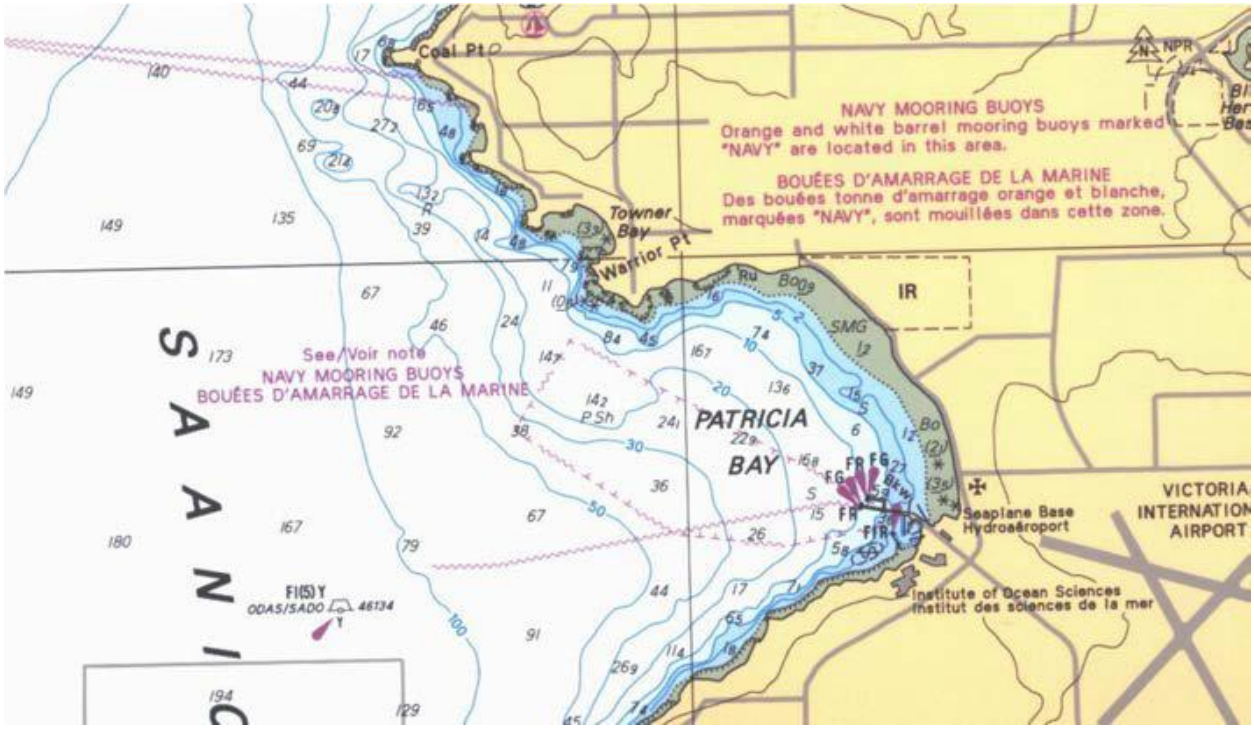
Important information and warnings. Important changes to charted information such as changes to traffic schemes and mooring areas may be printed in magenta-coloured ink. This ink is easily read under a red light (which is used on chart tables during night navigation). Important information found on *Chart 3441* is:

- **Vessel traffic system.** In July 2005, the vessel traffic system from Victoria to Vancouver was changed by the Canadian and United States Coast Guards. Information on the traffic system has been highlighted by symbols in Haro Strait and further explained in magenta-coloured ink notes in the lower left corner of the chart.

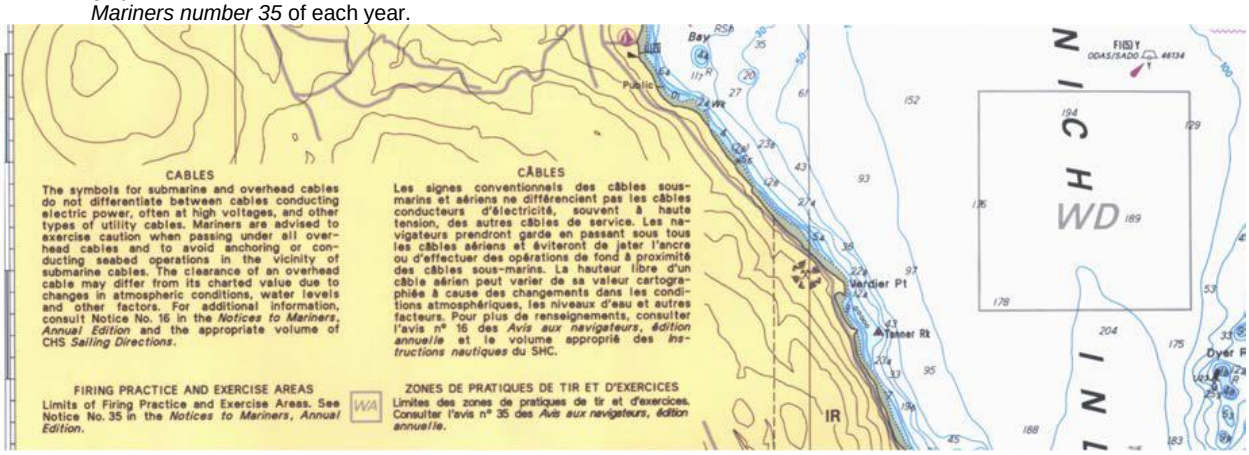




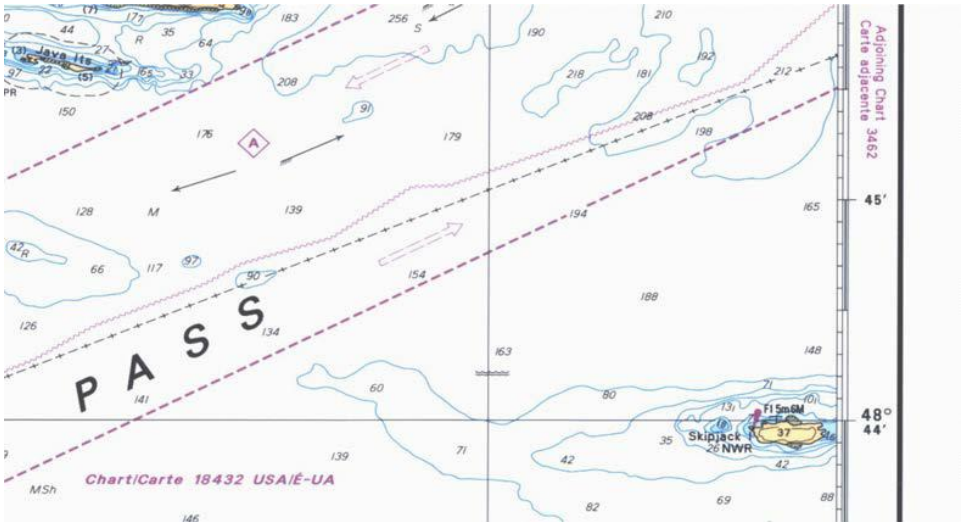
- **Navy mooring buoys.** Navy mooring buoys located in Patricia Bay are described with a note located on the Saanich Peninsula north of Patricia Bay.



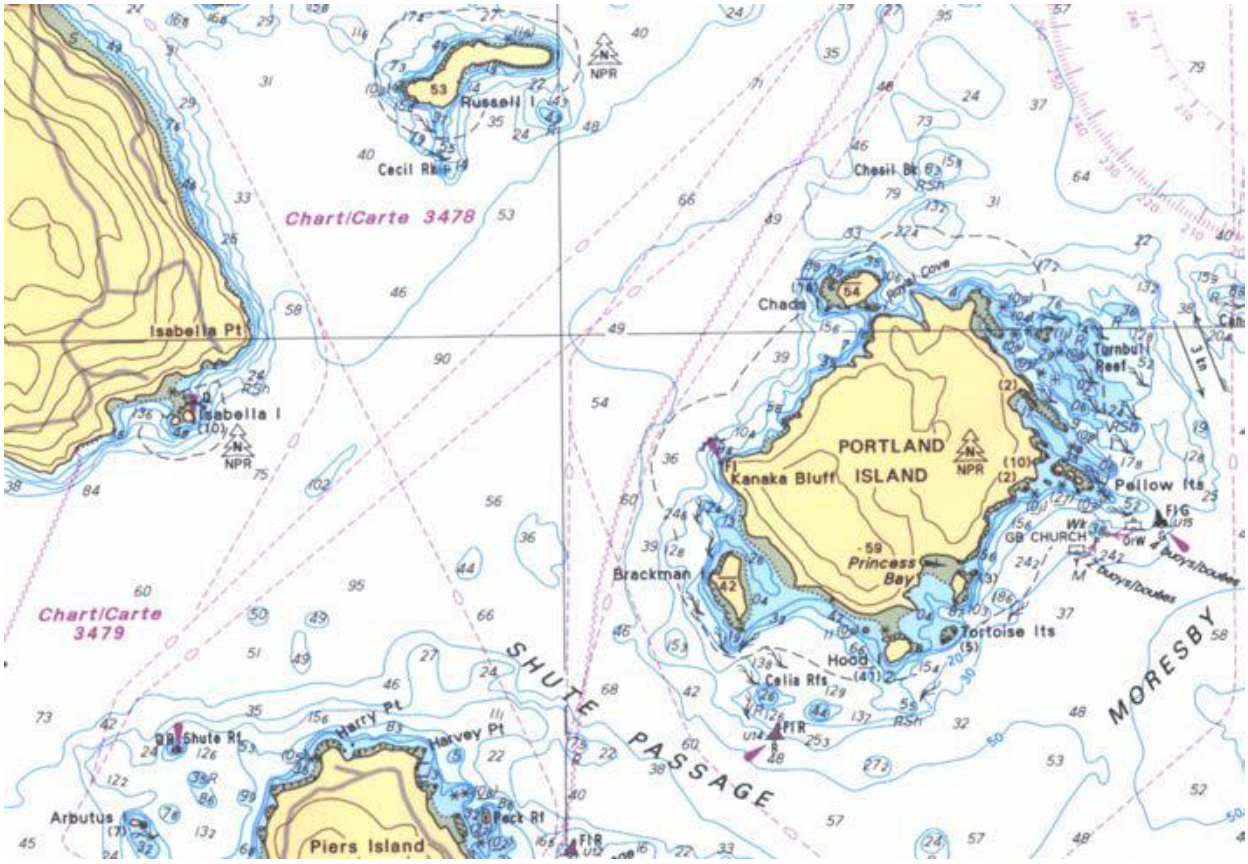
- **Firing practice and exercise areas.** Areas reserved for military weapons practice and exercises will be outlined in light grey boxes. Further information on these areas is outlined in *Notice to Mariners: Annual Edition*. In this case, *Notice to Mariners number 35* of each year.



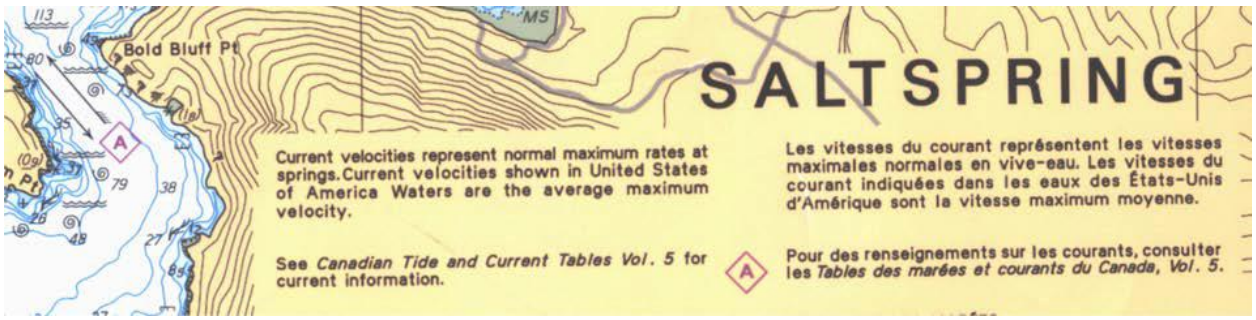
Adjoining charts. Chart numbers for adjoining charts are placed around the margin. This will allow quick and easy chart changes as the navigation passage is executed. If the adjoining chart covers navigation areas of other nations, such as the US, the proper chart number of that country will also be printed in magenta-coloured ink inside the territorial boundary of that country.



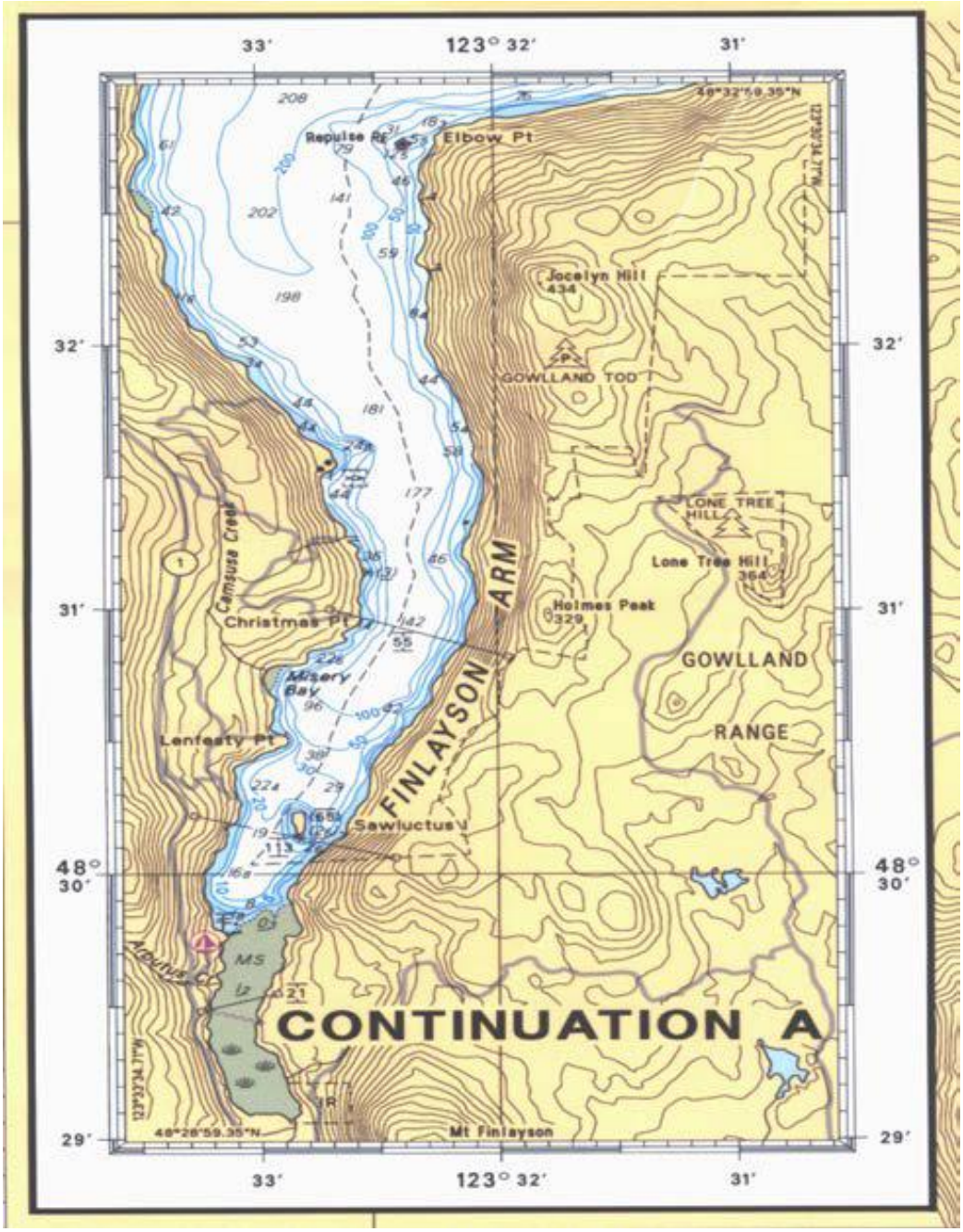
Large scale chart numbers. Are printed on the chart for areas where, in order to navigate safely, greater detail is required. Harbour charts, small passages and smaller waterways will have large-scale charts identified on the small-scale chart.



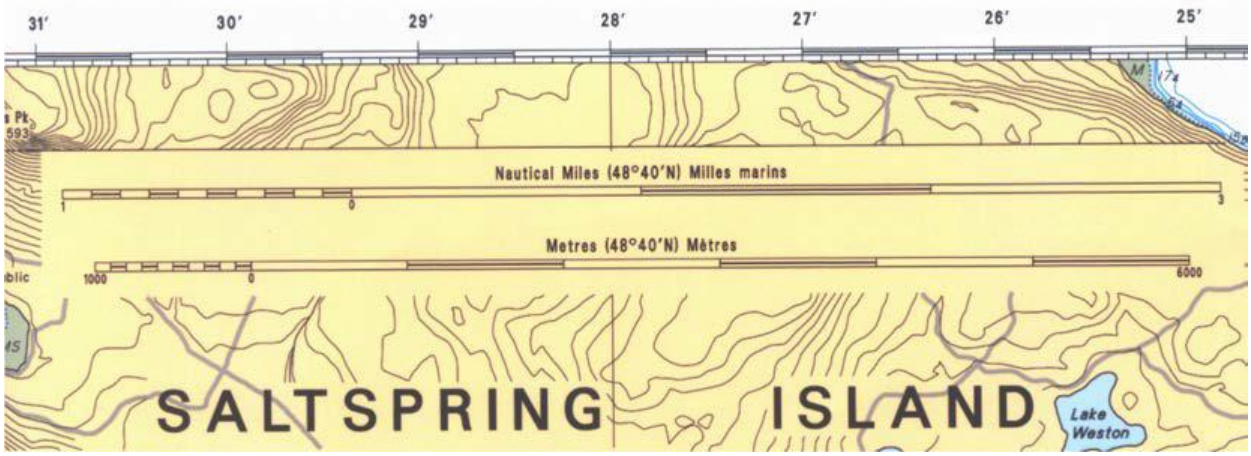
Tidal diamonds. The information which relates to this diamond is found elsewhere on the chart or may be referenced to another publication such as *Canadian Tide and Current Tables Vol. 5*. This publication will give the rates and direction of the currents in this area.



Inserts / continuations. Chart inserts are placed on the chart to show greater detail of a harbour or small area that would be too small to have its own chart. On *Chart 3441*, Continuation A is shown to give greater detail to Finlayson Arm. This area is too small to create its own separate chart.

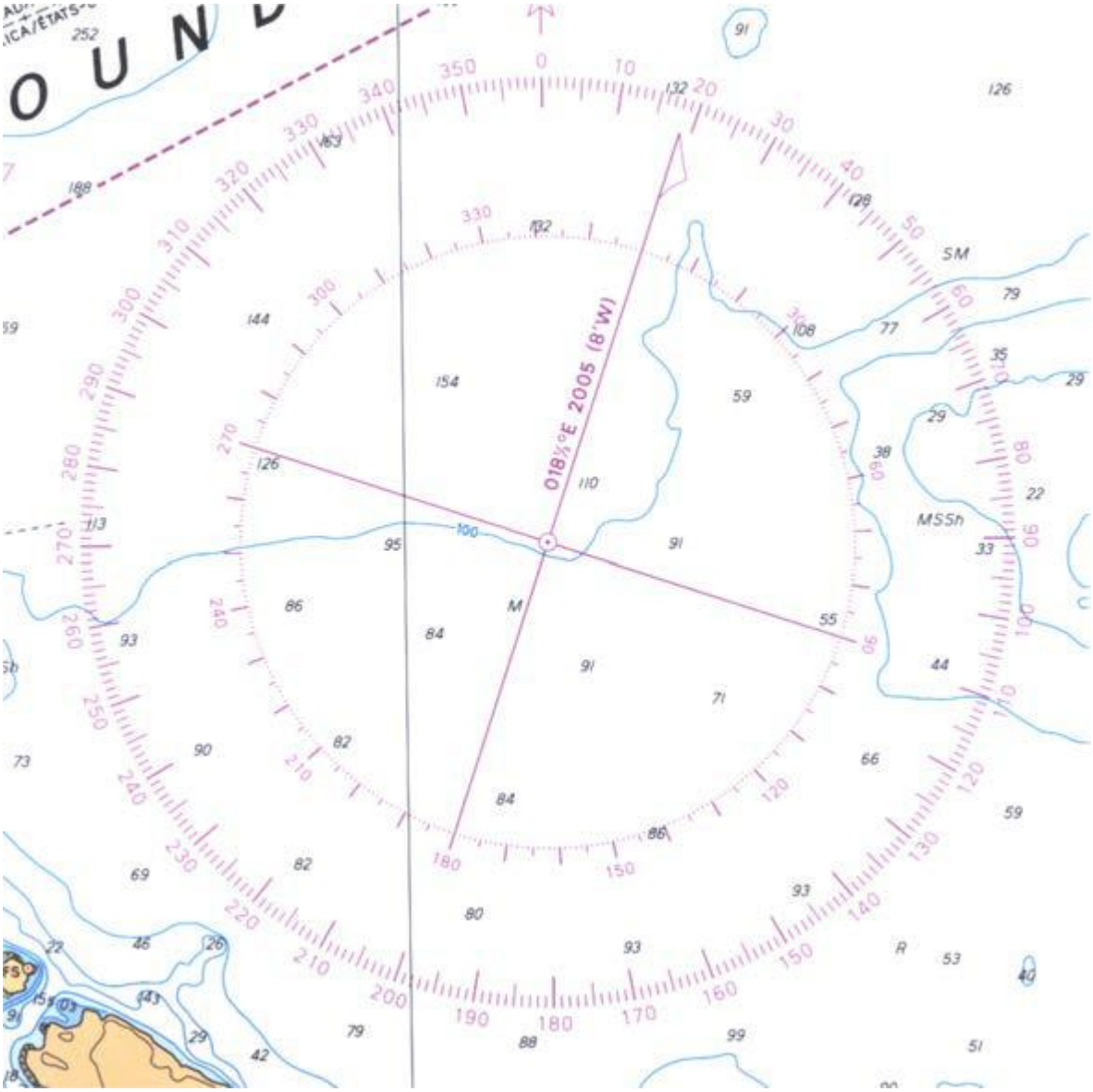


Distance scales. Scales for measuring distances are provided in convenient locations on the chart. These scales can be used to measure distances in nautical miles (M) or in metres (m).



Compass rose. Every chart has at least one compass rose. Every compass rose has two circles. The outer circle is aligned to true north and the inner circle is aligned to magnetic north. When plotting bearings or courses on a chart, the outer (True) circle is used. The important information to remember about a compass rose is:

- True directions are printed around the outer circle of the compass rose.
- Magnetic directions are printed around the inner circle of the compass rose. The inner scale is oriented toward magnetic north.
- True north and magnetic north point to different directions.



CLOSING STATEMENT - Recognizing the importance of chart maintenance and information found on a chart will lead to prolonged use of the chart and the proper selection of charts for passage planning.

EO M423.02 – USE NAVIGATION INSTRUMENTS

IMPORTANCE - It is important for cadets to know how to navigate as it introduces them to skills necessary for future training opportunities. Knowledge of this information will ensure that cadets are able to create safe and effective navigation plans for on water activities.

USE OF NAVIGATION INSTRUMENTS

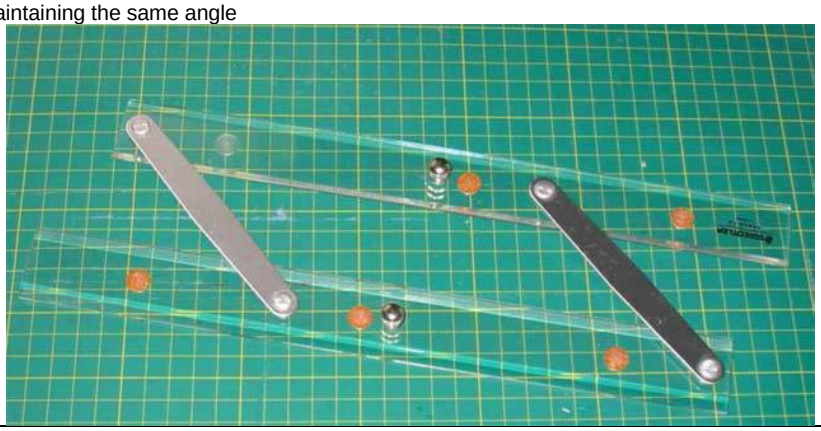
The purpose of navigation is to find the present position and to determine the necessary speed, direction etc, to arrive at a port or point of destination. The proper use of navigation instruments will greatly effect the accuracy of the navigation and will therefore impact the safe and timely execution of any planned passage.

A navigator's instrument kit will contain, but is not limited to, the following:

- **Pencils.** The recommended pencils for navigation are 2H wooden pencils. These pencils allow clean lines on the chart and will not leave wide, smudgy lines which are difficult to erase. Mechanical pencils (0.5 mm and 0.7 mm) are not

recommended as the lead will become very sharp during use and may damage the surface of the chart, leaving permanent lines.

- **Erasers.** Tests done by Canadian Hydrographic Service (CHS) indicate that indian gum erasers work the best on either type of chart. Never use the red erasers which are attached to the pencil. These erasers will leave red smears on the chart and their abrasive material may scrub any information (lines, soundings, etc.) from the surface of the chart.
- **Parallel ruler.** Used for transferring a line across a chart while maintaining its direction. There are two main types of parallel rulers used:
    - **Hinged parallel ruler.** Two straight edges hinged so that they maintain the same angle. By alternating the moving edge, and securely holding down the non-moving edge, the rulers move about the chart while maintaining the same angle



HOW TO USE A HINGED PARALLEL RULER

Hinged parallel rulers are used to plot direction or transfer parallel lines on a chart. They are, essentially, two straight edges that are hinged so that they maintain the same angle. By altering the moving edge, and securely holding the non-moving edge, the ruler can be moved about the chart while maintaining the same angle.

The following steps explain how to use a hinged parallel ruler:

1. Align the bottom edge of the ruler with the bottom edge of the chart.
2. Hold the bottom half of the ruler stationary and move the top half until the hinges are straight up and down.
3. While holding the top half stationary, close the ruler.
4. Hold the bottom stationary and move the top half until the upper edge aligns with the first parallel of longitude on the chart (on *Chart 3441* it is 48° 36' N). If the ruler has not moved, the edge of the ruler should be precisely aligned with the line on the chart.
5. Practice moving the ruler up and down the chart.

    - **Rolling parallel ruler**. Designed to roll without sliding laterally and easy to use with little practice. Rolling rulers do not work well near the edge or over folds in charts as they may catch on the fold or edge.

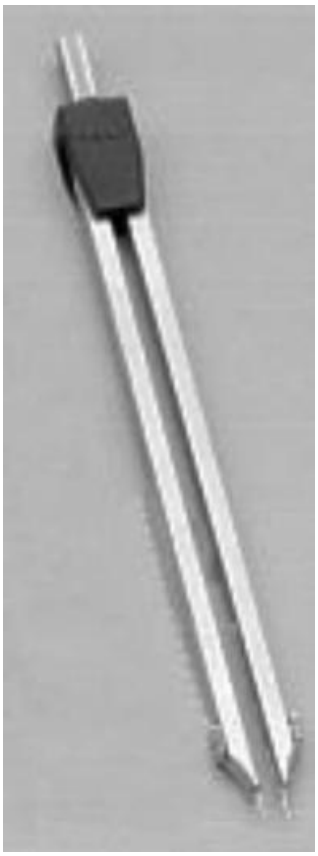
HOW TO USE A ROLLING PARALLEL RULER

Rolling parallel rulers are used to plot direction or transfer parallel lines on a chart. These rulers contain two large brass wheels mounted on a single axle which runs through the centre of the ruler. This will allow the ruler to smoothly roll along the chart while maintaining the same angle.

The following steps explain how to use a rolling parallel ruler:

1. Align the bottom edge of the ruler with the bottom edge of the chart.
2. Carefully roll the ruler to the first parallel of latitude on the chart (on *Chart 3441* it is 48° 36' N).
3. If the ruler has not moved, the edge of the ruler should be precisely aligned.
4. Practice moving the ruler up and down the chart.

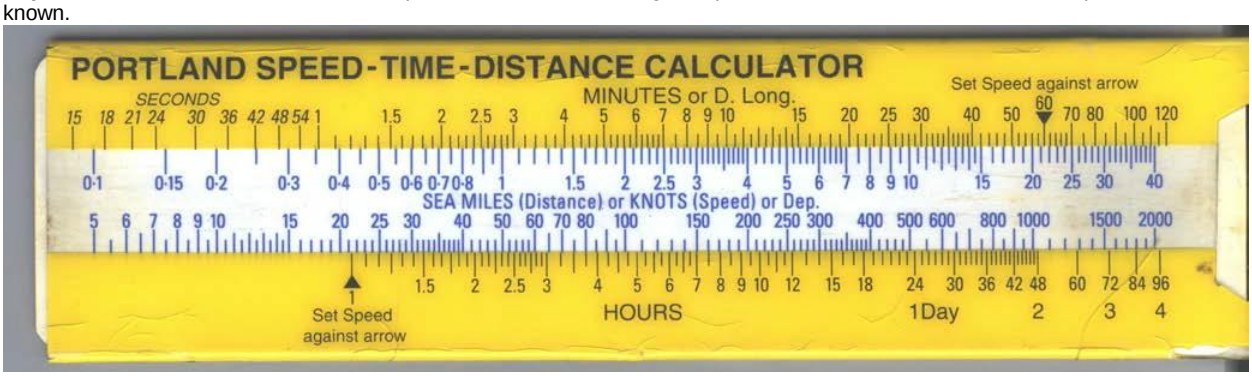
- **Dividers.** Dividers are used to measure the distance between two points, and also to help align parallel rulers. There are several styles of dividers available. A good set of dividers will have an adjusting screw to maintain the tension on the divider's arms.



Additional navigation instruments that could be included are:

- **Drafting compass.** A drafting compass can be used for scribing arcs, which indicate distances, on a chart. The best compass for navigation is one with a thumb screw between the legs to keep them in a set position.

• **Speed-Time-Distance calculator.** A simple slide rule for calculating the speed, distance or time if the other two quantities are known.

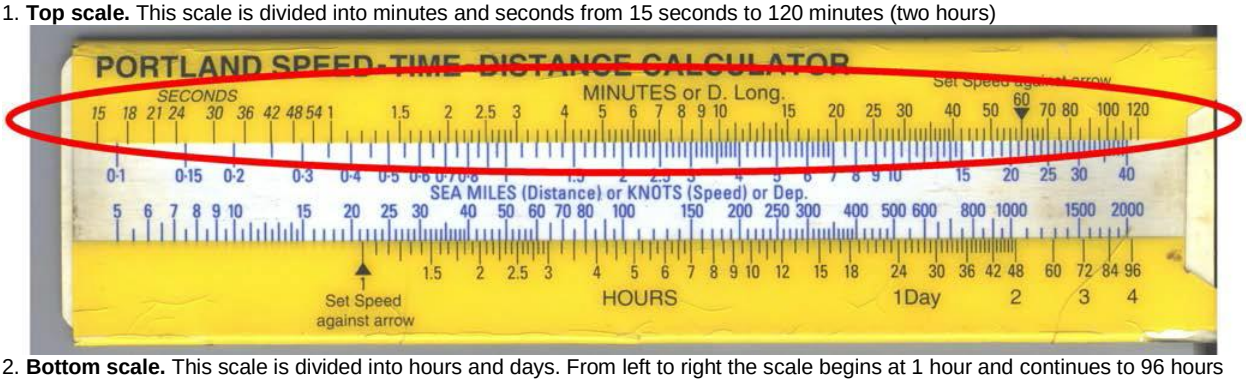


HOW TO USE A SPEED-TIME-DISTANCE CALCULATOR

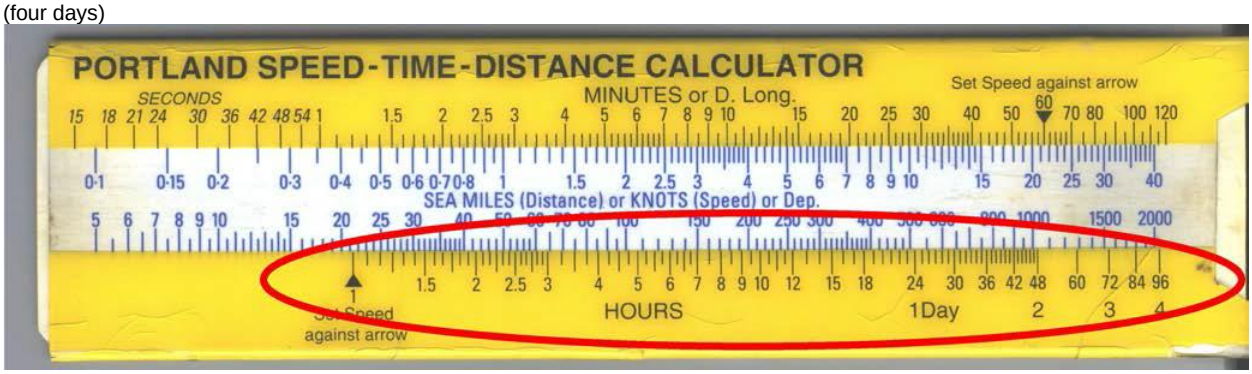
The Speed-Time-Distance (STD) Calculator is a simple slide ruler which can be a navigator's most used tool. The ruler can assist a navigator in easily and quickly calculating any required value when given two others.

Parts and Scales

1. **Top scale.** This scale is divided into minutes and seconds from 15 seconds to 120 minutes (two hours)

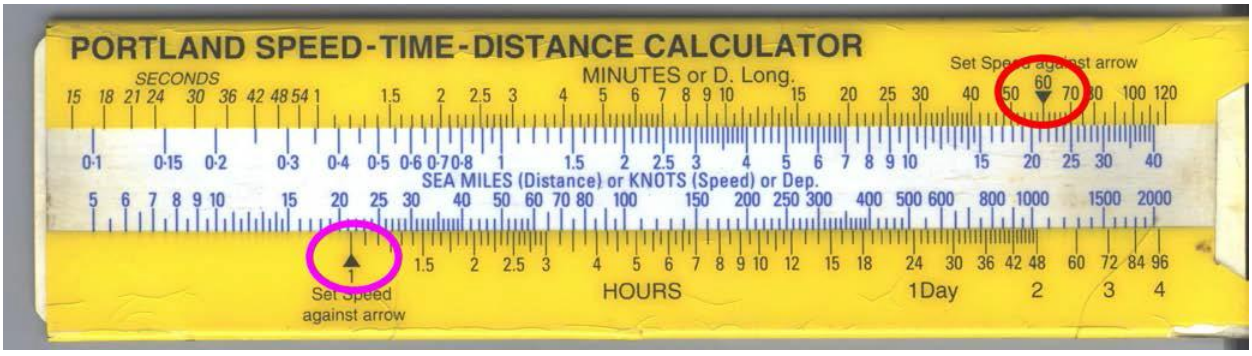


2. **Bottom scale.** This scale is divided into hours and days. From left to right the scale begins at 1 hour and continues to 96 hours (four days)

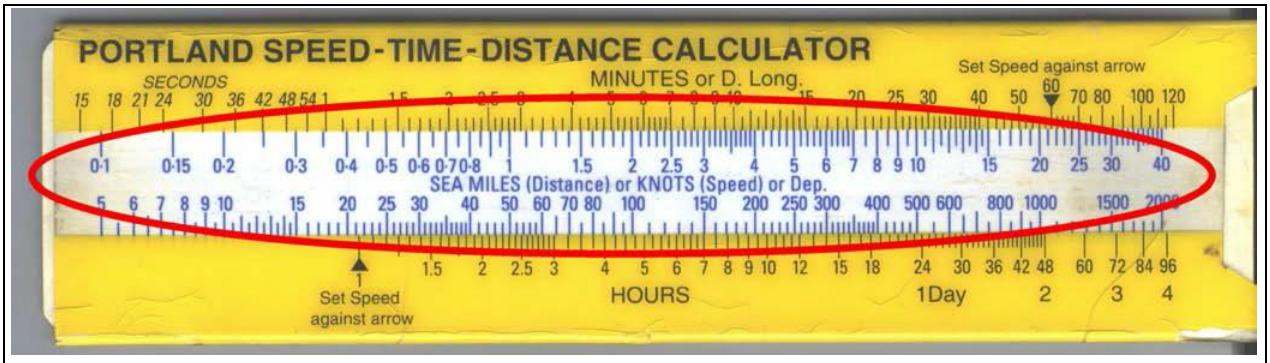


3. **Top speed arrow.** This speed arrow is used for calculations when the time given or required is two hours or less.

4. **Bottom speed arrow.** This speed arrow is used when calculating working in hours and days and large distances greater than 5 M



5. **Centre scale.** This scale can be used to represent either sea miles (Nautical Miles) or knots depending on which value is being calculated. The upper scale is for any speed up to 40 knots. The lower scale is used for speeds over 5 knots for periods of time longer than one hour



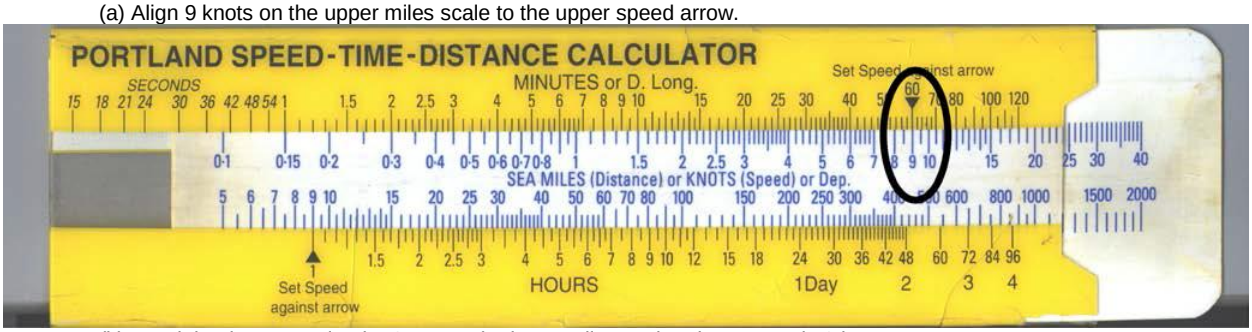
Calculating Time Required

When the speed is known, to find the time required to run a given distance, set the speed in knots on the upper miles scale against the upper arrow and read off the time opposite the distance to travel.

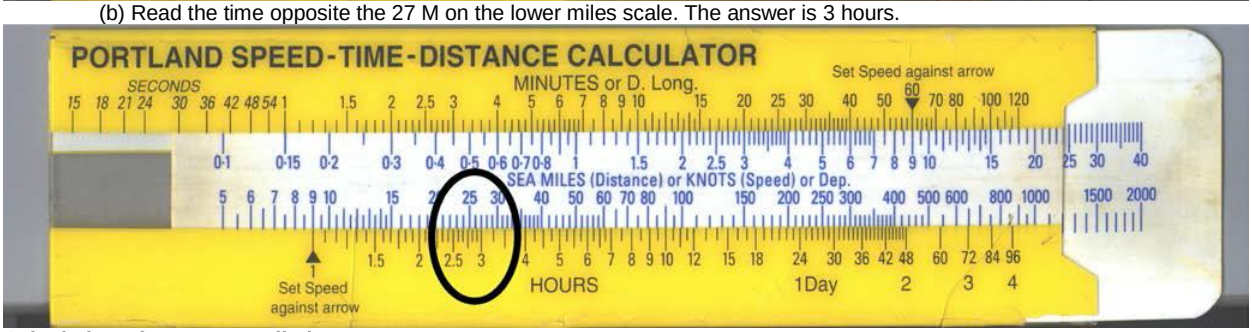
For example:

1. If the boat has a speed of 9 knots and the marina it is going to is 27 M away, how long will it take to get there?

(a) Align 9 knots on the upper miles scale to the upper speed arrow.



(b) Read the time opposite the 27 M on the lower miles scale. The answer is 3 hours.



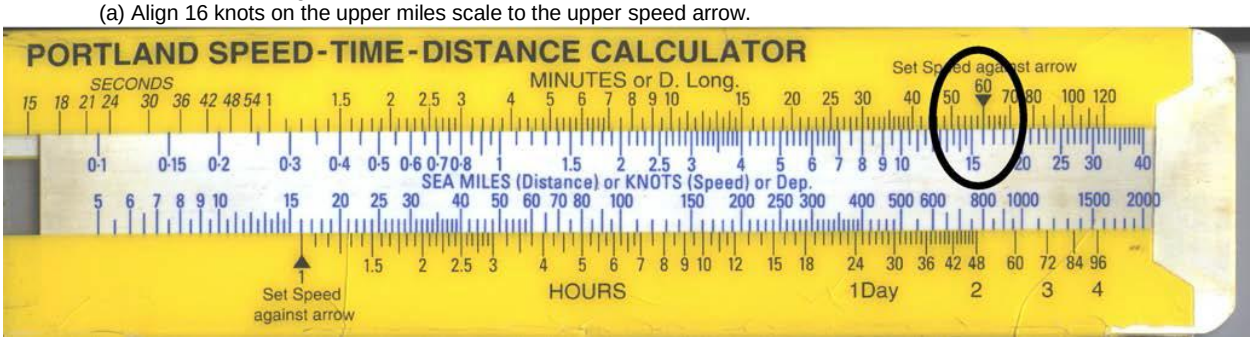
Calculating Distance Travelled:

To find the distance travelled, when the speed and time travelled are known, set the speed in knots on the upper miles scale against the upper arrow and read off the distance opposite the time travelled.

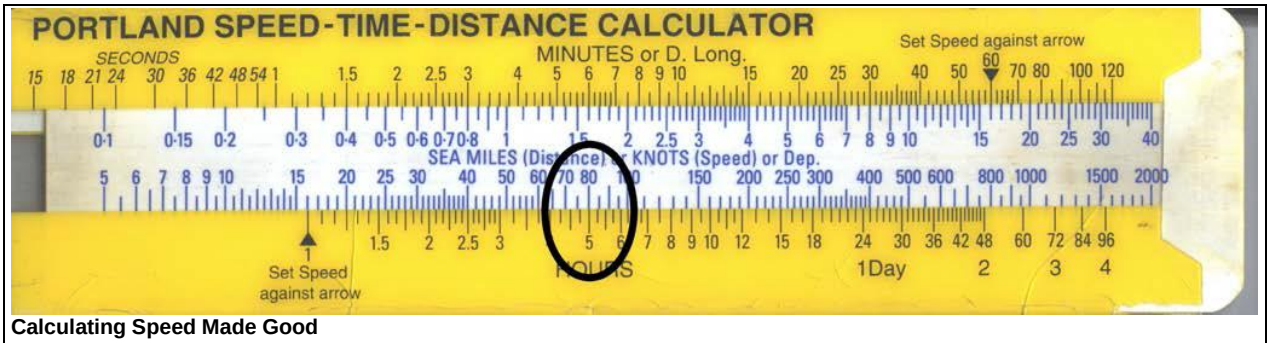
For example:

1. If the boat has been travelling at 16 knots for 5 hours, how far will it travel?

(a) Align 16 knots on the upper miles scale to the upper speed arrow.



(b) Read the distance travelled opposite 5 hours on the lower scale. The answer is 80 M.



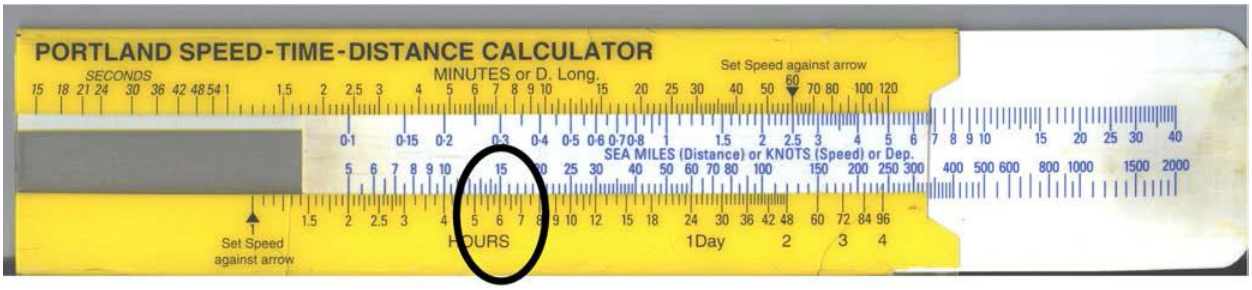
Calculating Speed Made Good

Set the distance against the time and read off the speed in knots on the miles scale opposite the upper or lower speed arrow.

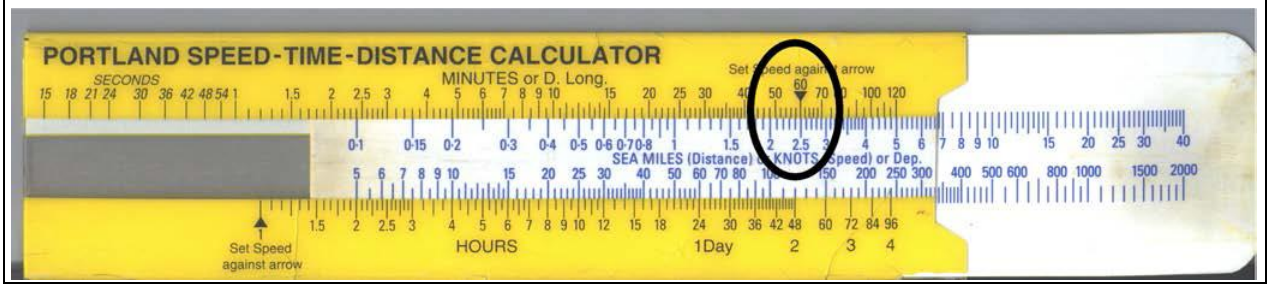
For example:

1. The boat has travelled for 15 M in 6 hours. What is the speed made good?

(a) Align 15 M on the lower miles scale with 6 hours on the lower scale.



(b) Read the speed made good opposite the upper speed arrow. The speed made good is 2.5 knots.



CLOSING STATEMENT - Using navigation instruments accurately will allow the cadets to safely navigate and complete their objectives during actual navigation passages.

EO M423.03 – DESCRIBE LATITUDE AND LONGITUDE

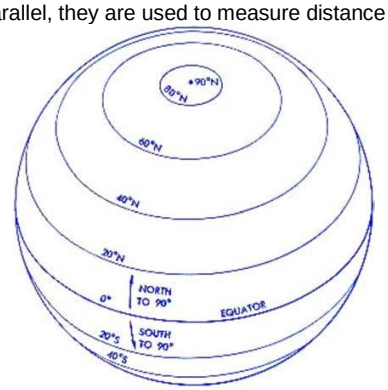
IMPORTANCE - It is important for cadets to know how to navigate as it introduces them to skills necessary for future training opportunities. Knowledge of this information will ensure that cadets are able to create safe and effective navigation plans for on-water activities.

DESCRIBE LATITUDE AND LONGITUDE

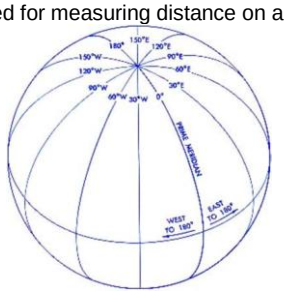
To know precisely a location on the surface of the earth, a simple system of reference points, based on a set of lattice lines covering the globe was invented.

This system of lattice lines can be described as:

Parallels of latitude. These lines run parallel to the equator and are measured from 000 degrees at the equator to 90 degrees north or south at the poles. Since these lines are parallel, they are used to measure distance on a chart.



Meridians of longitude. Lines that run perpendicular to the equator and converge or meet at the poles. These lines are measured 180 degrees east or west from the Prime Meridian (000 degrees), which runs through Greenwich, England. These lines meet at a point called the International Date Line (180 degrees) on the other side of the globe from the Prime Meridian. Since the meridians of longitude converge at the poles, they cannot be used for measuring distance on a chart.



Any point on the earth's surface can be found by referencing the corresponding latitude and longitude. On charts, the latitude scales are found on the left and right sides while the longitude scales are found on the top and bottom.

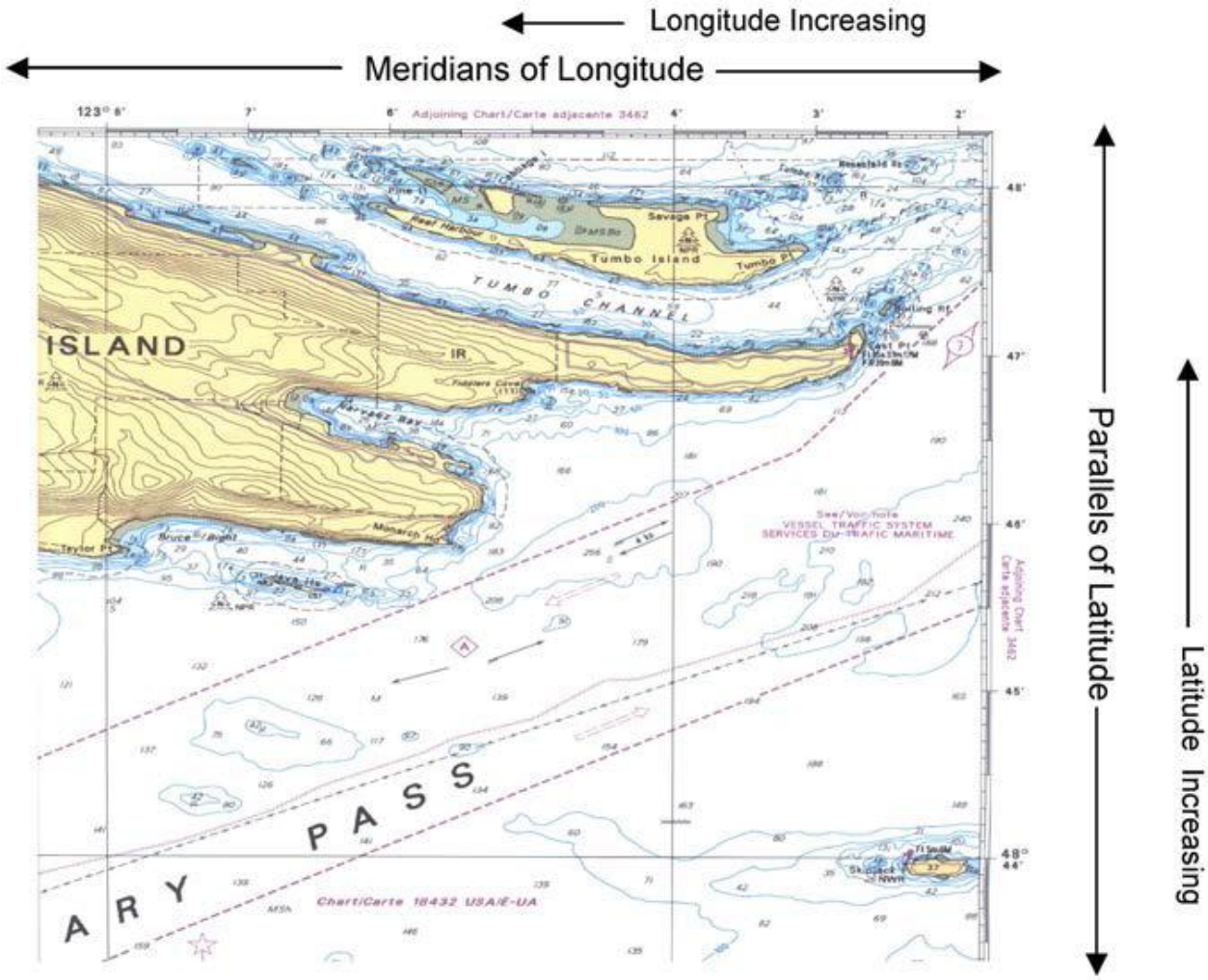
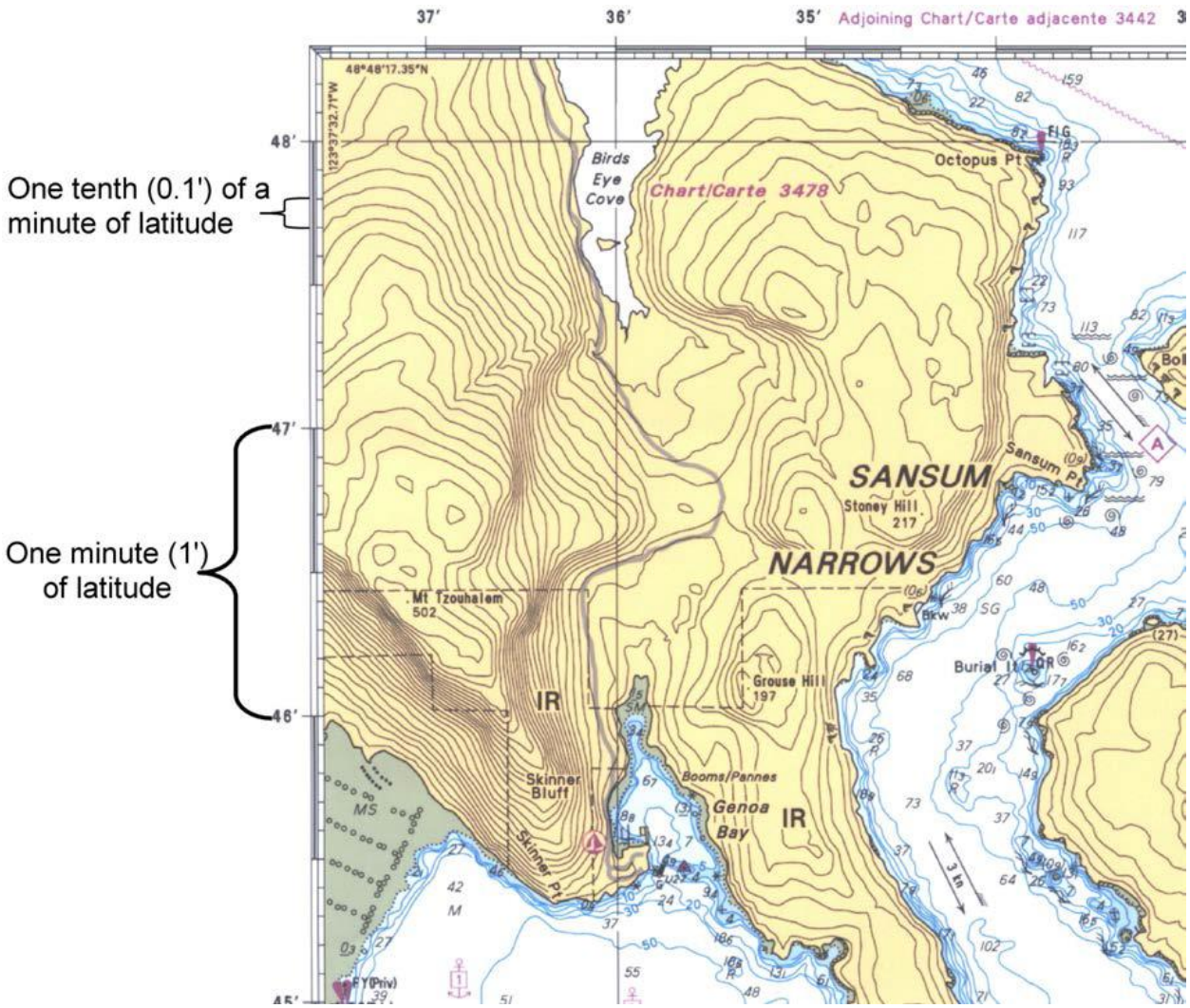


Chart 3441 depicts an area of British Columbia. Since this is in North America, the numbers on the latitude scale increase from the bottom of the chart to the top or as you move north. The numbers on the longitude scale increase from right to left as you move west.

Latitude and longitude are measured in degrees, minutes and seconds. A degree is divided into 60 minutes and each minute can be divided into 60 seconds. However, when referring to positions on a chart, it is more common to use degrees, minutes and tenths of a minute.

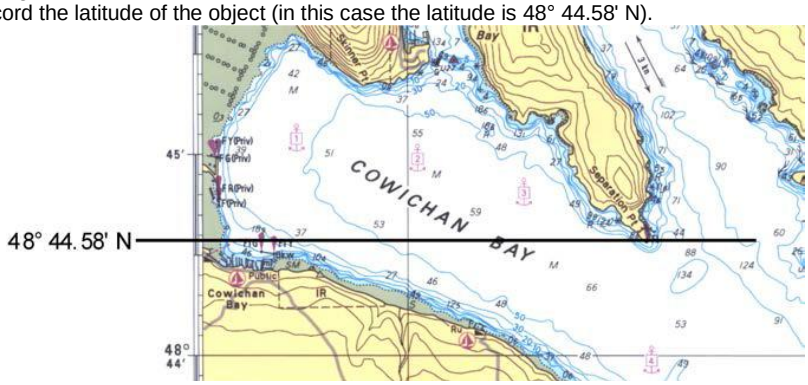


When writing the latitude and longitude of a position, latitude is always written above longitude or written first when written on the same line.

Example: The position of Senanus I. light can be written as:
1. 48° 35.55' N 123° 29.20' W or
2. 48° 35.55'N
123° 29.20' W
Degrees of longitude are always written in three digits (eg 090°E). If the longitude is less than 100 degrees, then a 0 is placed in front to differentiate between latitude and longitude.

DETERMINING LATITUDE
Determining Latitude (Method One)
The technique for using a parallel ruler to find the latitude is as follows:

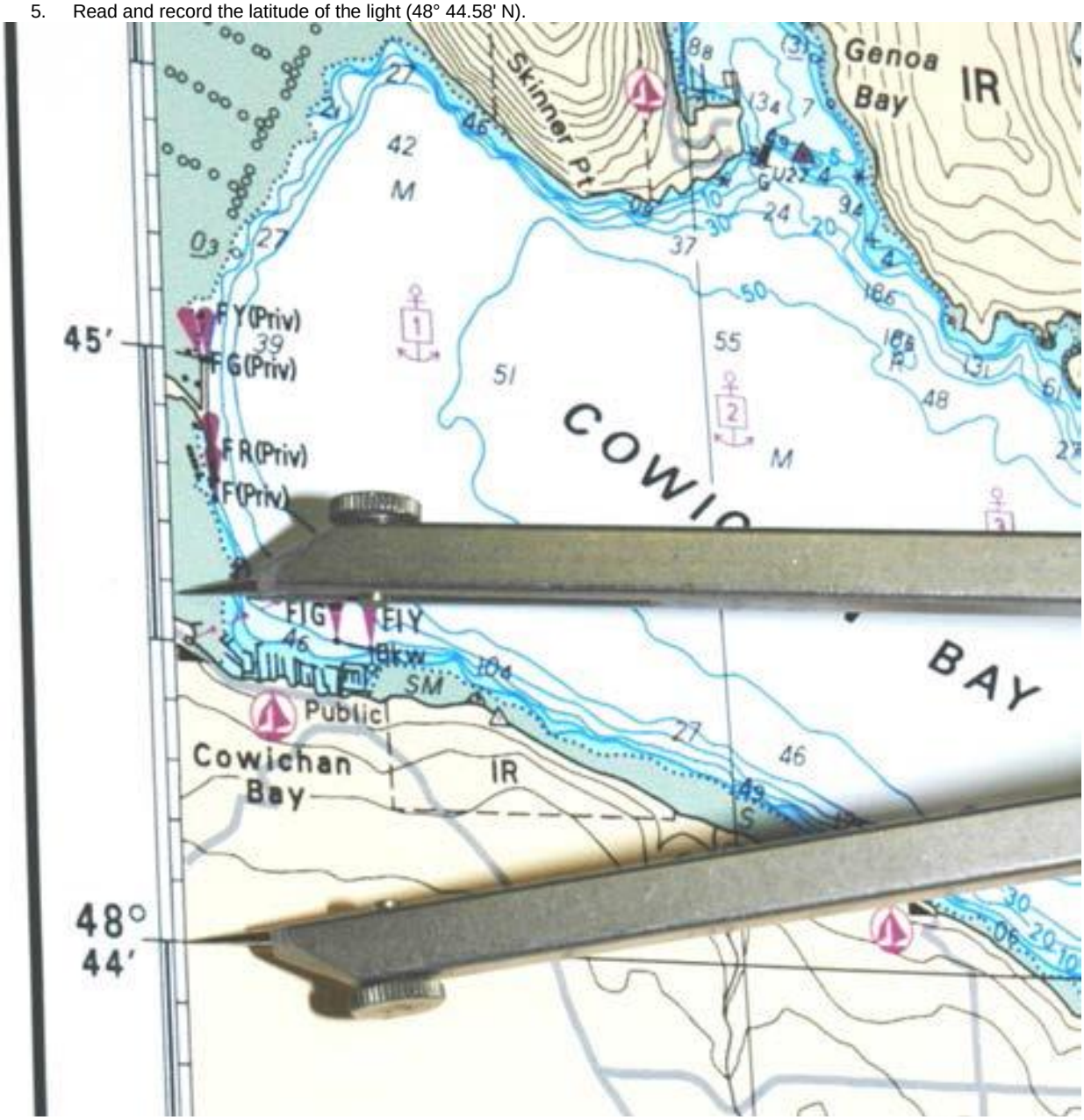
1. Align the edge of the parallel ruler along the nearest parallel of latitude on the chart. In this example, the ruler must be placed so that its left end intersects the latitude scale on the left side of the chart.
2. Roll the ruler to the light's symbol so that the black dot of the symbol falls along the edge of the ruler. Using the ruler as a guide, draw a light line on the latitude scale where the ruler intersects the scale.
3. Read and record the latitude of the object (in this case the latitude is 48° 44.58' N).



Determining Latitude (Method Two)

The technique of determining latitude using a set of dividers is as follows:

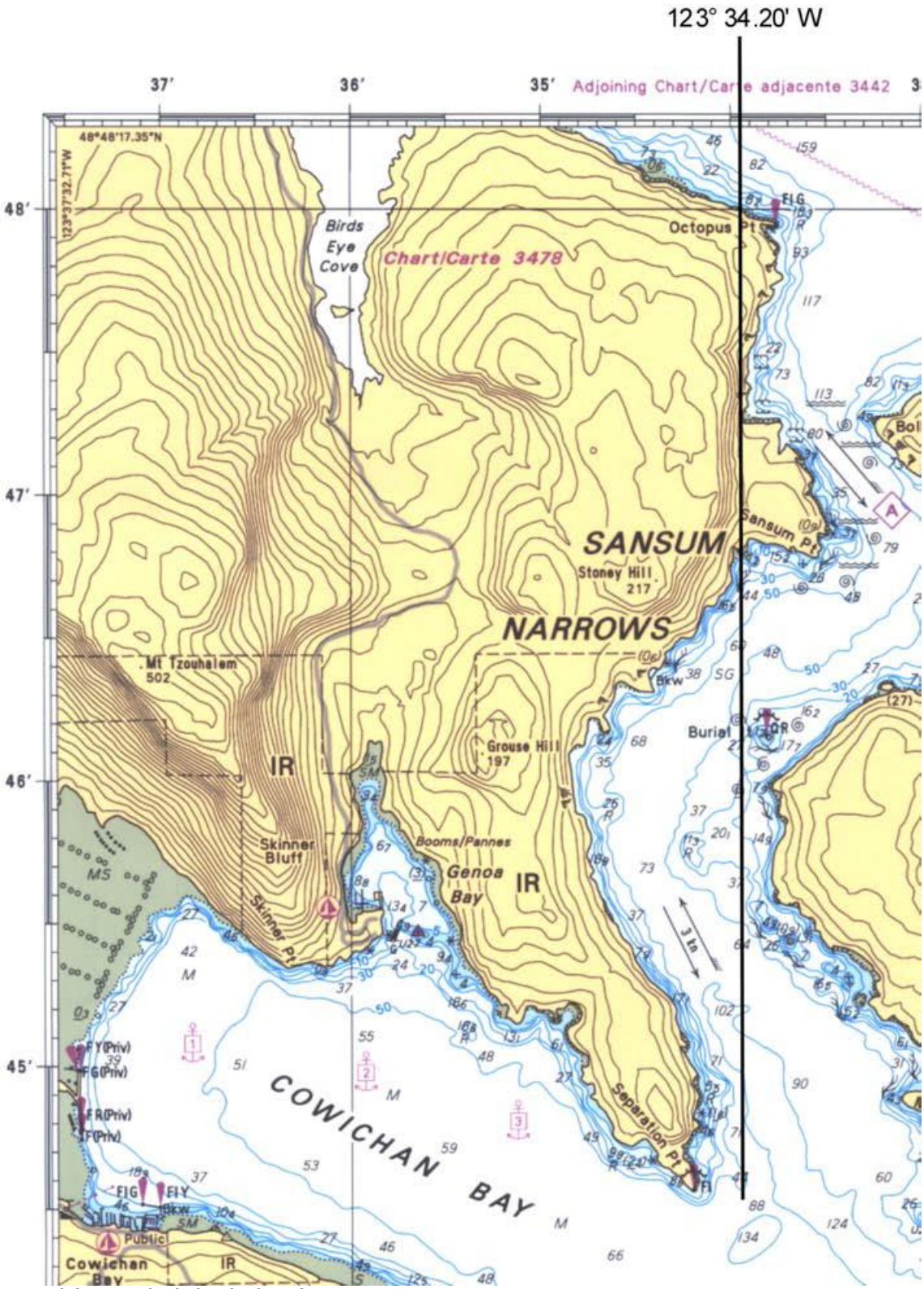
1. Align the edge of the parallel ruler with a meridian of longitude nearest Separation Pt.
2. Roll the ruler to the symbol so that the black dot at the bottom falls along the edge of the ruler.
3. Using the edge of the ruler as a guide, measure the distance from the symbol to the nearest parallel of latitude (in this case it is 48° 44' N).
4. Move the dividers to the latitude scale on the left side of the chart. Place one point on the same parallel (48° 44' N) and measure up the scale (as Separation Pt. is north of this parallel).
5. Read and record the latitude of the light (48° 44.58' N).



Determining Longitude (Method One)

The technique of determining the longitude of a point using a parallel ruler is as follows:

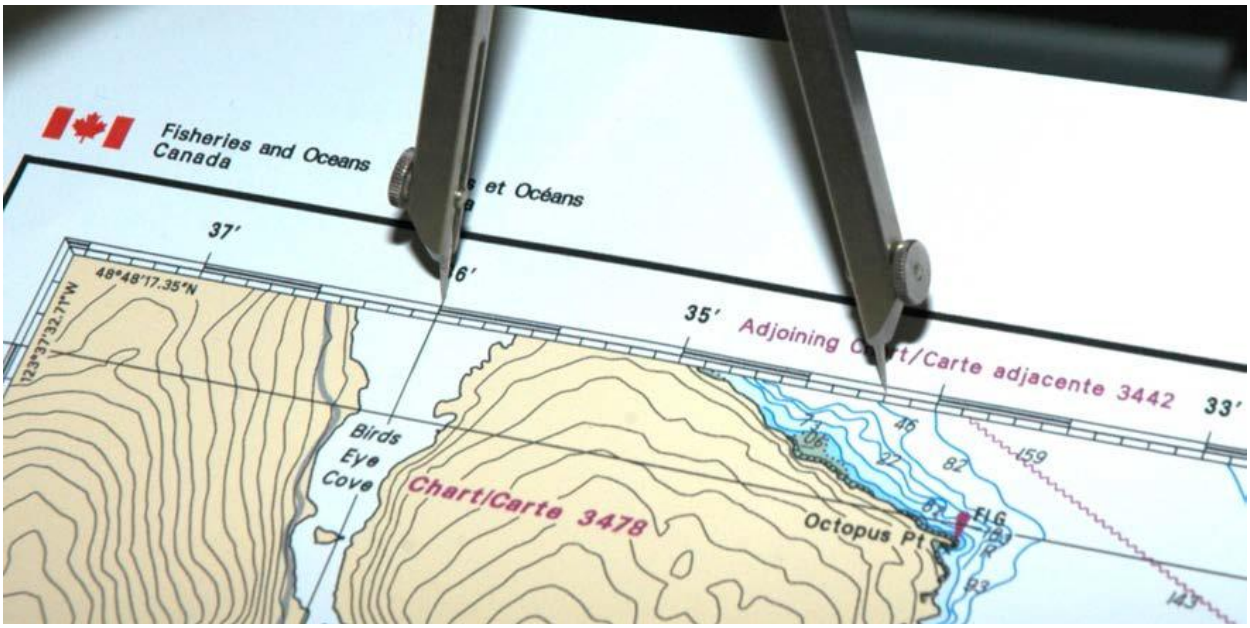
1. Place the edge of the parallel ruler along a meridian of longitude or along the longitude scale on the left side of the chart.
2. Roll the ruler to the light symbol so that the black dot of the symbol falls along the edge of the ruler.
1. Using the ruler as a guide, draw a light line on the longitude scale at the top of the chart where the ruler intersects it.
2. Read and record the longitude of the object (in this case the longitude is 123° 34.20' W).



Determining Longitude (Method Two)

The technique of determining longitude using a set of dividers for the same point is as follows:

1. Align the edge of the parallel ruler with the parallel of latitude nearest Separation Pt.
2. Roll the ruler to the symbol so that the black dot at the bottom falls along the edge of the ruler.
3. Using the edge of the ruler as a guide, measure the distance from the symbol to the nearest meridian of longitude (in this case it is 123° 36' W).
4. Move the dividers to the longitude scale on the top of the chart. Place one point on the same meridian (123° 36' W) and measure along the scale to the right (as Separation Pt. is east of this meridian).



5. Read and record the longitude of the light (123° 34.20' N).

MEASURE DISTANCE ON A CHART

In marine navigation the term “mile” does not refer to the land or statute mile, it refers to the nautical mile.

A nautical mile (M) measures 1853 m or 2000 yards. A statute mile (mi) measures 1609.3 m or 1760 yards.

When measuring distance on Mercator charts, always measure from the latitude scale. The longitude scale cannot be used as the meridians of longitude converge at the poles. Therefore they are not truly parallel.

Meridians of longitude only project distance accurately at one location on the globe—the equator.

The latitude scale is divided into degrees, minutes and seconds. However, when measuring distances on a chart, it is more common to use minutes and tenths of a minute.

Latitude can be divided into:

- One degree of latitude equals 60 minutes.
- One minute of latitude equals 1 M.
- One minute can be further divided into tenths

One M is 2000 yards long. Therefore 1/10th of a M is equal to 200 yards or one cable. In navigation, it is common for distance to be referred to in cables up to 1 M.

Technique for Measuring a Short Distance on a Chart

Distance is measured on charts using dividers. A good rule of thumb for using dividers is to keep the angle between the legs less than 60 degrees. If the dividers are opened more than 60 degrees, the accuracy of the measurement is lessened.

Follow these steps for measuring short distances on a chart:

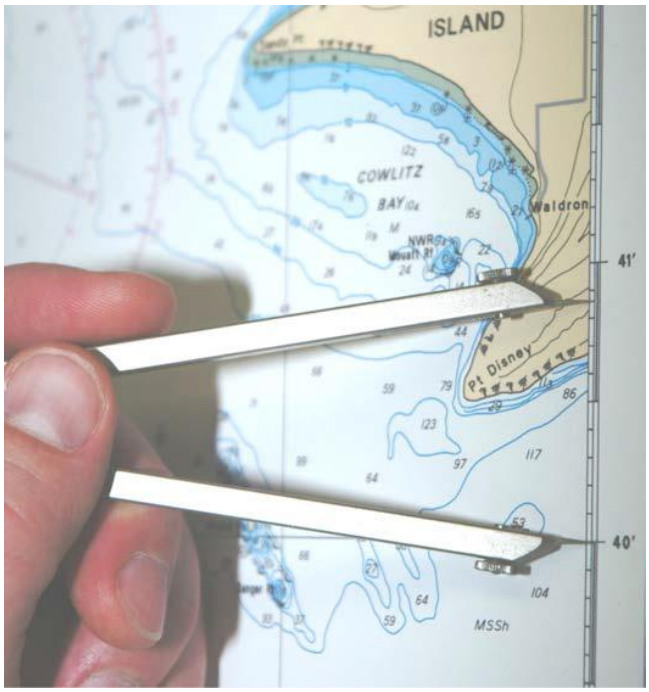
1. Set one point of the dividers at the first point and the other at the second point. Ensure the dividers are not opened more than 60 degrees.
2. Being careful not to disturb the position of the dividers, move them to the latitude scale on either side of the chart.
3. Place one point on a whole minute of latitude and let the other point fall along the scale line.
4. Read the distance in nautical miles and tenths of miles.

Example of measuring a short distance:

To measure the distance between Arachne Rf. light and Pt. Fairfax light:

1. Place one point on the symbol for Arachne Rf. light.
2. Open the dividers until the second point is on the symbol for Pt. Fairfax light.

3. Being careful not to disturb the position of the dividers, move them to the latitude scale on the right side of the chart.
4. Place one point on the line marking 48° 40' N.
5. Place the second point on the scale above this line and count the number of marks between the points in this example the distance is 0.86 M.



Technique for Measuring a Longer Distance on a Chart

A long distance is defined as a distance that cannot be measured within the width of a pair of dividers opened to no more than 60 degrees.

Follow these steps for measuring long distances on a chart:

1. Preset your dividers to a whole mile or a multiple-mile increment.
2. Align one edge of the parallel ruler between the two points.
3. Place one point of the dividers at the first point and lay the other along the parallel ruler toward the second point.
4. Being careful not to disturb the position of the dividers, swing or walk them along the ruler to the second point.
5. Count the number of times the dividers swing or walk along the ruler without passing the second point.

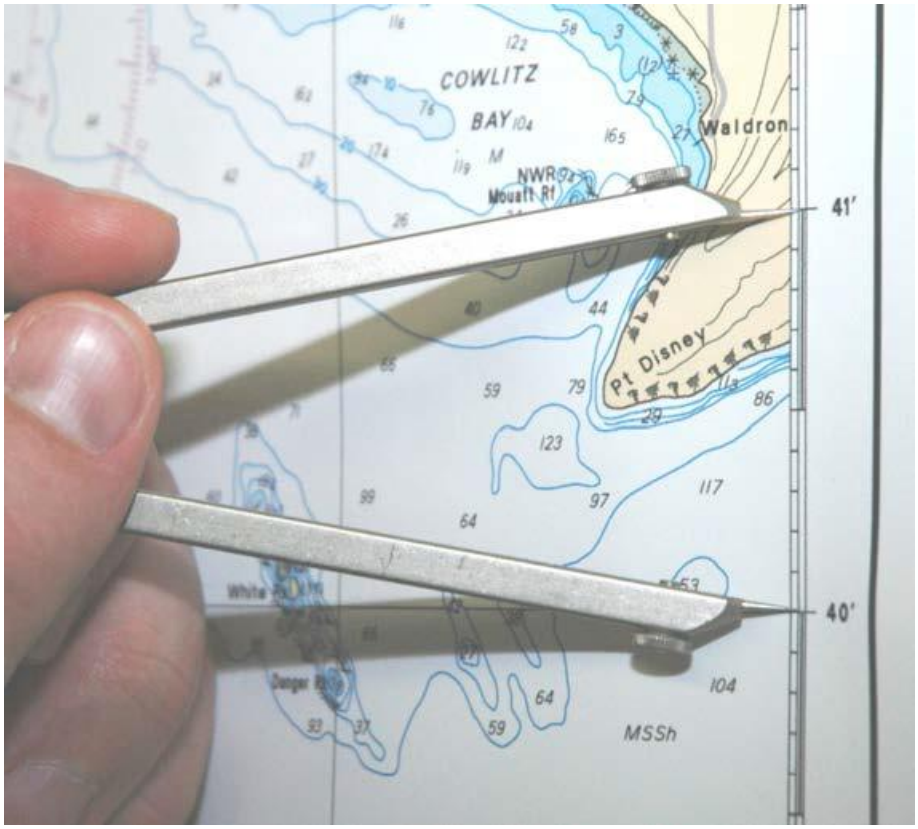
If the second point has not been reached but is within the distance the dividers have been set measure the remaining distance as follows:

6. Without removing the point of the dividers on the chart, compress the other arm of the dividers carefully and place its point on the destination.
7. Being careful not to disturb the opening, move your dividers to the latitude scale and measure the distance. Add the number of swings from Step 5 and the distance in Step 6 to get the total distance.

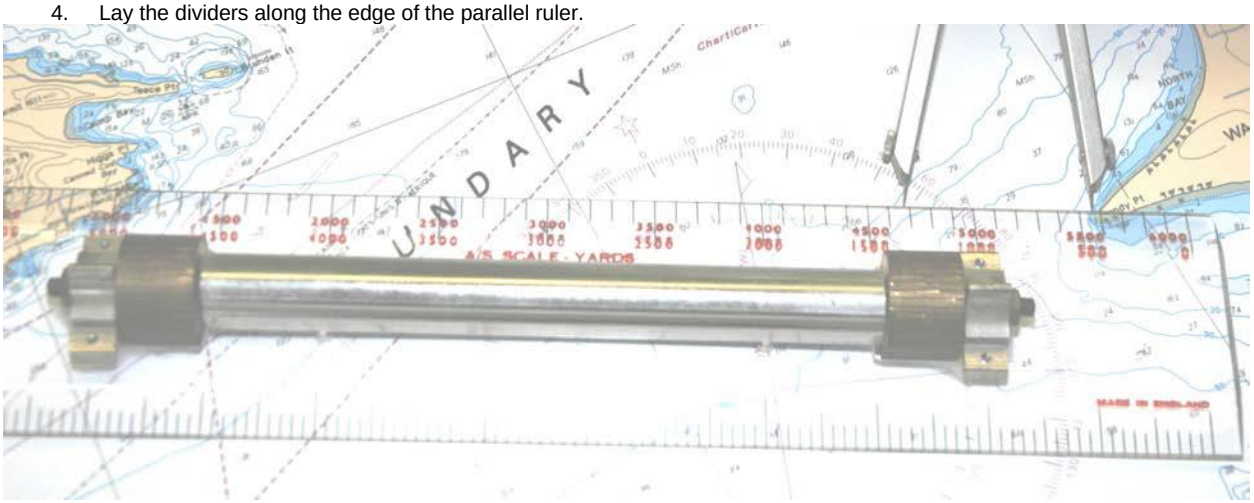
Example of measuring a long distance:

To measure the distance between Sandy Pt. and Gowlland Pt. light:

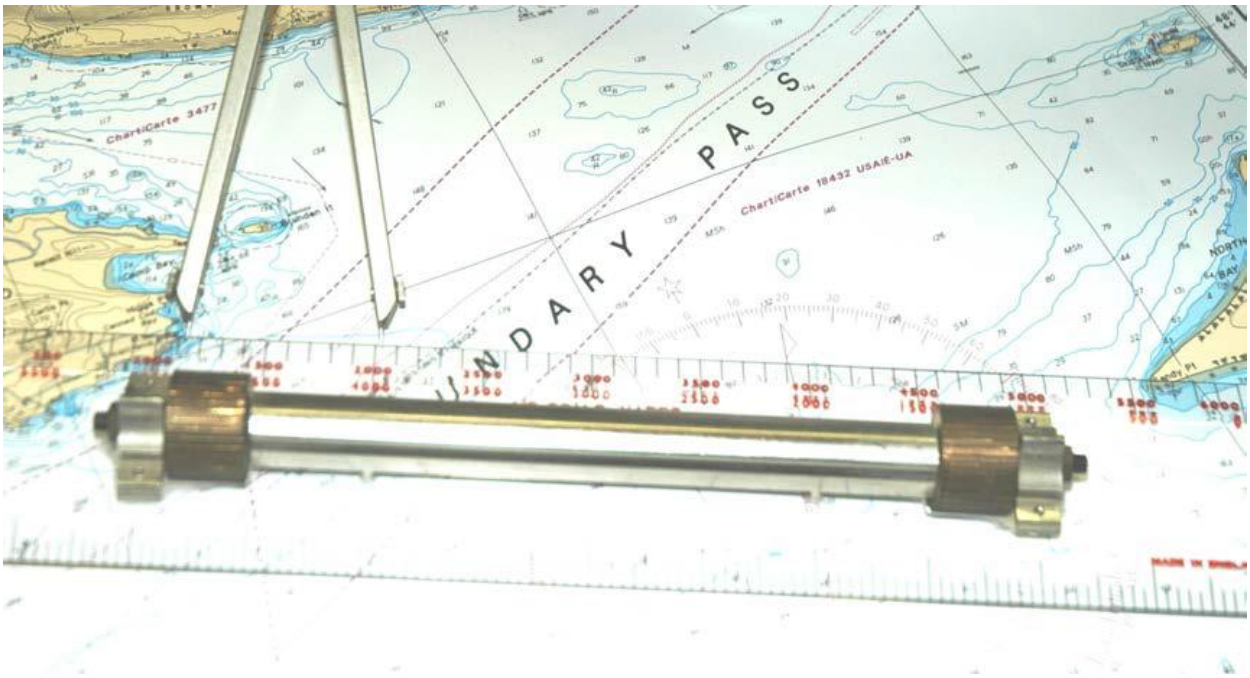
1. Measure 1 M from the latitude scale with the dividers.



2. Align the parallel ruler between Sandy Pt. and Gowlland Pt. light.
3. Place one point of the dividers on the outer edge of Sandy Pt.
4. Lay the dividers along the edge of the parallel ruler.



5. Being careful not to disturb the position of the dividers, swing or walk them along the ruler toward Gowlland Pt.
6. Count the number of swings made with the dividers.
7. From Sandy Pt. to Gowlland Pt. it takes five swings. Since the dividers were set to 1 M in Step 1, the distance is 5 M.



CLOSING STATEMENT - Latitude and longitude are the fundamental aspects of chartwork. Knowing how to use latitude and longitude to plot positions and to measure distance will lead to a safe passage plan.

EO M423.04 – PLOT A FIX

IMPORTANCE - It is important for cadets to plot a fix complete with track and dead reckoning because it estimates a future position and contributes to the safety of the vessel.

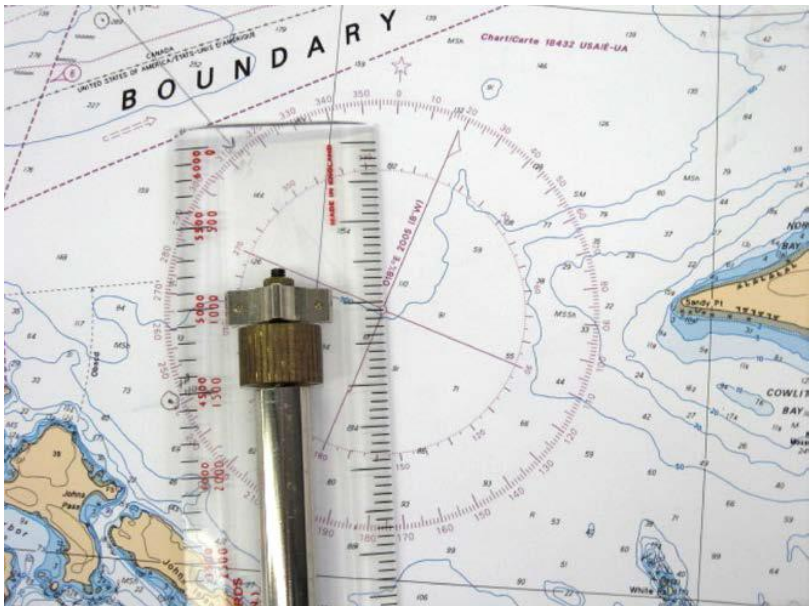
To better understand the principles outlined, it is important to know the following terms:
Heading. The direction in which the bow of the small craft is pointing. Headings are expressed in degrees (°)—000 through 360.
Bearing. A line of position sighted from a small craft to another object. Only true bearings can be plotted on charts.
Lines of Position (LOPs). Lines that are plotted on a chart for the bearings taken from objects.
Fix. The intersection of two or more LOPs. While a fix can be made with two LOPs, it is considered more accurate to use three LOPs in every fix. An ideal three-bearing fix should have 60-degree angles between the LOPs.

True bearings are obtained from a gyrocompass. Small craft are not normally fitted with a gyrocompass due to their weight and size. If taking bearings from a small craft, a handheld magnetic compass may be used to obtain the bearings. However, these bearings must be converted to true bearings before plotting them on a chart.

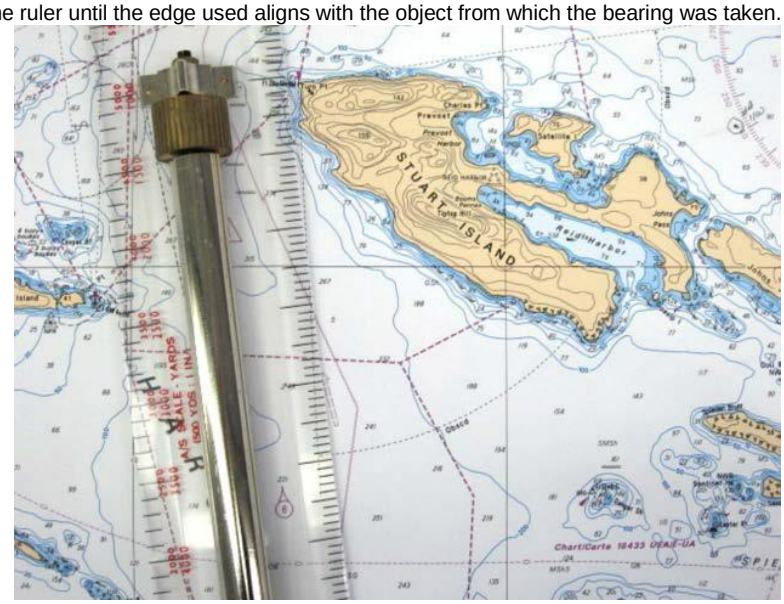
LINE OF POSITION
Bearings that are plotted on a chart are referred to as LOPs and are measured on the outer ring of the compass rose with a parallel ruler. A position can only be located when two or more LOPs cross.

Example: Plot the following fix on *Chart 3441*:
0800 LHE Stuart Island
Tom Pt light
173°
287°

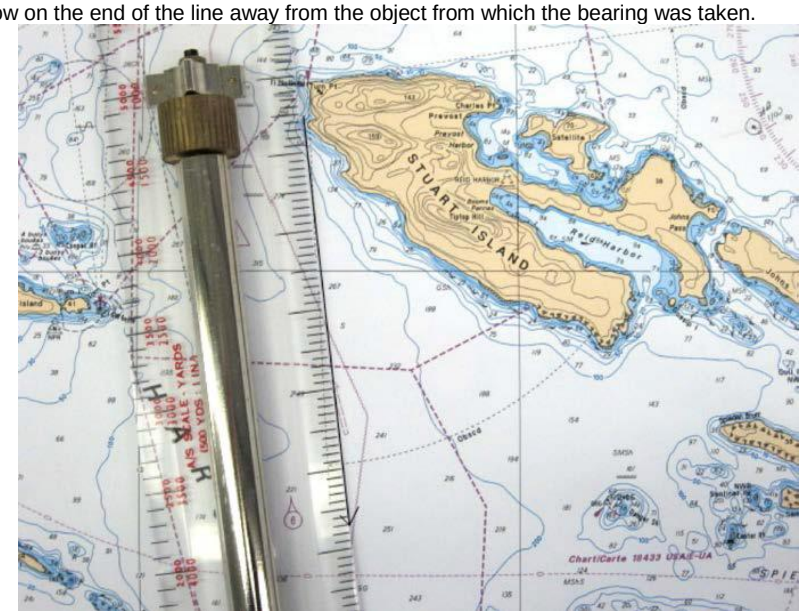
To plot an LOP on a chart, use the following steps:
1. Align one edge of the parallel ruler with the centre of the compass rose and the number of degrees on the outer circle. In this case LHE Stuart Island bears 173°.



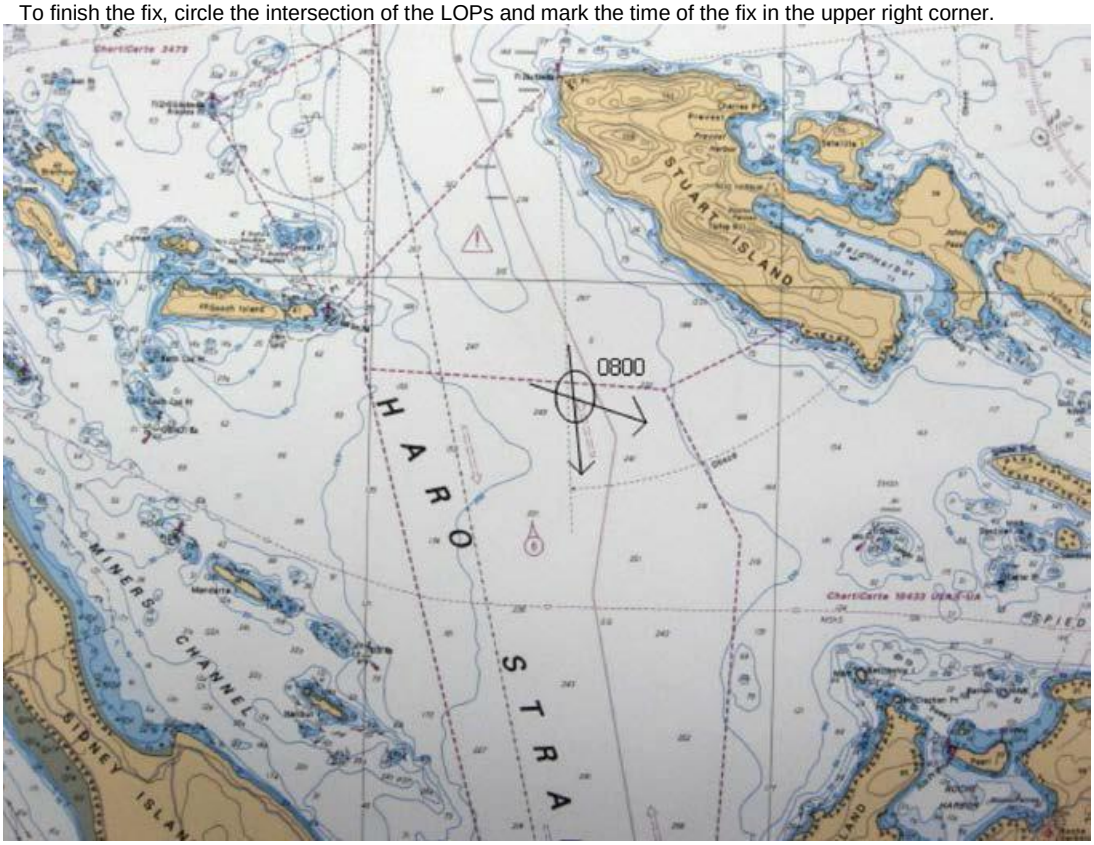
2. Roll or walk the ruler until the edge used aligns with the object from which the bearing was taken.



3. Draw a line away from the object along the ruler.
4. Draw an arrow on the end of the line away from the object from which the bearing was taken.



5. Repeat Steps 1–4 for the second bearing. After the first LOP is plotted, the last LOP is only drawn across the first LOP plotted.
6. Once LOPs are drawn they can be shortened to the same size as the diameter of a quarter.
7. To finish the fix, circle the intersection of the LOPs and mark the time of the fix in the upper right corner.



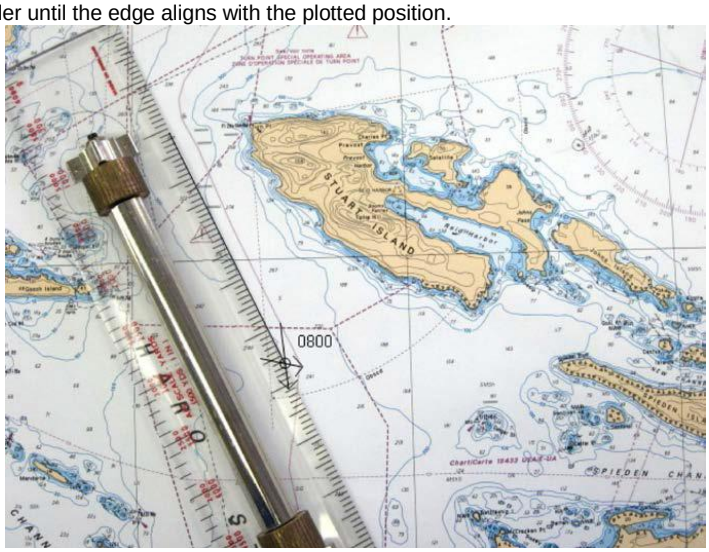
NAVIGATIONAL TRACK

A navigational track is a line that shows a projected course from a given position. It is commonly referred to as a track (TR). To plot a track on a chart, follow these steps:

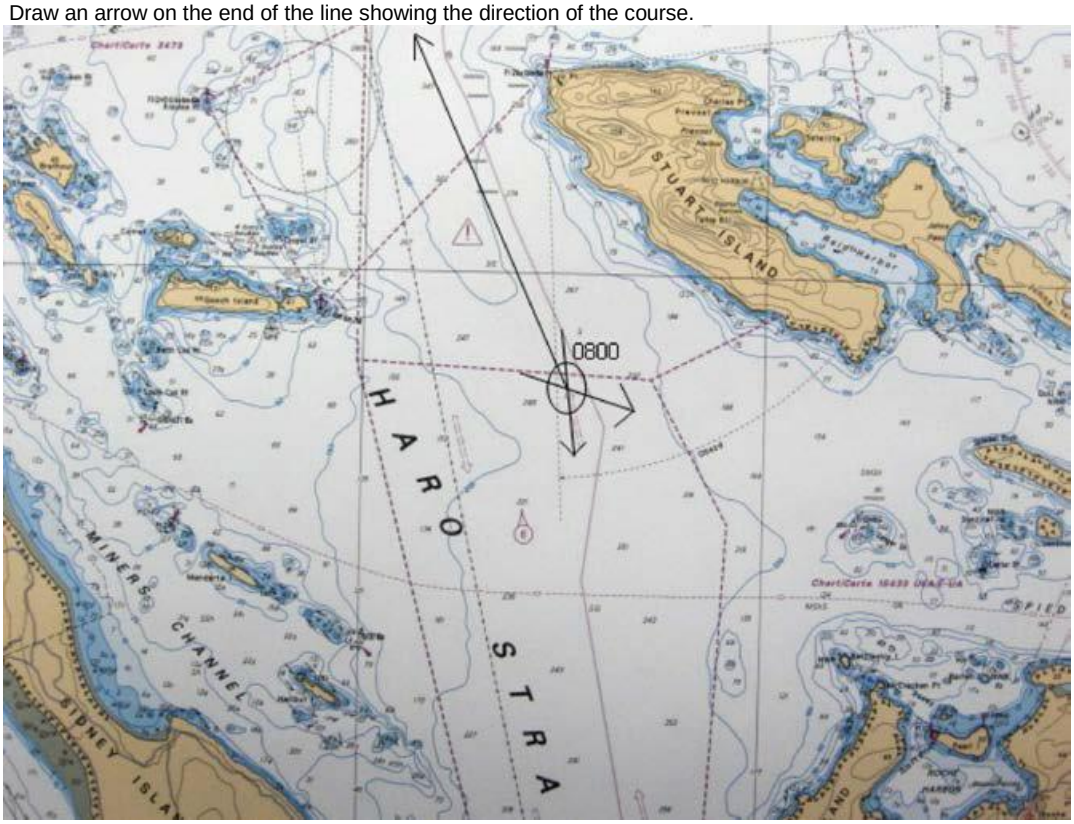
Example: Plot the following fix on *Chart 3441*:
0800 LHE Stuart Island
Tom Pt light
Course
173°
287°
335°

Plotting

1. Plot the position on a chart (use the plotted position from TP 1).
2. Align one edge of the parallel ruler with the centre of the compass rose and the number of degrees being steered (course) on the outer circle.
3. Roll or walk the ruler until the edge aligns with the plotted position.

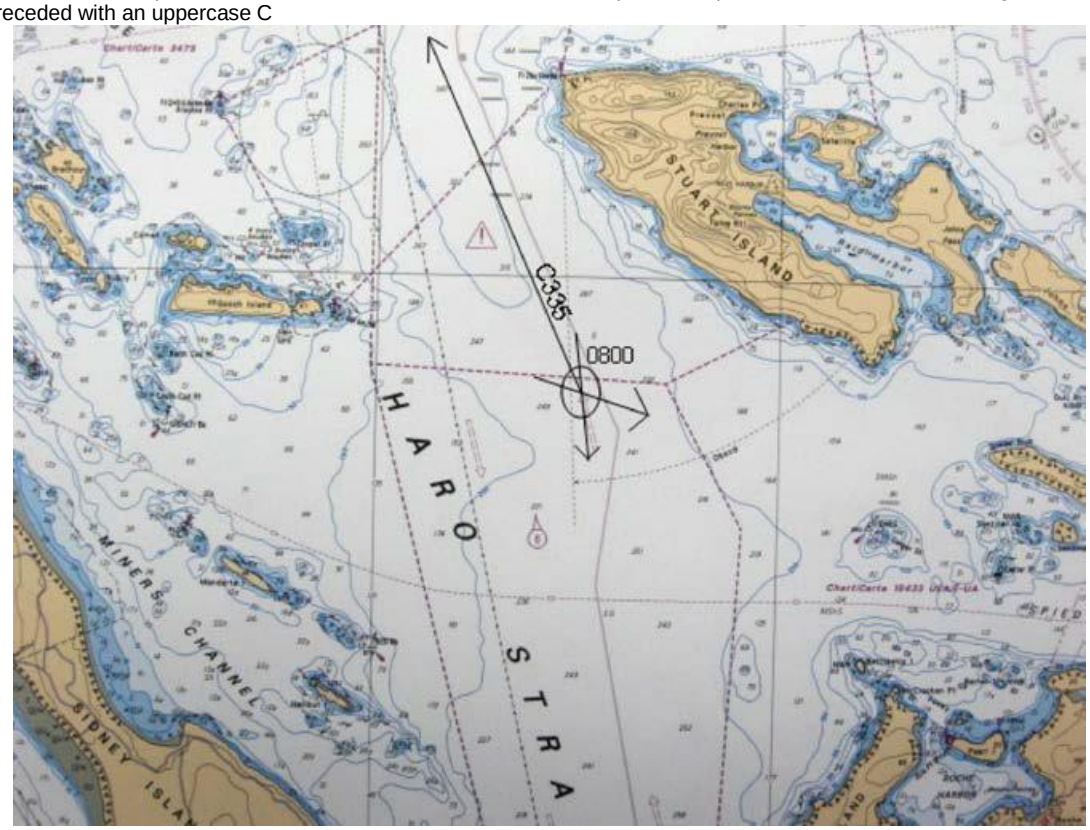


4. Draw a line away from the fix along the ruler in the direction of the course.
5. Draw an arrow on the end of the line showing the direction of the course.



Labelling

When a track is drawn on a chart, it must be labelled for future reference. They are always drawn showing a True heading. To label the course on the track, place the course above the track and toward the point of departure. Label the course using three digits (eg, 084°) preceded with an uppercase C



DEAD RECKONING

Dead reckoning (DR) is the continuous plotting of a course and position based on known facts. The facts used when making calculations for a DR include;

- time,
- speed,
- distance, and
- course steered.

Some reasons to maintain a plot of the dead reckoned positions are:

- very rapid determination of your approximate position in the event of an emergency;
- knowledge of approximate position in order to render assistance to another vessel in an emergency;
- to be able to plot the safest and shortest course to a desired destination; and
- to be able to make important decisions as to the proper action in the event of adverse conditions, such as:
    - fog,
    - wind,
    - storm, and
    - equipment failure.

The calculations for plotting a DR are derived through standard speed-time-distance calculations.

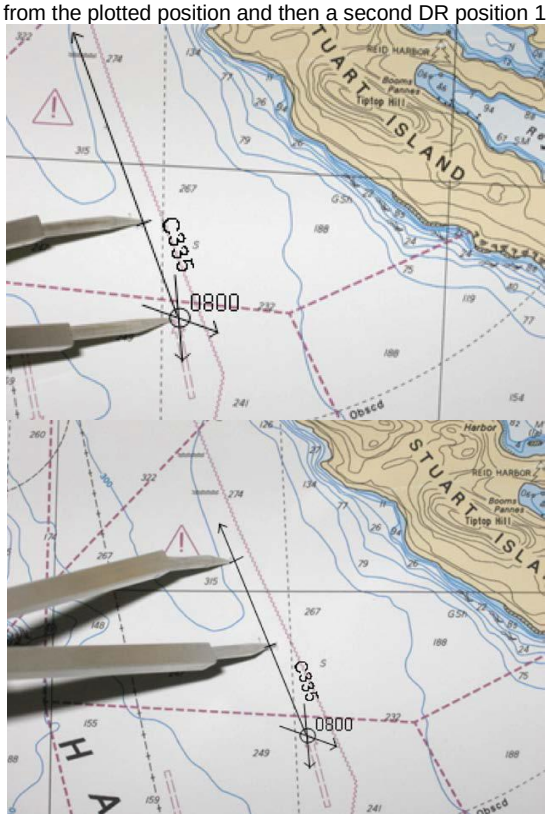
A DR is normally made at 6-minute intervals to make calculations simple. A 6-minute interval is equal to 1/10 of an hour; therefore, the distance travelled is 1/10 of your speed. It is good practice to plot two DRs, one at 6 minutes and one at 12 minutes because it gives a better view into the future safety of the vessel, especially in close navigable waters. A DR position is indicated by placing a small line across the course and the time alongside. A small cross may be used to originate the DR if a fix or estimated position is not available.

Plotting

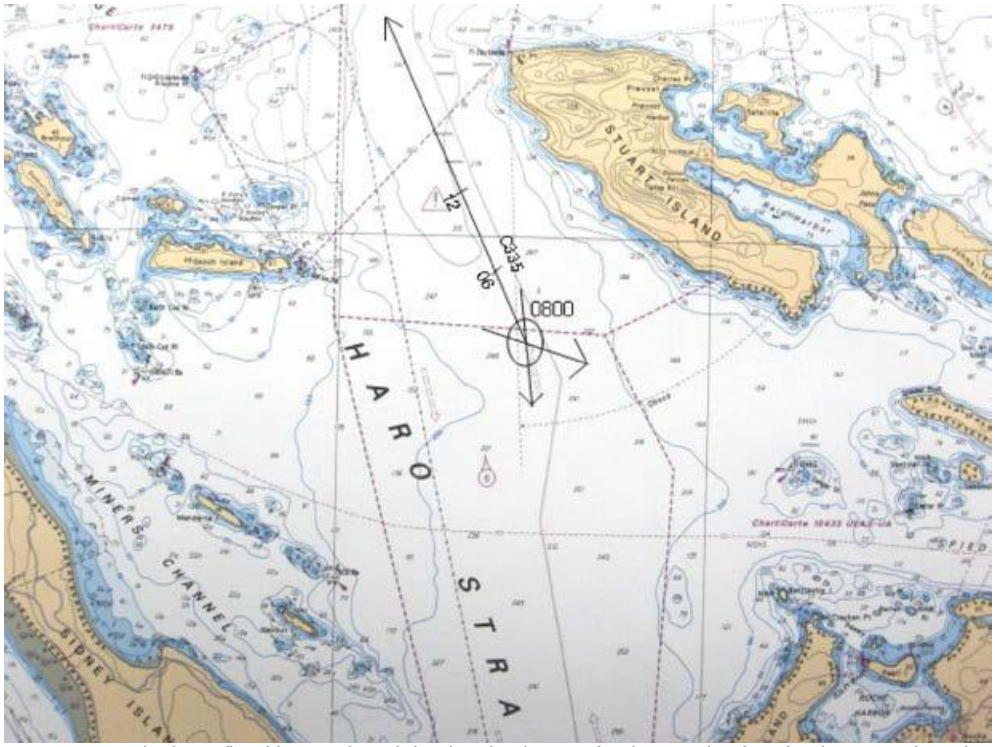
To plot a DR on a chart, follow these steps:

1. Determine distance traveled in 6 minutes.
2. Measure 0.5 M of distance on the latitude scale.

3. Mark the DR position 1 M (6 mins) from the plotted position and then a second DR position 1 M (6 mins) from the first DR.



Labelling
Each DR drawn on a chart must be labelled for future reference. A DR is labelled with the time in minutes



CLOSING STATEMENT - Plotting a fix with a track and dead reckoning are fundamentals of navigation. Knowing where you are and where you will be at any given time leads to safe navigation

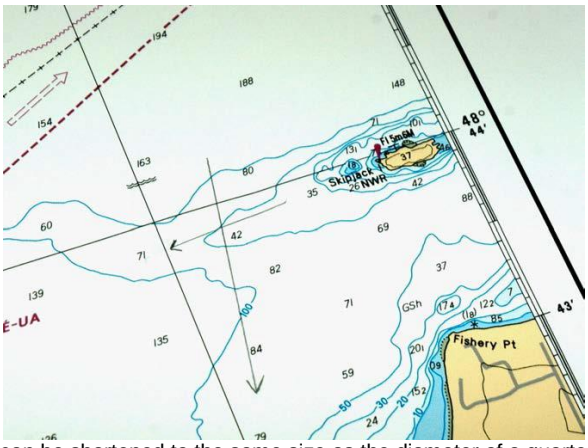
EO C423.01 – PLOT A POSITION USING A THREE-BEARING FIX

IMPORTANCE - It is important for cadets to plot a three-bearing fix as it is an accurate way of fixing a position by a visual means. Plotting a fix ensures the small vessel's safety during navigation.

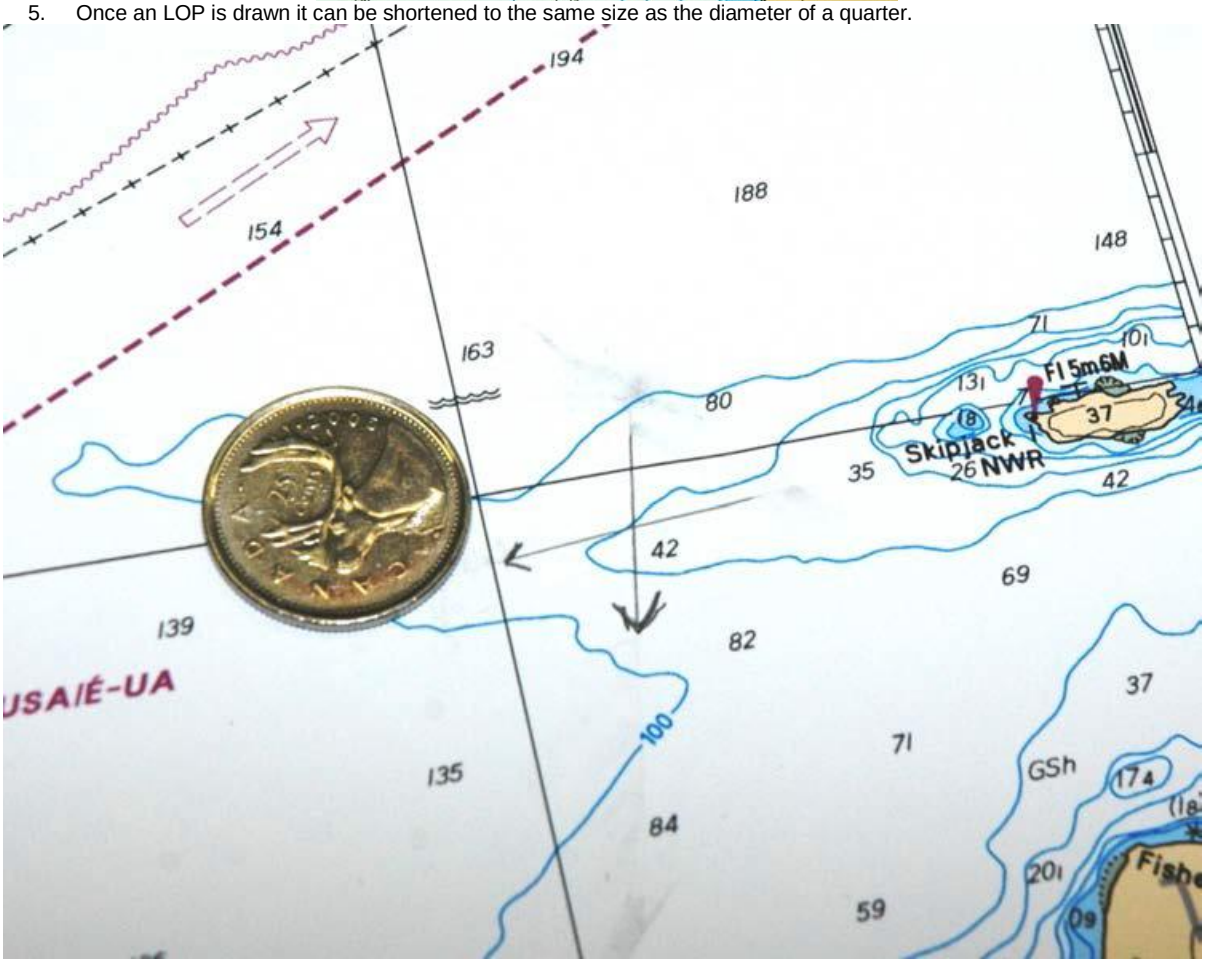
THREE BEARING FIX
In order to plot a three-bearing fix, three LOPs must cross at a specific point.

Example: Plot the following fix on *Chart 3441*:
0800
East Pt. light
Skipjack I. light
Monarch Hd.
010°
085°
326°

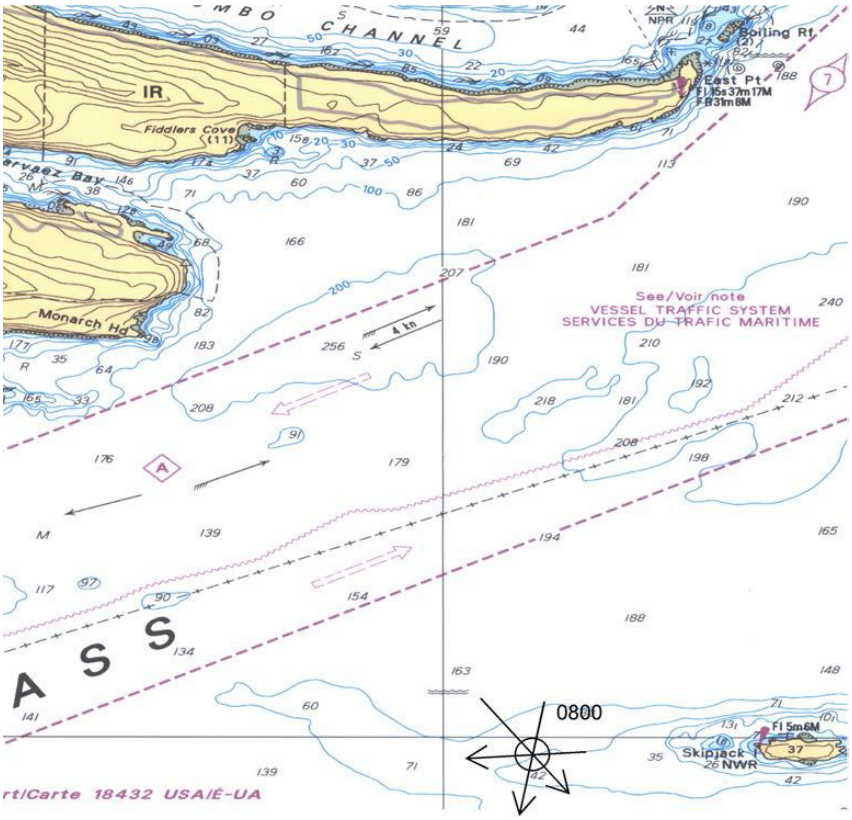
1. Align the parallel ruler with the centre of the compass rose and 010° on the outer ring of the compass rose.
2. Roll the ruler along the chart until the edge aligns with East Pt. light.
3. Draw a line from the light along the ruler.
4. Repeat Steps 1–3 for the other two bearings. After the first LOP is plotted, the remaining LOPs are only drawn across the first LOP plotted.



5. Once an LOP is drawn it can be shortened to the same size as the diameter of a quarter.



6. Draw arrows at the outer ends of the LOPs pointing away from the object. These arrows indicate the direction in which the observer must lie from the observed object.
7. Circle the intersection of the three LOPs and label with the four digit time the bearings were taken next to the fix.



When plotting LOPs, plot from the black dot at the bottom of the symbol or from the edge of the points of land.

When referring to edges of land, it is common to use RHE for right-hand edge and LHE for left-hand edge.

CLOSING STATEMENT - Locating a position on a chart is an important skill which cadets can use whenever they navigate small craft. Accurate navigation will allow the cadets to safely navigate and complete their objectives.

EO C423.02 – PLOT A POSITION USING A HORIZONTAL ANGLE FIX

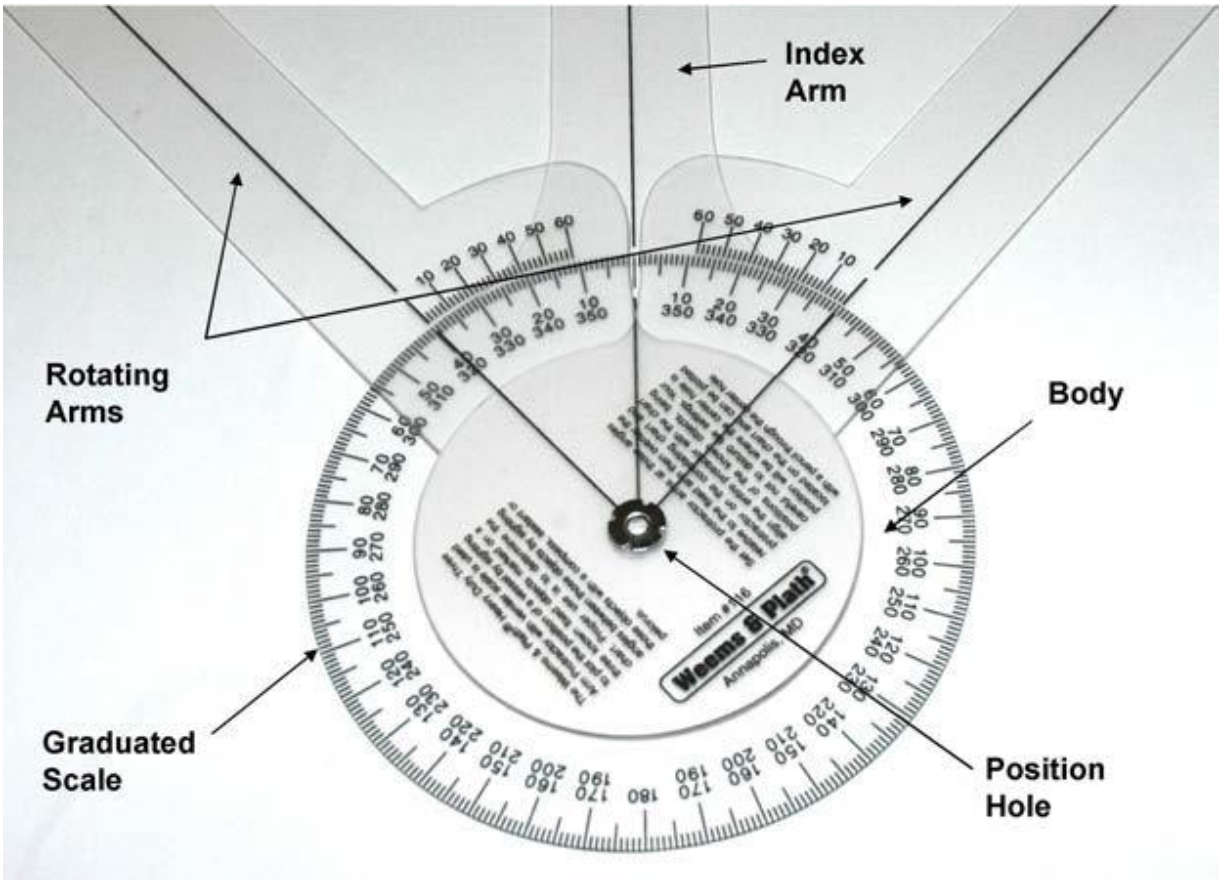
IMPORTANCE - It is important for cadets to how to plot a horizontal angle fix as it is an accurate way of fixing a position by a visual means. Knowing how to plot a fix ensures the small vessel's safety during navigation.

THE STATION POINTER
The station pointer was invented in 1801 by Joseph Huddart of the United States Navy (USN). It is a simple tool used to fix, or locate a position on a chart when the relative bearings are known between three visible, fixed objects.

This type of fix is called a horizontal angle fix as it uses the difference in the angles between three points. Although it is not frequently used today, it can give a navigator an accurate fix when electronic position equipment or a gyrocompass is not available.

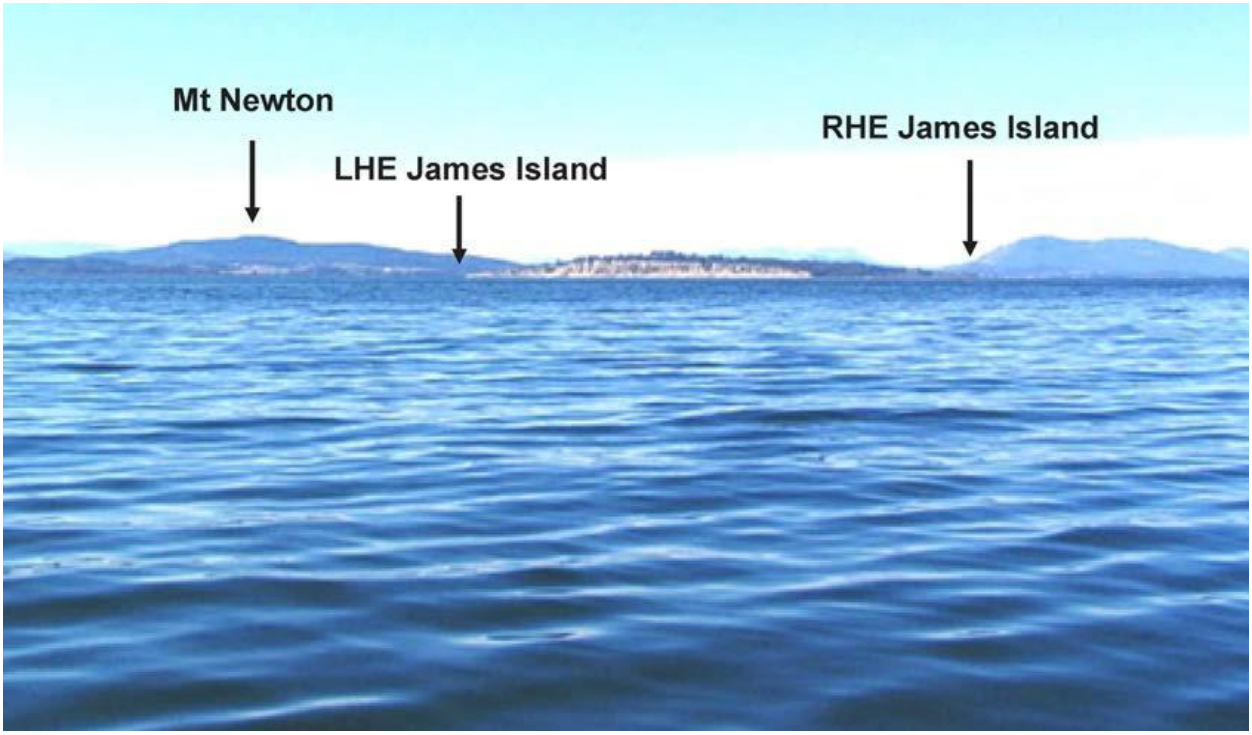
Parts of a Station Pointer
The following parts are found on a station pointer:

1. **Body.** A graduated circle.
2. **Position hole.** A hole in the centre of the body used to mark a position with the point of a pencil.
3. **Index arm.** Centre arm that is fixed to the body with its measurement line oriented to zero degrees on the circle. This arm is also referred to as the zero arm.
4. **Rotating arms.** Two arms, attached at the position hole that rotate freely around the body. The measurement lines on the arms overlay the graduated circle on the body.
5. **Graduated scale.** Marked in degrees around the circumference of the body.

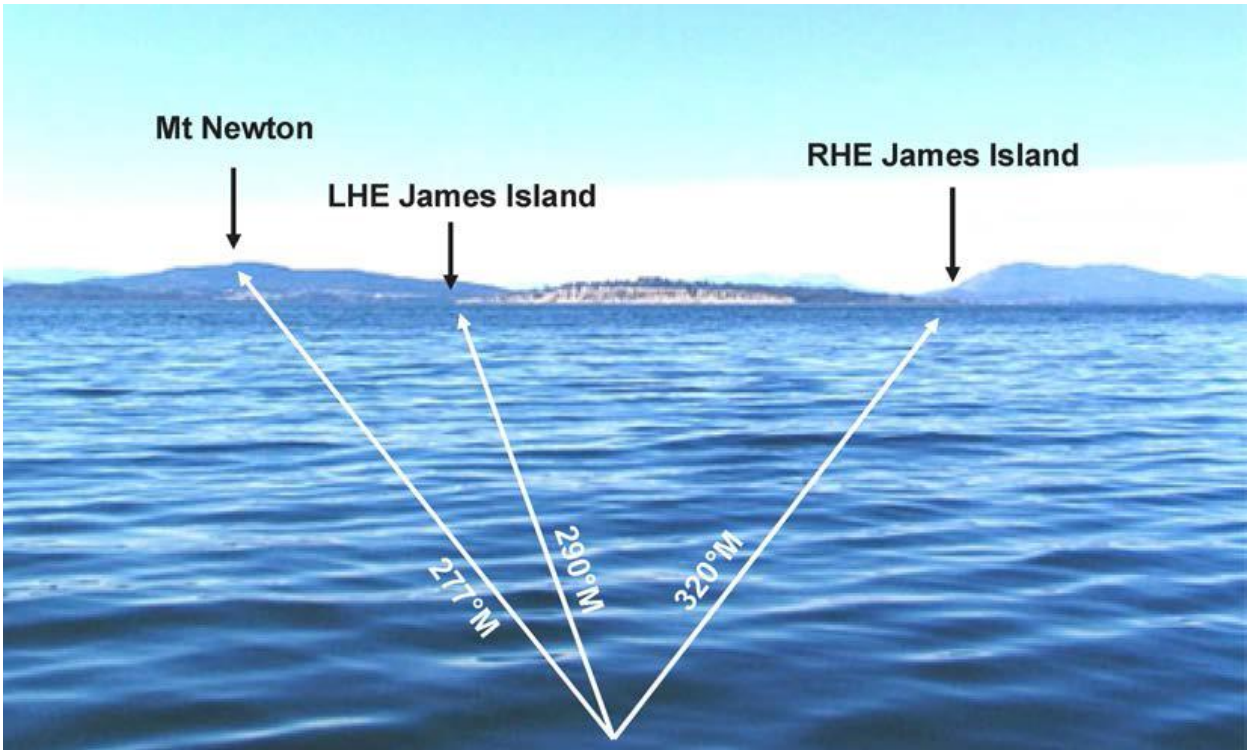


HORIZONTAL ANGLE FIX
Use the following directions to plot a position on a chart using a station pointer:

1. Identify three visible, fixed objects that can be found on the chart.



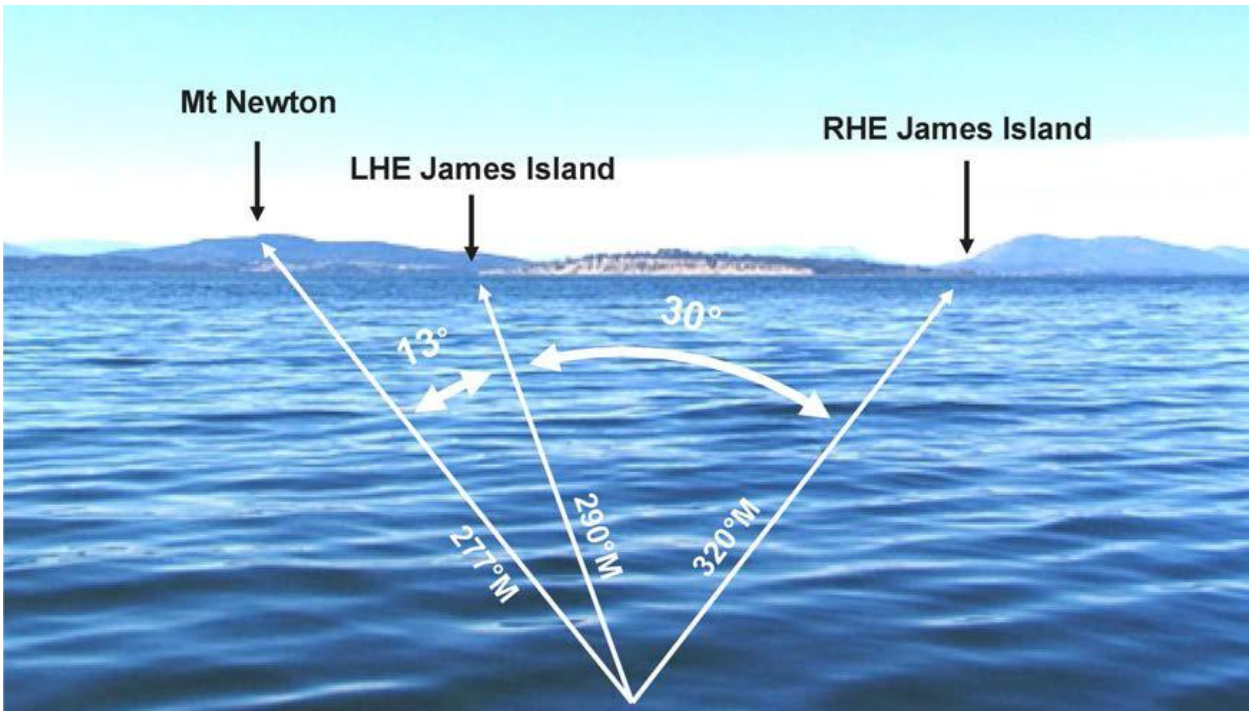
2. Using a hand-held compass, measure the bearing to the objects.



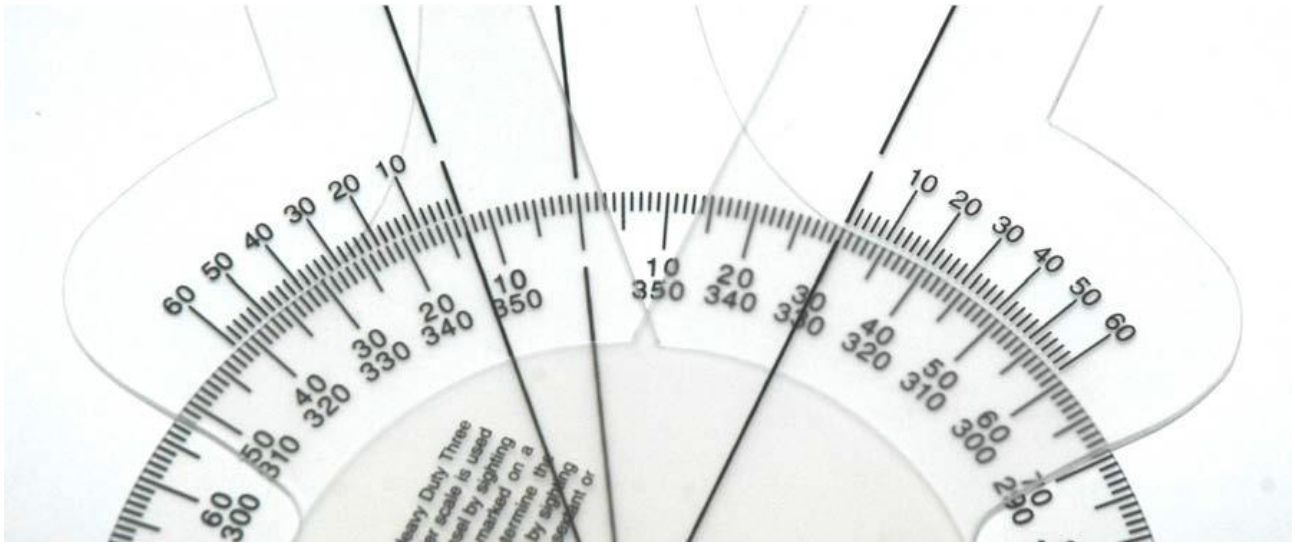
3. The angles for the fix will be written as:

Mt. Newton
LHE James Island
RHE James Island
277°M
290°M
320°M

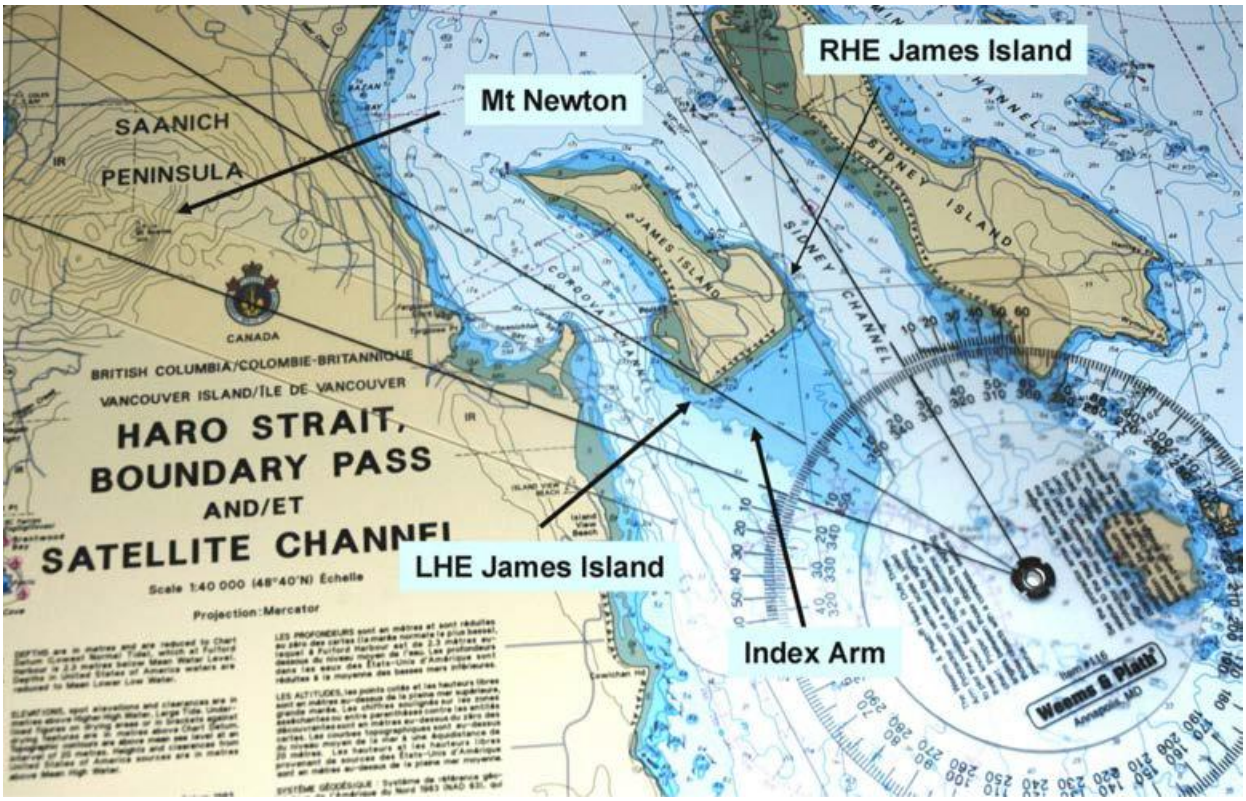
4. Calculate the two relative bearings between the left and centre and the right and centre objects. These are known as the horizontal angles.



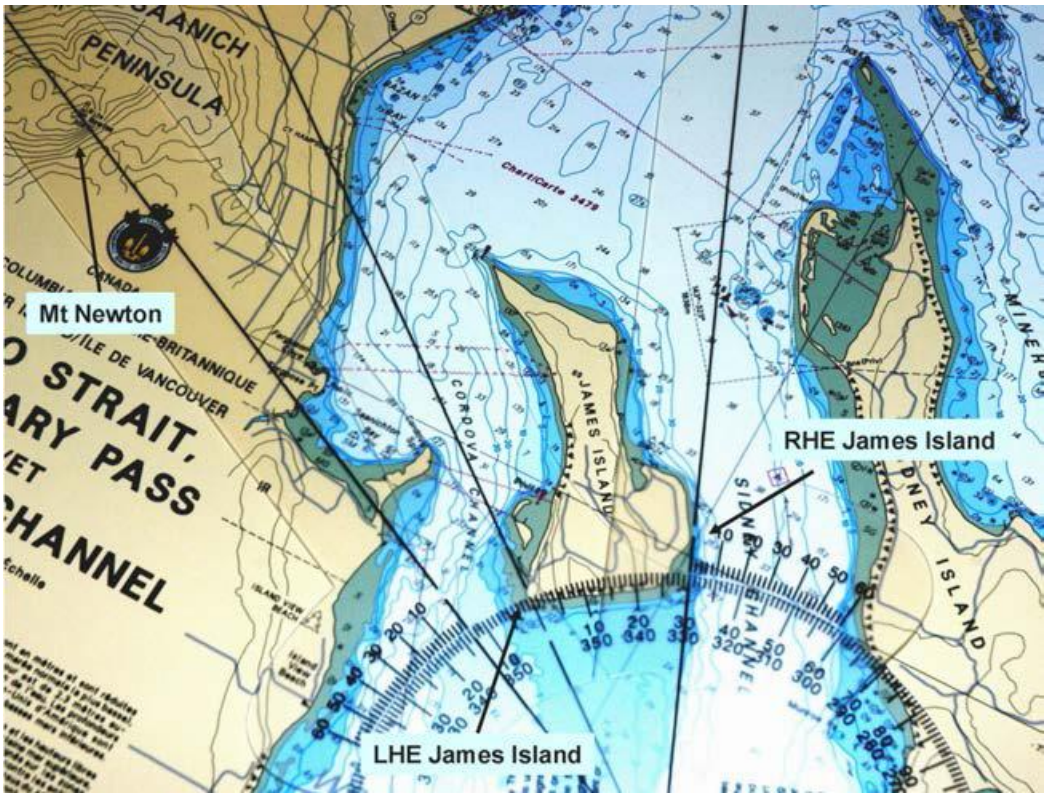
5. Set the rotating arms of the station pointer to the relative bearings, calculated in Step 4, using the graduated scale.



6. Place the station pointer on the chart with the index arm passing through the centre object.

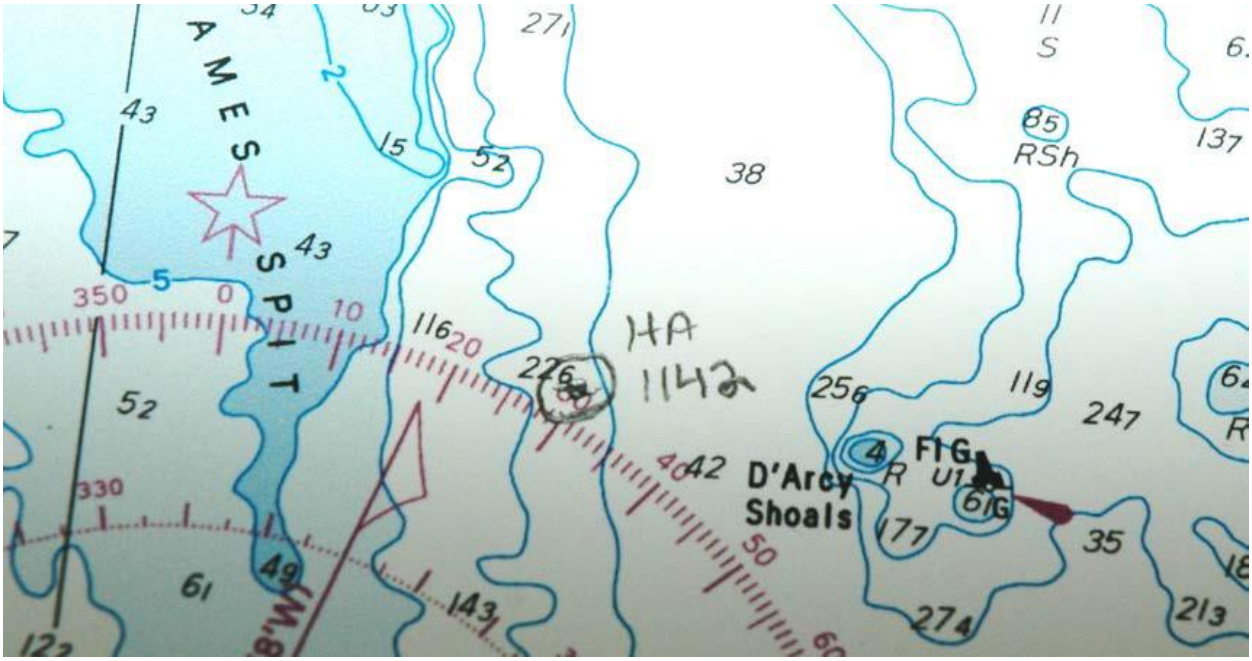


7. Slowly move the station pointer until all three arms are aligned with the three objects.



8. Using the point of a pencil, mark the position on the chart through the position hole.

9. Draw a small circle around the pencil mark and label the fix with 'HA' and the time.



CLOSING STATEMENT - Locating a position on a chart is an important skill that can be used when navigating a small craft.

PO X24 - SAILING

MX24.01 Prepare for a Sail Weekend
MX24.02 Participate in a Sail Weekend

MX24.01 – Prepare for a Sailing Weekend

IMPORTANCE - It is important for cadets to know the skills associated with CAN*Sail* Level 1 and the expectations for the sail weekend activities so that they have a positive sailing experience.

ACHIEVING CANS*AIL* LEVEL 1
To achieve CAN*Sail* Level 1, cadets must demonstrate the ability to perform the skills outlined on the checklist. Checklists are meant to be flexible and cadets can complete the skills as either helm or crew. Some boxes on the checklist have been blacked out because a skill might only be completed as either crew or helm.

Cadets will benefit from spending time in both the helm and crew position. It is important that those cadets who gravitate towards crewing complete some skills as a helm, and vice versa.

In double handed boats: 50% or more of skills achieved are as helm ('I helmed'); and in any type of boat, each skill listed has been mastered as 'I Helmed' / 'I Crewed'

CLOSING STATEMENT - The sail weekend is designed to introduce the skills associated with the Sail Canada *CANSail Level 1* Checklist. Being familiar with the skills and expectations will help to prepare for the sail weekend activities.

SUGGESTED CLOTHING AND FOOTWEAR FOR A SAIL WEEKEND
The weather forecast and the following clothing guidelines can assist in determining the clothing to be worn / brought for sail training.
Footwear
On-the-water training. Soft-soled shoes (sneakers) or sailing boots. No open-toed footwear is permitted. Footwear will get wet so it is recommended that cadets wear older shoes they do not mind getting wet or purchase water shoes.
Ashore training. A separate pair of shoes other than the on-the-water pair is needed. Cadets are not permitted to wear wet footwear unless they are participating in on the water training. Seasonal outdoor footwear is recommended for ashore activities.
Clothing
On-the-water training. All personnel should have at least two sets of the following:

- shirt,
- sweater,
- shorts (if weather permits),
- bathing suit,
- pants, such as, sweat pants or lined nylon (NO JEANS PERMITTED as they restrict movement and
- become heavy when wet),
- undergarments,
- hat, and
- socks.

Ashore training. All personnel are to bring appropriate seasonal clothing. This clothing should not be the same clothing brought for on-the-water training.
Outerwear

- Warm hat (if expected temperatures are low),
- Jacket, and
- Gloves / mittens (if expected temperatures are low and cadets wish to wear gloves on the water, they must be suitable for working with small lines and moving parts).

Note: Wet weather gear and wetsuits may be available for loan from the sail / nautical centre.

PO X25 – PARTICIPATE IN A NAUTICAL TRAINING WEEKEND

CX25.01 Prepare for a Nautical Training Weekend 1
CX25.02 Participate in a Nautical Activity

SEA CADET INTER-DIVISIONAL COMPETITION (SIDC)

☐ SIDC - Participate in the Sea Cadet Inter-Divisional Competition Weekend