



Canadian Coast Guard Auxiliary

Search & Rescue Crew Manual



This manual was written in cooperation by the Canadian Coast Guard Auxiliary, Pacific Region and the Canadian Coast Guard Marine SAR Programs, Pacific Region.

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This book is a compilation of common practices used in due regard to safety by the Canadian Coast Guard Auxiliary and the Canadian Coast Guard.

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SEARCH AND RESCUE CREW MANUAL

CONTENTS

INTRODUCTION	I
CHAPTER 1	
Search and Rescue Unit (SRU) Performance	13
CHAPTER 2	
Personal Safety	31
CHAPTER 3	
Vessel Fitness and Safety	47
CHAPTER 4	
Electronic Communication & Record Keeping	69
CHAPTER 5	
Practical Seamanship	85
CHAPTER 6	
Boat Handling	97
CHAPTER 7	
Foundations of Navigation	117
CHAPTER 8	
Towing	177
CHAPTER 9	
Search	195
CHAPTER 10	
Rescue	215
GLOSSARY OF NAUTICAL TERMS & REFERENCES	243

INTRODUCTION

This manual is dedicated to the volunteers of the Canadian Coast Guard Auxiliary who give their time and effort to protect Canadians on our National waters by ensuring safety at sea.

*AQUAE NUMQUAM ILLOS MERGENT
The waters will never take them*

“I took another look at the chart and realized that things were pretty bad. Not only was Raphael 160 miles away from me but he was also to windward in atrocious conditions. But I had to go, I knew that. It was that simple. The decision had been made for me a long time ago by a tradition of the sea. When someone is in trouble you help.”

An excerpt from “Close to the Wind,” when, during the 1996 Vendé Globe single hand around the world race, Pete Goss turned his vessel around into hurricane force winds and went back to save Frenchman Raphael Dinelli.

INTRODUCTION

CONTENTS

Letter from the President	4
Table of Abbreviations	5
The Development team	5
Welcome to the Canadian Coast Guard Auxiliary	6
What makes this manual different?	7
How to use this manual	7
Assessment and Approach:	
Stop Assess and Plan (SAP)	7
Commands and Signals	7
ONWATCH, Positions and Duties	7
Warning Symbol	7
Live examples	8
Canadian Coast Guard Auxiliary	8
Mission Statement	8
Marine SAR	8
Organization	8
Volunteers	9
Fleet	9
Training	9
Running Costs	9
Call Out	9
National Statistics	10
International	10
The Future	10
CCGA National and Regional Offices	10
The Canadian National SAR System	11
Considerations for Volunteers	12

Letter from the President



Dear CCGA Member:

Welcome to the Canadian Coast Guard Auxiliary.

This manual has been designed to provide you with all the necessary core information which, when combined with classroom teaching and on the water practice, will give you the tools you need to be an effective crewmember on a CCGA rescue boat. The time frame for this training, although flexible, is projected at one year. It is the intention of this course to have all members training to the same minimum proficiency throughout the organization. Members moving between communities will be confident that they will possess the required skills wherever they volunteer for duty.

I would like to thank all the dedicated Coast Guard Auxiliary volunteers and Canadian Coast Guard employees who over the years have contributed to the training programs that have preceded this one. Their work was essential in the development of this program. I would also like to recognize the hard work of the many Coast Guard Auxiliary volunteers who helped put this manual together as well as Project Leader Tyler Brand. Many thanks are also due to John Palliser, Superintendent, Canadian Coast Guard for his support to this project from start to finish, and former Coast Guard Auxiliary Training Director John Thomas, whose tenacity made this project a reality.

This manual is a prime example of the excellent work that comes from the partnership between the Canadian Coast Guard and the Coast Guard Auxiliary. Together, we will continue to build a strong team dedicated to saving lives at sea.



Randy Strandt
President, CCGA - Pacific

Table of Abbreviations

AMVER	Automated Mutual Assistance Vessel Rescue System	SITREP	Situation Report
CASARA	Canadian Air Search and Rescue Association	SKAD	Survival Kit Air Droppable
CCG	Canadian Coast Guard	SLDMB	Self Locating Datum Marker Buoy
CCGA	Canadian Coast Guard Auxiliary	SMC	Search and Rescue Mission Co-ordinator
CISF	Critical Incident Stress Foundation	SOLAS	Safety of Life at Sea
CISM	Critical Incident Stress Management	SOP	Standard Operating Procedures
CSA	Canada Shipping Act	SRR	Search and Rescue Region
DFO	Department of Fisheries and Oceans	SRS	Search and Rescue Sub-Region
DND	Department of National Defence	SRU	Search and Rescue Unit
GMDSS	Global Maritime Distress and Safety System	SVR	Small Vessel Regulations
GSAR	Ground Search and Rescue Association	VHF	Very High Frequency (Radio)
IAMSAR	International Air and Marine Search and Rescue Manual (volumes I-III)	VTS	Vessel Traffic System
ICAO	International Civil Aviation Organisation		
IMO	International Maritime Organisation		
JRCC	Joint Rescue Co-ordination Centre		
MCTS	Marine Communications and Traffic Services		
MOB	Man Overboard		
MRSC	Maritime Rescue Sub Centre		
MMSI	Maritime Mobile Service Identification		
NSM	National Search and Rescue Manual		
NVG	Night Vision Goggles		
OBS	Office of Boating Safety		
OSC	On Scene Co-ordinator		
PIW	Person in Water		
RIC	Radio Information Circular		
RROC	Restricted Radio Operators Certificate		
RSER	Rescue, Safety and Environmental Response		
S/V	Sailing Vessel		
SAR	Search and Rescue		
SARSAT	Search and Rescue Satellite Aid Tracking		
SART	Search and Rescue Radar Transponder		
SFVR	Small Fishing Vessel Regulations		

This manual was developed by the volunteers of the Canadian Coast Guard Auxiliary in partnership with the Canadian Coast Guard and the Joint Rescue Co-ordination Centre Victoria. Only through the devotion and extraordinary effort of over fifty CCGA and CCG team members did this manual come to exist. The base of expertise available in the ranks of the CCGA makes a product of this calibre possible for minimal amounts in funds and time.

The Development team

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Special thanks to Ric Tolonen

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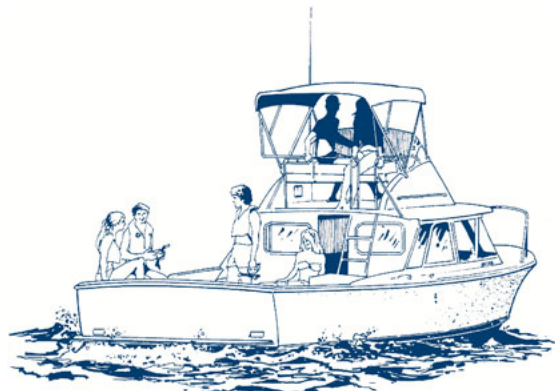
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Welcome to the Canadian Coast Guard Auxiliary

This manual has a distinct purpose: it provides the key concepts that are primary to becoming a safe, effective, and efficient crewmember on-board a Canadian Coast Guard Auxiliary vessel. This manual also provides the basic knowledge required for a new crewmember to meet the challenges of becoming a mariner.

Canadian waters are cold and unforgiving. Each year the northern oceans will claim the lives of expert mariners who have made no mistakes and taken no reckless actions. Any experienced sailor has, at one time or another, survived a storm or been surprised by the sea. They know that every calm day on the ocean is a gift.

Mariners thrive in the state of seamanship where they are on the waters, travelling on a vessel. This is a fragile state, one that lies only a breath away from a desperate fight for survival. Young sailors often speak of mastering their environment. Old sailors know how ridiculous an idea that is. Imagine standing on the nose of a giant and declaring yourself as the master. The key to existing on the oceans is the diligent regard for safety, and the constant habit of preparation. These must combine with a respect for the overwhelming strength of the ocean.

The Canadian Coast Guard Auxiliary does more than just work under the umbrella of the Coast Guard. Individual units and vessels respond where there is no Coast Guard vessel to back them up or ensure their safety. Alone, they face the same elements and perform the same rescue as Canada's professional rescue crews. The Canadian Coast Guard Auxiliary is tasked by joint rescue co-ordination centres to respond to 25% of calls for help on Canadian waters. The service that these vessels provide is a vital part of the Canadian search and rescue system and the risks that they face are real.

What makes this manual different?

This manual is only one part of a competency based training program that ensures a top level of performance that will become universal onboard all Coast Guard Auxiliary vessels. Each crewmember is evaluated against a performance standard that describes the skills and knowledge necessary to function as a well-trained member of a CCGA rescue crew. This manual was written around those standards and delivers a straightforward, step by step approach to achieving the skills along with a breakdown of positions and approaches.

The greatest challenges for a trainer is not just to come up with safer methods and techniques for vessel crews but to come up with techniques that are used. To be used in practice a technique must be:

- Easy to remember
- Easy to use
- Fast and efficient
- Intuitive to the user

These tools are designed to be used and we hope that the pages of this book will end up tattered and worn from constant reference.



Auxiliary crews operate in a team work environment

How to use this manual

This manual has a few features that identify different aspects of crewmembers' responsibilities:

Assessment and Approach: Stop Assess and Plan (SAP)



This manual uses the new **Stop Assess and Plan (SAP)** protocol to reduce the risk of injuries and accidents on the rescue scene. When the team is confronted with various situations the SAP sections of this manual provide a step-by-step approach for assessment and planning that SAR

trained coxswains and captains will use to detail the scene and assign duties to the crew before commencing action.

Commands and Signals



Each chapter includes a list of common commands and signals used by the Canadian Coast Guard and the Coast Guard Auxiliary Coxswains during all operations. These sections encourage the crews to pre-determine and practice their language prior to the operations. The commands and signals sections enable the new crewmember to become familiar with the terms and their meanings. Scripted examples give the reader a live example to put the terminology in context as well as to understand the responses and procedures connected to these commands.

ON WATCH, Positions and Duties



This symbol signals to the reader that the section outlines the primary duties of the crewmember. The section will describe and define the performance of a task and give examples.

When a rescue vessel transits to an area, sets up and prepares for a mission and then commences a search or rescue action plan, the crew must perform some common tasks that are universal to all CCGA vessels. This manual will specifically define the roles of the captain/coxswain and each crewmember in reference to the mission of the vessel. These position sections will help a captain or coxswain assign duties and responsibilities to his/her crew as well as enable the crew to understand their role in the mission without a lengthy explanation. As the vessel transits to the scene or navigates, normally certain roles and responsibilities are designated for the safe operation of the vessel. One crew will be on radio watch and one on navigation monitor, and each will know their responsibilities.

Each job on the vessel is described in detail allowing the new crewmember to anticipate the actions that will be needed.

Warning Symbol



This symbol indicates a critical safety warning or procedure.

Live examples

Every section has real life examples, scripted scenarios and actual Vessel Log excerpts from experienced rescue crews. The new crewmember and experienced member will all benefit from seeing how other vessels and units approach these fundamental duties.

Canadian Coast Guard Auxiliary

The Canadian Coast Guard Auxiliary (CCGA) volunteer organisation was formed in 1978 in partnership with the Canadian Coast Guard (CCG) to provide support to a national volunteer rescue service. The Auxiliary does assist the Coast Guard in the delivery of search and rescue (SAR), operational, and accident prevention services. The tradition of vessels responding to distress situations is part of the fabric and, in many cases, the law for most maritime nations.

In Canada, the participation of volunteers in marine rescue pre-dates Confederation. A loose network of unpaid rescue agents reported incidents and organized searches for overdue vessels.

By the nineteen seventies, it became clear that a formal volunteer network was needed to provide a more effective response to marine incidents and implement a wider safety net for mariners.

Mission Statement

The Canadian Coast Guard Auxiliary (CCGA) is a non-profit organisation dedicated to search and rescue (SAR) and safe boating activities.

Our mission is to provide a permanent day and night search and rescue service to cover marine requirements in Canada and prevent the loss of life and injury.

To fulfill this mission, our objectives are to:

- Save 100% of lives at risk;
- Reduce the number and severity of SAR incidents;
- Promote marine safety;
- Support the Canadian Coast Guard;
- Provide a humanitarian service;
- Maintain the highest professional standards;
- Promote dedication and pride of membership.



Marine SAR

The Canadian Coast Guard Auxiliary is a major player in Canada's national search and rescue (SAR) response network. Annually, the Auxiliary responds to approximately 25% of calls of nearly 7,000 marine SAR incidents. This translates into more than 200 lives saved each year.



The territory covered by the CCGA is vast. Canada's area of responsibility stretches over 5.3 million square kilometres, bordering some of the most rugged coastline in the world. In addition, the CCGA is also present on many of Canada's major inland waterways. Its units are especially concentrated within those high risk areas where the requirements are greatest. In a SAR system, it is essential that a sufficient number of rescue boats be available to provide the best coverage so that they may go immediately to the scene of an accident. Reaction has to be fast – lives depend on it.

Organization

The organizational structure of the CCGA is a testament to its humanitarian ideals and its grassroots strengths.

In Canada, six Canadian Coast Guard Auxiliaries are federally incorporated as non-profit associations.

- CCGA National Inc.
- CCGA Pacific Inc.
- CCGA Central & Arctic Inc.
- CCGA Quebec Inc.

- CCGA Maritimes Inc.
- CCGA Newfoundland & Labrador Inc.

Each association has a legal entity separate from that of the Government of Canada.

The Presidents of each of the five regional associations are members of the CCGA National Council, chaired by an elected Chief Executive Officer. The National Council oversees the administrative and business requirements that concern every region.

In seaside villages, marinas and ports across Canada, auxiliaries are organized into units that handle missions in their vicinity. Each unit is led by an elected unit leader. A group of units combines to make up a zone led by a director.

Volunteers

The Auxiliary is made up of close to 5,000 dedicated volunteers. The members are primarily pleasure craft operators and commercial fishermen who use their own vessels or community owned vessels for safe boating education and SAR-related activities.



All CCGA members are dedicated to saving and protecting lives in distress. In addition to their everyday jobs, auxiliaries are ready to exchange leisure, comfort and sleep for cold, wet and fatigue in a range of situations that will test their skills, strength and nerve.

When taking part in authorized SAR activities, they are compensated only for the cost of their fuel and little else save a thank-you from the victims or their families for their tireless efforts.

Fleet

Currently, the CCGA fleet includes over 1,500 vessels with a combined asset value of over 215 million dollars. Vessels are either privately owned, community owned or loaned by the Canadian Coast Guard to the Auxiliary.

All vessels must meet strict standards in order to become part of the Auxiliary fleet. Members are responsible for keeping their boats maintained. In addition, they are required to equip them with specialised



Many fishing vessels are members

search and rescue gear, which can run into the thousands of dollars.

Training

Once a person has become a member of the Auxiliary, they participate in an on-going training regime including SAR operations and SAR prevention activities to enhance their capabilities in the delivery of the program.

Running Costs

The CCGA is very cost conscious and aims to make maximum funds available for operational needs. The terms and conditions which establish the conduct of activities of the CCGA are identified in a Contribution Agreement drawn up between the Auxiliary and the Canadian Coast Guard.

Because auxiliaries are only reimbursed for out of pocket expenses when tasked to a SAR mission, the Government of Canada receives the equivalent of \$30 in services from the CCGA for every dollar actually spent. In other words, CCGA members save Canadian taxpayers millions by providing services at a fraction of the cost of maintaining the same number of Coast Guard units at the ready.

Call Out

Because of the effective organizational structure of the CCGA, the Canadian Coast Guard is able to keep up-to-date information on active auxiliaries and can match almost instantly a distress call to the nearest CCGA unit.

Most of the calls come from one of three Canadian Joint Rescue Coordination Centres known as JRCCs or one of two Marine Rescue Sub-Centres or MRSCs. These centres are responsible for the planning, co-ordination, conduct and control of SAR operations.

Their job is to direct the closest and most appropriate search and rescue resources to a distress call. These centres, staffed by SAR co-ordinators from the

Canadian Military and the Canadian Coast Guard, are on full alert 24 hours a day, seven days a week, year round.

National Statistics

The CCGA currently has close to 4,200 members and 1,200 enrolled vessels. In 2009, CCGA units responded to 1,750 SAR taskings and participated in 2,200 training exercises. Auxiliarists were also present at 160 boat shows, exhibitions and displays to support the Safe Boating Program.

The Auxiliary has shown an enduring and valuable commitment to SAR. Each year, the CCGA contributes to saving a significant number of those whose lives are at risk in marine incidents in Canada.

Since the CCGA was founded in 1978, its members have been credited with participation in 52,000 missions and saving 5,000 lives. Another 5,000 people are helped each year in non-distress marine incidents and millions of dollars of property are saved.

The CCGA is committed to the Government of Canada to provide search and rescue services. It is a hugely intensive operation requiring a large number of vessels, crewmembers and equipment.

International

The Canadian Coast Guard Auxiliary has been recognized as one of the best, safest and most cost effective volunteer marine rescue organizations in the world, with numerous national and international awards to its credit.

The CCGA also plays an integral role in the worldwide SAR community. The CCGA has signed a Memorandum of Agreement with the United States Coast Guard Auxiliary to promote joint efforts in search and rescue initiatives. The CCGA is also an active and contributing partner to the International Lifeboat Institution.

The Future

With the growing importance of safe boating education programs, the importance of private funding continues to increase.

The Auxiliary receives donations from the public and private corporations to support their activities. Since it is a non-profit association, donations are tax-deductible.

CCGA Offices

National Office

Canadian Coast Guard Auxiliary (CCGA) - National

Toll free: 1 866 MAYDAY2 / 629-3292
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Regional Offices

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Internet: <http://www.ccgga-ca.ca>

Canadian Coast Guard Auxiliary (CCGA) - Quebec

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Fax: (902) 479-3222
Internet: <http://www.ccgga-m.ca>

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Fax: (709) 772-4109
Internet: <http://www.ccgga-nl.ca>

The Canadian National SAR System

The primary goal of the national SAR Program is to save lives at risk throughout Canada. The program involves federal departments, volunteers, provinces, territories and municipalities, working together to provide this essential service.

You are part of a larger system. The Canadian Coast Guard Auxiliary (CCGA) Search and Rescue Unit (SRU) responds and acts in co-operation with the Canadian Search and Rescue System. In order for that system to function each SRU must work together with the Joint Rescue Centres and Surface Coordinators (on scene). As soon as one unit decides to act independently then the system starts to fail.

As stated in the National Search and Rescue Manual, the National SAR objective is:

To prevent the loss of life and injury through search and rescue alerting, responding and aiding activities which use public and private resources, including where possible and directly related thereto; reasonable efforts to minimise damage to or loss of property; and by ensuring appropriate priority to aviation and marine safety and prevention measures focused on owners and operators most commonly involved in SAR incidents.

The National SAR Program is delivered two ways:

1. **SAR Operations** - detection, search, rescue and incident co-ordination;
2. **SAR Prevention** - public education programs and the enforcement of safety regulations that are designed to minimise the loss of life and decrease the number of SAR incidents.

The Minister of National Defence is the lead minister responsible for co-ordinating the response to air and marine search and rescue (SAR) incidents in Canada. The Department of National Defence (DND) co-ordinates SAR through the country's three Joint Rescue Co-ordination Centres (JRCCs). These Centres are named after the cities where they are located: **Victoria, Trenton, and Halifax.**

The Joint Rescue Co-ordination Centres are staffed by DND and Coast Guard (CG) personnel who co-ordinate both air and marine incident response. The three JRCCs manage the federal search and rescue responsibilities for all of Canadian Waters and a substantial area of the Arctic, Pacific and Atlantic Ocean, extending approximately 800 nautical miles past the international boundaries.

The Joint Rescue Coordination Centre Responsibilities

- Co-ordination and termination of all SAR operations, associated with air and marine emergencies;
- Providing assistance to civil agencies, such as police forces and the local ambulance and fire services.

The Joint Rescue Co-ordination Centre (JRCC) is responsible for receiving and responding to information about an actual or suspected search and rescue incident. Maritime and Aeronautical Co-ordinators are on duty at JRCC twenty-four hours a day, seven days a week. Once JRCC has been alerted to a marine or air incident by any source, SAR Co-ordinators evaluate the information and activate the appropriate SAR response. JRCC utilises both government and non-government resources in responding to SAR incidents.

Under the terms and provisions of the 2001 **Canada Shipping Act**, Section 131:

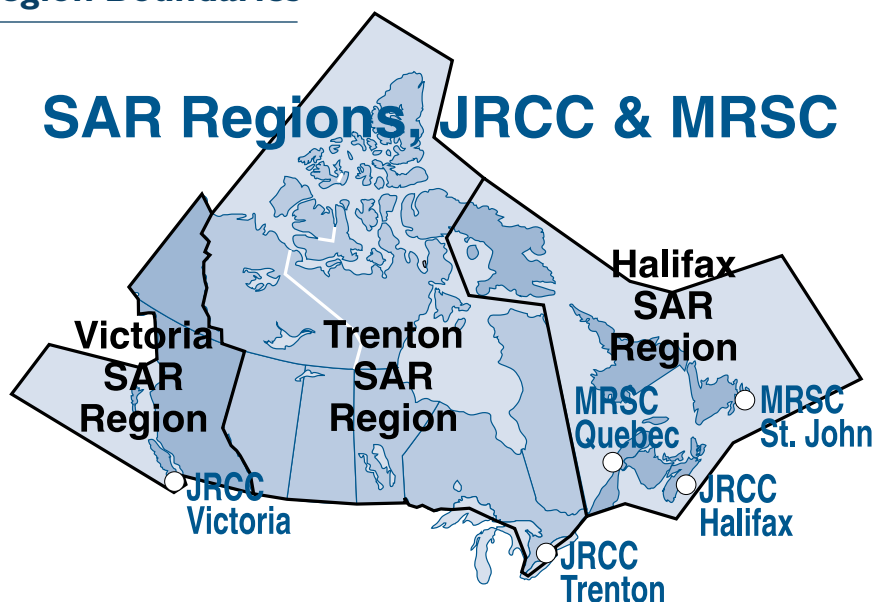
Answering distress signal

131. (1) Subject to this section, the master of a vessel in Canadian waters and every qualified person who is the master of a vessel in any waters, on receiving a signal from any source that a person, a vessel or an aircraft is in distress, shall proceed with all speed to render assistance and shall, if possible, inform the persons in distress or the sender of the signal.

Distress signal – no assistance

(2) If the master is unable or, in the special circumstances of the case, considers it unreasonable or unnecessary to proceed to the assistance of a person, a vessel or an aircraft in distress, the master is not required to proceed to their assistance and is to enter the reason in the official log book of the vessel.

SAR Region Boundaries



Considerations for Volunteers

Risk

Much like volunteer fire department members, CCGA members can find themselves in harms way. One should consider this duty an honour yet consider it carefully. Any mariner that goes to sea experiences risk and especially those that endeavour to go out and assist mariners that are already in trouble. You should discuss your choice with your family before making a commitment to serve as a SAR crewmember.

LongTerm Physical Effects

The physical forces affecting the crew onboard rescue vessels are not yet fully understood and in certain circumstances could result in long term after effects. These vessels can experience moderate to high impacts and the crews can be required to carry out heavy physical work. Fast Rescue Craft may not provide protection from the outside environment and can expose crew to extreme environmental conditions such as high wind chills prolonged excessive motion and vibration.

CCGA members must consider their fitness and health when volunteering for duty. If you are questioning your own strength and stamina then it may be wise to investigate exactly what may be required of you, to volunteer for duty on a vessel before you take the pager.