

IN AN EMERGENCY

Are you ready to deal with an emergency? Do you know how to send a distress message? Calling early and knowing how to ask for help in an emergency can make the difference between life and death. This section explains some of the equipment you can use to call for help and what to do in some emergencies.

Algonquin Provincial Park, ONTARIO

COMMUNICATE EFFICIENTLY

Marine Radio Communications

Regulated marine radio communication equipment includes :

- Marine VHF radios (with the new Digital Selective Calling (DSC) option on channel 70);
- Marine MF/HF – DSC radios;
- Emergency Position Indicating Radio Beacons (EPIRBs);
- NAVTEX; and
- Inmarsat.

These products and services work together to form the international system known as the Global Maritime Distress and Safety System (GMDSS). They quickly relay distress alerts to the Canadian Coast Guard and other vessels in your area.

Pleasure craft are not required to carry GMDSS-compatible equipment, but it is a good idea. If you have it, connect it to a Global Positioning System receiver to make sure that your exact location is automatically sent in a digital distress alert in case of an emergency. This way, rescuers will immediately know exactly where you are and will arrive sooner.

Marine VHF Radio and the Maritime Mobile Service Identity (MMSI)



Marine VHF radio is generally the best way to send a distress alert. If you have a VHF radio, keep it tuned to channel 16. Know where you are at all times and be prepared to describe your specific location.

All VHF marine radio operators must have a Restricted Operator Certificate - Maritime – (ROC-M). Industry Canada has delegated the ROC-M to the Canadian Power and Sail Squadrons (CPS). Contact the CPS for information about courses available in your area.

If you are buying a new VHF radio, make sure it has the new Digital Selective Calling (DSC) feature on channel 70. This provides automatic digital distress alerts. The Canadian Coast Guard provides DSC channel 70 service on the east and west coasts, as well as on the Great Lakes and the St. Lawrence River.

REMEMBER: VHF radio channel 16 is used for emergency and calling purposes only.

Once you contact another vessel on channel 16, switch to another working frequency. VHF channel 70 is used only for DSC (digital) communication – not voice. Use your VHF radio as described in the VHF Radiotelephone Practices and Procedures Regulations. Your owner's manual will explain how to make a DSC call to another vessel or to a shore station with DSC.

To make a digital call, each radio must have a nine-digit Maritime Mobile Service Identity (MMSI) number. Industry Canada assigns these numbers free of charge. Visit their website (see **CONTACT INFORMATION AND REFERENCES** section of this guide) to learn more.

Calling for Help

When in extreme danger

When in extreme danger (for example, your boat is taking on water and you are in danger of sinking or capsizing), use your VHF radio channel 16 and say “Mayday” — “Mayday” — “Mayday.”

If you need help but are not in immediate danger

If you need help but are not in immediate danger (for example, your motor has quit and you cannot reach shore), use channel 16 and say “Pan-Pan” — “Pan-Pan” — “Pan-Pan.”

In both scenarios, then give the following information:

- the name of your boat;
- your position;
- the nature of your problem; and
- the type of help you need.

Post these guidelines near your radio.

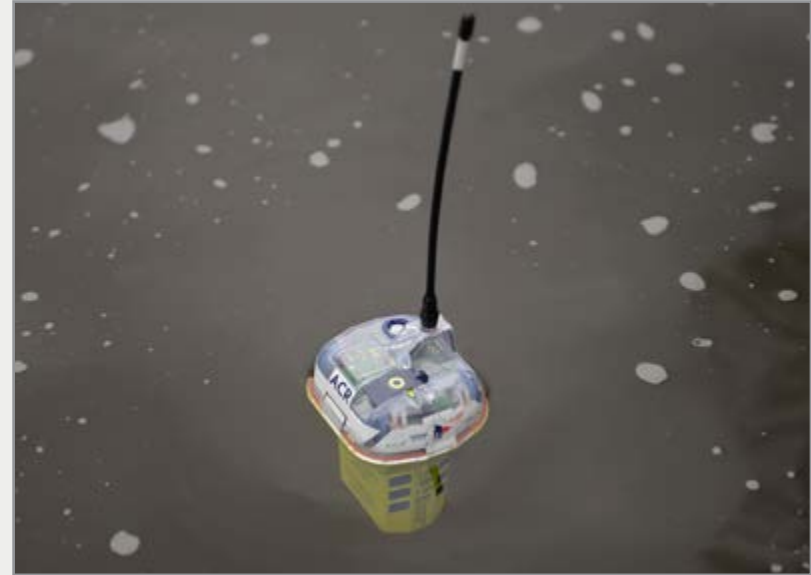
Use of a Cell Phone

While you may be able to get search and rescue assistance from the nearest [Canadian Coast Guard Marine Communications and Traffic Services \(MCTS\) centre](#) by dialing *16 or #16 on a cell phone, it is not a good substitute for a marine radio and this is not the best way to issue a distress call.

Why not?

- Cell phones can lose reception or get wet and damaged.
- Calling from your cell phone does not alert nearby vessels that you are in distress – they could be the ones to help you if they could hear you.
- Some cell phone signals cannot be followed back to your location by rescuers.
- Not all cell providers offer the *16 or #16 service.

Emergency Position Indicating Radio Beacons (EPIRBs)



These floating radio distress beacons can transmit for hours. They can be manually activated or can float free from a sinking or overturned vessel. Their signals give your position to a network of satellites, which then sends it to Joint Rescue Coordination Centres. They play an important role in an emergency. Although pleasure craft are not required to carry them, they are a very good idea.

REMEMBER: As of February 1, 2009, only 406 MHz beacons will work on the water. All beacon owners and users should take steps to replace their 121.5/243 MHz beacons with 406 MHz beacons as soon as possible.

You must register your Emergency Position Indicating Radio Beacon (EPIRB) with the [Canadian Beacon Registry](#). Remember to keep your contact information up to date.

Distress Signals

If you see a distress signal, the law requires you to see if you can help without risking your life or the safety of your boat. When possible, you must also contact the nearest Joint Rescue Coordination Centre (see **CONTACT INFORMATION AND REFERENCES** section of this guide) to inform them of the type and location of the distress signal you have seen.

Learning the common distress signals will help you quickly recognize when someone is in trouble so that you can quickly place a call for help.

Never send a distress signal unless you are in a real emergency. Sending false distress signals is against the law. It wastes the time of search and rescue personnel and may prevent them from answering, or take them farther away from, real emergencies.

Canadian Coast Guard

VHF/DSC radios can send distress alerts that tell the Canadian Coast Guard and nearby vessels that you need help right away. To find out where VHF/DSC services are available, visit www.ccg-gcc.gc.ca or contact a Canadian Coast Guard Marine Communications and Traffic Services (MCTS) centre.

MCTS centres provide Vessel Traffic Services (VTS) and a Maritime Mobile Safety Service. VTS provides traffic and waterway information to vessels via radio communication.

When near a VTS area, listen to the local VTS radio frequency to learn the intended movements of larger vessels.

MCTS centres also provide a safety service that monitors international distress and calling radio frequencies for distress calls and communications needs.

They also continuously broadcast *Notices to Shipping* and weather and ice reports on marine radio frequencies. These are published along with the VTS sector frequencies in the Canadian Coast Guard publication *Radio Aids to Marine Navigation*. You can purchase this publication from an authorized chart dealer.

Global Positioning System (GPS)



While more and more boat operators rely on marine GPS to tell them where they are on the water, it is a good idea to keep charts on board in case the GPS fails. The GPS is a worldwide radio-navigation system made possible by a network of satellites and monitoring stations. Its receivers can calculate where you are, anywhere on the planet, to within 30 m (98'5"). The Canadian Coast Guard supplies a differential GPS that provides an accuracy of within 10 m (32'10").

If you are using GPS on the water, make sure it is marine GPS. Automotive GPS will not give you the information you need on the water.

BE PREPARED TO REACT TO AN EMERGENCY

Recovering Someone who Fell Overboard

Could you get a person out of the water if they could not help you?

If you fell overboard, could your guests lift you to safety?

In certain weather conditions, and on some boats, it is a good idea to wear a quick release safety harness and a safety line secured to your boat. This keeps you from falling overboard, unless your boat capsizes. Knowing and practicing the procedures below with your guests will help them stay calm in an emergency.

If **someone falls overboard**, sound the alarm and then:

- slow down, stop if possible, and throw something that floats to the person (this will also mark the spot if they are under water);
- assign someone to watch the person overboard;
- carefully put your boat in position to bring the person back on board; and
- use a heaving line that floats, or a lifebuoy secured to the boat with a line, and recover the person from the windward side.

REMEMBER: If needed, you can secure both ends of a heavy rope, chain or cable to the boat and drape it over the side (almost touching the water) as a makeshift step. Remember that if the vertical height that someone must climb to reboard your boat from the water (freeboard) is over 0.5 m (1'8"), you must have a reboarding device, such as a ladder.

Boaters should know of, and be able to use, a few different methods to recover someone who has fallen overboard. They should also be able to decide which method to use based on the conditions of both the water and the person overboard.

When someone's size, or the freeboard of the boat, makes it difficult to carry out a rescue by hand, it may be a good idea to have lifting slings and rigging on board (if not already required by the size of your boat).

Surviving in Cold Water

Imagine that you are enjoying a warm day on your boat. You get up to grab something. Suddenly, you lose your balance and fall into water that is less than 15°C. Cold water can paralyze your muscles instantly. Sadly, many people do not understand this danger and how important it is to avoid it.

Cold Water Shock

Cold water shock likely causes more deaths than hypothermia. Canada's cold waters are especially dangerous when you fall into them unexpectedly. For three to five minutes, you will gasp for air. You could also experience muscle spasms or a rise in your heart rate and blood pressure. Worse yet, you could choke on water or suffer a heart attack or a stroke.

REMEMBER: Even strong swimmers can suffer the effects of cold water shock.

If you are wearing a lifejacket or PFD before falling into cold water, it will keep you afloat while you gain control of your breathing and prevent drowning from loss of muscle control. Trying to grab a lifejacket or PFD while in the water, let alone putting one on, will be very hard because of the changes your body will be experiencing.

Swimming Exhaustion



If you survive the shock of cold water, **swimming exhaustion** is the next danger. The longer you are in cold water, the harder it is to coordinate your movements. You will grow weaker and soon have difficulty holding onto the craft, putting on your lifejacket or PFD or even handling flares.

Hypothermia

If you survive the first two stages of immersion in cold water, you are at risk of **hypothermia**. This occurs when your body's temperature dips below 36°C. Hypothermia affects a person's control over his or her muscles and thinking. Someone who is exposed to cold water and becoming hypothermic might:

- shiver, use slurred speech and become semi-conscious;
- have a weak, irregular or no pulse;
- breathe slowly;
- lose control of body movements;
- behave in ways that do not make sense;
- act confused and/or sleepy;
- stop breathing; and
- become unconscious.

Tips on Surviving in Cold Water

If you end up in the water, do everything you can to save your energy and body heat. Swim only if you can join others or reach safety. **Do not swim to keep warm.**

You may survive longer in cold water if you:

- wear a Canadian-approved lifejacket or PFD so that you will not lose valuable energy trying to keep your head above water;
- climb onto a nearby floating object to get as much of your body out of or above the water as possible;
- cross your arms tightly against your chest and draw your knees up close to them to help you keep your body heat;



- huddle with others with chests close together, arms around mid to lower back, and legs intertwined.



If you have warning that your boat may sink, protect yourself from the cold by wearing multiple light layers of dry clothing and a water or windproof outer layer under a lifejacket or PFD.

Extra protection from hypothermia includes:

- **floaters or survival suits** (full nose-to-toes);
- **dry suits** (to be used with a lifejacket or PFD and a thermal liner);
- **wet suits** (to be used with a lifejacket or PFD – trap and heat water against the body); and
- **immersion suits** (to be used in extreme conditions when abandoning a vessel).

Knowing how your safety equipment works, especially in water, is a good idea. Test it in a warm swimming pool or in calm water before you may have to use it in an emergency.

For more information, or to see what really happens during cold water immersion, visit www.coldwaterbootcamp.com.

Reacting to a Fire

If you have a fire on board, make sure everyone is wearing a lifejacket or PFD and use extinguishers to control the fire.

In case of a small fire, activate a fire extinguisher and aim it at the base of the flames. Sweep the discharge nozzle from side to side and for a few seconds after the flames are completely out. Otherwise, the fire may restart and there might not be enough left in the extinguisher to put it out again.

If your boat is moving when a fire starts, position it so the fire is downwind from you and stop the engine if it is safe to do so under the weather conditions.

Even if your boat has an automatic fire extinguishing system, it must also carry the required portable extinguishers listed in the **SAFETY EQUIPMENT REQUIREMENTS** section. You can get more information on their care and maintenance from *Underwriters' Laboratories of Canada (ULC)* or the manufacturer.