

4.1 International code of signals

Phonetic alphabet, morse code and signal flags (single letter signals)

May be made by any method of signalling.

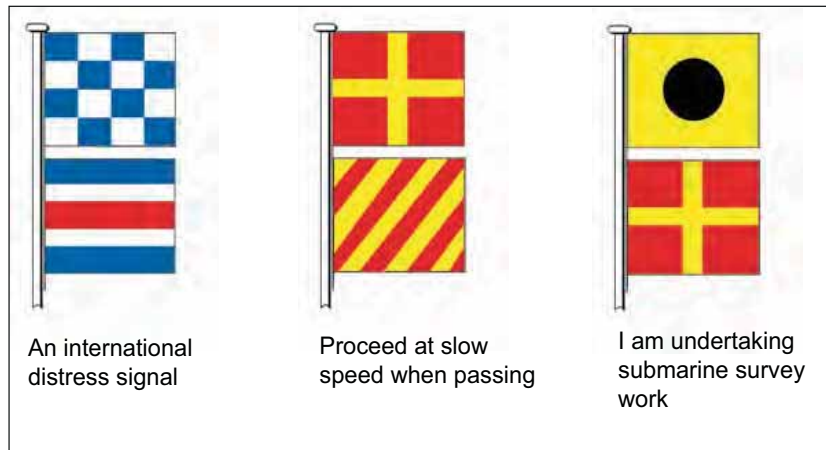
For those marked* see note below.

A ALPHA .. _		I have a diver down; keep well clear at slow speed.	O OSCAR _ _ _ _		Man overboard.
B* BRAVO _ _ . . .		I am taking in, or discharging, or carrying dangerous goods.	P PAPA . _ . . .		IN HARBOUR: About to sail. FISHING VESSELS AT SEA: Nets fast on an obstruction.
C* CHARLIE _		Yes (affirmative or "The significance of the previous group should be read in the affirmative").	Q QUEBEC _ _ . . .		My vessel is "Healthy" and I request free pratique.
D* DELTA _ . . .		Keep clear of me; I am manoeuvring with difficulty.	R ROMEO . _ . .		No single international meaning allocated.
E* ECHO . _ . .		I am altering my course to starboard.	S* SIERRA		My engines are going astern.
F FOXTROT		I am disabled; communicate with me.	T* TANGO _ . . .		Keep clear of me; I am engaged in pair trawling.
G* GOLF _		I require a pilot. FISHING VESSELS: I am hauling nets.	U UNIFORM		You are running into danger.
H* HOTEL		I have a pilot on board.	V VICTOR		I require assistance.
I* INDIA		I am altering my course to port.	W WHISKEY		I require medical assistance.
J JULIETT		I am on fire and have dangerous cargo on board; keep well clear of me.	X X-RAY		Stop carrying out your intentions and watch for my signals.
K KILO		I wish to communicate with you.	Y YANKEE		I am dragging my anchor.
L LIMA		You should stop your vessel instantly.	Z* ZULU		I require a tug. FISHING VESSELS: I am shooting nets.
M MIKE		My vessel is stopped and making no way through the water.		An international distress signal.	
N NOVEMBER		No (negative or "The significance of the previous group should be read in the negative").		Proceed at slow speed when passing.	

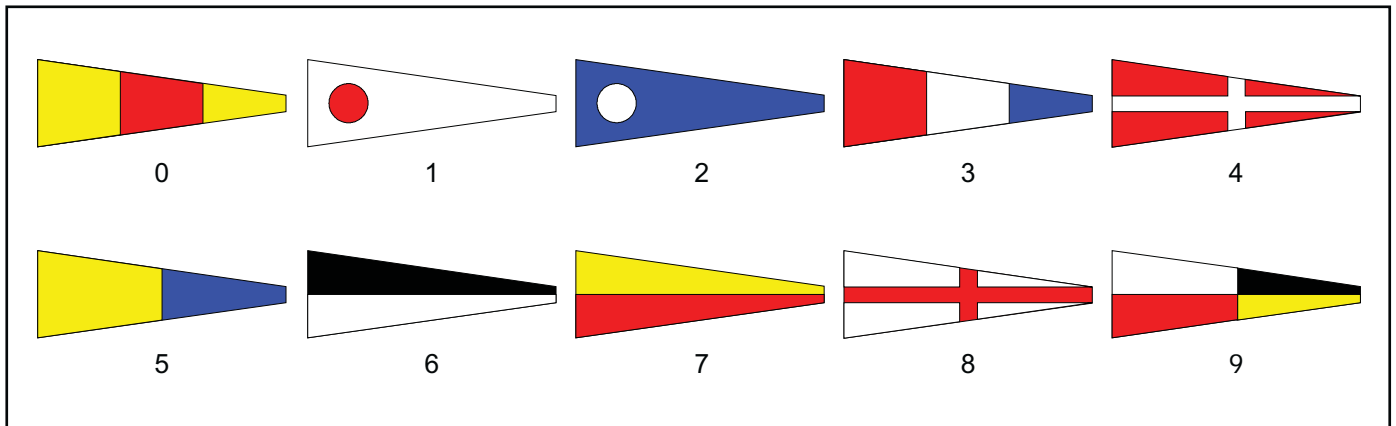
Note: signals of letters marked * when made by sound may only be made in compliance with the requirements of Rules 34 and 35, excepting that sound signals 'G' and 'Z' may continue to be used by fishing vessels fishing in close proximity to other fishing vessels.

Multiple letter hoists

A great many messages can be sent by combining multiple hoists of code flags. For interpretation of multiple hoists, mariners generally need to consult the code of signals. Three important double letter hoists are given below:

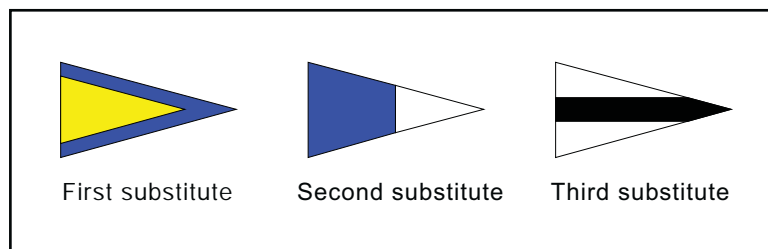


Number pennants



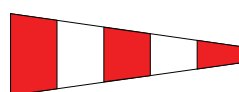
Substitute pennants

Substitutes are used to repeat an alphabetic or numeric pennant.



Code or answering pennant

This is used to tell the sender the message has been received and understood.



Queensland legislation

The IRPCS is brought into effect in Queensland by the *Transport Operations (Marine Safety) Act 1994* and *Regulation 2004*. The legislation also imposes special local Rules, the most notable of which relate to speed and wash limits.

4.2 IALA buoyage system

A system of buoys, marks and lights, known as the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) Buoyage System 'A', is used to assist safe navigation. These are the equivalent of road signs on highways. Study a chart, as well as the buoys themselves, to familiarise yourself with their meanings.

Each type of mark has a unique combination of colour, shape, topmark and light. You must be able to recognise these and pass them safely on the correct side.

Lateral marks

Port and starboard marks are referred to as lateral marks. They indicate the port and starboard hand sides of navigable waters (channels).

When a port and starboard mark are placed near to each other, travel between them.

Often lateral marks are not placed in pairs where the safe side to pass is generally determined by the direction of travel to or from the sea.

STARBOARD

When lit exhibits

Lateral marks

Beacons

Buoys

Light sequence

Photo example

PORT

When lit exhibits

Lateral marks

Beacons

Buoys

Light sequence

Photo example

When going upstream (away from the sea):

- keep red (port hand marks) on the left-hand side (to port)
- keep green (starboard hand marks) on the right-hand side (to starboard).



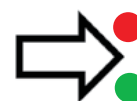
When going downstream (towards the sea):

- keep red (port hand marks) on your right-hand side (to starboard)
- keep green (starboard hand marks) on your left-hand side (to port).



Local direction of buoyage

Where there is doubt, the direction of buoyage is indicated on charts by the symbol.



Light sequence

By night a port buoy shows a red light and a starboard buoy shows a green light. Any rhythm may be used.

Cardinal marks

They indicate where the safest water may be found and is used in conjunction with the compass. It may indicate the deepest water in the area, the safe side on which to pass a danger or may draw attention to a feature in a channel such as a bend, junction or an end of a shoal.

You should pass on the eastern side of an east cardinal mark, on the southern side of a south cardinal, on the western side of a west cardinal and on the northern side of a north cardinal.

CARDINAL MARKS

When lit exhibits.

Photo example

NORTH SOUTH EAST WEST

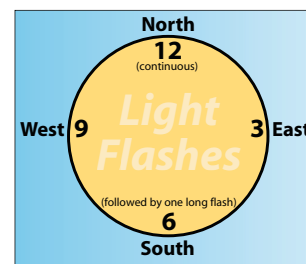
By day, the colour scheme can be remembered by noting that the black segment is positioned where the cones point:

- North—the top marks point up
- East—the top marks point outward
- South—top marks point down
- West—the top marks point inwards.



Light sequence

Cardinal marks, when lighted, all display a white light. To aid memory, associate the number of flashes with a clock face: three flashes indicate east, six flashes indicate south, nine flashes indicate west, and 12 flashes indicate north. North flashes continually. To ensure that no confusion occurs between east, south and west cardinal marks, a long flash immediately follows the six flashes of the south mark.



Special marks

This indicates a special area or feature such as traffic separation, spoil ground, cable or pipelines including outfall pipes and groynes. They can also define a channel within a channel, for example, a channel for deep draught boats in a wide estuary where the limits of the channel for normal navigation are marked by red and green lateral buoys.

They will also be found at the intersection of two channels where the use of a lateral or cardinal mark may not be appropriate.

As a general rule, consult a chart to see which side to pass.

Special marks can be used as lateral or safe water marks by using can, cone or sphere-shaped buoys.

SPECIAL MARKS

When lit exhibits

Light sequence

Photo examples

Light sequence

At night the light is yellow and the rhythm may be any other than those used for the white light of a cardinal, isolated danger and safe water marks.

Isolated danger mark

This indicates an isolated danger (for example rocks, reef, shoal or wreck) with navigable water all around it—but don't pass too close. The chart should be consulted to determine the extent of the danger.

ISOLATED DANGER MARK

When lit exhibits

Light sequence

Photo example

Light sequence

At night a white flashing light shows a group of two flashes. The characteristics may be best remembered by associating two flashes with two spheres as the topmarks.

Safe water mark

This mark indicates there is navigable water all round the mark, for example division of large shipping channels or landfall buoy. In Queensland, they are used to mark the seaward beginning of fairways entering major ports.

SAFE WATER MARK

When lit exhibits

Photo example

Light sequence

At night a white light shows a single long flash every 10 seconds.

Other navigation aids

Leads

Leads are often used to guide boats into a port or through sections of a waterway. It is essential to consult the chart for relevant leads and other navigation aids before entering unfamiliar waters.

Commonly they are triangular in shape, the front beacon having its apex upwards and the rear beacon inverted. Many new leading beacons carry no top mark and can be distinguished by fixed white day lights.

At night, major leads are lit. Increasingly, blue is a favoured light colour for leads where there is a great deal of background lighting.

LEADS

Line of leads

Front lead

Back lead

Channel leads may exhibit a light of any colour

Photo example

Fixed blue lights are also commonly used to mark the centre of the channel on overhead bridges.

By moving your boat to a position so that both leads are lined up, you will generally be in the centre of the channel.



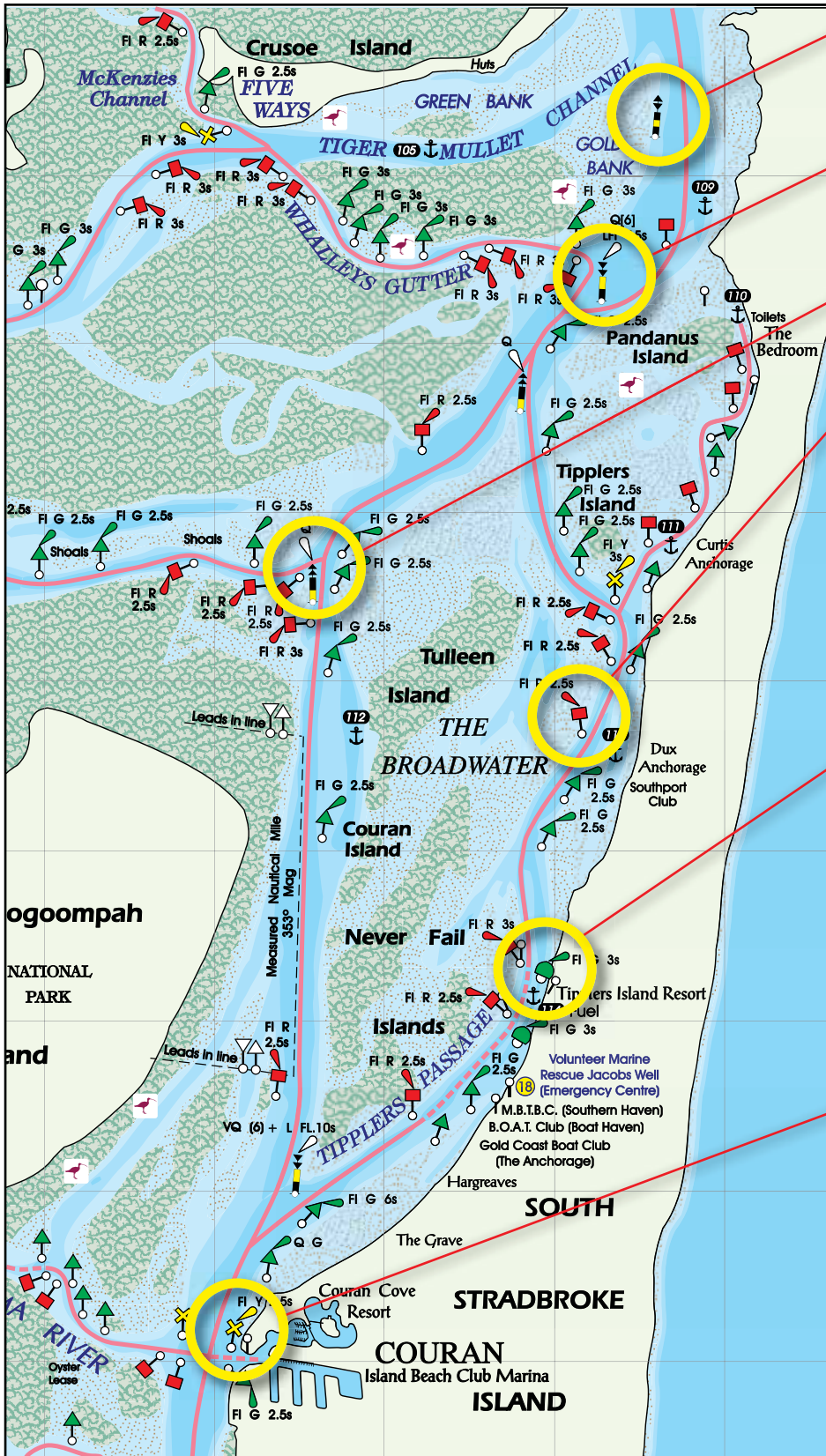
Given leads are usually in larger channels, open them up a little to starboard to keep to the side of the channel. Leads show the centre of the channel which is not consistent with the rule advising boats to travel as far to the starboard side of a channel as is safe and practicable. This is especially important at night.

IALA buoyage system in charts

The buoyage system is a silent traffic conducting system on the waterways 24 hours a day, 7 days a week. Before heading out, particularly on unfamiliar water, it is wise to prepare for your trip by studying relevant maps or charts to determine the best course to a destination, landmarks to look out for and any potential hazards to avoid. This requires a sound knowledge of the symbols used on charts to denote the IALA buoyage system.

The map below is taken from the Maritime Safety Queensland publication the *Beacon to Beacon Directory* and shows a stretch of water on the northern fringe of the Gold Coast. It shows a selection of navigation aids.

Please note, the map has been adapted for illustration purposes.



East cardinal mark: Indicates the end of a shoal and that the safest water is on the eastern side of the mark.

South cardinal mark: Indicates a bend in the channel and that the safest water is on the south side of the mark.

North cardinal mark: Indicates the end of a shoal and the safest water is to the north of the mark.

Port lateral mark: Indicates the navigable channel. When travelling upstream (away from sea) keep on the left-hand side. When travelling downstream, keep on the right-hand side. In this case, the Gold Coast Seaway to the south is regarded as the closest entry point to the sea, so therefore keep the port lateral marker to the left when travelling north.

Starboard lateral mark: Indicates the navigable channel. When travelling upstream (away from sea) keep on the right-hand side. When travelling downstream, keep on the left-hand side. In this case, the Gold Coast Seaway to the south is regarded as the closest entry point to the sea, so therefore keep the starboard lateral marker to the right when travelling north.

Special mark: A special mark can indicate several characteristics. In this case the mark is located at the intersection of two channels—the main channel through the broadwater and the channel leading to Couran Cove Resort. Only by consulting a chart or map can you accurately determine which side of the mark to pass. A special mark can also indicate the presence of a pipeline or groyne.

Directional and sector lights

Directional and sector lights are also installed to assist navigation in inshore waters.

A directional light may show only through a very small arc (less than 60°) and serves a similar purpose to leading lights.

Sector lights normally display arcs of different coloured lights in particular sectors to warn mariners of hazards and advise clear channels.



Advisory signs

Advisory signs are installed to advise on matters of importance to navigational safety including:

- Anchoring is prohibited.
- Submarine cable crossing—anchoring is prohibited within 200 m of submarine cables. If an anchor becomes snagged near one of these signs, it should not be retrieved—cut the anchor line.
- Speed limits.



4.3 Rules of the road

The 'International Regulations for Preventing Collisions at Sea' (commonly referred to as the ColRegs) are the traffic laws of the sea. They give clear indication about passing, approaching, giving way and overtaking to avoid collisions with other boats. They apply equally to all boats afloat.

All boat operators must thoroughly understand and apply the rules in all situations.

Boat operators must do whatever is necessary to avoid a collision. Actions must be clear and deliberate so other operators can see your intentions. Never assume the skipper of another boat will observe the rules—always be prepared to take action to avoid a collision.

Significant penalties apply for failure to observe these rules.

The full text of the ColRegs is found in the Small Ships Training and Operational Manual.

Lookout

A good lookout, through sight and sound, must be kept at all times. Be aware of other boats, especially in bad weather, restricted visibility and in darkness.

Safe speed

Travel at a safe speed at which you can manoeuvre to avoid collisions. This will vary depending on prevailing conditions including visibility, traffic density, proximity to hazards, depth, manoeuvrability and background lighting.

Always keep a safe distance from other boats so you can stop or manoeuvre to avoid any sudden danger. The faster the speed, the greater the safe distance must be.

Assessing risk of collision and taking action

Use all means available to assess whether other boats pose a risk of collision. One early indicator is to see whether the bearing of a closing boat is virtually steady. If it is, a risk of collision exists and early positive action (changing course and/or speed) can be taken to eliminate the risk.

Channels

When navigating in narrow channels, all boats should travel on the starboard side or right hand side of the channel and pass oncoming boats on their port side.

If plenty of distance separates two passing boats, there is no need to deliberately alter course to pass to the right of the other boat. The rule is simply there to remove doubt in the event of a close situation.

Avoid anchoring in channels, especially near markers.

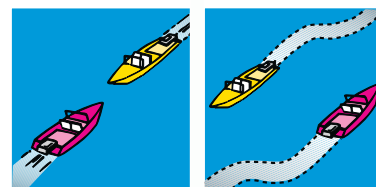
Small boats (including sailing boats) should keep clear of large boats that have limited room to manoeuvre in channels or are constrained by their draught.

Giving way

Power boats

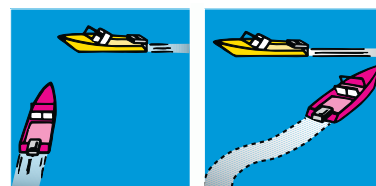
Head on

When meeting head on, both boats are required to alter course to starboard (right), never to the port (left). Any turn should be large enough to be obvious to the other boat.



Crossing

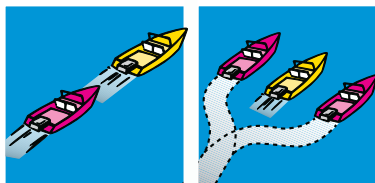
When two boats are crossing, the boat on your right is the **stand-on** vessel. As the **give-way** vessel you should keep clear, alter course or slow down to pass astern of the other boat.



If you are the stand-on vessel, be predictable—keep your course and speed. If the other boat does not give way, you must take appropriate action to avoid a collision; bearing in mind this does not relieve the obligation of the other vessel to take action.

Overtaking

If you are overtaking a boat, you can do so to either side of the boat you wish to pass. However, you must keep well clear of the boat you are overtaking. This applies to both sail and power boats.

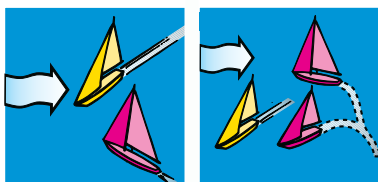


In narrow channels you must be particularly careful when overtaking. In all instances, make sure you do not cut in front of the boat you have overtaken.

Sailing boats

Wind on different sides

When each sailing boat has the wind on a different side, the boat with wind on the port side shall keep out of the way of the other.



If a sailing boat with the wind on port side sees a sailing boat to windward and cannot determine with certainty whether the other sailing boat has the wind on the port or starboard side, it must keep out of the way.

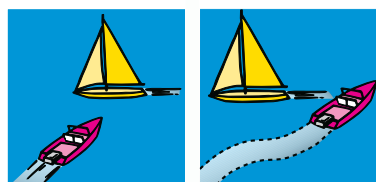
Wind on the same sides

When both sailing boats have the wind on the same side, the boat to windward shall keep out of the way of the boat to leeward.

NOTE: The windward side is the side opposite to that on which the mainsail is carried or, in the case of a square rigged boat, the side opposite to that on which the largest fore and aft sail is carried.

Power and sail

A power boat generally gives way to sail unless the sailing boat is in the process of overtaking it.



However, don't expect large, less manoeuvrable boats under power to give way. All small craft should give large boats a wide berth.

Special rights

Power-driven boats must give way to:

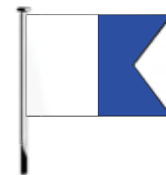
- sailing boats (except if they are large with limited manoeuvrability)
- boats engaged in commercial fishing and trawling
- large boats constrained by their draught in channels

- boats restricted in their ability to manoeuvre because of their work
- boats unable to manoeuvre because of exceptional circumstances (not under command).

These boats are recognisable during the day by their day marks and at night by their lights.

Diver below

This flag indicates the boat has a diver below. It should be placed to ensure all-round visibility. Reduce speed and remember you must keep at least 30 m from the flag.



During night diving, a boat must show the international signal for a 'vessel restricted in its ability to manoeuvre'. These are three lights shown here.



Restricted visibility

Use common sense and slow your boat or stop, and be ready to take immediate action. Be extremely cautious when operating in restricted visibility.

4.4 Sound signals

Most recreational boats (under 12 m) do not use sound signals; however, larger boats use them. Be aware of signals and what action to take when sounded. Sound signals may be accompanied by light signals. The more common signals used are:

- one short blast—I am altering course to starboard (right)
- two short blasts—I am altering course to port (left)
- three short blasts—I am operating engines astern (reversing or stopping)
- five (or more) short blasts—I am alerting the other boat—I am unsure of your intentions.

These signals may be supplemented by light signals.

All boats should use sound fog signals in restricted visibility to alert others of their position. The most common fog signals, sounded at intervals not exceeding two minutes, include:

- one long blast—power boat under way, making way
- two long blasts—power boat under way, not making way through water
- one long, two short blasts—sailing, fishing, working boats making way.

If necessary to attract the attention of another boat use any light or sound signals which cannot be taken for any signal authorised elsewhere. Alternatively a white hand flare or a beam of light directed at the danger may be used. Do not shine a light directly into the eyes of another skipper.

4.5 Navigation lights

By law, boats operating from sunset to sunrise, whether at anchor or under way, must display the correct lighting. A boat is 'under way' when it is not at anchor, made fast to shore or aground.

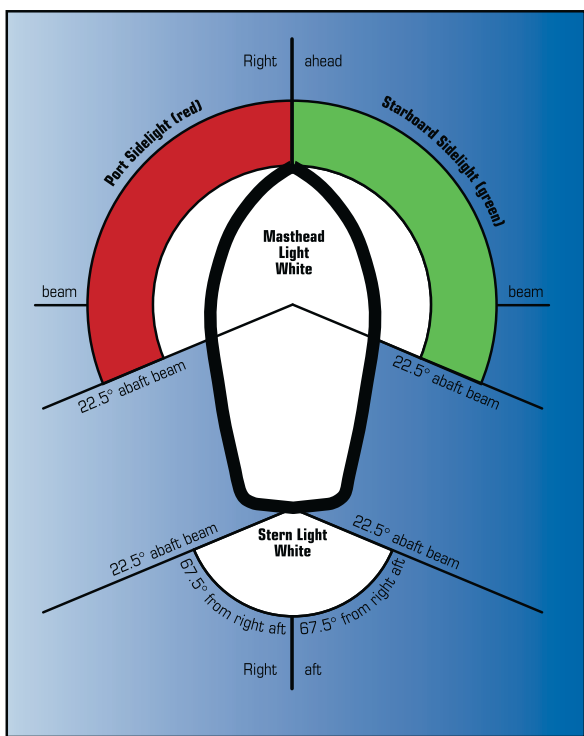
Navigation lights must also be used in daylight hours during periods of restricted visibility or in other circumstances when it is deemed necessary.

Lights must be placed and displayed appropriate to the size and class of your boat. These lights tell other boat operators about the boat and what it is doing—whether it is at anchor, under sail or motoring.

Navigation lights must be positioned so they are not obscured by the boat's superstructure or interfered with by the deck lights. They should be fitted by the manufacturer or an authorised person.

The masthead and/or all round white light must be fitted (if practical) on the centre line (bow to stern) of the boat.

When operating at night, carry replacement bulbs.

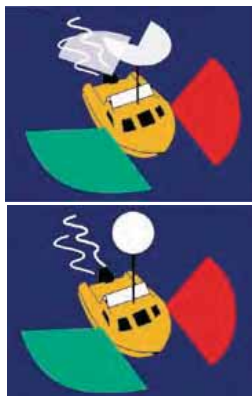


Minimum required lights

Boats under way

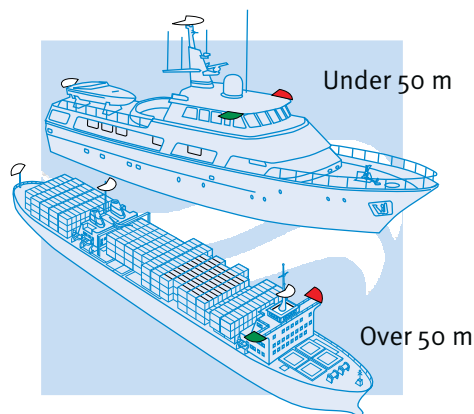
Power boats

- Less than 7 m in length with a maximum speed not exceeding 7 kn—a white light visible all round and, if possible, separate or combined sidelights.
- Less than 12 m in length:
 - a) separate or combined sidelights, a masthead light and a stern light or
 - b) separate or combined sidelights and an all round white light.
- Power boats more than 12 m in length but less than 20 m in length:
 - a) a masthead light, separate sidelights and stern light or
 - b) a masthead light, combined sidelights and stern light.



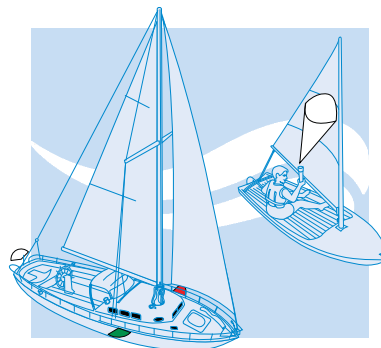
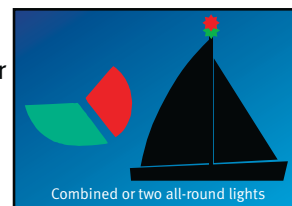
Note:

- Larger boats may have two masthead lights—the higher masthead light towards the stern.
- Boats drifting are still 'under way' and must show the same navigation lights as if they were still making way.



Sailing boats

- While being motor driven (even with sails up)—lights applicable to power-driven boats.
- Less than 7 m in length—the lights required for sailing boats over 7 m in length. If not, a torch or lantern showing a white light ready to display in order to avoid a collision.
- More than 7 m in length and less than 20 m in length:
 - a) combined lantern at or near the top of the mast that incorporates sidelights and stern light or
 - b) separate sidelights and stern light.
- More than 20 m in length—sidelights and stern light and may carry the optional red and green all round lights (they must not carry a combined lantern).
- Any length, which is fitted with sidelights and a stern light (but not a combined lantern) may, in addition, carry two all round lights in a vertical line at or near the top of the mast. The upper light shall be red and lower green.



Non-powered boats

Boats being rowed—torch or lantern showing a white light ready to display in order to avoid a collision.

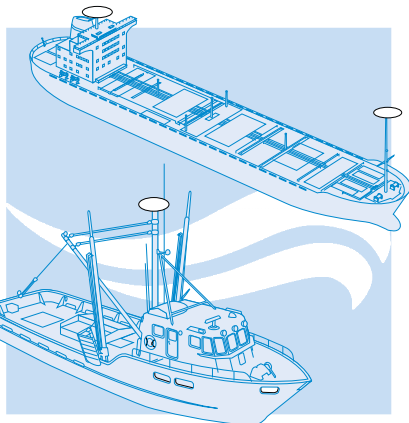
Ships engaged in rowing activities (training or competition) on the Brisbane River need to be fitted with an all-round, white, flashing light if they operate between the hours of sunset and sunrise.

Boats at anchor

Less than 50 m in length at anchor—an all round white light placed where it may best be seen.

Anchor lights must always be shown from sunset to sunrise. If you are at anchor or in a busy area, then show additional lights (not navigation lights) to ensure you are seen and keep a good watch.

Boats over 50 m should have two anchor lights—the higher one towards the bow.

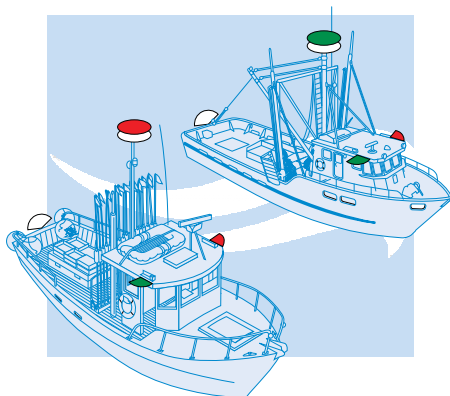


Boats to avoid

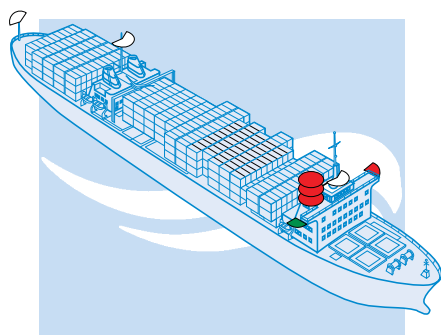
There are many other combinations of lights (used at night) and daymarks (used during the day) indicating the activity that the boat is engaged in, like fishing, dredging, not under command. The table below summarises the most common types.

A simple rule of thumb for a small power boat is to stay clear of any boats exhibiting additional lights.

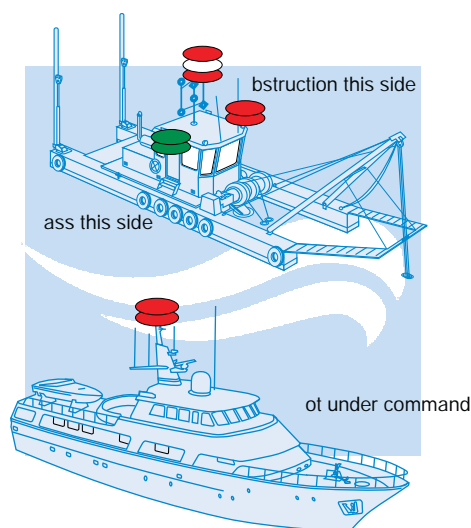
Some of the more important boats to keep clear of include:



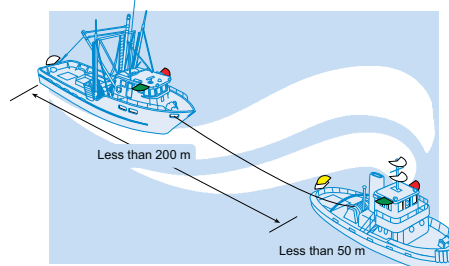
- boats engaged in commercial fishing and trawling



- large boats constrained by their draught in channels



- boats restricted in their ability to manoeuvre because of their work, or because of exceptional circumstances (not under command)



- boats towing another boat.

Cross-river vehicular ferries using wires or chains can be a particular hazard at night. Slow down to 6 knots or less when within 100 m of a ferry and sound a long blast before passing astern. Preferably wait until it has reached the shore to avoid becoming entangled in the wires. Generally, in Queensland, the ferry will display a flashing red light while cables obstruct the passage.

Navigation at night

Navigating your recreational boat at night can be quite an enjoyable experience. It can also be very dangerous if not approached properly.

Night navigation requires skill and concentration and should not be taken lightly. Perceptions change on the water after sunset. While on your boat at night, your depth perception decreases and distances and sizes of shores and navigational objects can look different. Waves are harder to see and judge and reflections in your boat's windshield can be confusing. Your night vision can be drastically reduced by bridge and city lights. All of these factors should be taken into consideration when navigating your boat at night.

Before navigating at night for the first time, it is a good practice to take someone with you that has night navigation experience. Always ensure that all your electronics are in good working condition and invest in a good quality spotlight. Remember that landmarks and navigational aids are going to look different at night and you will need your spotlight to double check buoy colours and numbers while underway. Always make sure that all of your navigation lights are operating and are not blocked from view by flags or other obstructions attached to your vessel.

When using your spotlight, you should take whatever steps you can to prevent from shining your spotlight into the wheelhouse of other boats. You can easily ruin another boater's night vision with your spotlight. Similarly, be prepared to look away from other vessel's spotlights should that skipper shine his light into your wheelhouse. Only turn your spotlight on for the amount of time you need it to light what you are looking at. Never leave your spotlight on continuously while underway as it can distract boaters that are a fair distance away.

When using your electronics, it is a good idea to turn down the brilliancy of their backlights. Your eyes will not have to adjust as drastically between looking at the waters ahead of you and looking at your electronics if you keep them as dim as possible. Also, remember, that after a few hours of looking at an electronic chart or GPS screen, you can very easily become fatigued and develop a headache. Don't hesitate to take a break and let someone else steer occasionally to help cut down on fatigue.

Unless you are involved in an emergency, there is no reason to navigate at full speed in the darkness. Navigate with caution and give yourself more time to react at night. Keep a very sharp lookout for unlit buoys and obstructions. All these objects can appear much smaller at night and can be dangerous and cause damage to you and or your boat.

When navigating in the vicinity of other boats in the dark, watch all the surrounding boats closely to ensure that they are not on a collision course with you. If a nearby boat appears to be on a collision course, take appropriate action, slow down or stop and if possible try to make yourself more visible. Turning your spotlight on without shining it directly on a nearby boater more often than not attracts just enough attention to alert the other boater of your presence. Remember; try not to hamper the other boater's night vision.

Use extra diligence in ensuring that your passengers and crew do not fall overboard at night. Locating a person in the water at night is very difficult and your chances of recovering that person are very slim. Keep less experienced passengers seated and don't let anyone wander onto open decks alone or unnecessarily. Always wear your life jackets and insist that everyone on-board your boat does as well.

All of these factors should be kept in mind when navigating at night. Remember that night navigation requires considerable focus and concentration and should not be taken lightly. Learning to navigate your boat safely at night can add a whole world of enjoyment to your boating career. Failure to learn proper night navigation techniques, however, can quickly land you in the middle of a very bad situation.

Vessel	Day shapes	'Signature lights'
Not under command *	●	●● Replaces masthead light(s)
Restricted in ability to manoeuvre *	◆	●●●
Constrained by draft	▬	●●●
Engaged in fishing *	▲	●●●
Engaged in trawling *	▲	●●●
Sailing		No masthead light
Power-driven		Masthead light
* displays sidelights and stern light only when making way		
Towing	◆	● * ●● ** Up to 200 m ● * ●● ** Over 200 m
* replaces one masthead light (same arcs as masthead) ** stern		
At anchor	●	●
Aground	●●●	●●●

4.6 Navigating

Safe navigation is the most fundamental element of safe seamanship. Understanding the buoyage system and collision regulations are essential when travelling in complex and busy waterways. At sea, where there are no visual indicators, it is easy to lose all sense of direction. Navigation equipment like charts, compass, radar and satellite position systems are needed to keep safe and on course, particularly in restricted visibility.

At the most basic, a chart, watch and compass will enable you to plot a course. By noting the compass direction while heading out, you can tell the distance travelled by the speed of the boat and the time taken—a boat travelling at one knot will take one hour to travel one nautical mile.

More detailed instruction in navigation is beyond the scope of the BoatSafe course. Enquire at your local Coast Guard, Volunteer Marine Rescue or TAFE if you want to develop higher level knowledge and skills in this area.

Compass

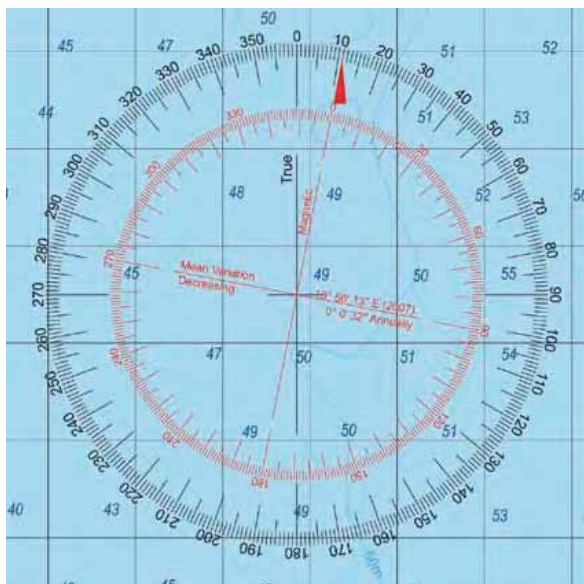
A compass is a must on every boat. There are two types—a magnetic compass that points to the magnetic north and the gyrocompass which points to the true north. Most recreational boaters will have a magnetic compass which will have a magnetic variation. This is an error caused by the earth's magnetic field not being lined up with the true north (the axis of the earth's rotation). Magnetic variation may be east or west and may change from year to year. The change to be



applied may be calculated from information also supplied in the compass roses or isogonal lines. For example:

Magnetic variation (1995)	9° 43' E
9 years @2.5' (increasing)	23'+
Magnetic variation (2004)	10° 06E

Magnetic variation in Queensland varies from about 5° E in the Torres Strait to about 12° E at Point Danger.



The compass rose shown above demonstrates the variation between true north (shown as 'o' on black scale) and magnetic north for 2007 (shown with red arrow).

Global Positioning Systems (GPSs)

GPSs are commonly found on recreational boats, and while a good navigation aid, they should not be relied upon (like any other electronic equipment dependent on battery power). A GPS is able to provide a latitude and longitude, updated almost continuously. This can then be plotted on a chart and should be verified with a compass.



There have been a number of navigational incidents, where boats have run aground and into obstructions, attributed to people using GPS data alone. Some positions given by GPS will need to be adjusted due to differing datum (see cautionary advice on charts). As with all fixes, the GPS position should be checked against something else.

A GPS is not a substitute for sound watchkeeping and navigational practices and should be used only in conjunction with other aids to navigation.

Consider the following when using GPS and/or chart plotters:

- Masters should still maintain a proper lookout while the vessel is underway to identify any approaching hazards.

- Zoom to the largest available accurate chart scale. If the zoom recommended exceeds the accuracy scale limit then a warning message is displayed on the screen.
- It is advisable to switch the unit on and select the correct chart datum before departing. GPS units require time to initialize, and the master needs time to assess the accuracy of the position information prior to starting the voyage.
- The accuracy of GPS units can be compromised by power failures or poor electrical connections.
- Always ensure your electronic charts are updated with supplier upgrades.
- When going to a waypoint in a straight line, check what is in between your boat's initial location and the waypoint.

Before using your new GPS, you are obligated to familiarize yourself with the strengths and weaknesses of the equipment. As a starting point, it is recommended that GPS users undertake navigation and GPS courses currently offered by both Volunteer Marine Rescue (VMR) and the Australian Volunteer Coast Guard.

4.7 Local rules



In many areas of Queensland, our rivers, bays and harbours are under considerable pressure from high use by recreational boating enthusiasts. This handbook outlines most rules and regulations governing waterway activities across the state, but some local rules may apply to sewage, PWC use, speed limits, anchoring and other activities. Information about local rules can be obtained from local maritime authorities or signage. The Beacon to Beacon Directory (from the 7th issue) also provides this information.

Most importantly, there is no substitute for care, courtesy and commonsense. Be considerate to other members of the community—people on shore as well as those on the water.

Speed limits

Many boating areas have maximum speed limits which are enforceable. For safety reasons, it may be necessary to stay well below these limits depending on the conditions.

Before boating in unfamiliar areas find out if there are any speed restrictions through the local marine authority and obey speed restriction signs. The following restrictions apply to boats other than PWCs throughout Queensland whether signs are present or not. For speed limits for PWC see page 91.



6 knots:

- within 30 m of
 - boats anchored, moored to the shore or aground
 - a jetty, wharf, pontoon or boat ramp
- within 30 m of people in the water
- in harbours and marinas.

Boats must stay at least 30 m off a float or structure showing a diver below, Code A flag.



Learn how to judge distance, for example 30 m is ten times longer than a 3 m boat and five times longer than a 6 m boat.

Even at slow speeds your boat will create a wash. Look behind at your wash and be aware of the effect this can have on other boats, people in the water, or the shore. Travelling at the speed shown on a speed restriction sign does not guarantee you are not creating excessive wash.

Mooring areas

Special mooring areas are located around Queensland with some marked on boating safety charts (shown below as 'Small Craft Anchorage'). Be aware of moored boats at all times, especially at night. When navigating near, in or through a mooring area drive slowly and keep wash to a minimum and keep a lookout for people in the water, small dinghies, and trailing ropes.



4.8 Bar crossings

Queensland has many dangerous bars where crossings should only be attempted by experienced boaters. Local knowledge, experience, the right kind of boat and good weather and boating conditions are critical factors for a safe crossing.

It is compulsory for all people to wear a PFD when crossing designated coastal bars in open boats less than 4.8 m.

Before crossing a bar:

- observe the wave patterns and conditions
- learn what you can from local operators or volunteer marine rescue groups
- find out if any leads or beacons are in place to assist with navigation
- cross with an experienced operator before attempting it by yourself
- ensure the boat is seaworthy and capable of taking impact from waves.



When this is done and you decide to cross the bar, the following precautions should be taken:

- prepare the boat by
 - checking the steering, bilge, hatches and drains
 - check all lifesaving equipment and ensure it is ready for an emergency
 - clear decks and secure all lines
 - secure movable items
 - ensure watertight integrity
 - check and test the engines, steering and controls
 - ensure the engines are drawing fuel from a full tank
- check the tides—best one hour before high and worst in mid-ebb
- get an up to date weather report for the time of departure and expected time of return
- report your intentions by radio to a volunteer marine rescue group and advise once you are clear of the bar
- have all people on board wear a personal flotation device.

Do not attempt a crossing in heavy swell and strong winds or on a run-out tide. Be prepared to cancel or delay the crossing.



Going out

The skill of crossing a bar is to know the best water by judging the wave pattern, crossing at the calmest point and manoeuvring the boat around breaking waves. Look for the deepest water or channel; going aground on a bar can be disastrous.

Tactics may vary between displacement boats (slow) and high-speed planing boats. Be patient and watch the sets of swells before choosing the best time to go. Once committed, keep going—attempting to turn around in front of an incoming wave can be disastrous. Do not hit the waves at high speed; take them as close to head on as possible. Some bars have waves breaking across the whole entrance and finding a way through may be difficult. Be prepared to take a wave head on and take water over the bow if you find yourself in a position where there is no alternative.

The boat must meet the incoming wave energy. Do not hit waves at high speed and do not allow waves to break onto your boat.

Some general principles may include:

- look for lulls and select a line of least wave activity
- where possible, cross on an incoming tide when the wave is running with the tide
- keep the boat generally bow on as the waves approach and do not let the boat turn sideways to a breaking wave
- head up into the waves and bear away quickly on their backs
- accelerate where possible, but avoid getting airborne
- head for saddles which occur between peaking waves about to break
- navigate quickly clear of the bar
- take back leads and marks to locate the entrance for the return trip.

Coming in

When coming in, speed boats (capable of at least 18 kn) should travel at the same speed as the waves. The aim is to travel in on the back of a wave, staying ahead of the waves breaking behind the boat. Again, watch for patterns and deeper areas:

- approaching from the sea, increase power to maintain speed within the sets of the waves
- position the boat on the back of the wave—do not surf down the face of the wave
- adjust the boat's speed to match the speed of the waves but do not attempt to overtake the waves.

Displacement boats may have to come in very slowly to avoid surfing and broaching-to (getting caught side on to a wave). In extreme conditions, the very difficult but vital decision not to come in may have to be made. It may well be safer to stand off in deeper water until conditions improve or to seek alternative shelter.

4.9 Navigating near shipping channels

Interaction between large ships and small craft is rapidly increasing in Queensland coast waters.

For example, trading through the Port of Brisbane is growing with an expected 7000 shipping movements annually. That's almost one every hour.

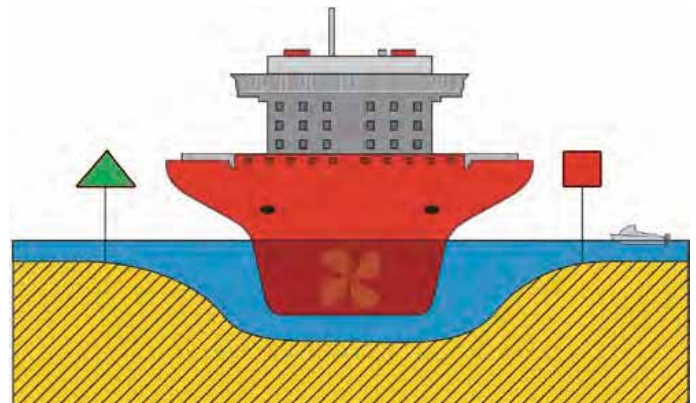
Ships can approach quickly and silently. It can take only 15 minutes from the time a ship is spotted on the horizon by a small boat to the potential time of impact.

At night, judgement of distance over water is more difficult. Ships do not have brakes and can take up to two nautical miles (about 37 football field lengths) to come to a complete stop.

Where possible, keep clear of ship navigation areas (major shipping routes, pilot boarding grounds, channels, swing basins and berths).

If you must navigate in a shipping channel, you must keep to the outer edge of that channel and must maintain an all-round visual watch including monitoring VHF radio channel 12/16 for the local traffic movement information.

If you need to cross a channel, always transit at right angles directly across a channel, behind a large ship, when it is clear and safe to travel.



Large ships at maximum draft have minimal under keel clearance and can only manoeuvre within the designated shipping channel. Please ensure to give these ships adequate room to navigate.



Large ships with the bridge at the stern will have a large blind spot for several hundred metres in front of the bow. The blind spot extends much further forward if deck cargo or containers are carried.

When in a swing basin or along side a berth, ships are accompanied by tugs and other vessels. Keep well clear.

Between sunset and sunrise, including periods of restricted daytime visibility, always show correct navigation lights when at anchor or under way.

Despite the fact that they attract fish, avoid anchoring or tying-up near a navigation aid (buoy or channel marker) in a designated shipping lane.

4.10 Waterskiing rules

Waterskiing involves the towing of a person or persons behind a boat (on skis, bare feet, inflatable toys, boards or a parasail). The owner or master is responsible for ensuring that the waterway is safe for skiing. Check for sufficient depth of water, width to make turns safely and any hazards.

Know the following waterski rules:

- When waterskiing stay at least 30 m away from people in the water, anchored or moored ships, boat ramps, jetties and pontoons. Travelling too close to boat ramps can impede the safe launch and recovery of other boats. Keep as far as possible from banks and shorelines.
- When skiing in rivers and creeks boats should travel in an anticlockwise pattern. In a few locations, local customs and conditions may dictate the direction of travel—always check before skiing.

Suggested water-ski signals



1. Start—nod the head.



2. Faster—open palm facing up motion upwards or nod head if both hands are in use.



3. Slower—open palm facing down motion downwards or shake head if both hands are in use.



5. Speed OK—arm upraised with thumb and forefinger making an 'O'—OK signal.



4. Speed required—use the number of fingers for km required. Therefore 23—first two fingers then three fingers.



6. Turns—palm vertical, curving motion of hand in direction required.



7. Whip off—point in direction and then give quick circular motions with hand.



8. Stop—hand up with fingers outstretched policeman style.



9. Back to dock—point, with downward swing of the arm.



10. Cut motor—finger drawn across throat in cutting motion.



11. OK after fall—after a fall, skier should clasp hands over head if unhurt, until seen by the boat driver.



- Skiers must wear a PFD Type 2 or 3, or level 50 or level 50 special purpose, or a wetsuit which has built-in buoyancy.
- A capable observer who is 12 years or older must be on board and should be watching the skier at all times.
- Obey the rules of the road at sea at all times.
- The operator of the towing boat must hold a valid marine licence.
- The operator must keep a proper lookout at all times and should not be watching the skier.
- The tip of the ski should be showing above the water before the towing boat is under way.
- The observer has to relay any signals from the skier to the operator and should alert the operator as soon as they see the skier fall.
- After a fall, a skier should clasp hands over their head until seen by the towing boat operator. Immediate action must be taken by the operator and observer if there is no signal from the fallen skier.
- A fallen skier getting into a boat should leave their skis in the water and swim towards the boat.
- The operator should stop the engine a safe distance away from the skier before collecting the skier.
- Skiers should enter a boat over the stern whenever possible.

4.11 Alcohol and drug obligations

Have a sensible attitude to alcohol on the water. The same alcohol limit, under 0.05, applies on boats as it does on the road. Breath testing may be conducted by the Queensland Water Police on the water, at boat ramps and in marinas as part of routine boat checks.

The master is responsible for the safe handling of the boat even if another person is actually driving the boat. It is therefore, the master's responsibility to stay below the 0.05 limit at all times and to ensure that any person driving the boat is also under the limit.

There are heavy penalties for persons convicted of operating the boat while under the influence of alcohol or a drug, ranging from monetary penalties to imprisonment and the marine driver's licence may be suspended or cancelled.

The signals above are suggestions only - organise between yourselves what you are going to use.

A master may be convicted of being in charge of a boat under the influence of liquor or a drug even though someone else is actually driving the boat—just like an instructor would be liable if under the influence while the driver, on a learner’s permit, is sober. This emphasises that the master is at all times responsible for the safety of the boat and all people on board.

Being under the influence of a drug does not refer only to illegal substances. Prescription medications may also pose problems, particularly if mixed with even a small amount of alcohol. Seasickness preventatives, hayfever and other allergy preparations can induce drowsiness and make you easily confused. Always check with a doctor or your pharmacist about the possible side effects of any medications or preparations you are taking before going boating.

The effects of alcohol are enhanced while on the water due to the sun, wind, waves and constant motion. It can erode sense of balance, fade vision, impair judgement, and adversely affect coordination, all of which reduce ability to safely handle a boat. Reflexes and response times to emergencies are slowed and swimming ability deteriorates considerably. If in the water, body heat is lost much faster and exhaustion, vomiting and choking are more prevalent.

4.12 Enforcement officers

Maritime Safety Queensland, Queensland Boating and Fisheries Patrol and Water Police enforce marine safety regulations. They regularly check commercial and recreational boat users for licences, registration, safety equipment and safe behaviour on the water.

The Water Police are responsible for crime prevention on the water and facilitate search and rescue activities in conjunction with the National Rescue and Coordination Centre in Canberra.

Note: all noise complaints must be directed to the Department of Environment and Heritage Protection.

All vessel-sourced marine pollution should be reported to Maritime Safety Queensland. Contact numbers are listed on page 95.



4.13 Marine incident reporting

All marine incidents must be reported to a Shipping inspector within 48 hours by completing and lodging the approved ‘marine incident report’ form.

Reportable incidents include:

- the loss of a person from a boat
- the death of, or grievous bodily harm to, a person caused by a boat’s operations
- the loss or presumed loss or abandonment of a boat
- a collision with a boat
- the stranding of a boat
- material damage to a boat
- material damage caused by a boat’s operations
- danger to a person caused by a boat’s operations
- danger of serious damage to a boat
- danger of serious damage to a structure caused by a boat’s operations.



Common marine incidents include collisions with other boats, buoys, jetties and pontoons, fires, falls within a boat and persons overboard.

Incidents involving injuries to people must always be reported even if the boat does not sustain any material damage.

If in doubt about reporting the incident, contact a shipping inspector (Water Police, Queensland Boating and Fisheries Patrol or Marine Officers) for clarification.

Marine incident report forms are available from Maritime Safety Queensland, enforcement agencies and online at <www.msq.qld.gov.au>.

Why reporting is important

The reporting of marine incidents is not only a statutory requirement, it is also vital to Maritime Safety Queensland. The information collected assists in the development of safety standards, education, and on-water compliance programs that benefit all waterways users.

In addition, reporting a marine incident may assist you if you decide to make insurance claims on any damage. Most insurance companies will not honour claims if the marine incident has not been officially reported. They may also require that you provide them with a copy of the lodged marine incident report form.

How to report marine incidents

A marine incident must be reported to a shipping inspector within 48 hours of the incident, unless you have a reasonable excuse for not doing so within this timeframe.

Shipping inspectors include Marine Officers (located at Maritime Safety Queensland offices and bases), Queensland Water Police officers and Queensland Boating and Fisheries Patrol officers.

The report must be made on the approved form (marine incident report form F3071). These forms are available from shipping inspectors, Department of Transport and Main Roads customer service centres or the Maritime Safety Queensland website.

This form is used to report all incidents, no matter what type of ship (commercial or recreational) is involved.

The form may be completed with the assistance of a shipping inspector to ensure the information is accurate, unbiased and as reliable as possible. It is important that the form is filled in completely, with the incident described in as much detail as possible. The shipping inspector who receives the form will check to ensure it has been correctly completed in full detail.

If the initial report is not made in the approved form, the owner or master must make a further report to a shipping inspector in the approved form as soon as possible. The master would normally report a marine incident but the owner would report if the master, for some justifiable reason, was not able to make the report. Each marine incident reported will be investigated by a shipping inspector and the results fed back to the person reporting the incident.

The investigation may be as simple as a thorough examination of the marine incident report form and a decision that no further action is required, or it may require an investigation complete with interviews, statements, surveyors' reports and the preparation of a prosecution brief.

It is an offence not to report a marine incident and can result in a fine of up to \$4,000 for an individual and \$20,000 for a company.



Incidents involving more than one boat

If you are involved in an incident involving more than one boat it is a legal requirement (in addition to reporting) to:

- render any possible assistance without endangering passengers or crew
- stay at the scene of the incident to ensure the safety of all involved
- give details of the owner of the boat to the operator of any other boat involved
- assist any injured person(s)
- assist the owner with any damaged property.

Assisting persons in distress

All boaters have a legal obligation to assist persons in distress unless:

- they are unable
- assistance is not required
- the circumstances are unreasonable (unsafe) for the boat.

If an accident occurs nearby, it is a legal requirement to assist where possible, provided it does not seriously endanger your boat or passengers.

4.14 Pollution

Small commercial and recreational boats conducting everyday activities like refuelling, fishing or emptying bilges cause much of the pollution we see in waters, harbours and marinas.

Sensible environmental practices when using and maintaining our boats will go a long way to preserving the aquatic environment for future generations.



The Department of Environment and Heritage Protection (EHP) is the lead agency for environmental management within Queensland, however, Maritime Safety Queensland is responsible under the *Transport Operations (Marine Pollution) Act 1995*, for managing the prevention and minimisation of marine pollution from ships, out to three nautical miles from the territorial sea baseline (Queensland coastal waters).

Waters beyond these limits are subject to complementary Australian legislation. The penalties for breaking these regulations can be up to \$350,000 for an individual and \$1,750,000 for companies.

Garbage

Garbage includes all kinds of victual, domestic and operational waste, including plastics, generated during the normal operation of the boat. Marine animals and sea birds often mistake plastic material for food and often end up dying a slow and painful death from starvation or strangulation. Garbage generated on board must be disposed of ashore. Garbage does not include fresh fish and parts of fresh fish, or the release of small amounts of food wastes for the special purpose of fish feeding.

The general rule is no discharge of garbage overboard. It should be stowed on board and disposed of responsibly once you are back on shore.

No plastics (synthetic ropes, fishing lines, nets or bags) should ever be thrown overboard.

Some tips for minimising pollution from garbage include:



- Avoid taking plastics on board (use crockery or disposable plates and cutlery).
- Carry food in reusable airtight containers and leave plastic wrappers at home.
- Store garbage in a strong garbage bag or container.
- Don't throw tangled fishing line overboard and pick up any discarded line you see.
- Don't throw anything overboard, including cigarette butts.

Oil and chemicals

Unfortunately some boat operators deliberately or accidentally discharge oil and chemicals into our waterways through refuelling, boat maintenance and bilge discharges.

Owners and operators must ensure no oil or chemicals are discharged from the ship into the sea. They are toxic to marine and human life.

Oil products on boats include:

- petrol
- diesel

- two-stroke oil
- motor oil
- gearbox oil
- hydraulic oil.

Chemical products on boats include:

- cooling system additives
- cleaning agents
- degreasers
- acids and paints.

All boat operators need to manage the use and disposal of oil and chemicals kept on board properly.

Some suggestions to reduce accidental pollution include:

- Always check the capacity of fuel tanks before refuelling.
- When refuelling, insert the nozzle into the filler before starting the pump. Always turn the pump off and ensure that the flow has stopped before removing the nozzle.
- Watch the breathers for signs of blow-back or overflow.
- Do not overfill your fuel tank (leave 2% for expansion).
- If you overfill your fuel tank, wipe the spill up with a rag. Do not hose the fuel into the water.
- Plug scuppers and block freeing ports during refuelling.
- Fit bilge filters.
- Always supervise the operation of bilge pumps. Keep an eye on the discharge when pumping to make sure no oil or chemicals get pumped out with the water.
- Review the installation of your bilge pump's float switch to stop oil accidentally discharging with bilge water.
- If you use degreasers and detergents, including biodegradable products to clean your bilges, make sure the residue is not discharged into waterways.
- Use absorbents to clean waste oil from your bilge and always dispose of the absorbents appropriately.
- Make sure your boat and its engines are in good working order—regularly check seals, gaskets, hoses and connections for leaks and drips.
- Repair oil and fuel leaks when first noticed.
- For everyday deck scrubbing use clean water—use chemicals only for severe staining.
- Read product information before you decide on any chemical cleaner. If it is toxic to humans, it is not good for marine life either.
- Use phosphate-free biodegradable detergents.
- Wipe cooking utensils and plates clean with a paper towel before washing up.
- Carry absorbent material on board to clean up any accidental spills.
- When possible, remove your boat from the water and clean where debris can be captured and disposed of properly.
- When your boat is being scraped or sanded, use a vacuum sander or place a drop sheet underneath to catch paint scrapings and dust. Dispose of these residues carefully.

- When painting your boat's hull, use the right paint for the job and be sure to follow the application instructions carefully. Check with a marine painting professional to determine if there are alternatives and choose the most environmentally friendly product(s).

Sewage

The discharge of sewage from boats reduces water quality, poses a human health risk and decreases visual aesthetics of waterways. The table on page 73 outlines current discharge restrictions.

For further information on sewage management including maps showing permitted and prohibited discharge areas, please refer to the Maritime Safety Queensland website.

Boat owners and operators must adopt sewage management measures if sewage is likely to be generated on board. This could be as simple as using a portable toilet, installing a holding tank or a sewage treatment system on board your boat.

Please refer to Transport Operations (Marine Pollution) Regulation 2008 - Schedule 3, Section 44.

Noise

Be considerate about noise as it is amplified on the water, making engine noise and music appear louder. For the enjoyment of everyone, noise should not be offensive.

Factors to be taken into account include:

- character of the noise
- quality of the noise
- noise level
- effect the noise has on activities
- time of the noise event
- waterside land use
- number of people affected.

Noise also disturbs wildlife. Care should be taken to reduce noise in the vicinity of waterbirds and other animals.

As a general guideline, for recreational ships (including personal watercraft), the maximum noise level for engines is 85 dB(A) at 30 m. Complaints regarding noise should be directed to the Department of Environment and Heritage Protection or the respective local government authority (Council).

Reporting

All marine pollution incidents must be reported to the local Regional Harbour Master's office detailing:

- when and where the pollution occurred
- what type of substance was discharged
- the extent of the pollution
- the name, size and type of boat
- any other relevant information.

4. 15 Marine animals and habitats

Take care when anchoring. Sub-marine habitats, such as seagrass and corals, can be severely damaged by anchors. Seagrass beds are important fish habitats and help bind the sea floor and improve water quality.

Note the following:

- try to anchor in sand away from coral and seagrass
- use a reef pick with heavy plastic tubing over the anchor chain
- motor up when hauling in the anchor.

Where there are no approved moorings, anchoring limits may apply in some marine park areas to prevent damage to seagrass, coral and bottom-dwelling animals and to manage pollution and boat numbers.

Marine parks may also encompass areas to protect endangered and vulnerable animals (for example turtles and dugongs) from boat injuries and disturbance.



When boating in these areas:

- go slow in a non-planing or displacement mode
- operate your boat in a way to avoid hitting a turtle or a dugong and maintain a good lookout
- do not drive your boat across shallow, weedy areas, as boat propellers may damage seagrass.

Recreational boaters should not approach closer than 100m to whales or dolphins. When within 300 m of a whale or dolphin you should:

- maintain a constant speed not exceeding five knots
- avoid sudden changes in direction
- not approach a whale or dolphin head on
- not be in the path of a whale or dolphin
- not separate a whale or dolphin from its group
- not come between a mother and her young.

Heritage wrecks

Any ship that sank more than 75 years ago is protected by state and commonwealth regulations. Protected zones have been declared around some particularly fragile and historic shipwrecks and these are shown on nautical charts. It is an offence to enter a protected zone.

It is also an offence to damage, disturb or interfere with any historic shipwreck. This includes anchoring on it or removing objects from the wreck.

Transfer of exotic weeds

Introduced and trans-located species can have a devastating effect on the local marine eco-system. Prevent the spread of exotic aquatic weeds such as caulerpa taxifolia. Remove all plant fragments from trailers, propellers, anchors, ropes, chains and fishing tackle. Collect all pieces in a plastic bag, seal it and put the bag in a bin.

	SHIP-SOURCED SEWAGE
Prohibited discharge	<p>Prohibited discharge waters</p> <p>No discharge of treated and untreated sewage in the following waters:</p> <ul style="list-style-type: none"> • a boat harbour • a canal • a marina • a designated area including: <ul style="list-style-type: none"> – a marine national park zone described in the Marine Parks (Moreton Bay) Zoning Plan 2008 – a marine national park zone, under the Marine Parks (Great Sandy) Zoning Plan 2006, located near Burkitt’s Reef, Hoffman’s Rocks or Barolin Rock, adjacent to the Woongarra Coast – an area within the Great Barrier Reef Coast Marine Park mentioned in schedule 8A of the Transport Operations (Marine Pollution) Regulation 2008. <p>Declared ships (class 1 commercially registered passenger carrying ships) fitted with a fixed toilet must have a sewage holding device if operating in areas where discharge is not permitted.</p>
Untreated sewage	<p>Nil discharge waters:</p> <p>In those waterways where discharge of sewage is permitted, sewage discharged from all boats with a fixed toilet must first pass through a macerator.</p> <p>Smooth waters (includes rivers, creeks and designated smooth waters):</p> <ul style="list-style-type: none"> – nil discharge (all ships). <p>Hervey Bay and Northern Moreton Bay waters:</p> <p>For a declared ship:</p> <ul style="list-style-type: none"> – nil discharge. <p>For all other ships:</p> <ul style="list-style-type: none"> – nil discharge within 1 nm (1852 m) from reefs, aquaculture fisheries resources and the mean low water mark of the mainland. – if 16 or more persons on board, nil discharge. <p>Open waters:</p> <ul style="list-style-type: none"> – for all ships—nil discharge within 1 nm of aquaculture fisheries resources – for ships with 7 to 15 persons on board—nil discharge within 1 nm of a reef, the mean low water mark of an island or the mainland – for ships with 16 or more persons on board—nil discharge in open waters.
Treated sewage	<p>In those waterways where discharge of sewage is permitted, sewage discharged from all ships with a fixed toilet must first pass through a macerator.</p> <p>Smooth, Hervey Bay and Northern Moreton Bay and open waters</p> <p>Treated sewage can be discharged subject to the following restrictions:</p> <p>Grade C treated sewage</p> <p>Nil discharge within 1/2 nm (926 m) of:</p> <ul style="list-style-type: none"> – a person in the water – aquaculture resources – a reef. <p>Grade B treated sewage</p> <p>Nil discharge within 700 m of:</p> <ul style="list-style-type: none"> – a person in the water – aquaculture resources – a reef. <p>Grade A treated sewage</p> <p>No restrictions other than prohibited discharge waters.</p> <p>Declared ships (class 1 commercial ships) must have a sewage holding device suitable for the number of persons and duration of journey in those waters if operating in any waters where discharge is not permitted.</p>
	<p>Declared ships are required to have a shipboard sewage management plan on board with particulars described at section 49 of the <i>Transport Operations (Marine Pollution) Regulation 2008</i> and to keep sewage disposal records when discharged to a sewage disposal facility.</p> <p>All ships with a treatment system are required to have system documentation and manuals on board for operating and maintaining the system.</p>

Section 4 activities

Activity 1

When going upstream (away from the ocean), which side of the boat should you keep the port lateral mark?

- A pass with it on your port side
- B pass with it on your starboard side

Activity 2

How is the buoyage direction marked on a chart?

Activity 3

If you see a mark that is yellow and black in colour and it has two black cones pointing inwards, what is it and what side do you pass it?

Activity 4

If you see a north cardinal mark and you are unsure which way north is, how could you work it out?

Activity 5

List five things a special mark could be used for.

1

2

3

4

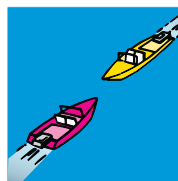
5

Activity 6

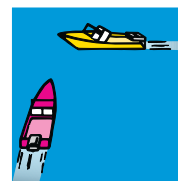
How should you keep a proper lookout?

Activity 7

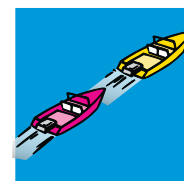
Circle the boat required to give way in the following pictures



Head on



Crossing



Overtaking

Activity 8

Which boats have special rights over power boats?

Activity 9

By law, when must navigation lights be displayed?

Activity 10

A speed limit of 6 knots or less within 30 m applies to:

Activity 11

What is your responsibility in relation to the wash your boat creates?

Activity 12

What is the legal alcohol limit on the water?

Activity 13

Within what time must you report the incident, and who should you report to?

Activity 14

When operating your boat near shipping channels which radio channels should you monitor for up-to-date information on local traffic movement of larger ships?
