

RADIO

The VHF radio: This set is normally monitored on a twenty-four hour basis. You do need a licence to operate this radio. The only thing you need to know regarding a VHF radio is **Channel 16**. This is the distress calling channel: in the time of need call up on Channel 16 and the receiving controller will advise you which working frequency to go to.

29 MHz 5-Watt Sets: This is probably one of the few pieces of modern equipment which has added so much safety to small craft at sea.

The operating efficiency of this equipment depends on the correct operating procedure and strict observance of the rules. This radio is required by Category B and D vessels going to sea. No operator's licence is required for this set, but you do require a licence to have this set in your possession. The operating frequencies are as follows:

Channel A or 19	-	29.9350	Distress or calling
Channel B or 6	-	29.7725	Working channel
Channel C or 22	-	29.9725	Working channel

These channels have been registered with the Posts & Telecommunications as Marine Channels.

It is normal good practice to leave your set on at all times on Channel A – obviously if you only have a hand held then you must use this set at pre-arranged times.

1. The set should be correctly installed and checked before use, i.e. the aerial and its ground plane should match the set.
The output power of the set should be checked, the SWR standing wave ratio must be as close as possible to a one-to-one ratio. If not, not all the power generated will be transmitted, causing lack of distance of transmission and also cause the set's components to heat up.
The radio must be installed in such a place that it will remain dry in all weather and sea conditions, it must also be installed out of direct sun.
The microphone should not be placed near the compass as the microphones normally contain permanent magnets which will affect the compass readings and must be kept dry at all times.
If a radio should get wet and blow a fuse or cease to work, the set should be switched off immediately. If it is possible, the covers on the set should be removed carefully and the components and PC board sprayed lightly with CRC or Q20 or any other water repellent spray. The set can then be closed again and re-connected and checked. If the squelch is turned anti-clockwise, a hissing noise should be heard. When the microphone is keyed, the meter should swing across its dial indicating transmission.
2. When using a portable handset, make sure that the aerial is fully extended before transmitting.

3. If using a 2-way radio installed on a boat or in a mobile vehicle check that the aerial is connected properly. (Connection is not cross-threaded, the connection is home and tight.) Also check that the antenna or whip is installed on aerial base before transmitting, as transmitting without an aerial can, and will, cause damage to the set as the power generated in the set cannot be dissipated without an aerial causing output transistors to overheat and cause failure.
4. If for some reason the fuse should blow, replace the fuse with a fuse of the same ratio as specified and not with a piece of silver paper or a straightened 2.0 hook, as this practice may cause total burn out of the radio.
As most 2-way radios come with flying fuses, i.e. a fuse holder in the main power line to the set, a spare fuse or two could be taped on to the fuse holder of the set.

In the case of an emergency the signals – MAYDAY – PAN – SECURITE – must be repeated three times when commencing transmission. This must be followed by “THIS IS (give the boat name)” three times, followed by your position and then the information of the nature of the distress and the assistance required.

It is very important to clear the air when you hear an emergency call.

Listen carefully to the message and if possible, come to the distressed vessel’s aid, inform him of the actions you are taking.

MAYDAY

This means – I am in immediate and imminent danger, and require immediate assistance. This signal has priority over all signals, and it is only used when in serious danger.

PAN

This means – I have an urgent message regarding the safety of the vessel or a person on board. It does not mean immediate danger or assistance. It is only used to ALERT ships or control. This signal must only be used with discretion and must be cancelled or confirmed at the earliest convenience.

SECURITE

This means – A deterioration in the weather or that – I have a warning of danger to shipping at sea.

RADIO PROCEDURE WHEN CONTROL IS OPERATING

1. Watches shall be synchronised with control before boats put to sea or immediately after launching.
2. Boats shall report to Control immediately after launching and shall state where they propose fishing.
3. Control shall issue weather reports as necessary, but, in any case, at 07h33 and 11h03.

When making a radio transmission, the party being called must be named first and called three times. The boat making the call should then be named three times and acknowledgement awaited.

For example:

CONTROL – CONTROL – CONTROL – this is X51, X51, X51

A correct reply would be:

X51 THIS IS CONTROL – SEND YOUR MESSAGE – OVER

Should any craft hear any other craft or control unsuccessfully trying to make contact, the craft should act as a relay.

For example:

CONTROL – CONTROL – CONTROL – THIS IS X51, X51, X51

X55 is trying to contact you. I will act as relay – OVER. Control should acknowledge and X51 then acts as a relay contacting X55.

SILENCE PERIODS

Silence Periods:

Three (3) minutes after the hour and three (3) minutes after the half hour.

During this period careful watch must be kept for a weak distress signal, your watch must be synchronised with the controller so that this period can be carefully observed.

Operating Procedures:

Calling signal not to exceed one (1) minute

Use installation for nothing other than what it is required for

You may not transmit without identification – your call sign or boat number

You may not use offensive or abusive language.

You may not use CB jargon on this radio channel

Listen for other traffic before transmitting

Use of personal names is prohibited – use other boat's name or call sign

When a station does not reply to a call sign set out three (3) times, calling shall cease and only set out fifteen (15) minutes later.

A good policy is to leave your set on at all times unless you have a hand held set

Use only short and to the point messages

'MAYDAY' signal may only be used in time of distress

When transmitting on any of the above frequencies, speak slowly, clearly and concisely.

SELONCE MAYDAY

Where the control station (any station at sea or land which is in actual control of that search and rescue operation) may call on any frequency: "Selonce Mayday, this is Where the controlling station takes over.

They have now called for total silence on that frequency. A boat may only continue using the frequency because he is out of range of the Selonce call, then the boat in the vicinity hearing the call, can relay to that boat. In other words, this is the relay to boats who cannot hear the call.

SELONCE FINNEE: Silence is now finished and can be relayed.

CRAFT IN A 'MAYDAY' SITUATION

This message must have the following:

1. Vessel's ID
2. Vessel's position
3. Vessel's problem

Meaning of the following:

Selonce: Radio Silence
Over: I am standing by waiting for your reply
Out: I have completed my message and going back to Channel A

Phonetic Alphabet

A(lpha)	B(ravo)	C(harlie)	D(elta)	E(cho)
F(oxtro)	G(olf)	H(otel)	I(ndia)	J(uliet)
K(ilo)	L(ima)	M(ike)	N(ovember)	O(scar)
P(appa)	Q(uebec)	R(omeo)	S(ierra)	T(ango)
U(niform)	V(ictor)	W(hiskey)	X(ray)	Y(ankee)
Z(ulu)				
0(zero)	1(wun)	2(too)	3(tree)	4(fo-wer)
5(fife)	6(six)	7(seven)	8(ait)	9(niner)

NOTE

The law of the sea and the law of the land require you to go to the assistance of a vessel or person in distress. You must exercise caution and not endanger your own vessel or crew. Failure to comply with any of the above is an offence that carries a severe penalty. Your first responsibility is to save life, the property.

The law also requires you to do your normal radio call ups from an uncontrolled radio operated beach when launching or beaching, so as to enlighten other operators of your intentions.

THE PENGUIN PROCEDURE

For safe return to base:

This procedure bears the name of, and was initiated by Penguin Radio Control Station in the Cape Point Lighthouse.

The object of the procedure is:

1. That there is regular radio contact at short intervals between vessel and control.
2. That if an emergency develops, or a mishap occurs, control is automatically aware thereof.
3. That rescuers would have quick accurate and definite information on which to react.

Procedure:

When a PAN situation develops, the skipper of the craft informs control, adopting the correct PAN procedure.

Control will then prescribe that the Penguin Procedure must be adopted and also at what intervals radio contact must be made. This prescribed time may not be exceeded, however the skipper of the craft may shorten this time interval, depending on the situation.

With each radio contact the skipper of the craft must accurately as possible report his speed and position. This information is used by control to determine the estimated time of arrival (ETA) of the distressed craft at base.

If the craft in distress misses a radio call, control will try and contact the craft, failure to contact will alert control that the PAN situation has changed to a MAYDAY situation and will immediately institute a "Search & Rescue" operation.

The benefits of this procedure now becomes evident.

ANTENNAE

It is not just enough to buy the set of your choice and installing it unless you have the right tools. The set should be properly tested for efficiency with an SWR/power meter. If an installation was done improperly, you might lose up to 90% of its efficiency. If you do not possess the equipment mentioned and have installed the radio yourself, have it checked by a professional. One day your life might depend on that set.

VHF as well as 29MHz should always be fitted with a good antenna with SWR correctly set and you must always make sure that it has a good ground plane.

RADIO NOT WORKING

Make sure that the fuse is not blown, check the power supply cable to see they are properly connected. Make sure the antenna is properly screwed in and seated, before you key the mike to see if the needle comes across the dial face. This could damage the set. Check the squelch to see it is not turned down too low. This should be turned up to just before the set makes a hissing noise. Check also to see the ground plane has not been damaged.