

# Government Backs VHF As The Future Distress & Emergency Radio System

*Special Report by Peter Webster, Editor F&B magazine, 8/2/01. Our thanks are extended to Mr Peter Irwin of the Australian Maritime Group for his assistance in the preparation of this report.*

**A**fter months, of delay, argument and debate, the Federal Government has decided to formally approve one primary radio system over all the other options including cellular phones. In this special report, editor Peter Webster looks at the ramifications of a system that is bound cause heated discussion amongst the volunteer rescue movement right across Australia.

In December last year, representatives of every state in Australia gathered in Melbourne for what proved to be an unusually historic occasion. For the first time, all of the states agreed – sometimes reluctantly – to adopt a uniform national radio formula that would take Australia into the 21st century of communications.

In theory at least, Australia will soon have a uniform national distress and working radio network.

That VHF has been chosen is both logical and to a large extent, predictable. When all is said and done, the Federal and State authorities didn't really have a lot of choice.

HF/SSB frequencies require extremely expensive and problematical equipment. A typical set from an Australian manufacturer (a Barrett or Codan HF/SSB for example) will start from \$4,000 - \$5,500

VHF is considerably less expensive (about a tenth of the cost of an HF/SSB system) has a sharp, clear signal but a range factor that is largely determined by the transmit/receive mast.

VHF does have other advantages though, and some of these are really important to recreational boat owners.

For example, VHF is the world's lowest common denominator in voice com systems, and is carried onboard all commercial ships. This is the only way a small boat can make contact with a big ship – something that is becoming



increasingly important as more commercial ships (and fishing trawlers) ply our waterways.

VHF is also carried aboard all Aussie search and rescue (SAR) boats and helicopters, so if boatowners need to make contact with the rescue teams, VHF is the radio of choice.

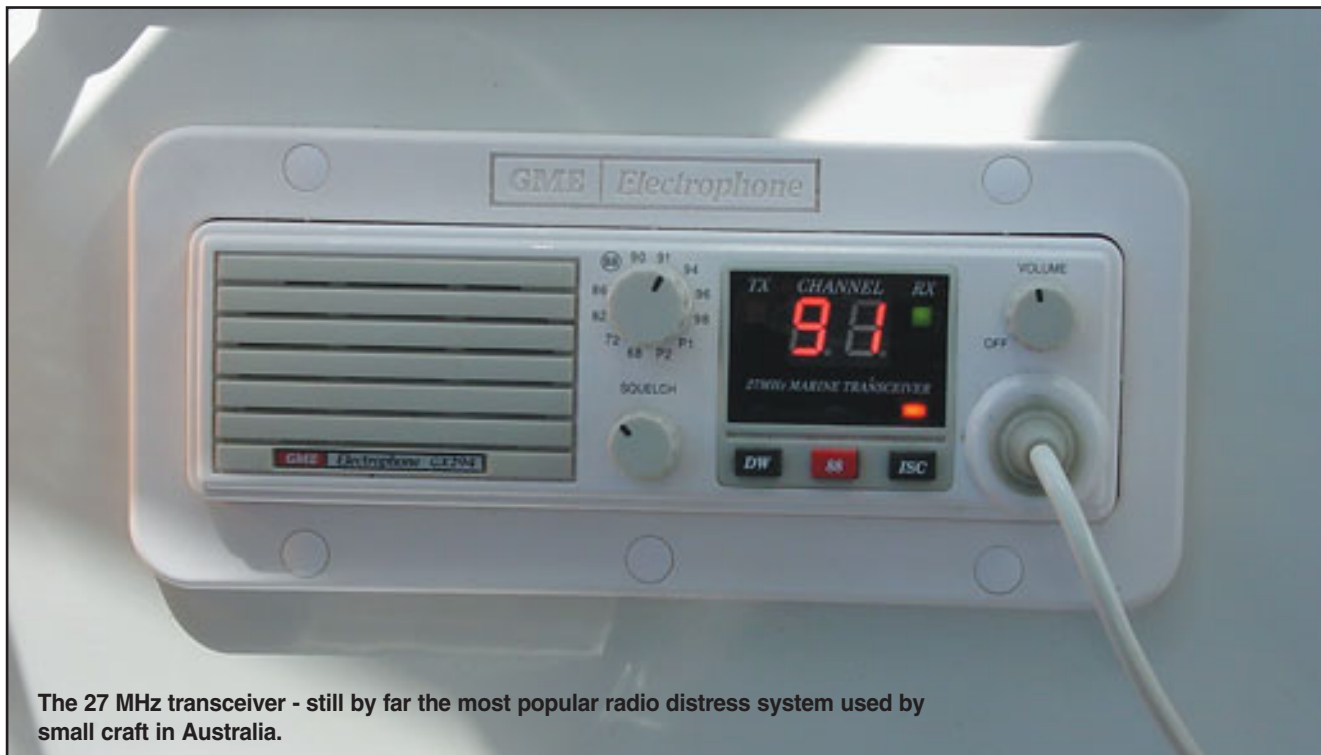
The third level carrier, the ubiquitous 27 MHz radio has now been around since Dick Smith first introduced it nearly 30 years ago, and it is far and away the cheapest radio system available today.

One hundred and fifty dollars will

buy a very well made, rugged piece of equipment that will transmit and receive on 6 set frequencies, and has undoubtedly achieved Dick Smith's aim of bringing reliable, cheap communication to the masses.

That said, it still has to be acknowledged that 27 MHz radio reception is often jammed and/or cluttered with hash and spurious radio broadcasts from (usually) Asian sources, and it does not have a significantly improved range over that available from VHF.

So it was not entirely surprising that



**The 27 MHz transceiver - still by far the most popular radio distress system used by small craft in Australia.**

the various government authorities involved in the December conference gave VHF the nod. But there was more to it than just deciding on the best type of radio system.

With the subtlety of a train crash, the Commonwealth Government has almost completely passed the responsibility for Australia's small craft distress radios back to the States.

**State Control** In other words, the Feds want to move out of the communication business and to do so, they're 'volunteering' the State Governments to take over where they leave off.

Nobody has a problem with that in a general sense, but from a specific, operational viewpoint, the whole notion is fraught with problems.

**VHF Advantages** Okay, so the government has decided VHF is the 'go' in the future. What does that mean to Australia's 630,000 small boatowners?

Does it mean that we throw all our 27 MHz radios overboard?

Does it mean we all have to rush out and buy VHF radios in the future?

Let's take this one at a time.

Firstly, the government has essentially decided that we need a uniform national standard distress radio system. In other words, whether you are sending out a Mayday call from

somewhere in the Gulf of Carpentaria, or in the Great Australian Bight, the procedure and system should be the same.

They have chosen VHF as the carrier or distress system of choice.

However, this does not mean that anybody has to go and buy a VHF radio.

**Boatowners who already have an effective 27 MHz radio system working within their local boating community, do not have to buy anything.**

Nor is their 27 MHz radio going to be any less effective in the future. The key words here are "effective" and "reliable".

In the authority's opinion, there are many parts of Australia where 27 MHz is no longer an effective and reliable radio system because of the awful amounts of clutter, hash, spurious transmissions and junk noise that makes getting through on 27 MHz's 6 allocated frequencies all but impossible.

In this situation, the government is now advocating that the boat owner steps up to the more sophisticated, higher quality transmit and receive capability of the VHF radio. These have come down dramatically in price in recent years, especially since the Seaphone capability has already been removed from many of the VHF radios.

But again, as noted, if a small boatowner has a 27 MHz radio that works really well in his part of the world, enabling him to tick-tack with the local Coast Guard or SAR Rescue base, then he has no need to change anything at all.

Using the 27 MHz radio at this point in time does not require the boat to be licensed, and although the operator is supposed to be licensed, in practice, this has never been enforced.

**Why VHF?** If your 27 MHz radio is working fine, who needs a VHF? Well, as we've noted, although your 27 MHz radio might be working really well, there are plenty of parts in Australia where it is all but useless.

As well, 27 MHz radio even in a good environment, has nothing like the clarity or quality of the VHF signal.

VHF radio modulation is superb, and is virtually unaffected by bad weather, heavy storm conditions, local interference etc. There's not much doubt that if we'd been able to access VHF back in the days when 27 MHz was first mooted, everybody would

**Quick Take  
(One) 27MHz**

**If your 27 MHz radio is providing effective, reliable and clear communication with your local radio base station, then there's no need whatsoever to upgrade to VHF in the near future.**

# VMQ 4447



have chosen VHF – but that wasn't to be. It's only been in relatively recent years that VHF has gained any sort of a foothold, despite the quality of its signal.

Then along came Seaphone, which gave boat owners the first real opportunity of being able to “dial home to mum” from their boat at sea. Or out on the river. Wherever. For quite a few years, this was more than enough reason for boat owners around Australia to purchase a VHF radio as well as the 27 MHz system.

However, the booming popularity of the mobile or “cellular” phone as it is more accurately called, has just about killed off the Seaphone system. Telstra has already announced it would like to quit the Seaphone system completely, sometime this year.

They're being a bit cute about this because they have been reassuring boat owners for many years that the system would be permanent. Only a few years ago, they couldn't envisage an environment where the Seaphone service would no

longer be required, but in fact, that's exactly what's happened.

Cellular phones enjoy such universal applications now, there are very few boat owners who do not have access to them.

So the whole notion of “phoning home to mum” from a Seaphone boat radio is no longer unique to the Seaphone service. For approximately 95% of Australia's boat owners, a very simple and easy to use mobile phone solves the problem – and Australians

have taken to mobile phones like ducks to water.

However, the mobile phone system has had its problems, too with many popular boating areas suffering from “blind spots” in the mobile phone's coverage. Because of this, the government has decided to pursue a nation-wide distress and safety VHF radio system, principally because there are so many gaps in the ordinary mobile

phone's ability to provide a 100% safe, reliable and effective coverage.

This fact can be easily attested by many F&B readers who frequently

remind the editor they go boating in “blind spot” areas as far as cell phones are concerned. Boat owners in these areas (and there are probably just as many cell phone blind spots as there are VHF blind spots) must retain conventional 27 MHz and or VHF radio facilities in order to access adequate safety and distress capability.

**Government Plans** Following the December Conference and the decision to pursue a nation-wide VHF network, the government made a number of other significant announcements. One of these involved the agreement to commit some \$3.02 million straight away in Federal funding to expand and consolidate the new VHF network.

At the heart of the government's thinking is that the new group, called the Australian Maritime Group (the body representing all of the states in Australia involved in this issue) should negotiate with Telstra to purchase or lease Telstra's Seaphone and VHF infrastructure (that Telstra has built) at 45 sites around Australia.

Originally, Telstra had in mind gifting this network to the community at large. However, following Telstra's recent change from being a government owned community service organisation to a hard-nosed private enterprise operation, Telstra has now

**Quick Take (Two)  
VHF**  
**If you are having trouble getting through to your local base station because of junk traffic and spurious emissions on your 27 MHz radio, then the new breed of VHF radios from the likes of GME is definitely the way to go. The radios are simple to operate, they have superb voice quality, and you can patch straight in to the SAR teams. But they do cost a little more, and they do require a licence to operate.**

decided not to gift the 45 VHF station infrastructure to anybody.

They want to either sell it outright or (at least) get a reasonable commercial rental for the infrastructure.

As this issue goes to press, the Australian Maritime Group is negotiating with Telstra to “acquire” the network, and is hopeful of finalising the negotiations within weeks, not months or years.

In addition to acquiring the Telstra network, the Australian Maritime Group’s brief included the expansion of the network by up to another 60 or 70 sites, to ensure the new VHF network is a truly national operation with VHF coverage for the vast majority of Australia’s 600,000 strong small craft fleet.

The Australian Maritime Group is at pains to point out they have no interest whatsoever in picking up the Seaphone facility as they are not in the telephone business. However, they are definitely after the VHF broadcast towers and equipment in the Seaphone network, which, one must remember, consists largely of fully automated facilities.

**Remote Areas** The Australian Maritime Group is unashamedly targeting locations where the bulk of the Australian small craft fleets are located.

Specifically, they are targeting (and intend to have complete coverage) from the tip of the Gulf of Carpentaria to the bottom of Tasmania and around the

Bass Strait into the Great Australian Bight by the end of this year, with appropriate coverage for the rest of Australia’s far flung population centres – as the AMG progressively identifies the areas that remain with problems.

They do not intend to extend the network to the truly remote areas such as the Kimberley, or the western side of the Gulf of Carpentaria (etc) because the cost of setting up automated facilities in these regions is so great, that the end does not justify the means.

For cruising boatowners and long range fishermen working in these remote areas, systems such as the Vodafone Globalstar cellular/satellite phone system (or the satellite systems such as Optus Mobilesat, Inmarsat C & M, etc) are clearly the way of the future in the outback and remote fishing grounds around Australia.

This Vodafone system in particular, is an excellent system, with particular application to long range, remote area fishing crews. A keystone of the Vodafone service is that it covers 100% of the Australian mainland, plus an impressive 200 nm to sea – right around Australia. However, it does cost quite a bit more than “ordinary” cell phone cover on the Australian mainland. The Vodafone Globalstar cellular phone system costs anywhere from \$1,200 - \$5,000, depending on the “toys” (e-mail or fax capabilities) and the ‘plan’ involved.

**The Coastal Radio Stations** There has been a great deal of publicity given to the closure of Australia’s manned coastal radio stations from July 1, 2002.

As Australians work towards the International Convention covering commercial shipping (that’s boats over 300 tonnes) these coast radio stations that we have (still) in Townsville, Darwin, Brisbane, Sydney, Melbourne (etc) will not be operated by New Zealand TV as commonly believed.

This Kiwi company tendered and won the right to provide automated radio stations for the commercial shipping world, and they are building two special radio base stations for the purpose.

Ironically, the two new stations (located at Charleville QLD and Wiluna in WA, of all places) couldn’t be much further from the coast if they tried, but in their business of super long range communication, clear passage of their signals into the ionosphere is more important than being close to the harbour. This service is of no interest to recreational boat owners.

In truth, the closure of the historically significant coastal radio service, after 70 years of operation, doesn’t really affect too many small craft owners.

Whilst it’s unquestionably true that the loss of the manned operators in these coastal radio stations removes a potent, back-up safety force of professional operators, it is equally true to say they have had very little to do with the small craft world for many years.

Small craft radio traffic now depends on Australia’s network of volunteer search and rescue organisations such as the Australian Volunteer Coast Guard,

Volunteer Marine Rescue (VMR) the Royal Volunteer Coastal Patrol, (etc). These hard working volunteer organisations share the responsibility of looking after Australia’s small boat voice-com traffic, and they do a mighty fine job of it too.

Right across Australia there are dozens of base stations (manned up to 24 hours a day at busy times of the year) by hundreds of volunteer radio operators who put in their time for the benefit of their fellow boat owners and fishermen.

In a sense, the Federal and State Governments have both abrogated their responsibility to the boatowners of Australia by passing the buck fair and square back to the volunteer movement.

This will be the area where the controversy will – and should – start.

On the one hand, you can say this is just a commonsense recognition by the governments of the day that (now) the volunteer networks do 99.9% of the pleasure boat radio traffic anyway.

On the other hand, the more cynical of us could observe that the government(s) are all taking advantage of a situation by passing the buck – especially the financial buck – across to these volunteer organisations, and just walking away from their responsibilities to Australia’s 630,000 boatowners.

F&B suspects it is partly because of this quasi “guilt” the government is no doubt feeling, that this VHF network has been proposed at all. Especially since no-one has been able to explain to F&B why pleasure boatowners should continue to pay radio licence and ship station fees to the Federal government for a service they no longer provide.

Surely these fees must now be formally directed to a funds pool to be allocated directly across to the volunteer groups the government is now ‘volunteering’ to run the show in future.

**Who’s Manning The Shop?** One of the biggest questions concerning the operation of this new national VHF network specifically relates to the operation of these volunteer stations.

F&B put it to the government body, the Australian Maritime Group, that it was a pretty big ask to expect these volunteer organisations to run 24 hours a day.

As most of them can't (which they acknowledged) we also asked who did the government (then) see would operate the service on a 24 hour basis?

F&B's central point is this: Unless the VHF operates on a national basis in all the populated coastal communities scattered around Australia on a 24 hour basis, what incentive would there be for any boat owner to buy a VHF radio - if his regular 27 MHz radio would do exactly the same job of keeping him in touch with his local SAR radio base station ?

In answer to these questions, the AMG's spokesman Mr Peter Irwin, told F&B that their plan was to divide Australia up into specific VHF capable lengths of coast line, utilising a combination of either manned volunteer base stations, or automated VHF bases. These would all feed back to a major regional base station that would operate 24 hours a day.

The AMG insists it can encourage the appropriate regional base stations to operate 24 hours a day, with specific equipment, training and financial support.

Let's take a typical example.

Consider the far south coast of NSW. Let's say the Eden, Merimbula, Pambula, Tathra and Bermagui, and

Narooma volunteer radio base stations normally shut down each night at (say) 8.0 pm.

The AMG believes the technology and equipment can be installed in each of these community radio base stations enabling the operator in Eden or Bermagui (or

wherever) to merely switch over his base station at night to the "on-line" 24 hour base station in his district, perhaps 150 miles up or down the coast.

The 24 hour base station would become (in effect) a de-facto "A" class base station where the operators were specially trained to deal with maritime emergencies up and down their strip of



The latest Vodafone system is very appealing to long range fisherman working within 200 nm of the Australia coast. They already offer 100% coverage - but coast range from \$1500 up.

**Quick Take (Three)**  
**MOB (sat) Phones**  
If you are planning to go from the south up to the north and fish and explore the remote regions, for effective voice communication, the best bet is a satellite phone system such as the Vodafone Globalstar network's cellular phones (which work right across Australia and up to 200 miles to sea, right now). They cost from \$1,500-\$4,000 depending on the

coast. This would include being able to patch straight into the Canberra-based AMSA (Australian Maritime Safety Authority) to access the full range of safety and distress resources they can apply.

More to the point perhaps, the Officer in Charge of the "A" Class base station would be able to immediately access the local SAR teams, the local police station, hospital, ambulance, the fishing co-op or local fishing and sailing club. His local knowledge could save the Federal Government (AMSA) millions in needless roll-out expenses for situations that 99% of the time, are usually

(a) False/needless alarms and/or  
(b) Problems that are easily dealt with at a local level i.e flat batteries, breakdowns, running out of fuel, etc.

(c) Localised medical emergencies

With the installation of transmit/receive masts on the right coastal mountain ranges, delivery of the latest/best VHF/computer equipment, plus appropriate operator training, the Australian Maritime Group believe it is possible to create a series of "A" class base stations that do actually run 24 hours a day in the populated centres, linked to the smaller, local base stations that might only operate 8-12 hours a day.

**Are We Dreaming?** At the end of a detailed review and consultation of the process involved in getting this VHF radio network up and running, one must observe that it's not just cynicism that leaves F&B with some serious concerns about the effectiveness and

likely success of the VHF network the Australian Maritime Group is proposing.

At the heart of F&B's concern lies the obvious question:

*1. What assurance do Australian boat owners have that the Australian Maritime Group will get another 60 or 70 VHF outlets and repeater stations operating to ensure a true coverage of all the popular boating areas without blind spots?*

*2. What assurance do Australian boat owners have that 24 hour facilities will be forthcoming in the next 12 months that would give them sufficient incentive to warrant the additional cost (and licensing) required to operate a VHF radio?*

At this point in time, the Australian Maritime Group (obviously) has not had time to organise anything like a nationwide network of base stations capable of running 24 hours a day.

And the coastal radio stations that have always run 24 hours a day for the big ship community, are now being closed down – because the cost of manning them 24 hours a day is no longer justified !!

**It's A Worry** Frankly, it's hard to see how the government expects to make VHF a mainstream player in this day and age of el-cheapo local cell phone systems (let alone the very sophisticated international facilities such as the Vodafone Globalstar Network) **when 99.9% of Australia's small craft fleet are perfectly happy with their 27 MHz radios.**

Nor do they have any real incentive to upgrade their 27 MHz radio to VHF unless the government can offer the boatowner a benefit that will outway the *disadvantages* of going with VHF.

Nobody is going to spend another \$300-\$400 on a VHF system (much less undertake an oral exam) or pay the government a licence fee for a radio system unless it's got a hell of a lot more going for it than is currently mooted.

To say that it *might have* access to Voice-com facilities on a 24 hour a day basis, sometime in the future, is not going to wash with boat owners. We've all heard that before.

**F&B Viewpoint** So for the moment

#### **Quick Take (Four)**

##### **Inmarsat C**

**If you are building a long range cruising yacht or sportsfisherman, then as well as (QT #3 – Sat phones) you should also invest in the Inmarsat C system, as used by every offshore trawler in Australia. A data-only system, plug your laptop in and send (and receive) e-mails to the grandchildren, faxes to your stockbroker – and emergency info direct to Aus SAR (Canberra) in an emergency. A bargain at \$4,000 - \$7,000.**

at least, F&B's view is that our readers and Australian boatowners should sit tight, and *not do anything*.

The government is about to launch a substantial campaign promoting VHF radios and the proposed national VHF network, but they're going to have to pull some sort of rabbit out of the hat if they believe they're going to convert Australia's half million boatowners over to the VHF network in the foreseeable future.

**F&B**