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CB Action

AUSTRALIA'S ONLY CB MAGAZINE

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RC800 UHF Mobile
uper Tiger AM/SSB

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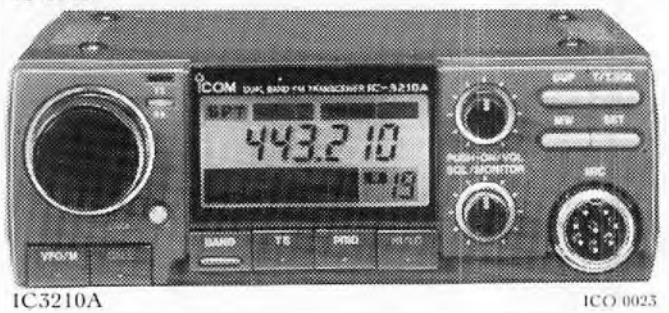
ICOM

IC-228A



IC3210A

ICO 0023

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ON CHANNEL

ON THE SPOT FINES

Well, anyone who thought Furious Fewster's 'On The Spot' scoop in our last issue was a hoax now knows better — as of August 1 the DoTaC folk have the power to issue instant prizes to the unwitting and unwary.

One more than obvious flow-on from this brand new piece of 'stick-it-to-em-hard' legislation is that the RIs will be earning lots and lots more money for the Government for less and less work.

Think about it for a minute. Prior to this latest move it was necessary for the 'bustee' to go before a court and have the case proven against him/her before he/she was fined, locked away and probably lost his/her radio equipment into the bargain.

Now do you really think that the RIs were all that anxious to do the necessary 'busting', follow-up paper work and finally the court appearance simply to make life hard for some poor unsuspecting Good Buddy...no way!

Now, however, the situation is a very different one. They can give you an 'on-the-spot' and you can choose whether or not to go to court over it...and the chances are that you'll decide to pay in case it gets more expensive when you elect to fight it in court.

So, just as with parking fines, 'on-the-spotters' are likely to flow like water and Government income (ripoff maybe) is about to take a markedly upward turn.....and can you expect better policing of the 'brain-dead' and 'foul- mouth' brigade as a result - not likely...!

It's staggering to us how such a piece of legislation ever slipped through so quietly and maybe we should all have listened somewhat more attentively to Furious Fewster when he predicted a couple of years back that such a move was in the pipeline.

..but 'too late' is now the cry and we wait to see how hard the RIs start to police things now life has become so much easier for them.

CHANNEL USE

Way back when 27 MHz was just starting, we (CBA) regularly promoted the correct use of channels which genuinely assisted everyone to maximise the pleasure of their operations. It was quite simple with AM operators staying within specified channels and SSB stations staying within theirs - it worked and worked well.

What are your thoughts today? - we would like to receive your comments and if there are sufficient replies to make it a workable proposition we will take it up officially and see if we can achieve anything.

The proposal is that AM operators are confined to channels 1 to 14, retaining channel 11 as the call channel, with SSB stations using channels 15 to 40 with 16 LSB remaining the call channel, 9 remaining the emergency channel and 35 being made an official 'interstate' DX call channel.

It's really nothing spectacular, just basic commonsense in which both modes get a fair go with minimal interference to each other. If, however, the response is strong, DoTaC might just make it official which will make things much easier for all concerned.

Let's hear what you think - address your comments to Channel Use, CB Action, P.O. Box 628E, GPO Melbourne 2001.

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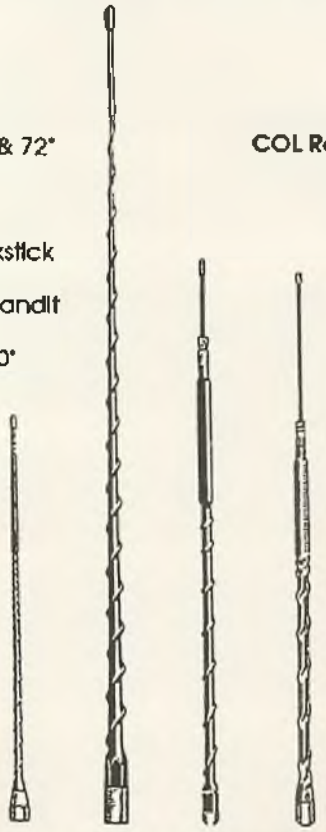

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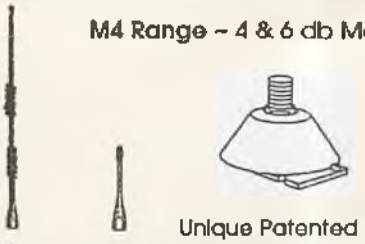

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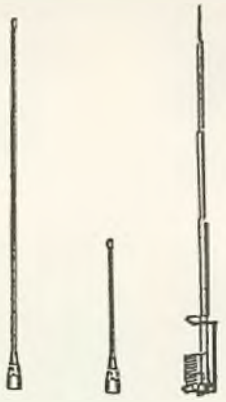

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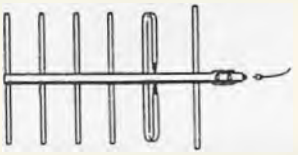

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NEWCOMERS START HERE

Welcome to CB Action magazine — the only regular CB publication in Australia and also the oldest, having been first published in 1977.

CB is a form of radio communication which is popular around the world, however, unlike amateur radio, it is not necessary to pass an examination to go on air. All that is needed is a licence and the equipment.

CB Action, though, is a little more than just CB. While CB is the backbone of the magazine, it also has reports and reviews on scanners, antennas, shortwave radios and other areas of general interest to radio communicators and listeners.

In the course of reading the magazine (and on air) it is probable that newcomers will encounter words which mean nothing to them. This short introduction is to help these readers understand CB terminology and its application.

It should be stated right now that ***there is no special CB language.*** *Many newcomers believe that they require a lecture on the basics of CB language before they can operate on air.*

This is simply incorrect. While some stations use esoteric CB jargon, all Australian CBers understand English and this is all you need to go on air.

A half hour spent listening before going on air for the first time will be time well spent as you will hear how to initiate a contact and how to pass the conversation back to the other station and, really, that's about all there is to it. Even so, while it is not essential that you know and understand some of the various abbreviations used and/or the amateur 'Q' code, it can be helpful to you.

That is what this introduction is all about.

One of the first things you will hear is a ***QSO.***

A QSO is simply a contact with another station. It derives from the amateur radio operator's 'Q' code — a form of abbreviation used by amateurs when sending ***CW*** *(continuous wave transmission) which is simply another way of saying morse code.*

Morse code is not used in CB, however, a number of 'Q' code abbreviations are....

A ***QSL*** *is a card sent from one station to another confirming that these stations have been in radio contact. It is not sent after every contact, but, is usually exchanged after a* ***DX*** *contact.*

DX means long distance, usually overseas but often just interstate. If the station to which you are talking asks whether you QSL the operator is asking whether you will send him a QSL card to confirm the contact.

A ***QTH*** *is the 'Q' code for location so, if you're asked 'what's your QTH ?', the station is asking where your station is located. It's just as easy to ask in plain English, but, it adds a bit of glamor if you say QTH instead.*

You'll hear many stations talking about ***SWR (usually pronounces swer — which is incorrect — it is SWR spoken as letters) and this stand for*** *Standing* ***W****ave* ***R****atio. This is essentially a measure of the antenna's effectiveness and is read off an* ***SWR meter.*** *You will learn what SWR is from this magazine or from a CB store. When you hear a station calling* ***CQ CQ*** *it means that he is looking for a contact with another station. CQ means 'seek you' while* ***CQDX CQDX*** *is different (seek you long distance) in that the station only wants a long distance contact — not a local one.*

AM *stands for amplitude modulation while* ***SSB*** *stands for single sideband. If you have an AM-only rig it's nice for everyone if you stay on the lower channels and, conversely, if you are using SSB you should restrict your activity to the upper channels.*

QSB *means that the signal has a tendency to fade — that is, it goes from strong to weak and back to strong again, sometimes over a period of seconds and other times over a period of minutes.*

It is not a fault of the station, but, of atmospheric conditions.If a station says that there is QSB on your signal it means that your signal is fading and when this occurs it is best to keep your ***OVER*** *short or you are likely to lose the other station while you're talking.* ***SKIP*** *is essentially the same as DX — if the skip 'is running' it means that there are interstate and/or overseas stations being heard.*

BEAM, YAGI and ARRAY *all mean much the same. They mean that the station is using an antenna system which effectively (and legally) increases the restricted power output of the CB rig and can be pointed at the other station for improved communication. A* ***ROTATOR*** *is used to turn a beam, Yagi or array. Incidentally, Yagi is spelt with a capital Y as Yagi is the name of the inventor of the beam.*

LINEAR, BOOTS, AFTER-BURNER, LITTLE HELPER, etc. *mean that the station is using illegal equipment to increase the power output and will eventually receive a call from* ***DoTaC.*** *DoTaC is used in this magazine as an abbreviation for the Department of Transport and Communications — the authority charged with the regulation of CB radio.*

A POWER MIKE *is an after-market accessory which can also improve your station's 'talk power'. Whether or not they are legal is open to question, but, they probably aren't.* ***QRM*** *is when another station is making it difficult to hear due to being too close to your own station, having a rig in poor condition, running illegal power,etc.*

QRN, *however, is noise made by atmospheric conditions or, more likely, static caused by poorly installed electrical power lines out in the street. A* ***SWL*** *is a* ***S****hort* ***W****ave* ***L****istener but an* ***XYL*** *is usually the wife — an ex-young lady.* ***YL*** *is of course young lady and a* ***DOUBLE BUBBLE*** *is a police vehicle.*

GOOD BUDDY *is a somewhat derogatory term applied to operators who still use American style CB jargon such as,' what's your 10-20 ?' or 'that's a big 10-4'. This* ***10 code*** *originated in America, but, is now rarely used as it indicates that the operator has what can be best termed a 'juvenile brain'.*

A ***BREAKER*** *is an operator who wants to get into an existing conversation and there's nothing wrong with* ***BREAKING*** *providing that you only call in the pause between overs. If you break between overs one of the stations will probably say* ***ACKNOWLEDGE THE BREAKER*** *which means that you have been heard and will be invited to join in when the stations are ready — in other words standby and don't keep shouting.*

An ***ALLIGATOR*** *is another derogatory name which is applied to an operator who talks too much but doesn't listen — in short, all mouth and no ears.* ***SANDBAGGING*** *means to listen to a conversation but not join in yourself.*

A ***DUMMY LOAD*** *is a device which should be used when testing or tuning your rig. It can be purchased from any CB store and should be a must in your list of station equipment.* ***UHF*** *stands for* ***U****ltra* ***H****igh* ***F****requency and is the 477 MHz CB service*

LONGPATH *means that you are pointing away from a station you are speaking with rather than* ***SHORTPATH*** *which of course means the opposite. Different atmospheric conditions mean that at certain times you can communicate with (usually overseas) stations by sending your signal right around the world rather than by the most direct path.*

An operator who works out of the legal channel frequencies or runs illegal equipment is referred to as a ***PIRATE.*** *An ATU stands for an* ***A****ntenna* ***T****uning* ***U****nit which is used to tune your antenna to a good match with your rig if the SWR is a little too high.*

It won't cure any major SWR problems, but, it can adjust a slightly high SWR reading to a 1:1 match with the transceiver. If you receive a visit from the ***RIs*** *you're probably in trouble for causing* ***TVI — T****ele****V****ision* ***I****nterference — or — **BCI** — **B****road****C****ast* ***I****nterference. RIs stand for* ***Radio Inspector*** *- the gentlemen from DoTaC who call around if there are any complaints about your station.*

RIs are also often called ***RED INDIANS.***

COAX *stands for coaxial cable, the link between your rig and the antenna while a* ***WHIP*** *is not something wielded by a leather-clad lady but is rather a generic term for a mobile antenna.*

A ***REPEATER*** *relays a UHF CB signal from one point to another so giving much greater range of communication and a repeated list is published in every second issue of this magazine. After all of the above we reiterate — it is not necessary to learn CB jargon to go on air. Sure it helps, but, it will all come in time — for now though just use common sense English and if you don't understand something don't be afraid to ask — remember everyone you hear also had a first time on air.*

We hope you enjoy CB and CB Action.

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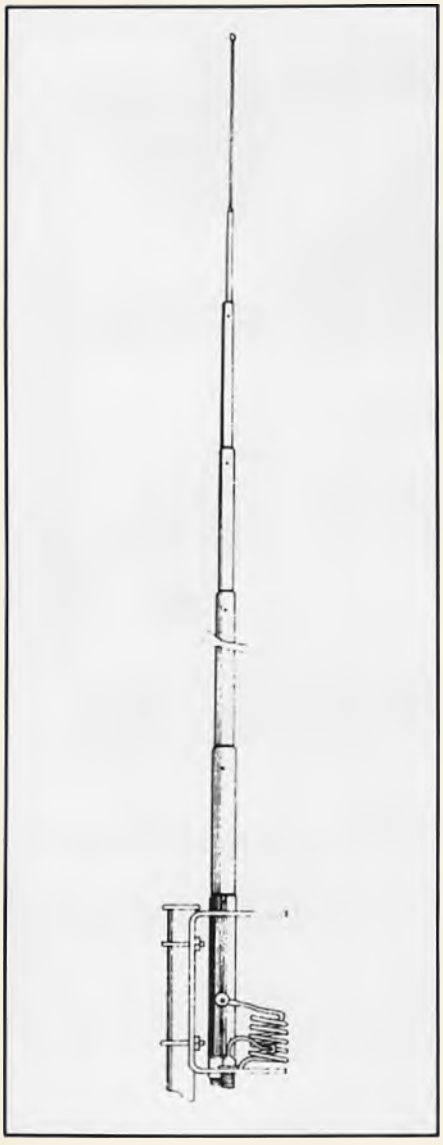
OK, so now you've got a scanner, all you need is a . . .

GOOD SCANNING ANTENNA

Confused as to the best external antenna to connect your scanner to ? Scanning Actions' Russell Bryant looks at the various aerials available for scanners. Also some not so obvious models.

When scanning radio receivers impacted on Australian society 20 or so years ago, the choice of antenna was simple. You used the on-board telescoping whip or adapted a commercial antenna to suit. Today it is a different story, the consumer is inundated with antennae specifically manufactured for scanners. The price tags attached to these receiving elements varies from a humble $15.00 to a staggering $500.00.

The purchase of a scanner is your ticket to the world of two-way radio. Hundreds and thousands of radio waves crisscross the atmosphere daily, using the radio with the on-board whip allows the scanner enthusiast to monitor those waves in his or her immediate environs. However, at some stage most hobbyists look beyond their corner of the world and resolve to extend their listening horizons.



The Station Master antenna can be cut to receive frequencies in the new lowband VHF allocations, but you need to be careful when trimming.

EXTENDING THE RECEPTION RANGE

The receiving distance of the average scanner can be extended by the erection of an external antenna. Basically, two types of external aerials can be employed by enthusiasts to improve reception, a properly designed receiving aerial, or as it was two decades ago, a modified commercial antenna. Dedicated receiving aerials come in a variety of forms and frequency ranges.

The most common are discones and these have broadband receiving capabilities from the HF band extending into the microwave portion. While it is true that discones have a broad response and will receive signals well into the UHF frequencies, care should be taken when purchasing such a unit. If you own a super scanner like a PRO 2004/2005, AOR 2001/2002/3000, Icom R-7000 or Yaesu 9600 there are several models available that will (genuinely) resonate across the entire (or thereabouts) range of the radio.

The SPR Scantenna XLR (marketed by South Pacific Radio), Diamond D-130, Icom AH 7000 and Archer (Tandy) discone antennas all cover the extended frequency range of the aforementioned receivers.

DISCONES SUIT ALL SCANNERS

Discones are not restricted to the top shelf scanners, in fact the 'normal' scanning receiver may benefit from the use of such an antenna. Those makes which are suited to scanners covering the mid and high VHF as well as the UHF band only are the Dick Smith Discone, the locally produced Belcone or the SPR Scantenna-2. Discones present a unique problem when mounting as the average antenna stands between a metre to a metre and a half tall and nearly a metre across. They require plenty of room to erect and are not well suited to flat dwellers. A Co-linear scanning aerial may be a better choice if space is a problem.

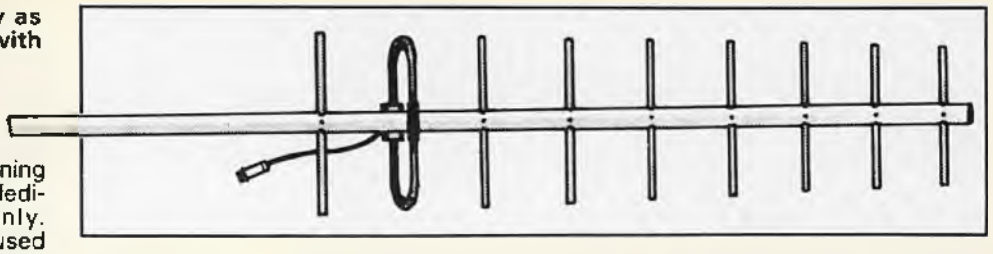
Resembling a base type two-way antenna, the co-linear is a neat package with an overall length of about 1.5 metres. Performance of the co-linear is approximately that of a quarter wave at frequencies between 70 - 500 MHz. The co-linear is fitted with three and a half metres of cable, terminated with a Motorola type plug. At around $50, it is a relatively cheap and easy way to improve reception on your scanner.

IF MONEY IS NO OBJECT

If money is no object, an active antenna provides a compact, wideband omni-directional aerial capable of installation indoors and out. Radio frequency amplifiers are employed in active antennae, boosting the in-coming to an acceptable level. If you are unable to erect an outside aerial and have between $200 and $500 to spend, an active antenna may increase your range. There are several brands of active antennae on the market in Australia — the Diamond D-505 (for mobile use), D-707 (for base), Emtron EAA 230 and ARA 500 are all top quality products. Available at Captain Communications is the range of Hoxin brand of scanner antenna and among them is an active model. Even if you don't have spare cash to spend on an antenna, you are not necessarily restricted to the telescoping whip or rubber duckie (in the case of a handheld) supplied with the set. Mobile One, Dick Smith and Tandy all market scanner aerials designed primarily for mobile use. The Realistic version comprises a centre loaded stainless steel whip atop a magnetic base. As supplied, the Tandy mag-whip has 4.8 metres of RG-58U terminated with a Motorola type plug.

The Mobile One or Dick Smith mobile scanner antenna is manufactured to fit onto any standard 5/16 inch 26 TPI base. Designed for broadband scanners covering the VHF and UHF bands, the Mobile One Scantenna enables reception of most frequencies between 70 - 520 MHz. Provided you keep your cable run to an acceptable limit (under about 20 metres for RG-58U) there is no reason why a mobile scanning whip cannot be used as a budget base antenna. Also from Mobile One, is the Megablaster, a genuine two way antenna. The Megablaster is an extremely efficient whip with 477 MHz transceivers, yet

The beam or Yagi works equally as well with scanners as it does with two- way systems.



works equally as well as a scanning aerial. So far we have looked at dedicated receiving antennae only. Although, some discones can be used to transmit across a broad bandwidth, we are only concerned with their receiving capabilities. All the aerials mentioned exhibit omni-directional characteristics, in other words they receive from all directions. It may be that you wish to monitor a particular channel some distance away and the signal coming in on the omni-directional antenna is scratchy and broken. By using a beam or Yagi, reception can be improved, in some cases to full noise quietening (the strongest unmodulated carrier required to quieten the radio).

COMMERCIAL BEAMS ARE AVAILABLE

Commercially manufactured beams are available at reasonable cost for 27 MHz, the two metre (144 MHz) amateur band and 477 MHz CB allocations. They can be used in their stock standard form or modified (trimmed) to suit the frequency or frequencies you wish to monitor. A beam delivers the strongest signal to the radio from the front of the antenna. Called the frontal receiving lobe (when compared to the back and side lobes) the area can be ten times the size. Signals, outside the frontal lobe, are normally below strength, in some case so low the receiver can reject them. Retailers such as PowerBand, Dick Smith, Argent Communications, South Pacific Radio and Andrews Communications, together with many of the dozens of other radio shops across the country, all sell UHF beams that can be adapted or used straight out of the box with all scanners. Beams for the two metre amateur allocations are suitable for monitoring frequencies from 108 MHz to 200 MHz.

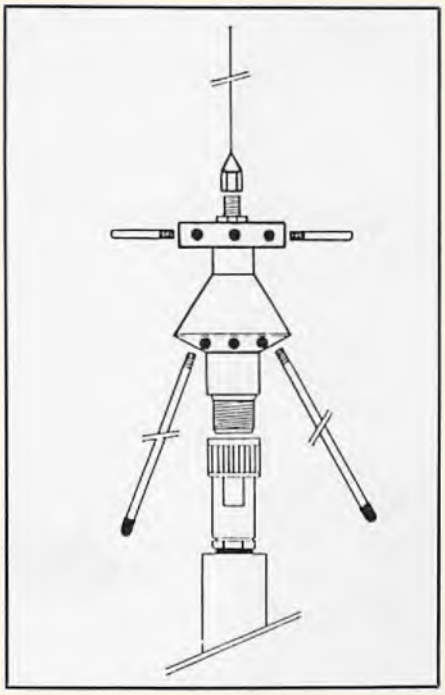
VHF SKIP

In mid 1988 a small revolution occurred in Australia's two-way land mobile allocations. The DoTaC opened the frequencies from 29.5 to 45 MHz for licencing to general radio users. Known as the 'VHF lowband' its propagation characteristics lie between HF (prone to skip) and the VHF mid-band (known to skip under the right conditions).

To receive signals in the VHF lowband, you will need to connect your scanner to an antenna just shorter than one used for 27 MHz CB. There lies the solution cut or shorten a base 27 MHz antenna to the desired lowband frequency. Any of the well known brands currently available will do the job admirably. By installing two or three antennae to the one scanner (through a suitable co-axial antenna switch) we can improve our listening enjoyment many times over. Whether it is a discone, co-linear, dipole or any of the other variations contained in this article, is of little importance, the name of the game is 'experimentation '.

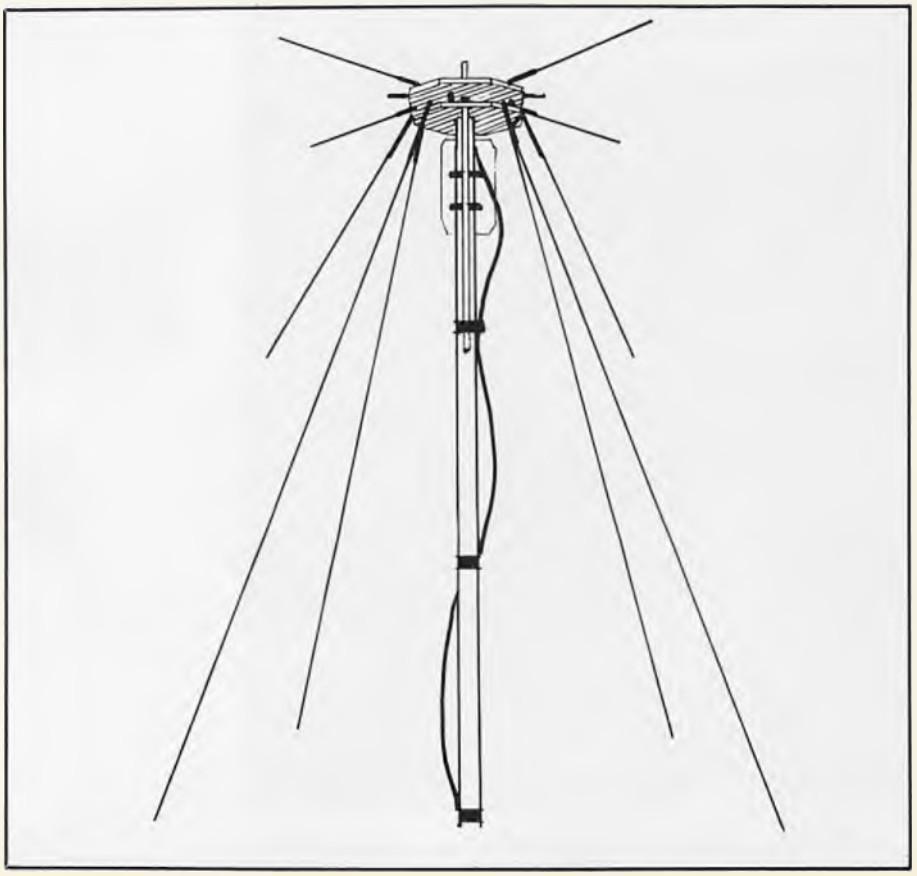
As scanner enthusiasts, we should take a leaf from the pages of the SWL crowd. Look beyond our local area and try to extend our reception range via the scanner as far as possible.

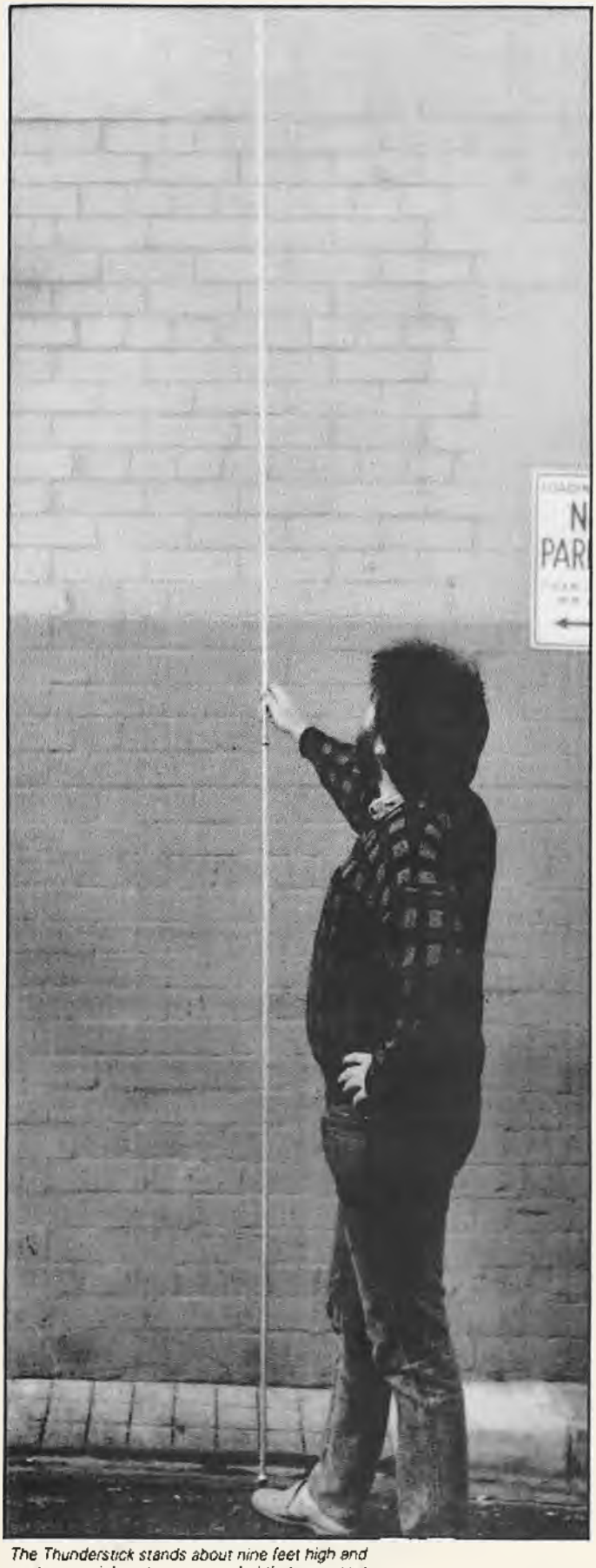
Good monitoring.



Left: South Pacific Radio's Scantenna-XLR covers 25-1300 MHz and is recognised as one of the top quality antennas. It's cost is around $150 plus about $15 for freight.

Below: Belcone is another Australian-made antenna which received a good report when it was reviewed in a recent issue of this magazine. The cost was around $100 several months back.





The Thunderstick stands about nine feet high and it is certainly not recommended that you use it when mobile.

HERE'S A DO IT YOURSELF (for around $13)...

DX THUNDERSTICK

Here's an antenna which will only cost you about $13 and works remarkably well. It's been tried and tested and will occupy about an hour or so for construction.

Some 11 years back the then assistant editor, later editor, Pete Smith put together a 'stationary mobile' antenna which worked so well that Fred, the ultimate bad luck CBer, refused to give it back to him....

While it's not going to work as well as Mobile One's big-gun Skipchaser, it also doesn't cost as much and you can put it together with just a couple of lengths of aluminium tube, a hacksaw, worm-drive hose clamp and some epoxy resin such as Araldite.

The original antenna was made from aluminium tube with one section having an outside diameter of 10mm and an inside diameter of 7mm. The other tube section naturally enough had an o/d of 7mm so that it telescoped neatly into the larger diameter tube.

Having chased around a number of aluminium retailers we discovered that these specific sizes are no longer available, however, not to worry.

We came up with two standard sizes very close to the original with the larger tube measuring 12.7mm o/d and the smaller 9.52mm o/d (the stock numbers are BDT0909M and BDT1214J — purchased from Alcan, but, you can buy the same from most

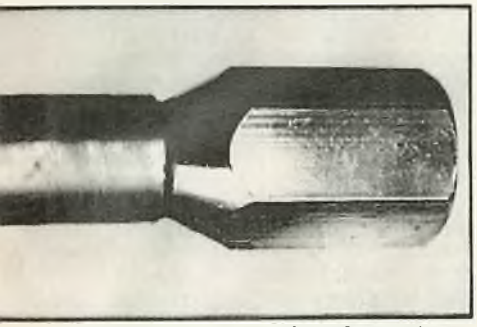
similar outlets). They come in 1.8 metre lengths and cost us $7.66 including tax.

The dimensions are not critical — just go for something around these sizes in diameter and make sure the tube is good quality or you will strike a problem telescoping one into the other.

The only other bits you'll need are an antenna base and a worm-drive hose clip.

We obtained the antenna ferrule from Ken Reynolds at PowerBand for a cost of just $5 and the hose clip cost 50 cents from the local garage. So, armed with all of this and out of pocket to the tune of only $13.16 or thereabouts you're ready to start construction.

As already stated, the measurements are not critical and we cut the larger section tube back to 1.5 metres (about 5 ft.) and left the smaller tube at 1.8 metres.



Mounting ferrule came from PowerBand and cost $5. It is mounted into the alloy tube with an epoxy resin such as Araldite.

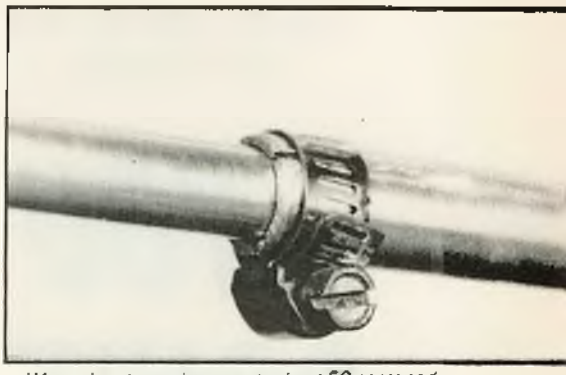
The first thing to do is to mix up some epoxy resin (we used Araldite but any similar mix will do the job) and fill one end of the larger tube with it — then push the antenna ferrule into the resin and leave it to cure overnight. The Araldite forms a very strong bond and also has good conductivity so it is ideal for this task.

Next we cut a couple of 'grooves' into the large section tube at the top and inserted the smaller length of tube inside to finish with an overall length of around 2.75 metres (about 9 ft.). We also filled the top of the smaller tube with Araldite to keep out the rain — then put the hose clip over the lower section (where you've cut the grooves), tightened it and screwed it onto an antenna mount.

First time up the SWR reading at channel 20 was around 3:1 so we played with the overall length and after the fourth try we achieved a perfect 1:1 at channel 20 with a maximum of 1.5:1 elsewhere — not bad for $13 and about an hour's work overall.

If you're not familiar with the way to obtain the best SWR and whether the antenna should be shortened or lengthened, the rule of thumb is as follows; if the SWR is higher on channel 40 than it is on channel one the antenna should be shortened — and vice versa.

We then ran a number of tests against several different whip (helical) antennas and our 'home-brew' was generally equal to, and in several tests better than, the whips (quite a bit better than the shorter whips in all cases).



Worm-drive hose clamp costs about 50 cents and locks upper section into place once the SWR reading is at an acceptable level

The one thing that you **do not do** is to run mobile — that is unless you want to either electrocute yourself by having the antenna hit a power line or, more common, have it fold up into an 'inverted vee' type very smartly.

It is strictly a stationary mobile antenna...!

So there you have it. A really worthwhile, cheap project that will give you a good DX antenna at a cost of around $13. No, it's not going to challenge something like the big Skipchaser in performance, but, it will certainly give you a decided advantage when working DX from your **stationary** mobile.

Computers open up a new way to work skip . . .

YOU DON'T EVEN NEED A RIG

David Flynn discovers the world of personal computer communications and becomes decidely excited about it...so excited in fact that he returned to the keyboard to produce the following....

Last Sunday night I stayed at home. I called up some friends who are into shortwave radio and swapped news of stations, frequencies and programes. I read articles, DX reports and reviews of the latest radios,

Then I exchanged hints on computer operations and software with someone who owns a computer like mine and picked up a few new programs. And got to know some people who share my tastes in good science fiction and very bad jokes.

I played a quick game of backgammon and compared notes on red wine with a ham on the north coast, talked about music with a young girl from Adelaide and CB with guys in California and London.

Yet I didn't hear a single carrier dropper or 'good buddy', and had perfect copy every time — even though the DX was dead last weekend.

I cheated. I didn't use a radio, I used a computer.

Welcome to the world of electronic mail and computer communications. Welcome to the global village where all you need is a computer, a black box and a telephone line.

Let me start at the beginning.

CB Action is produced almost entirely on computer. We type our stories into a personal computer and send them to the Melbourne office on disk or down the telephone line. The first time this article hits paper will be when the magazine is printed.

This system only came on line this year, before which we all sent printed 'hard copy'. Following his decree that we CBA hacks must drag ourselves into the '80s sometime before the '90s began, our Editor impressed upon me the need to get a decent PC and hopefully a 'modem' — the black box which lets computers talk to one another across telephone lines.

I settled upon my machine, an Amstrad PPC640, because it is IBM—compatible (ie swaps programs easily with the majority of PCs), is portable and has an inbuilt modem.

Originally I only thought to use the modem for CBA and other mags I write for, but somewhere I'd read about these dial-up services for computer buffs. 'Bulletin Boards' they were called, because like an office board they're used for notices and mail and generally interesting stuff.

I happened across a computer magazine with a listing of Bulletin Board Systems (BBS) and their phone numbers. Hundreds to choose from around Australia. Boards for different models of computers, boards for serious programmers and for playing games. Boards acting as relays for thousands of other boards overseas, with special interest areas on almost every subject you could imagine. So I dialled a number on my computer, and that's how I spent one Sunday night when the DX was dead.

About Bulletin Board Systems....

The BBS is a personal computer little different to the average, except that it has a larger memory and stores hundreds of programs and special applications. It is hooked up to a telephone line, just like a fax machine, and when you call the BBS your computer becomes a temporary terminal into the main system.

If you've ever used any sort of computer system it's plain sailing from here on. Up come various screens with menus and announcements and you only need to be able to type a single letter to use and enjoy a BBS — they are so 'friendly' it's almost like talking to another person.

The BBS is run by a system operator or 'sysop'. They buy the gear and set up the system, do all the computer 'house-keeping' and pay the telephone bills when they send mail from their system to another. A sysop is a lot like a UHF repeater sponsor — they like the hobby and want to do their bit to make it even better, so they put in large amounts of time and effort and money so others can enjoy it too. So I'm not sure whether they're saints or lunatics.

We've just mentioned sysops sending mail between BBSs, and this is the electronic mail or E-mail for which BBSs are so useful.

A practical example. CBA's 'Sydney Mafia' of Russell Bryant, Greg Towells, Rob Williams and myself spend almost as much time trying to contact each other as we do actually talking. We all work in different parts of Sydney at different jobs with different hours. But we've each got a modem connected to our home computer. So instead of leaving an endless trail of 'please call me' notes between ourselves we log into a BBS when convenient and leave private E-mail for one another.

When you call the BBS it checks your electronic mailbox and lets you read your mail. And you don't even have to call the same BBS-mail lodged in one board can be addressed to another. There are also numerous standard 'message areas' to which most BBS are connected, and mail between these is also shared. In the early hours

AMNET is one of the many Bulletin Board Services available to computer owners. This concentrates on amatuer and general radio.

of each morning, when callers are few and phone rates are lowest, boards automatically dial up central collecting points called 'nodes' which act like mail exchanges. They dispatch mail addressed to different systems and collect mail sent to them via other boards.

These messages may be private or public, and can be almost any length. There are also special interest groups (SIG) message areas on topics from cooking, pen-pals and computer games to religion, politics and physics.

Some of the areas are 'conferences' — Australia-wide and even international forums on particular topics, with messages flowing back and forth from bulletin boards around the world.

Consider the international sci-fi conference, which is carried by most BBSs in Australia. I can call a local BBS and 'enter' the conference. After reading

the latest messages about new books, films and discussions of various authors I reply to a message or leave my own contribution and log out of the system.

As with E-mail my message is copied and dispatched the next morning. But rather than being directed to one particular board it is sent to every BBS which carries the conference, passed from one node to another until within a week it can be read on the sci-fi conference on every BBS in the world.

Costs No More Than A Telephone Call

All this costs me no more than a telephone call to my local board, but the total cost to the sysop can be hundreds of dollars a month — for which reason some boards require you to become a 'member' for a small amount (typically $20 or less) which helps support the service.

The choice of which conferences to carry, if any, is up to the sysop. Some charge no fee and offer only local message areas, to minimise their phone bills. Others carry the most popular conferences and allow you to join in without any fee, although a donation is always appreciated.

Because most new BBS users start up by calling a dozen or more services before they settle upon the ones that interest them most, most BBSs allow for 'visitors' to log on for 20 minutes or so. This gives them enough time to look around and get familiar with the system. Visitors can of course call back as they wish, but it doesn't take long for users to choose their favorite boards.

While E-mail is an important feature of using a BBS, so is the ability to transfer files between systems and users.

These files can be computer programs, from serious applications to games, or text material such as reports and articles. They can be 'downloaded' onto your own computer, or if you've got something which others might be interested in you can 'upload' it to the BBS for others to see.

Although there are hundreds of boards to choose from most users tend to adopt only a handful as their local board. The choice of board depends on many factors, one being distance — if you work through an interstate board and have to call STD it can become an expensive pastime. Other factors are how many facilities it offers, if the board itself meets any special interest of yours and simply how 'friendly' it feels. If you live in a country area where there are only one or two boards the choice is much easier !

'But I Don't Have A Computer ...'

Maybe all this has whet your appetite, and you've found another reason — perhaps the one you needed — to buy a personal computer.

Buying a PC is a lot like buying a CB, but more expensive. There are many different home computer systems priced from under $1000 to $4000 plus, so first of all decide what you want the PC to do. Luckily there are far more computer stores than CB shops so you can shop around and get armloads of brochures and opinions before you buy.

Getting Started....

If you've already got a PC and a modem, here's how to get into the swing of BBSing right away. The boards listed below each have some content of interest to radio. I'm personally active on most of these boards, so why not leave me a note and say 'hi' (why not just say hello instead - Ed) ?

BBSing is like CB — busiest on Friday and Saturday nights. Even though regular callers don't need much more than 10 minutes on their BBS there are a lot of callers out there, so either be patient or call another time. If you are calling a distant board remember that STD rates are more than halved between 10pm and 8am each day and from 6pm Saturday to 8am Monday.

As a first-time caller you'll be asked to complete an on-screen questionnaire and possibly given the names of files to download, explaining how to get the most from the board. There may be a listing of boards in each state, so download this and check out your local boards. Lists are also printed in Australian Personal Computer and your Computer magazines. So if you've got a PC and a modem, don't get bored — get boarding !

AUSTRALIAN RADIO BULLETIN BOARDS

(all accept data speeds V21, V22 & V22bis)

Shortwave Possums — ph (02) 651 3055; a great BBS specialising in shortwave radio, on which you'll find most SWLs and communications enthusiasts who have a PC. My favorite board !

Dick Smith Electronics — ph (02) 887 2276; run by DSE to encourage computer hobbyists and offering a selection of message areas and files for users; a good general-use BBS.

AMNET — ph (03) 366 7055; general and amateur radio, numerous conferences.

AMPAK — ph (07) 263 7070; general interest and amateur radio, extensive conferences.

Hightech — ph (060) 25 1813; general interest and amateur radio, numerous conferences for members

Spend some time moving around the various BBSs and the chances are, that like me, you will discover that this great new world of computer associated communication information further broadens your knowledge and enjoyment of hobby radio in general — it's also a nice way to fill in your time when the bands are quiet.

WE WON'T BE BEATEN ON PRICE!!

BE QUICK

★ WE WILL FREIGHT ANYWHERE ★

Scanner Frequency Listings for each State $29.95 Per State inc postage

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TX475 H'HELD	$669
UNIDEN 001	$389
UNIDEN 007	$399
LEOPARD MK3	$375
AUS 100	$389
TX472S	$459
FM620	$469
SAWTRON	$799
SELCALL Fitted	$99

SSB

P/S LION MK2	$229
UNIDEN PC122	$289
UNIDEN AX144	$309
COBRA 146	$329
UHIDEN PRO 640	$345
UNIDEN GRANT	$369
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ALPHA TANGO DXers UNDER ATTACK

Further to our article about 'out of band DXers — and in particular Alpha Tango Group members' being savaged by DoTaC (refer our last issue) — below is a copy of a letter sent by DoTaC to AT Group's Italian headquarters.

Alpha Tango International DX Group
PO Box 140
Asti 14100
ITALY

Dear Sir/Madam

As you may be aware, the Federal Department of Transport and Communications in Australia regulates the radio spectrum, of which 27 MHz (11 metres) is a part.

In this country, the authorized Citizen Band Radio Service (CBRS) comprises of 40 channels between 26.965 and 27.405 MHz inclusive. Frequencies above 27.405 MHz and below 27.720 MHz (the beginning of the Australian Marine Section) have been allocated to other non CB-type users.

It has been apparent for some time that many Australian members (as well as overseas) of your club are using frequencies above 27.405 MHz for CB-type transmissions. This is despite warnings given to some AT members and quite a number of prosecutions against other CB users of these frequencies (though not A.T. members to my knowledge).

I wish to inform you of the situation in this country regarding frequencies above the authorized 40 channel Citizen Band Radio Service. I wish to do this for 2 reasons —

(a) so that harmful interference may cease to the authorized users of this part of the spectrum, and
(b) so that your members, who otherwise appear to be decent radio operators, will avoid any legal action taken against them by this Department.

Examples of some users above 27.405 MHz are as follows: —

(a) Waverider Buoys operated by the Department of Harbours and Marine throughout the country to measure heights of tides or waves, are used extensively on frequencies above 27.405 MHz and below 27.720 MHz. Transmissions by illegal users of these frequencies, completely obliterate remote receiving stations set up by this particular user.
(b) Internal paging systems are operated by many businesses throughout this country on several of these frequencies.
(c) The State Emergency Service operate frequencies within this portion of the 11 metre band.
(d) The Handphone Radio Service, which includes bushfire fighting, operate on these frequencies.

It is quite unnecessary and very inconsiderate, as well as being illegal, to operate on frequencies that are allocated to quite different usage. Rules and laws must be made and kept if all users of the radio spectrum are to operate efficiently and without interference.

Please advise your members within Australia, as well as internationally, in regard to the allocation of 11 metre frequencies in this country, so that they can prevent any possible legal action against themselves, as well as provide an interference free service to other users of this portion of the radio spectrum.

Yours faithfully
A. Gardner
Investigations Officer
Radiocommunications Operations

RUSSELL BRYANT'S

SCANNING ACTION

THE WHERE, WHY AND WHAT ABOUT SCANNERS

Normally, each alternate column will feature the letters you send in, however, due to the volume of correspondence received over the last few months, this column will also contain reader mail.

Stan in Shepparton VIC, says that while touring South Australia he attempted to monitor the SA Police in and around the Riverlands (Berri) area on VHF 73.040 MHz, but heard nothing. Stan, according to my records the SA Police use 73.250 MHz in that region. Designated channel 5 it takes in Berri, Renmark and Loxton areas.

Another Victorian reader K. Baker, has sent along a list of frequencies for the South Gippsland area of the state.

Sale Police 168.520 MHz
Morwell Police 469.050 & 469.100 MHz
Wonthaggi Police 168.310 MHz
Geelong Police 168.250 MHz
Dandenong Police 468.500 MHz
Ambulance 76.670 MHz
Victoria wide Ambulance 76.010 MHz
Surf Life Savers 486.950 MHz
Fire Service 163.090 MHz
N.S.C.A 466.500 MHz (don't expect much)

From a reader in southern NSW, comes an up-date on frequencies used by the three services in the national capital. The ACT Fire Service has 465.025, 465.325, 465.650 and 466.850 MHz as replacements for its VHF 71.000 and 71.540 MHz. The ACT Ambulance has introduced some of the new Australia wide ambulance allocation. The three used in the ACT are, 412.475, 413.025 and 413.425 MHz. The Federal Police have eight of the 64channels employed in the ACT — they are...

1. 468.425 MHz
2. 468.450 MHz
3. 468.475 MHz
4. 468.400 MHz
5. 468.700 MHz
6. 468.525 MHz
7. 468.775 MHz
8. 468.725 MHz

Bert in Merimbula NSW would like to know some of the frequencies allocated to the emergency services in his area. Bert, the Police are on 468.750 in Bega, the Ambulance service uses two channels 76.670 and 77.435 MHz and the Fire Brigade uses 78.115 MHz. With all the activity in our southern forests the Forestry Commission on 72.980 MHz may prove interesting. The Bega Valley Shire Council frequencies, 74.450 and 74.540 MHz may be active around this time with bushfire brigades.

INTERMODULATION PROBLEMS

I have a number of letters from readers all suffering from a similar complaint. When trying to listen to a certain channels, their monitoring is interupted by 'cross talk'.

Without going into specifics, all seem to have a number of factors in common. Those factors are.... they live in or near the city, have a high aspect (or their antennas do) and finally they operate scanners with an IF of 10.7 MHz.

The answer to the problem of intermod (inter-modulation) is not easy. The main cities of this country are thick with RF, a scanner, being a broad band receiver is swamped with radio waves, thus overloading the front end. Add to the situation an external aerial sucking in those waves, and the poor radio gives up and releases all to the listener.

After all, the scanner cannot tell what it is supposed to be receiving. One remedy is the use of band-pass filters. This is limiting as each filter is designed to allow certain frequencies through but not others. In other words, VHF can be monitored but UHF frequencies are filtered out. Using an internal antenna limits the range of the scanner and sometimes doesn't relieve the problem.

EASIEST SOLUTION NOT NECESSARILY THE CHEAPEST

The easiest solution, but not always the cheapest is to purchase a scanner like the PRO 2004/2005, AOR 2001/2002/3000, ICOM R-7000 or Yaesu 965/9600. These scanners have IF (intermediate frequencies) other than 10.7 MHz and improved front ends, all this assists in the rejection of adjacent channels and intermod — but not always — Catch 22 !

A letter from Robert in Balaclava VIC, and one from Brett in Diggers Rest VIC, asks for the police districts, suburbs, frequencies and radio codes used by VKC. Any reader south of the border who can help, drop me a line.

Brett, in respect of your purchase of the Saiko, the price is not excessive especially if the radio was in good condition. Prices in the article 'Buying a Used Scanner' were based on a radio in good condition with few marks on the case . The article also states, ' quoted prices are an indication only '.

ANTENNA WITH A DIFFERENCE

While travelling on the Trans Australian Railway in WA, Geoff from Burwood East, VIC writes, his train was delayed near Kalgoorlie because of a derailment. Australian National train crews could be heard discussing the incident on 168.520 and 168.580 MHz. Using a AR 3000 to monitor activity on the HF band Geoff connected his wire antenna to the wash basin. A clean signal everytime!

Roy from Ridgehaven SA complains of the lack of frequencies from the festival state. To start the ball rolling he has included a list of the interesting channels in and around his area and would like other readers from South Australia to write in.

Roy's frequencies are....

159.190 Air ambulance and rescue
159.250 Ambulance South Adelaide
158.470 Ambulance North Adelaide
158.530 RFDS far north of the state
163.240 CFS Keswick
163.270 CFS Tea Tree Gully

Roy would also like to know if it is against the law to monitor the police channels. The basic answer is no, however problems may be encountered and questions asked if you make it obvious.

ICOM R-7000 MODIFICATIONS

John in Shepparton VIC has sent Scanning Action several modifications to the ICOM R-7000 scanner including increased scan speed, scan delay and increased memory capacity. If you would like a copy of the mods, send me a stamped self addressed envelope and I will mail them to you. Leigh from Cairns uses a Bearcat 100 XL to monitor the following frequencies in his area.

70.130 Royal Flying Doctor
71.270 & 71.300 Mulgrave Shire Council
74.060 Fire Brigade
75.620 Cairns City Council
113.000 ATIS Cairns Airport
121.200 Flight Service
124.900 Tower
156.300 Cairns Port Authority
158.905 Main Roads Department

It seems that monitoring 'link frequencies' is popular among enthusiasts.

Mark from Raymond Terrace NSW is seeking the links used by the Police, Bushfire Brigades and SES in his area.

Police links — Mt. Penang to Newcastle/Newcastle to Bulahdelah 482.780 MHz
Bulahdelah to Taree 450.800/460.300 MHz
S.E.S link Taree area 451.350/460.850 MHz
Bushfire link Great Lakes Shire 451.400/460.900
Taree City Council 451.275/460.775

Geoff in Alstonville NSW writes to say he will be visiting RAAF Williamtown and would like to know where to listen.
Try these Geoff,

113.3 MHz AM TACAN
133.1 & 261.4 MHz AM Approach Primary
135.7 & 293.4 MHz AM Approach Secondary
243.0 MHz AM Emergency
135.7 & 293.4 MHz AM Departure Primary
118.3 & 257.8 MHz AM Tower Primary
133.1 & 261.4 MHz AM Tower Secondary
121.8 & 264.3 MHz AM Tower Secondary
254.7 MHz AM Surface Traffic Primary
133.9 & 134.8 & 317.8 MHz AM Primary Willy Final
338.5 Seconadary MHz AM Willy Final
118.3 MHz AM Ground Secondary
121.8 MHz AM Ground Primary

CONCERN ABOUT BANNING SCANNERS

A letter from Peter in Kilsyth VIC expresses concern over government moves to ban scanners. I think they would have their work cut out. How many government departments have you told about your scanners ? In other words, they can't ban something that is an unknown quantity.

If you are in any way concerned, write to your local state and federal member registering your complaint, politicans listen if they think a vote is in jeopardy.

In London recently, five scanner enthusiasts were prosecuted for breaches of the Wireless Telegraphy Act during the latter part of 1987. According to reports, officers of the DTI (British equivalent to DoTaC) monitored the five discussing 'interesting frequencies' by radio. For 10 months the DTI maintained a listening watch recording every transmission.

In July 1988 25 police and DTI investigators in a series of co-ordinated raids, arrested the five. The court was informed that the group were monitoring the radio networks of several government agencies including MI-5 (similiar to ASIO), and were initially suspected of being spies or subversives. Fines totalling in excess of 7000 Pounds (UK) were imposed plus equipment valued at 10,000 Pounds (UK) forfeited.

The Australian Standard and Time Station VNG transmits time signals on 5000 kHz, 10,000 kHz and 15,000 kHz from Llandilo NSW. Reports have been received of VNG transmitting on 60 MHz, this appears to be the sixth harmonic of 10,000 kHz and indications are that it is able to be copied for some distance. Try QSLing VNG stating you are receiving it on VHF and it is an harmonic, the address is broadcast every 15 minutes.

WRITE AGAIN TO PROSCAN

The Proscan company, which markets the Realistic PRO2004 scanner up-grade kit mentioned last issue, has advised me that a slight mix-up by Australia Post resulted in some mail to its post office box being returned to the sender.

However Proscan still is alive and well, and tells me its kits have been enormously popular. So if your order was returned, write again to Proscan at PO Box Q365 QVB Sydney 2000. Kits are still available for $9.95, and upgrade the PRO2004 to 400 memory channels, give 30 kHz stepping on the cellular band, increase the scan speed and improve the muting action.

Included in the next edition of CB Action will be a reader survey. If you are wondering why we feature these every so often it's simple, as buyers of the magazine, we want you to get your money's worth. The survey tells us if we are delivering the goods.

Don't forget, if there is a frequency you are chasing or you are having trouble indentifying a user, Scanning Action may be able to help.

SCANNING ACTION
P.O BOX R16
ROSELANDS NSW 2196

SUPER TIGER AM/SSB

New sideband mobile earns its stripes

It's worth noting that of some 16 AM/SSB mobiles on the Australian scene, half (including the Cobra models) are brought to us courtesy of the Hatadi Pearce-Simpson company.

This alone says much for Hatadi's philosophy of a radio for every purpose and price-range. And with a glut of full-feature SSB rigs, the latest market niche called for a value-for-money mobile with all that a first-time sidebander would need.

This means a back-to-basics approach. No flashing lights, no slimline design, and certainly nothing more than a half-dozen controls. But with the right combination of price and performance to do the job.

And that is the new Super Tiger in a nutshell. Hatadi's newest sideband cat aims to please, nothing more nothing less. And it hits the target.

For those with long memories, the name "Tiger" will of course bring back visions of the ill-fated UHF Tiger, the less said about which the better. This lost ground has been made up and more by the superior Leopard, mainly the Mk II and current Mk III versions.

Had the Super Tiger been given any other name, 'twould still smell as sweet. But with this nod to its first incarnation, the SSB rig also succeeds in making the name good again.

The photographs illustrate that the trend to dazzling mock-chrome finishes has now almost faded away, thank goodness, with inoffensive darker colors (mostly black for CB rigs) back in vogue. Also evident in their absence are the arrays of blinking lights and switches — the Super Tiger is straightforward to operate, with no hidden traps or surprises, a compact SSB well-suited to car, truck or home.

Likewise for the internals, which meet the usual Pearce-Simpson standards and use commonly available components, so obtaining spares should not be a drama.

CBA was unable to fully run the Super Tiger through the hoops, as our review model arrived back from DoTaC type-approval testing with little time to spare before deadline. But we did fire it up on-air, which is where it mostly counts, and it didn't let us down.

The receiver seemed quite sharp, annoyingly dragging in local music men and ratbags as well as the more distant DX stations that the last few months have given us. Why can't they invent an idiot blanker (perhaps a low IQ pass filter) to attenuate these brain-dead morons ?

On transmit the Super Tiger also did the job as expected, although as with most other rigs we noticed a tendency to over-modulate when we deliberately tried to over-drive the rig by YELLING INTO THE MICROPHONE AT VERY CLOSE RANGE, and what can you expect if you do that anyway ?

Like all the Pearce-Simspon range this mobile carries a full 12-month warranty with authorised service centres in all major cities, so it's a far better bet than cheap and nasties from the flea market or the local garage.

In summary the Super Tiger is a welcome addition to the Pearce-Simpson pride, and is especially worth considering if you want to make the step up to sideband with a good value mobile.

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★ Low cost ANTENNA ROTATOR, light duty, 50kg			$129

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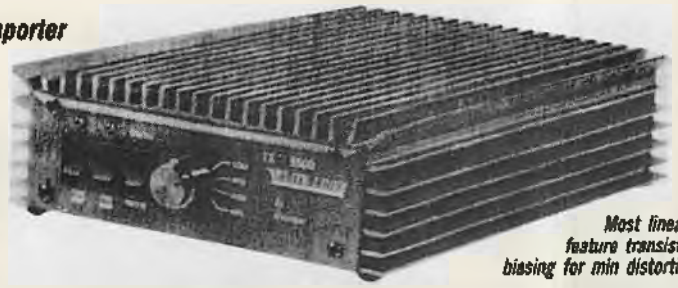

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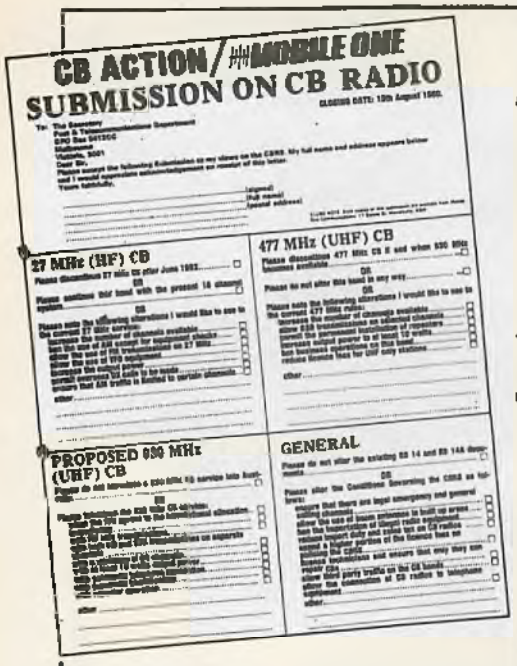

CB ACTION / MOBILE ONE

SUBMISSION ON CB RADIO

27 MHz (HF) CB

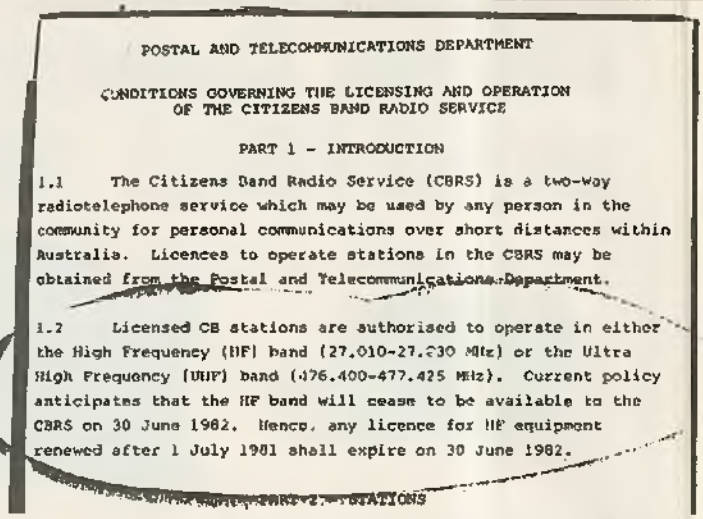
477 MHz (UHF) CB

PROPOSED 930 MHz (UHF) CB

GENERAL

This report appeared in a 1979 issue of CB Action — the circled section reads, "1.2 Licensed CB stations are authorised to operate in either the High Frequency (HF) bands (27.010-27.230 MHz) or the Ultra high Frequency (UHF) band (476.400-477.425 MHz). Current policy anticipates that the HF band will cease to be available to the CBers on 30 June 1982. Hence, any licence for HF equipment renewed after July 1 1981 shall expire on 30 June 1982."

This is just one of the many submissions made to the P & T Department way back when CB was just getting off the ground . . .


POSTAL AND TELECOMMUNICATIONS DEPARTMENT

CONDITIONS GOVERNING THE LICENSING AND OPERATION OF THE CITIZENS BAND RADIO SERVICE

PART 1 - INTRODUCTION

1.1 The Citizens Band Radio Service (CBRS) is a two-way radiotelephone service which may be used by any person in the community for personal communications over short distances within Australia. Licences to operate stations in the CBRS may be obtained from the Postal and Telecommunications Department.

1.2 Licensed CB stations are authorised to operate in either the High Frequency (HF) band (27.010-27.230 MHz) or the Ultra High Frequency (UHF) band (476.400-477.425 MHz). Current policy anticipates that the HF band will cease to be available to the CBRS on 30 June 1982. Hence, any licence for HF equipment renewed after 1 July 1981 shall expire on 30 June 1982.

HF, UHF or maybe even VHF . . . ?

Where Might Today's CB Have Been If Different Decisions Had Been Made in '77/'78 . . . ?

David Flynn looks at the CB submissions from 1977 — what we wanted then, and what we could have ended up with today. In retrospect it's surprising to read some of the things which were suggested, but, it's probably more surprising that CB is still alive and well in the late 80s.

I have a large box in my study, a treasure-trove of submissions on CB radio from the mid-70's through to the recent 'ban AM' proposals. There are papers calling for more channels on 27 MHz, from 40 in 1979 through to 80 in more recent years. Original draft plans for 477 MHz repeaters, and in-depth documents on the merits of a 930 MHz service. Calls for non-technical 'experimenters bands' at 27 MHz and 40 MHz, for legal beams (in 1980) and the introduction of FM CB.

And copies of the official Government reports and responses, too ... from the days of the PMG, thence P&T ('Aunty Pat'), DoC and DoTaC. We CBers certainly killed a lot of trees generating all this !

Of course many of these submissions bore fruit, giving us the CB service we know today.

But what if other submissions and proposals had won out ? What if different paths had been followed ? What if ... ?

Here's a look at some of those proposals, and what might have been ...

Dick Smith Electronics

There was absolutely no way that the self-proclaimed 'CB Wiz' and champion of the cause, Dick Smith himself, could have been kept out of the fight for CB, when the P&T Dept. called for submissions on the legalisation of CB radio in 1977.

Dick was still the owner and driving force of DSE, and he called for :

— a 27 MHz allocation with 18 channels available for use, these being our current channels 3-20 (at the time only 23 channel rigs were in use), both AM and SSB allowed;

— point-of-sale licensing and a 60-day amnesty for unlicensed operators (who were under constant threat of 'the bust');

— amateurs to receive a CB licence free of charge, but must use equipment complying with the CB regs (one wonders how the RIs would have felt about an FT-101 wound down to 4w AM ?).

Mr Smith also made two comments worthy of note. The first — 'an efficient, well-run service will attract more users than a crowded chaotic system'. All too true, Richard.

The second was less accurate, in that he claimed UHF CB to be too expensive, having little potential and as such there was no point in introducing the service. Hands up all those who are glad he was wrong ? I would bet that Dick's hand is up there, too.

As for 18 channels — he may not have got the frequencies quite right, but we know who the Department was listening to when 1 July 1977 rolled around.

NCRA

Remember them ? The National Citizens' Radio Association was our key lobby group, formed from clubs and later individuals around the country. They were our political voice — and at times there was too much politics and too many voices — but they and many of the hard-working delegates and executive played the larger part in getting CB legalised and later improved.

Their submission was a whopping 109 pages in length, and in summary made 32 recommendations. Highlights were :

— introduction of the American 23ch system, with a supplementary VHF or UHF allocation;

— licences issued to an operator after passing a non-technical exam based on operating procedure, and costing $15 for individuals and $10 for families, with an amnesty of three months for pirates;

— Automatic Transmitter Identification System (known as ATIS, autoident, identicode etc.) built into all transceivers;

— the NCRA to act as the administrative body of the CBRS, handling all licensing and regulatory matters with Government backing;

— CREST to be given Govt. authorisation and develop a 'national road safety service';

— 80% of licence fees to be used for administration and improvement of the CBRS, 20% being added to 'consolidated revenue';

— and even extending the amateur 3.5 MHz (80m) band and shifting amateurs onto 10 metres.

Okay, some of these recommendations were overbearing (especially the jobs- for-the-boys role of the NCRA and sister group CREST) but many were plain common sense in 1977 and still stand up well some ten years on. We got UHF CB and eventually 40

channels (another NCRA submission made on this), and the amateurs got 10m and eventually a larger slice of 80m.

WIA

The Wireless Institute of Australia, which is the national body of the amateur radio service, had two main thrusts into the CB debate. Each of the independent state divisions put their views forth, as did the Federal Executive.

On the whole the WIA thought very little of these untrained (gasp !) unlicensed (horror !) rabble who sought access to the mysterious world of electro-magnetic waves without even knowing morse code — quick children, close your eyes !

Even the introduction of the novice licence in 1975 was an attempt to defuse the growing pirate movement, with such concessions as multiple-choice questions (full and limited calls had to write essay-style answers to five of seven questions at the time) and CW at only five words per minute.

There was no shortage of dislike between the two camps. The Wireless Institute was known by many different names — the Mindless Institute and Whiners' Institute being the only ones we can print in a family magazine.

State divisions were of the general opinion that the 11m band belonged to the amateurs, although it put them way out of step with the rest of the world on 10m. So it wasn't surprising when their submissions stated that the novice licence was quite sufficient for potential radio operators.

Some states did see merit in the CB concept, but requested an 'upper VHF or low UHF allocation' for the service, somewhere between 200-500 MHz.

The Federal proposal focussed more on the viewpoints of the amateur and the WIA's role in all this and came down hard on the negative aspects of CB radio, dealing heavily with the need for strict and total supervision at all times.

I'm only too thankful that not all individual amateurs were as anti-CB as some were, and still are.

The Citizens' Band Radio Study Group

Who ? I hadn't heard of them either until this Canberra-based enclave made their submission. The paper began with notes on how CB was a social medium, relating to mans' need for communication and the social/tribal factor. The hand of some ANU philosophy and psych students must have been in this.

Following this rationale for CB radio came the nitty-gritty.

— 23ch AM/SSB to be introduced, but they forgot to specify a band. Oops .... 'Look on the bright side, guys — the antennas for 43 GHz are real small'

— all police vehicles to be fitted with CB rigs

— CB dealers to issue temporary licences while the Dept. processed the real thing;

— all conversations limited to five minutes with a one-minute break between each QSO

— all CBers to be members of recognised clubs.

Some classics there, especially the compulsory club membership. There was also an innovative but totally impractical idea to introduce CB for a one year trial period, and if it didn't work out then make it illegal again.

Some had merit though, including the temporary licences and a suggestion that all CB rigs come with a plain language regs & guidelines booklet and licensing form.

Citizens Amateur Radio Movement

CARM was an off-shoot of Sam Voron's VK-CB Club, and put forward the case for a fourth level of 'amateur' licence, long a pet project of Sam's. The 'Communicator' grade would operate on the 27 MHz band, 23 channels with 5 watts AM input and 15w SSB input (not output, as most often specified).

Sam is a devil for bandplans, and his Communicator licence had it all tied up neatly. Ch 9 for emergencies and ch 14 for calling (14 was the official amateur call frequency on 11m in those days), 1-15 for AM, 16-23 for sideband, 7 and 12 for low-power handhelds, 19 for anyone born on an odd-numbered day, and room for 12 extra channels (one for each star sign).

Jokes aside, Sam's proposal spelt out the very heart of what CBers were all about — 'what is being questioned by the CB movement is the necessity of novice licence requirements of morse code and electronic theory in regards to the ordinary citizen who wants to engage in the hobby of recreational radio communications'.

Also in the Communicator blueprint was the call for holders of a limited amateur licence to be allowed to use 27 MHz, so the band would become a common meeting place for all grades of amateur. Until novices were given 2m privileges recently, there was no band in which all classes of amateur licence could mix.

Plus no age limit (which there was on amateur licences) and a simple operating procedure exam ... and all amateurs, while on 27 MHz, would have to keep to the power levels as set.

Given this choice of futures, what would our twins in a parallel timestream see as CBers ? Non-technical exams ? 27 MHz only, or a 225 MHz VHF service ?

Would it be even recogniseable as CB radio, or might there be no CBRS at all ?

Looking at what we do have, I think we ended up in the best of all possible futures and a service which is arguably best in the world. We've just got to grin and bear it ...!

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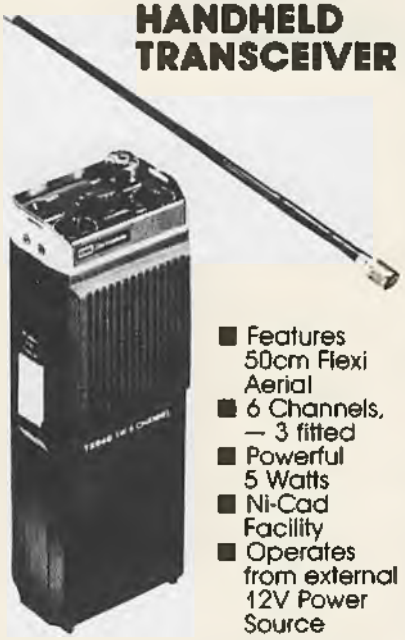

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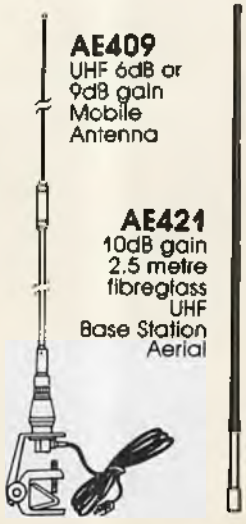

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WHAT'S IT LIKE TO BE A . . .

CBer IN PARADISE

Jack, the 67-W-07, recently spent a few weeks in Western Kiribati, a far flung group of islands just north of the equator in Micronesia. Here is his report on what he found in "paradise" . . .

Geographically, the Pacific Ocean is divided up into three regions — Melanesia and Polynesia, which are south of the equator, and Micronesia which is north of the equator.

The majority of Australians would know abut the first two regions as quite a number of these islands boast numerous tourist resorts and other holiday centres. Papua New Guinea, the Solomon Islands, Vanuatu and New Caledonia are prominent tourist destinations in Melanesia, while the islands of Fiji, Tonga, Western Samoa, the Cook Islands and Tahiti are popular destinations for the tourist in Polynesia.

Micronesia is little known to the average Australian as there has been very little publicity promoting this region as a tourist destination. This is changing however and Continental Airlines have recently started a new service from Australia to Guam Island in Micronesia. Special tourist fares have also been introduced in direct competition to those offered by other carriers to the more popular South Pacific destinations.

A more direct route which takes the traveller to Tarawa, the administrative island of Kiribati, is via Nadi in Fiji. The Airline of the Marshall Islands offers a twice weekly service from Fiji to Majuro, the capital of the Marshall Islands. The flight stops off in Funafuti, the capital of Tuvalu, and Tarawa, my destination in Western Kiribati, before ending in Majuro. The economy-class fare is very expensive, around $1670 Australian round trip from Sydney. You could get a return flight to Europe for less.

TROPICAL ISLAND

The Republic of Kiribati is the largest but least developed island nation group in the entire Pacific Ocean region. Kiribati stretches an awesome 2400 miles east to west and 1275 miles north to south. The climate is tropical with daytime temperatures between 26 degrees and 32 degrees Celsius. A north-westerly trade wind blows from March to October making things reasonably pleasant and at times is strong enough to keep flies and mosquitoes away.

The average rainfall in Tarawa is around 1500mm per year and falls primarily between October and March. The principal languages are I-Kiribati (Gilbertese) and English and the islands' inhabitants are mostly Christian. Prior to 1979 the Republic of Kiribati was known as the Gilbert Islands and was under British colonial administration.

The main industries in Kiribati are copra (from coconuts) and fish, both of which are exported. There is very little tourism owing to the islands' remoteness.

Having been to Tarawa on numerous occasions I was not a total stranger to Western Kiribati. Before leaving Australia the usual requests came through from my host family on the island for numerous odds and ends. My

host, Willie Maen, being a fellow DXer required a variety of pieces associated with radio ranging from PL-259 plugs to a complete antenna for the 11-metre band along with 0.5 amp fuses and a roll of solder. Willie's wife even requested some ointment for the baby, so after doing the shopping in Sydney my bag was full and ready to go.

The flight to Tarawa from Fiji is quite long, just over six hours aboard a British Aerospace HS-748 twin prop. Not having any passengers for Funafuti in Tuvalu, we bypassed there and flew over some of the most beautiful scenery in the world to Tarawa. Thus I arrived in Tarawa, at Bonriki Airport, an hour and a half early, which caught Willie by surprise as he hadn't even left home to pick me up from the airport.

Taking the bus ride from the airport at Bonriki to Willie's house at Betio I could see little had changed on the island since my last visit. A new radio antenna here, one missing there, showed the ups and downs of the radio hobby on the island.

There are quite a number of CB radio operators scattered throughout the Republic of Kiribati. Although most are based on Tarawa, the main island, there are numerous battery-powered stations on the outer islands. Outside the main centre of Tarawa there is very little associated with modern lifestyles we take for granted and enjoy in countries like Australia.

BATTERY POWERED

On the outer islands, radio equipment is usually operated from a 12-volt car battery. Charged by a solar powered system these are simple but effective enough to supply reliable communication via groundwave or propagation throughout the entire Republic. Even on the main island of Tarawa some people still use 12-volt car batteries to power their CB radio as they cannot afford the cost of a power supply, considered a luxury in these parts.

Very few of the I-Kiribati people who operate CB radio stations are DXers, most of them use the radio for inter-island business, ordering supplies for the store or just conveying domestic traffic over the radio as there are no telephone systems as we know them on the outer islands. Some are lucky enough to have a radio telephone station at the main post office in the village, other than that there is only the odd CB radio station providing a link to places outside the island.

CB radio in Kiribati provides a cheap form of communication throughout the country, a sort of an electronic "bush telegraph", keeping people in touch as to what is going on within the country. Most of the inter-island ships are also equipped with CB radios which provide back-up communication with the outer islands in the event of an emergency.

After settling in at Willie's house I decided to check the band to see how the DX was going. I was very surprised to note that the band behaved quite differently north of the equator. I could hear stations in Australia and New Zealand working Europe and the Middle East but nothing from those countries was heard in Tarawa. Being in the Northern Hemisphere there are bound to be different characteristics of propagation compared to what is experienced in the Southern Hemisphere. Different band paths, along with different opening times all have to be taken into consideration.

Europe was a disappointment although one evening around 11.30pm local time Italy was heard. Longpath from Western Kiribati to Europe was also a failure, again stations south of the equator were heard working them but nothing from Europe at my end despite constant antenna switching and rotating of the beam.

SALT-AIR SAGA

With conditions to Europe, the Middle East and Africa being virtually non-existent Willie and I took the opportunity to do some work on the antennas. After taking down the beam antenna I could see why Willie needed the new antenna clamps I brought from Sydney — the ones that were on the mast were virtually eaten away by salt-air corrosion which attacks just about everything metallic in these islands. Motor cars have a three to five year life span, if they are lucky, and by then they are little more than rusted hulks on wheels.

It is hard work dropping down the beam antenna in heat and humidity, not to mention the flies that keep attacking you. The 11-metre band vertical brought up from Australia presented quite a problem when it came to mounting it atop the beam. Not only are clamps hard to come by in "paradise" but good straight lengths of pipe are also hard to procure, especially if you are after a particular size and length.

After a scrounge about some pipe was obtained, even though it was quite rusty it would have to do as it was all we could find. After another 30 minutes of mucking about the vertical was eventually secured atop the beam and everything was then set to go. Surprisingly the SWR on the vertical was perfect, but the weird part was the SWR on the beam had risen slightly. As it was still at an acceptable level we decided against mucking about with it anymore. It takes a good six pack of beer to get the antenna down, not to mention getting it back up!

Even though the band remained dead as far as Europe was concerned there was ample Pacific DX about. Many a long ragchew was conducted with John, the 25-E-01 in Tonga along with Dick, the 33-FE-077 in neighboring Eastern Kiribati so there was always someone to talk to. The AW-25, operated by Jin on Cheju Island, South Korea also popped in to say hello and was closely followed by my good friend Mike, 101-AT-102 in Madang, Papua New Guinea. After some fiddling around we managed to secure a three-way hook-up with John in Tonga, Mike in PNG and myself in Western Kiribati. John and Mike established a readable contact and picked up each other as new DXCC countries for the first time. An unusual hook-up considering the distance involved.

SUPER PANTHER

The following day was visiting day. Willie came home from work early on the motorbike and picked me up for the short trip to the northern end of Betio village where I was to meet Ruka Betero, who signs as T3-CB-2134.

Ruka has a very modest set-up as far as DXers go, and has done quite well for his four years on CB radio. As soon as I entered the radio area of Ruka's modest home I had a surprise — the Super Panther CB radio that Ruka owns was brought to Tarawa by me six years ago for another operator at distant Bikenibeu village.

The radio had changed hands at least three times since I brought it to Tarawa but the Super Panther was still going strong with no fault occurring — a good advertisement for Pearce Simpson!

As Ruka cannot afford the luxury of a power supply he still runs the radio off a 12-volt car battery. He spends quite a bit of time off-air waiting for the battery to be re-charged. The two main antennas that Ruka uses are a vertical dipole and a three-element beam, and with only 12 watts PEP from the Super Panther he had done quite well for himself judging by the QSL cards proudly displayed on the wall.

Ruka is employed by the Kiribati Police Force as a constable and is stationed at Betio village police headquarters. A policeman in Kiribati is only paid between $1513 and $2820 a year de-

pending on his grade in the force. One can see why Ruka cannot afford the luxury of a power supply for his radio. Out of his wage he has to feed and clothe his family and pay other expenses that crop up from time to time. Luxuries such as QSL cards are out of the question as they have to be imported from overseas at a price well out of Ruka's reach at present.

Another prominent DXer from Tarawa is Tekena Teitiba, who signs as CB-2147. Tekena has been about the CB channels for quite a few years and like Ruka has made many friends in Australia and other countries through his DXing activities. Tekena uses a President Grant 40-channel radio through a vertically polarised three-element beam.

Tekena also has an old Yaesu FT-101ZSD which he uses to listen about the other bands, that is, when he is not supervising band practise. A number of Tekena's older children have formed a local band and have proved themselves quite popular around Tarawa. Tekena is employed at the local meteorology station on Betio, which is linked to a Pacific-wide network of net-stations providing valuable information on Pacific weather patterns.

When Tekena took me to his house he explained that he was off the air due to the radio blowing the transistor finals. He couldn't understand why this kept happening. I immediately asked what the present SWR reading was on his antenna and his reply was a simple shrug of the shoulders and a big smile.

Not owning a SWR meter, Tekena had no idea at all as to the reading of the antenna, and judging by the number of transistors his radio had blown in the past I could only assume that the reading was far too high. As simply as I could I explained the rules of antennas with relation to SWR and the importance of regularly checking the SWR reading. Again Tekena smiled at me, but I think he did get the general idea of what I was trying to explain to him. He then said that he would ask around to see if he could get a loan of an SWR meter to check the antenna reading.

CB radio is quite popular in Kiribati. Antennas, especially on Tarawa, can be seen everywhere, and there are quite a variety of them too, ranging from homebrew creations to the top-of-the-line fancy DX models. Although CB radio is not legal, nobody seems to worry too much about its presence. It is an accepted way of maintaining communications throughout the country, a way that people and communities stay in touch thus narrowing the barrier of distance that separates them.

CHEAP COMMUNICATION

Basically, CB radio is a cheap and effective mode of communication in a country as diverse as Kiribati. Good reliable radios are worth their weight in gold here. There are no service agencies or spare parts back-up in this region, so everything is imported. Items such as power supplies, SWR meters and fancy power microphones are hard to come by and are very expensive here. You will find that the basic CB radio station in Kiribati is very modest with the sole purpose of establishing contact with other stations in the region. Therefore, DX takes second place.

On Tarawa, there is only one reliable technician who, if he has the time, may look at the radio for you. He is Bill Reiher, the chief engineer at Radio Kiribati the national broadcaster. Bill is also a CB radio operator, but doesn't get much time these days to work the DX as he is usually working on radios in his spare time, that's if Bill isn't out fishing in Tarawa lagoon!

Looking about in Bills' rather cramped workshop at Radio Kiribati, one can see numerous CB radios gathering dust, waiting for their turn on the repair bench. Bill was surprised to see me back so soon, as six months had only passed since my last visit to Tarawa. Bill, being a busy man, didn't have much time to chat, but we both agreed on one thing — the salt air so prevalent in Kiribati is the main cause of problems in CB radios. That, coupled with ignorance of the laws associated with SWR results in burnt-out power transistors.

Having no exclusive radio shops within the country, CB and amateur operators alike have to obtain their equipment from overseas, usually from Australia, Japan or the US. This is done via mail orders, or through on-air contacts with friends in the countries concerned. It's a difficult life in "paradise". One has to make do with only basic resources. In a country where wages are low and services limited, a sound investment has to be assured before a purchase is made, as value for money is fundamental on a remote Pacific island.

The majority of CB radio stations in Kiribati do not have QSL cards of any kind. Postcards are hard to come by and can only be purchased on the main island of Tarawa, at Bairiki. I know many DXers who have complained to me that they have never received a QSL confirmation from Kiribati. One of the main reasons for this is that the average I-Kiribati CBer cannot afford such a luxury. Another reason is that they are not really conversant with the DX hobby and do not understand the importance of a QSL card.

HOW TO . . .

QSL LATIN AMERICA SW

QSLing Latin American stations can be the ultimate challenge for a shortwave DXer. In fact, getting those verifications back is a real art. And that's the title of a little publication from Argentina that can help you be more successful in your attempts to QSL Latin stations. It's called italicThe Art of Latin American QSLing by Julian Anderson and Gabriel Ivan Barrera.

Although the booklet only contains nine (that's right nine) pages, it can help bring those elusive QSLs into your mailbox. The booklet begins with an explanation of how to go about writing to Latin stations, from how to address the envelope to what to put inside it. Then there are some excellent tips on how to write both a covering letter and a reception report in Spanish.

These are not just form letter or reports that you simply copy, rather, they are a selection of phrases and paragraphs to enable you to build your own letter or report. Within this section the authors present some things that are very worthwhile; paragraphs to include explaining just what DXing is all about and what a QSL is...

As the authors point out, most stations in Latin America have no idea why DXers are writing to them or what they want. Including an explanation of what your hobby is about and what you would like from the station is essential in obtaining a reply from them.

The booklet ends with a listing of the various languages used through Latin America, a list of Latin American soccer teams (very useful if you should happen to hear a sports broadcast), an explanation of the various musical styles of the continent and details of the currencies used in Latin American countries.

The Art of Latin American QSLing is an essential publication if you are at all interested in receiving cards from this part of the world. It costs $US3.00 or six IRCs and is available direct from the publishers, Casilla 57, Suc. 40, 1440 Buenos Aires, Argentina. If you are a stamp collector you can collect an added bonus - the envelope in which you receive your booklet is likely to be covered with Argentinian stamps - particularly if you request this when ordering.

CURRENT SOUTH PACIFIC PROGRAMS FROM HCJB (Equador)
Below is the current South Pacific broadcasting schedule for the Equadorian station HCJB. Programs of particular interest are 'Ham Radio Today' and 'DX Party Line' and if you're interested in joining the Andex International to receive regular schedules and other items of interest you should forward $AUS6.50 to HCJB-Andex, GPO Box 691, Melbourne, Victoria 3001.

SOUTH PACIFIC RELEASE

UTC	My Time	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	My Time	UTC	METER BAND
0710		Psy. For Living	SOUTHERN CROSS SALUTE					Focus 2000		0710	
0725		LATIN AMERICAN NEWS								0725	49m 6130 kHz until 0800
0730		**HAPPINESS IS**	We present HCJB staff, visitors, and in-depth topics daily.				**HAPPINESS IS**			0730	
0800		SALUDOS AMIGOS	DX PARTYLINE	MUSICA DEL ECUADOR	HAM RADIO TODAY	MUSICAL MAILBAG	Sounds of Joy	DX PARTYLINE		0800	
0830		Focus on the Family	Gateway to Joy Psychiatry and You Guidelines for Family Living					Focus on the Family		0830	
0900		NEWS PASSPORT	NEWS DISCOVERY	LATIN AMERICAN NEWS (0900 and 0950) **PASSPORT** Joni and Friends (0955)						0900	31m 9745 kHz
0930		Songtime	Radio Reading Room	HCJB's magazine of the air. News, music and special features from Ecuador and the world.						0930	
1000		**HAPPINESS IS**	We present HCJB staff, visitors and in-depth topics daily.				**HAPPINESS IS**			1000	25m 11925 kHz
1030		SALUDOS AMIGOS	DX PARTYLINE	MUSICA DEL ECUADOR	HAM RADIO TODAY	MUSICAL MAILBAG	Sounds of Joy	DX PARTYLINE		1030	
1100		**MUSIC IN THE NIGHT**						Family Foundations		1100	
0800		Communication Gospel Blessings	Back to the Bible					Heaven And Home Hour		0800	
0830		Radio Bible Class	Thru the Bible with Dr. J. Vernon McGee					Encounter		0830	
0900		Hour of Decision Psychiatry and You	Insight for Living with Dr. Charles Swindoll					The Sower Psychology for Living		0900	49m 6130 kHz
0930		Wonderful Words of Life Let My People Think	NEWS HCJB TODAY	Telling the Truth	Family Bible Hour	Words of Hope	Haven of Rest	Communication Chords of Love		0930	
1000			Rendezvous LATIN AMERICAN NEWS					Bill Newman Speaks		1000	

BAND SPREAD

FROM DC TO DAYLIGHT

WITH GREG TOWELLS

Welcome to the Springtime edition of Bandspread. Remember, this is your column and it covers all parts of the spectrum and caters to all radio interests. If you want others to read about your news and views or interests, you need to let me know about it as soon as possible. It does not matter if you are confined to 27MHz AM or are into exploring the inner workings of the high gigahertz bands, drop me a line and let me know.

ONE FOR SYDNEY UHFers

At the time of writing most operators have a wide range of repeaters available for use. Channel 4/34 recently came back into operation after a lengthy downtime while 3/33 seems to have recovered from its recent burst of on-again/off-again style of operation and now provides reasonably stable use, provided you put up with a short time-out period and long tail.

That means that channels 1, 2, 3, 4, and 7 can be accessed by most people with a lucky few able to trigger channel 6/36 near Mittagong and channel 8/38 from down Wollongong way. However, this profusion of repeaters does not necessarily mean the wombat and other non-intelligent species are spread around more, but rather appears that more of this species take their place. A particularly foulmouthed security company cretin inhabits channel 3 virtually every morning of the week and crowds of sad cases indicate the finish of school most afternoons on most repeaters. I would suggest these types take the hint and cool their style of operation as the new 'on-the-spot' fine system is already being policed by DoTaC.

WHO IS THE MAD UHF DXer ?

Who is the Sydney operator obviously dedicated to DX on UHF?

I mean, there can't be any other reason to have a multi-element beam strapped to the top of a small truck aside from chasing the prized DX. Said operator has been spotted many times around the metro area with this mean antenna on board. Drop me a line, please, and let me know what sort of results you achieve with it. But then, maybe it is the ultimate legal solution to accessing Sydney repeaters over the top of the brain-dead.

OF AMATEUR INTERESTS

For all those who are Amateur Radio operators, aspiring licensees or just those interested in listening around the bands, the Wireless Institute of Australia has many services of interest. The following information relates to the NSW division of the WIA, however, divisions in other states will no doubt have similar services.

Some of the member services include a QSL bureau at little or no cost to members, a wide list of local and overseas publications for the Amateur operator and a reference and lending library. Video tapes are also available for loan to members. The WIA also conducts broadcasts from the divisional station VK2WI at Dural, Sydney on Sundays at 1100 hours and 1930 hours local time. The broadcast is carried at both times on the frequencies of 1845 KHz, 3595 KHz, 28320 KHz, 52.12 MHz, 52.525 MHz, and 144.12 MHz. Sessions carried on repeaters are 146.650 MHz Western Blue Mts, 146.725 MHz Gosford, 146.850 MHz Wollongong, 147.000MHz Sydney, 147.100 MHz Lake Macquarie, and 438.525 MHz Sydney. There are additional frequencies for the 1100 hours session which are 7146 KHz Sydney, and 3585 KHz from Newcastle. There are also relays of the broadcast carried through repeaters in country NSW. These are 146.700 MHz Orange, 146.800 MHz Western Plains, 146.800 MHz Lismore, and some ATV repeater systems.

LIMA ALPHA CLUB

The Lima Alpha club has once again sent me plenty of information about its forthcoming activities and events. Unfortunately, I have had to condense some areas due to space limits. But...other clubs....surely there are some left around Sydney that have the capability to send in info.....it may be a brief rundown, but it's better than nothing! And the same goes for other Australian clubs! Anyhow, to the LA's events of interest. The LA club auction will be held on Saturday 4 November at the clubroom at Quigg Road, Lakemba. Goods to be auctioned must be registered in by 12.30 with the auction starting at 1.30pm. The Christmas function will be held for members and guests at the Royal National Park, Heathcote, on Sunday 26 November. Food provided by the LA club, just bring your own grog. An expedition (DX?) to Lightning Ridge is planned for January 1990 and all are welcome to come along, not only members. Duration is from 13 January to 21 January 1990. Could be an interesting trip, especially with all those opals just waiting to be discovered there, and all that DX for the taking.

AMATEUR LICENCE OR UPGRADE

For those wishing to attempt the Amateur license, or wanting to upgrade, the WIA has tutorial services designed to improve your level of proficiency. A correspondence course is available to cater for the AOCP, LAOCP, and NAOCP examinations, as well as bridging course from NAOCP to AOCP/LAOCP level. To get your morse up to scratch, the WIA provides morse practice sessions on 3.550 MHz at 1930 hours every Sunday. There are also continuous morse transmissions on 3.699 MHz and 144.950 MHz provided courtesy of the Hornsby & District Amateur Radio Club.

Beacons and repeaters are also provided for the benefit of the Amateur Radio service. Beacon services from VK2RSY Dural are on frequencies of 28.262 MHz, 52.420 MHz, 432.420 MHz, and 1296.420 MHz. WIA repeaters are 147.000 MHz and 438.525 MHz from Dural, and WICEN VK2RWS on 147.150 MHz and 438.275 MHz from Chatswood The Wireless Institute Civil Emergency Network (WICEN) operates in each state. Further details concerning VK2 WICEN may be obtained from Amateur Radio House in Parramatta NSW, or by calling in on the Thursday evening net in the Sydney region at 8.30pm on repeaters VK2RWS on 7150 or 8275.

WARRANTY WARNING

A warning to buyers of new radio or computer equipment concerns any possible future warranty claims. Advice from a number of retailers and particularly importers is THAT upon purchase, **you must ensure that you get a receipt clearly stating the DATE OF PURCHASE and the serial number of the item in question.** Next...make sure that you keep the receipt, since a warranty claim will be denied if the receipt is not available.

DON'T FIDDLE WITH IT..!

One more point about new radios and warranty is the tendency shown by proud owners to 'have a fiddle' under the covers, possibly prompted by mates who know everything about radio except how to fix it when it does not work anymore.

The advice here is, leave it alone, at least while the equipment is still under warranty. If you feel the radio is not performing up to specifications, take it back to where you bought it. The retailer is obliged, under warranty, to tune the radio to the published specifications in your handbook. Some shifty CB stores will attempt to deny you these rights under warranty, however, a quick call to consumer affairs in your State is usually enough to sort these types out.

Better still, when purchasing your radio insist on the radio being tuned up to specifications before taking delivery. A few radio stores I have experienced claim that all radios are tuned correctly before sale, but then, pigs don't fly either (except in some States!).

35LSB IS NOT A CALL CHANNEL

Put very simply, Channel 35 lower sideband is **not a call channel**, just an outlet for operators to ratbag and music-box each other all their waking hours. Anyone who is serious about using a sideband call channel **FOR CALLING** can be found on **16 LSB**, the OFFICIAL SSB CALL CHANNEL! Lots of operators can be found on 35 bleating about the jamming and abuse and spraying threats of 'on-the-spot-fine' radio inspectors that are about to raid everyone who annoys them, and the morons keep on, delighted that they are having an effect on someone. While I don't condone jamming and the like, I am sure that the RIs are delighted that this channel drains the brain-dead off all the other channels.....except maybe 11 AM. My advice is, if you are serious about calling, whether it be your mate across town, or calling DX, then use channel 16 LSB. In my time monitoring, just about any time of the day or night, 16 LSB will be dead while 35 is going hammer, tongs and music-boxes. If you choose to stay on 35 LSB it's only because you enjoy a CB brawl, frustration or are stone deaf. Get the message, anyone care to comment, or have I said it all.....? **Once again, a reminder to write to me with your news from around about and on the bands. The address is Greg Towells, P.O. Box 514, Toukley, NSW, 2263.**

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Q. Will the Captains's Registers give me all that information for all bands?

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Q. That sounds good, but what's the range of frequencies?

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HF LINK

WITH ROB WILLIAMS

Welcome once again to HF Link, I hope the winter months were good and you didn't freeze in front of your radio. This month I have a report on the recent London-Sydney Qantas flight and news on a new HF network.

Remember, all times are in UTC (same as GMT) and all frequencies are in kHz. International broadcast stations are in AM and utility stations in SSB unless stated otherwise.

NEW SHORTWAVE BOOKLET

New to the scene is the Australian Shortwave Guide, a compact 20-page booklet of DX news.

The most recent (July) edition hit my desk too late for a mention last issue, but I still found it a useful reference to have alongside my radio.

The guide is designed for listeners in the local region, including a listing of English-language broadcasts to Asia and the Pacific and transmission schedules of over 60 stations.

It also contains a list of station addresses and a time-order list of both English and foreign-language transmissions.

The guide is ideal for anyone who is just starting in the hobby, and as it only costs $5 it certainly won't send you broke. Most shortwave DX clubs provide the same material as the guide, but not everyone wants to join a club and for these people the Australian Shortwave Guide is worth considering. To order, write to Australian Monitoring Services, GPO Box 2143T, Melbourne 3001.

EXTENDED GUARANTEE FOR FRG-8800

Further to last issue's review of the renowned FRG-8800 HF receiver, DSE's radio wiz Chris Ayres informs me they now offer a full two-year guarantee on the radio — double the usual 12-month warranty. Sounds like the FRG-8800 just became even better value for your shortwave dollar!

MORE ON SKYCOM

Following my notes in the May-June edition concerning Skycom, Lawrence Hester from Swan Hill informs me of additional frequencies in use.

Incorporated within the Skycom service is "Autocall", an air-to-ground telephone link similar to OTC's VHF maritime Seaphone service. Listeners will hear a series of tones, which alert the OTC operator.

Autocalls are established on 13300 and 17940. Voice calls can be initiated on 4666, 8930 and 11342, however 4666 suffers from interference from a Korean station and hence has moved to 4687, one of the Qantas' company frequencies.

Other working frequencies available are 3007, 6532, 8903, 8936, 10072 and 17934. Some of these higher frequencies may come into use if the sunspot cycle continues on its upward climb. 17934 and 8930 also carry other international users, so alternative frequencies to these two may be used.

OTC is using 10Kw Marconi transmitters at its transmitter site at Doonside, west of Sydney. These transmitters are fully synthesised and can operate anywhere from 3-30 MHz.

OTC also is offering a dedicated Skycom service for companies who need to establish long range communications using HF radio. Qantas is using such a system to maintain world-wide communications with its aircraft, so we may see further Skycom services commencing in the future. Skycom is not as efficient as using Aussat but is far cheaper.

QANTAS BREAKS A RECORD

To top off what we've learnt about Skycom, 17 August saw the record-breaking flight of Qantas' new 747-400 from London to Sydney. The first of the new long-range fleet, it is named "City of Canberra" and uses the callsigns QF-741 and QF-41.

Much of the communication was carried out on good old HF. Kelvin from Sydney tells me of his day-long adventure glued to his radio, listening to the flight from 0530 AEST till its arrival over Australia. Many Skycom frequencies were used together with Qantas company channels. It was planned that from take-off in London, HF communications to Bahrain would be co-ordinated by Stockholm radio. From over Bahrain OTC was to continue monitoring the flight. Kelvin tells me of many phone patches between numerous media organisations and the aircraft. The callsign of the new aircraft is VH-OJA, the first in the "O" series of callsigns, which have been reserved for the new fleet. The fleet will be known as Longreach, after the town in Queensland from which Qantas commenced operations, as well as the plane's "long reach" over vast distances.

The jet has only one HF antenna on board, therefore to communicate with Skycom it must leave the HF channel it uses when communicating with air traffic control. QF741 had 9 x 15 minute windows in the India to Sydney leg to break with ground control for Skycom, however this was extended with in-flight permission from aviation authorities.

Another first was achieved when OTC provided a patch between a Qantas aircraft over Lord Howe Island and QF-741. This was the first aircraft-to-aircraft HF link via Skycom. Nice catch, Kelvin!

Due to ionospheric disturbances during the flight Skycom activated several new frequencies which we haven't heard before. These were 8140, 8722, 11417, 14974, 15750 and 13817. OTC did everything possible to maintain communications.

This goes to show what you can hear if you know what is going on. Keep up with day-to-day happenings around you and read the newspapers. Who knows what you may hear? If you do hear something unusual drop me a letter so I can share it with everybody.

In the future if I come across a major event where I think HF will be used I'll leave a message in the "Shortwave Possums" BBS, which may be forwarded onto your local BBS. This way up-to-date information can be passed on as it happens.

A MOVE FOR THE IPS

The IPS radio and space services have moved to a new location in Sydney. Their new postal address is PO Box 1548, Chatswood NSW 2057, phone (02) 414-8000. The Solar and Geophysical report recorded message is now on (02) 414-8330.

IPS provides CBA with an excellent monthly solar-geophysical summary, with all the indices and solar figures and a detailed list of flares and fade-outs. I find the back page of the report most interesting, as it explains particular aspects of propagation and its effects on Earth.

MORE ON WIA BROADCASTS

From this month's correspondence, Glen Sawyer of South Australia tells me the SA division of the WIA conducts a news broadcast commencing at 0900 local time (Sundays I presume) on 1820 (AM), 3590, 7095, 14175, 28470 as well as 145 MHz (FM), 53.1 MHz (AM) and various VHF/UHF repeaters around the state. Glen also says the WIA broadcast has an excellent "disposals segment" for second-hand communications equipment. This might be the way to pick up a bargain.

NEWS FROM WWVH

While on the subject of propagation, WWVH has introduced a solar and geophysical report, similar to WWV. According to a report on Radio Nederlands' "Media Network" the report can be heard at 45 minutes past the hour on 2500, 5000, 1000 and 15000 (all in AM).

EDUCATION VIA HF RADIO

Listeners to HF know of the Royal Flying Doctor Service (RFDS) and School Of The Air (SOTA), provided to isolated outback communities. Well, an announcement from the NSW Minister of Education on 24 July detailed a plan to disband the Sydney-based correspondence school and replace it with a network of seven "distant education centres" (DES) using HF radio, starting in 1991 to bring students closer to their teachers. Stations will be established at Bourke, Walget, Tibooburra, Cobar, Dubbo and Hay, in addition to upgrading the existing Broken Hill base.

Each network will have separate frequencies. Broken Hill will also be expanded to provide a service for students who live closer to Broken Hill but are not already properly served by the SOTA. A VHF/UHF link will be established from the town to the HF transmitter site where 1kW transmitters will be used. Lessons will consist of 3 x 20 minute classes per day, per age group.

Various coastal networks will also be established for isolated families, but will be linked using modern telephone facilities. I'll keep my ears to the ground and pass on more information as it comes my way.

Well,the word counter on my PC tells me I have run out of space, so I'll just have to hang on to the rest of my notes till next time. If you have the urge to write to me the address is PO Box C-111, Clarence St, Sydney NSW 2000, enclosing an SASE for personal reply. So until next time, may you receive many HF electrons on your antenna.

ICOM IC-M800 IDEAL FOR ANYTHING THAT FLOATS

One of the world's leading communications equipment manufacturers, ICOM, have released an HF marine (SSB) transceiver which will solve that age-old dilemma for boat owners: "Water and Electronics don't mix!"

A problem mariners (and in particular yacht owners) have had for years is that a normal sailing position can be damp — if not wet. And high technology equipment such as marine transceivers do not like wet, or even damp, conditions.

Put the transceiver "in the dry" down below, and the chances are a call might not be heard.

ICOM's new IC-M800 Marine Transceiver has changed all that!

It is a split system, with a splash-resistant remote controller which can be mounted practically anywhere. Even more, up to four remote controllers can be connected, making multi-point operation simple. Wheel or tiller, chartroom, sleeping area, flybridge . . think of the convenience such a system would give.

And there's more: the controllers also double as an intercom system (assuming two or more are fitted).

A state-of-the-art optical fibre cable just 5mm in diameter connects the controller(s) to the transceiver — which itself can be mounted anywhere you wish.

The optical fibre cable cannot corrode, short or pick up electrical noise from other electrical/electronic equipment on the vessel, from the motor or other sources of interference. The cable can be routed under carpet, under fittings — anywhere.

The IC-M800 is ideally suited to all ocean-going craft from yachts to supertankers. And with HF radio now mandatory on most craft, the IC-M800 is the perfect choice.

THE TRANSCEIVER

A frequency coverage of 0.5 to 30MHz (continuous receive) and 2 to 23MHz (transmit) is provided, with the transmit covering all international HF marine frequencies.

The receiver features high sensitivity (0.5uV from 1.8 to 30MHz) while the transmitter has a power output of 150 watts. It operates from a nominal 12 volt supply, with a maximum 30A transmit current.

Up to 127 memory channels are available, and each channel is written into a memory chip so no backup battery is needed.

The IC-M800 is unique in that it has a CPU (central processing unit) which automatically ensures the transceiver operates according to each country's regulations.

Memories can be scanned for signal searching, or individual frequencies can be entered via a keyboard or tuning dial.

If your're in trouble, one switch will gain immediate access to the 2182kHz distress call frequency.

The ICOM IC-M800 is also designed for SITOR operation.

Dimensions of the remote control unit are just 286(w) x 111(h) x 62(d), with the main transceiver unit 286(w) x 111(h) x 325(d).

An automatic antenna tuner or an antenna matcher are available as options.

The ICOM IC-M800 will soon be available from ICOM Marine Radio dealers around Australia.

David Flynn reviews the new . . .

REALISTIC TRC800 UHF RIG

The new rig bears more than a passing resemblance to the Uniden UH-001.

Realistic's first entry into the UHF CB stakes was a good little radio handicapped by 'sticker shock'. Tandy re-badged Uniden's ever-popular UH-001 with their house brand, priced it at some $80 above the 001's retail and then sat back and waited for sales.

They must have been somewhat disappointed that UHF CBers quickly recognised the Realistic/Uniden similarity and elected to save $80.

The TRC-800 is set to change that. Yes, it bears the same model number. And yes, apart from minor cosmetic changes it is the very same radio as before. The only serious modification is the price tag — the new TRC-800 sells for a tad below $400.

IS IT A TWIN OR A CLONE ?

That it remains a UH-001 clone — no, a twin — is obvious at first glance. But with a competitive price, who cares ? Uniden makes good gear, and rather than coyly avoid the connection Tandy should be proudly trumpeting it — you know, 'built by the world's leading communications company to our exacting specifications' and all that advertising hype. If Uniden proceed with the rumoured facelift for their UHF models, to bring them in line with the snazzy PRO series, the kinship will only be obvious to those 'in the know'. So here we have the TRC-800, mk II. Get an original and play 'spot the difference'. The new one has a smooth silver fascia with black detailing and controls, except for the white 'tone call' button. It's neat, unobtrusive and efficient. Not flashy or scary. Made to suit any vehicle and any operator.

NO SURPRISES

Turn it on. Up and down, front to back, there are no surprises. Select the channel. Transmit. Receive. As such, the TRC-800 is ideal for Tandy's target market — the average guy or gal who has never before used a two-way radio. Computer buffs who are into desktop publishing and graphics have a special phrase — 'what you see is what you get'. WYSIWYG, for short. The TRC-800 is very WYSIWYG. It is very easy to drive. The casework and construction is good, the knobs move smoothly, the mike feels light but comfortable. The mounting hardware is far from heavy duty, but for a rig weighing 1.6 kg it will suffice. The internal circuitry is the same — well laid out, with quality enough for the task at hand.

Rather than use a hard-wired power lead, the TRC-800 features a common three-pin connector, for trouble-free installation and removal. For extra audio beef, an external speaker can be added, although the bottom-fired internal speaker is ample for most situations.

Some UHF elitists always stand ready to mock a radio like this — a rig which is good, simple, and simply good. They would have us all using Sawtron 999s. But Uniden know what they are doing — meeting a very substantial market. Building a 'user-friendly' (an abused but accurate term) UHF rig which does the job.

DOES IT VERY WELL INDEED

And it does that very well indeed. On air the TRC-800 came across with a crisp transmitter (just above target at 5.2 watts) and a pleasant receiver (coming in just under Tandy's quoted 0.5 uV sensitivity spec). The TRC-800 is not a 'super-rig' you'd travel across town for, nor do you have to hunt around for the best price. It's simple, inexpensive — and is as we speak available at over 400 Tandy stores and dealers across Australia. That alone puts it on the road to success — the average buyer will be the home, farm or small business with a Radio Shack telephone, Tandy computer and more. It is not without shortcomings. There are no indicators for duplex (repeater) or tone squelch operation, and I found the depression of the appropriate buttons barely noticeable from one setting to the other — not the most convenient arrangement.

Also curious is the green 'receive' LED. This would be better labelled 'not transmitting', because it lights up whether you are getting a signal or not.

SUMMARY:

Beyond its own merits, the TRC-800 will undoubtedly bring the delights and convenience of UHF CB to thousands of new users, especially in country towns where the local Tandy outlet is truly an 'electronic supermarket'. Only a good radio like this, with the right price, could do so. And that's got to be worth something too. What more can we say about Tandy's 'new' TRC-800, but ... 'welcome back' !

QUEENSLAND SCENE

— FURIOUS FEWSTER TELLS IT AS IT IS —

MAYDAY HOAXES

I couldn't mention this in the last issue because the hunt for the station responsible for this bloody stupidity was still in full swing and Brisbane Radio Inspectors put in a great deal of time and effort over a period of some three to four weeks to locate the source of deliberate interference to 27.880 MHz, finally busting a southside teenager who was already known to them as a troublemaker...as well as persistently playing music and hassling Coast Guard and Air-Sea Rescue operators despite pleas to desist, official warnings, and threats of dire retribution the alleged offender **committed the ultimate on-air atrocity by transmitting fake Maydays.... not just once but at least three times !!**

Other hoax distress calls received during the same period have also been attributed to this clown but only three were officially logged by Radio Inspectors. The sort of stupid behavior we're all used to on CB shouldn't be carried over to the marine bands, not even to a marine band as crappy and unreliable as our 27 MHz allocation Maritime safety communications are taken SERIOUSLY.

Every Mayday call is treated as GENUINE, and many brave men have lost their lives attempting to save others at sea when some socially-irresponsible dickhead transmits a hoax distress call. It's not just a case of causing a bit of inconvenience and wasting rescue organizations' time and money... **IT'S PUTTING MEN'S LIVES AT RISK FOR NO REASON !!**

Ratbags found guilty of transmitting hoax Mayday calls usually end up with a fine...I've said this before and I'll say it again... . fines are inadequate punishment for this offence and it's about time those with the power to increase the penalties pulled their collective fingers out and did so.

The penalty for transmitting a hoax Mayday should be a mandatory jail sentence !!

Unfortunately, under our present laws, the fact that the alleged offender is in this case a juvenile means he'll get off with not much more than a swift kick up the arse.

THE VERY RED FACED DEPARTMENT

The Sunshine Coast search and rescue groups recently spent half the weekend unsuccessfully hunting high and low for a vessel in distress, after picking up an EPIRB signal. Radio Inspectors subsequently located the offending EPIRB...it wasn't bobbing around in the ocean attached to a dinghy or to some half-drowned boatie's lifejacket...it wasn't even in the water...it was chirping happily away on a Maroochydore two-way radio dealer's workbench....sorry about that !

New Commex AM/SSB rig will be named the 'Cavalier', however, Furious has not managed to get his hand on one for a test report.

COMMEX RIG STILL COMING...

Still no test Report on the Commex sideband rig, but I did manage to get my hands on the prototype for a few days and snap off a couple of shots.

If there isn't a photo in this issue then you'll know I forgot to remove the lens cap!

It's to be called the Commex 'Cavalier' and it features all the usual controls including the worse-than-useless Channel 9 button (beats me why other manufacturers don't follow Electrophone's lead and stick in a Channel 8 button instead) and a Dual Watch function which would be great on FM but seems a bit strange on an SSB rig to me.

When the 'Cavalier' appears on the market I've got the first one off the ship earmarked for a full test report...incidentally, since the Ministerial Standards were introduced, **not one CB rig has been given type-approval.**

NO DAYLIGHT SAVING IN QUEENSLAND

As I write this Queensland is again going it alone and rejecting Daylight Saving Time. Once again the National Party has decided that cows are more important than commerce and that Queensland businesses can afford to lose an hour's trading with the other states at each end of the day.

Brisbane's Lord Mayor Sallyanne Atkinson's group of Daylight Saving Time advocates appears to have accepted defeat, and apart from murmurs from a few breakaway businessmen who reckon they'll run their own independent Daylight Saving systems, it looks like we're in for another summer of crack-of-dawn phone calls from Kiwis living in Sydney who think they're still on Auckland time.

ANOTHER FURIOUS PREDICTION...?

Editor Len Shaw asked in the last issue of CB Action 'Is this man (me) never wrong' ?

We're about to find out....the Fewster electromagnetic spectrum-sweeping crystal ball predicts that Premier Mike Ahern, despite his statement that Daylight Saving is definitely not on for Queensland and that the decision is irreversible, will bow under pressure from Queensland CBers who aren't prepared to miss out on the daily lunchtime skip because Southerners will have used most of it up by the time it arrives here, and do a swift about-face by the end of August.

BLIND OPERATORS ENJOY CB TOO...

Had a couple of interesting conversations with Brother Gerard of Melbourne.

He's a blind operator who's into amateur radio, UHF-CB, shortwave listening and scanning. One of the priests at Saint Francis' Monastery in Lonsdale Street recently installed an SPR Scantenna-XLR discone on top of a ten-metre lift tower on the roof, running 35 metres of RG-213 down to Brother Gerard's room on the second floor.

Not only does the Scantenna do what he wants it to do on UHF-CB and the two- metre band but the system can also be used as a shortwave listening antenna.

The cable is acting as an antenna and receiving signals from all over the world...the Man Upstairs just has to be on Brother Gerard's team.

Mere mortals couldn't hope to duplicate this trick. Things sighted people take for granted, simple things like going for a walk or taking a ride on a bus, can quickly turn into a nightmare for a blind man.

If you or I happened to get lost in an unfamiliar part of town it would be a simple matter to go to a phone box and call a taxi.

A blind person in the same situation wouldn't even be able to find a phone box, let alone his way home.

Brother Gerard takes to the streets carrying a hand-held knowing that if he needs assistance, help is only as far away as the PTT switch. Being able to call for help easily would have to give a blind person more independence and a hell of a lot more confidence.

When I think about the millions of dollars the government bleeding hearts spend each year making life easier for poofters

with AIDS it makes me wonder why they don't kick the tin a bit harder and make life easier for every blind person in Australia by providing them with a UHF-CB hand-held apiece.

I've been lurking around the spectrum for a long time over 20 years in Australia and even longer overseas and I thought I knew most of what's what around the bands, but, Brother Gerard told me something I'd never heard before. Blind operators are able to 'read' their own copies of CB Action and Amateur Radio Action.

Not in Braille...on tape !!

A Melbourne blind amateur's father takes the time to read the contents of the magazines aloud to a tape recorder each month and these tapes are distributed to other blind operators through the Blind Association. After talking with Brother Gerard I did a bit of snooping into the blind scene and I discovered that there are a lot of blind operators, both CB and Ham, out there ... we just don't know they're blind unless they tell us.

Back in the seventies I spoke to a guy in the Panama Canal Zone for months before he told me he was blind. He used to talk about 'watching TV' and 'reading books' and it just never occurred to me that he couldn't see.

I also found that 'Blindies' (as they refer to themselves) are heavily into helping one another.

Maybe the rest of us should take a leaf or two out of the same book

BIT OF A CON — MAYBE ?

A reader from a Western Australian country town tells me the town's one-and-only two-way dealer has the locals brainwashed into thinking that UHF-CB antennas are area-specific, and that antennas purchased elsewhere won't work on the local repeater.

TAIPEI ON CB - COME ON NOW

The story persists that there is a pirate CB station (sometimes he's a Swiss engineer on loan from the United Nations, sometimes he's a German managing a Taipei hotel, and sometimes he's a Belgian student...either the bugger can't make up his mind who he is or there are three of them) operating out of Taiwan.

It's even been mentioned in CB Action a couple of times. One Brisbane know-all has been telling all and sundry that I was talking through the top of my head when I said in a previous Queensland Scene that Taiwanese authorities take a very dim view of radio piracy.

He reckons that CB Radio is legal in Taiwan and that hundreds of Taiwanese pirate stations can be heard when the skip's in (I think he's hearing Taiwanese trawlers pinching fish from under the Victoria Bridge myself). I'd like to know where all these Taiwanese pirates get their equipment.

Even though most of the world's CB rigs are made in Taiwan you won't find **ANY** transceivers in Taiwanese shops...not even a pair of flea-powered toy walkie-talkies. When I was in Taiwan late last year a senior Military Police officer made it quite clear to me that anyone caught with an illegal transceiver of any description, including me, would face a firing squad.

No options...no excuses...no mitigating circumstances. Just a blindfold and 'BANG' !!

I prefer to believe him rather than some dork whose only claim to fame is that his bowels are connected to his brain.

BRISBANE'S LOUDMOUTH DXer

Over the years I've heard a lot of CBers make a lot of extravagant claims about how long they've been on air and what fantastic equipment they've used and the number of countries they've contacted, but the latest loud-mouthed newcomer to the Brisbane scene takes some beating.

I've been listening to his tall stories on and off for a couple of months and he seems to have attracted a 'fan club' of gullible Good Buddies. I reckon it's about time he was exposed as the wanker he really is...for starters, the guy claims to have been pirating 27 MHz in Brisbane since 1971. Funny thing is, I'd never heard his voice until a couple of months ago.

If he'd been around in 1971 I would have heard him, even if he'd been using a one-watt hand-held. In those days you could count Brisbane pirate stations on one hand !! Secondly, he reckons he didn't buy a CB rig until after legalization.

Prior to that he used an Icom IC-720A, modified to cover 27 MHz, and an IC- 2KL linear.

In 1971 ? I'll bet Mr Icom didn't know about it !! Where's all his supergear now ? How come he's using a poxy-sounding off-frequency Good Buddy Super Chunderbox wireless ? Thirdly, his amazing antenna.

He claims to have been using a Hy-Gain LP-1017 log periodic which covered one to 30 megs with a gain of over 20 dB over a dipole, on top of a 60-foot tower.

AARRRGGHHHH !!

The LP-1017's lowest usable band is 40 metres (about 6.5 MHz) and the gain is around 10 dBi, or 7 dB or so over a dipole, and as far as I can recall it didn't appear on the scene until around 1978 or 1979.

It's also bigger than the average house and weighs almost 300 kg.

In the seventies you could expect a visit from the Frequency Management boys within minutes of hiding an HF mobile whip in a drainpipe yet this 'Big Gun' wants everyone to believe he could run a 2 kW pirate station through an antenna which would stick out like dog's balls in a suburban backyard for years without the RIs kicking his door down.

Where is it now ? How come he's using a home-made three-element beam of dubious capabilities ? How about his amazing QSL collection ? He claims to have cards from a number of exotic places including some which top the amateur radio 'most wanted' list.

How about China ? Not Hong Kong (everyone who's anyone has a card from Hong Kong) but The People's Republic of China.

Wow !! What I wouldn't give for one of those.

What 99% of the Hams in the world wouldn't give for one of those !! The list includes Vietnam, Cambodia, Laos, Taiwan, Burma, Tibet, Poland, Russia, Libya, Iran, Uganda, and Angola.

One thing all of these countries (and Mainland China) have in common is that the penalty for **owning or operating an illegal transceiver is DEATH** !! Not the sort of places you'd expect to find CB pirates in abundance, and with most of these countries practising mail censorship, sending a QSL card overseas would be suicidal.

If he can produce all these cards I'll eat the bloody lot on the Derryn Hinch show.

Last but not least...he claims to be a member of the pirate group Spectrum Anarchy International.

HE'S NOT !! HE NEVER HAS BEEN !! AND HE NEVER WILL BE, BECAUSE DICKHEADS ARE AUTOMATICALLY BLACKBALLED !!

He's just a barefaced bloody LIAR !!

So, next time you Brisbane CBers hear Mister SuperWank telling you what a great DXer he is and what great equipment and antennas he used to have and that he was Brisbane's first pirate station and that he invented the spark-gap transmitter or whatever...tell him I said 'BULLSHIT' !!

DAVID FLYNNS'

477 Report

UHF NEWS AND HAPPENINGS

Welcome again to The 477 Report, and CBA's second last edition of the eighties. And what a decade it's been !

In 10 years we've gone from a choice of three UHF rigs to some 30; seen repeaters develop from a few 'experimental' licences to an Australia-wide network of over 150 stations; experienced the growth of 477 MHz into a band that attracts hobbyists, farmers, businesses, emergency services and entire communities.

Yet you can still get into UHF for less than $400, not far from Philips' 1977 target price for the very first FM320.

So whether you're an old hand, newcomer or potential UHFer, enjoy what the band — and CB Action — has to offer.

REPEATER UPDATE

We've had a tremendous response to our call for repeater info, with letters from individuals, clubs, repeater associations and retailers and we believe that we're now about as up to date as it's possible to be, but please, if you know of new ones or of old ones no longer active, don't keep the news to yourself — let us know so that we can keep out lists current.

NEW REPEATERS

Victoria's latest repeater is Mornington Peninsula 8/38, brought to you by the Omega Radio Club (Inc). Located at Red Hill, 8/38 has a spectacular and very useful service area covering the Peninsula, Phillip Island and the stunning Great Ocean Road.

Another new one (or so I'm told) is Falls Creek 3/33. The repeater was supplied, installed and is maintained by Henry's Radio Centre at Wodonga, and uses Sawtron equipment with Polar diplexer and antenna. Also heard on the air were signals from Echuca 6/36 and St Arnaud 1/31 — details, anyone ?

Phil Shields, from Phil Shields Electronics in Hay, advises that Mt Squareknob, halfway between Griffith and Narrandera in the state's southwest, now runs an 8/38 service with a tremendous 80 km coverage.

Our thanks to everyone who sent in repeater info...

MELBOURNE UHF BROADCASTS

Yes, you can get too much of a good thing — so the popular weekly UHF broadcasts of the Omega Radio Club will now be heard on the first and third Wednesdays of each month.

So for the latest UHF and repeater news, communications updates and guest speakers on every topic under the sun — tune into VOC-001 every first and third Wednesdays for the Omega Radio Club UHF broadcasts. Listen to ch. 11 prior to 8pm for details of the channel to be used.

IT'S RUMOR TIME !

It must be that time of the year again ... when boredom sets in and rumors flourish.

We've got an excellent crop of ill-founded rumors at the moment, which prompted quite a few letters from readers seeking to confirm, deny or otherwise shed light on them. For what it's worth, here goes ...

An increase to 80 channels ... why do we always talk in multiples of 40 ? Aren't there any moderates out there who'd be happy with 60 channels ? At any rate this rumor has not a grain of truth, with the necessary space above 477.400 MHz firmly entrenched in the land mobile service and used by thousands of operators as input frequencies to commercial repeaters some 5.2 MHz below.

Extra channels no. 2 ... 80 channels again, but to be achieved by reducing the current spacing to 12.5 kHz, simply splitting the channels in half to create twice as many. Technically feasible but practically impossible, given there are well over 100,000 UHF sets licenced and a DoTaC estimate of up to three times that number unlicenced.

UHF CB to be closed and handed over to business operators. This sounds like scare tactics from the anti-commercial lobby. Would the DoTaC and Government risk total condemnation from the users and the industry just to get a few extra business users onto the UHF mid-band ?

If you've got two brain cells to rub together, the answer is obviously 'no'.

UHF CB to be closed because of the increase in UHF TV stations. I don't know how this one even got out of the starting gate, although perhaps the imminent loss of the 576 UHF amateur band had something to do with it. Fact is, Australia's UHF TV allocation begins at channel 28 at 526 MHz — well above our 477 MHz segment. Besides which, doesn't it strike you as strange that UHF CB could be under threat but national UHF police allocations and thousands of other services in the immediate vicinity of 477 would escape the axe ?

Yes, these rumors are certainly designed to keep the band active with debates and 'what ifs', but, ignore all the talk from your local gurus and know-alls — it's totally unfounded.

FM620 MODIFICATION

Some time ago a reader passed on to me details of the very popular FM620 microphone channel-change modification.

Most UHFers are aware that unlike the earlier FM320, the 620 does not have channel up/down switching on the microphone, although two similar mike buttons are used for optional selective calling.

This is a bit of a disappointment to UHF hobbyists, and before long a simple modification was developed which allowed these buttons to duplicate the channel change paddle on the 620's front panel — handy indeed if you are mobile.

Obviously the mod will void any warranty on your 620, and CBA 'accepts no responsibility in any way' and all that ... but you'd have to be pretty basic to stuff this one up !

If you'd like a copy of this mod, write to me enclosing an SASE.

I'd appreciate hearing from anyone else with other useful little modifications for UHF rigs.

DoTaC DOES IT RIGHT!

The much maligned Department of Transport and Communications has been earning praise for some recent moves in the CB field.

First came licencing campaigns in regional and country areas, which saw thousands of users join the ranks of official licenced UHFers and paying their share of the load.

Next, some welcome changes to the DOC14, especially with regards to the planning and operation of UHF repeaters.

And then came on-the-spot fines, as reported last issue. You might whinge if you're on the receiving end of a DOC53 (infringement notice), but there is no doubt that the system will enable RIs and other DoTaC staff to get on with their job instead of being tied up on long and expensive court cases — cases which cost far more than they recover. And cases which inevitably tie up our justice system and impact on the wider sphere of other court cases, legal fees and such, costing us even more in the long run.

It can easily be said that we get precious little for our licence fees, but OTS fines are the first step towards changing this. They have my complete support, and maybe should have yours too.

The latest good news is the trial use of Post Offices for licence renewals in WA, which began in July. SA radio users were also invited to provide feedback to the DoTaC in September, and if the scheme proves successful it may eventually be established as standard procedure in all states.

The arrangement applies to all radio communications licences, but not as yet the processing of new licences — hopefully this will come in due course for those simple over-the-counter jobs such as the CBRS.

If there's a logical next step, it must be the adoption of a 'station licence' for the CBRS, replacing the present system of one licence (and call sign) per radio.

Like all of the above measures, station licensing has been proposed in the past from both outside and within the DoTaC. It is simple and cost-effective for both the Department and the user.

One licence to cover all type-approved CBRS equipment, 27 MHz or UHF, base, mobile or handheld. One call sign, one piece of paper, one receipt, one computer record.

Honestly, how many of us have a clutch of rigs and only one licence ? And how much of this because we couldn't be bothered with all the paperwork, especially if you have a fairly enthusiastic turnover of rigs ?

I'd like to hear any comments for or against the concept of station licencing — but at this stage it looks like another winner !

That's it for another issue — don't forget to keep in touch with repeater updates, news and general comments about the UHF scene — write to PO Box E160 St James 2000 (but enclose a stamped self-addressed envelope if you want a reply).

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CHRIS EDMONDSON EXPLAINS

SELCALL — HOW IT WORKS

Those of you who have used selective calling systems (usually grouped together under the abbreviated title 'Selcall') on UHF will know just how useful it can be. And if you have a UHF set without Selcall you'll have heard the unique tone groups which precede many station a lot in recent times — especially during business hours.

But what exactly is Selcall, and how does it work?

Selcall is a simple-to-operate selective calling system, which uses a relatively simple coded signalling device to silence a receiver until a signal carrying an audible signature of pre-programmed frequencies is received — and it keeps the receiver quiet irrespective of how much traffic it's hearing. **Nothing** will be heard over the loudspeaker until a signal carrying the correct sequence of tones is received.

The whole thing is quite simple, really. To place a call to another station with Selcall, you push a special 'call' button (or just push the PTT button in some cases) which puts your set into transmit mode. It then rapidly fires off a group of three, four, five or six discrete pre-programmed tones and returns the set to receive.

Meanwhile, any Selcall-equipped stations within reception range — provided they're programmed with the same set of tones, of course — will open the set's mute and allow a spoken message from the first station to be heard.

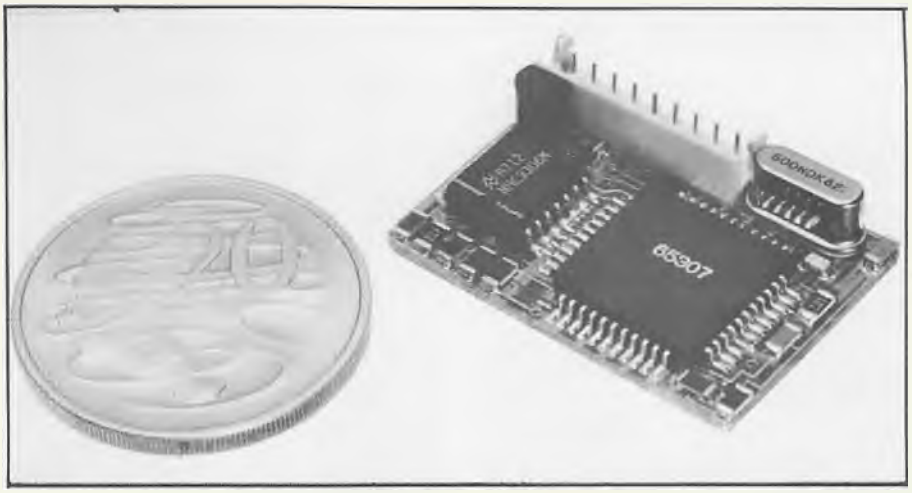
Each tone is generated with crystal-controlled accuracy, although a certain margin or leeway is built into the receive decoders to allow for slight variations in transmitted frequencies.

This group of signalling systems has been with us for many years. Selective calling systems originated in the US, where significant overcrowding of even the commercial channels had become a major problem more than 20 years ago.

Since its introduction, selective calling has gone through a number of evolvements, with some modern systems even capable of instructing remote equipment to change to a vacant channels prior to commencing transmission.

SOME SYSTEMS EMPLOY INAUDIBLE TONES

A number of systems still in widespread use employ tones which are inaudible to the listener, with frequencies generally ranging from a low 67 to 250.3 Hertz continually transmitted with the carrier. These **CTCSS** systems, as they are known, are limited to a small number of frequency combinations but, when used in conjunction with the multi-tone Selcall systems, make it virtually impossible for other tone-reliant transceivers to 'accidentally' hear the transmissions.



Selcall modules are getting smaller all the time — this one, designed for Electrophone TX-475 handheld — is not much larger than a 20 cent piece.

A common misconception of many Selcall users is that their transmissions are encoded in some way so **only** the intended stations will be able to understand the conversation. **That is totally wrong!** Selcall systems are mainly of advantage to the **receiving** stations only, and are used to 'filter out' unwanted stations.

Obviously, you'll be more likely to hear **your** calls if they're all that comes through your speaker!

It's a good practice to briefly disarm the Selcall unit before making a call. Today's busy UHF frequencies can quickly end up a total shambles if three or four stations try to talk at the same time. Everybody quickly learns to check the S-meter or receive light, or unmute the set before calling.

Many of the more sophisticated calling systems prevent embarrassing mistakes by inhibiting any transmissions while the receiver is able to detect an incoming signal (whether it's correctly-coded or not). Although this sounds a great idea, it can in some cases (on busy repeater channels) mean you'll have virtually no chance of placing a call from one end of the day to the other!

IF IN DOUBT — ASK

If you don't know for sure, it could pay to ask the dealer what his particular system will do before you lay out the ready...

Once a contact has been established most Selcall systems will continue to apply the special set of tones at the start of each transmission to ensure the mute, or 'squelch', of the other receiver does not close until the contact is concluded.

To add to the confusion, there are no fewer than **six** commonly-accepted 'international standard' systems in common use in this country. This absurd situation arose some years ago when different areas of the commercial radio service chose, almost simultaneously, to accept different standards as the 'norm'.

A versatile selective calling system, then, is one which offers not one but **all six** different systems on the one board.

Where selective calling comes in handy (it's a real sanity-saver in most cases!) is for the tradesman or business operator waiting for calls from just one station or group or stations.

SO WHO SHOULD USE SELCALL SYSTEMS?

Let's say you run XYZ Plumbing Supplies, and have a fleet of three vehicles on the road. Yours is not quite big enough an outfit to need its very own channel (it's an **unbelievably** expensive proposition — thousands of dollars a year in licence fees alone for even a shared channel, and the radio gear is usually around five times the price of comparable CB rigs!) but your drivers are being driven mad by all the traffic through the local UHF repeater.

They aren't radio hobbyists, so they wind up turning the radio down — and you lose business.

Selcall may not be the most technologically-advanced calling system used today — but it sure beats the hell out of chucking the rig for an expensive cellular phone!

NEW SHOPS

The past couple of months has seen more activity among CB outlets than the industry has seen for the past several years.

In Victoria, the long established JUST Communications has moved from their long time address to a new one just a few doors up the street where they now have considerably more space in which to display considerably more stock. After a lengthy 15 years in their "hole-in-the-wall" shop they can now be found at 552 Whitehorse Road, Mitcham and both the telephone (03) 873 3710 and fax (03) 872 4229 remain the same.

Also in Victoria, the long established Sydney operation of Andrews Communications has opened up at 6 Church Street, Bayswater — telephone (03) 720 5900 and fax (03) 720 5280. Owner Lee Andrews has obviously decided that the time is right to spread his activities into the southern state and he will be carrying similar stock and similar prices to those carried at his Maroubra Junction outlet.

There is also a strong rumor that Captain Communications may just be looking at the Melbourne scene too as owner David Gill was sighted doing the rounds a month or so back.

All of which sounds pretty good for the CBer as more competition means better prices — just so long as an all-out discount war doesn't break out as this invariably leads to industry problems which, while having short-term benefits for CBers, usually means long-term problems for everyone as retailers discount themselves out of business.

Meantime, across the border in South Australia, Contact Communications have opened at 36 Adelaide Road, Gawler, supplying servicing and installing radio communication equipment.

Contact Communications also stock a comprehensive range of general components at city prices, covering CB, UHF, commercial two-way and amateur radio, marine radio, scanners, cellular phone and security systems.

Michael Constable and Carl Beard, who operate the business, have extensive experience in retailing and electronics.

Contact Communications is the authorised dealer in the Barossa region for Link Telecommunications.

The shop also operates a fax service, which is available to the community.

ABOVE: Victorian sales manager, David Werkmuller, helps a customer at the new Andrews Communications shop.

RIGHT: Michael Constable (left) and Carl Beard at Contact Communications in Adelaide.

BELOW: The Just Communications team (from left) Mark French, Paul Gosling and Peter, Jenni, Peg and Des Greenham.

THE NEW TANDY UHF CB RADIO!

The Realistic® TRC-800 UHF CB Says It All!

The **New Realistic® TRC-800 CB** from Tandy is the ideal unit for those who want reliability and performance to spare. The TRC-800 is packed with features to keep you entertained and safe during your journeys. The large LED display clearly identifies the channel in use while rotary channel selector gives you easy access to any channel. Duplex operation allows the TRC-800 better reception and further distant transmission when used with repeaters. It's squelch control eliminates background noise for a more clear and intelligible conversation and reception. The TRC-800 has combined today's technology providing you with phased loop circuitry for ultra precision control and an optional selcal facility for private conversations. The TRC-800 comes with standard 4-pin mike and jack for external speaker. And for your convenience this affordable unit includes all mounting hardware and instructions for easy installation. All this in just one unit with a cost of only **$399.95**.

Tandy ELECTRONICS

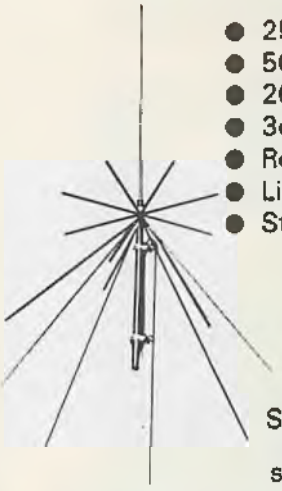
The Biggest Electronics Store in Australia with Over 400 Stores Australia Wide

We Service What We Sell

SCAN-TENNAS

If you haven't tried one of our discones, you don't know what you're missing!

CDS-150

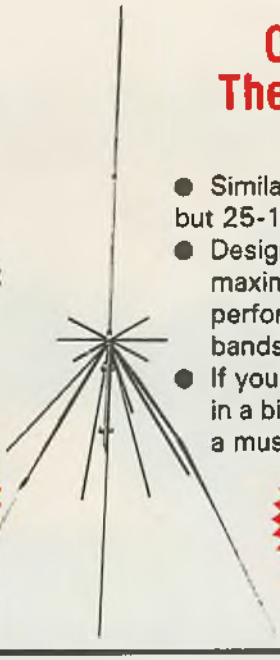


- 25-1300MHz Receive
- 50-1300MHz Transmit
- 200Watt Input
- 3dB Gain
- Robust Design
- Light Weight
- Stainless Steel Elements

SCAN-X

Still using the telescopic supplied with your scanner? On a budget?? **Scan-X is for you**

CDS-180 The Ultimate!



- Similar to CDS-150 but 25-1300MHz TX/RX
- Designed for maximum performance on all bands
- If you're into scanning in a big way, the 180 is a must!

LATEST TECHNOLOGY

IMARK COMMUNICATIONS

Buying 2-Way Radio?

SAWTRON 999

UHF CB 2-WAY RADIO

● Rugged — for a tough Australian environment ● Extra range for important calls ● Front panel programmable scanning and priority scan ● Full power and 40 channels ● Small control panel up-front with boot mount option ● Scrambler or Sel-call available

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* Dealers Australia wide

Please send for further information on the SAWTRON 999 UHF CB

.....

.....

.....P/C.....

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JENSEN ELECTRONICS SECALL/ANI

South Australian company Jensen Electronics has recently released a five tone Selective Calling System which can be easily added to any mobile radio equipment, new or existing.

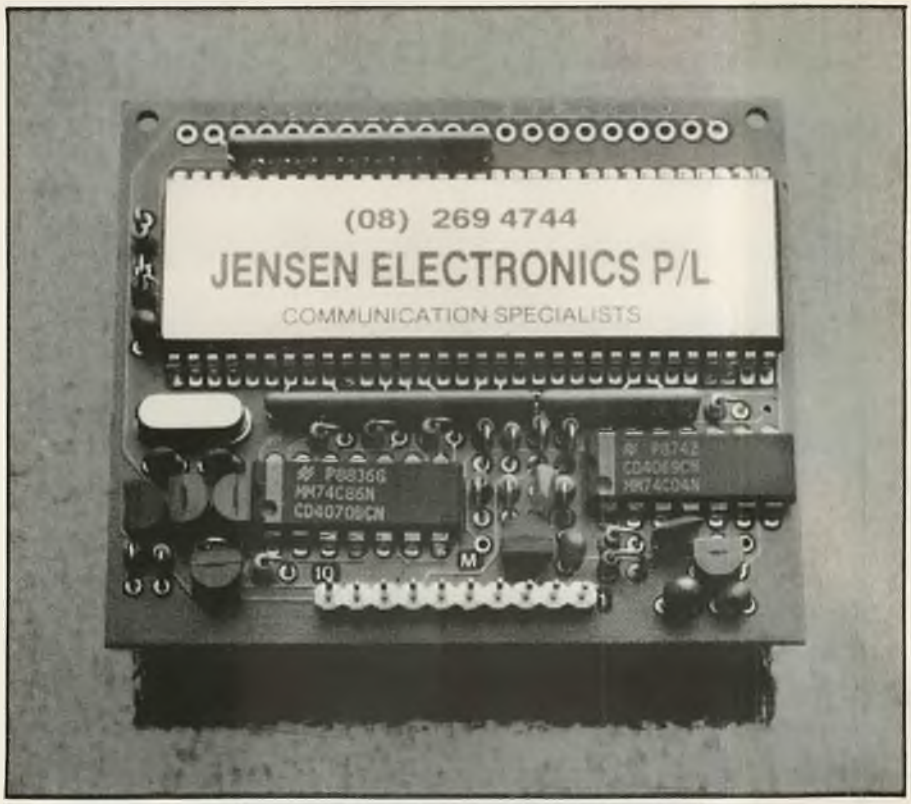
With this system, each user is allocated a unique numerical identity. This identity is encoded as a sequence of tones, the frequencies of which are directly representative for the address digits. Users do not need to listen to unwanted channel traffic and may 'mute' the radio.

When the Selcall decoder receives a correct address code, an audible and/or visual 'alert' will indicate to the called party that he/she has been called, his radio will automatically 'open' and the conversation can then proceed.

This unit is model SC1000 and there is also the SC4000 which has many features including an inbuilt RS232 computer interface.

Read the article on Selcall, what it is and how it works, elsewhere in this issue.

Further details on either these or other Jensen products can be obtained from that company at 75 Prospect Road, Prospect, South Australia — telephone (08) 269 4744.



It's hard to pronounce but easy to appreciate

Yupiteru MVT 5000 Scanner

The Yupiteru MVT 5000 is the first handheld to deliver continuous coverage from 25-550 MHz, and extending to 800-1300 MHz. Scanning Action's RUSSELL BRYANT rates the latest from Hatadi Pearce-Simpson as the best handheld scanner yet released . . .

About four or five years ago the highest frequency any scanner could monitor was around 500 MHz. Every radio received half a dozen bands, each one an island. In some cases the gaps ignored not only active but also very interesting frequencies.

It was around this time that the AOR company of Japan released the AR 2002 continuous coverage scanner. The 2002 took monitoring beyond the 500 MHz barrier, into the cellular and 800 MHz trunking allocations.

Since then many of the scanners sold have the extended frequency range as standard. Hobbyists can now pursue monitoring activities previously unavailable. One drawback has been that all the so-called super scanners have been desk-top or mobile units, restricting the listener to the shack or car. If you happen to be at a military air show being tied to your car monitoring the UHF aircraft band means you may be missing the action.

The Yupiteru (pronounced U-pit-ear-oo) MVT 5000 is the first handheld equipped with continuous frequency coverage from 25 to 550 MHz and 800 to 1300 MHz. It covers many of the bands previously excluded in handhelds.

The MVT 5000 looks no different from any other portable scanner on the market today. Its 100-channel memory, selectable search increments of 5, 10, 12.5, 25 and 30 kHz, extended frequency coverage, as well as additional keyboard function place the Yupiteru above and beyond any other handheld.

Bearcat started the idea of factory pre-set bands, and the ability to search them at the touch of a button. Yupiteru continues the trend by including not one or two but 10 different pre-programmed services. Some of the bands have little compatibility to Australian allocations (the MVT 5000 is manufactured in Japan). Using the BAND WRITE function any of the bands can be re-programmed to your individual requirements.

The keys one to zero activate the auto-band search and are subtitled with their Japanese designations (see table one). Search increments and receiving modes can be varied to suit local conditions, for example altering the annoying 12.5 kHz stepping to 30 kHz on the cellular band. If you turn the scanner off or perform another function the bands return to the factory increments and modes.

The Yupiteru, compared with the Bearcat 200 XLT and Realistic PRO 34 is smaller overall, measuring 67mm x 175mm x 40mm and weighing around 400g with the supplied ni-cad batteries installed. Hatadi, the importer of the MVT 5000, includes an approved charger with the radio, making it a complete unit.

For frequencies below 550 MHz, sensitivity is quoted at 0.5uV FM and 1.5uV AM. In the band 800-1300 MHz, the figures are 0.8uV FM. No AM specifications are given, which is of little importance as there is no AM activity up that high. The 100mV AF output from the speaker seems a little conservative to me as the volume level sounded much beefier.

One departure from the norm is the deletion of the stock standard "rubber duckie" whip. Replacing it is an eight-segment telescoping antenna. While most handhelds have improved reception when used in a motor vehicle or when carried in a pocket, if both types of antennas were supplied it would allow the scanner to be utilised in a variety of situations.

Other accessories included in the box are a charger cord that plugs into the cigarette lighter socket, shoulder strap and belt clip, four AA ni-cad batteries rated at 600 mAh, a battery charger, carry case and instruction booklet.

Programming the Yupiteru MVT 5000 requires a little more attention than you would normally devote to a handheld scanner. Dial up the desired frequency, then press the ENTER, FUNCTION and MEM WRITE keys to enter the data into the microprocessor. If you make an error in programming, the button marked "C" clears the incorrect data from the screen and resets the display for the correct information.

Once all the channels have been programmed, pressing MEM READ, followed by arrow up or down accesses the memory channels in order. To protect the MVT 5000 from accidental erasure of the memory, a positive action KEY LOCK switch is provided on the side of the scanner, together with the display light key.

After a while if you are tired of the frequencies in the memory and you wish to completely wipe the stored channels, located below the KEY LOCK is the recessed RESET key. One press returns the Yupiteru to the same status as when it came out of the box. Clearing the memory channels also returns the search bands to the factory-set frequencies.

The LCD displays all program functions including frequency, bank, search increment, receive mode, priority (which is the floating type), scan speed, delay and so on. Pressing the STEP key progresses the scanner through the various search increments and each is displayed on the screen with the exception of 30 kHz. When nothing is showing 30 kHz is selected.

The Yupiteru has only one drawback — it is a little thirsty when it comes to battery juice. The longest cycle I could manage was just over three hours. Carrying a spare set of dry cells would be a good idea.

Overall the MVT 5000 is the clear leader as Handheld Of The Year.

Thanks to Hatadi Pearce-Simpson for the loan of the rig.

TABLE ONE

1	AIR VHF 1	108.000 - 136.010	AM	10 kHz INCREMENT
2	AIR VHF 2	225.000 - 261.500	AM	25 kHz INCREMENT
3	AIR UHF	275.500 - 327.500	AM	25 kHz INCREMENT
4	POLICE	146.010 - 154.500	FM	10 kHz INCREMENT
5	MARINE	156.000 - 162.050	FM	5 kHz INCREMENT
6	POLICE U1	347.7125 - 348.2125	FM	12.5 kHz INCREMENT
7	POLICE U2	361.500 - 362.500	FM	12.5 kHz INCREMENT
8	MCA BASE	850.00 - 859.975	FM	12.5 kHz INCREMENT
9	CAR TEL	870.025 - 884.975	FM	12.5 kHz INCREMENT
0	PERSONAL	903.0375 - 904.9875	FM	12.5 kHz INCREMENT

If it could sing it'd sing Waltzing Matilda.

They don't come any more Australian than the Philips FM 620. It's designed here in Australia. And it's manufactured here. So you know it's tough enough for local conditions.

And though it can't sing it does just about everything else.

The micro computer inside every FM 620 makes it the ultimate two-way in its class.

You get advanced technology at an affordable price.

The FM 620 is crammed full of features: fast channel scan, super bright visual indicator, easy switch controls and a lot more that has to be seen and heard to be believed.

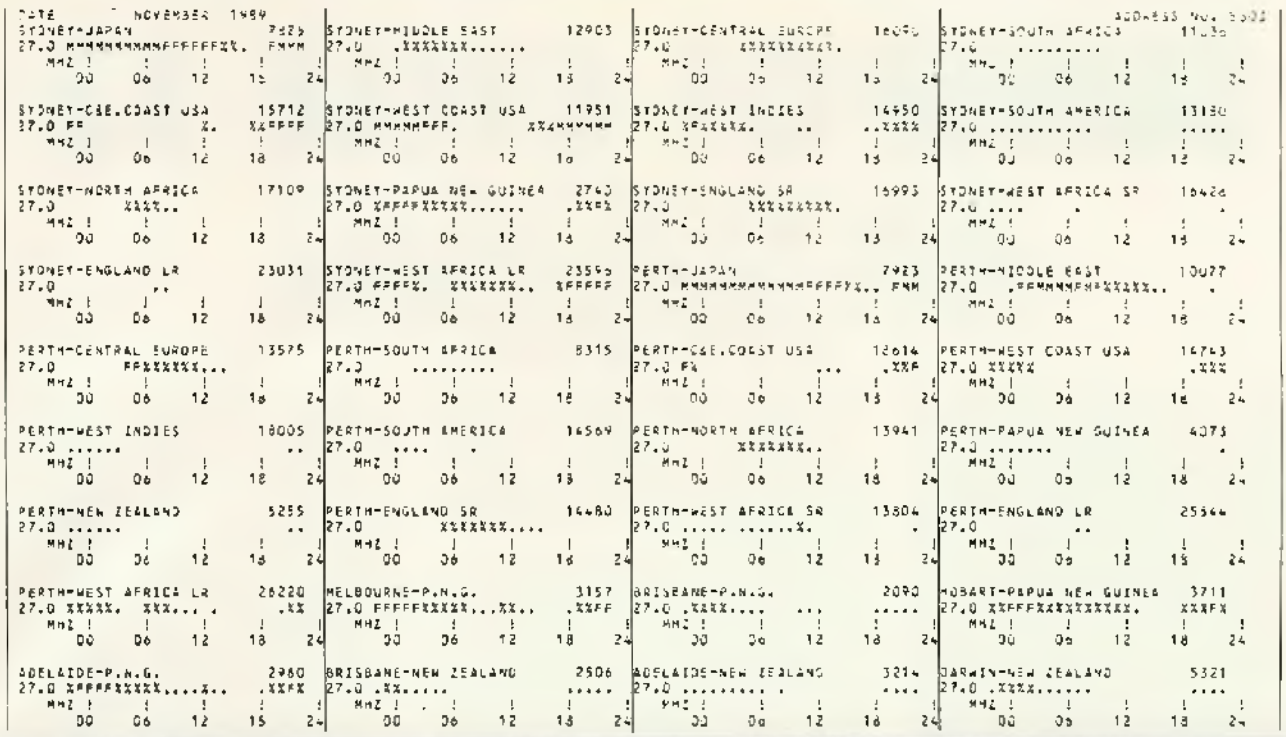
See and hear the FM 620 at your local Philips dealer.

He'll be happy to sing Waltzing Matilda with you.

PHILIPS

SSB/PCS 185

NOTE: Skip conditions are virtually the same from Sydney as they are for all other East Coast areas — likewise Perth predictions can be taken as similar to those for other West Coast areas.



These GRAFEX style predictions present in pictorial form the expected HF propagation conditions between Australia and a number of important DX areas. For each circuit, the "East" terminal refers to the eastern half of Australia. The horizontal axis of each graph represents the hours of the day in Greenwich Mean Time from 0000 hours to 2300, reading left to right. The vertical axis represents increasing frequency.

A GRAFEX symbol represents the predicted propagation conditions for a particular frequency at a particular time. The meaning of each symbol used is given in the key on the next page. The letter "F" designates the best conditions for HF communications.

Grafex prediction charts supplied courtesy of the Ionospheric Prediction Service, 162-166 Goulburn Street, Darlinghurst, NSW. IPS offers pre-recorded telephone information. To access the service, please phone (02) 269 8614.

LEGEND TO GRAFEX SYMBOLS

Propagation is possible but probably on less than 50% of the days of the month.

'%' Propagation is possible on between 50% and 90% of the days of the month.

'F' Propagation is possible by the First F modes on at least 90% of the days of the month.

'E' Propagation is possible by the E modes on at least 90% of the days of the month.

'M' Propagation is possible by both the First and Second F modes on 90% of the days of the month.

'S' Propagation is possible by the Second F mode on 90% of the days of the month.

'A' High absorption — above the ALF but probably too close to it for good HF communication.

'X' Complex mixture of modes including the Second E mode

ALL YOU NEED TO KNOW ABOUT . . .

SUNSPOT CYCLE 22

This is the second and final part of an in-depth examination of the effect sunspots have on DXing and propagation in general. Part one appeared in the previous (September/October) issue of this publication.

This is a common occurrence all over the country. What you heard was the "sky wave" of the broadcast station and the distortion was caused by a change in the refraction level of the layer bouncing the signal back to earth so that certain frequencies in the "sidebands" of the station arrived at your receiver at slightly different times.

Some stations have superior ground systems that help not only to spread the ground wave, but also to bounce some of the energy up to the ionosphere where it is reflected back down some distances away from the transmitter. This happens in the winter, because the density of the layers is much less than in the summer, when they have been heavily ionized from the action of the sun. A heavily ionized or dense layer will absorb the energy from the sky wave of a station in the broadcast band, but a lightly ionized layer will reflect it back to earth. So, that's why you heard that news broadcast from a station hundreds of kilometres away — loud and clear.

As the information was compiled from thousands of observations several things became clear. The amount of ground wave compared to sky wave became less and less as the frequency was increased. The angle of radiation from the antenna became lower and lower as the frequency was increased. And signals were not being bounced right back to earth like a tennis ball off a wall. Instead there appeared to be a "bending" of the wave, rather than a duplication of the angle of incidence in the angle of reflection. Indeed, it was more of a "refraction" than pure reflection involved.

As the science of molecular physics advanced, so did understanding of the ionosphere and its effects on radio propagation. It was a slow amassing of evidence that led to conclusions that are still being modified today by new evidence that is constantly being gathered. It was found that there are several layers involved in the phenomena. These layers are composed of molecules of matter that have been split apart by bombardment from high energy rays from the electron and are in an unstable state until they recombine. But in the uncombined state they will react to the energy from a radio wave and respond to the exact frequency and transmit it along the layer, bending it back toward earth until it is reflected down at a point some distance from the transmitter.

Exactly how the layer will react to a radio wave of a specific frequency is a function of the density of the ionization. Since there is less and less matter in the atmosphere as altitude is increased, there is less material to be ionized — and a further distance to travel to be recombined. thus, the higher layers are much less prone to absorb energy and more likely to bend it back — to refract it back to earth.

For any particular state of the layer, however, there is some frequency that will not be bent back, but will penetrate right through and go into "outer space". Since the state of the layer is constantly changing, this "critical frequency" is constantly changing. If the ionization of the higher layers is very light, even some of the lower frequencies will go right through.

In periods of little ionizing activity those frequencies above 15 Megahertz penetrate the layers and little "skip" is heard. Only during the day, when the sun is hitting the layers will any skip be heard — and then on an inconsistent basis. Those of you who "shoot skip" on the CB band have realized that it is a variable thing — signals drifting in and out quite rapidly — suddenly hearing a very loud signal from hundreds of kilometres away — like he was in your living room — and then nothing. And no long distance at night at all.

DX ACTIVITY IS PREDICTED TO PEAK IN NOV/DEC.

At this point we have established that all long distance radio communication (except via satellites) is carried on by means of refracting the radio wave off an ionized layer high in the sky and having it bounced back to earth. (One exception is the very powerful very low frequency CW stations used to transmit signals through the ocean to submarine fleets).

It was earlier stated that it was the rays from the sun that caused the layers to be "ionized" which made the skip effect possible. It is easy to understand that the longer the layers are exposed to the sun's radiation the longer they will stay ionized — hence the changes between day and night and between winter and summer in the level of ionization and, consequently in the transmission of radio signals.

But there is another factor that has a major impact on how those layers work — the level of sunspot activity on the surface of the sun. What are these sunspots? They have been observed from ancient times as dark spots on the sun. No one knew what they were, but careful records were kept, particularly over the last 200 years. Gradually, it was noted that they seemed to come and go in cycles. The new cycle would begin by showing the dark spots well above the sun's equator. Gradually, the spots would increase in number and move toward the equatorial line. After achieving a maximum the cycle would die out to be replaced by new spots from the next cycle. For a period of a couple of years, at the bottom of the cycle, it is common for spots from both the old and the new cycle to be visible.

The observatory at Zurich, Switzerland, developed a means of measuring the number of spots that has been accepted all over the world. In order to establish trend lines, the count is made on a 12-month moving average, although the number of spots is kept track of on a daily basis. Scientists have been developing correlations between sunspot activity, the aurora borealis, weather patterns, and others. There is much evidence to suggest that we are only beginning to understand the action of solar energy on our own planet.

No, a strong south wind will not help your DX, however, a solid flurry of solar storm acitivity will have major consequences — for better or worse, but, either way you'll notice them.

The sunspots, dark spots on the sun, have been determined to be huge areas of violent magnetic storms, moving in a vortex like a cyclone, bringing up fantastic amounts of energy from within the sun and moving out through the white hot surface like the two poles of a huge magnet. The enormous energy of the hydrogen and calcium gases contains electrical energy in the form of ultra violet and cosmic rays. These rays are flung out from the sun and hit the atmosphere of the earth causing, among other things, the ionization of the layers responsible for long range radio propagation.

The relation between the number of sunspots and the degree to which radio signals, especially those of a higher frequency, are reflected is quite direct. Although there have been two periods in recorded history (the Maunder Minimum) when recorded sunspot activity was almost nonexistent, the cycle seems to repeat at intervals, though not with clockwork regularity.

Incidentally, the polarity of the sunspots in the two hemispheres of the sun appears to reverse with each cycle, so the actual, complete cycle is 22 years. The effect on radio communication is tremendous. When sunspot activity is high and the layers remain ionized for long periods of time it is quite possible to communicate with stations all over the world all day long and into the evening on 21, 27 and 28 MHz. Yes, I said 27 MHz, the Citizens Band frequency. The signals are characterized by great strength and persistence, so long contacts with foreign stations are quite possible most of the time. On 14 MHz communications are possible on a 24 hour basis.

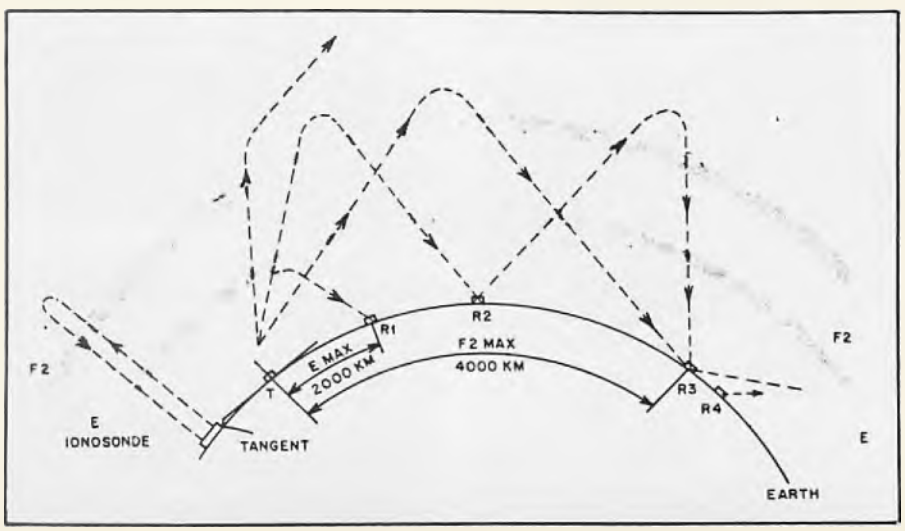
The layer nearest to the earth, the "D" layer, is present only in daylight hours, being most intense around noon and disappearing by sunset. The effect of the "D" layer is mostly one of absorption of radio wave energy on the lower frequencies. Frequencies below 4 or 5 MHz are usually absorbed while the "D" layer is present. That leaves only the "ground wave" radiation for communication. This is most noticeable on the 160 and 80 metre ham bands, where long distance communication is largely confined to times other than the middle of the day.

We mentioned that horizontally polarized ground waves are rapidly absorbed by the earth. This is one of the reasons why most AM broadcasting stations use a vertical tower as a means or radiating power.

You may also have noticed that some AM stations have several large towers located near each other. This is to give a "directive pattern" to their signal, so that they might transmit in certain directions while not bothering other stations in a different direction.

Except for the lower frequencies the "D" layer has little effect on radio propagation. The next higher layer, the "E" layer, is located an average of 70 miles above the earth's surface. The atmosphere here is still relatively dense, so constant bombardment from the sun is required to keep the ions and electrons apart, so that the layer will act to reflect radio waves. This region practically disappears at night, so the layer mostly

CONTINUED OVER



Three types of ionospheric propagation. Sounder, left measures virtual height and critical frequency of F2 layer. Transmitter T is shown radiating at three different angles. The highest passes through the ionosphere after slight refraction. Lower-angle wave is returned to earth by the E-layer, if frequency is low enough, at a maximum distance of 2000 kilometres. The F-layer reflection returns at a maximum distance of about 4000 kilometres, depending on the radiation angle. It is shown traversing a second path (double hop) from R2 to R4, the latter beyond single-hoop range. The lowest-angle wave reaches the maximum practical single-hop distance at Rs. (Diagram courtesy ARRL Radio Amateur's Handbook)

SUNSPOT CYCLE 22
(Continued)

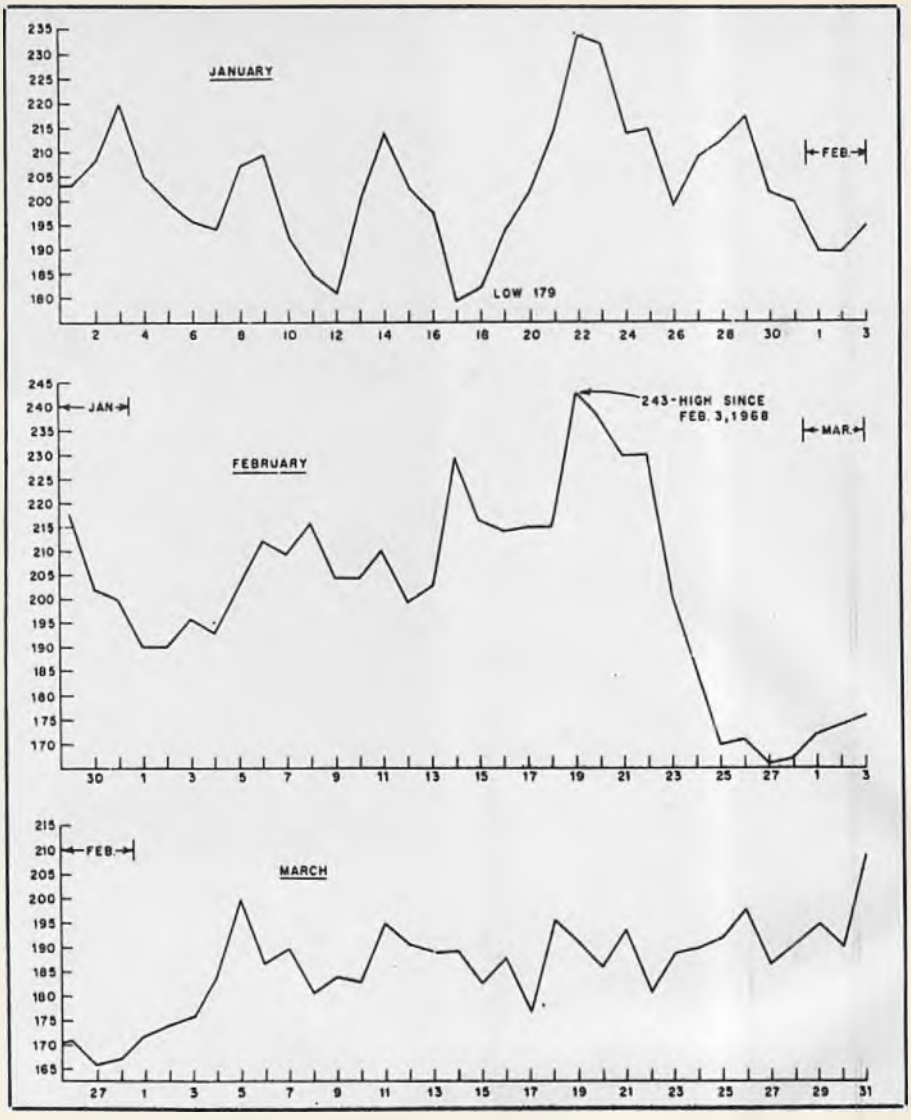
responsible for long distance communication is the "F" layer at a height of 175 kilometres. This layer "splits" into two layers during the day, the "F-1" layer at 140 kilometres and the "F-2" layer at 200 kilometres.

In addition to the refraction from the "E" and "F" layers, there is refraction that can take place from any heavily ionized cloud called "sporadic E skip" which might last anywhere from a few minutes to an hour or more. The effects of sporadic E skip are pronounced on the higher frequencies and unusual radio paths might provide very long distance communications on frequencies normally restricted to relatively local contacts. There are two other fairly rare methods of sending radio signals over long paths, "tropospheric bending" occuring when there is a marked difference in temperatures between air masses, which acts in such a way as to refract radio signals of certain frequencies, and "ducting" which traps high frequency signals between two refractive layers and bounces it along for long distances before coming back to earth.

But the radio paths of most interest to the CB operator are those that effect the 27 MHz frequency range. In this case we are normally dealing with three distinctive paths. First, there is the "ground wave" effect — most effective from a vertically polarized antenna and confined to somewhat more than "line of sight". It has been determined that a certain "bending" occurs at the higher frequencies that allows the ground wave to follow a path somewhat longer than a straight line between two points. Most CBers are well aware that the higher the transmitting antenna the further the range, whether it means putting up a tower or high mast, or parking the car on top of a mountain.

There is little, except local terrain, that affects the ground wave propagation on 27 MHz, so it is quite reliable over the moderate distances involved, as long as there is no interference from the sky waves.

Generally speaking, the 10, 11 and 15 metre bands are the "daylight" bands, although during periods of high sunspot activity they frequently stay open until late evening. It should be remembered that the E and F layers are not some stable boundary that signals bounce off but rather are constantly moving up and down and varying the degree of ionization. They are very subject to the effects of magnetic storms and changes in the magnetic flux that moves around the earth — all providing for changes in propagation conditions. I have many times been talking with a far distant station with S-9 signals, only to have him fade completely out in less than 30 seconds, just like "dropping off the end of a table."



Graphs of 2800 MHz solar flux values for the first three months of 1979, approaching the peak of Cycle 21. The same period in 1976, near the bottom of Cycle 20, had values between 68 and 85. The dates are arranged so that days one solar rotation (27.5 days, average) apart line up vertically. Recurring solar phenomena are clearly apparent.
(Diagram courtesy ARRL Radio Amateur's Handbook)

Radio propagation is a complex science — there are so many variables — and much is still being learned about it. We have only scratched the surface in this article, for the purpose was to introduce you to the phenomena and sunspot activity and show their relationship to the transmission and reception of radio waves.

Radio signals have a delightful tendency to travel in the shortest possible distance between two points — most of the time. Therefore, they travel the "great circle path" much the same as an airplane flying between Los Angeles and London will fly north via the shortest route. This might only be of passing interest to the operator who is using a vertical antenna with a ground plane that provides for equal transmission in all directions, but it is vital information to the operator who has a "beam" antenna, for he must know in which direction to point his beam to achieve maximum results.

Once you have calibrated your beam indicator so that it is pointing in true compass headings, you can consult your great circle map or beam heading list to find in which direction your beam should be pointing. There are times when the best path isn't the shortest one, due to the particular condition of the intervening skip layers, so you might work "long path" — sending your signal around the world the long way. Sounds like a long way, and it is, but I've done it many times because it was the best way to go at the time. Once in a while you will get a strange "echo" effect, which results from the

signal reaching your antenna from both directions at slightly different times — yes, all around the world from both sides.

If you are interested in distance (DX) work you will want to squirt your signal off your antenna at the lowest possible angle, so that it will travel as far as possible before hitting the ionosphere and bouncing back down. You will study various types of antennas and note how the angle of take-off lowers as the antenna is raised in height above ground. And you will want to put as much of your power in one direction as possible, so you will note how the addition of more "elements" to the antenna sharpen up the signal and increase the "forward gain." If there was any question in your mind as to why some hams (and CBers) have very high towers with big beams on top you should now know the answer — they like to "chase DX" and are trying for every advantage.

Incidentally, we mentioned that the polarity of the radio signal was changed upon moving through the ionospheric layers, so it is not a matter of great importance if your antenna is vertical or "on the flat side" when working DX. It is normally easier to construct and install a horizontal antenna of any size to use as a beam.

We have only garnered experience in radio propagation through a half dozen cycles to date. There is still much to learn and things are always happening that seem to defy the so-called "laws" of propagation. It is a constant challenge to the interested radio operator, for you never know what may come out of that loudspeaker on any particular day.

We can, however, be sure that things are going to change within the next 12 months. Just how that change will affect your operation of your CB station depends to a great extent on how you use it. Fortunately, the changes seem to take place in increments, slowly enough so that there is time for adjustments of operating habits.

10 metres is a "daylight" band — opening up shortly after sunrise and lasting until a little after sunset. More than any other ham band, 10 metres can provide extremely strong signals with very little power at the transmitter. Because of the short wave length it is simple to construct beam antennas that take up very little space and can be turned by inexpensive rotators. It is often the first real DX band of the new ham, for it is a large band and simple equipment still yields very good results.

The skip distance on 10 metres is the greatest of any of the high frequency DX bands, for the angle of radiation is the lowest. This means that signals from across the country will be hitting "on the first bounce" with no lessening of signal strength that occurs from "multiple bounce" contacts.

This is important to keep in mind, for a 4-watt transmitter can put a whopping big signal a couple of thousand miles away, especially with a beam antenna. There is simply no way that I can think of to keep those signals in anyone's "backyard." It won't be a case of people "shooting skip" and trying for a DX contact. It will just happen. And with the limited ground wave on 11 metres, only the very local stations will have a signal strength at your receiver great enough to overcome a signal from 1500 to 2500 kilometres away. Since the AM radios are not all right on center frequency for each channel, there will be "bat notes" or "hetrodyning" heard as a steady howl of several different pitches on each channel almost constantly.

Instead of making antennas designed to increase efficient reception, CBers may find themselves trying to reduce the gain to cut down the unwanted DX. I spent some time listening to the CB bands during the high of the last cycle, so these words are based on actual experience — although the CB population back then was only a fraction of what it is now.

So, it may be a little unnerving to hear a signal from a city 2000 kilometres away drowning out your neighbor down the block but CB radio has already lived through two very good "highs" and survived — I'm sure that it will live through the coming one too.

DX INTERNATIONAL

WHAT'S BEING HEARD ON THE DX CHANNELS — JACK-67-W-07

The 11-metre band has still failed to yield to some form of regularity, especially as far as dependable band openings are concerned. Perhaps we are all too quick to judge the band on past performances, times when the band was wide open virtually 24 hours a day. Recent longpath openings have often proved to be a much better bargain than the once reliable evening and night time shortpath openings. Some of the morning longpath signals have been well in excess of strength nine on the meter and have held quite well.

Night time shortpath has often been so miserable that one is better off devoting some time to other activities, maybe even giving the beloved morse code practise tapes a bit of a whirl. I know they tend to get boring rather quickly, still, it is more constructive than sitting by the radio listening to pathetically weak signals floating about the noise.

When chasing rare stations on the African continent it always pays to have a browse about the 10-metre amateur band as there are a lot more active radio amateurs in central and western Africa than there are on the 11-metre band. By monitoring these stations on the 10-metre band you can obtain the best beam heading and judge how well the signal is holding before going to 11 metres for a look around. This method has proved its worth to me time and time again so give it a go.

Why is it that various imbeciles think it is fashionable to whistle into their microphones prior to placing a DX call? I find it a rather irritating practise, if not childish. I know quite a number of European stations and our New Caledonian neighbors subscribe to this uncalled for habit, but why should we? I use the term "we" rather loosely, as most of the Australian stations that I have heard whistling before calls share the intellect of the old 10-4 Good Buddy brigade — they haven't grown up, and perhaps never will. I cannot understand why some of us have to copy the bad habits of others, surely we can stand on our own two feet and assert our own degree of natural intelligence on radio. I tend to class them in the same bracket as the Brain Dead brigade who call with American accents when the Yanks are about the radio. Aren't they proud to be Australian? Nevertheless, I have yet to read a radio instruction manual that requires the operator to whistle into the microphone while the radio is in the transmit mode, have you?

One last point, and that is the issue of unvalidated QSL cards. I am sure that most of us have received them at one time or another, a card, usually a picture postcard, devoid of the proper information such as date, time, mode, frequency and signal report. These cards are considered unacceptable as a QSO confirmation by most prominent DX groups as they fail to exhibit the proper information concerning the contact. The same system exists on the amateur bands. If you are going to send a picture postcard then the least you can do is fill it out properly, otherwise it will most likely end up in the garbage bin.

AFRICAN & INDIAN OCEAN REGIONS

Some long awaited activity from this region has made its presence known on the band. A rare one by way of Marcos, who signs as 159-AT-101, was heard at 0830z with a report of four by one. Unfortunately Australia and the Pacific missed out as the usual big guns from Europe had total control over the frequency and were jumping over each other trying to work him. However, if you were lucky enough to secure him, cards go via his QSL manager, 1-AT-197 in Italy.

A number of Asian stations were heard calling the 162-AT-113, operated by Ahmed in Zaire at 0803z. Ahmed was a miserable four by one but quickly dropped into the noise of the band and failed to reappear. Let's hope this is a sign of increased activity from this region as there are quite a few of us who need Zaire in the logs.

Activity from the French possession of Corsica is quite rare, and thus is a much sought after country by DXers.

Djibouti is still easily obtained on the band via Regis, who is the 186-ICC-002. He was logged at 0445z with a good steady five by six signal report and had no shortage of takers. QSL cards for Regis go via the club headquarters, PO Box 6, Maurepas, Cedex 78311, France, and should include the usual green stamp or three IRCs for return postage. Regis only runs 15 watts PEP with a Superstar 360-FM into a double antenna.

Although he is supposed to be active, nothing has been heard from Roberto, who signs as 83-AT-101 in Tanzania. Recently Roberto went to Europe for a long vacation but has since returned. It may be a case of being around at the right time to secure this one, though it is possible he may not speak English but only Italian. If you are lucky enough to hit the proverbial jackpot, the QSL route is via 1-AT-502, Antonio in Sicily.

Morocco is still proving to be rather elusive on the band. Patrick, the 66-AT-101, was logged at 2355z via the longpath calling the Caribbean Sea. Although his signal was barely readable it maybe only a matter of time before it picks up. The station I heard him working in the Caribbean gave him a five by nine plus 10 report. Just be patient, that's all I can say at the moment.

Namibia, in south west Africa, has been noted on a number of ocassions. Along with the run-of-the-mill Alpha Tango stations there has been a new one to surface. Colin, who signs with the imaginative call of Safari-69, was heard at 0520z with an excellent five by seven report. QSL cards go via Colin's home address in the UK.

A reasonable amount of activity has been heard from Zimbabwe. Johan, the ZFL-142, was heard at 0726z. Although his signal was knocked around with the usual rabble from Indonesia he was still quite readable but he was scraping in with a poor four by two report. The best times to look for Zimbabwe are anytime from 0430z onwards, or when South Africa is about.

The MacDonald Islands were represented on the band by way of an operator called Kevin (call unknown), who was logged at 0852z with a massive five by nine report although it was subject to a reasonable amount of fade. It appears that Kevin was not too interested in the art of DXing and was only concerned with meeting up with a mate of his in Western Australia. MacDonalds Islands are north of Antarctica and due west of Heard Island.

Mozambique received quite a bit of airing by way of the DXpedition launched by the Papa-Whiskey DX Group. It appeared on time and gave many stations in Asia and the Pacific the opportunity to secure this seldom-heard area of eastern Africa. QSL cards go to Braan, the 44-PW-010, PO Box 14986, Verwoerdburg 0140, Republic of South Africa. One green stamp is essential for this one and a contact number is required on the card.

The usual signals can be heard from Reunion, Mauritius and Mayotte Islands, anytime from around 0430z onwards and as

Popular Yugoslavian DXer, Peter, the CP-1A-532 is very active on the band and has made many friends in Australia, he usually transmits maritime mobile from a container ship.

usual QSL cards still tend to be a problem. They seem to like receiving over there but are not too inclined to give. The best bet is wait until you receive theirs before sending yours.

Beware of a slim who says he is operating from Christmas Island in the Indian Ocean. He uses a variety of calls but in fact is an Indonesian on the island of Java. Don't send him anything as he asks for one US dollar for a card to his Indonesian address. You've been warned!

MIDDLE EAST

Signals from the Middle East have proved to be quite strong on the longpath. Around 2335z I logged Don, the 666 portable in Abu Dhabi, and he was a good five by five and the signal held quite well. he was soon followed by stations in Lebanon, Kuwait and Qatar with equally as good signals.

A new one has emerged on the band by way of 94-AT-101, name unknown. He was heard at 0840z on the shortpath, with a five by three signal. It was not clear what part of the United Arab Emirates he was operating from, although he had quite a load on his hands with the west coast of Australia and Asia in hot pursuit.

Kuwait has been well represented on the band by way of Abdullah, who signs as 102-NE-101. Abdullah was heard at 0716z with a steady five by five report and was closely followed by 102-AT-115, operated by Sami, who was a massive five by nine plus 10DB. Sami was also heard earlier the next day at 0355z with a five by nine plus 20DB signal and had no shortage of takers to his calls. Sami operates out of Safat, in Kuwait. He QSLs on receipt of card only.

A French maritime mobile station signing with the call of Curlew was heard at 0415z, operated by Francois. He was a five by six as the vessel passed through the Suez Canal en route to Alexandria in northern Egypt. He does not speak English and QSL information at present is unknown.

EUROPE

The usual countries from western and southern Europe have been about, both on the shortpath and the longpath, although the shortpath at times appears to dip out in favor of morning longpath openings.

West Germany was represented by way of Joerg, who signs as 13-AT-214. Joerg operates from Bielefeld and was logged at 0452z with a good five by seven report.

There have been some thumping signals out of Sicily Island recently with Antonio, the 1-AT-502, leading the way and at 0500z he was a massive five by nine plus 20DB. Shortly after I heard Antonio I logged a rather solid signal from 1-AT-220 operated by Vincenzo, also on Sicily Island. He was 30DB over nine at 0520z and the signal was still holding at 0630z.

Greece has been about and with excellent signals. One notable station was Spiros, who signs at 18-AT-133. He was heard at 0543z and was a good five by six report. Spiros operates from the island of Kefallinia in the Ionian Sea. The Greek island of Rhodes was also heard at 0558z by way of Tolis, the 59-AT-101. Tolis was five by nine plus 10DB and had no shortage of takers to his call.

A few signals from the UK have been making it through the sometimes poor shortpath openings. Ron, the AB-46, was noted at 0741z with a five by five report. Also heard was Scott, the BR-109 from Birmingham. At 0810z he was five by three and mentioned that he had sent 36 QSL cards to Australia and had only received five back!

The countries that make up the main portion of Europe's Eastern Bloc are still relatively scarce on the 11-metre band. Although there have been plenty of Yugoslavian stations about the others take a bit of finding.

East Germany sometimes appears often by way of Michael, who signs as 46-AT-102 from East Berlin. He usually only comes on for one, maybe two brief contacts and then signs off abruptly.

Poland was logged at 0756z with Tomasz, the 161-AT-128 being heard but he was a poor four by one from his home in Warsaw. There have been quite a few remarks about his ability to send QSL cards, so beware of this particular station.

Nothing much has been heard recently from Bulgaria, Romania, Czechoslovakia, or the USSR. The problem is mainly attributed to the lack of active operators from these countries. Listening to the 10-metre amateur band will prove that the band does in fact open to this area. Many stations in the countries just mentioned were heard on 10 metres with five by nine plus reports.

A lot of us are still waiting for cards to materialise from the two main stations who frequent 11 metres in the USSR — Grey, the UB-01, and Boris, the 50-AT-380. Don't forget, when sending cards to Eastern Bloc Europe, NO CALLSIGNS on the envelopes.

CENTRAL/SOUTH AMERICA & THE CARIBBEAN

Havana, Cuba was heard on the band at 2156z by way of Manuel, who was signing as Cuba Radio.

He was a reasonable five by four and the main problem was that he didn't speak a word of English. It may be a case of brushing up on your Spanish to secure him.

Uruguay was about at 1220z by way of Luis, who signs as the IC-111 from Duranzo. Luis was a five by three and was mainly concentrating on stations in the Pacific Islands rather than Australia and New Zealand. Luis uses a President Richards into a three-element beam and speaks perfect English.

Argentina was represented on the band by Karl, who uses the novelty call of La Bamba. Karl, from Beunos Aires, was logged at 2233z with a good five by six report although his modulation was not too good due to one of those stupid echo machines.

Another novelty call was heard, Tortilla, logged at 2357z from a portable station in Paraguay. Tortilla was a good five by six report but his English was not too good. The only English he appeared to know was his QSL information which he kept repeating parrot fashion. I would treat this one

It may be tiny, but Johnston Island is home to Mel, who signs as the ONE-MAN-ARMY from the North Pacific Ocean.

Bill, the BC-216 is one of the better known stations from British Colombia, Canada. Bill uses an Excalibur CB radion into a Moonraker-4 antenna system

with suspicion as far as cards are concerned.

The usual big signals from Colombia and Venezuela are still about and there are quite a few to choose from. Some were logged here in excess of 10DB over the nine and the signals held quite well too.

Quite a number of stations have been appearing from Haiti recently with Patrick, the 103-SK-101, being the most predominant. Patrick was logged at 2354z with a five by four report. Later in the day I noted 103-DX-105, operated by Jason at 0425z and he was an excellent five by eight signal into eastern Australia. Jason lives in Port-au-Prince on Haiti.

Puerto Rico was about the band, with Ozzie being the strongest. Ozzie signs as 11-AT-116 and was heard at 0007z with a five by seven on the meter. The New Zealanders kept him entertained for nearly two hours until conditions changed.

Costa Rica was around and Hermes, the 69-AT-102, was a massive 30DB over the nine at 0110z. I don't think I have heard him yet under a strength seven. Other stations calling from Costa Rica at the same time were nowhere near as strong.

Curacao, in the Netherlands Antilles, was present by way of regular station Lucky-13, operated by Ricky. He was a good five by five at 2348z and was still around the band at 0620z.

Other regulars from Panama, Guatemala and Honduras were heard in the usual morning opening, anytime from daylight onwards. Some were up around the five by nine mark and by now I think most of us will have these anyway.

NORTH AMERICA

Not a great deal to gloat about as far as this region is concerned. The ever-present Mexicans are still about although the QSL situation hasn't changed with the majority of them. I am forever hearing of people who are owed quite a few cards from Mexico.

An excellent signal was logged from Pacific Beach in Washington. This came by way of Ian who signs as 2-AT-415. At 0025z he was a good five by nine. Ian uses a Galaxy 2100 CB radio into a three-element horizontal beam antenna.

International 298, operated by Fred in British Colombia, Canada, has been quite active. Fred was noted on the band at 2012z and his report was a stable five by four. Fred will be coming to Australia for his annual vacation and will be looking forward to meeting his many friends here.

A station signing with the novelty call Wild Horse was heard from Anchorage, Alaska at 0210z, operated by Jake aboard a fishing vessel lying off the coast. He was having a ball entertaining the Pacific with his smutty jokes. Jake was a good five by five at the time.

ASIA & THE PACIFIC REGION

A few new ones have appeared in this region and are proving quite popular with those DXers chasing the odd new country or two. This is a welcome change from the usual hurly-burly associated with the area.

Cheju Island, off the tip of South Korea, has been present on the band by way of Jin, who signs as the AW-25. Jin was a good five by six report at 0545z and had his hands full working many stations south of the Equator. Cheju Island is not a DXCC country but is part of South Korea and counts as such DXCC wise.

There has been noticeable activity from the Solomon Islands by way of Paul, the 1808, who is maritime mobile on a ketch. Paul was heard from Gizo Island at 0645z and peaked at five by nine at times. Paul should be in the Solomons for some time as he has fallen in love with the magic of cruising the South Seas.

American Samoa is still about the band for those wishing to work this area. Tony, the Pineapple 995, has been reasonably active and was logged at 2320z with a steady five by five report. I believe he is currently working at the local TV station in Pago Pago the capital, and he is reliable in the QSL department.

A new one that you should have by now is the Marshall Islands. Alden, who signs as 132-AT-101 or 132-SR-01, has been most active and has given many this usually hard to obtain country. Alden is operating from the atoll of Majuro, the capital of the Marshall Islands, seven degrees north of the Equator. Cards go direct to Alden's Majuro address.

Christmas Island in Eastern Kiribati is still about radio wise, for those who may still be after this one. Dick, who uses many callsigns but is best known as the 217-AT-177, was heard at 2255z with a small but punchy five by two report. QSL cards take some time to filter through as they go via his US address, so be patient and yes, he does QSL.

A huge pile-up signalled the appearance of Somchai, the GV-17 from Thailand. He was noted at 0435z along with a five by six report. The pile-up became so big that it was impossible to work out who was speaking in the end.

West Malaysia is around spasmodically by way of Deen, the 113-AT-101. Deen was logged at 1031z with a five by two report and was busy dealing with the backlog of Europeans wishing to work him.

The operator of station One-Man-

Army, Mel on Johnston Island, is issuing QSL cards so those who were waiting should have received his card by the time this magazine is on the stands. Cards still go to his San Fransisco address.

There has been quite an increase in activity from Futuna Island with Brigette, the BY-01, proving most popular. Brigette is active most days and I heard her at 0845z with a solid five by nine report. Sorry, she doesn't speak fluent English.

Many new operators are appearing in the eastern Caroline Islands, the most recent beig Kan who signs with his amateur band callsign KC6KF from Moen Island, part of the Truk Group. Kan was a fair five by two at 0015z and was enjoying himself on 11 metres.

The big gun signals from Hawaii are still with us with Kevin, who signs as 17-AT-106 on Mui Island, being quite active. Kevin was a good five by nine plus 10DB at 2340z and this was brought around by his Super Galaxy II radio fed into a Super Scanner antenna at a height of 40 feet. Kevin QSLs only on receipt of the card. His other interests are shortwave listening and scanners and he is into RTTY, SSTV, Packet radio, AMTOR and CW.

A new station operating from somewhere in South Korea has being noted signing as Unit-131. He was logged at 0600z with a steady five by seven report with the Japanese and Americans in hot pursuit.

DXPEDITION NEWS

The scheduled DXpedition to Iran, signing as 154-IRO, failed to appear on the band. It was scheduled for the first two days of July but nothing was heard.

Also in early July, the proposed DXpedition to the Vatican City was not heard either, although this was only a strong rumor.

British Sovereign Base Cyprus, signing as 291-AT-0/ZC-4, appeared on time and gave many a chance to pick up a new one. If you were lucky enough to secure this then cards go via 26-AT-440.

The DXpedition to Bulgaria failed to appear on schedule. Signing as 178-AT-0 from 3 to 15 July, nothing was heard in the Pacific from that one. If you did by chance secure this one, cards go via George, 109-AT-108 in Hungary.

Another DXpedition to Bulgaria (rumored), again signing as 178-AT-0 for the weekend of 12 and 13 August, also failed to appear. It was supposed to have been conducted by 14-AT-325 and cards go to the same address and operator.

One of the best known operators from Europe is Antonio, the 1-AT-502 from Sicily Island is seen here in his impressive shack with budding DXers Antonio Junior and Claudia, his two children.

The north African DXpedition to Tunisia, signing as 147-AT-0, was not heard on the proposed dates of 9 and 10 July. There was a rumor circulating that it was deferred to 10 and 15 July, but again nothing was heard. If you were lucky then cards go via 14-AT-227.

Market Reef appeared a week later than planned and was heard signing as 213-AT-0 on the weekend of 22 and 23 July. A number of operators in the South Pacific secured that one although competition from Europe made it hard work. Cards go via 212-AT-102 on Aland Island.

North Pole DXpedition, signing as VE-08, failed to appear during the period 3 to 24 July as scheduled. Was it too cold for them to operate the radio? If you were fortunate to get hold of this one then cards go to 14-AT-493 in France.

Mozambique appeared on time, signing as 204-PW-0A. There were a number of eager DXers after this over the period 20 to 23 July. Six operators went on this one led by Braam, the 44-AT-116 or if you like, 44-PW-010. They were active for the entire period with three operators per station (two stations established). QSL route is via Braam or Barry (44-PW-011).

For those chasing IOTA points, the two DXpeditions to Houat and also Hoedic Islands appeared on schedule, signing as EU-48. Operated by three French operators, 14-AT-217, 337 and 661, they proved to be quite popular despite the fact they are not DXCC countries in their own right. QSL routing is via 14-AT-337 for both islands.

Liechtenstein DXpedition 40-AT-0-HB0 failed to materialise on schedule on 30 July. It was to have been a combined French and German effort performed by 14-AT-133 and 13-AT-137 along with 13-AT-715, however, I and many others failed to hear it eventuate but if luck was on your side cards go via 14-AT-133 in France.

There was a rumor of a DXpedition to Singapore which was to have signed as 98-AT-0. Although a number of dates were volleyed about none of them yielded anything concrete, so I tend to think it may be something of a fizzer.

Closer to home, the DXpedition to Tarawa Atoll in Western Kiribati went off on schedule. Jack, the 224-KI-01, appeared on time commencing 24 June and concluded on 16 July. All cards were sent from Tarawa so you should have yours by now if you were lucky enough to get this one.

The proposed two-week DXpedition to Funafuti Atoll in Tuvalu appeared three days late. Signing as 276-TI-01, Jack appeared late due to some transport problems from Tarawa and was only active for three days. Murphy made his presence known by way of antenna problems, but those who made it should have their cards by now as all were posted in Funafuti prior to leaving Tuvalu.

The KA Club of Kuwait is running a DXpedition to Failaka Island over two days, 26/27 October which should find plenty of takers. Also, Patrick, signing as 255ICC, is operating regularly from Kerguelen Island which is a rare one even for amateurs. He has been heard around 0900 to 1000Z.

That wraps it up for another issue, I hope that you found something useful in this edition. News was down in the last edition but hopefully I have made it up with this one. Longpath notes were sort of incorporated with the rest of the news. As usual my thanks to those who kept me posted as to what was going on.

Prominent Yugoslav DX-ers, Zivko, the 1-KL-001 (left) and Ribic, the 1-KL-037, are in the top ranks of Europe's best DXers. Zivko is the President and founder of the well-known "Kilo-Lima" Club based in Yugoslavia.

AUSTRALIAN UHF REPEATER LIST

AREA	CHANNEL	LOCATION	SPONSOR
ACT			
Canberra	2/32	Isaacs Ridge	Philips — TMC
Canberra	8/38	Isaacs Ridge	Philips — TMC
New South Wales			
Adjungabilli	6/36	—	—
Albury	4/34	Lavington	Albury Communications
Armidale	4/34	Armidale	New E'land Mobile Comms
Barraba	6/36	—	—
Bathurst	8/38	Mt Panorama	Serv-U Appliance Centre
Bega	6/36	Mumbulla Mtn	A. McCoy Two-Way Radio
Belbora	1/31	—	—
Bombala	1/31	—	—
Booral	7/37	—	—
Bowral/Mittagong	6/36	—	—
Brewarrina	1/31	—	—
Brindabella R'ge	8/38	Mt Ginini	Outward Bound Australia
Broken Hill	4/34	—	B. Hill UHF Club
Broken Hill	7/37	—	B. Hill UHF Club
Bulahdelah	7/37	Cabbage Tree Mtn	Great Lakes UHF R'ter Grp
Capoompeta	5/35	—	—
Casino	6/36	Malanganee Range	Nathan Ross Electronics
Coffs Harbour	1/31	—	—
Coffs Harbour	6/36	Coffs Harbour	Countrywide Communications
Cooma	4/34	—	Blamac Communications
Corowa	1/31	Corowa	Corowa Electrics
Corowa	5/35	—	—
Cowra	7/37	Bellview Hill	Harvey Electronic Services
Deepwater	5/35	—	—
Deniliquin	1/31	—	—
Deniliquin	3/33	Deniliquin	Deniliquin Machinery
Ebor	1/31	Nr Armidale	—
Eden	2/32	—	—
Glen Innes	7/37	Mt Rumbee	Glen Innes ARC
Goulburn	4/34	Mt Gray	Double Diamond
Grafton	8/38	—	—
Grenfell	1/31	—	—
Griffith	8/38	Mt Squareknob	—
Harden	1/31	Mt Bobbara	—
Hay	4/34	—	Phil Shields Electronics
Inverell	2/32	Inverell	—
Jindabyne	1/31	Coninya A'pine C.	Manst Brothers
Lismore	2/32	Raus	—
Malananee	6/36	—	—
Moonee	6/36	—	D. Groth Radio-Electronics
Murrurundi	3/33	Liverpool Range	—
Muswellbrook	4/34	Mt Arthur	General Communications
Narrabri	2/32	Castletop Mountain	L. Hannaford Electrical
Narromine	5/35	—	—
Narromine	6/36	—	—
Newcastle	1/31	Charlestown	—
Newcastle	6/36	New Lambton	General Communications
Oban	1/31	—	—
Oban	5/35	—	—
Parkes	2/32	Parkes	Bionics Australia
Port Macquarie	4/34	—	—
Syd Outer West	4/34	Kurmond	Riverlands Repeater Group
Sydney South	1/31	Hurstville	Practronics
Sydney Blue Mtns	2/32	—	Argent Comms
Sydney North	7/37	Chatswood	Philips Communications
Sydney West	3/33	Prospect	Philips Communications
Tamworth	1/31	Windworth	Landlink Communications
Taree	3/33	—	—
Tenterfield	3/33	Mt McKenzie	Nathan Ross Electronics
Tumbarumba	3/33	Mt Ikes	—
Tweed Heads	4/34	—	—
Tumut	6/36	—	—
Wagga	1/31	—Riverina Communications	
Wagga	5/35	—	—
Wagga	7/37	Wagga	Riverina Communications
Walbundrie	2/32	Walbundrie	Corowa Electronics
Walcha	8/38	Walcha	WalGraz
Wilcannia	1/31	Murtee Station	—
Wingham	1/31	Wingham	—
Wollongong	8/38	—	Phil Day
Queensland			
Atherton	8/38	—	—
Atherton-Mareeba	1/31	Rocky Creek	Marteens Electronics
Bajool	4/34	Mt Hopeful	Mt H. UHF Rpt Assoc
Barcaldine	1/31	—	—
Bathurst Heads	1/31	—	
Biloela	7/37	Mt Bertha	Biloela Repeater Assoc
Blackdown	6/36	—	Blackdown UHF Rpt Assoc
Brisbane	1/31	Mt Cotton	Philips Communications
Brisbane	5/35	Mt Glorious	ACRM (Q'land)
Brisbane	7/37	Toohey Mnt	Olbis Industries
Bundaberg	1/31	Mt Perry	Bundaberg Hi-Fi Stereo
Bundaberg	4/34	Sloping Hummock	B'berg Hi-Fi Stereo
Burnett Ranges	6/36	Munduberra	Custom Scientific Elects
Cairns	3/33	Mt Yarrabah	GtG Communications
Caloundra	6/36	Bald Knob	Ralph Hill Electrical
Chinchilla	3/33	—	—
Clermont	1/31	Clermont	—
Clermont	7/37	—	Clermont SES
Dalby	4/34	Mt Mowbullan	GT Communications
Dimbulah	6/36	—	—
Emerald	7/37	—	—
Emerald	8/38	Emerald	Emerald Dist Rpt Association
Gladstone	6/36	Mt Larcom	Nixon Controls
Gold Coast	4/34	Coolangatta	Philips Communications
Goondiwindi	4/34	Goondiwindi	Border TV & Radio
Gunalda	2/32	Mt Kanigan	Ralph Hill Electrical
Gympie	7/37	—	—
Ingham	2/32	Mt Cudmore	R.E. Pugh
Innisfail	1/31	—	—
Ipswich	4/34	—	Ipswich Rpt Assoc
Jericho	4/34	—	—
Kilcoy	3/33	—	—
Leichhardt	1/31	Mt Hope	Driscoll Pastoral
Longreach	3/33	—	—
Mackay	3/33	Fairleigh	McKay C'zens Rpt Grp
Mackay	6/36	—	—
Marlborough	2/32	Broadsound Range	M'Borough UHF Rpt Assoc
Maryborough	6/36	—	—
Middlemount	1/31	—	Middlemount SES
Millaa Millaa	8/38	Millaa Millaa	Bill Jones Communications
Millaa Millaa	7/37	—	—
Miriamvale	2/32	—	—
Monto	3/33	Pine Mountain	Monto UHF Rpt Assoc
Mt Alexandra	8/38	Mt Alexandra	Bill Jones Communications
Mt Aunt	4/34	—	—
Mt Inkerman	3/33	—	—
Mt Isa	1/31	Lake Julius	Q'Land Education Dept
Mt Janet	2/32	—	—
Mt Stewart	1/31	Mt Stewart	Olbis Industries
Mt Wolvie	5/35	—	—
Mundubbera	6/36	—	—
Murgon	7/37	Mt England	Murgon Repeater Assoc
Ocean View	8/38	—	—
Palm Island	6/36	Palm Island	Palm Island Council
Pialba	8/38	Ghost Hill	M'borough Sugar Factory
Police Mountain	6/36	—	—
Port Douglas	6/36	—	—
Quilpie	2/32	Trinidad Station	DEA Pegler & Co
Rockhampton	1/31	Mt Archer	Capricornia UHF Rpt Assoc
Roma	1/31	—	Roma Teleradio
Springsure	3/33	Rodda Lookout	Bauhinia SES
Stanthorpe	8/38	Amiens	Mt Peanga Rpt Assoc
Tambo	6/36	—	—
Taroom	2/32	Mt Kinnoul	Taroom Repeater Assoc
Thargomindah	6/36	—	—
Tin Can Bay	3/33	Double Is Point	Tin Can Bay Lions
Toowoomba	2/32	Picnic Point	Custom Scientific Elects
Townsville	1/31	—	—
Wilkes Knob	6/36	—	—
Yaraka	7/37	Mt Stowcombe	Yaraka Repeater Assoc
South Australia/Northern Territory			
Adelaide	1/31	Summerton	Philips Communications
Adelaide	5/35	Upper Sturt	ACR (SA) Inc
Adelaide	3/33	Trott Park	Philips Communications
Blinman	3/33	Patawarta Hill	Gum Creek Station
Burra	8/38	Mt Bryant	Mt Bryant Repeater Assoc
Ceduna	1/31	Coppudurba Hill	Ma Ross Electrical
Clare	7/37	Quarry Hill	Midnorth Repeater Assoc
Cleve	2/32	Mt Nield	Cleve Repeater Station Inc
Darwin	1/31	Darwin	Saascan Communications
Coonalpyn	6/36	Coonalpyn Hill	Upper SE Repeater Assoc
Hawker	7/37	Mt Aleck	Wilpenna F. Fighting Assoc
Manimum	8/38	Mt Beevor	SA Antenna Services
Mt Gambier	5/35	Mt McIntyre	Crest SA Mt Gamber
Mt Gambier	7/37	The Bluff	SE Repeater Assoc
Myponga	2/32	Nr Myponga	Aust Volunteer Coastguard
Naracoorte	4/34	Lucindale	Naracoorte Repeater Assoc
Oodnadatta	1/31	Mt Jane North	Todmordon Cattle Co
Orroroo	2/32	Black Rock Peak	Toops Electrical Services
Pardana	4/34	Nr Parndana	Ki Repeater Assoc
Port Lincoln	8/38	Pillawarta Hill	K.M. Electronics
Port Pirie	4/34	The Bluff	Dist Council of Mt Remarkable
Price Hill	1/31	—	Dist Council of Carrieton
Renmark	6/36	—	Riverland Repeater Group
Snowtown	6/36	Barunga Ranges	Largies Electrical
Tarcoola	6/36	Nr Tarcoola	A.J.& P.A. McBryde
Truro	4/34	Nr Truro	Barossa Repeater Assoc
Warooka	7/37	Mt Gore	Power Communications Service
Wilkatana	8/38	Mt Arden	Mt Arden Repeater Assoc

Tasmania

Burnie	8/38	Round Hill	N-West Coast Rpt Assoc
C.Highlands	7/37	Barren Tier	C-H'lands Assoc
Devonport	1/31	Sunnyside	Rick Rickard TAS-000
East Coast	6/36	Moaners Tier	East Coast Rpt Assoc
Hobart	1/31	Grass Tree Hill	Sth Tas Rpt Assoc
Hobart	5/35	Mt Faulkner	CREST (Tas)
Launceston	2/32	Mt Arthur	Launceston Rpt Assoc
Midlands Area	4/34	Millers Bluff	Midlands Rpt Group
N-E Coast	3/33	Tower Hill	N-E Repeater Group
West Coast	6/36	St Valentines Pk	N-W Coast Rpt Assoc

Victoria

Anakie	4/34	—	—
Ararat	6/36	Mt William	Mt William UHF Rpt Grp
Barnsdale	1/31	—	G'land Repeater Assoc
Bairnsdale	7/37	—	—
Ballarat	2/32	Mt Bunninyong	C'tral Highlands R. Assoc
Ballarat	5/35	Mt Warrenheip	B'rat Rural E'gency M'tors
Ballarat	7/37	—	Ballarat Communications
Balmoral	1/31	—	—
Bendigo	4/34	Specimen Hill	Central Vic R. Assoc
Bendigo	8/38	Mt Alexander	—
Carrajung	4/34	Carrajung	Carrajung UHF R. Assoc
Echuca	6/36	—	—
Eildon	1/31	—	—
Eildon	8/38	—	—
Euroa	3/33	—	—
Falls Creek	3/33	—	Henry's Radio Centre
Foster	6/36	Mt Fatique	G'land Repeater Assoc
Geelong	4/34	—	G'Long Amateur R. Club
Gippsland	7/37	Mt Taylor	G'land Repeater Assoc
Hamilton	8/31	—	—
Hamilton	5/35	Mt Bainbridge	Hamilton Electronics
Hamilton	8/38	—	—
Hawkesdale	4/34	Hawkesdale	—
Kerang	2/32	Mt Kerang	—
Lorne	3/33	Weeaproonah	—
Mansfield	2/32	The Paps	—
Melbourne North	1/31	—	Omega Radio Club
Melbourne Metro	3/33	Lysterfield	Philips Communications
Melbourne Metro	5/35	Olinda	Paravic Sports Assoc
Melbourne South	7/37	Frankston	Powerband Communications
Mildura	3/33	—	Ferguson Sec & Sound
Moe	2/32	Moe	G'land Repeater Assoc
Mornington Peninsula	8/38	Red Hill	Omega Radio Club
Mt Cann	8/38	—	—
Myrtleford	8/38	—	Alpine Repeater Group
Newtown	4/34	—	—
Omeo	1/31	—	—
Penshurst	1/31	Mt Rouse	Hamilton UHF Users Grp
Shepparton	7/37	Shepparton	Angus Communications
St Arnaud	1/31	—	—
Tallangalta	7/37	—	—
Wangaratta	6/36	Warby Ranges	Corowa Electronics
Yea	6/36	—	—

West Australia

Albany	3/33	Mt Melville	—
Augusta	7/37	—	—
Bencubin	2/32	Bencubin	—
Boyup Brook	4/34	Dinninup	Boyup Brook Comms Grp
Bunbury	2/32	Shenton Ridge	B'bry & Dist UHF R.G.
Carnamah	2/32	—	—
Coolgardie	7/37	Mt Burgess	—
Denmark	1/31	Denmark	—
Esperance	4/34	Esperance	—
Kambalda	1/31	Kambalda	Goldfields Repeater Assoc
Kamboola	1/31	—	—
Katanning	1/31	—	—
Kulin	4/34	Kulin	—
Lancelin	4/34	Lake Karakin	Gingin Shire Council
Mandurah	7/37	—	—
Manjimup	8/38	—	Manjimup Comms Radio
Margaret River	6/36	Ellen Brook	Margaret R. UHF Rpt Grp
Meekatharra	1/31	Hill View Station	—
Mia Mia	1/31	—	—
Mt Barker	7/37	Mt Barker	Plantagenet Rpt Group
Mt Barrow	7/37	—	—
Mt Marypeaks	6/36	Mt Marypeaks	—
Perth	1/31	Wanneroo	Philips Communications
Perth	3/33	Roleystone	Philips Communications
Perth-Metro	5/35	Maddington	CREST (WA)
Perth-East	8/38	—	—
Ravensthorpe	8/38	—	—
The Knob	2/32	—	—
Wickham	1/31	Wickham	Wickham Radio Club
Wongan Hills	8/38	—	—
Wyalkatchem	6/36	Wyalkatchem	D & G Pearce
York	7/37	Mt Bakewell	York Repeater Group

NOTE: This information is provided by various sources and relies upon reader input for the correct information. If you are aware of any non-listed or no longer operating repeaters, please advise to: REPEATER LISTING, P.O. Box E160, St James, Sydney 2000.

HUME HIGHWAY REPEATERS TO SHUTDOWN!

Bad news for UHF users travelling between Melbourne and Sydney (not to mention the locals along the way) is that a combined force of police and DoTaC folk are requesting repeater licensees along the Hume Highway to close down the repeaters from around 9 pm to 9am the following morning.

This is the result of the truckies moving en masse from 27 MHz channel 8 to UHF duplex setups to keep each other advised of speed traps, police vehicles and what have you.

What is an even greater problem is the sad fact that there are quite a few truckies who appear unable to get out more than two words without foulmouthing everything within hearing range and there has been a whole heap of complaints to both the police and DoTaC.

Now, while the truckies were solid on ch 8 there weren't any major problems. Sure, the language was often obscene, but, you didn't have to listen on this channel unless you were using it for the same purpose as the truckies — hearing where the law was and/or what road conditions were like. Usually, you only needed to listen to the foulmouthing for a couple of minutes to get this information and, quite often, you also found someone who could get out a sentence without f...g every second word.

Being unable to talk decently is not necessarily limited to truckies, but, there's little argument that they're the worst offenders on specific channels — namely 8.

Any night spent on 27 MHz will provide clear indication that there are also sufficient 'brain dead' yobbos operating from home bases so it's a little unfair to blame the truckies for everything.

The problem, however, is that they have now discovered repeaters and as a result the usually decent UHF repeater channels are now occupied by what are quite obviously truckies who can't string two words together without a string of profanities. This is a pity in itself, but, it's also creating a major problem for everyone — truckies included.

I've got no argument with any driver wanting to know where the speed traps are, but, surely this can be accomplished without inserting f..k into every second word and/or attempting to provide a graphic word picture of what the truckie is fantasizing about by way of female company.

The end result is that moves are now being made to close down Hume Highway repeaters at night so preventing the flood of obscenity destroying the UHF channels as it has done to channel 8 on 11 metres. The truckies will argue that the real reason is that the police are finding it difficult to nail speeding trucks when their every movement is announced through a repeater and there's certainly a degree of truth in this, but, the initial complaints have come from ordinary members of the public who are sick to death of the way the repeaters are being used.

So what's the end result ?

Well, as we go to press with this issue there are meetings being held between repeater licensees and DoTaC and the word is that the licensees will agree to night-time closure.

What a pity the truckies can't self-regulate themselves by way of language. Truck driving is not the easiest way to earn a dollar and I think that a majority of the public are sympathetic to their problems, but, they shouldn't expect any sympathy when they force other UHF users to listen to their language.

In short, truckies, it's largely up to you.

CB ACTION PEARCE – SIMPSON WORDMAZE

The answers to the questions in our last issue were: 1 — Yassu, 2 — Hobart, 3 — Xenofos, 4 — Possum, 5 — Bernard, 6 — Alpha, 7 — Commex, 8 — Hansen, 9 — Flynn, 10 — Hawker.

Once again there was a huge entry with everyone out to win the Connex 40 UHF Handheld — and the winner was Mr Justin Thomas of Ashton, South Australia.

Congratulations Justin you will receive your new rig within the next few days.

For this issue's competition we have a Pearce-Simpson Super Tiger.

The questions you need to answer are:

1. What is the new name (first word only) for the company which used to be known as Sentronic Agencies?
2. What is the surname of the author of the Deutsche Welle article which appeared in the September/October issue of CBA?
3. What is the first name of 'Furious Fewster'?
4. Propagation is currently becoming better as a result of (name) 22?
5. What is the Q Code for ceasing transmission?
6. What is the Q Code to ask someone to please stand by or wait?
7. What is the Q Code for indicating that you are being troubled by a nearby station?
8. The name 'Selcall' is generally used to indicate (first word) calling system.
9. What sort of meter (three letters only) should every operator use on a regular basis to check the efficiency of a rig's matching to the antenna?
10. Who (surname) writes the Bandspread column?

ANSWERS:

1.....

2.....

3.....

4.....

5.....

6.....

7.....

8.....

9.....

10.....

E N Y U B T A Z Q E A E Q A A M F K I A
X U F V L K S R L Y O V P C G P P I A F
E N E U K G I G I R J I L E R W H Q P A
C Y C L E E T A I D I H O I W K Z Y U V
N A O E E M X E J E M G O Z O I J B N B
C X V U C V E E X R B M U M E X Y E B D
L S K U O Q U R R D F Z U K E E W M Y Q
P X G W E A D E A U C F K L Z L E O R E
M I E Z I V P S Y R X J E E Y E F E A Q
G E B F D Q E V E A U O N N E F E C H A
E R W E J K U A A U U E E V X O T V A E
S D E A Z K B H U M H E D F O U D F G F
O E V K O M E E V T E Z I K I T X W L R
I R F O O S E B O A E O N S L T B I E H
U C E G S X U W U Z O R U K M L O E O F
O Q R X H V E I Q Z W Z M J Y L U V P N
O S X A T L R A C S X B C D U T R B C W
M P Q R L O S E L E C T I V E G F M V E
E E Q S D O D O A L D H H E W J E Q I A
E V E U G S O E L P Q O Y E E Q A O E E

They're really all pretty easy questions and you should have no great difficulty in finding the answers (not all of which are in this issue).

Note that the correct answers must be circled in the wordmaze — photostate entries are acceptable, however, only one per reader. If we find a reader sending in more than one on a photostate (send in as many as you like on the original page) all that reader's entries will be disregarded.

The closing date for entries is 20 November and the winner will be the first correct entry opened after that date. The draw will be conducted in the offices of CB Action and the results will be published in the next issue.

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