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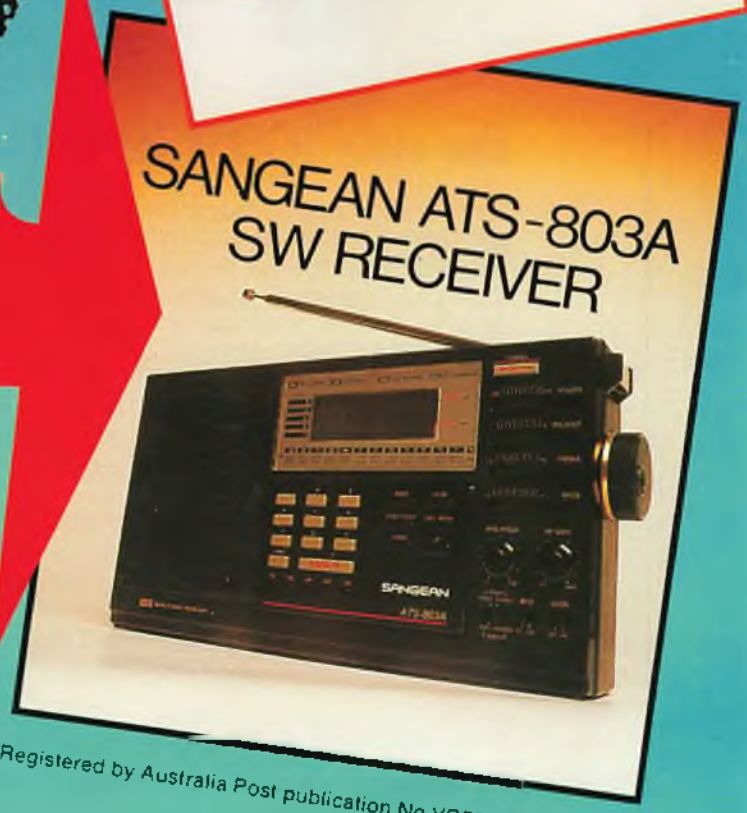

RIG REVIEWS

3 SCANNERS

4 SW RECEIVERS

1 UHF HANDHELD

3 AM/SSB 27MHz

COLUMNS ON:

SW LISTENING, SCANNERS, UHF NEWS DX, and more

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ON CHANNEL

HERE WE GO AGAIN

Hopefully you all had a marvellous Christmas and New Year and received things like 400w linears, super 20000 channel scanners with built-in decryption devices, 13 element Yagis atop 50 metre high towers and a brace of 'DC to Daylight' communication receivers with on-board TV and a satellite dish supplied and installed at no charge.

At worst we hope that you received a long-awaited QSL card from Swaziland and the visiting RI decided to tear up your on-the-spot ticket when you started crying.

So, what's in store for 1990?

Not a helluva lot really....no, we're not serious about that....the coming 12 months promise lots of fun for everyone with some great new UHF rigs due for release (check out the handheld IC-40G review in this issue), also some new AM/SSB units which are expected to appear around March/April, plus the ever expanding line-up of specialist columns....and lots more.

Yup, 1990 is going to be a good one.

READER SURVEY

While we have not yet finished compiling the results of the recent survey there are a couple of things which stand out like the proverbial dog's whatevers. One is the enormous increase in scanner freaks and in response to their pleas for "more of everything on scanners" we'll be trying to get young Bryant to increase the size of his column and provide even larger lists of "unknown" frequencies.

We are also looking at the re-introduction of the "classified sale/wanted" section, however, this has a few in-built problems which we need to sort out first.

Nor have we forgotten the suggested designation of AM/SSB channels (which attracted several favorable letters), but, here we have run into a few political problems and until we can sort these out there is no point in trying to actually get DoTaC to look at the situation.

Incidentally, the first winner of a free subscription for sending in his reader survey goes to Ian of Ormond, Victoria — we decided this even though we haven't picked any other winners as yet. The reason Ian gets a free sub is that his response was so amazingly negative about damn near everything that we think he deserves the sub as punishment. We think we're pretty rotten doing this — how would you like to be given a year's subscription to a magazine that you don't like anyway?

Happily, with the exception of good old Ian (who at least took the time to tell us what's wrong with CBA — like most everything) the remaining responses that we've looked at are praiseworthy of our efforts and include a heap of worthwhile ideas and comments for which we thank you — you too Ian, thanks.

APOLOGY

Our last issue advised that it carried a review of the new Super Cheetah Mk3 — it didn't....we're sorry. The CBA cover goes to press considerably earlier than the actual body of the magazine and, every so often, we list something on the cover which fails to make it in time for inclusion and that's what happened — it's in this issue...again our apologies, grovel, grovel.

CB Action

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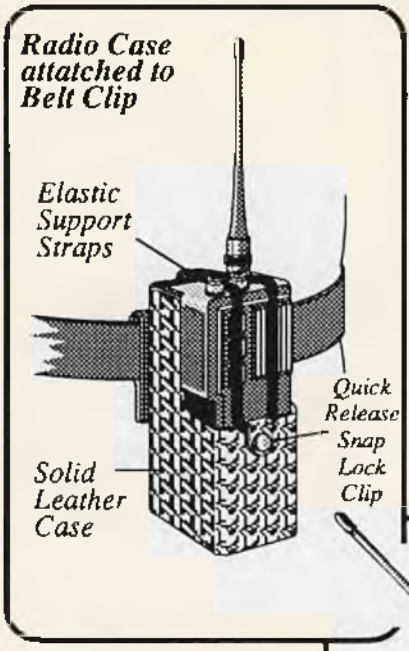

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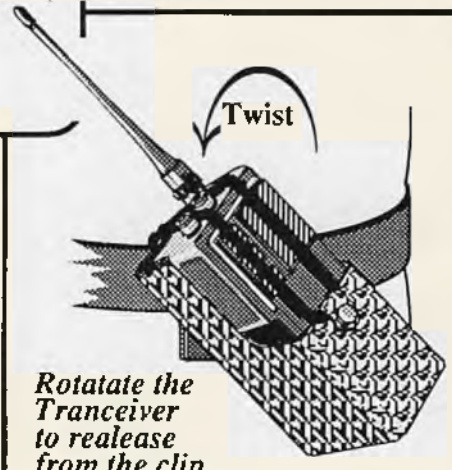

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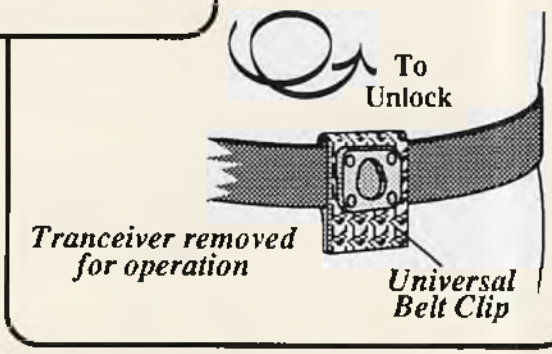

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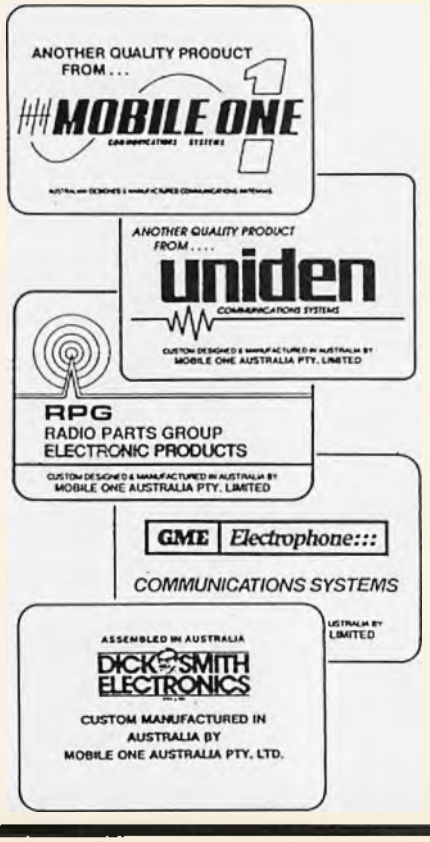

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Here's one with the lot . . .

ICOM'S BRILLIANT IC-40G HANDHELD

Reviewed by David Flynn

It's here! After months of rumor and speculation Icom has unveiled its successor to the IC-40, Australia's most popular UHF CB handheld. And if you've been lamenting the level of features and performance offered by many 477 MHz handhelds, especially in relation to their kin on the UHF ham bands, then the IC-40G is sure of a warm welcome.

You want a full five-watt output? No sweat! Twelve memories for your most-used channels? Done! Band scan and memory scan? You've got it! Dual watch? Of course, sir! Will that be all? No, not by a long shot.....

It's a lot to take in when you consider the spartan IC-40, which with the exception of some areas such as EPROM-driven frequency selection, has its roots in a design now over 10 years old. The IC-40G is simply the same design concept using the technology of the '90s. Channel selection is by an electronic version of the thumbwheel, switches are push-button rather than mechanical slide switches. And once you partner the EPROM (Eraseable Programmable Read-Only Memory) to a CPU computer chip, there are a whole host of useful features at your fingertips — simple, practical, and at almost no extra cost. This is true — the IC-40G will retail at around $780, close to the same price as the IC-40 when first introduced.

The IC-40G is a classic example of human engineering — technology made to fit the user, not the user having to adjust to a frightening technology. Oh, Icom has technology coming out of its ears. Its latest release IC-4SAT UHF amateur micro-handheld would make your head spin. "So", you might ask, "why didn't we end up with an 477 MHz IC-40SAT?"

It would not have been difficult. As a rule most manufacturers have a number of basic radio designs, "floorplans" if you will, which are adapted to suit different bands. Icom is perhaps at the forefront of this. Thus we have the long-time favorites of the IC-2 and IC-4 (and from which the IC-40 was derived). The "0" series then spawned the 02 and 04, slightly larger units with LCD readout, memory channels, scanning and other benefits of a keyboard- programmable microprocessor-controlled radio, followed by the "G" series, a more rugged yet compact handheld; and the latest "SAT" range, which must be the tiniest but most sophisticated amateur handheld to date. Most have been available as different models for the 144 MHz, 430 MHz and 1296 MHz amateur bands. The benefits are obvious — reduced tooling and construction costs, commonality between spare parts, and availability of accessories which fit all models in that series.

The IC-40G is based on Icom's durable Icom "G" series, a radio which is simple to operate yet has a level of features striking the right balance — enough to be practical and relevant, but not so many that the radio becomes an over-priced and over-engineered puzzle to the average user.

"This is the philosophy behind the IC-40G," says Icom Sales Manager Duncan Baxter, "it is a very neat and effective package having just the right level of features for both the commercial user and hobbyist".

Even so the IC-40G is Australia's most sophisticated and advanced UHF CB handheld. So let's take some first impressions.

The 40G is smaller than the IC-40, but equally as wide, and as deep if you ignore the "humpback" on the IC-40 where the EPROM resides. Surprising, because the IC-40 had this tall, lean look, and the style of the 40G is more compact, more rugged, even heavier. Another mirage. The 40G is lighter, just shy of 500 grams.

We normally don't bother with the guided tour of review rigs as you've only got to look at the photos to work out what's where. But, with so many of the 40G's controls having two functions, this is worth a run-through. The left- side panel is straight forward: a FUNCTION key, which is pressed to access the secondary function of other keys; the large push-up-talk key; a button to illuminate the LCD display (for

five seconds automatically, or press on and off); and the battery release switch.

There are three "touchstep" rocker switches on the top deck, each with two positions. From the left, then.....the first switch activates duplex (repeater) and dual watch, and doubles up to select the "power save" mode and time-out timer period. The second steps up or down through the channels 10 at a time — 10 to 20 to 30 and so on — and also sets the scan stop timer (SST). The third key changes the single channel digits (0-9) and commences scanning. As with thumbwheels, the touchstep channel selectors allow you to skip very quickly around the band, in either direction. Operators who are used to rotary dials soon find that once they become used to thinking in combinations of tens and single digits they get very fast on the draw.

To the far right of the top panel, beneath the on/volume knob, are two small press buttons. MEMO puts the 40G into memory mode and is used to lock channels out of the memory scan process, while DIAL reverts to the full band of 40 channels and also enters these channels into the memory bank.

A high-pitched "beep" accompanies most keystrokes, including channel changing and dual watch activation. A lower tone indicates you have either de- activated a function (such as ending the scan) or pressed the wrong key. The volume level of the tone varies in accordance with the setting of the volume control. Why is it so hard for other manufacturers to follow suit, instead of forcing us to tolerate a loud beep or pip or blat no matter how the volume knob is set ?

To tell you what your radio is doing at any given time is a good-sized LCD readout which indicates keyboard lock, scan, memory lock-out, dual watch, duplex, high/low power, and whether you are in memory or dial mode. Plus two separate channel displays, the larger for DIAL mode and the smaller for MEMO.

Perched top left beneath the squelch knob is a "transmit" LED which is unusual in two counts — it is clear but illuminates bright red, as opposed to the usual and much cheaper dark red devices; and it wraps around both the top and front panels, so being visible from either angle. Clever. Not the stuff from which revolutions spring, but an example of thoughtfulness in design.

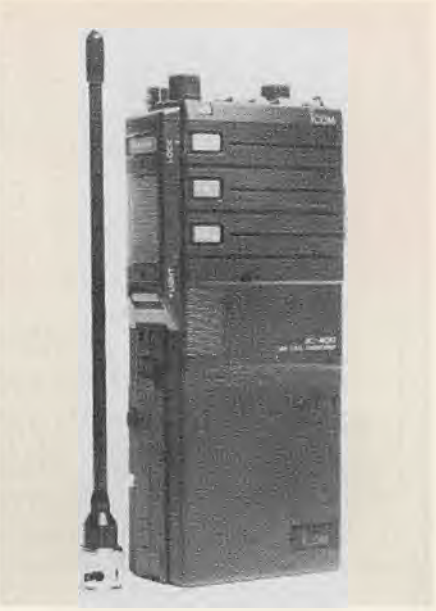
The front panel holds three keys, each recessed to prevent accidental operation. The top-most, labelled H/L, toggles the power level between high (five watts) and low (600 milliwatts). CALL activates the optional selective calling tone-burst. Between these is a key marked *, which has no function. Amateur versions of the "G" series used these last two keys for instant monitoring of a repeater input, and one-touch return to a user-programmable channel. Either of these would have been welcome uses for the * key, preferably for immediate return to a calling, working or net channel or your local repeater, rather than leaving it for decoration alone. At any rate, it's ideal for future modifications (oops!).

All controls are laid out in a logical and ergonomic manner, and I found the IC-40G easy enough to drive in either paw. The BNC antenna connector is recessed and slightly hidden behind the squelch knob, and it is hard to get that final locked-in turn unless you grip it from the side or back. Maybe that's obvious to you, but it took me a few tries to think of it....! The color- coding of the IC-40G's controls, like the layout itself, shows good sense. The H/L key is a bright blue, the LIGHT key is tan, and Icom has used different colors (dark olive vs tan) for the 10ch and 1ch touchstep keys — excellent for quick at-a-glance identification.

Overall construction of the unit is excellent, and you'd expect nothing less from a company which has made a name for quality equipment in the amateur radio, marine and commercial fields. Built around a strong aluminium die-cast frame, Icom has made full use of surface-mounting technology to reduce the handheld's size and increase reliability. There is real attention to detail and the intricacies of UHF RF, which has long been Icom's forte in the ham radio world. The casing is sealed at all vulnerable points with rubber gaskets, preventing moisture from sneaking inside and so effectively making the 40G splash-resistant.

Icom has also produced one of the better handbooks I have seen for some time. It uses clear text and very effective illustrations (especially when explaining scan and dual watch functions) to de-mystify what could be a very confusing radio to operate if you had to muddle through with a poorly-written manual. As it is, Icom has ensured that anyone from the raw beginner upwards will get full benefit from the IC-40G — provided they read the instructions.

The IC-40G's use of "dial" and "memory" settings can be a bit baffling to the uninitiated, so here's a word of explanation.. "Dial" is the everyday 40-channel UHF CB band, and "memory" refers rather obviously to the 12-channel memory. In both cases channels are selected using the 10ch and 1ch touchstep switches, although there are some things you can only do in one mode — for one, duplex can only be activated in "dial" mode, and in order to program a repeater channel in the memory you first have to set it up on the dial and then write it into the desired memory channel. Because of the different operations possible in each mode, the IC-40G requires you to select which "band" you are working in — hence the switches for the 40-channel DIAL and 12-channel MEMO. The advantage is that changing the dial setting doesn't alter your selected



memory channel, and vice versa. You can program a handy frequency as a memory channel and then switch straight back to "dial" for normal working around the band. Then press MEMO at any time and you'll instantly be returned to your handy frequency.

This is one of the numerous neat tricks to which the IC-40G lends itself, the memory feature being far more versatile than you might first expect. Any of the 40 channels can be programmed into the memory much as frequencies are written into a scanner. Select the desired channel on the "dial" option, and the memory channel into which you wish it programmed — that both are displayed at once makes this easy indeed — press "FUNCTION" and "DIAL", and three rapid beeps sound forth from the speaker to tell you the job's done. As you step or scan through the memory, the actual channel you have programmed is displayed on the larger "DIAL" LCD while the memory position itself is on the smaller readout, so you always know just where you are. Memory channels can be programmed as simplex or duplex. A tiny lithium cell is used to retain the memory programming, even if the battery pack is totally discharged or removed.

To this point, the 12 memories are handy for quickly hopping between your favorite channels, even if they are scattered throughout the band. To ensure you don't miss a bit of action on them there is a memory scan which flicks through these channels only. Individual memories can be locked out of the scan process, and restored, using the FUNCTION and MEMO keys. The scan can be applied across the entire 40-channel band in a fast four seconds, although there is no lock-out facility in this mode. The scan will stop on any active channel, resuming either immediately after the end of the transmission or following a 15-second pause depen-

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IC-40G

dent on the setting of the scan stop timer (SST).

Now to the "dual watch", and if you're not familiar with this feature be assured it is a convenient one. Dual watch allows you to operate on one channel while the radio automatically monitors another, a priority channel, and switches over to this frequency when a signal is present. Obvious applications would include emergency, calling or working channels. The IC-40G dual watch samples the priority channel every five seconds, for a period of 0.25 seconds. Following any transmission on the priority channel, the dual watch can be resumed instantly or with a 15-second delay using the SST.

The added flexibility of the IC-40G's dual watch comes from its adoption of the "dial" setting as your current working frequency, and any memory channel as the priority channel. So any combination of channels can be set up for dual watch, and this pair changed in seconds. The dual watch can also be set to scan the entire memory bank, all 12 channels if you wish, instead of monitoring a single frequency. As the same sampling period is used — a quarter second check every five seconds — it obviously will take longer to work its way through all the channels compared to a single priority. As before, memory channels can be locked out from the dual watch scan. This can be used to create a tri-watch, by locking out all but two memory channels from the scan. Or a four-channel watch, or five, or six.....this would get a bit slow and cumbersome in most instances, however at least the user makes this choice and can change it at any time.

The duplex setting allows access to repeater stations on channels 1 to 8, but, unlike most other UHF rigs it is set on a channel-by-channel basis. So if your local repeater is on 6/36 you can set 6 as being duplex while all other repeater channels remain simplex, ready for regular use. As it is not uncommon in uncrowded areas to go up one or down one when you want to move off the repeater for a quick simplex chat, this feature beats the constant setting and re-setting of the duplex switch which is necessary on most other radios. This is another advantage of the CPU — instead of having to mechanically switch a 30-channel offset onto the entire group of repeater channels you are effectively programming your radio to your individual needs.

Beyond these features comes the appeal of a full five-watts output, the legal limit, using the supplied BP-70 rechargeable battery pack. The BP-70 is a 13.2v DC pack rated at 270 mAh, which according to Icom will provide 1.6 hours operation at full power on a duty cycle of 1:1:8 (one minute transmit, one minute receive, and eight minutes on standby).

This figure is almost doubled with the optional 450 mAH BP-7 pack, while retaining the five-watt output. The longest life is with the BP-8, an 8.4 volt 800 mAH nicad pack which reduces power and extends life to almost seven hours, again on a 1:1:8 ration at high power setting. Using a BP-8 with judicious use of the low power would give you a handheld that would last the whole working day and beyond. Both the BP-7 and BP-8 can be fast-charged (1.5 hours and 3 hours respectively) using the standard IC-40G charger.

While on matters technical, the output of our review model was measured at 5.6 watts on high, and 650 mW low — both above spec. Receive sensitivity is quoted at less than 0.25 uV (at 12dB SINAD), which according to my info is the best figure in the handheld class.

The automatic "power save" function is common to most other Icom handhelds, but another debutant on the 477 MHz band. After 30 seconds in standby mode (no signal received), the receiver is turned off for a brief period of time, then quickly checks if there is a signal present, then off, then on again, over and over until a signal appears. Duncan Baxter explains this as a "sleep mode — the radio might be considered as going to sleep for a few seconds, then opening one eye for a second". This is barely enough to be noticed, and while a saving of a few seconds may not seem like much it certainly makes a big difference — the current drain is reduced by 75 per cent to a mere 12 mA. This conserves battery life and extends on-air time between charges. The power save can be de-activated by the user.

A time-out timer setting allows for a limit to be placed on the length of each transmission, from one to four minutes in minute intervals, and can be de-activated for endless waffling.

For business and private users Icom has made provision for internal fitting of an optional five-tone selective calling module, which conforms to the Sigtec S1515 configuration and as such is compatible with most other UHF CBRS selcall systems.

The IC-40G comes with the usual compliment of inclusions — a 240 volt DC battery charger, quarter-wave whip antenna, belt clip, wrist-strap, and a protective rubber cap for the antenna socket. The handstrap neatly attaches to a special clip instead of requiring the usual Herculean effort to prise apart those metal double-ring things. The strap itself is solid and thick, and large enough so that you can operate the radio without cutting off circulation to your hand.

And what would any UHF handheld be without accessories? Those for the IC-40G number no less than 33, two of which — the HM-46L speaker microphone and the LC-36 carry case — were also supplied by Icom for evaluation.

The EM-46L is a thin, lightweight unit not much larger than a matchbox. It can be affixed to your shirt, jacket or whatever with a small alligator-tooth clip which swivels so the mike can be attached at the most convenient angle. At the mike's base, next to the curly-cord feed, is a tiny socket — protected from moisture and dust ingress by yet another rubber plug — for the connection of an earphone (which disables the built-in speaker). With a discreet earpiece, or the more obvious Walkman headphones to which no-one gives a second thought these days, and the EM-46L fed down the sleeve and into the hand, it's a great set-up for concealed, security-oriented work.

To keep your 40G in mint condition (although I prefer musk) Icom also has a selection of soft, well-made vinyl carry cases which slip neatly over the radio and offer a full-length fold-over flap for complete protection.

What does all of this mean for the IC-40, Australia's best selling 477 MHz handheld? I am pleased to announce that contrary to rumor, the IC-40 remains available. Orders are still coming in, and in fact the current production run is already spoken for, so for now you have a choice between two excellent Icom handhelds which suit both ends of the market.

There's no doubt, and probably no surprise, that we are very much impressed with the IC-40G. It won't replace the less-expensive no-frills models for those UHFers to whom a handheld is a second rig, but that isn't Icom's intention. If a handheld is to be your only rig, if you use it as much or more than the mobile or base, or you want something above the average UHFer, the IC-40G stands unchallenged.

You've read the review — now win the radio! Thanks to the generosity of Icom Australia, CB Action is giving our readers the chance to win an IC-40G handheld, complete with EM-46L speaker-mike and LC-36 carry case. Add to this a range-boosting Larsen Kul-duckie whip antenna, courtesy of the lovely Livia from AP Imports, and you have a high-performance prize worth nearly $1000! It's CBA's biggest contest ever — turn to page 43 for details.

IMARK OPENS NEW PREMISES

Imark's new shop at 75 Mark Street, North Melbourne, is a long way from the country Victorian town of Ararat, population 8000.

That, however, is where partners Greg Lloyd and Owen Smart began.

They decided to move to Melbourne about 10 years ago to a leased building in West Melbourne.

Increased sales, higher stocking levels to accommodate same-day dispatch, the assembly of two-way radios and manufacture of their own equipment made the move necessary.

The new building was opened by Shadow Minister for Communications, Senator Richard Alston, on 15 December, 1989.

The President of Kyodo Communications and Electronics Incorporated, Mr T. Tagami, came from Japan for the opening, joining many Imark dealers, Government department personnel and Imark staff.

The strong Imark/Kyodo relationship began 13 years ago.

In the early days, 27MHz CB radio and ham gear were Imark's main lines but a decision was then made to concentrate strongly on UHF CB.

The promised delivery of the then Sawtron 880 from Kyodo was delayed many times.

Even though many in the industry said it would never come, Greg Lloyd and Owen Smart had faith in Kyodo.

From UHF CB, Imark moved into commercial two-way radio and today, is in the top bracket of commercial two-way suppliers, distributing the extensive Sawtron range.

It is one of the few privately-owned Australian companies distributing two-way radio in Australia.

Imark now plans to export products designed in its research and development section and manufactured in-house.

10TH ANNIVERSARY FOR JENSEN ELECTRONICS

The Steen Jensen family-owned business, Jensen Electronics, at 75 Prospect Road, Prospect, South Australia, is now 10 years old.

It has a staff of nine — five workshop staff, three sales people and administrations staff.

It is a communications specialist, dealing in new and secondhand equipment as well as researching, developing and manufacturing all types of signalling equipment.

One of its top-selling manufactured products is its own sel cal unit.

It has full workshop facilities, with the latest equipment for all repair work.

Jensen stocks all forms of communications products, from CBs for the individual and commercial user, to amateur radios and cellular telephones.

Mail order service is also provided.

POWER BAND COMMUNICATIONS

1289 NEPEAN HWY, CHELTENHAM VIC. PHONE (03) 584 7631 FAX 583 0846

(OPPOSITE CHELTENHAM POLICE STATION) Melway Ref. 86 J1

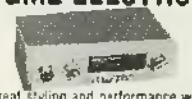
The people who brought you the world's first permanent UHF CB repeater...Channel 7 Melbourne

NEW VOICE RECOGNITION PHONE

Stores 50 voice activated names and numbers, 3 single touch memories, voice synthesizer can answer calls, selective incoming calls, alarm clock and elapsed time indicator, recall last 100 numbers called and duration of calls, hands free operation and more.

$599 P&P $7.50 Insurance $6

GME ELECTROPHONE TX-826



Brand new version of a popular GME AM only 'Compact'.

Great styling and performance with the new space saving power and antenna leads. DX/LOCAL switch. Highway channel 8 priority switch on mike and more.

P&P $7.50 Ins. $3.50

NEW ICOM IC-40G

The UHF CB portable you have been waiting for...

- ★ 5 watt output
- ★ Channel scan
- ★ 10 memories
- ★ Illuminated LCD display
- ★ operates direct off 13.8Vdc
- ★ Compact rugged construction
- ★ Variable Ch. step rate
- ★ Wide range of accessories

(see review this issue)

Limited Stock Available

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TURN YOUR ORDINARY MIKE INTO AN ECHO/POWER MIKE

2 mike inputs and 1 music level input, mike volume & input volume control, echo delay, repeat time and echo level controls. Foot switch socket and multiple outputs. Operates off power supply or internal 9 volt battery

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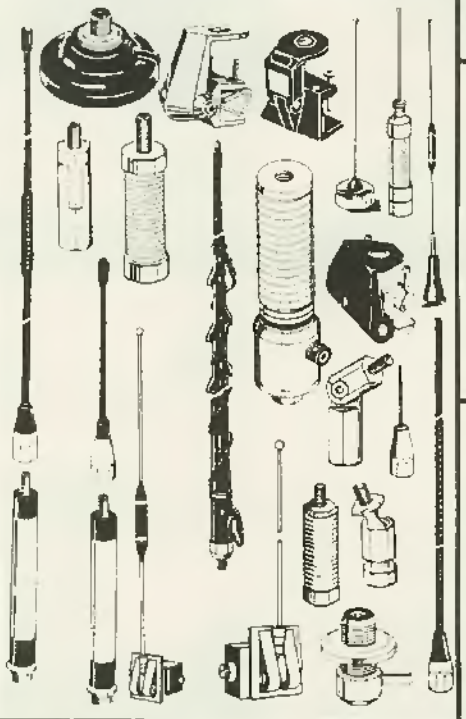
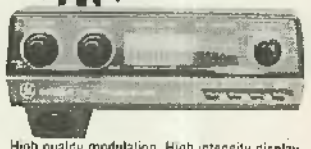
A SELECTION FROM OUR WIDE RANGE OF ACCESSORIES



NEW G.E. DELUXE AM CB

Complete new design rig.



High quality modulation. High intensity display Trendy styling

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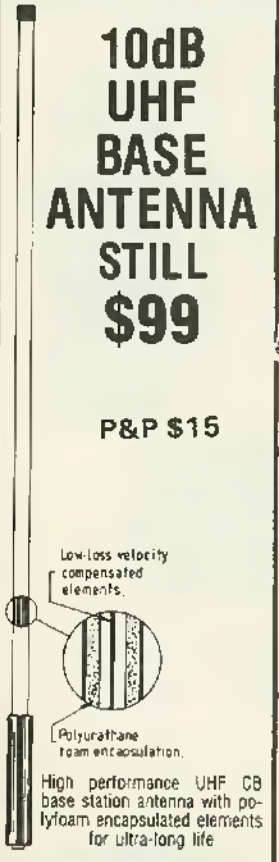
PB-900

10dB UHF BASE ANTENNA STILL $99

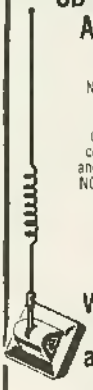
P&P $15



High performance UHF CB base station antenna with polyfoam encapsulated elements for ultra-long life

THE ORIGINAL AND STILL THE BEST

NEW HI PERFORMANCE UHF CB ON GLASS ANTENNA



No holes or any other fittings hardware required. Supplied complete with cable, connectors, adhesives and full instructions, etc. NOW PRICED RIGHT AT

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Wide range of 'On-Glass' antennas now available 27MHz, phone etc.

NEW ELECTRONIC BREATH ANALYZER

Reads from 0.01% to 0.15% BAC (blood alcohol content) Battery powered or external 12Vdc (batteries not supplied). Comes with 2 mouthpieces

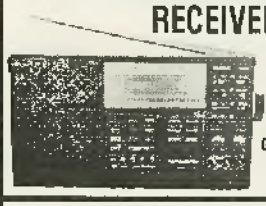
Only **$99**

Extra mouthpieces $1 each. P&P $5.50

UNIDEN GRANT

Luxury AM/SSB Transceiver **$ RING**

WORLD BAND COMMUNICATIONS RECEIVER ATS-300



Continuous coverage from 150kHz to 30MHz and FM broadcast band decoded stereo output. 3 tuning modes — dial knob, scanning, keyboard. AM/SSB reception. Built-in alarm clock and 'sleep timer' mode. 14 memories

Great value at only **$289** P&P $5 Insurance $5

ICOM AH-7000 SUPER WIDE BAND ANTENNA

Receive only from 25MHz to 50MHz Transmit/Receive from 50MHz to 13000MHz. Stainless steel construction. Complete with mounting hardware, cable and N type connectors.

NEW SWR POWER METER

with extended UHF range

A top quality VSWR power meter covering from 3MHz to over 1,000MHz in two ranges. A must for the serious UHF enthusiast. Australian made. 'Eats' the imported competition.

$249

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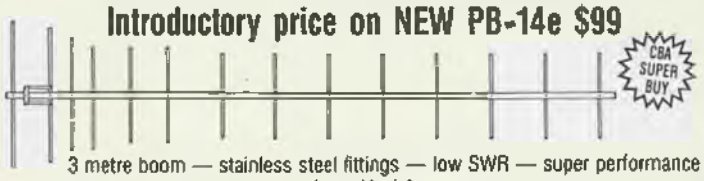
GME ELECTROPHONE TX-840

40ch AM/SSB 27MHz — quick release mount — compact size — space saving power and antenna entry — front mount mike — channel 8 priority etc.

$265 P&P $7.50 Ins. $6.00

ON SALE FOR ONE MORE TERM PB-11e $59

Introductory price on NEW PB-14e $99



3 metre boom — stainless steel fittings — low SWR — super performance Long Yagi Array.

UNIDEN BEARCAT 200XLT

200 ch. Intelligent memory 12 bands with 10 priority ch. ch. lockout scan delay.
Clip-on batt pack.

$435

See review CBA Mar/Apr.

NEW RELEASE

HI PERFORMANCE UHF CORNER REFLECTOR ANTENNA

$128 P&P $15

Specialised directional array with unique directional properties. Polar pattern is virtually free of side-lobes and has very high back to front ratio. Ideal for repeater operation for stations who usually access multiple repeaters on a single channel. Wide frequency range from 460MHz to 490MHz. Ideal high performance UHF scanner antenna. Offers good gain and directivity from 420MHz to 550MHz. Works well on 800/900MHz too. Variable feed impedance and frequency range. Short mounting mast supplied. Complete kit with detailed instructions

ROTATORS LIGHT DUTY

Suit ATV, UHF antenna arrays. 50kg load. 200kg/cm min torque. Stationary braking torque 1000kg/cm min.

$155 P&P $15

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UNCOMPROMISED QUALITY AND PERFORMANCE

PROGRAMMABLE UHF CB EXCELLENCE

GME ELECTROPHONE TX-472S

40 channel UHF CB with two programmable scan groups and programmable priority channel. Front mounted speaker and mike. Quick release mount. Memory back-up and space saving power and antenna connections. SELCAL available.

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SUPER SPECIAL OFFER

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the lot.
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UPDATE YOUR TANDY PRO-2004 SCANNER

Conversion features:
400 channels.
30 channel per second scan rate.
30kHz channel spacing in Cellular Phone Band.
Improved squelch control.
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RELIABLE . . . AFFORDABLE

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NOTE:—
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MASTERCARD ☐ Please send goods COD ☐
COD Orders must include phone number for confirmation.

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Signature .....

Expiry Date.....

Name.....

Address.....

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Reviewing the Yaesu FRG 9600

SCANNER OR RECEIVER . . . EITHER WAY IT'S A QUALITY UNIT

Do you want to monitor some of the more exotic modes of communication? Having trouble deciphering the garble on VHF? Then have I got a scanner for you. Scanning Action's RUSSELL BRYANT investigates the Yaesu FRG 9600.

The name Yaesu, has for many years now, been associated with quality communications equipment. Probably more widely known for its amateur radio products, the Yaesu catalogue also carries a scanner.

To call it a scanner is somewhat misleading, as it's more a communications receiver than scanner. At first glance it doesn't appear any different to other scanners on the market. Looks are deceptive, the 9600 lacks the usual controls associated with scanning radio receivers. Don't look for manual, scan or lock-out etc, they are there, but not under those names.

CONTINUOUS FREQUENCY COVERAGE

Sporting continuous coverage from 60 - 905 MHz, the 9600 is truly an all-mode receiver, with 100 memory channels available to the user. Single button selection of FM narrow, FM wide, AM narrow, AM wide and single sideband (up to 460 MHz) allows reception of many signals previously excluded from other scanners. One such mode is ACSB (Amplitude Compandored Single Sideband). Relatively unheard of on the business bands, ACSB is popular with the military and Telecom for telephone RF links. As the radio spectrum becomes crowded, authorities look to more efficient ways of accommodating radio users. ACSB allows two services on the sidebands of a single frequency, in theory doubling the available channel allocations.

Options allow either complete or limited band scanning, translated you can scan the entire frequency range (60 - 950 MHz) of the scanner or between two parameters, bank or memory channel scanning are also included. By pressing the AF SCAN key, the radio ignores unmodulated carrier-only transmissions, which can be annoying, as they tend to lock up the scanner.

As well as selectable receiving modes, users are given a choice of search steps. Increments of either 5, 10, 12.5 or 25 kHz can be utilised for AM wide or FM and are selected prior to entry of a frequency into the memory. On SSB and AM narrow only, the search increments are 100 Hz or 1 KHz. The availability of 10 kHz allows easier monitoring of the cellular band than the 12.5 kHz step included in some scanners.

Other inclusions are LED bar graph S-meter, 24 hour clock and automatic turn on/turn off of a tape recorder via the recorder output socket together with AF and RF mute options and something not seen on many other receivers under $1,000, access to the CPU using a personal computer.

COMPUTER CONTROL

Originally developed for amateur radio, CAT or Computer Aided Transceiver allows the radio to be interfaced to a computer thus expanding the functions of the set.

The Yaesu CAT system provides direct control of the CPU using a PC and the FIF CAT Interface Unit adds almost unlimited control functions, such as multiple organised memory banks, automatic tuning and customised scanning to an already advanced unit.

To remedy the problems of intermod and adjacent channel rejection, the 9600 employs a triple conversion system of IF frequencies. Intermediate frequencies of 45.754, 10.7 MHz and 455 kHz certainly go a long way to eliminate a common occurence.

Power is supplied from a 12VDC source and requires 550 mA of current. Yaesu does not provide a power adapter, which is more in keeping with the amateur Hams' image of the FRG 9600. They assume that most amateurs have regulated power supplies available. Cable termination is via a high quality SO-239 socket, located on the rear panel.

Yaesu includes the following accessories with the receiver, a telescoping whip antenna, DC power connector and cord, mounting bracket and hardware and a stand to elevate the front of the radio for easier operation. Just quickly referring back to the mounting bracket, it is a solid beast built the way brackets should be. The scanner is held in the bracket with three retaining knobs on each side.

If you can program and drive your other scanner blindfolded, don't expect to be able to do the same with the 9600, you can't. It is slightly more complicated to program than normal, and as, I keep saying, a read of the very detailed handbook will belay any difficulties encountered. I tried to program the scanner without the book and got myself into a mess.

To program a 'normal' scanner, the process is simple. Manual to the desired channel, key the frequency onto the display and then enter it into the memory. The FRG requires a little more thought. Start by pressing DIAL, key the frequency onto the LED display, (don't spend too much time looking for a decimal point, there isn't one - it got me again), press DIAL for a second time, key in a two digit channel number and enter the frequency and channel instructions into the scanner by pressing D > M (dial to memory). Continue the sequence until all channels are full.

TAKE CARE WHEN PROGRAMMING

If you enter a six digit frequency the FRG enters the decimal point automatically between the third and fourth figures. A five digit frequency needs the zero pressed prior to the frequency numbers, it apppears on the LED as 077.000. Failure to enter the zero will give you a frequency 100 times higher than expected. The score so far — FRG 9600 three, RB nil.

The 9600 has three methods of tuning, the first is the customary keyboard numbered 0 - 9, just punch up the frequency as usual. The TUNING KNOB allows step tuning through the band, either increasing or decreasing in frequency. The last method is the UP and DOWN KEYS, when pressed they move the frequency display up or down by one tuning step. Both the tuning knob and up-and-down keys require the radio to be in the DIAL position and have the tuning step to be selected prior to operation. Once you have mastered the programming steps it can be just as fast as other scanners.

If by chance you make a mistake during programming, and it does happen, the CE keys clear the incorrect data and re-set the display to receive the new instructions.

Once all the required channels are programmed the MR (memory recall) key removes the FRG from the DIAL state to the MEMORY mode, allowing access to the programmed channels. When the MR button is depressed the rotary dial and up and down keys assume a new role. They manually display the programmed memory channels in numerical order. Direct keying of a memory channel is similar to other models, enter the channel number, then MR to display the frequency.

To cover all the controls and options available on the 9600 would take a considerable amount of time. Briefly, however, the Yaesu features an AF SCAN, which will stop the radio scanning on when a voice modulated signal is present. An ATTenuator switch, that decreases the level of a strong incoming signal to prevent front end overload and a floating PRIority, automatically checks the nominated channel for activity every three seconds.

The Yaesu FRG 9600 is not a new scanner, having been released about three years ago. Dick Smith Electronics, the offical Yaesu agent in Australia, features the 9600 in its 1989 catalogue at $999. Packed with functions not available with other super scanners, the Yaesu is 'top shelf' equipment.

Thanks to Chris Ayers, from Dick Smith Electronic, for the loan of the FRG for this review.

RUSSELL BRYANT'S

SCANNING ACTION

Allocating common frequencies to Australia-wide services is not new, after all the police have their 64 channels in the 458/468 MHz band, together with the various railway networks operating on frequencies around 407/417 MHz.

In an attempt to rationalise services the DoTaC has set aside a block of frequencies for the exclusive use of ambulance communications. Contained within the 410 MHz band, the introduction of the new channels will take our medical transport services into the 21st century.

With the exception of one or two states most ambulance organisations have maintained their VHF systems, resisting the move to UHF mainly due to cost. As the first level of medical assistance, a need has arisen where ambulance personnel require immediate access to hospitals and specialist doctors. The new radio allocations will given them that access.

Today, most transmissions, if not all, are in voice-mode requiring long and tedious relay, of sometimes detailed medical information. If, for any reason that transmission is interrupted, it is often necessary to repeat the instructions completely. The paired UHF frequencies will utilise data as the primary mode. As a telephone message is received, operators will type the necessary information onto a computer terminal; the computer will then distribute the job to the correct radio operator; the operator will allocate a status to the call.

Urgent requests for ambulance services will be dispatched immediately, whereas non-urgent jobs will be given a lower priority. After the jobs have been labelled urgent or non-urgent, the computer will arrange and display the cases in status order.

A number of channels will be allocated to voice-mode, allowing communications between cars and control, with the remainder having something rather new to Australia, the broadcasting of EKG and other vital body functions via radio. This will allow doctors to monitor the patients' progress while on route to hospital.

Initially however, ambulance services will use voice on these channels until suitable CAD (computer-aided dispatch) equipment can be installed. As most readers will appreciate the cost is the limiting factor, so the change-over will be carried out as funds are made available.

Several states have switched to the UHF frequencies and are operating in voice-only or a combination of voice and data. The Australian Capital Territory employs the following paired channels:

412.475 / 403.025 ACT WIDE; 413.025 / 403.575 SOUTH, 413.425 / 403.975 NORTH.

New South Wales has 412.475, 412.750, 413.025, 413.225, 413.425 allocated for trials of the new equipment. Ambulance radio technicians anticipate starting the tests shortly. While the propagation tests will be restricted to the five channels mentioned, the final system will include about a dozen frequencies.

Victoria is the probably the first state to adopt the system in a big way, switching its entire metropolitan fleet to UHF almost overnight. Up and working for the past six months, the Victorians have reported a marked improvement in communications. The Victorian channels are 412.475, 412.500, 412.575, 412.650, 412.750, 412.850, 413.025, 413.075, 413.100, 413.125, 413.150, 413.175, 413.225, 413.275, 413.350, 413.375, 413.425.

(The repeater input frequency is 9.45 MHz below the repeater out.)

South Australia or, more correctly, Adelaide is now operating on the new band, again no information is available as to specific areas and channels. Queensland and Western Australia have expressed plans to up-grade to the UHF channels, for use primarily within the metropolitan area and larger regional cities.

While the implementation of the ambulance-only frequencies will deny monitors easy access to what's happening around them in the long run, it will be some time before they are totally data, so make the most of them.

Some readers appear confused about just how many channels the police in Sydney have available to them. The usual question is, if there are only 64 channels, why do they say use channel 81 or 84 or similar?

The channels 76 to 85 inclusive are voting groups. Without going into the operation of voting, the following are the channels and areas:

CH.76 CITY AREA; CH.77 WOLLONGONG; CH.78 EASTERN SUBURBS; CH.79 NORTHERN BEACHES; CH.80 NORTHERN SUBURBS; CH.81 INNER WSTERN SUBURBS; CH.82 SOUTHERN SUBURBS; CH.83 WESTERN SUBURBS; CH.84 SOUTH WESTERN SUBURBS; CH.85 FAR WESTERN SUBURBS.

Wayne, in Hobart Tasmania, sends along some of the services he monitors, like the MTT or Metropolitan Transport Trust on 463.500 Tow Vehicles and 463.600 Buses. Three taxi companies provide light relief — they are Silver Top 162.455, Combined 164.770 and City Cabs 167.825. When all else fails there is always Hobart Airport on 118.100 MHz. Wayne would like to know the callsigns used by the Tasmania police vehicles. Any helpers?

Errol, from Proserpine Queensland, would like to know if back issues of CBA are available? Errol I suggest you write to the Editor, CB Action Magazine, GPO BOX 628E, MELBOURNE, 3000 for details of back issues, prices and so on. In answer to your question the Main Roads Dept. has 158.530, 158.695, 158.845, 158.875, 1598.905, 158.920, 158.935, 158.965 and 159.055 for its use, with the callsign of VL4TC. I have the following details regarding the SES, the Bushfire Brigade liaison channel is 78.685, the VHF high band frequencies are 168.820 and 168.850. The SES also maintains a UHF network on the following channels, 466.775 467.250 467.525 467.625 467.725 467.775 468.600 468.625 468.650. SES zones and areas: ZONE 1 SE QLD, ZONE 2 SW QLD, and ZONE 3 FAR NORTH QLD. In Mackay the Fire Brigade is on 74.000 VL4NP, and Proserpine 74.060 VL4OP. Hope that keeps you going Errol.

Steve, in Cottesloe Western Australia, fills us in on the WA Police upgrade to UHF. The following are the channel numbers from the 64 allocation and area of use: 21 and 54 North Perth; 8 South Perth; 12 and 47 Fremantle; 13, 41 and 48 Warwick; 16 Rockingham; 2 Roleystone; 26 Emergency and Car to car; 37 Mundaring; 17 Mandurah; 6 North Perth inquiries, 20 South Perth inquiries. Steve also listens to the RAAF on 260.9 MHz AM while training over Pearce Air Base.

From somewhere in Sydney comes a host of frequencies from Scanning Action regular, ' The Secret Republican'. The first group are the Darling Harbour channels for Alex at Bondi — DH Authority Security 472.300 who identify as Pyrmont Bridge Control — next are a group of frequencies used in various sections of the tourist facility, 472.400, 472.475 and 472.675. The Republican has also monitored the SES using the Mosman Municipal Council channel 465.175 during the evening. An up-date to some country police channels is next with Cooma on 83.940, Queanbeyan and Yass using 468.150. More to follow in future columns!

In response to a request from two Victorian readers, regarding the radio codes used by the Victoria Police, here are the first 12 to start off with more in a future issue.

CODE: 1 MEANING: On patrol; 2 — In office; 3 — At station; 4 — Away vehicle check; 5 — Away premises check; 6 — At court; 7 — Mobile to office; 8 — Mobile to residence; 9 — Not allocated; 10 — Domestic disturbance; 11 — Armed suspect; 12 — Vehicle accident.

John, in Shepparton Victoria, says in his letter that he has monitored what appears to be telephone conversations on 30.125 MHz. He was wondering who or what it maybe. The frequencies 30.125 is the output side of 20 frequencies allocated to cordless phones. There are two groups of channels — the first is the older 40 MHz allocation, the second is the new 30 MHz band. What follows is broken into channels, output, and input:

Channel A — 1.725 — 40.025; B — 1.740 — 40.075; C — 1.755 — 40.125; D — 1.770 — 40.175; E — 1.785 — 40.225; 1 — 30.075 — 39.775; 2 — 30.125 — 39.825; 3 — 30.175 — 39.875; 4 — 30.225 — 39.925; 5 — 30.275 — 39.975

Monitoring cordless phones is in the same category as their mobile cousins, a big no-no. Sometimes more interesting though.

Geoff, from Parramatta New South Wales, is interested in monitoring the Harbour Link monorail as it travels around the Sydney Central Business District. The company that operates the monorail, TNT - Harbour Link, has four UHF frequencies on issue — one is used for voice, three for data. The voice frequency is

485.250, the data channels are 485.550, 486.400 and 489.375 MHz.

I am reminded in a letter from Terry, in Tottenham Victoria, that the coupling of a scanner to a PC is not new. (CBA Jan/Feb — Look Back on the 80s). As Terry points out Electra Bearcat attempted it back in early 1984 when it released the CompuScan 2100. The strange grey box was the first scanner designed to bring the personal computer and the scannning radio receiver together. When channels became active all relevant information was displayed immediately on the screen, Bearcat discribed them as "accurate pictures of activity". Software was available for either the Commodore C 64 or VIC 20 PC amongst others. Like one or two other radios the CompuScan 2100 failed to impact on the scanning hobby.

Also in the January issue, in my piece on the Sydney to Hobart Yacht race, I listed the frequency for TV Channel 10 as 492.725, this is in fact radio station 2WS, TEN is on 492.975. Whilst I would like to blame the mainframe computer in Melbourne for the error I must accept the responsibility for not proof reading my material as often as I should.

A few months ago I reviewed the Yupiteru MVT 5000 handheld scanner. Released last December was the MVT 6000, the mobile version of the handheld. Features include extended frequency coverage, 100 memories and excellent specifications. Look for a review in a future issue of CBA.

PROSCAN, marketers of the PRO 2004 conversion kit, has the keyboard overlay available for those who have converted the PRO 2004 scanners themselves. The price is $3.00 plus 50 cents postage, or if you send a stamped self-addressed envelope it's an even $3.00. Orders to PROSCAN, Box Q365, Queen Victoria Building, Sydney, 2000.

Several readers have written asking me to pass their name and address onto other readers. I am happy to do this, however it will be necessary to enclose a stamp in the letter, I will foot the bill for the envelope. Also if you require a personal reply a stamped self-addressed envelope is to be included, please.

Don't forget I can receive mail through the Shortwave Possums BBS 02 651 3055 or the good old fashioned way via Australia Post at: SCANNING ACTION,
PO BOX R 16,
ROSELANDS NSW 2196.

HF LINK

WITH ROB WILLIAMS

Welcome to the March/April edition of HF LINK. The last edition was packed with so many goodies I hope they helped you get some QSLs. This issue will also be jampacked with all sorts of news, so let's get going. Remember, broadcast stations are in AM and utility stations are in SSB. All times are in UTC unless stated otherwise.

Believe It Or Not Department

News from Glen Hauser via Radio Austria of plans by Radio Vilinus to have an external shortwave service broadcasting to the USSR using a 250 KW transmitter by 1992. Can you believe that?

New Booklist From Radio Netherlands

Edition No 12 of the Radio Netherlands booklist has been released. This 48-page publication contains a very informative listing of English language books and periodicals available from around the world.

The book is divided into eight sections and covers all areas of shortwave, amateur radio together with addresses and prices. Even CBA and ARA get a mention. As like other publications from Radio Netherlands the book is free and is available from Radio Netherlands, PO Box 222 Hilversum JG, The Netherlands.

New Publication From Radio Sweden

And while on the subject of new books, Radio Sweden has released edition 4.2 of its "DXers guide to the galaxy". While not entirely devoted to shortwave there is some very interesting information for DXers to read. The 13-page guide concentrates heavily on satellite communications but has some worthwhile comments on space shuttle comms for HF DXers. The following frequencies should be monitored during Space Shuttle launches (all transmissions are SSB):

5700 and 13218 Western test range; 5190 and 11780 Eastern test range; 7675 NASA Kennedy ops; 10780 USAF "Cape Radio"; 11201 Shuttle mission control; 20186 NASA Ascension Island tracking range. HF isn't as active with NASA transmission these days as VHF/UHF and satellite comms have replaced many uses. However I heard 10780 many years ago. But you never know, give them a try. While on the subject of Space comms the Soviets use the following: Salyut 7 space station on 19995; Soyuz T-11 space vehicle telementary on 20008.

The guide is free from Radio Sweden, S-105-10, Stockholm, Sweden.

BBC Audibility Plans

During 1990 the BBC plans to install two 500 KW transmitters at Rampisham and two 250 KW transmitters at Cyprus. By the end of 1991 four 300 KW senders at Skelton in the UK will be commissioned. This will complete the current audibility plan which has involved large upgrades at BBC sites around the world.

Frequency Change For BBC To Australia

The BBC world service broadcast to Australia between 0600 and 0915 on 17710 has moved to 17830. The BBC is looking for feedback on this change.

New 13 MHz Antennas For RCI

According to a report over RCI, the Canadian Department of Communications has given approval to RCI to use the new 13 MHz band at the Sackville site in Canada. Even though the ITU has posponed the introduction of this new band for international broadcasters RCI, along with others, are moving into this band to overcome congestion from other stations. Broadcasters are also moving to higher frequencies during the current solar cycle.

New antennas are being built to serve RCI's target areas with some already in an operational condition. The African 13 MHz beam is on-line and they have commenced on the South American array, which will replace an old 6 MHz antenna. There has also been talk of two small 13 MHz antennas for North America being built, but a decision still has to be made.

RCI has successfully completed negotiations with Radio Korea to provide a daily two-hour program exchange between RCI and Radio Korea. RCI will broadcast its Mandarin and Chinese service to mainland China while Radio Korea will broadcast Korean to North America from RCI's Sackville site. If the Korean government approves the exchange, transmissions are planned to commence towards the end of March this year.

New Icom Receivers

News from Larry Magne that Icom is to release three new shortwave radios. There are two small receivers designated the ICR-100 and ICR-1 and a new ICR-72, similar to the ICR-71 but cheaper. The ICR-71 will not be discontinued.

HCJB Cuts DX Party Line

The Monday edition of DX Party Line has been cut from HCJB's line-up. The only broadcast is now on Saturdays at 0800 and 1030 on the familiar frequencies of 9745 and 11925. The Wednesday edition for Amateur Radio operators will still continue.

DX Asiawaves From KSDA

The D-89 schedule for KSDA, AWR-Asia, has English at the following times: 0000-0100 on 15125; 1000-1100 on 13720 and 2300 on 15125 to Indochina; 0200-on 13720 to China on Sundays only; 1600-1700 to India on 11980. The program "DX Asiawaves" is aired at 0230 Sundays, 1630 and 2330 Saturdays and 1030 on Mondays. The 1030 transmission offers Australian DXers the best opportunity to monitor the program. AWR-Asia

has installed Optimod audio processors to improve the audio response of the transmitters.

This translates into an improved audio quality for listeners. The BBC has also followed this path and I think we'll see more broadcasters installing these processors during the 1990s.

New DX Organization For DXers

The newest DX group on the scene is called OZ DX. Located in Melbourne and run by a dedicated group of specialized DXers, OZ DX is building up a strong reputation among international DXers who are keen to hear low powered stations from this part of the world. Some of Australia's top DXers have formed this group, aimed at chasing Latin Americans, Indonesians and those hard-to-hear Asians. If you're interested in this area of DXing then maybe OZ DX is for you.

Full details can be obtained from the editor, Peter Bunn, at 19 Jillian Ave, Highett, Victoria 3190. Subscription rates are 50 cents per issue. Peter will be providing HF LINK with a regular copy of his magazine so we can bring you some highlights.

And news from OZ DX is the appearance of Butan nightly except Sundays at 1415 to 1500 in English. They are announcing their frequency as 5025 but are actually on 5023.

The program commences with a news bulletin. Peter notes that fade-in in Melbourne is around 1115 and even though Butan has a new 50 KW transmitter expected to start soon he suspects that this isn't it. Craig Edwards reports in OZ DX that he is producing a five-minute DX program to be heard over FEBC. "DX Report" is aired on Saturday on 15480 between 0100 and 0200 and Wednesdays at 1445 on 11850.

VOA May Lose Its Voice

The highly successful "Voice" magazine produced by VOA looks likely to leave the world of free publications. According to a report in the Washington Post, VOA plans to put the magazine up for sale due to budget constraints. If it can't be sold the magazine will fold.

VOA sees the magazine becoming a commercial publication like BBC's "London Calling". However, by law, Voice can't be offered to DXers within the USA which would limit sales of the magazine. Voice is printed in Manila and is distributed every two months to about 155,000 readers world-wide with requests from another four to five thousand a month coming in. Already about 50,000 names are on a waiting list because VOA can't afford to add them to the mailing list. Currently the magazine is produced by a staff of five in Washington at a cost of US$30,000 per year. Thanks to Kraig Krist who placed this in the world shortwave conference which is carried on Shortwave Possum.

SES On HF

The SES has several HF frequencies assigned for use during disaster periods. Some 23 frequencies were found when AMFAR was first released. During the week there are several test transmissions from inter and intrastate divisions. On 3732 on Wednesday nights at 0900 during daylight saving and 1000 in winter you can hear the Upper Hunter district nett. 3732 has VL4CQ from Mackay SES on Mondays at 0900. On 3735 at 0900 on Monday nights there is VL3XM from Bairnsdale and 3732 at 0915 VL4CQ in Townsville on Monday nights. After testing this frequency Townsville moves to 5833, 4576, 3743 and 2575 where further tests are carried out.

So by listening to these frequencies during the week on various days you should be able to hear several SES stations. If you find any let me know.

Catch The Coast Guard On HF

A good catch in our mornings is the US Coast Guard station at Guam. Its callsign is NRV and at 2130 on 13113.2 it has a weather forecast for the area. A weather forecast is also issued at 0330 on 13113.2 and on 6506.4 at 0930 and 1530.

VNG Official — At Last

The VNG users group has been granted a license for VNG to operate on 10 and 15 MHz until 30/11/90. DoTaC is still considering a license application for VNG to operate on 16 MHz. And that just about winds up this month's column. If you want to write to me my address is PO Box C-111 Clarence Street, Sydney NSW 2000, or catch me in Shortwave Possum. So until next time, may you have some good DXing.

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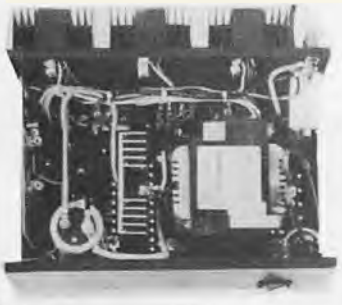
PSA1225



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UNIDEN UH005
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Looking for a scanner....? BEARCAT'S NEW LINE-UP LOOKS GOOD

Bearcat invented the scanner as we know it back in 1968. Since that day it has not been resting on its laurels, three of the newest Uniden Bearcats being testimony to past achievements. RUSSELL BRYANT checks out the latest from the famous feline.

Whenever the chance arises I enjoy window shopping in many of the radio stores around Sydney. It was on one such expedition to Argent Communications in the western Sydney suburb of Blacktown that memories of the ' good old days' came flooding back. Less than 20 years ago progammable scanners were in their infancy — 10 channels, limited bands and one size, big, were common. In Argent's display cases were the rewards of Bearcat's many thousands of research and development hours and dollars. Truly pocket-size fully programmable handheld scanners and DIN size mobiles.

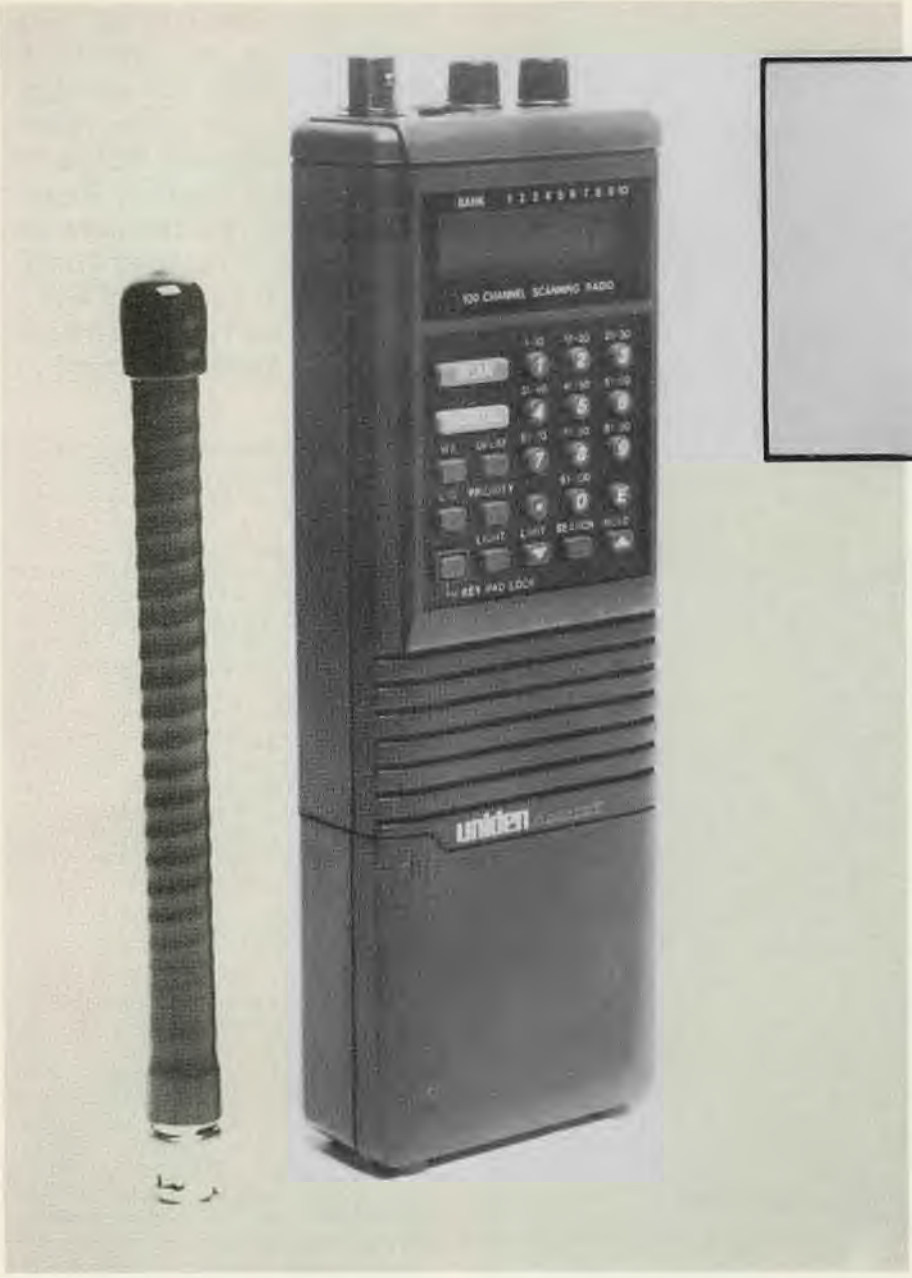
'Good old days'? I don't think so! The 'good old days' have just arrived, with these receivers from Uniden.

UNIDEN BEARCAT 70 XLT

The feeling of deja vu that accompanies two of the three new Uniden Bearcat scanners is overpowering. Both the 70 XLT and the revamped 100 XLT have lookalikes on the market. The 70 XLT is the base on which Uniden manufactured the SR 15 handheld scanner for Cobra. That is where the comparison should end — appearance. The 70 is a budget scanner, that is fully programmable, with 20 channel scanning capability. Band coverage includes VHF mid band (68 - 88 MHz), VHF high band (136 - 174 MHz) and UHF (406 - 512 MHz).

The gun metal grey front panel of the 70 XLT is complemented by the black ABS plastic case. The construction is solid given the overall size of the scanner, it's in the catagory of small, measuring 15 X 5 X 2.5 cms. The 70 would fit nicely into a shirt or jacket pocket without overloading the wearer.

The keyboard is well laid out, with all keys clearly labelled. For ease of operation, the numerical buttons are round and those used for LIGHT, SCAN, MANUAL, LOCK OUT, DELAY, PRIORITY, SEARCH, LIMIT and HOLD square. With the exception of the SCAN, which is red, and MANUAL, which is orange, all keys are a grey color similar to the front panel. The 70 XLT's keys are made from a rubberised compound and are error free in function. As well, their fit is tight so there is no annoying rattle.



Volume and Squelch are to be found on the side of the unit, contributing to the overall compactness of the 70 XLT. A separate ON/OFF slide switch is mounted atop the unit together with the earphone socket and BNC antenna connector.

The full function LCD display is illuminated from both sides for use at night. The light remains on for approximately 20 seconds before shutting off to conserve battery life. All operation messages such as PRIORITY, LOCK OUT etc are indicated on the LCD, so you know exactly what the scanner is doing. To prevent accidental programming the keyboard can be disabled by use of the positive slide switch.

The HOLD button doubles as a manual search function during SEARCH, each depression of HOLD advances the frequency by the pre-programmed search step. The on-board speaker is rated at 140 milliwatts, which is still enough to make the 70 XLT heard during normal operation. Sensitivity is quoted at .4 microvolts on mid VHF, rising to .7 microvolts on UHF. Scan rate is 15 channels per second, or just on a second and a half to cover the 20 memories.

Accessories included with the 70 XLT are a heavy (and I mean heavy) duty carry case, low profile rubber duckie antenna, rechargeable battery pack and earphone. The 12 page instruction sheet covers all aspects of operation and programming AND should be read BEFORE turning the scanner on.

Overall the 70 XLT is a neat little performer that will appeal to those who don't need large capacity memories in their handhelds. Recommended retail is around $300.

UNIDEN BEARCAT 100 XLT (revised model)

Just on 12 months ago Ken Reynolds reviewed the UBC 200 XLT, the top-of- the-line handheld from Uniden. The 200 XLT presented enthusiasts with some unique innovations in scanning, with rounded slimline styling, detachable battery pack and advanced programming functions. With extended frequency coverage and 200 memory channels the 200 XLT has proved extremely successful for Uniden.

By whatever means scanners propagate, the 200 XLT has given birth to the new 100 XLT handheld scanning receiver. Externally a clone of its parent, the 100 XLT has the same quality of the 200 XLT minus 100 channels and some frequency coverage. The 800 MHz band has also been deleted from the 100, still allowing reception of the VHF mid band (68 - 88 MHz), VHF air band (118 - 136 MHz AM), VHF high band (136 - 174 MHz) and UHF (406 - 512 MHz). Another feature carried over with the 100 XLT is the detachable battery pack, no more fiddling with separate AA dry cells or ni-cad batteries.

Sensitivity across the entire FM frequency range is around .4 to .5 microvolt and around .8 microvolt on AM. It takes the 100 XLT just on seven seconds to cover its 100 channels, which gives it a scan rate of 15 channels per second. If, for any reason, you detach the battery pack from the scanner, the internal capacitor allows an hour's grace before frequencies drop out of the memories.

Keyboard layout is identical to the 200 XLT including the WX (weather) key, which allows single button access to the NOAA (National Oceanic and Atmospheric Admistration) weather service. Indigenous to America, the 162 MHz frequencies have little relevance in Australia. The substitution of the 156 MHz marine channels would be an alternative for scanners sold outside continental USA.

If you attempt to program a frequency already entered into a memory channel, the 100 XLT displays a prompt telling you that the frequency has been

previously programmed into whatever channel. With direct channel access, you can select any channel instantly without stepping throught the entire 100 channels. The Uniden patented-feature 'Track Tuning' means the exact frequency is being received with maximum tuning on each transmission. The audio ouput is a respective 450 milliwatts, more than enough oomph even in a motor vehicle.

Accessories included with the 100 XLT are heavy duty carry case, rubber duckie aerial and earphone. The Uniden Bearcat 100 XLT handheld scanner might rate second to the 200 XLT in Uniden's catalogue, but in my opinion they should stand side by side. Recommended retail is around $400.

UNIDEN BEARCAT 760 XLT MOBILE

They tell me size is important. Maybe, when it comes to mobile scanners, the smaller the better, considering the interior room of today's motor vehicles. To fit a PRO 2005 to your car would almost require the removal of a seat.

Uniden has done its homework — the result is the UBC 760 XLT, a mobile scanner that is small enough to be mounted on a plastic console, if not in it. With an overall size of 16 X 3 X 18 cms and weight of just on half a kilogram, the 760 will fit almost any nook or cranny.

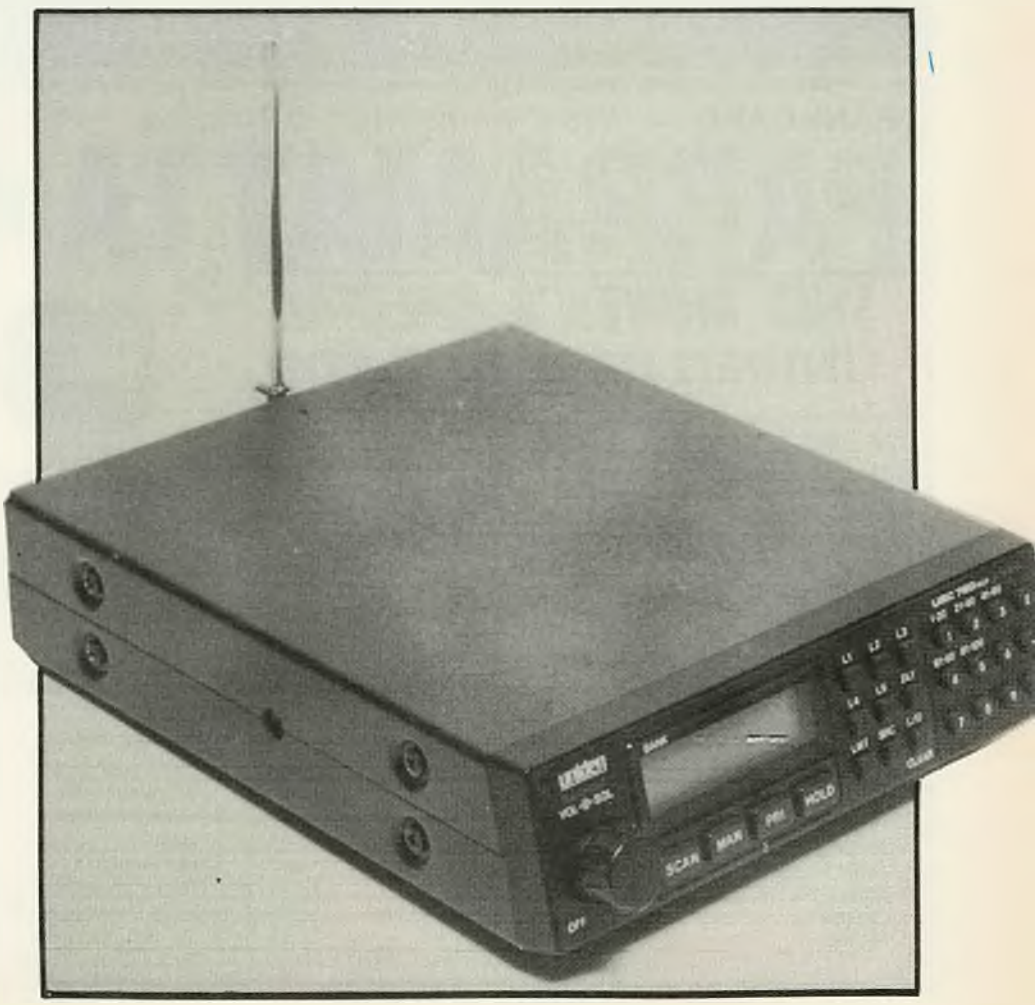
Memory capacity is 100 channels, divided into five banks of 20, with scanning functions allowing monitoring of all or one bank. Scan speed is rated at 15 channels per second, taking seven seconds to cover the memory channels. Frequency coverage includes VHF mid and high bands, airband VHF, UHF and 806 - 956 MHz. Channel spacing on the 800 MHz band is 12.5 KHz, making reception of the cellular band (30 KHz spacing required) difficult. However, given the legal problem of such activities and the increase in popularity of trunking, it should not be a worry. Sensitivity ranges from .4 microvolt on VHF mid band to 1 microvolt on 800 MHz.

Uniden has modified the 760 XLT for the Australian and possibly the UK market. In America the scanner has factory pre-programmed banks for fire, police, NOAA weather, emergency services, airband and marine services. A single button for each service activates auto search. The frequencies have little relevance to Australian conditions, therefore Uniden has deleted them. Instead five individual user-programmable search banks have replaced the service scan. Full points to Uniden for thinking of its customers.

The LCD display is permanently illuminated. I would have preferred one that could have the light switched on or off at the discretion of the user. Memory back-up is via an internal Lithium battery that refused to drop the memory out after two weeks of sitting idle. Powered by 13.8 volts, either from a motor vehicle or external power source, the 760 XLT delivers three watts of audio from its bottom-mounted speaker. If used as a base or desk top scanner, the 760 has a centrally-mounted foot, which, when lowered, raises the front panel about four cms from the table top for better audio reproduction.

An external antenna can be connected to the radio by way of a BNC connector on the rear panel, which also supports the DC socket, extension speaker and tape recorder jacks and oddly the keyboard disable switch. Surely the front panel is the place for that sort of thing? Nevertheless the Uniden 760 XLT is a handsome, compact scanner well suited to today's cars, be they large or small.

Accessories included are mounting hardware and telescoping whip with BNC connector. Recommended retail is around $530.



Here's the latest one from Hatadi...

Reviewed by Ken Reynolds

SUPER CHEETAH Mk-111....GOOD VALUE

Hatadi's Pearce Simpson Super Cheetah MK-III is a variation on the well tried and proven theme but this version has been facelifted to a more trendy "Plain Jane" styling using the popular matte black all over finish. The old familiar imitation woodgrain front control panel has been sacrificed for the more westernized monotone look with bright white decals contrasting against the black to identify the model and to identify the controls.

The 40 channel rotary switch has been replaced by a pair of buttons labelled "UP" and "DOWN" for channel selection and a SWR meter function has been added to give the owner a full-house line-up of features in an economically priced 27MHz, AM/SSB transceiver.

A window on the far left of the rig houses the dim channel display — like most rigs it needs high light output seven segment displays — with three single LED's indicating the current operating mode, AM USB LSB.

Almost central is an edge reading meter that triples as signal strength, RF power output and SWR meter all in one. It is good to see that a real analog meter has been retained for these functions because no matter how many bargraph LEDs you like to stuff into a display window they can't rival a real analog indicator with its infinitely variable characteristics.

On the right of the meter is a row of switches that control the following functions:

(a) Receiver Scan — in combination with the squelch control, the receiver searches for occupied channels and stops on detection of a sufficiently strong signal. To only select very strong signals the squelch control is advanced further in a clockwise direction. After the signal has gone the scan timer waits about five seconds before resuming the search mode. You can also override the delay by pressing the UP button.

(b) CH9/CB/PA — the usual change-over function enabling the use of the rig as a Public Address amplifier with a third function as a priority switch which immediately selects channel nine regardless of the main dial channel position.

(c) Mode Switch — selects transmit and receive operation for AM and Upper or Lower sidebands.

(d) Meter function — changes the meter calibration for signal strength and RF output power to read SWR.

(e) Noise processing — allows normal reception without any noise reduction for quiet conditions (least signal distortion and best sensitivity) and the insertion of a Noise Limiter circuit, or to cope with other noise characteristics, a Noise Blanker circuit.

From left to right, the lower row of controls are:

Channel Switching — the UP and DOWN buttons used for increasing or decreasing the channel number. Not as nice as a real rotary switch but just as effective — changes channel one step for each short duration press, or changes continuously if the button is pressed in and held.

ON/OFF and Volume — self explanatory.

SQUELCH Control — the squelch threshold was a bit difficult to set for weak signals and on our test rig the minimum reliable trigger level was about one microvolt. The Tight condition (the knob turned fully clockwise) required a strong signal of 670 microvolts to open the audio channel.

CLARIFIER — has plenty of range on sideband and even works quite well on AM reception allowing the operator to fine-tune quite a range of off- frequency stations.

RF GAIN — a handy control when nearby signals are so strong that they tend to distort during the signal processing. The Cheetah's RF gain has a full range of about 26dB which is more than adequate for most situations.

SWR CALIBRATION — this control in conjunction with its associated switch allows proper calibration of the SWR meter function. The SWR reading of our laboratory standard dummy load as read by the Cheetah was 1:1.5. It is probably an adequate guide for most situations, however, we know our 50 ohm termination is a fair whack better than the indicated value.

Receiver sensitivity was 0.32 microvolts for 12dB SINAD on AM and noticeably better on the USB and LSB modes. The noise limiter circuits work well and most types of noise were noticeably suppressed.

Transmitter performance was also quite good with AM output power of 3.8 watts and about 12 watts PEP on both sidebands. Transmitted audio is good and the automatic limiting circuit easily constrains the amplitude modulation level to below 100 per cent — right where it should be kept.

Transmit frequency accuracy was very good and only a slight variation in frequency was detected from the moment of switch-on until the end of our evaluation several hours later.

MECHANICALS

The Cheetah uses a combination of aluminum and steel in the sub-assembly with steel case halves painted matte black and a similar colored, molded plastic front control panel.

The main circuit board is mounted securely on pressed steel tabs and with the case halves securely tightened the whole assembly shows very little sign of flexing.

There is a small loom of wires connecting the front panel electronics to the main circuit board with the hand soldering a bit better than the usual Korean standard. The wave soldering across the main board appears quite acceptable too.

The main circuit board is single sided and uses an array of wire straps to make various connections instead of printed tracks on the topside. Component insertion and layout also seem quite good with only some small reservations.

SUMMARY

All things considered, our test rig gave a good account of itself in most respects and it certainly offers what you might term a complete package of features — about the only control left off is a microphone gain control which is probably not much of a loss anyway. For a combination of price and features the SUPER CHEETAH MK-III looks like good value.

DAVID FLYNNS'

477 Report

UHF NEWS AND HAPPENINGS

One of the more controversial issues on the air in recent years relates to emergency channel arrangements in the UHF CBRS. When the 477 MHz band was created in 1977, channel 5 was chosen as emergency channel — basically because at that time 27 MHz CB operated on an 18 channel system in which the emergency frequency of 27.065 MHz (now ch 9 in the 40 ch scheme) was channel 5. So on either HF or UHF, you'd dial 5 for emergency assistance. Sensible enough.

When repeaters became an established part of UHF CB in 1980, it was proposed that the channel pair of 5/35 be used for an emergency repeater service, which also converted UHF ch 35 into a secondary emergency frequency. Ten years down the track, with 477 MHz continuing to thrive and new repeaters being established across Australia, UHFers are asking if this arrangement is really in the best interests of the service — and if some changes couldn't make the band more efficient and more effectively shared amongst all users.

This topic affects everyone — individuals, repeater sponsors and of course emergency monitoring groups. Should we retain 5/35, or has this allocation been a good idea that just didn't work ? If so, what happens to the emergency channel — should it remain on ch 5 as a simplex allocation, be moved to ch 9 simplex, or be combined with calling on 11 ? Have you ever called on or monitored channel 5 or 5/35 ? Does 5/35 have a future ? Write to me and let CBA know what your answer is.

80 CHANNELS?

A few isues ago we spoke of several rumors doing the rounds, relating to expansion to 80 channels and closure of the UHF CBRS. They were and still are unfounded, although the most technically feasible — which doesn't necessarily make it practical — claimed that by halving the existing channel spacing we would double the band to 80 channels.

Since then I've received some mail indicating that this rumor still is circulating, and in fact one repeater sponsor wrote to me and announced they were actively campaigning to introduce such a measure. While I thoroughly applaude such interest and enthusiasm to improve our UHF CB service, the proposal is totally impractical. But, as the professor fondly said: "Why is it so?"

On the surface the plan seems very straight forward. We have 40 channels, starting at 476.425 MHz and spaced at 25 kHz. So by halving the spacing to 12.5 kHz we create 40 new channels between the existing ones. Rather than go through a confusing renumbering exercise we'll refer to them as "A" channels, each 12.5 kHz above the original channel — so ch 1A is 476.4375, 2A at 476.4625 and so on.

Now there is essentially nothing wrong with 12.5 KHz spacing. It is not unheard of, is well established overseas, and DoTaC has already specified such in several commercial allocations from the VHF high band to remnants of the old "007" mobile telephone system at 500 MHz.

New UHF CBs could easily meet this spec, and most existing rigs could be modified without major technical drama. On the receive side you need a sharper IF and narrower filters, because you suddenly have only half the room between channels and so adjacent channel interference must be further reduced. In transmission, the deviation must be wound down from 5 kHz to around 2.5 kHz. A more stable crystal oscillator must also be fitted to keep everything on the ball. And of course you need to bring in the extra channels — either reprogramming the EPROM, reworking the PLL configuration or replacing a dedicated microprocessor, depending on which system your radio uses.

We have the technology, without doubt. And it is seemingly the answer to a number of problems.....twice as many channels (even the creation of another eight "A" repeater channels) and all existing rigs compatible with the new system, even though they can only use half the channels. But this is where the idea falls down.

Every single 477 MHz radio already in use would have to be modified — every mobile, base and handheld. The reason? Because the older radios would not have the improved specifications and tighter parameters of the new gear, you'd find adjacent channel interference would become a major problem. A new rig operating on ch 10A, for instance, would give major interference to older rigs on channel 10 and 11, which are unable to reject the signal because they still work on the assumption of a 25 kHz spacing.

The higher quality of the new transceiver would prevent it from receiving interference of the same magnitude from the older channels either side, but some would still come through depending on the proximity of the stations. For the same reasons, repeaters would need to be re-tuned and in many cases upgraded to ensure they would not "splatter" the new channels on either side.

This is why the proposal will not get off the ground — attractive as it seems at first glance, any basic research will show the practical flaws. Yes, you knew it was too good to be true !

WHAT'S IN A NAME?

Trivia time. You may have noticed that Icom constantly refers to the UHF CBRS as the CRS, or Citizens Radio Service. This is a deliberate and well- conceived marketing tactic. After all, CB does have an image problem (pardon the pun) with much of the public, and 477 MHz is as far from the perceived antics of 27 MHz as you could imagine when you get into the regional and country areas where UHF sells so strongly. And Icom is not the only one aware of the problem — Electrophone's UHF rigs are always referred to as being a "40 channel UHF/FM transceiver".

REPEATER UPDATE

Belated apologies to all those who wrote to me with changes for the repeater list over the past few months — especially those who wrote again and again and again, wondering why the repeater list didn't reflect those changes ! I plead guilty to missing a deadline, which caused the old listing to be printed instead of the new one you see starting this issue.

How new, you ask ? Very is the answer — over past years the list has gone from a single well-spaced page to one and a half pages of the smallest typeface we can use, and shows no sign of stopping. As a magazine with a limited number of pages with which to please a very broad-ranging readership, CBA simply cannot afford the space. So the list has been pruned to include coverage area and repeater channel only.

We won't list actual transmitter locations — if you don't live in the area you probably won't know where the site is, and if you do live there then you can get on the repeater and ask someone. And we stopped listing callsigns long ago because most CBers don't know morse code, and aren't required to — CW identification of a repeater is a technical DoTaC requirement, not a practical operational neccessity.

We do extend our apologies to repeater sponsors, whose names are no longer listed, but once again there just isn't the room — we'll still give you a plug where possible through this column, provided of course that you write to CBA!

This first new format list is based on one produced by the DoTaC late last year, with changes made based upon your letters. You may find a repeater included which is not yet on air, but at least you'll know a licence has been issued and a service is planned and underway for the area. And as ever, corrections and new entries will be gratefully received.

One of the newest additions to the 477 MHz repeater network is Orange 3/33, in the NSW central west. After two years' planning, fund raising and sheer hard work the repeater (located at Mt Canobolas, the local RF hotspot) is now providing unparalleled coverage of local towns including Bathurst, Orange and Dubbo, and well along the Great Western Highway in both directions.

There are some 2000 UHFers in the region according to the Central West UHF Repeater Association, mostly rural and small business but also many hobbyists. "We have very little change left over from the $10,000 raised over the last two years," says Bob Fenton. "Apart from CWURA membership, many donations were forthcoming, including $1000 from the NSW Bushfire Council whose local volunteer brigades make heavy use of 477 MHz. But at last 3/33 is up and running."

Having spent some memorable times in Bathurst and Orange I can vouch for the extraordinary difference this repeater will make to local UHFers, who should give their support (and put some money behind the thought !) to the CWURA at PO Box 1062 Bathurst, 2795.

Over to you now.....write to PO Box E160, St James 2000, or log onto Sydney's "Shortwave Possums" computer bulletin board (netmail from your local board to 3:713/605), or Viatel/Discovery to 062012090. And as Ellie May Clampett was heard to say: "Y'all come back now, y'hear?"

All hams hate CBers — or do they . . . ?

BRIDGING THE GAP

Are UHF repeaters breaking down the ham-CB barriers, or adding fuel to the fire?

According to the conventional wisdom, all hams hate all CBers and all Cbers hams. Yet this rough-edged generalisation has a good many exceptions to the doubtful "rule".

Take as evidence the 477 MHz band. Why is it that most CBers, who've started on 27 MHz and 'graduate' to amateur radio, then return to CB on UHF? And why are so many amateurs, who'd not be caught dead on 27 MHz, taking to 477?

Until novices were given VHF privileges in 1988, 477 MHz CB was a common ground where hams of all licence levels could meet. And UHFers have always been more technically oriented, more "in sync" with hams than their 27 meg counterparts — without forgetting how to enjoy themselves.

So not only do hams find like minds on 477 MHz, but they are given a break from the stricter behavior of the amateur bands. On UHF CB they aren't expected to endlessly swap callsigns and signal reports — they have instead a freedom to bend rules, to make jokes of questionable taste and on the whole have a good time.

Much of the antipathy between CBers and hams has been broken down on UHF CB simply because they were able to talk to one another. And with amateurs having so much experience with repeaters, it was never beyond reason that the two camps would at some stage join forces in establishing 477 MHz repeaters.

Four amateur-sponsored repeaters are profiled here, and not all have been trouble-free. But in the mid-70's, during the height of the ham-CB "war" prior to CB legalisation, who would have thought that we'd even see one story with a happy ending?

Geelong 4/34

Geelong is the second largest city in Victoria, and has a thriving business and rural community. These two groups, combined with an enthusiastic core of hobbyists, ensured that the UHF CB channels are very active indeed, and, for some years, the need for a repeater was obvious.

The proposal for the Geelong Amateur Radio Club to establish this repeater was floated in mid-1987, and even though only five percent of members operated 477 MHz the idea had immediate merit according to club secretary Peter James (VK3AWY).

"Our club currently operates three VHF repeaters, two VHF beacons, a 430 MHz repeater and a number of links for distribution of the weekly WIA broadcasts, so we felt we had the necessary expertise in repeaters.

"The club has, in fact, a respected history of involvement in repeaters, dating back to members' efforts in establishing one of Australia's first amateur repeaters in 1969.

"There was also a feeling that the idea had direct and indirect benefits both to the club and amateur radio in general, including exposure of CB operators to the hobby of amateur radio and the Geelong Amateur Radio Club, and increased goodwill between CB and amateur operators," said James.

"4/34 also has the potential to be used during emergencies by volunteer services such as the SES, Red Cross and St Johns Ambulance, and could enable direct contact with amateurs operating the WICEN emergency amateur network."

The repeater was installed on Mt Anakie in January, 1988, and the reaction from local users was encouraging.

"Businesses in particular were quick to realise the potential of the repeater and took advantage of the excellent communications range it has, especially along the Melbourne-Geelong Freeway," said James. "Businesses have been prepared to help financially and many of the hobbyists have offered to assist with work at the repeater site."

The repeater has been almost trouble-free according to the club, which has appointed a technical sub-committee responsible for the repeater and is presently in the process of raising an 18 metre free-standing tower atop Mt Anakie.

1/31 Dubbo

The aptly-named John Hams (VK2JH) has no doubts that amateurs are far too interested in preaching to a flock converted.

"I feel that we as amateurs should come out of our hidden worlds to assist others with a similar interest in and use of radio, be it for business or pleasure. It has been unfortunate and quite unintentional that amateurs have lived in their own little worlds. While some groups have been in the public eye from time to time most do their "thing" on their own or in the company of fellow amateurs. A lot of expertise just goes to waste by living like this."

Hams' own solution, as President of the Orana Region Amateur Radio Club, was for the club to establish a UHF CB repeater to serve the regional centre of Dubbo.

"There were already some local UHF users talking about the need for a repeater but there was extreme difficulty in obtaining occupancy for private radio bases. Our club already had a two-metre repeater high in the Warrumbungle Mountains, which had its own hut and power supply."

In 1988 Hams told the club that its hut could be used to house a 477 MHz repeater, and, to ensure the security of the site and promote the hobby, the club itself should hold the licence.

"This was agreed upon without hesitation," recalled Hams, "as many of the members at that time used UHF quite heavily."

With the licence granted in December 1988, the club called a public meeting of local UHF users to explain the project and establish a sound financial base through sponsorship. Donations are still coming in and the target of $6000 is closer every week, thanks to generous support from UHFers and good publicity in the local newspapers.

Hams hopes to have 1/31 on air within the very near future, if not by the time this article is printed, and believes it will both provide a service to the community and possibly help bring some new blood into the amateur fold.

(Local UHF users who wish to contribute towards the repeater fund may contact the Orana Region Amateur Radio Club, c/o Lot 28 Bencubbin Estate, Dubbo, 2830.)

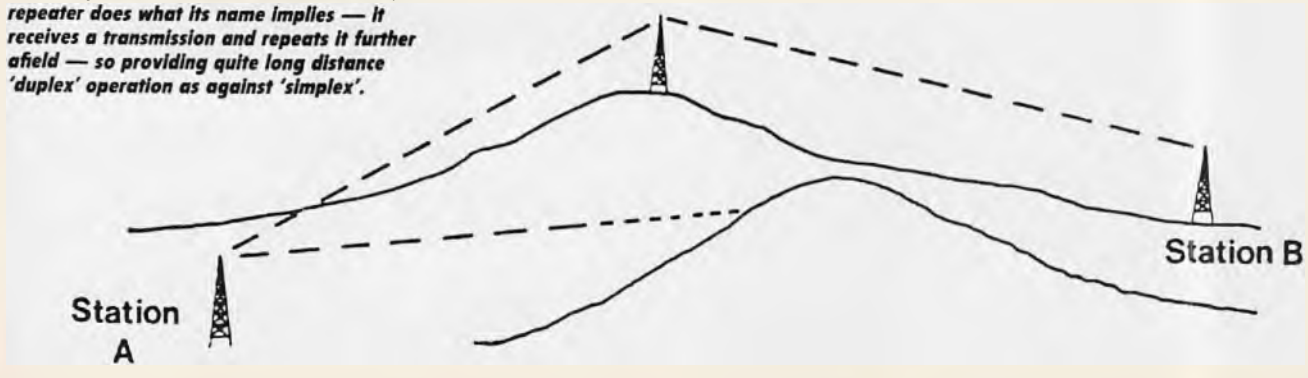
7/37 Glen Innes

Even the experience and resources of amateur radio clubs do not exempt them from some of the difficulties which repeater sponsors can face.

The Glen Innes & District Amateur Radio Club operates from the New England region of north-western NSW and holds the lease for the Mt Rumbee site of the local two-metre repeater operated by the North West Amateur Radio Group.

In early 1985 the club was approached by three UHF users, one of whom was a member, with a view towards installing a 477

In case you're an 11m AM operator and think that a repeater is someone who talks a lot, a repeater does what its name implies — it receives a transmission and repeats it further afield — so providing quite long distance 'duplex' operation as against 'simplex'.



MHz repeater on this site.

As with other amateur clubs the Glen Innes group wished to maintain the security of its transmitter building, but also saw that the repeater would provide a valuable community service, upgrading emergency communications and possibly attracting new members to the club. As a result, the club itself applied for, and was granted, the licence for GLI-07.

The repeater was installed in September, 1985, following a public meeting to attract financial support from local users, and the club claims it has been in almost continuous operation.

The UHF CB community of Glen Innes has grown immensely as a direct result of 7/37. It is used by the SES, hospital and emergency rescue squad, farmers, stock and station agents and many business and hobbyist operators, in addition to traffic on the New England Highway.

But for all the evidence of success, the club is adamant that given the chnce it would not do it again.

"We would encourage and assist someone else to establish the repeater," said secretary Russell Scott (VK2ERS), "but not on our site and not in our name. The community has benefitted from it but the club has, in our view, paid a heavy price for its experiment."

Clearly the club is the first to admit there have been serious and damaging difficulties — not with the repeater itself but with people's usage, expectations and contributions towards it.

Following a difference of opinion regarding necessary maintainence of the repeater the club experienced a fallout of all members operating UHF CB. These internal disputes have according to Scott "created considerable bad feeling within the amateur radio fraternity in Glen Innes and throughout the north west area".

On the one hand, users complain of a poor coverage area (Scott dismisses most as "unreal expectations — they expect to work the repeater for 100 miles in all directions") and warn of commercial "vested interests" having control over the repeater.

On the other, the club claims that there is no longer any monetary support from the community, to the extent whereby the repeater is draining club funds and must be questioned on purely a financial basis.

Although there is no intention of switching off the repeater while it continues to provide an adequate service — which remains the bottom line of the issue and one with which most local UHFers seem satisfied — the club is concerned that in the event of major repair work or upgrading it may not have funds at hand to bring the repeater back on air.

"Any attempt to solicit further donations is frowned upon by a number of amateurs throughout the region, especially if we mention the possibility of system failure. Then we are accused of blackmail," explained Scott. "The current committee of the club is in the process of re-evaluating the future of the repeater and hopes to have a policy established by the end of this year."

Melbourne 3/33

An examination of this issue would not be complete without mention of Melbourne's 3/33 repeater, which is presently sponsored by the Victorian Division of the Wireless Institute of Australia (WIA) — the Australia-wide body which represents the hobby of amateur radio.

This time last year saw a decision taken by Philips Communications to move out of sponsorship of Melbourne's 1/31 and 3/33 repeaters. Mindful of the need to ensure a continuity of service, Philips made approaches within the industry for potential groups to whom they would hand over responsibility for the services.

The UHF-oriented Omega Radio Club, which has undoubted credentials and experience in this field, became the licensee for 1/31, which has since been overhauled and relocated to result in a greatly extended range.

The surprise entry was the WIA's Victorian division, taking over control of 3/33. The decision has not been without criticism within the ranks of the division, with protests from members and even some on the executive committee that the operation of a CB repeater is no task for an amateur radio association. Their opposition seems to extend as much from the very principle as the financial burden.

Luck has not been with the division. Recurring inter-mod problems at the RF- heavy Mt Dandenong site forced the repeater off air almost a year ago, problems which were evident during Philip's tenure and are no reflection on the capabilities or intent of the division.

However the situation has not exactly been a PR triumph for the division, and the ire of UHFers has added weight to internal pressures favoring as graceful a withdrawl as possible under the circumstances. The division's plans for 3/33 are at the time of writing unknown, and despite letters, phone calls and even shifting this article from one issue to another to allow time for an official response, CBA was unable to obtain anything other than a terse "no comment" from the Division's president.

ARE YOU BEING SERVED?

In which we ask a number of simple questions and discover that DoTaC does not always know the answers . . .

Dear CBA,

A few months ago I applied for a UHF CB repeater licence through the Sydney office of DoTaC. I was amazed at how long it takes them to answer the simplest letter, let alone issue licences and send out the various paperwork I needed. I even phoned them a few times and haven't exactly been knocked out by the knowledge their various staff have when it comes to handling CB enquiries.

I don't know what it is like in Melbourne or anywhere else, but could you look into this ? There must be a lot of CBers out there who have the same trouble as me, even just in getting a CB licence.

BR, NSW.

This is not the only complaint CBA has had on this subject. We have all heard about the speed, or lack of it, with which Government departments such as the DoTaC operate. This is not restricted to complicated matters such as repeater licences. When it comes to getting the right answer to a relatively simple question about CB you can wind up doing the "telephone tango", a dance from one telephone extension to another until someone can be found to help you.

Unfortunately in this dance the Department always leads!

But, to be fair, would anyone be quick to tell us if the Department was prompt in replying to a letter, or courteously told a caller everything they needed to know about CB ? Probably not. Taking pot shots at the public service is easy enough.

Not only are they sitting ducks, but, they are in season all year round. And maybe for every complaint there are a hundred satisfied customers with no reason to gripe.

So CBA decided to check it out. The aim of this exercise was not to "stick it to the Department", just to throw a few everyday questions plus a curve ball or two and see how they performed.

As our regular writers are rather too well known, we enlisted the support of some of our "spies" around the country. Their role was that of an average person getting back into CB radio after a few years' absence, and deciding to telephone the DoTaC looking for some information to help them get re-established.

We selected six DoTaC offices, in Sydney, Melbourne, Perth, Hobart, Wollongong and Rockhampton. These represent a cross-section from large capital cities through to small regional centres. Each caller was instructed not to call on a Monday or Friday, which are the most common flexi-days or RDOs and so are the days when staff shortages are most likely. In the same spirit calls were only to be made between 9am and 4pm, but not between 12 noon and 2pm. Each person was to remain friendly and stick to a standard script of questions, so enquiries made to each office would be identical.

PUT ON HOLD

Our people called their chosen local DoTaC office. Our man in Sydney was put on hold for three minutes, but every other office answered promptly, and each caller told the switchboard operator: "Good morning/afternoon — I'm making some enquiries about CB radio." In most cases they were quickly put through to an appropriate person, to whom they repeated the opening line and added: "I was on CB a few years ago, and I'm getting back into it again — could you tell me how much a licence costs these days?"

THEY GET IT RIGHT

Yes, we started with an easy one, and each DoTaC employee was quick off the mark with the correct answer of $15.

Next question: "Do I have to have a licence for each radio?"

Another easy one to which every officer answered "yes". Our people asked if they could be sent the paperwork, supplied their home address, and then asked: "How long will it take to have the licence issued?"

From here it got tricky. Sydney responded with: "It depends on the backlog, but at the most it would take two weeks by mail." Melbourne was more optimistic: "It will be issued on the same day as we receive your application, so it all depends on how fast the

post is. I'd say about one week turnaround from yourself to us and back."

This was essentially the same reply which all the others gave, except that both Perth and Hobart also pointed out that licences could also be issued straight away over the counter.

Next: "Oh, I was going to ask about beam antennas — are they legal on CB now?"

BEAM ANTENNAS

Remember, all directional aerials were illegal until 1983, so an older CBer might not know they had been made legal.

Sydney didn't know what a beam was, and we were speaking to their licencing section! Our caller explained that a beam was a directional or "gain" antenna, and was rewarded with the reply: "Well, I'm not sure if they're legal, but there's nothing about them in the brochure (wrong!) so I guess it's okay as long as the local council doesn't mind."

Melbourne was on the ball: "Oh yes, they're fully legal now."

Perth tried hard: "Yes, they are legal, but I really don't know anything else about them. Would you like me to transfer you to our technical section?" The honesty and courtesy was nice but, one transfer later the "technical" officer said he thought they were only legal up to five elements, and he did not have any more exact information to hand. To his credit he did suggest that our caller check with the local council, as there have been some recent instances where Perth councils have opposed the erection of a beam or antenna mast.

Hobart, Wollongong and Rockhampton all replied that beams were legal, provided they didn't cause any TVI. This is also a valid point, and the most accurate response of all.

POWER MICROPHONES

The next question was about the legality of power microphones, which are pretty often the subject of much confusion. Our callers posed this question and once again discovered that variety is the spice of life.

Sydney: "There's nothing about them in the regulations so they are probably not allowed."

Funny, but they said that because beams weren't mentioned in the regs they would be legal, yet for the same reason they claim power mikes are prohibited?

Melbourne said: "They're not legal if they are an accessory." Asked to clarify this it was stated: "They are only legal if they are part of the original equipment," which is 100 per cent right. Wollongong answered likewise. In Perth, the DoTaC officer said he didn't know, which is pretty bad considering our caller was still connected to their technical section. Our caller was asked to hold on while the DoTaC man asked someone else in the room and then came back to say: "They've never been legal, and they're still not legal."

Hobart admitted they were not sure of the legality of a power mike, but, they did warn our CBer against them and explained that if overdriven a power mike caused TVI and made your signal hard to understand to other CBers.

Our last question was designed to test how helpful and well organised each office was, and we asked: "What about repeaters on UHF — do you have a list of the repeaters which you could send me?"

YEAR OLD REPEATER LIST

Sydney volunteered that they had a list, "but it's at least a year old". They sent it anyway and although old it was the most useful of all repeater lists received. It covered all states with a good degree of accuracy. There were mistakes with channel numbers and lack of detail in some areas, but after everything else that Sydney had told us we sort of expected this by now!

Melbourne sent a nine-page photocopy of a computer printout dated 29/6/88. It covered all UHF CB repeaters Australia-wide, listed state by state and sorted according to site, with the transmit and receive frequencies and callsigns of each station. It would certainly be better to list coverage area rather than site and channel number instead of frequency, which does not mean much to most UHF CB users.

In Perth, the officer explained a little about repeaters and told us the channel and coverage area of the Perth repeaters, but said he had no list and that "there are only eight in WA anyhow", when there are three times as many.

UP TO DATE IN TASMANIA

The list sent by Hobart was up to date and well laid out. It included channel, location, callsign and service area, and also notes of one licence issued but not yet operational and a further two "applications pending". There was also a footnote that "CBers must refrain from transmitting on the simplex mode on the assigned repeater channels when operating in the recognised service area of a particular repeater station".

Wollongong apologised they had "no list to hand, but if we find one we'll send it out". Nothing arrived, so we suppose it is the thought that counts. In Rockhampton, our caller was told: "Yes, we have a list, but you're not allowed to have a copy of it".

That done, our people rang off and reported in to CBA with the results. Licence applications, as requested, arrived the following day to our Perth and Wollongong callers. The longest wait was of four days (Rockhampton), but even this would be acceptable to most people.

GOOD RESPONSE

In light of complaints about slow responses from DoTaC, we did not see evidence of this. Phones were answered quickly and requested documents arrived within days.

Some staff were not as fully informed as they should be, and there is not much excuse for this on the face of things but our most basic enquiries were answered without too much error. Some offices were clearly better informed and more helpful than others, and one reason might be that in a smaller office such as Hobart the staff would tend to be more involved in everything and so be required to know more about the services than their larger counterparts.

There is really no reason why the Department cannot compile an accurate and standard-issue repeater list. All licence details are on their SMIS computer system, and it would only take a bit of effort to have a program sort through 477 MHz repeater licences and extract the service area, channel and site, and either update automatically or on a regular run.

Obviously much of this exercise of ours depended on the efforts of individual DoTaC employees, but this is entirely how any organisation is judged by the public. Let our readers and the Department award their own bouquets or brick bats as they see fit.

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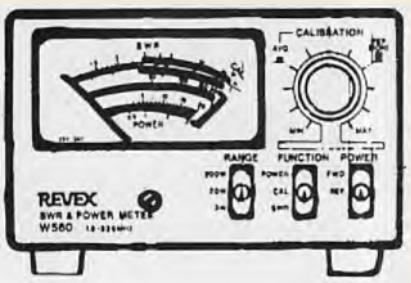
The Revex W560 makes measuring and monitoring possible with low power loss (insertion loss) and without disturbing the supply of power from the radio to the antenna by merely connecting a sensor.



Although compact, the W560 can be used in the amateur radio frequency bands of HF, 50MHz, 144MHz and 430 MHz in the 1.6 - 525 MHz bandwidths. A built in Peak Envelope Power monitor display measures modulation peak power in the SSB and various other models. N type connectors with good frequency responses are used in the 140 MHz - 525 MHz bandwidth sensor

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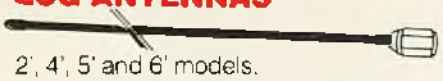
ZCG ANTENNAS



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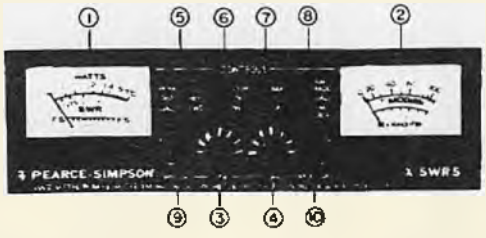

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SANGEAN HAS THE RECEIVERS

If you've been looking for a budget-priced shortwave receiver to get started then look no further. ROB WILLIAMS, CBA's authority on shortwave, takes a close look at the range of receivers from Sangean. Read on to find his comments.....

Of all the shortwave radios available on the market Sangean is one of the few companies to offer such a wide range.

Sangean is a Taiwanese company which has built up a reputation with a wide range of receivers.

For those who are just entering the hobby thru to the experienced DXer, who needs a second radio, then maybe Sangean is for you.

Garry Cratt, from Access Communications, has been kind enough to loan me a range of receivers to review in the pages of CBA. Let's begin with the lower- priced units and work our way up to its 'Top Gun'.

SG-796

For the low price of $79.00, Sangean is offering a small nine band radio which contains seven shortwave, AM and FM bands. This nine band radio offers SWL the opportunity to experience shortwave radio without the hassles of learning complex controls.

Built in a stylistic black case with all controls clearly displayed, the radio offers a good entry point into the hobby. A unique slide volume control, which also acts as an on/off switch is located on the right-hand side of the radio and above this is a conventional tuning control connected to a horizontal analog dial display.

While not offering any great accuracy, you can still pin-point a station to within 50 kHz. Band selection is achieved in a slide switch located on the top and a handy carry-strap is included on the side to allow you to carry the radio safely.

Power is via two AA size batteries or an external three volt DC power supply.

The seven segment telescopic whip allows you to maximise reception when listening to shortwave or FM stations. Included with the radio is a black plastic pouch which offers protection against the environment.

SG-792 AL

For those who enjoy monitoring the airband as well as their favorite shortwave stations, Sangean has produced a small hand-held size radio to suit your needs. For $79.00 you get a radio with six shortwave bands, LW, MW, FM and as a bonus the VHF-air band. On shortwave the 49, 41, 31, 25, 19 and 16 metre bands are covered, missing out on higher frequencies and the new 13 MHz band.

Unlike other Sangean receivers the tuning display moves vertically across the radio. Band selection is done via two slide switches located on the front. While half the front of the radio is taken up by the analog dial the other half contains a powerful speaker.

The push-button on/off switch is located on the top of the radio on the left-hand side while the volume control is a slide switch on the side.

A small LED on the front gives an indication of a station present and power is via two AA batteries or an external three volt DC source.

MS-101

The MS-101 is not only small in price but also in size. The catalogue describes the receiver as a 'Palm size' radio and at only 125 x 71 x 26.5mm (W x H x D) its built to take anywhere you go. This pocket size radio has seven shortwave bands, missing out 21450 to 21850kHz. Band selection is done via a slide switch located on the top of the radio. To select a shortwave band you operate the MW/SW button on the front of the radio and then move a slide switch on the top to select either shortwave or mediumwave.

Actual tuning inside a particular band is via the tuning dial located on the right-hand side of the radio. As the dial is rotated, an indicator pointer moves up or down the front giving you a rough idea of the actual frequency you are tuned to. Audio output is rated at 60 mW into a two inch speaker.

On the side of the radio is a stereo/mono slide switch for use on FM and a safety switch which locks the band selection switches in their current state to stop accidental operation of the wrong button.

A suede-looking pouch is included with the radio to provide protection.

The MS-101 is priced at $119 and allows SWLs to operate at a low price and get some real experience on shortwave DXing.

MS-102

The MS-102 is a 10 band radio, similar in style to the MS-101 except the

SANGEAN RECEIVERS

selection of the AM/FM and SW band switches and the SW band switches have been interchanged. The 49, 41, 31, 25, 21, 19 and 16 metre bands are covered and while not offering continuous coverage most of the international bands are there.

A miniature headphone socket, located on the side of the radio together with a mono/stereo switch, allows you to listen to AM or SW stations in mono and your favorite FM station in stereo. Power to the receiver is via two AA size batteries, which sit in a battery compartment in the back of the radio, or via a three volt DC power socket located on the side of the radio.

The receiver has an eight segment telescopic antenna for SW/FM reception. Shortwave reception can be improved with the connection of a longwire antenna to the telescopic antenna in the retracted position.

The MS-102 retails for the same price as its little brother — the MS-101 — at $119. For this price you are buying a radio which will get you an entry point into shortwave radio for minimum cost.

Without any trouble you should be able to hear some 20 to 30 of the most powerful shortwave stations. Reception on these radios is as good as you would expect from small portable hand-held radios. They offer basic facilities but for this price you get a little box of tricks to get you started.

If I had to make a choice between these two radios I would choose the MS- 102, only because it has an extra shortwave band.

ATS 803A

Its "Top Gun" is the ATS 803A. A fully synthesised receiver measuring 292 X 160 X 60 (WxHxD in mm) using phased-locked loop (PLL) technology to provided accurate frequency selection and stability.

Promoted as a portable radio, but too large to carry around with one hand, you need the shoulder strap which is provided to allow easy carrying from place to place.

This receiver has many "bells and whistles" and offers average all-round reception on all bands.

It would also double as a good back-up receiver to your main radio for checking parallel frequencies and for band scanning. Continuous coverage is offered from 150 kHz to 29999 kHz, taking in LW/MW and SW. FM is also covered providing good stereo reception via the headphone socket. I was able to listen to 2NEW-FM from my QTH some 220 Km away without any extra accessories.

The in-built telescopic antenna expands to 1.37 metres and provides a very good indoor antenna. On the back is a RCA socket for the connection of an external aerial, which can be switched in or out via a slide switch next to the socket.

Inside the radio is a ferrite MW antenna for local MW reception (I wonder how it performs with a MW loop antenna?).

With a built-in BFO control any SSB/CW signal can be resolved very quickly, something which is important for utility DXing. Nine preset frequencies can be programmed into its memory allowing for instant recall of your favorite channels. Five extra memory locations store the last selected frequency from each of the five bands the radio covers.

When the radio is turned off the in-built clock displays the time in 24 hour mode and once the receiver is turned on again it is replaced with the last frequency you were listening to.

I was surprised by the large LCD read-out on the receiver, this made it easy to see at a glance what channel you were tuned to. A five segment LED display allows you to get a visual indication of your signal strength.

Selection of a frequency can be done in three ways, via the tuning knob, located on the right-hand side of the radio, by directly keying in the frequency through a calculator-like keyboard on the front or by using the up/down buttons next to the keypad to move the frequency up or down in one KHz steps as required.

Scanning of a frequency inside a particular band is also possible by using the start/stop keys next to the frequency keyboard. The receiver has separate volume, balance, treble and base slide controls on the front of the radio. Be-

low these are the BFO pitch and RF gain controls. These two controls are a bit awkward to operate, when the radio is resting on its back using the built- in metal bracket which supports the radio at 45 degrees, because they are rotary controls which sit almost flush on the front of the unit making it hard to grasp.

The RF gain control prevents overloading on strong signals which can occur when listening to some of the 'powerhouse' broadcasters on the SW bands.

The inbuilt FM tuner allows you to listen to stereo broadcasts via the headphone jack on the side of the radio. A stereo indicator next to the LCD display indicates if a station is transmitting in stereo.

Near the bottom of the radio is a slide switch which can not only select stereo or mono on FM but also chooses narrow or wide filters for use on MW and SW. Next to the mode switch is the BFO slide switch for the selection of SSB or AM when on SW. On the right is a 'Lock' switch which locks the radio's controls in their current position to stop accidental movement of the station you are listening to. This facility has become very popular on modern receivers.

Five band select switches, located below the keypad, provide you with instant access to any particular band. Very handy for moving over a large range of frequencies quickly.

Built in is a convenient sleep timer which can be set in 10 minute increments from 90 down to 10 minutes to automatically turn the receiver off.

To compliment the sleep timer is the timer control which turns the receiver on at a preset time. This is a must if you want to tape a program while you are away or asleep.

On the side of the radio is a 5 pin DIN socket for connection to a tape recorder. Unfortunately this doesn't provide any means of turning on or off the tape recorder. To overcome this problem a voice-operated recorder would be needed.

Power can be supplied from two sources, six D size dry cells for the radio and two AA size batteries for the clock or via an optional external nine volt, 400ma D.C. power supply. With all these batteries included the receiver weighs over 2.1 Kg and requires the shoulder strap for support.

Hidden inside the battery compartment is a small slide switch to allow selection of either 9 kHz or 10 kHz channel selection on MW. MW stations in Australia use 9kHz channel separation while the USA uses 10 kHz.

The ATS-803A sells for $299 and comes with a small operating manual.

I found the wide filter too wide to use and preferred to leave the filter switch in the narrow position. Sensitivity is good for a radio this size with good audio response from the large inbuilt speaker.

By manipulating the tone controls you are able to improve reception of

stations just that little bit more. By not allowing control of a tape recorder, via the DIN socket, I think it's a bit of an overkill using this type of socket. If you are using this radio just for FM stereo then you are wasting your money.

The operating instructions, while covering the radio adequately only briefly explain shortwave listening and how to use the radio to achieve maximum performance. This is not a truly portable radio because of its size and weight but it offers more than similar radios and has some of the 'luxuries' you would find on communications receivers costing many times more.

Access Communications can also provide external power supply units for all radios which saves on money and the environment.

CONCLUSION

If you are looking for a good range of radios to choose from and have been bitten by the shortwave bug, then contact Access Communications for details on how to get your hands on their catalogue. All radios reviewed came with a small 21 page 'waveguide' booklet which includes addresses, times and frequencies of some of the common radio stations. Unfortunately, like all books that are included with radios, they become out of date.

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WIN AN ICOM IC-40G UHF HANDHELD

Elsewhere in this issue you will have read David Flynn's review of the brand new successor to Icom's IC-40, arguably the best UHF handheld on the market — until the IC-40G that is . . .

Through the co-operation of Icom Australia, we are able to give away, free, gratis and for absolutely nothing one of these brilliant new rigs.

The contest will be conducted over two issues of this magazine, the one you are reading now and the May/June issue. In each one you will find an entry coupon and AFTER YOU HAVE BOTH COUPONS (the one from this issue and the next) affixed to this page in the spaces shown, mail this page to:

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(March/April issue)
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AFFIX COUPON TWO
(May/June issue)
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The answers to all of the following questions appear in this issue.

1. What is the power of the IC-40?
2. How many memory channels does the IC-40G offer?
3. Name two additional features of the IC-40G.
4. Name two accessories for the IC-40G.
5. Name two Icom dealers who advertise in this issue.
6. Icom's other UHF CB handheld is the . . .
7. Name one other field for which Icom manufactures communications equipment.
8. What position does Duncan Baxter hold in Icom Australia?
9. What is Icom's toll-free (008) telephone number?
10. "UHF" stands for . . .

NATIONAL SPECTRUM ANARCHY

— FURIOUS FEWSTER TELLS IT AS IT IS —

CRYSTAL BALL DEPARTMENT

In his well-researched article about on-the-spot ticketing and fines for breaches of the Radio Communications Act in the last issue Ron Lear took a couple of snide potshots at my 'light-hearted' article on the same subject in the September/October issue.

Mr Lear suggests I "misread" the number of section 65(9).

The reverse of DOC53 refers to section 65(a).

I did NOT misread this !!

It's a typographic error on the form ...I DID ,however, misread the 65(9) in the accompanying handwritten notes as 65(g), but the' 9' still looks like a' g' to me.

Sorry I'm so illiterate, Mr Lear.

Mr Lear is correct in saying that there is no such thing as a 'minor breach' under the Radiocommunications Act but when I referred to breaches as 'minor' I wasn't using the term in the legal sense and I doubt if anyone else thought I was.

Sorry I don't have a QC on hand to proofread my articles, Mr Lear. My article was a full-blown 'STOP PRESS'. scoop, NOT something I could have picked up simply by reading Ministerial Media Releases.

DoTaC wouldn't even comment about on-the-spot ticketing .... the subject was taboo at the time .... but CB Action Editor Len Shaw felt that it was important enough to create waves and delay printing of an issue which had already 'gone to bed' so that it could be included.

I was working from a couple of clandestinely-photocopied documents and a few scribbled notes. With less than 24 hours to get it all together I just didn't have the time to muck around checking for minor cockups and discrepancies by poring over Acts & Regulations or DoTaC's Annual Reports. But, any under-the-counter information I've received from my sources within DoTaC has always been spot-on and once I'd convinced Len that it wasn't another of my well-known elaborate hoaxes he decided to run it as I wrote it and bugger the consequences.

Until I rang Len telling him that I'd received reliable information that on-the-spot fines were to be introduced within a matter of weeks he'd never even heard so much as a whisper about it and neither had anyone else at CB Action.

Mr Lear, however, reckons that he could equal my predicting ability (and presumably obtain copies of 'non-existent' official documents) merely by reading through the Acts & Regulations, so I've decided to give the time-consuming and expensive crystal-gazing business away and just comment about past happenings on the CB radio scene from now on.

Mr Lear can make all the predictions in the future !!

CAUSING A STIR!

New Brisbane UHF-CB repeater on 2/32 (still in the experimental stage as I write this column) looks like causing a bit of a stir if the few times I've listened to it are any indication of what's to come.

Licensee Mark Kyle told me that from the very first day on air the repeater attracted a resident Phantom Farter/Burper/Jammer who managed to render it almost useless. Perhaps 'Phantom' isn't a very good description in this case as Mark has already identified the culprit as a UHFer living in the Newmarket area, only a short swing of a pick-handle from the repeater site (subtle warning !).

Apart from the problems caused by this persistent wanker and similar types who jumped on the bandwagon (there's more than one source of deliberate interference but most of the others are hit-and-miss efforts, probably caused by the same small group of dorks who have been burping and farting on the other Brisbane repeaters for years) there has already been quite a bit of 'accidental' interference from users of the 2/32 repeaters situated at Toowoomba and Gunalda, both of which are fairly easy to access from Brisbane.

Mind you, ducting has been pretty phenomenal lately and many Brisbane base stations have been able to access distant repeaters they wouldn't have a hope of using under normal circumstances, but, a handful of Brisbane UHFers use the two 'DX' 2/32 repeaters regularly, ducting or no ducting, to contact friends and family, and a couple of keen operators who've spent several hundred dollars apiece on phased Yagi arrays to enable them to do so aren't too impressed at the prospect of losing this capability.

According to DoTaC it's 'tough titty' for Brisbane stations if the local 2/32 repeater interferes with their communications via the Gunalda or Toowoomba repeaters because these two repeaters are primarily for LOCAL use, not 'DX'.

That's fair enough, but, what about LOCAL users of the other repeaters ?

I've heard COMMERCIAL users on Brisbane's western fringes bitching about interference with their business communications on 2/32 Toowoomba from stations using the new Brisbane repeater....and it's not even firing at full strength yet.

When Mark told me a few months ago that he intended setting up another repeater in Brisbane I thought it was a great idea .... Brisbane NEEDS another repeater badly to alleviate congestion, particularly during business hours .... but so far it doesn't seem to have had the desired effect.

Maybe things will settle down when the weather changes and the ducting drops out.

MEET MISTER DORK

While we're on the subject of ducting .... I was decidedly unimpressed by the on-air performance of a certain Brisbane 'emergency monitor' (let's call him Mister Dork for want of a better name) on the 3/33 Double Island Point repeater recently.

This character was chatting with another Brisbane operator when a Fraser Island station asked them (quite politely) if they wouldn't mind vacating the repeater for a while as he was expecting calls from the local Ranger and from the vehicular ferry which was preparing to leave for the mainland .... not an unreasonable request when one considers that UHF-CB is the primary (and sometimes only) method of communication on Fraser Island.

Mister Dork replied with a two-minute lecture about how 3/33 isn't an officially-designated emergency repeater and that DoTaC regulations say that anybody can use it and that he was an 'emergency monitor' and he knew what he was talking about and that he wasn't going to be ordered off the repeater by anyone and blah blah blah yakkety-yak and finished off by telling the guy that he could 'come in as a breaker' if he wanted to make a call.

The Fraser Island station pointed out that the two Brisbane stations were using a repeater situated around 200 kilometres from Brisbane when they were within Simplex range of one another (they'd each said on-air that they could hear the other's uplink a minute or two earlier) and asked for a fair go for a few minutes because he was expecting some calls which he may not be able to receive if they had the repeater tied up.

Mister Dork responded with another lengthy lecture along the same lines as the first,added some crap about how he could have the repeater closed down for good with a couple of phone calls, and tried to get back to his original (Brisbane) contact.

A couple of other Fraser Island users jumped in with irate comments, then suddenly all hell broke loose. A powerful German-accented station boomed over everyone else, accurately identifying Mister Dork by name and address and threatening to, 'come down to Brisbane and tear off your head if you don't shut your bloody stupid mouth and get off this repeater you stupid little bastard.' I got that bit on tape, so it's verbatim.

Obviously Mister Dork must have wanted to keep his head attached to his body because he immediately took his Brisbane contact to a Simplex channel.

Naturally I followed them and for the next few minutes I listened to him spout more bullshit than you could find at the Dayboro Rodeo. I couldn't hear the other guy Simplex, but, he

hardly get a word in edgeways anyway. The way Mister Dork tells it the Brisbane RIs are in his pocket along with the Minister of Transport and Communications, he's Top Gun of the Brisbane 'emergency monitoring' scene, he's been an Amateur for years, he has several licences to operate 'big gear' (whatever that is) and by the time you read this column the Double Island Point repeater will be off the air forever and he'll have given the German guy from Tin Can Bay a bloody good thrashing.

Mister Dork was right in one respect .... the Double Island Point repeater is NOT an officially-designated 'emergency repeater' even though it IS often used for emergency communications and it IS available for ANYONE to use, but, that's beside the point.

Because of the lack of other forms of communication in the area LOCAL users should have priority over 'DX' users, particularly when the 'DX' users are within spitting distance of one another and even more so when one of the 'DX' users is fully aware of the circumstances. Longtime readers may recall that I gave one self-appointed 'guardian' of 3/33 a bit of a rev in CB Action some years ago for persistently shooing people off the 'emergency repeater', but, that operator's behavior was definitely out-of-line. In this instance the guy on Fraser Island wasn't arbitrarily trying to order 'outsiders' off the repeater....he was merely asking for a fair go for a few minutes so he could listen out for a couple of scheduled LOCAL calls.

In my opinion, and I'm sure everyone who heard the altercation will agree, the dork's behavior was childish, selfish, and downright ignorant !!

SPEEDING TRUCKIES AGAIN

A week or so after yet another tragic smash on the Pacific Highway, this time between two passenger coaches near Kempsey, I received an unofficial call from a Queensland Police officer regarding my comments about speeding truckies in the last issue.

He agreed with me about the lousy condition of our highways being a major contributing factor to the road toll, about tachographs being useless and 100 km/h speed-limiters being dangerous (more on this later) and with my comments about freight companies whose unrealistic schedules virtually force their drivers to break the speed limits and rest-period requirements.

He reckons, however, I'm way out of touch with the 'go-faster' scene if I think that CB radio doesn't play a vital part. He said if I ever spent a day in a CB-equipped Highway Patrol vehicle I'd feel like I'd just stepped off the set of 'Convoy'.

He claimed that official records show that a radar trap set up on the open highway seldom nails more than one speeding long-hauler because the first truckie flagged down immediately broadcasts its location on his CB radio, in many cases even before his wheels stop turning. He told me that the NSW Police had already instituted an official 'get tough' policy of prosecuting anyone who is caught transmitting information about radar traps or Highway Patrol activities and that they regularly request UHF-CB repeater owners in some areas to switch off their repeaters between dusk and dawn in an attempt to catch 'midnight flyers' and that these moves have proven so successful that Police in other States will almost certainly follow suit in the very near future.

It's unfortunate that hobbyist UHFers will have to pay the price along with the leadfoots, but, if that's what it takes to slow the buggers down or get them off the roads then I'm all for it.

He also felt that my article wrongly implied that only the 'cowboys' exceed 100 km/h on the highways.

According to him the 'Smoky And The Bandit' mentality of the 1970s has been revived in a big way over the past couple of years. He reckons MOST truckies these days exceed the speed limit, usually by a substantial margin, and thanks to the combination of CB radios and radar detectors most of them get away with it most of the time.

This is particularly so in Queensland where mobile radar units are few and far between....this could change soon.

Rumor has it that the Queensland Police plan to equip 50 unmarked vehicles with new hard-to-detect mobile radar units.

His proposed solution to the 'speeding truck syndrome' might sound a bit radical to some readers and probably sounds right off-the-wall to truckies, but, the more I think about it the more sense it makes. He firmly believes that the speed limit for ALL heavy vehicles .... trucks, buses, or whatever .... should be 80 km/h and that limiters should be fitted to these vehicles so that they are unable to exceed this speed under any circumstances.

If a truckie got 'stuck' behind a slow driver and was unable to overtake safely then he'd just have to wear it.

He answered my suggestion that cutting the speed limit for trucks by 20% would probably cause a rise in freight rates by saying that fuel savings on a 1000 km trip in a fully-laden semi would more than offset the cost of the three hours added to such a trip by travelling at 80 km/h rather than at 100 km/h. I later rang the RACQ to check this and was told that fuel costs could be cut by as much as 25% in some cases and added that a 20 km/h margin would allow safe overtaking by other vehicles allowed to travel at 100 km/h.

He (the lawman) also believes that restricting heavy vehicles to a 90 km/h speed limit is more dangerous than allowing them to continue to travel at 100 km/h and that the 90 km/h speed-limiters proposed by some 'experts' would prove to be even more dangerous than the 100 km/h speed-limiters I rubbished in the last issue.

OK .... maybe I was wrong.

Maybe the use of CB radio by IRRESPONSIBLE truckies DOES contribute to the road toll. I still say that these guys would be just as irresponsible WITHOUT the benefit of CB communications .... but maybe they'd be easier to catch !! Minister for Transport and Communications Mrs Ros Kelly recently ordered an investigation into the abuse of the Citizens Band Radio Service. Preliminary inquiries indicate that most CBers only abuse the CBRS part of the time...let's wait to hear the rest.

• ***KEMPSEY . . . the crash that sparked the controversy.***

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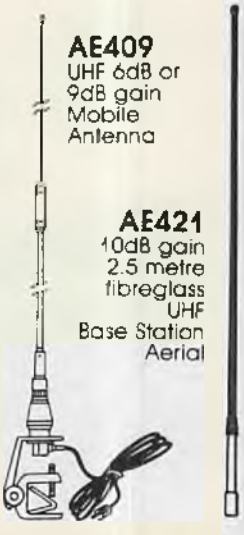

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ONLINE

With PATRICK McDONALD

Howdy, everyone, and welcome back to another edition of CB Action's little corner for you radio fanatics with a computer somewhere in the shack!

Lots of feedback from the first column and the most common question was ... "Okay, so how do I start, anyhow"? Well, I can't repeat all the relevant details in each and every ONLINE column, but I can advise you that if you are currently using Telecom's well-known VIATEL service you can certainly ring other computer bulletin boards, including Shortwave Possums, by simply changing your set-up parameters to 8-N-1, because many boards accept the Viatel 1200/75 "split band" rate as well as the more common 300, 1200 and 2400 speeds. Once connected, you will find lots of info available, including good quality communications software — and on SWP yours truly is always happy to help computer BBS novices get up and running so they can double their radio fun!

OK, let's talk radio now. We discussed an electronic radio logbook program last time, and decided to throw away our ancient dog-eared notebooks where we could never find anything when we wanted it. This time let's see what else computers can do for we radio folk.

Ever do any research into exactly when you hear certain SW signals? Ever notice that the massive 500 kW VOA transmitter at Greenville, North Carolina booms in at 1400 UTC but you get nothing but "white noise" at 2400? Yup, we're talking shortwave propogation here!

TROPICAL BAND AFRICANS

I used to be very interested in one particular phenomenon when "Tropical Band Africans" stations were my first love — those crazy local stations active in the 60 metre band, between 4700 and 5100 kHz, pumping out French disco music from Accra, Spanish language soccer matches from Bata, and lots of extremely interesting and obscure local news in African English from Kaduna, Nigeria. Trouble is ... you can usually hear these stations only in the wee hours of our local mornings (1900-2000 UTC). And boy, it sure does take some real good DX to get me out of the sack at that hour on a winter am! But now, here's an interesting point ... around 0600 UTC on our local winter afternoons, you can often hear many of the same stations, but only in a "window" period of about an hour!

"What's going on here?" you might ask. Well, it's called "Grayline DXing".

A look at a world globe and a few experiments simulating the sun with a torch will demonstrate to you that at twilight, twice a day, there is a band of half-light, half-darkness — a "grayline" — extending right around the world from where you are listening. And at these times you can often hear some local, low-powered shortwave stations that are otherwise inaudible here in Australia. It's much, much easier to observe the Grayline effect with the new 'Geoclock' MS-DOS computer software, however. A touch of one key and this super world map fills your monitor's screen, actually showing you a colorful simulation of the whole world as the sun moves from east to west. And the great thing is, Geoclock works in real time! You can set up your program to show you what the world looks like right now, where the sun is shining and where there is a "darkness path" between your shack and target station. Great idea, right? And Geoclock allows you to customise the map to show whatever cities strike your fancy: Moscow, Lima, Ouogadougou ... the choice is yours! And if you live out "back of Bourke", just make a few adjustments to the program (easy even for the beginner) and there's Tibooburra listed, bold as brass, right where it should be!

HOW DO YOU GET IT?

So how do you get this Geoclock? Well, you can start by "logging on" to a BBS that carries radio-related software. After downloading this particular file onto your home computer, you will discover how easy is is to set up and operate. You must have an IBM-compatible computer, however, that runs on the MS-DOS operating system. If not, you should seek out those special BBSs which cater to Commodore or Apple/Mac users and see if something similar is available for these quite different operating systems. This spectacular Geoclock map looks much better on a color EGA or CGA screen, but will work with ordinary monochrome or "Hercules" monitors as well. Now, folks ... Geoclock is what we call "shareware". This means you are able to try the program out for free, and use all its many features, before you decide if it's what you want. Then you send a small fee to the author, to assist him with his costs and to encourage him to write more, similar programs. That's right, shareware works on an honor system, and this is another great feature of the world of computer bulletin boards.

Which reminds me ... Robert Nagy logged on the other day to report that he has been very pleased with all the interest in his "Recom" electronics radio logbook mentioned in last issue, and is now preparing a brand new version, hopefully to be ready sometime in February or March, with lots of new features. This software will of course appear on SWP BBS. Interested? Try out the current version of RECOM from SWP BBS, and then leave an electronic message for Robert, telling him what new features you'd like added, to suit your own particular listening requirements. I can assure you he'll be keen to receive the feedback and will try to incorporate your suggestions into the upgrade.

INSTANT FEEDBACK

This kind of instant feedback is another way computers are great, and there are still other ways that personal computers are spicing up the radio hobby, by the way! Tips on new stations, changed frequencies, propagation conditions, receiver mods, the latest tropical band catches, all are rapidly circulating not only around Australia, but all over the world. These electronic messages are called 'echomail' and are a real boon to radio listeners, hams and others trying to stay in touch quickly about radio matters. Naturally, nothing can replace the depth and detail of traditional, high-quality DX newsletters, such as the Australian Radio DX Club's "Australian DX News", but computer bulletin boards can speed listening tips from DXer to DXer fast enough to report some of the "tough catches" before freak propagation conditions change.

Another advantage is that frequencies covering national and international "news" events can be swapped quickly and accurately. In recent months SWP and other boards with "echomail" have carried HF frequencies for Qantas' record-breaking London-to-Sydney flight, and the San Francisco and Newcastle earthquake emergency networks.

Like several other Australian computer bulletin boards, Shortwave Possums is now pleased to be linked into the famous world-wide "Shortwave Echomail conference", sharing messages with hundreds of other boards across Europe and the USA. Any "electronic mail" left in this particular message area in any of these BBSs is quickly "echoed" (repeated automatically) to all the others, across thousands of miles. Great idea, huh? Well, you can try this out by ringing SWP or any other board with the SW Echo and having a look. Try a BBS that is close to home and and it will only cost you the price of a phone call to communicate worldwide! To get you started, two other Australian bulletin boards that carry Shortwave and other world echomail conferences are Melbourne's "Amnet", on (03) 366-7055, and the Sydney BBS "Monitor World", on (02) 675-3027. If you are aware of any others please let me know, so I can share them with all those other keen radio users out there !

Whoops! The old "word-counter" on the word processor is nearing the magic mark and CBA won't be able to fit much more into those pages already packed with radio info, so I must log off now until next time! Computer software to provide ionospheric predictions and tips on avoiding computer noise interference are on the menu for future columns, along with other radio/computer topics. But remember that in the meantime myself and thousands of other radio maniacs are available 24 hours, seven days a week, on Shortwave Possums, (02) 651-3055. So get that computer hooked up to a modem this week and find more radio action than you never knew existed!

Wireless Institute of Australia NAOCP home study kit, a comprehensive and thorough method of studying for the NAOCP. (kit by courtesy WIA).

Jack Haden looks at what's available to help you

OBTAIN YOUR AMATEUR LICENCE

The majority of avid DXers on the 11-metre band, out-of-band operators in particular, would dearly love to possess an Amateur Radio licence. To be able to own and operate an amateur band transceiver (minus the old 11-metre band) without fear of the dreaded knock on the door would be sheer bliss in anyone's book.

By obtaining your Novice Amateur Operators Certificate of Proficiency (NAOCP), you will be taking the first step into the realm of Amateur Radio, a new and exciting world of radio with extra privileges previously unknown and experienced on 11 metres. With the NAOCP you will have a greater selection of operating bands (80, 15, 10 and 2-metre bands) and you will be able to take full advantage of the various propagation modes available on ech band.

Not only would you be able to establish contact with overseas stations legally but you would also be free of those ever-present cretins that inhabit the 11-metre band, namely the Brain Dead, those obnoxious pests that are neither DXers nor pirates whose operating procedures leave much to be desired. I have known quite a few old pirates that have taken the plunge, driven to despair by the actions of the Brain Dead.

Studying for the NAOCP is not an easy task especialy if you know little or nothing about electronics. A large number of us haven't been to school for a number of years and find it hard to discipline ourselves into a regular study routine, thereby making it difficult getting things to stick in our minds.

One of the biggest fears that tends to sour the prospect of sitting for the NAOCP examination is conquering that much dreaded and often detested morse code. For some, morse code is resented more that the theory part of the exam, all those weird dots and dashes never seem to make any sense at first. However I think morse code is a valuable part of the NAOCP requirements and with a modest five words per minute too send and receive it shouldn't present too much problem in mastering.

When propagation conditions on a particular band are poor, a morse code signal will often get through whereas a Single Side Band (SSB) signal, under the same conditions, would be virtually unintelligible. Over the years I have always held a fascination for morse code. I feel that it is an important part of the Amateur Radio hobby and should be kept as a licence requirement at all costs despite the constant lobbying in favor of a no-code licence for the HF bands. If these people do not want to do the morse code part of the exam then they should sit for the no-code

Limited Amateur Operators Licence of Proficiency.

As mentioned, the Limited Amateur Operators Certificate of Proficiency (LAOCP) is available for those wishing to escape sitting the morse code exam. The LAOCP theory is much harder than that required for the NAOCP and one must also keep in mind that the LAOCP doesn't allow you the HF band operating priviliges that the NAOCP does. The LAOCP licence holder is restricted to VHF, UHF and SHF band operations, otherwise known as the world above 50MHz.

Finding time to study for the NAOCP always presents a problem. Most family people find it hard to allocate time that will blend in with the smooth running of the household. Although there are numerous NAOCP courses being conducted at various Amateur Radio clubs on a regular basis there are some of us who find that these too are out of the question. A second job, family commitments, shift working, or other social activities make attending night classes virtually impossible on a regular basis.

Over the years I have heard some remarks made about Amateur Radio club night courses, some participants say that they drop out part way through the course mainly because the instructor tends to cater for the brighter students in the class. Others feel they are forced to learn too much too quickly and thus rapidly lose interest, and then there are some who dislike being taught things that they consider irrelevant to the hobby and the actual licence theory requirement.

I am not saying that all Amateur Radio NAOCP club-run courses are the same, but if this applies to you then there are other options available to suit various life styles, options that allow you to study at your own pace and leisure.

VIDEO CASSETTE NAOCP STUDY COURSE

One excellent way to study for the NAOCP is by way of video cassette tape. Just about every household in Australia has a VCR these days, either on VHS or BETA systems. The Sydney-based Gladesville Amateur Radio Club offers a series of tapes, both on VHS and BETA, dealing with the NAOCP studies. The series dedicated to the NAOCP is 24 tapes in all and covers theory, mathematics and DOTAC regulations governing the Amateur Radio Service.

The course tutor is Ron Bertrand, VK2DQ, a well known and respected Sydney radio amateur who has conducted the NAOCP course for the Gladesville Amateur Radio Club (GARC) for over eight years. I have inspected and reviewed a number of the tapes associated with the NAOCP and I found the quality and presentation to be excellent. I am not surprised that GARC boasts a better than 85 per cent pass rate from candidates employing this method of study. By using the GARC video tapes one can study for the NAOCP as time permits, and of course, at any time refresh the memory simply by rewinding the tapes and playing them through again.

What you will need to conquer the morse code, training tapes, cassette player and of course a key. (tapes courtesy: Archer (Tandy) and the WIA).

The GARC video tape section not only covers the NAOCP, but also the Amateur Operators Certificate of Proficiency (AOCP, often referred to as the Full Call). There also is a series of tapes dealing with subjects such as transmission line theory and basic computer programming.

For readers in Sydney with the UHF mode on their TV, GARC offers a twice-weekly transmission series on the NAOCP and the AOCP. The transmission is on Channel 35 UHF (the same band that you would receive SBS-TV on) and starts with a test pattern for tuning purpose at 7pm local time with the actual program getting underway at 7.30pm local time. The programme runs for about three hours. The Friday night transmission is a repeat of the Wednesday night segment and starts with the test pattern at 6.30pm local time with the main program getting underway at 7pm local time. On Saturday night from 7pm to 10pm GARC also transmits general information relating to Amateur Radio. Another follow-up program on Sunday night deals with similar items and includes Wireless Institute of Australia news. The Sunday schedule is 7.15pm to 10pm.

If you are interested in studying for the NAOCP by video cassette, then I suggest that you write to the dedicated team at Gladesville Amateur Radio Club which will be only be too pleased to hear from you and provide you with up-to-date details. Tapes are hired to residents of Australia and its territories. The address for enquiries is Gladesville Amateur Radio Club, PO Box 48, Gladesville, NSW 2111. You may phone the club on (02) 427 0530 most evenings.

CORRESPONDENCE COURSES

The WIA offers correspondence courses for all three Amateur Radio Licences. These courses are ideal for those in rural areas without access to a local Amateur Radio club night course facility. The correspondence courses are comprehensive and are conveniently divided into sections that deal with each subject in easy-to-digest detail. At the end of each section there is a trial examination paper which determines your progress.

There is no set period for the course so you can work at your own pace. Correspondence course enquiries may be directed to: The Wireless Institute of Australia, Education Service, PO Box 262, Rydalmere, NSW 2116, or for those in the southern states to The Wireless Institute of Australia, Education Services PO Box 300, South Caulfield, VIC 3162.

NAOCP HOME STUDY KITS

A few years back when the CB radio craze was at its peak, there were a few NAOCP home study kits available, usually purchased from leading radio communications stores. Unfortunately there are not too many of these left and it may take a journey to a number of stores before you come across something.

One of the best NAOCP study kits about would have to be the one prepared by the Wireless Institute of Australia, Education Services. This kit is moderately priced at $22 and contains a wealth of information to start you on your way to Amateur Radio. The kit covers the theory side of the NAOCP quite well and caters for those who know nothing about electronics to those who know a little.

The kit also includes five handbooks, which are easy to read and un-

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The Novice Operators Theory Handbook and morse code training cassette

derstand, plus two copies of the Department of Communications and Transport booklets dealing with the "Amateur Stations" and "General Conditions Governing Licensing". Along with all this you also receive two morse code practice tapes to train you up to the required five words per minute transmit and receive level.

Any enquiries regarding the NAOCP home study kit may be directed to the same address mentioned for the WIA correspondence courses.

Another kit doing the rounds is available through the Dick Smith Electronics group of stores. This kit was compiled by Graeme Scott, VK3ZR and well known Sydney amateur Sandy Brucesmith, VK2AD. I found the kit to be rather basic, a sort of no-frills approach to studying for the NAOCP, and I personally think that it would be more suited to those who have at least a wisp of knowledge in the world of electronics. However the kit is put together rather well and as mentioned if you have that basic wisp of knowledge in the field of electronics you shouldn't find the theory booklet too hard. There are trial examinations at the end of each chapter designed to gauge how much you have absorbed from the various sections of the handbook.

The most valuable part of the whole kit would have to be the morse code training cassette. I think that the tape alone is worth the price of the kit and is a credit to Graeme Scott who prepared it. The tape pulls no punches and is ideal for those who have no knowledge of morse code whatsoever. This kit can be purchased from any Dick Smith Electronics outlet. Graeme also offers further study cassettes at 10 and 12 words per minute should you wish to continue above the Novice level of five words per minute. This would have to be one of the best kits about so I suggest you at least have a look at it.

MORSE CODE PRACTICE TRANSMISSIONS

If you happen to own a shortwave or communications receiver capable of receiving morse transmissions I suggest you tune-in to the nightly morse training sessions provided by volunteer operators from the Wireless Institute of Australia. These transmissions are on the 80-metre amateur band and commence with VK2BWI in NSW coming on air at 7.30pm on 3.550MHz, starting with a speed of five words per minute and then gradually progressing to six, eight, 10 and 12 words per minute. At the end of each section the tests are read back on SSB so you can readily check your progress. The session runs for an hour. Shortly after the VK2BWI morse transmission ends VK5AWI in South Australia commences with another one-hour morse code training session following a format similar to VK2BWI.

On the 15-metre amateur radio band there is a morse training transmission provided by a Japanese radio group, usually I find it around 21.125MHz in the early afternoons through to late evening. All the text is sent in English but there is no voice read-back of the text sent.

For those who live in Sydney, the Hornsby and Districts Amateur Radio Club has a 24-hour continuous morse code transmission on 3.699MHz (80-metre band) but the speed sent is above the NAOCP requirement, around 10 words per minute, although it is still ideal to have an attempt at. There is no voice read-back of the text sent. On the two-metre VHF band Hornsby and Districts Amateur Radio Club also operates another 24-hour morse code transmission on 144.950MHz which is the brother to the one on 3.699MHz HF.

If you live in Melbourne the 28.340MHz Morse Practice Net is well worth a listen. The net has been running for nine years and is credited with helping around 250 radio amateurs gain their Novice or Full call licences. The Net starts up about 10 weeks prior to the DoTaC examinations and can be heard at 8.30pm local time starting with the Novice speeds. From 9pm to 9.30pm the morse speeds up to the Full call requirement and a little above just for good measure. At the end of the session the text is read back on SSB. The frequency again is 28.340MHz on the 10-metre band with a sister service now available on 147.425MHz (VHF two-metre band) modulated CW on FM.

I was hoping to have more information on the 80-metre band morse code training sessions but as we went to press I had not received an update from WIA headquarters in Melbourne, so all I have furnished is the VK2BWI and VK5AWI schedules. No matter where you are in Australia, if you have a reasonable antenna and a good receiver you should be able to receive the slow morse via propagation as I know people in New Zealand and the Pacific Islands regularly copy the signals from these services.

Any futher information that I receive will be printed in future editions of CB Action but I think I have covered the main activities associated with morse code training facilities via your radio.

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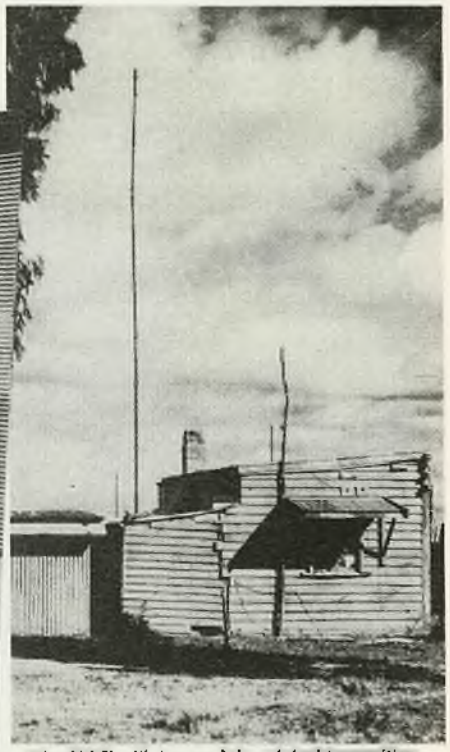
RADIO AUSTRALIA 50 YEARS DOWN THE TRACK

DAVID FLYNN visits our International shortwave broadcaster, Radio Australia, and finds that after 50 years there are still exciting times ahead . . .

It was a very different world, a world at war, that half a century ago first heard the words crackling through the shortwave bands: "This is Australia Calling". It was the birth of what later became Radio Australia, and although the following 50 years have seen many trends (and lately much turmoil) in the broadcasting sphere — FM radio, UHF TV, networking, satellite television and more — RA has remained constant. Through war and peace, from the eras of white Australia to the Pacific neighborhood, Radio Australia has been our voice to the world. Our experience with international shortwave began just three years after regular SW services commenced in the US. Australia's first stations were privately owned and operated under an experimental licence by AWA, whose 1.5 kW Melbourne service first appeared in September 1927 as VK3ME — in those days all international broadcasters used the "VK" callsign prefix now exclusive to amateur radio. This was later followed by stations in Perth (VK6ME) and VK2ME Sydney, which signed on as "The Voice of Australia" and opened and closed each day's transmission with a recording of the kookaburra's laugh. The need to provide listeners in the outback with reliable broadcasts prompted the Government to establish VK3LR Lyndhurst, Victoria, in 1934, and in 1938 a second station was opened at Perth. But with the outbreak of World War II came the need to overcome another isolation — that of Australian soldiers fighting on foreign soil. The AWA licences were cancelled and the fledgling shortwave network became "Australia Calling". When transmissions began on December 20, 1939, they were to counter propaganda beamed south by the Axis forces — broadcasts designed to make Australian citizens and soldiers question their involvement in a war halfway around the globe. "Australia Calling" was our chance to "speak for ourselves", said then Prime Minister Menzies at the official opening — not just our right of reply but our own rallying cry and a part of Australia carried on radio waves to diggers the world over. The service was at first controlled by the wartime Department of Information. In addition to general listening transmissions and those intended for the Allied Forces, there were numerous foreign language programs into Asia as part of a psychological warfare campaign. The end of World War II saw "Australia Calling" facing a new role as our international peacetime broadcaster. First came a change of name, to Radio Australia. With it, an increase in on-air hours, a new program schedule and the commissioning of new transmitters. The saga of RA's transmitters could fill an article in itself. The first efforts used four shortwave transmitters owned by AWA and operated by the ABC. In 1944 RA's Shepparton (Victoria) station commenced operation using a single 50 kW transmitter which is still in operation today ! Shepparton has always been the heart of the RA network, and now has six 100 kW and two 50 kW transmitters beaming throughout the Pacific region. In order to more effectively reach South East Asia a new facility was established on the north western tip of the Cox Peninsula, near Darwin, in 1969. But, as with the rest of Darwin, the devastation of Cyclone Tracy in 1974 took its toll. The antenna system was demolished, transmitters flood-damaged, underwater power cables cut. The jetty used to transport staff and equipment to the station from across Darwin Harbour was extensively damaged and two PMG launches sank. It was almost five years before the station was returned to air in a temporary capacity and not until 1984 that it once again became fully operational. Indonesia and the underserved Indian subcontinent were also targetted by Radio Australia. To

A group of Radio Australia's first staff members. John Royle (seated, right) had the honour of inaugurating the station on 20 December 1939. George Ivan Smith (standing, third left) later headed the organisation.

Master Control, Radio Australia Centre, Melbourne



"The Old Shed", home of the original transmitters for Radio Australia at Lyndhurst, south-east of Melbourne. The station carried RA broadcasts for more than 40 years.

Keith Glover, presenter of the long-running Mailbag program which was enjoyed by English listeners all over the world. Glover is one of numerous announcers who became well-known through their Radio Australia work.

Michael Wagner, English Service broadcaster.

meet this need a third station was opened at Carnarvon, WA, in late 1975, fortuitous timing indeed considering the hole which Cyclone Tracy created in RA's coverage the previous year. Carnarvon occupies the site of a former NASA tracking facility and now consists of 1 x 300 kW, 1 x 250 kW and 1 x 1kW transmitters. Latest in the chain is the newly opened station at Brandon, near Townsville, Qld. The site is shared with local ABC radio service 4QN, using three 10 kW transmitters relocated from Lyndhurst to improve reception in Papua New Guinea, Vanuatu and other islands to our northeast. Such a network is expensive to maintain — half of the annual $25 million budget goes to keeping Radio Australia on the air, with the remainder stretched to ensure they have something to do once they're their. Even so, ABC Managing Director David Hill has called the transmitters "a national and international embarrassment", and welcomed recommendations in a recent report into RA (the fifth in 10 years!) to expand the Darwin station, establish a site in far north Queensland and also investigate the possibilities of a time-share relay with shortwave stations located in other countries. The key is of course money. RA's network is by no means the world's largest, and current funding is almost insignificant when compared to other shortwave broadcasters: VOA is undergoing a $1 billion upgrade over the next two years, with several new transmitters, studios and satellite relay links planned (see CBA July/August '89); the BBC has a new $15 million station in Hong Kong; and many others are buying time on the transmitters of foreign broadcasters to better reach local audiences. RA is

Listening in Indonesia.

officially the overseas service of the ABC, in the same way that the BBC World Service is administered within the BBC. Although the coverage and role of international broadcasters can put them at odds with the Foreign Affairs Department of their own country, most of the major shortwave stations are treated as radio broadcasters first and foremost. Two exceptions to this are the Voice of America, which falls under the wing of the US Information Agency, and New Zealand's new shortwave service, which reports to the Department of External Relations.

Radio Australia's headquarters are neat, modern and located in pleasantly greened surroundings at Burwood, an eastern suburb of Melbourne. They could be anything but the heart of an international shortwave broadcaster — even the small satellite dish at the rear of the building, used for ABC feeds via Aussat, could be one used for almost any modern business purpose.

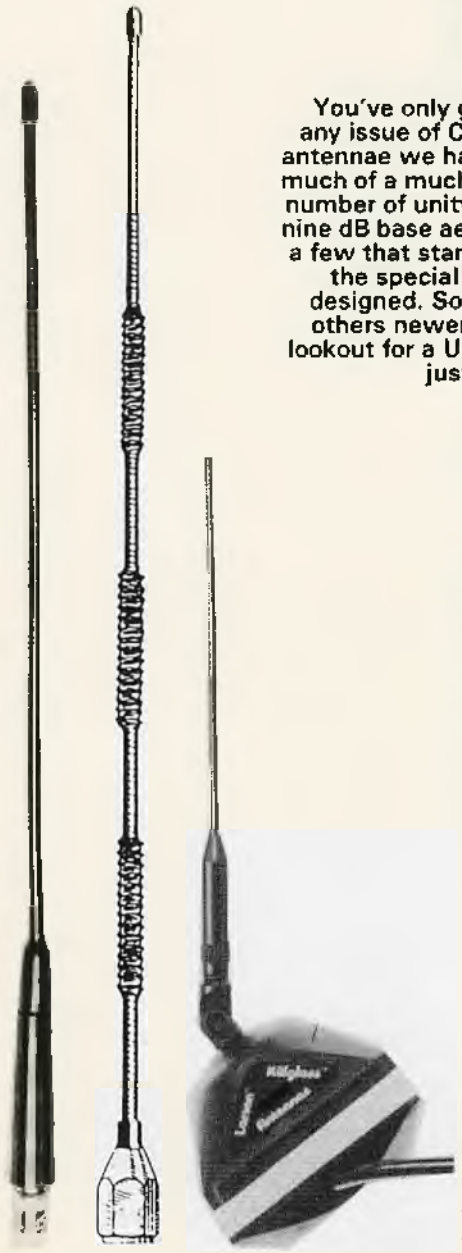
Inside, however, the atmosphere is a happening one.....interviews are being recorded, music played and mixed, programs compiled, and material is routed through Master Control and a computerised switching system for distribution into the network of over a dozen transmitters. The centre boasts 18 studios and control booth areas, two newsreading booths, and a multitrack production suite for producing complex spoken word or music programs. It is the working home for 200-odd staff, from broadcasters and journalists to technicians and administrators. It's not an uncommon to ask why, in this day and age, do we need international shortwave stations or, more directly, why do we need Radio Australia? RA is all about international public relations, and has established itself as the Pacific region's key shortwave broadcaster. It's brief is twofold — to encourage understanding, respect and goodwill for Australia, and as an invaluable link to home for Australians abroad. Regular programs are transmitted to Japan, Indonesia, China, Vietnam and Taiwan in their native languages and are widely enjoyed in these countries, where ownership of a shortwave radio seems as common as an AM/FM portable. Broadcasts are a mix of news, current affairs (local and regional), talk shows and music (local, Australian and international). English language lessons are also extremely popular. There are regular services to Papua New Guinea in Tok Pisin (a Pidgin English form) featuring modern and traditional music of PNG and the Pacific islands; and French language broadcasts to islands such as New Caledonia, Vanuatu, Polynesia, Wallis and Fortuna. There are also English broadcasts around the clock (RA splits it's transmitter network among some 50 frequencies each day, so that different programs can be directed to each area). These provide a comprehensive news and current affairs service, plus a variety of talk programs and interviews, music and of course sport — live coverage of such hallmarks of Australia as the VFL Grand Final, Test cricket and the NSW Rugby League match of the day, taken as feeds from the ABC to be heard around the world.

RADIO AUSTRALIA
1939 - 1989

Radio Australia has an enviable and hard-earned reputation for impartial, accurate and ultimately credible news reporting. It is considered far more so than VoA and other government broadcasters, and — as demonstrated in cases from Fiji to China — in times of crisis it can be one of the few sources of reliable information available to people in that country. If there is any doubt as to the depth and scope of Radio Australia, consider the following regular (at the time of writing) programs: an International Report every even hour, with world and Australian bulletins every odd hour; daily sports results, and Australian Sports World on Saturday; the daily Stock Exchange Report, with Business Horizons each week; plus popular request programs and Window On Australia throughout the week. Listeners tune into these and other favorites with as much ease as you might tune to the weekly Top 40 countdown on your local AM or FM station. As a service, Radio Australia's biggest and most appreciative audience has always been the Asia/Pacific region, and it is to this area that RA is shifting its emphasis. Although listeners in Africa, Europe and North America can still enjoy adequate and in some cases exceptional signals, they are well served by international broadcasters and have never been RA's top priority. With this in mind, RA has devised an entirely new program schedule designed to serve this audience like no other broadcaster. It is as innovative as it is exciting, and truly recognises the unique regional role of RA. Each transmission day has been divided into two 12-hour portions. The first slot commences at 4am EST, which further east to the Cook Islands is equivalent to breakfast radio — say, 7am local time. This program is a general broadcast of music, news and information, and continues through the day, and as morning slowly beaks in Fiji, Australia and India. By this time it is now early evening back in the Cook Islands, and so commences the second half of RA's programming day — dedicated to regular programs and features at this convenient listening time. Once again, these programs are beamed to local audiences as night marches west. And so new times are ahead for Radio Australia. There is more than the new schedule and the direction it represents. There is new blood — Peter Barnett, Director of RA for the past 10 years, has retired and has been replaced by new General Manager Richard Broinowski, a career diplomat who praises Radio Australia as "one of the world's most respected shortwave broadcasters.....the most authoritative in the Asia-Pacific region".

David Flynn reviews a . . . .

SELECTION OF UHF ANTENNAS



You've only got to glance through the adverts in any issue of CBA to see the variety of 477 MHz antennae we have to choose from. Many are really much of a muchness — there seems no end to the number of unity gain or 4.5 dB mobiles, and six or nine dB base aerials are without end. But there are a few that stand out from this crowd, by virtue of the special applications for which they are designed. Some are old favorites on the band, others newer arrivals — and if you are on the lookout for a UHF antenna, maybe one of these is just what you are after.....

'Megablaster' Mobile Whip

Not the world's most subtle name, to be sure, however Mobile One's newest UHF antenna isn't exactly a wallflower. In fact, as an American friend put it, "it looks a real signal kickin' mother". So much for subtlety!

Before we get too much further in this report, a word on gain figures and radiation patterns is appropriate. Without going into boring detail it is sufficient to be aware that for an omnidirectional antenna, low gain means a high angle of radiation - signal going upwards, as it were - while a higher gain puts more signal along the ground path. An over-simplification perhaps, but it will do for the moment.

So a unity or low gain antenna with a high angle of radiation is ideal for accessing repeaters mounted atop mountains and buildings, but does lose something on the simplex range along flat ground. Wind up the gain and you'll get an extended ground path but perhaps experience flutter and limited range with repeaters.

The Megablaster fits into the category of high-gain and thus long-range UHF whips, using three-phased loading sections to provide a quoted 6 dB gain rated at up to 50 watts. It benefits from an extremely rugged base, which adds to the beefy and almost 27 meg-like appeal of the antenna. Mobile One also claims the whip to be ideal for UHF scanners, with a wideband coverage of 450 - 500 MHz. Our resident scanner expert Russell Bryant hooked up the Megablaster to his ever-increasing array of mobile and base scanners, and found himself in agreement — it works very well as either a 477 MHz mobile or a UHF scanner antenna, which is something to bear in mind if you want one antenna to do the two jobs.

Price: around $60.

From: Most Mobile One dealers, including Delta Base and Time Plus.

AE-409 6dB/9 dB Mobile Whip

Electrophone's AE-409 mobile whip has been a favorite for many years now, offering excellent build quality with a choice of 6db or 9dB performance (although we suspect this figure is dBi, not dBb) as required by the user. Both configurations use a stainless steel whip mounted on a very substantial base. The whip is inserted into a collar which locks solidly into upright position, or can be loosened to allow the antenna to fold down and avoid obstacles — just remember to put it up again before you start transmitting!

The collar, in turn, mounts the base through the rather unusual use of an SO-259 (female socket for the PL-259 plug), so you can't use the base for any other whip without a special adaptor. And even then it has to use the Japanese-pitched thread of the AE-409, not the wider European thread. The co- ax is solidly sealed into the mount, a robust approach which would however prove bothersome if the cable needed to be replaced at the base.

The AE-409 is supplied with two sets of whips. The 6 dB element is ideal for use in the city and suburbs, where a combination of simplex and repeater operation would be required. Being 80cm in length it is also convenient where the low roofs of parking stations and garages may be a problem. Once on the open road or in the country, the whip can be replaced with the longer (1.3 metre) 9 dB section for maximum range — although at speed there is a degree of bending in the whip which will distort the radiation pattern out. The 9 dB radiator has two loading coils which are dark blue, the 6 dB element using a single black coil — the color-coding is a safeguard against getting the very different sections mixed up.

Being groundplane independent, the AE-409 can be mounted on any surface, a factor which has made them popular with 4WDs and trucks with fibreglass roofs. It is supplied with three metres of co-ax ending in a PL-259 plug.

Price: around $90.

From: All Electrophone agents, including Andrews Communications, Captain Communications and Powerband Communications.

Faze 3 Mobile Whip

Here's the antenna which the irreplaceable Max Short, from Exeter Antennas, says, " is farmer proof, truckie proof — everybody proof!"

Max developed the Faze 3 as a tough all-rounder. Like all Exeter aerials the Faze 3 employs a spaced wire winding on a hollow fibreglass rod, an approach which reduces weight and loading but encourages flexibility and therefore strength.

The last two qualities are further enhanced through the addition of a thick spring mount at the antenna base — after all, if an antenna can't bend at the base it will do so elsewhere along its length, and possibly break into the bargain. The 6 cm spring goes a long way towards making the Faze 3 into an aerial that can take a battering and keep you on the air.

When asked of the Faze 3's gain figure, Max will generally say, "it's bloody good ", which translates to an estimated 5 dB — a fair combination of low-angle for distance and high-angle for hilly terrain or working repeaters. It

also comes with a small metal fitting which can act as a groundplane, so the aerial can be mounted almost anywhere. At just over a metre in length it isn't likely to get in the way too often and as such represents a good balance between the practicality of size and the necessity of gain.

There's not much more to be said about the Faze 3 - it really is one of those aerials which will get up there and do the job right in almost any circumstance, but without breaking the bank. **Price:** around $40.

From: Most CB retailers, including Argent Communications, Captain Communications, Jensen Electronics and Just Communications.

Larsen 'Kulglass' On-glass Whip

Modern cars can be very nice, but they do have one drawback for the die-hard radio enthusiast.....rain gutters and drip rails, although useful for antenna mounting, have almost entirely vanished — sacrificed to the gods of streamlining and looks. And if you aren't keen on drilling holes in your new car then until now the second-best option was a trunk or boot-lip mount.

This is the situation in which I recently found myself — but with the added twist that my new car was a convertible on which most mounting points either folded down or came off! (Our editor remembers convertible sports cars, he fanged 'em when he was young and single — around the 17th century, I think!).

Solution — the Larsen 'Kulglass' whip (model KG-470) from AP Imports. The concept is simple, and identical to that used for most cellular car phone aerials — two small units mount either side of any glass surface, such as the rear window, and by virtue of inductive coupling pass the signal through the glass. Many early on-glass 477 MHz antenna left most of the signal somewhere in the glass itself, but things seem to have improved since then and on-glass whips are now a true alternative to the conventionally-mounted unity gain antenna. And the pose value from it's similarity to a cellular aerial is not to be overlooked!

The only catch is that on-glass whips are only a half-wave with unity-gain (or 2.4 dBi, depending on how you look at it). If you want anything more then you'll have to settle for a conventional antenna. But the unique and easy mounting arrangment, low profile and ground-independence are the answers to many a troublesome installation.

The Kul-glass exhibits Larsen's usual high standards. The pre-tuned 30cm whip consists of a high-tensile strength stainless steel rod with separate nickel and copper coatings, finished with a thin layer of black protective compound. This inert coating protects against corrosion and adds to the visual appeal of the antenna, without impeding the whip's performance. The antenna is supplid with five metres of Belden RG-58/U co-ax, terminated in your choice of Amphenol PL-259 or N-type plugs - quality from start to finish.

Price: around $140.

From: Selected dealers (including South Pacific Radio) or AP Imports, ph (02) 829 1555.

'Swordfish' Yagi Beam

Need a hand getting out of that RF-proof 'black hole' you live in? Trying to crack an out-of-town repeater? Or simply after some extra punch for your signal?

Then here's the newest and one of the most powerful UHF beams on the market — the 'Swordfish', designed and built for Argent Communications. "The cutting edge", the adverts say, and the 20 element Swordfish certainly does give you an edge.....a 20-element edge, with a massive 18 dBi (estimated 15.5 dBd) gain. That adds up to an effective 300 watt output from your standard 5 watt UHF rig. But, unlike a linear amplifier, a beam antenna is totally legal — and at $199 the Swordfish is a fraction of the price of a linear, too.

The Swordfish has the advantages of all directional antenna — this is not only a matter of increased signal strength, but also the reduction of interference from other stations outside the tight beam path. If you only wish to pump your signal in one direction, then simply leave the Yagi fixed in place — otherwise, you'll need a rotator to get it turning towards the desired station. However, the small wavelength of UHF CB compared to 27 MHz means that even a 20-element beam such as this is is a not-unmanageable four metres in length, and can be driven on a lightweight (around 100kg-cm/min turning torque) rotator.

Technically, the Swordfish's 20 elements are derived from a single reflector, a folded dipole for the driven element, and 18 directors. The balun is encased in a well sealed plastic section inside the dipole, so it is weatherproof and, say Argent, "bird-proof". It is mounted through the centre using a supplied stand-off, and uses an N-type fitting for co-ax cable.

This beam has been clearly designed with maximum quality in mind — the workmanship is excellent.

Price: $199.

From: Argent Communicatios.

Larsen 'Kulduckie' Handheld Whip

For owners of a 477 MHz handheld then the best way to improve performance is with a decent antenna. Let's face it, the quarter-wave whip supplied with most handhelds is barely adequate for the task at hand, but easily improved upon.

It's a lot like the tyres on a new car. The standard-issue rubber on most cars will do the job, but the difference a set of high-performance tyres can make is staggering. That said, the Michellin of the handheld antenna world is Larsen. You must have read our man Fewster's raves about Larsen from time to time, and not without reason — they are simply the best money can buy.

The UHF CB Kulduckie (officially known as KD14-450-HW) is a half-wave constructed from a flexible steel core with brass-wound cable. And flexible it certainly is — this 40cm whip is undoubtedly the rubberiest 'rubber duckie' I've ever encountered, and it's not about to fall apart after a bit of tough treatment. The whip is mounted atop a solid polycarbonate section which houses an impedance transformer, to provide a match to your handheld's 50 ohm antenna socket via a BNC connecter.

The Kulduckie clearly out-performs all similar handheld whips — signals are clearer and less subject to drop-out with the handheld used 'on the go'. Sure it's not cheap, but where's the sense in paying upwards of $500 for a handheld and then skimping on the antenna? You get what you pay for, and even at $85 Larsen's Kul-Duckie must be the best value UHF accessory on the market.

Price: around $85

From: Selected dealers (including South Pacific Radio) or AP Imports, ph (02) 829 1555. ends

Power Band's PB-60 SYSTEM

This antenna is similar in many respects to the Electrophone offering but has its own variations on a theme. The 'SYSTEM' also has two gain ratings — namely 6dB and unity gain as a ground independent dipole style. The high gain fibreglass whip is interchangeable with the shorter, stainless steel half wave whip.

The PB-60 uses the same SO-239 type mounting base as the AE-409 but the cabe is not crimped-in so it can be changed if need be.

The whips are directly connected to earth inside the solid loading section to prevent the build up of static electricity especially in hot dry weather. This prevents possible damage to your rig from potential high static voltages.

The high gain whip is fairly rigid — POWER BAND claims this reduces mobile flutter over the more flexible whips and also keeps the transmitted signals fully vertically polarised — "The way they are supposed to be," said a spokesman for POWER BAND.

This antenna can also be mounted on a non-grounded surface — like the AE-409 it doesn't care one way or another.

The product seems to be rugged and well made as we have come to expect from this manufacturer.

As with the Electrophone antenna, the POWER BAND PB-60 SYSTEM offers two levels of performance in the one attractive package.

Price: Approx $60

DX INTERNATIONAL

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

It may still be too early to make any assurance with regard to improved propagation paths on 11 metres, after all the year is still only a pup or so to speak. We have a long way to go yet before we start passing judgement on band conditions. So far the year has failed to show any drastic signs of improvement, actually conditions here in eastern Australia have deteriorated to Africa and the Indian Ocean areas.

One encouraging sign is the slow but gradual increase in the number of stations appearing from the Soviet Union, perhaps the fruits of glasnost and perastroika are spreading to the 11 metre band. Let's hope this is a sign of more to come, not only from the Soviet Union but, also, from a more politically free Eastern Europe. It will no doubt give many of us a chance to pick up some much-needed new countries from that region. After all there are 18 DXCC countries alone which make up the Soviet Union without counting the Eastern European countries.

There has been a noticeable increase in the number of DXers chasing FM mode contacts on the band, perhaps a sign of the times. With more and more new radios having the FM mode as standard, we will no doubt see an increase in this mode of communication. Just after Christmas I eavesdropped on an FM mode contact between New Zealand and Denmark with reasonable signal reports being exchanged.

Along with the growing number of FM contacts there are several enthusiasts CW (Morse Code) on 11 metres, much to the annoyance of those who do not appreciate this mode of communication. I have heard some quite good code being sent, mainly from Europe and Japan which in turn assures me that some people out there are still willing to experiment with other modes rather than SSB.

A rumor circulated late last year that the Italian headquarters of the Alpha Tango DX Group in Asti was raided by Italian authorities. At the moment I have nothing concrete on this rumor but it is well known that some countries have written letters to Italy protesting about the Alpha Tango Group and its out-of-band activities on 11 metres. (CBA November/December 1989, page 19) with Australia included amongst the complainants. It is well known that the Alpha Tango Group has swelled in membership in the past two years and its activities are causing concern in some countries where CB radio, let alone out-of-band operation, is not permitted.

AFRICAN & INDIAN OCEAN REGIONS

Poor band conditions to this area have meant little if any signals are being heard, although I did manage to pick up a station signing as the 102 from the Seychelles Islands at 0333z with a poor five by two signal.

A reasonable signal was logged from Paul, who signs as the IO-002 from Re Union Island, at 0455z. Paul was five by five but fading heavily and at times was hard to understand due to an overdriven radio.

A rather poor signal was heard from Mayotte Island by way of station MEGA-219. He was logged at 0717z with a four by one report but, speaking only French, failed to arouse much attention from this region although a couple of New Caledonian stations replied.

The SAFARI-69, operated by Colin, was logged at 0829z with a poor four by two report. Colin was in the tiny South African territory of Walvis Bay in Namibia, South West Africa. There have been moves in the past to declare Walvis Bay a new DXCC country and a decision is expected from the DXAC regarding Walvis Bay anytime now. So it may be worth keeping an eye on any activity heard from Walvis Bay as it could end up being a new DXCC country.

Cards promised to regular contacts by way of Ken, who signed as the 44 from the MacDonald Institute, have still failed to materialise raising questions as to whether this one may have been a slim, only time will tell.

Beware of a station signing as HI-0 supposedly on Heard Island. There have been some strong points indicating this one is a slim and his location is Western Australia and not Heard Island. He was logged here at 2355z with a good five by six report and had no shortage of would-be contacts.

MIDDLE EAST & ARABIA

Band conditions to this region haven't been all that great with signals nice and strong one minute and then gone the next. Regular stations out of Lebanon and Israel have been about, sometimes mixed up in the hurly-burly of Western Europe.

I find the best time to look for this region is from 0330z onwards before the Europeans start to filter through. At 0440z a rather good signal from Kuwait was noted by way of 1-KA-90, name unknown. He was a good five by five at the time and was looking for contacts in the Pacific Islands.

A number of European stations were noted at 1151z calling a 48-AT station in Saudi Arabia. His signal was too poor to be of any use here as Indonesian AM stations were generating too much noise at the time.

Quite a lot of noise was noted on the band at 1320z with a throng of Italian stations calling Libya. As they were calling in Italian I presume the operator was an Italian in Libya but there was so much noise I failed to hear any trace of the station concerned.

EUROPE

Activity from the USSR has been noted by way of 50-AT-103 operated by Alex. He was heard at 1230z with a five by three report but it was not clear as to which part of the USSR that Alex is located. I understand that Alex is also 50-SR-101 and his QSL Manager is Ed, the 19-AT-369 in Holland.

Also from the USSR was Max, who was signing as the AN-1-IS from Moscow. Max was logged at 1045z with a steady five by five report. There was quite a pile-up of stations wishing to work him and the noise

A much sought after card from Alden, the 132-AT-101 from Majuro in the Marshall Islands. Alden gave many an opportunity to secure this one.

was so bad at times it was almost impossible to hear him.

Greenland was noted on the band at 0112z by way of Hans, who was signing as the DELTA MIKE. Hans was a good solid five by six at times and his signal held quite well for over one hour. Hans seemed to be favoring stations in the USA and Canada and was giving them five by nine plus reports but I failed to hear him work anyone in this region. Let's hope we hear a little more of Hans as there are quite a few people about who need Greenland on the band.

Scandinavia has been coming in quite well from time to time with the usual five by nine plus signals. An interestig one was RADIO DELTA KILO operated by Danny in Denmark. Danny was a massive five by nine plus 30 at 0856z with the signal holding quite well. Also noted from Denmark was Carsten, who signs as 47-AT-132. His signal from Regstrup in Denmark was five by nine plus 10 at 0902z. The band was still open to Denmark at 1150z with the 47-AT-144 operated by Janick being a reasonable five by five at the time.

Iceland was noted at 1356z by way of Frederick, who signs as the 555. Although his signal was a poor four by one here, he was getting five by nine reports from France and Italy at the time. Frederick uses a ground plane antenna with a Cobra 148 GTL radio from a town called Keflavik on the southern end of the island, just south of the capital.

Cyprus has been about the band as usual, with regular DXer John, who signs as the 110-AT-177, being noted at 0549z with a five by three report. He had no shortage of takers to his call and at times he peaked five by seven.

Popular Hungarian DXer George, the 109-AT-108, was logged at 1037z with a rather healthy five by six to seven report. At the time George was having trouble hearing a chap in New Zealand desperate for the contact as noise from fellow Europeans made things difficult.

At 1058z a number of Indonesian stations were heard calling an unidentified station in Romania. Although I couldn't hear the station in question here I do not doubt his existence as a number of Europeans have Romania confirmed by way of QSL cards.

Some big signals as usual have been coming from the United Kingdom and Ireland. At 0850z, the IS-415 operated by John, was heard with a good five by nine report, and he was closely followed by 29-Shamrock International-231, operated by Henry in the Republic of Ireland. Henry was also five by nine at 0918z.

One of the strongest signals out of the United Kingdom would have to belong to Jon in Scunthorpe, England. He signs as the 26-WW-908 and was noted on the band at 0910z with a five by nine plus 10 report. Jon uses a President Lincoln along with some other odds and ends into an impressive seven element beam antenna. Anyway, Jon's QSL card says it all!

Ivo, the 16-AT-136 from Hever, in Belgium, was creating quite a noise on the band at 1120z with a massive 40DB over nine signal. He virtually flattened all the other Europeans at the time and had no shortage of replies to his calls. He was still five by nine plus 10DB at 1240z.

Quite a number of Greek stations have been about the band at the usual times, although they seem to come in a little earlier than most of the other Europeans. Xenefon, the 18-AT-104, was heard at 0440z with a fair five by four report and as usual Tolis, the 59-AT-101 on Rhodes Island, wasn't far away with a good five by eight report at 0456z.

Popular Washington State DXer Ian, the 2-AT-415 is always happy to talk with those in the Pacific region and is quite active.

CENTRAL/SOUTH AMERICA & THE CARIBBEAN

A rare one doing the rounds recently was Bobby, who signs as 12-FE-11 from the island of Saint Lucia in the Caribbean. Bobby was logged at 0131z with a poor four by two signal report but managed to secure a couple of contacts into the Pacific region. Bobby lives at Vieux Point on St Lucia island.

I have received some reports that there is some activity from Trinidade and Martin Vaz Islands off the east coast of South America. One station is said to be using a 290-AT callsign, but as past experience has shown there have been a number of slims in Brazil reportedly conning people with hoax calls stating they are on Martin Vaz or Trinidade Island.

Noted at 0456z was station HB-002 operated by George from Hamilton, Bermuda. George was four by one at the time and was having trouble making it into the Pacific region due to poor band conditions.

An interesting station I monitored was ALIES, operated by Celso in the city of San Salvador, El Salvador. At the time heavy fighting was taking place in the capital and it was possible to hear rifle fire in the background. Celso was heard at 0415z with a five by nine report. I know one thing, he sure had a lot of guts operating the radio whilst the fighting was going on in his street.

Guatemala is still about the band by way of 72-AT-109. The station is run by Joege and at 2154z was a five by five report. He didn't seem to receive much response form his calls which suggests that most DXers have this one confirmed by now.

A good strong signal was heard from Raul, the 37-AT-108 in Santo Domingo, the capital of the Dominican Republic. Raul was five by nine plus 10DB at 0455z and had quite a number of stations chasing him.

There has been plenty of activity from Colombia recently with Jose, the CR-009, being most active from the city of Cali. Jose was five by nine at 0132z and was heard calling a station on Easter Island, who I could not hear at all.

As usual plenty of signals can be heard from Panama and Costa Rica along with the regulars from Brazil, Ecuador, Chile, Paraguay and Suriname. The band has been quite poor to Argentina and Uruguay with very poor signals being heard. There have been reports of a station operating from the Falkland Islands but at the present time nothing has been heard here. No doubt there will be a few needing the Falklands.

NORTH AMERICA

A surprise from this region was the appearance of 141-AT-105, name unknown. He was logged at 2159z with a four by zero report from Saint Pierre and Miquelon Islands, a much needed one on 11 metres.

Saint George Island in Alaska was noted by way of Larry, the 2897. He was a good five by six report at 0119z and had plenty of callers wishing to make the contact.

Quite a number of Canadian stations are about with Bob, the DB-68, leading the way at 0124z with a good five by nine report from his home in British Colombia. He was closely followed by Jerry, the 9-AT-105 in Alberta, who at 0143z was a good five by five signal report.

ASIA & THE PACIFIC REGION

A much-welcomed new one appeared on the band by way of Serges, who was signing as the 303-SR-01 from the Russian island of Sakhalin, once a well known place associated with the training of KGB agents. Cold showers and 100 kilometre runs was the rigorous training protocol adhered to. Serges was logged at 2340z with a good five by six report and had no hesitation in giving his QSL information over the air. He was heard on the band quite a few times and often had quite a pile-up of stations to deal with. No, I didn't find out if he was there training for the KGB! But let's hope a QSL card is forthcoming from his Sakhalin Island QSL address.

A station using the call RADIO EASTER ISLAND has been heard on odd occasions. I last logged the station at 0345z with a

Uruguay is still a hard country to secure here in Australia due to poor propagation and not through the lack of operators. Gustavo, the 12-AT-159 is very active on the band.

miserable four by zero report, but this didn't stop hordes of Japanese DXers from calling him. Perhaps they were receiving him a lot better than I was, although none of them managed to secure the contact.

In case you are wondering as to the validity of 276-KI-02 operated by Chicka on Funafuti Atoll, in Tuvalu, well, I can assure you that he is the real McCoy. Chicka is using my old station but you will have to be quick as he is sitting for the amateur licence in late January and will thus move on to greener pastures so to speak, and will no longer be active on the 11 metre band. Good luck with the CW Chicka, I am sure you will pass.

The Marshall Islands has been about the band again, this time by way of Troy, who

A man we owe a lot of thanks to is Sture, the 212-AT-105 from Aland Island. Sture was part of the team that activated 213-AT-0 DXpedition to Market Reef on 22 and 23 July 1989.

signs as KWA-01 from the US Army base on Kwajalein Atoll. Troy was logged at 0210z with a good five by six report. He works on the Kwajalein Missile Range as a Communications Officer and will be there for another seven months before returning to the States.

There is still plenty of activity from Truk Island, in the Eastern Caroline Group by way of KO-583, name unknown. He was a good five by seven peaking nine at times here at 0400z. I must stress that you will have to be very patient with this station as his English is not very good but he does try very hard for his contacts, so how about giving him a fair go? I also tried some Marshallese with little luck.

The Hawaiian Islands has been plentiful on the band with a variety of regulars to choose from. One good signal belongs to HI-135 operated by Rob on Kauai Island. Rob was five by nine plus 10DB at 0730z and was followed by HOTEL-6, also in Hawaii, who was busy chasing Phil on Christmas Island in Eastern Kiribati.

Tonga has been coming in well of late with popular local John, who is the 96-AT-101. Coming in at 0840z with a five by nine plus 20DB, John was doing an excellent job whilst the band was at its peak. However some days later, whilst I was in Fiji, I failed to secure him too well as the islands are too close together for ionospheric propagation and too far apart for groundwave.

Hong Kong is still about for the taking with the usual "CB" group being most active. At 0415z I heard CB-7 operated by Bansan, who was five by six, at the time trying to work KO-583 in Truk. He was accompanied by CB-12 also in Hong Kong.

A new station from Taiwan has been heard by way of BV-2-T, operated by Tony. He was logged at 0259z with a five by five report and was chasing after a station in South Korea. Earlier in the morning I heard Rainer, the 155-AT-101, at 2204z with a good five by eight report from Keelung in Taiwan.

Those of you who worked the KB-100 operated by Paul, who was supposed to have been in Papua New Guinea around the Port Moresby area, can forget about a QSL card materialising. It seems that Mr Paul was sprung by a prominent Darwin DXer operating from a mobile home on the outskirts of Darwin and was caught red-handed with mike in hand giving his Queensland QSL address over the air whilst requesting one dollar for return postage. You can kiss the dollar goodbye as well as the card from PNG. As for Paul, I believe he is now the proud owner of two rather black eyes and a rather mangled nine foot stainless steel whip.

DXPEDITION NEWS

Not a great deal in this department at the moment, but some news is better than nothing. The Brunei DXpedition, signing as 225-AT-DX, failed to appear on schedule over the period 24 and 25 of November, 1989. I didn't think this one was a sure thing. Perhaps I didn't hear it and you did, I know my regular scribes failed to hear it too so I don't think it took place.

A DXpedition to Rodriguez Island (near Re Union) in the Indian Ocean appeared giving many of us the unique opportunity to pick up this most wanted country. I noted it on the 2nd and 3rd of December, 1989, signing as 257-SR-0 and had quite a pile-up at the time. QSL cards go via 1-SR-01, Nimo in Italy. Of course return postage is a must with a green stamp doing the job.

A DXpedition to Eastern Germany appeared on the band by way of 13-AT-000/46-AT, and was logged at 1100z on 29 December, 1989, with a five by three report. Three operators were involved — they being Mike, Ralph and Ken. They were operating mobile at the time and cards go to 13-AT-000 Club address in Roth, West Germany, along with a couple of IRCs or a green stamp of course.

A planned activation of Laeso Island, near Denmark, is due to take place from 22 April, 1990, through to 5 March 1991. The group will be signing as 47-E-0. Those with a reasonable atlas should be able to pin-point Laeso Island. It is good for some IOTA points, QSL arrangements at present are unknown.

Those still looking for Nauru Island may take some time in the period of 17 February through to 21 February. There is a possibility of 271-NI-01 appearing on air around the usual traps, although a possible change in airline schedules may see a slight variation in the dates of operation if any. Nothing is promised at the moment.

If you still need Western Kiribati, then 224-KI-01 will be about in late February through to the end of March around the various traps. Cards go to the address used in the past operations.

Well, that's the first DX International for 1990 out of the way. As usual thanks to all who have provided me with updates and news. 73 Jack.

Ken Reynolds reviews . . .

NEW ELECTROPHONE TX-826

. . . . good value at around $135

If you think the new GME TX-826 40 channel, AM only CB transceiver looks familiar...well, you're absolutely right. The styling, shape, coloring and even the weight is almost a replica of the very successful TX-525 and TX-526 rigs of recent history.

The earlier models date back prior to the big Australian dollar devaluation in the early 1980s when we were big importers of "cheap", high quality Japanese electronic equipment. With the shift in world economics it quickly became evident that the super strength of the Nippon currency would force up our buying prices to a point where importation of some equipment, especially with high levels of Oz import duty, would no longer be an economic proposition. Like most other CB radio importers, the GME people were forced to look elsewhere to source their goods. At this point the well entrenched TX-526 was replaced with a model imported from Korea - the TX-820.

The new TX-826 is not manufactured in Japan either. However, the Korean manufacturing ability has advanced so quickly, in the last few years, that it is now difficult to pick the difference between the quality of the new rigs from the old series transceivers.

The TX-826 employs the same chocolate brown case and champagne, satin-toned front panel as the 526 model and even the controls are set out similarly with the same knobs and channel display.

GME has incorporated a couple of new features in this rig — one that is definitely an improvement and the other is interesting to say the least.

The former is the removal of the familiar SO-239 antenna connector from the back panel to where it now becomes a line connector at the end of a 20cm "flying lead" that exits the rear panel via a small, almost flush-right angle fitting. The power cable has similar treatment with the connector at the end of a short lead. The reason for this may not be obvious until the owner tries to install the unit into a cramped space where there is insufficient depth to accommodate aerial and power connectors projecting an extra 5cm behind the radio - then you appreciate the design. In fact, the transceiver can be mounted with the rear panel almost flush up against a bulkhead thus saving considerable space and perhaps allowing installation of the unit in an unexpectedly small "spot".

The latter addition is the clever use of one control to perform two entirely different functions - the SQuelch knob also doubles as an RF gain control with its function changed back and forth by a single, locking pressbutton switch on the front panel. A red or green LED beside the switch indicates which control function has been activated - SQUELCH or RF GAIN.

There is nothing unusual about the SQuelch function , and, when selected, the minimum setting or threshold will operate the speaker for a signal level of about 0.2 micro volts. The maximum or "Tight" setting for the SQuelch needs a signal of around 400 micro volts to "open" the circuit.

The RF GAIN function on the other hand is different to say the least. It is the only RF gain control I have ever encountered that operates in reverse... unless, all the others are back-to-front and this one is OK. It really doesn't make much difference so long as you remember to turn the control fully anti-clockwise to get maximum sensitivity from the receiver. An operator not familiar with the rig could easily "goof-up". The maximum RF attenuation on the test rig was 28dB on the minimum setting.

The receiver sensitivity is about 0.6 micro volts for 12dB SINAD and it is a double conversion, super-heterodyne design offering best rejection characteristics for unwanted signals, but, like most similar rigs it isn't all that brilliant at rejecting adjacent channel signals if they are strong enough.

GME has incorporated its now familiar channel 8 priority function on this model with the function accessed via a locking pressbutton switch on the microphone case. With the function activated, the dial switch channel selection is ignored and the channel takes priority over everything else. Restoring the switch to normal returns the original channel to the display window.

The transmitter RF output on the test rig was 3.6 watts for a test voltage of 13.8 volts. Transmitted audio is good and the modulation easily peaks to 100 per cent with average speech producing 70 to 85 per cent modulation. The Automatic Level Control works well and generally prevents large excursions of over modulation.

The physical construction of the TX-826 is good with a strong steel subframe and pressed-steel covers. The main circuit board is firmly fixed in place, however, there is room for improvement in the way the components are inserted into the board and the soldering on our test rig was a bit shabby in spots. This is probably explained by the fact that our test rig arrived before the main production quantity.

The channel display is no where near bright enough and as with many other rigs it becomes very difficult to read in most daylight conditions.

SUMMARY

The TX-826 is a neat, strong little AM only rig styled strongly on the lines of the now extinct TX-526 transceiver which was made in Japan - the 826 is of Korean manufacture and internally the two radios are quite different.

Performance and construction are quite good but I would like to see a bit more attention given to component insertion on the main circuit board.

The TX-826 includes some good, new ideas and as a compact AM only CB transceiver it looks like quite good value priced at around $135.

GE'S NEW LOOK FOR THE NINETIES

Ken Reynolds checks out the S-5827A AM rig and decides that it represents good value for those wanting more than just a 'cheapie'.

It looks like all the manufacturers have been working on new models to mark their entrances into the 90's, and the GE company is no different.

GE offers a choice of two new AM-only transceivers that directly replace their now dated predecessors. This is the story of the 3-5827A. Now there's an imaginative new name for you. It beats me why they don't think up something a bit more catchy.

While the radio's designation might be a bit old hat, the actual transceiver is quite innovative from its new style case to the unusual channel selection method.

CB radio transceivers are, for some reason, what you might call the last frontier in the electronics industry to stave off the march of progress in the swing to plastics. The pioneering PHILIPS FM-320 after a decade or so is still the subject of much criticism for its use of a plastic case instead of the traditional steel box.

Plastics in the electronics industry have been the designers' "dream" medium for more than 20 years, and, it is a mystery to me why the CB radio area has been ignored for so long.

In a daring departure from previous CB models, GE has chosen to use an all- plastic case for the 3-5827A model....in fact the only metal visible on the whole rig is the antenna connector on the back panel and two little metal circles for the PA speaker and EXTension speaker sockets.

The case is predominantly grey with the front panel colored somewhere between dark chocolate brown and black which is highlighted with splashes of brilliant orange and silver control designations....quite a striking design that would be difficult to produce in steel.

Volume and Squelch controls occupy the left-hand portion of the front panel with a four segment LED "Signal strength/Power meter" combination and digital channel display, with the channel selector on the far-right hand side of the panel. On the lower right-hand side is a row of four pressbuttons that are from left to right: PA (public address), DX/LOCAL (RF gain), NB (Noise Blanker) and finally the red CH9 priority switch which, when activated, causes the channel display to flash.

Disappointingly, the old 5 pin DIN microphone connectors have been retained in the "dangling hang-dog" style of a previous model.

Operator comfort has been improved over previous models with the inclusion of back-lit controls for night operation and a great improvement for daylight hours being the addition of high intensity digital LED displays for the channel indicator.

The Signal strength meter is a bit tricky. It appears at first sight to have 8 LED segment resolution, however, only four stages of illumination are present....'S'1 equals a signal strength of 1.75 micro-volts, 'S'5 equals 3.7, 'S'9 equals 9 and 'S'30+ equals 75 micro-volts — quite a good level range for this type of indicator. The power indicator is of average accuracy provided the antenna matching is close to correct.

The SQuelch threshold can be easily set to open at about 0.4 micro-volt received-signal strength and with the control turned fully clockwise our tests showed that a huge signal of 900 micro-volts was needed to activate the speaker. The SQuelch showed only minimal signs of "hysteresis" - the term used to describe the length of time the SQuelch remains "open" after the signal is reduced in strength or disappears.

Receiver sensitivity is about average, registering 0.4 micro-volts for the 12dB SINAD figure we often refer to in these reviews.

For those unfamiliar with the SINAD term, here's a quickie explanation.

SINAD is an anogram of several features in combination which are exhibited by the radio receiver and how well it processes the received signal...SIgnal to Noise And Distortion. In other words, it compares the strength of a weak signal with the background noise present in the receiver and the amount of distortion when all three components are measured at the speaker terminals of the radio. So, the smaller the microvolt figure in this specification, the more sensitive and useful is the receiver's performance....as a general rule.

GE uses the double conversion principle in the receiver, which improves its immunity to out-of-band signals and rubbish so common with the 27MHz band.

An RF gain control appears in the form of a LOCAL/DX switch and when set to the LX condition the received signals are attenuated by 24dB in our test rig.

The noise-blanker operation was very good and handled most types of noise well except for the usual "gunk" that appears immune to everything but the rig's on/off switch.

Changing channels is different! In the photo the channel change switch appears to be small but otherwise quite normal. In fact it is not the usual rotary 40 position switch but a combination of the rotary idea blended with the now common up/down pressbutton idea used in many recent rigs. The control can rotate about one eighth of a turn in either direction - to the left is down-stepping and to the right increases the channel number. The switch has quite a strong spring detent action which "snaps" quickly back to its centre resting position. It is quite easy to use however, and the channel "stepping" rate

is as good as I have seen up to date, i.e., the step speed is fast enough not to frustrate the operator but controllable enough to accurately stop on the desired channel without repeatedly overshooting the mark. The associated High Intensity LED displays are a great addition and should be fitted to all rigs. Apart from the PHILIPS FM-620 (which is not a competitor in this market) I can't remember ever seeing another AM rig that even approaches the brilliance of this new GE model channel display.

Before we look at the transmitter performance, the microphone supplied with the 3-5827A is worth a moment's discussion. Apart from the obvious styling departure (see photo) which incidentally makes the mike quite comfortable to use, GE has fitted the case with an ELECTRET-style insert instead of the usual "lumbering" old dynamic-type transducer that usually weighs more than the mike case. The result is a small, light fist microphone that is easy to use and has excellent voice reproduction.

The transmitter output power on our test rig was 4.2 watts RMS - just a tad over the limit - and after the usual five minute test transmission at 13.8 volts supply voltage, the output had faded slightly to 4 watts and there was some sign of internal warmth seeping through the plastic case.

The transmitted signal is excellent for an AM CB rig and it is a breeze to talk the modulation up to 100 per cent - in fact so anxious was the 3-5827A to show its enthusiasm, it tended with ease to overmodulate. While this is technically not a good point, those operators who like plenty of "bite" in their transmissions (and isn't that everybody) might find they don't need a "power mike" after all.

NOW GET THIS....

The 3-5827A has got RF output transistor protection. While I don't recommend readers to transmit on any rig without a proper load/antenna, this new GE set has taken "axe" out of accident by allowing for the fact that most operators will one day have an antenna cable or connector problem not to mention the occasion when....Arrgg..@!*%$&, I forgot to plug in the aerial!

Internally the rig is well manufactured with a steel sub-frame to support the main circuit board and the associated hardware. The circuit board is single sided and uses none of the latest "whiz-bang" surface-mounted technology, therefore service access for repairs is good. The components are neatly mounted and all is snug and tidy. The only criticism is a slightly clumsy group of wires that meander their way around the inside of the frame. A few years ago this would have been par for the course, however,

most of the latest CB rigs have all but eliminated the use of discreet wiring and wiring looms. The soldering on our test rig was excellent and there were no "afterthought" components "hanging about" under the main circuit board.

SUMMARY

The GE 3-5827A is a good AM only CB transceiver incorporating plenty of good ideas that have been well combined into a stylish new package.

Overall performance is very good by competitive standards. However, the transmitter tends to over-perform a bit in the modulation department.

This rig represents good value for those wanting more than just a "cheapie".

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BAND SPREAD

FROM DC TO DAYLIGHT

WITH GREG TOWELLS

Welcome to another Bandspread for two months. Remember, this is your column for items of general interest to 27 MHz and UHF operators, as well as any other radio related news that may come up. If you know something worth hearing about, drop me a line to the address at the end of the column and share your information with other readers.

IS ANYONE OUT THERE ?

A number of operators around Australia have mentioned the huge decline in emergency monitors and the service they provide.

This seems to be happening on both 27 MHz and UHF CB and the decline seems to coincide with the rise in the number of dropkicks (or newcomers who don't know better) who persist in using channel 9 on HF and 5/35 UHF for general conversation/ratbag use.

I would not envy a monitor for one minute for what is a basically thankless job, putting up time and money listening for hours on end to the rubbish that is heard on emergency channels.

I think, however, that the time is coming when the CB public should know whether an emergency monitoring service still exists, in what areas, and for what times of the day.

These days, far too many CB radios, particularly 27 MHz units, are sold simply on the safety aspect, their proud owners under the impression that a call on channel 9 results in instant help.

How have I come to the conclusion that the CB emergency network has or is dissolving?

Many, many on-air contacts, friends travelling around the state and people around the metro area of Sydney have reported to me no response to frequent calls for assistance on the designated emergency channels, day or night.

What if any of these had been major emergencies?

ALTERNATIVE CHANNELS

In the cases that were, assistance was arranged either on channel 8 on HF (the road channel), the sideband call channels, or by way of the UHF repeaters.

In fact, I doubt that any emergency calls have been acted on using UHF 5, except in areas where dedicated repeaters exist. Occasionally, where a call has been answered, some monitors have been know to tell the caller that his call for assistance did not rate as an "emergency" and therefore should not be on the "emergency channel".

This particular type of response makes me see red...!

I hope to receive a response from the active emergency monitors who are still out there in CB land as I am sure there are still the dedicated few hanging out with their thankless task. So....emergency monitors out there, tell me where you are and some details of what is happening these days.

I wonder whether the Sydney or Melbourne suburban areas are still covered by monitors and when? If you know of areas where monitors are still active, let me know so that I can reassure CB users who bought their radios for safety that they can rely on them. For people requiring assistance then, a few tips.

HINTS ON REPEATER OPERATION

Call first on channel 9 on 27 MHz, or channel 5 on UHF. If there is no response, on 27 MHz, try channel 8 AM, or channel 16 LSB. On UHF, try channel 11, or any repeater in the area (found in the duplex mode between channels 1 to 8). I put in a lot of monitoring hours during the silly season period on both 27 MHz and UHF...and when all that became a bit much I moved onto the amateur bands for a dose of sanity (mainly on HF).

It seems that each new year brings yet another vast group of newcomers onto the CB bands. Unfortunately, most newcomers arrive woefully lacking in the basic knowledge to operate in the first place.

There are several reasons for this lack of know-how.

Firstly, in many cases your friendly retailer is far more interested in getting the new operator to part with the necessary cash than in actually imparting a little knowledge, as in the performance to expect, preferred channel usage, operating procedure, or even how to install the brand new system.

BEEN THERE — DONE THAT

How many times have you been wandering around one of the larger radio stores, and overheard one of the enthusiastic staff rave about how this brand X radio/scanner will enable the user to find out where every police radar unit is set up within that state at any given time, obtain emergency assistance at the snap of the fingers 24 hours a day and communicate around the world when coupled with the fantastic exclusive antenna that said shop also happens to stock?

Further questions from the newcomer are generally met with a "doesn't matter mate", or such fanciful bull that you either wonder who wrote the staffer's script or where the wonderful imagination came from.

Little wonder then that the newcomer gets on air (eventually) and becomes an instant ratbag through sheer frustration when most of the things claimed by the shop are discovered to be impossible to achieve with the radio/scanner or whatever.

Next is the general lack of patience shown by just about everyone on the CB bands, both 27 MHz and UHF, towards the newcomer who is obvious by his lack of operating skill. A newcomer to UHF repeaters, in particular, is invariably "dumped on" when using Sydney repeaters.

One time-out caused by the newcomer seems to be the bait for every power- head on channel to instantly go into ratbag mode and cause havoc on the repeater to the point of making the channel unuseable for an indefinite time.

Little wonder then that the newcomer ends up adding to the overall jamming effect due mainly to a simple lack of operating procedure. For newcomers to UHF repeaters, then, the following suggestions for repeater use (that is if/when you find a repeater whose occupants are willing to let you get a word in) should help a little.

When selecting an active repeater channel (or any active channel for that matter) call breaker and WAIT until called in....this is necessary whether you want to put out a call or simply enter the conversation.

If you are engaging in conversation on a repeater, leave a break between overs so that the repeater can reset....and so that other breakers can be heard.

There are few things in life more frustrating than trying to call "breaker" when the stations using the channel leave virtually no break between overs. Leaving a break between overs also saves people becoming impatient and disrupting the channel.

A break for repeater reset saves the repeater timing out and you being cut off in mid sentence.

STATION I.D. IS IMPORTANT

Identification of your station is an important part of operation on any band, not just CB bands or repeaters. On repeaters, just the three numerals of your callsign will suffice and saves everyone guessing who you are and can aid in other stations calling you into the conversation.

The number of stations just appearing on the repeater with no callsign and no invitation makes life much more difficult and leads to the ratbag element taking over.

A very important part of UHF repeater operation is one which many operators these days tend to forget. Repeaters are limited devices and, particularly during peak useage times, should be used with consideration for other users.

If you are within SIMPLEX range of your contact, pick a clear channel and move off the repeater. This way you leave the repeater clear for users who require the extra distance available only when running DUPLEX through the repeater.

There is no need to use the repeater when stations are within simplex range....especially if you think of the advantages of simplex operation.

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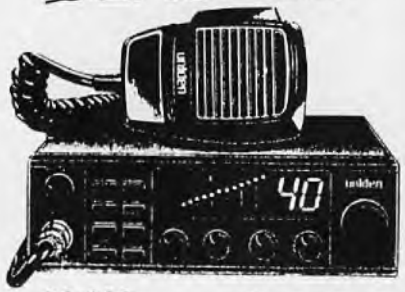

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COMET CM 400 UHF meter.....**$75**
REVEX METERS (UHF).....from **$75**
★ **W570 $299** ★ **W560 $249**
★ **W540 $169** ★ **W520 $149**
★ **W500 $199** ★ **W140 $75**

ELECTROPHONE 27 MHz CBs
ELECTROPHONE TX 840 SSB.....**$249**
ELECTROPHONE TX-830 AM.....**$119**
ELECTROPHONE TX-820 AM.....**$99**
Chirnside Beams in stock
★ **UNIDEN HR-2510** 10m t'cvr.....**$499**
★ **WILSON 1000** Whip.....**$129**

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High-performance HF linear amplifiers
★ **TX-200** 180W output on SSB.....**$179**
★ **TX-2250** 190W, 4 pos, rx amp..**$279**
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★ **1200FXX** Super h/duty rotator...**$999**

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★ **KR-250** Hi-quality, light duty.....**$199**
★ **KR-400** Medium duty.....**$349**
★ **KR-400RC** M.duty round control.**$399**
STATION MASTER, The Original.....**$59**
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AM/FMN/FMW
Super wideband
Handie scanner

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YUPITERU MVT 5000
25-550/
800-1300MHz
AM/FMN

$579 1000ch
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25-550/
830-1300MHz
AM/FMN/FMW

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BC-100XLT 100ch, Lo, Hi, UHF, Air. **$339**
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AUSTRALIAN UHF REPEATER LIST

AREA	CHANNEL
ACT	
Canberra	2-32
Canberra	7-37
New South Wales	
Albury	6-36
Armidale	4-34
Bathurst	8-38
Bega	6-36
Bellbora	1-31
Binya	3-33
Blue Mountains	2-32
Bombala	1-31
Booral	7-37
Bowral	6-36
Brewarrina	1-31
Brindabella Ranges	7-37
Broken Hill	4-34
Broken Hill	7-37
Buladelah	7-37
Casino	6-36
Cobar	8-38
Coffs Harbour	6-36
Coolah	6-36
Cooma	4-34
Coonabarabran	4-34
Corowa	2-32
Corowa	5-35
Corowa	7-37
Deepwater	5-35
Denliquin	3-33
Dungog	3-33
Eden	2-32
Glen Innes	7-37
Grafton	8-38
Grenfell	1-31
Goulburn	4-34
Gundagai	7-37
Guyra	1-31
Harden	1-31
Hay	4-34
Inverell	2-32
Jindabyne	1-31
Junee	5-35
Lismore	2-32
Murrumbidi	3-33
Muswellbrook	4-34
Narrabri	2-32
Narranderra	8-38
Narromine	5-35
Narromine	6-36
Newcastle	1-31
Newcastle	2-32
Newcastle	6-36
Orange 3-33Port Macquarie	2-32
Sydney (south)	1-31
Sydney (west)	3-33
Sydney (outer-west)	4-34
Sydney (north)	7-37
Tamworth	1-31
Tenterfield	3-33
Tumbarumba	3-33
Tumut	6-36
Tweed Heads	4-34
Wagga Wagga	1-31
Wagga Wagga	5-35
Walbundrie	2-32
Walcha	8-38
Warrumbungles	1-31
Wingham	1-31
Wilcannia	1-31
Wollongong	8-38
Northern Territory	
Bushy Park	1-31
Darwin	1-31
Erlunda Station	3-33
Katherine	2-32
Maryvale Station	4-34
Mt Swan	2-32
Queensland	
Amiens	8-38
Atherton	6-36
Ayr	3-33
Barcaldine Downs	1-31
Bathurst Heads	1-31
Biloela	7-37
Brisbane	1-31
Brisbane	5-35
Brisbane	7-37
Bundaberg	1-31
Bundaberg	4-34
Caloundra	6-36
Cairns	3-33
Chinchilla	3-33
Chinchilla	8-38
Clermont	6-36
Clermont	7-37
Crows Nest	6-36
Dimbulah	6-36
Dingo	6-36
Dirranbandi	8-38
Disreah Mine	8-38
Drummond Range	2-32
Emerald	8-38
Gladstone	2-32
Gladstone	6-36
Goondiwindi	4-34
Gunalda Range	2-32
Gympie	3-33
Gympie	5-35
Gympie	7-37
Hayman Island	4-34
Hervey Bay	8-38
Ingham	2-32
Inglewood	1-31
Innisfail	1-31
Ipswich	4-34
Jericho	4-34
Kilcoy	3-33
Lakeland	2-32
Longreach	3-33
Mackay	1-31
Mackay	6-36
Marlborough	2-32
Maryborough	6-36
Monto	3-33
Moranbah	4-34
Moura	1-31
Mt Isa	1-31
Mt Kynoch	2-32
Mundubbera	6-36
Murgon	7-37
Port Douglas	6-36
Quilpie	2-32
Rockhampton	1-31
Rockhampton	4-34
Roma	1-31
Springsure	3-33
Sunshine Coast	6-36
Sunshine Coast	8-38
Tambo	6-36
Taroom	2-32
Thargomindah	6-36
Toogoolawah	1-31
Toowoomba	2-32
Toowoomba	4-34
Townsville	1-31
Wavell Heights	2-32
Wide Bay	1-31
Yaraka	7-37
South Australia	
Adelaide	1-31
Adelaide	3-33
Adelaide	5-35
Angaston	4-34
Blinman	3-33
Carrietown	1-31
Ceduna	1-31
Clare	7-37
Cleve	2-32
Coonalpyn	6-36
Coppuduriba Hill	1-31
Hawker	7-37
Kangaroo Island	4-34
Manum	8-38
Mt Bryan	8-38
Mt Gambier	5-35
Mt Gambier	7-37
Myponga	2-32
Naracoorte	4-34
Orroroo	2-32
Port Lincoln	8-38
Port Pirie	4-34
Renmark	6-36
Snowtown	6-36
Tarcoola	6-36
Wilkatana	8-38
Yorketown	7-37
Tasmania	
Burnie	8-38
Central Highlands	7-37
Devonport	1-31
East Coast	6-36
Fingal	3-33
Hobart	1-31
Hobart	5-35
Launceston	2-32
Midlands	4-34
North East Coast	7-37
West Coast	6-36
Victoria	
Alexandra	1-31
Ballarat	2-32
Ballarat	5-35
Bairnsdale	7-37
Beech Forest	3-33
Bendigo	4-34
Cavendish	8-38
Curragung	4-34
Echuca	6-36
Euroa	3-33
Falls Creek	3-33
Foster	6-36
Geelong	4-34
Halls Gap	6-36
Hamilton	5-35
Harcourt	8-38
Hawkesdale	4-34
Horsham	3-33
Kerang	2-32
Mansfield	2-32
Melbourne (north)	1-31
Melbourne (metro)	3-33
Melbourne (metro)	5-35
Melbourne (south)	7-37
Mildura	3-33
Moe	2-32
Mornington Pen.	8-38
Mt Cann	8-38
Mt Concord	6-36
Mt Delegate	3-33
Mt Terrible	8-38
Myrtleford	8-38
Penshurst	1-31
Shepparton	7-37
St Arnaud	1-31
Swifts Creek	1-31
Talangatta	7-37
Wangaratta	6-36
Waubra	7-37
West Australia	
Albany	2-32
Albany	3-33
Augusta	7-37
Boyup Brook	4-34
Bunbury	2-32
Carnamah	2-32
Carnarvon	2-32
Coolgardie	7-37
Darkin	6-36
Denmark	1-31
Esperance	4-34
Kalgoorlie	2-32
Kambalda	1-31
Katanning	1-31
Kelterberrin	1-31
Kulin	4-34
Lancelin	4-34
Mandurah	7-37
Manjimup	8-38
Margaret River	6-36
Meekatharra	1-31
Merredin	2-32
Mia Mia	1-31
Manypeaks	6-36
Mt Barker	5-35
Mt Saddleback	1-31
Mt Solus	4-34
Nannup	3-33
Perth	1-31
Perth	3-33
Perth	5-35
Perth	8-38
Ravensthorpe	8-38
Stirling Ranges	7-37
Wickham	1-31
Wongan Hills	8-38
Wyalkatchem	6-36
York	7-37

NOTE: This list includes repeaters licensed but not yet operational. It is compiled from various sources, and relies upon reader input to remain accurate. Corrections and updates may be sent to: CBA Repeater Listing, PO Box E160, St James, NSW 2000.

CB ACTION ACCESS COMMUNICATIONS WORDMAZE

The Road Runner 800 scanner attracted a huge number of entries for our last issue Wordmaze and the winner is . . .

Well, let's look at the correct answers first, they are: 1-Limited, 2-Patrick, 3-Edmondson, 4-QSY, 5-QRN, 6-Yagi, 7-Five, 8-Emona, 9-Flynn, 10-Jan.

Mr/Ms/Miss/Mrs C. Beckworth of Geelong, Victoria — you now own a Road Runner 880 scanner courtesy of Access Communications which will shortly be on its way to you — congratulations.

This issue has yet another fabulous prize — a Sangean ATS803A communication receiver (see the review in this issue) which will bring in the shortwave stations from all points of the globe and it is also courtesy of Access Communications.

It will go to the first correct entry opened after 16 March . . .

1. What company manufactures the FRG 9600?
2. One of the articles in this issues has the line, "with an ???-style insert instead" - what's the missing word?
3. Radio (name?) has recently had its 50th birthday.
4. A New South Wales amateur radio club produces a number of 'home study kits' — what letters are the abbreviation of this club?
5. Who signs as the 110-AT-177?
6. What make of receiver are we giving away in this issue's Wordmaze?
7. Icom constantly refers to the UHF CBRS as the??? (initials only).
8. What Sydney company (one word only) markets the Super Cheetah?
9. One of our columnists mentions the 'DXers guide to the (word ?)'
10. What is the surname of the Icom Sales Manager?

Nothing very difficult about any of those is there . . .?

Incidentally, we suggest that you always retain your copy of CBA as we regularly go back a few issues in search of an answer just to keep you honest.

NOTE: The correct answers **MUST** be circled in the wordmaze — photostat copies are acceptable **HOWEVER** only one per reader — if we find a reader sending in more than one all that reader's entries will be disregarded.

I	U	X	A	R	G	G	R	N	L	D	L	U	R	R	T	H	E	R	C
E	S	N	R	R	R	A	A	E	N	L	I	N	G	I	R	J	Y	H	R
L	L	O	T	E	T	T	E	X	L	T	C	E	R	L	E	R	E	A	Y
R	S	G	T	N	A	T	R	R	R	N	X	A	U	A	G	E	T	X	L
L	A	X	J	E	R	A	A	Y	C	R	S	E	S	E	S	A	A	H	G
A	A	C	A	A	I	S	A	T	R	G	G	A	C	E	D	L	E	A	O
B	A	E	A	R	G	S	X	I	T	O	U	A	A	R	A	R	T	G	A
R	A	D	L	I	X	G	A	A	E	S	R	S	G	G	R	A	A	S	A
A	N	E	A	N	A	T	J	S	T	R	N	T	S	B	G	N	E	J	S
H	C	A	R	B	R	S	O	R	O	J	G	Y	N	H	E	A	J	X	X
A	S	U	A	R	H	T	A	E	Y	A	S	X	A	A	L	O	A	E	X
T	T	U	A	E	X	L	N	I	S	R	S	A	A	L	H	R	O	C	I
A	I	E	Y	X	I	I	D	C	S	E	L	A	N	N	R	R	I	S	E
D	R	A	R	A	T	C	X	R	U	S	E	A	Y	G	S	I	A	S	R
I	O	A	N	T	E	T	U	L	A	T	A	A	A	N	E	C	R	E	O
O	A	T	I	T	C	N	R	E	D	G	Y	R	H	N	C	A	R	O	G
X	D	C	A	L	O	E	R	S	A	H	H	E	A	R	B	S	N	R	A
R	I	A	T	D	X	A	L	R	L	T	L	E	A	G	A	R	A	B	E
G	L	S	A	A	S	A	C	E	T	A	B	S	X	R	T	A	S	T	R
A	O	E	A	G	A	R	S	G	R	S	N	S	D	A	S	N	T	A	N

1 .....

2 .....

3 .....

4 .....

5 .....

6 .....

7 .....

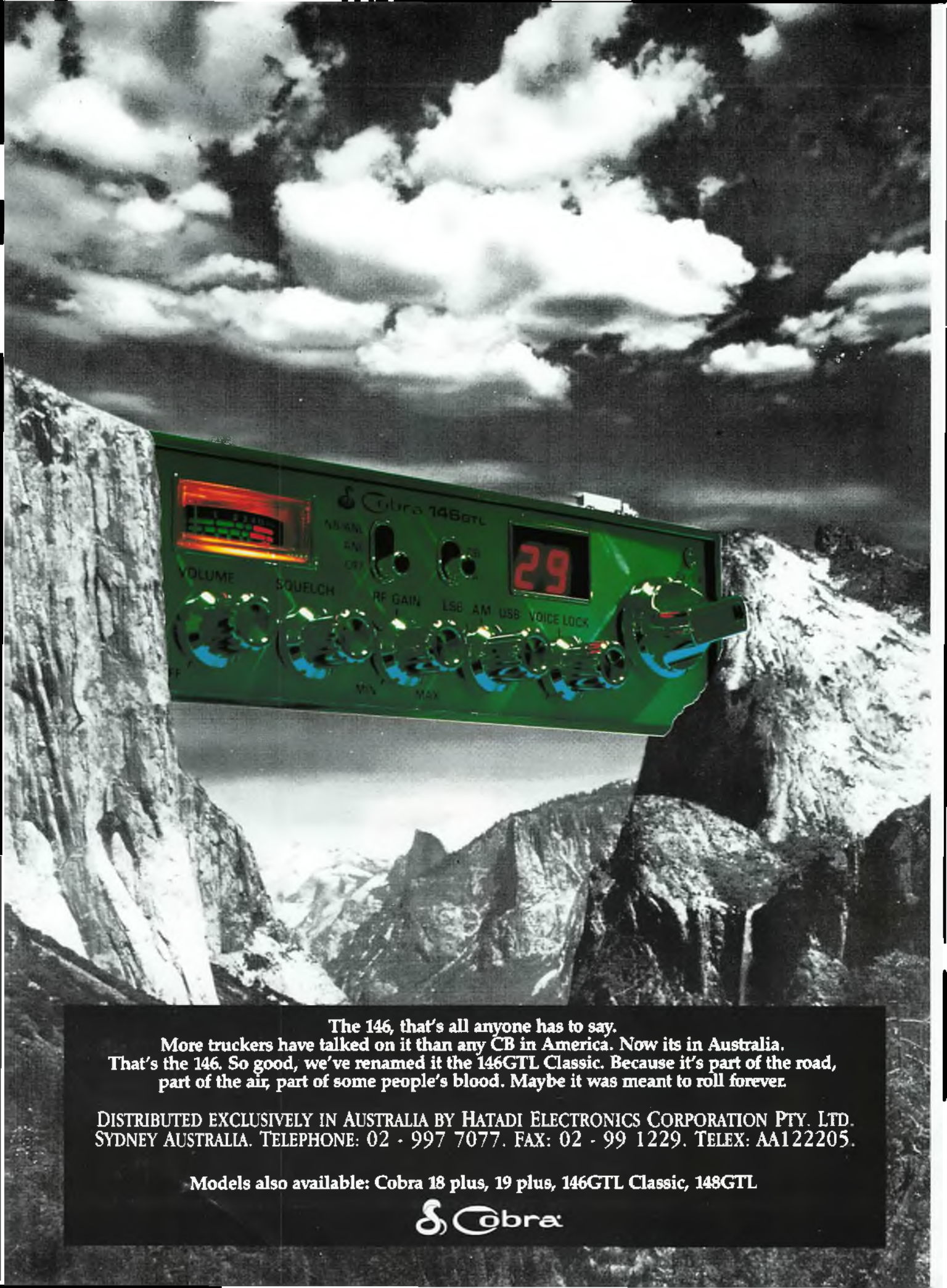
8 .....

9 .....

10 .....

The closing date is 16 March 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 answers and winner will be published in the next issue.

Entries should be addressed to: Access Communications/CB Action Wordmaze, PO Box 628E, GPO, Melbourne 3001.



The 146, that's all anyone has to say.
More truckers have talked on it than any CB in America. Now its in Australia.
That's the 146. So good, we've renamed it the 146GTL Classic. Because it's part of the road, part of the air, part of some people's blood. Maybe it was meant to roll forever.

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INTRODUCING WHISTLER 200

Whistler 200 Superheterodyne Radar Detector that gives you consistent, advanced warning of speed radar transmissions. Whether the radar signal is over a hill, around a curve - even from behind, Whistler 200's sensitivity locks onto radar long before it locks onto you.

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Whistler 200 is easy to use. Just plug it in, turn on the power switch and it's ready to perform. Whistler 200 is compact and lightweight, too. It can be easily removed from its dash or visor mounting, then slipped into a pocket, purse, or glove compartment until you need it again.

AUDIBLE AND VISUAL ALARMS PROVIDE EARLY WARNING

When Whistler 200 encounters a speed radar transmission, it responds with an audio alarm accompanied by a red alert light. As the signal gets stronger, the audible and visual alarms will report with a Geiger counter-like warning of closeness to the source of radar transmissions.

HIGHWAY/CITY MODE

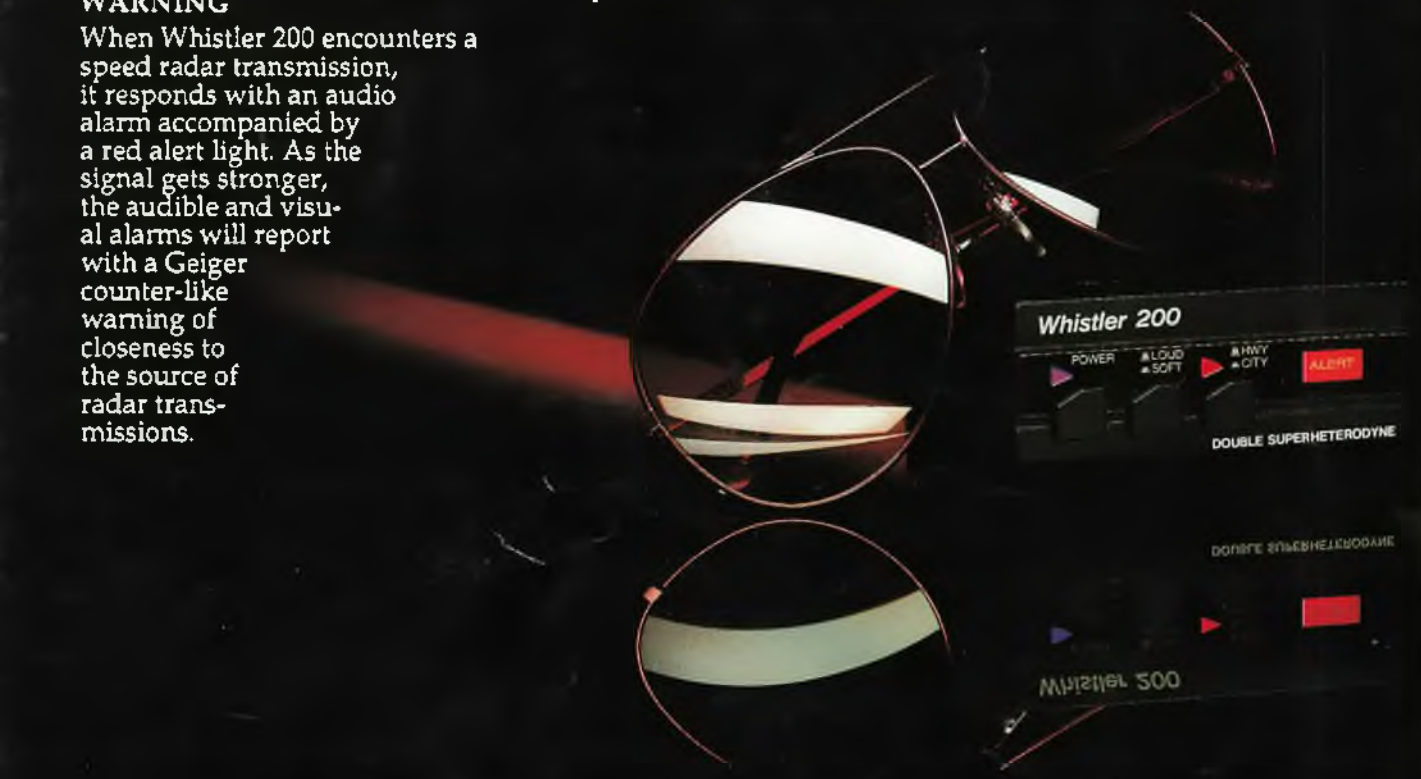
To accommodate your different driving needs, Whistler 200 is equipped with the Highway/City Mode. When in City Mode, it reduces the annoyance of unwanted signals that can be picked up during urban driving. With just a push of a button, you can choose the mode that best suits your situation.

WHISTLER 200 FEATURES:

- High sensitivity for early warning.
- Audible and visual warnings.
- Tuned precisely to X and K Bands.
- Easy to install and use.
- Loud/soft button allows you to choose one of two audio levels.
- Compact-can easily fit into pocket, purse, or glove compartment.
- Dash or visor mounting.
- City Mode reduces annoyance of intrusion alarms during urban driving.

Whistler 200 comes complete with a parts and labour warranty. But chances are, you'll never have to use it because Whistler 200 is made to last.

If you would like more information on Whistler radar detectors and accessories, call us toll free at (008) 251285 or (02) 6664000.



Whistler, the performance leader, leads once again in 1990.

For further information contact your nearest Whistler agent, or call (02) 666 5367 or toll-free (008) 22 7405