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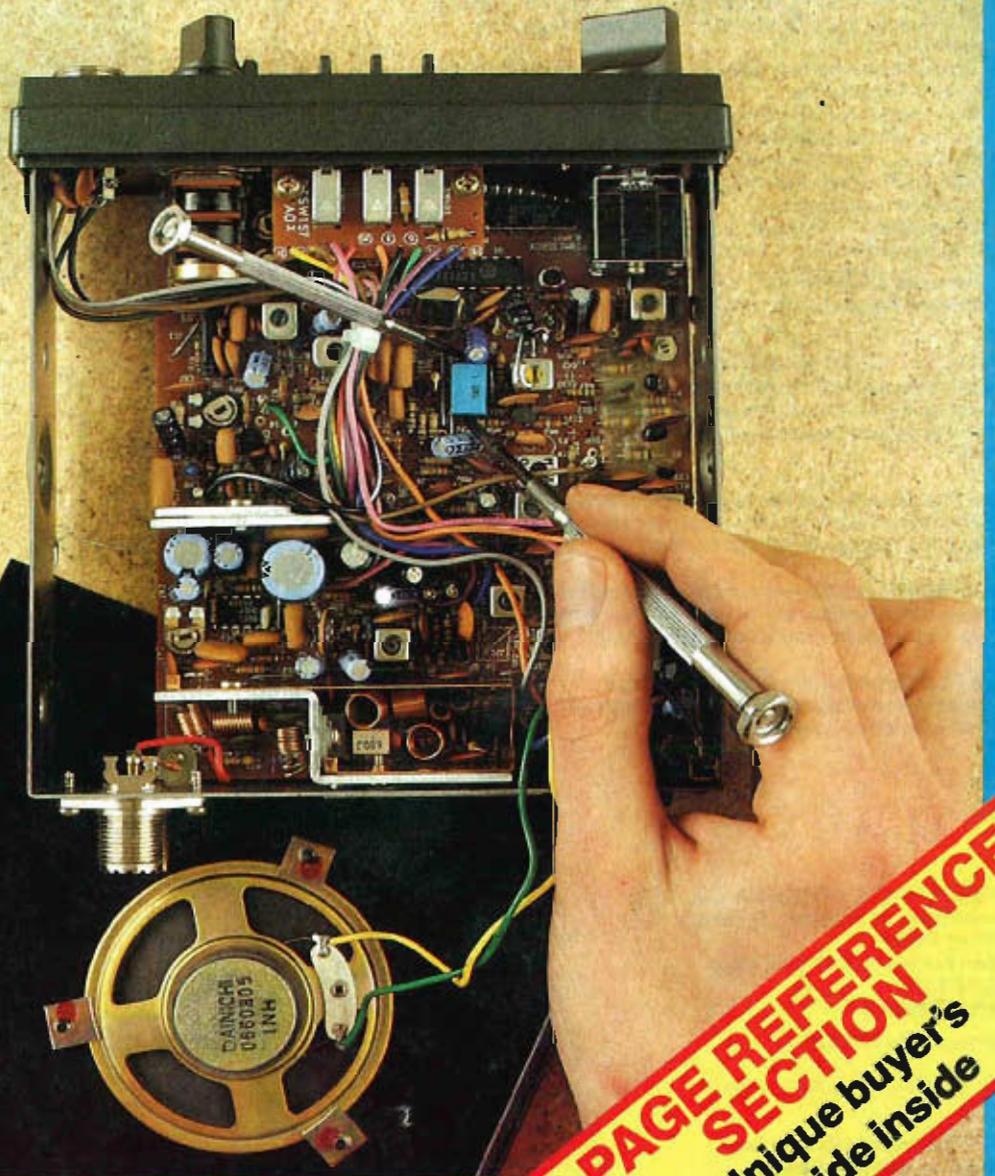
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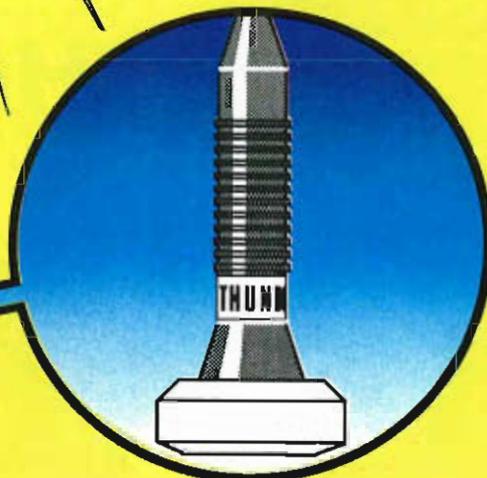
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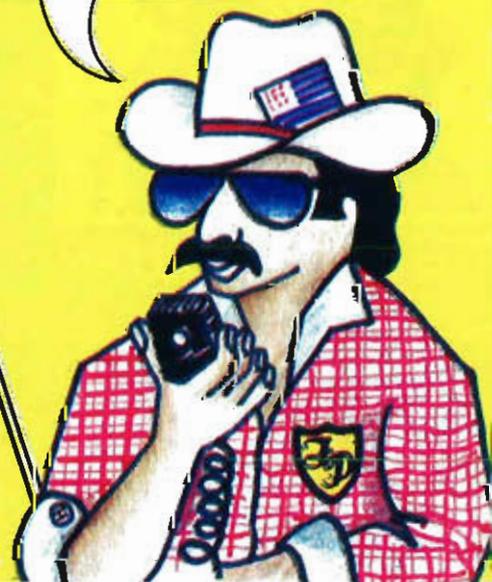
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Citizens' Band

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Cover This Month
Getting to grips with crystal filter modifications

... our breaker was getting pretty fed up with everyone else getting better copies than him. He had his rig checked — it was fine, he had his twig checked — that was fine. But he just wasn't getting the good copies.

He listened around and decided that everyone else was doing better because they were higher. After looking around and realising that he couldn't move the antenna any higher than it was already, he made his plans ...

A week later, his mates were amazed to see our breaker up the top of a tree, with wires and antennas festooned around. "I thought that with a bit of height I would get out better" shouted down our hero, "but it doesn't seem to make any difference". "Of course not" said his friends, "Don't you know that YOU ARE BREAKING UP THE WRONG TREE ... III

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UPDATE

NEWS FROM THE WORLD OF CB

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NEWS FROM THE WORLD OF CB

Last month I echoed Mark Twain's words when he said that "Reports of my death have been greatly exaggerated" and I suggested that the same could be said for CB. Someone pointed out another quote from 'One Flew Over the Cuckoo's Nest' during the last week which seems to me to be equally valid — "But it's the truth even if it didn't happen". This little saying set me thinking about how it could be applied to CB.

Quite often I get letters or telephone calls from readers who are having trouble in obtaining the magazine. Usually I suggest that they take a subscription or place a regular order with a newsagent and take down the details so that I can go and make a nuisance of myself to the distribution people. The trouble is that many newsagents have seen the rapid disappearance of many of the CB magazines and have decided that CB is now a dead duck and no longer stock *any* CB publication. When readers go in to find a copy, they are told "there is no demand for it" and the disappointed customer goes away — but can't help thinking to himself "there must be a demand, I just asked for it!" How many more people has the newsagent turned away with that phrase?

I have also heard quite a few people comment that CB can't be a 'serious' communications system. It's true that many people don't use it as such, but that doesn't mean that it can't be when the situation demands. In the past month I have had two enquiries from people wanting to use CB in two very different situations — a school sixth form group who will be climbing in the Himalayan mountains and an expeditionary group from Oxford University who will be studying the pollination of orchids in the Venezuelan forest. Both these groups have no pre-conceptions about CB and

see no reason why CB can't be used as a serious form of communications. They may eventually decide against CB radio, in fact, if it doesn't suit their exact requirements — but they have considered it and given it a chance.

For something that is, in some people's view, dead, CB is a very active corpse!

As a p.s. to the comments I have just made, I would appreciate hearing from readers who are experiencing great trouble in getting hold of the magazine. If they could write to me with their name and address and the area they have tried to obtain the magazines, with the name and address of the newsagent concerned, if possible, I will shout even louder at the distribution dept. Send any letters to me, addressed to Citizens' Band, No. 1 Golden Square, London, W1R 3AB.

Whilst we are talking about letters, I would like to say how much I appreciate the letters that you send me.

They are obviously essential to pages like 'Back Chat', 'Club News' and 'Q & A' but they are especially nice to receive when they praise an article that has been a lot of hard work to prepare and contributors are always pleased to hear how their article has been received. I even like getting letters that criticize as then I know what you like and what you don't.

Once again a reminder for letters writers. If you are hoping to see your letter in print, especially if it is asking for publicity for an event, you must bear in mind the time it takes to produce a magazine — I am writing this at the beginning of March and you will be reading it at the end of April! I need your letter at least two months before the month it is intended for.

Sue Sharp

B.C.B.C.

The British Citizens Band Council have received a lot of enquiries and applications for membership since the item about the Council appeared in the February magazine.

They have also been getting a lot of enquiries on technical matters and for specific items of information. Although more than pleased to help out where they can, as a new group they are not that well endowed financially at the moment and are asking that all queries are accompanied by a stamped, self addressed envelope.

50MHz. Band

The Dept. of Trade and Industry have announced that another 60 licences for the 50-52MHz. band will be made available to class A amateur radio licence holders.

This frequency band has been open to amateurs in other countries for some time, but it conflicts with the Band 1 broadcasting frequencies and until recently was not permitted for amateur use.

To allow for experimentation and research, 40 licences were allocated last year by agreement with the BBC. Those with the special licence can only work outside broadcasting hours and on a strict non-interference basis.

A further 60 licences are now available for radio operators that already hold a class A licence (access to all amateur bands, rather than to 70Mhz. and above) and applications are being made to the R.R.D. and the R.S.G.B.

The propagation experiments already carried out by the 40 who obtained licences last year have been very successful, but the permission given is exceptional and cannot be construed as long term rights to the frequency. The DTI are free to withdraw permission at any time.



Envious glances and twitching fingers!

I know this is a CB magazine and I know that at least a few of you will write in and complain but I couldn't help but show you this latest offering from the world of amateur radio.

The Yaesu FT-757GX receives from 500kHz. to 29.99 MHz., AM, SSB, FM and CW, transmits on the amateur bands between

160m to 10m in tuning steps of 10Hz. and 500kHz. with LSB, USB, CW, AM and FM with SSB, CW and FM power of 100W and AM power of 25W and is controlled by three micro-processors.

This beast has eight memories for frequency storage and a programmable scanning memory which will scan between any two adjacent memories programmed by the

operator. Also fitted as standard are a keyer with dot-dash memory, AF speech processing, noise blanker, IF shifts and width filters . . . etc, etc!

The FT-757GX also has the Yaesu computer aided transceiver facility which provides external control of the VFO frequency and memory functions form the operator's personal computer when linked to the interface unit. The

heatsink design includes a quiet cooling fan which allows forced-air cooling.

And the list goes on and on. For those of you who are getting your wallets out, the set costs well over £600 which has probably cooled your ardour if not your heat sink. The amazing thing about it, of course, is that it is just 238mm x 93mm x 238mm in size. What I need to know is, can it edit magazines too . . .

R.N.L.I. Link Up

The Caledonian Breakers Club of Leven in Fife are planning a sponsored modulation linking up around the country to raise funds for three inshore life crafts for the R.N.L.I. It is hoped that this will take place on the 12th August on channel 28.

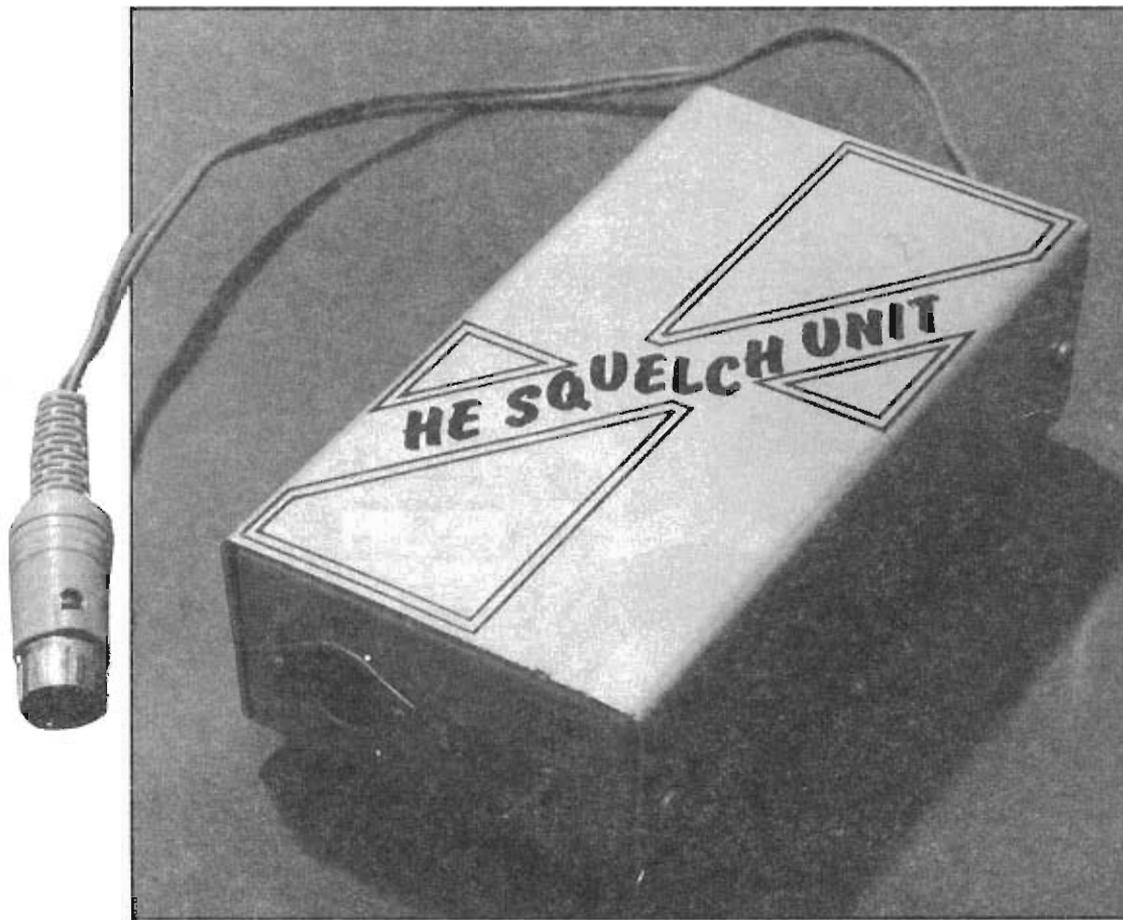
The club hope to cover the whole the whole coastline of the U.K., starting at the Forth

estuary in the Kennoway area of Fife, working south to Cornwall then north via Wales to the north of Scotland and back down south to the Forth estuary. It is intended that Kennoway will be the control point and that breakers will be at 10-15 mile intervals around the coastline, with a number of breakers at lifeboat stations if this proves possible. The

link up is expected to start at 12 noon and be finished by 6 p.m. Breakers inland at major cities and towns will, they hope, collect donations towards the fund.

Chris Knight of the Caledonian breakers estimates that it will take approximately a 1000 breakers to cover the coastline itself, plus many more inland. Chris is asking

all clubs who may be interested in participating to contact him at P.O. Box 20, Leven, Fife, enclosing a stamped, self-addressed envelope. As the Caledonian club hope to raise as much money as possible they would also be very pleased to hear from CB and accessory manufacturers and dealers who would be prepared to sponsor the event.



Squelch Unit

Those more eagle-eyed readers have realised that the squelch unit featured in the March edition of the magazine was passed to us from our sister magazine, Hobby Electronics. If the p.c. board is presenting a problem for you, the HE

PCB service can supply a board that has been made from the same master as that used in the finished design. If you require the board for the CB squelch unit, send a cheque for £3.35 (this includes 45p for packing and posting) made payable to ASP Ltd., quoting an order number of HE/8210/3 and a descrip-

tion of the board required to HE PCB Service, Argus Specialist Publications Ltd., No. 1 Golden Square, London, W1R 3AB. You can also order on your Barclaycard or Access card, quoting your card number and including your signature.

Please allow 21 days for delivery.

Tape Services

You may be interested to hear that Citizens' Band magazine now contributes to a tape magazine on communications for the blind.

Monument Tape Services in Somerset use excerpts from the magazine to contribute to a 90 minute audio magazine on communica-

tions. Other magazines also contribute, including Practical Wireless, but this magazine certainly had the lion's share in the last tape distributed. Monument Radio chooses pieces that it thinks will be of greatest interest to the non-sighted and particularly concentrated in the last issue on short wave listening — something that is of great interest to

many blind listeners. All of 'Starters Orders' was reproduced to give the blind some idea of CB radio and how to operate it.

If you want more details for someone you know, more information can be obtained from Monument Tape Services, 'Townsend', Thorne St. Margaret, Wellington, Somerset TA21 0EQ.



N.S.P.C.C. Fun Day

A group of clubs in the West Midlands, co-ordinated by Wendy Gilbert, or Tongue Tied of Ensign Cards, are organising a Fun Day and mass eyeball in aid of the National Society for the Prevention of Cruelty to Children.

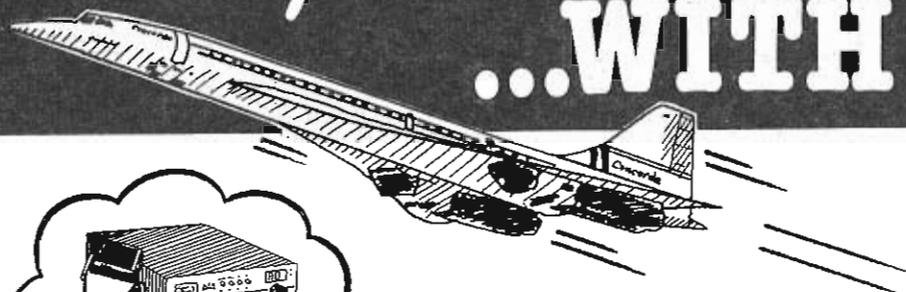
This is being held on Saturday, 19th May at Chasewater, off the A5 in the West Midlands, from 9 a.m. to 4 p.m. It will cost adults 50p to enter and children will be free if accompanied by an adult.

The day's activities will be very much aimed at children with the Sundowners clowns performing and plenty of activities going on. There will also be a military display, drum majorettes, games and competitions, an inter-club tug of war and a raffle with both adult and children's prize. Many local companies are donating goods.

The Society is going through a bad time financially and are very grateful for any monetary assistance that they receive. Many of the people appearing at the Fun Day that would normally charge an appearance fee are donating that fee to the N.S.P.C.C.

Wendy is the local representative for the N.S.P.C.C. and is working very hard with clubs involved to organise a successful day out. Anyone attending should have a great time with the knowledge that they are helping a very worthy cause.

UP, UP AND AWAY... ...WITH DIALS



MULTI-MODE 3

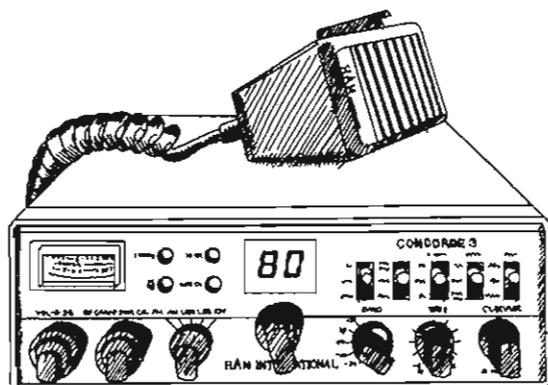
This full feature 200 Channel Mobile Multi-Mode Transceiver is converted to U.K. specifications.

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This full feature 120 Channel Mobile Multi-Mode Transceiver is converted to U.K. specifications.

R.R.P. £149.95



CONCORDE 3

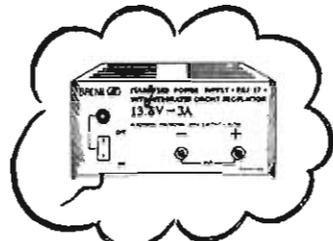
This 227 Channel Mobile Multi-Mode Transceiver is probably the finest Mobile CB in the world. And has now been modified to comply with MPT 13 20 making it legal to own and use in the U.K. In this form it has 40 F.M. Channels. Built-in S.W.R. meter Power Mic. and many other features.

R.R.P. £249.95

CONCORDE 2

This is the 120 Channel Mobile Multi-Mode Transceiver modified to comply with MPT 13 20 making it legal to use in the U.K. In this form it has 40 F.M. Channels, Built-in S.W.R. meter, Power Mic. and many other features.

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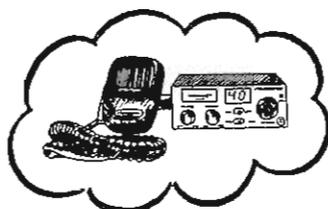
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JUMBO 3

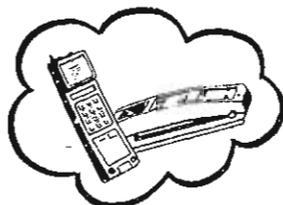
This 227 Channel Base Stations Multi-Mode Transceiver probably the finest CB in the world has now been modified to comply with MPT 13 20 making it legal to own and use in the U.K. In this form it has 40 F.M. Channels, Built-in S.W.R. meter, Power Mic. and many other features.

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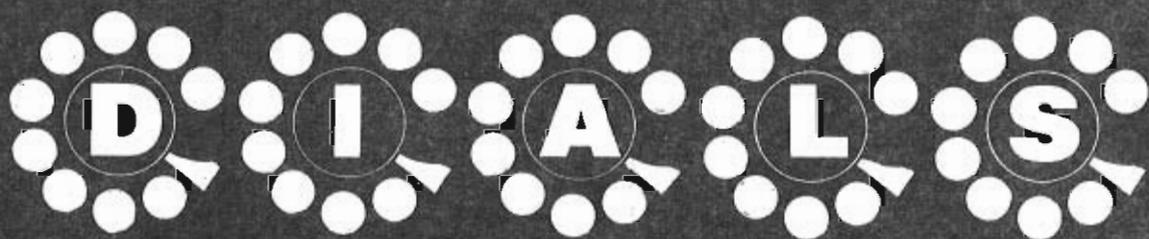
R.R.P. £279.95



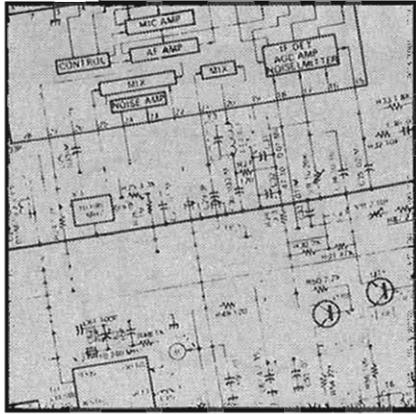
M.C.P. 150

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In response to all your letters, Chris Peterson is having another look at crystal filter modifications and answering questions from his last article.

RETURN OF THE MODS

The "March of the Mods" article in the December '83 issue of Citizens' Band has generated an un-precedented amount of interest. The mail bag has been so large that it has proved impossible to answer all the individual queries. Those of you who sent SAEs should have received acknowledgements by now, and I'm sorry that I simply can't deal with your queries on an individual basis! There aren't enough hours in a day to make that possible! However, many of your letters had common themes, so I'll deal with those now to clarify some of the points raised.

Wrong Impedance?

Many of you point out that in the latest Ambit catalogue the 10MOBAA filter has a specified impedance of 1.8Kohms. The article was originally written some months before publication and at that time, Ambit were publishing the filter specification to be 3K. Only in the latest catalogue has this been revised to 1.8K. Apparently

this is due to a change of supplier. However, it really doesn't matter very much! As Mr. T. J. D. Mountain points out in a very comprehensive letter, when the input impedance of the second mixer transistor is taken into consideration, the terminating impedance seen by the filter is of the order of 1.4K anyway!

Incidentally, Mr. Mountain, your calculations are perfectly correct and I do not fault any of your conclusions. Perhaps wrongly, we have tried to keep our technical articles as simple as possible. It was felt that pages of maths and highly technical discussions of the finer details of impedance matching might put many of our readers off!!! However, in view of some of the unexpectedly astute letters we have received on the subject maybe this policy should be reviewed a bit!

To return to details, the original ceramic filter was designed for 330ohm termination. Even if a crystal filter is directly substituted with no attempt to correct the matching, there

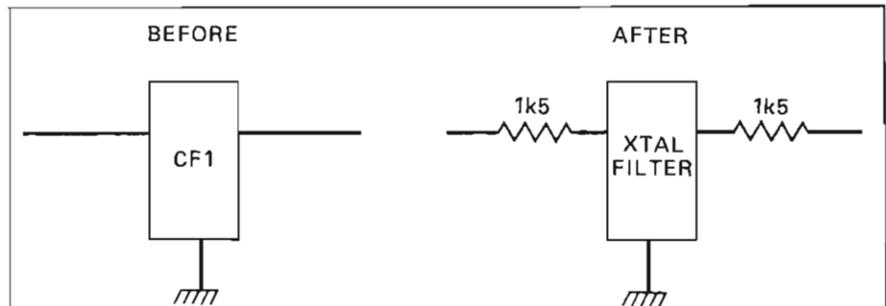


Figure 1.

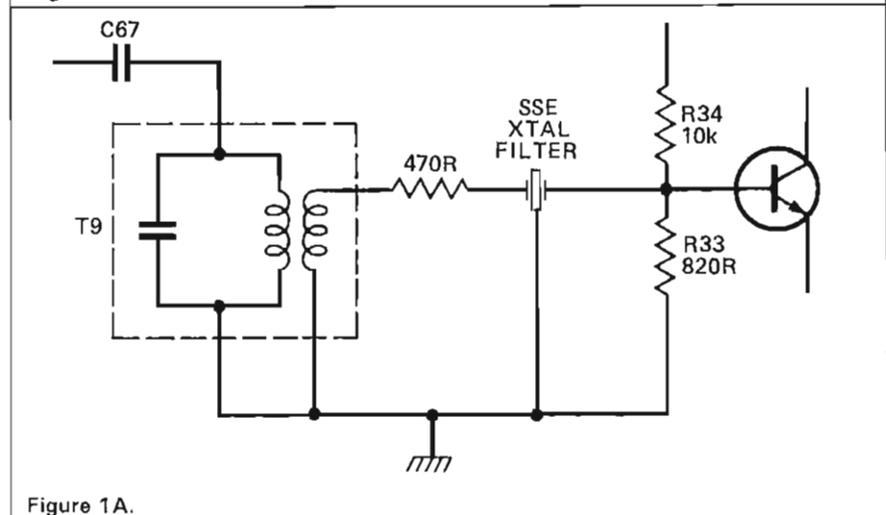


Figure 1A.

will be a dramatic improvement in performance. Impedance matching will cause further slight gains to be made, but as long as the impedance seen by the filter is relatively high then that is all that is necessary. Purists will argue, quite correctly, that the slight mis-match still present will degrade the ripple response in the pass-band, and the skirt selectivity may suffer slightly. However, I would reply that a small amount of ripple is unimportant in an FM system, and that the slight broadening of the skirt response will be insignificant.

I have modified many sets using exactly the procedures outlined in the article and the results are dramatic. Don't worry about the finer details, follow the procedures outlined and you won't be disappointed.

An alternative approach has been suggested by Bonex, suppliers of crystal filters. This consists of direct substitution of the ceramic filter with a crystal filter, but to add 1.5K resistors either side as shown in Fig. 1. Although I haven't tried this, I see no reason for it not to work. My only

comment is that useful signal power is being wasted in the 1.5K resistors, and that this must lead to decreased sensitivity. However, if your rig hasn't got an RF gain control, and you are surrounded by powerful transmitters this could be advantageous!

Bonex also carry a large range of ceramic filters suitable for the second IF filter. Some of the budget rigs using the Cybernet chassis economise on this filter by using a CFU 455 device. This is a small blue cube, rather than the larger black CFW 455 HT. Bonex are able to supply an LFH6S filter that is an exact equivalent of the CFW 455 HT, and this may provide a useful improvement in selectivity. The Cybernet board is designed to take either type of filter, so upgrading is simple.

CFW 455HT filters are available from SSE of 41, Twyford Avenue, Southampton. SSE can also supply the T9 transformers should you wish to fit one. They have also sent us samples of a specially manufactured crystal filter for CB rigs. This is similar to the unit supplied by Bonex, but has an

input/output impedance of 850ohms. This eases the matching problem slightly, as the filter can remain connected to the secondary of T9. Details for installation in a Cybernet 134 chassis are given in Fig. 1a.

Mr. Mountain has also sent us details of some very comprehensive modifications he has carried out to Maxcom 20E rigs. In addition to the crystal filter, he has replaced the first mixer with a dual-rate Mosfet device. This is quite a complex modification, involving re-winding coils; and adding a buffer board for the first local oscillator. However, if sufficient interest is expressed, maybe we can persuade him to write it up for publication!

No T9?

As many of you will be aware, Cybernet chassis are used in a large number of "badge-engineered" rigs, and I thought I had covered all the variations! It appears that there are a number of rigs that use the 134 chassis, but T9 is missing! Don't worry! Adjust the values of R33 and

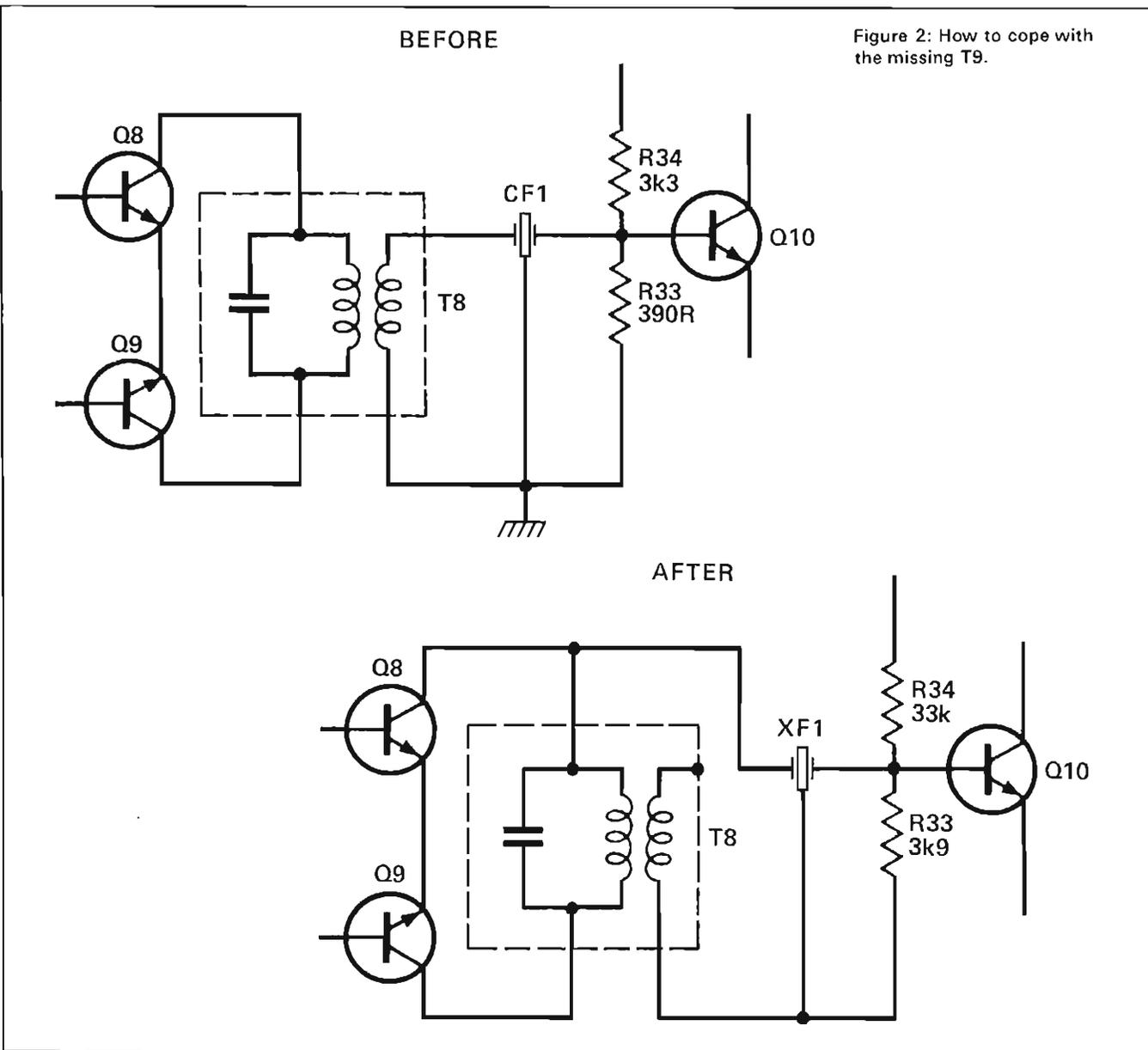
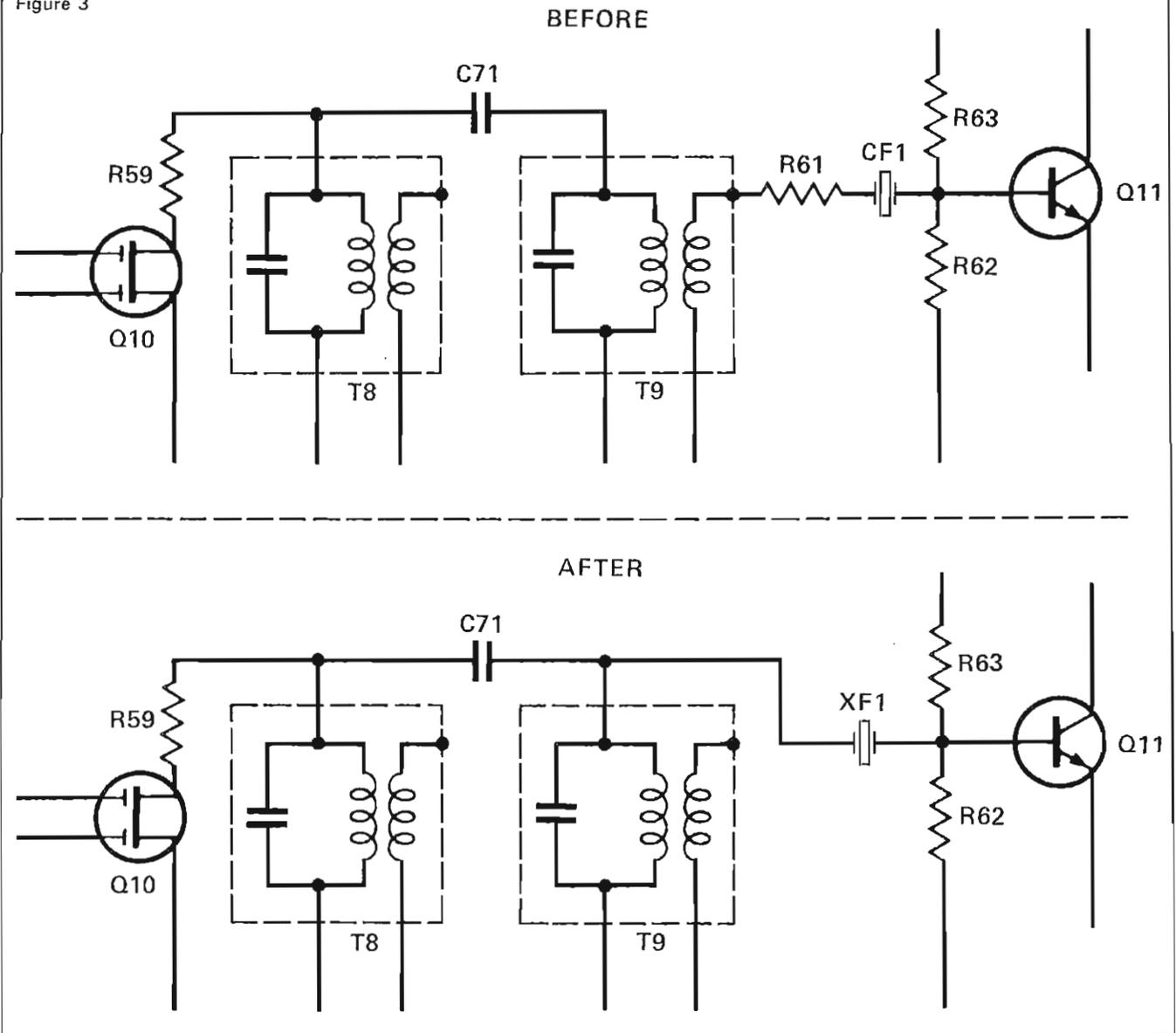


Figure 2: How to cope with the missing T9.

Figure 3



R34 as specified but couple the other end of the filter to the top of T8 instead of T9. This is the point where C67 would connect to T8 if it were present (Fig. 2). It should be possible to achieve this by simply moving one end of the J14 jumper wire. (It may not be long enough, so replace it with insulated wire to stop it shorting against the IF cans.)

Fidelity 2001

Mr. J. Daulman enquires if we can tell him how to modify a Fidelity 2001. This appears to use the same chassis as the Amstrad rigs and some Harvards and Mustangs. They are identified by the 10dB attenuator being a small blue push-button on the back of the rig.

I have not actually modified one of these rigs, but would suggest the following procedure:-

Locate and replace CF1, the ceramic filter.

Locate and remove R61 (220 ohm).

Using a short piece of insulated wire, connect the R61 end of the

crystal filter to the junction of C71 and T9.

(Should T9 not be present on your rig, connect it to the T8-R59 junction instead.)

The base bias resistors, R62 and R63, appear to be high impedance values to start with and should not need adjustment. The input impedance of the 2nd mixer transistor Q11 will provide an approximate match. (Fig. 3).

I must emphasise that this is an untested modification, but it should work OK. Perhaps you will write back and tell us the results!

Grandstand Gemini

Mr. S. Campbell of Strathclyde is enquiring about similar modifications for the Grandstand Gemini rig, as he is suffering severe bleed over problems. Unfortunately this is a rig I haven't come across, though I have heard of it. I haven't got a circuit diagram of it so I can't even suggest where to start. Does any of our readers have a circuit diagram. Or has anyone tried to fit a

crystal filter to one of these rigs?

I hope this article clears up some of the queries that have arisen. Our mailbag indicates that everyone who has carried out the modifications has experienced a dramatic improvement in performance.

One final point worth raising. We have pontificated in the past on the problems in over-deviating your transmitters i.e. winding up the deviation to make your rig sound louder. If you have fitted a crystal filter, your rig will now be much more selective than before. It is quite possible that a "tweaked" transmitter may deviate outside the pass band of the now very selective receiver. If you have fitted the noise squelch kit as well, then the squelch may well operate on peaks causing break up of the received signal. So if you find the local whizz-kid breaking up on your receiver where previously he used to rattle your windows, then it's HIS rig at fault NOT YOURS. It is over-deviating, and aside from annoying people on adjacent channels, it will be broken up by a very selective receiver.

THE NEW GAP RANGE OF AERIALS TO COMPLY
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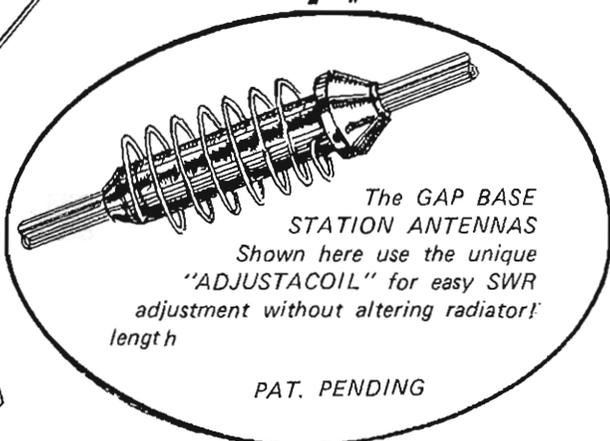
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length

PAT. PENDING

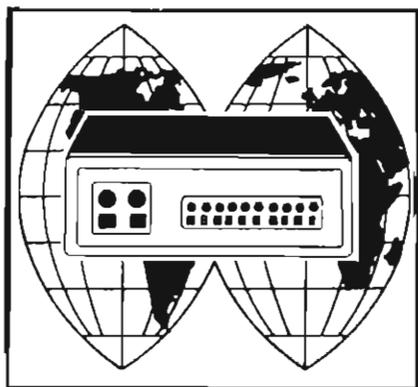
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Gamma Aerial Products Ltd.

MANUFACTURERS OF AMATEUR RADIO & C.B. ANTENNAS

LYE, WEST MIDLANDS

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JUST LISTENING

CB is essentially a medium for those who like to talk. Sometimes, however, you can have too much of a good thing and it's quite nice to sit back and just listen. This is a favourite pastime of Andy R Giles and here he explains why.

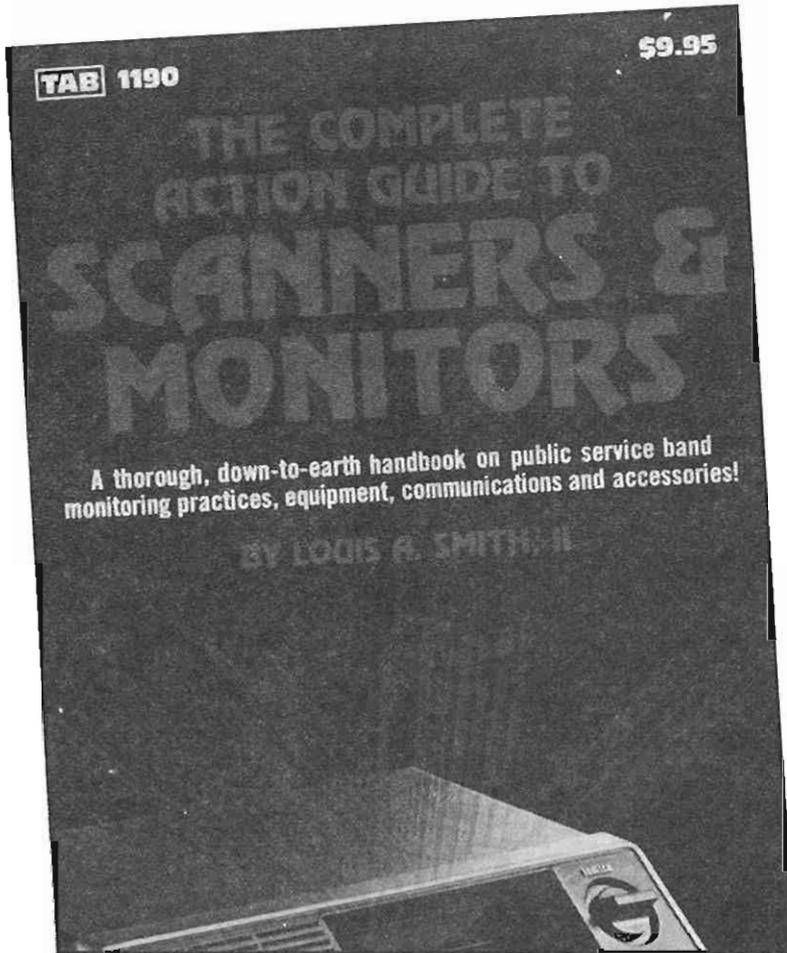
Have you ever picked up a telephone, started to dial and suddenly found that there are already people talking on that line? With the primitive switchgear that is still used in some of our telephone exchanges, this is a regular occurrence for anyone who uses a telephone reasonably often. If this has happened to you, did you hang up and dial again, or did you find the urge to listen in was irresistible? It's strange how many people will admit that it is almost impossible not to listen, no matter how obviously boring the conversation is going to be. Eavesdropping is one of those solitary pleasures that is not quite nice to talk about but the fact that a crossed line is an accident somehow makes it acceptable. We know that we shouldn't listen, but we do.

Around the bands

I derive a lot of pleasure from listening and obviously radio is the ideal medium for this. There was a time when I thought that the epitome of happiness was driving along chatting to another breaker on the CB. Now I rarely transmit. Instead I now listen around the bands. In common with a lot of other breakers, I've bought a communications receiver and scanner. With the aid of these two gadgets I can now tune from 500KHz through to 512KHz, with just a few gaps in between. This is an enormous chunk of the radio spectrum, in fact far too big. Tuning around on the receiver, which goes up to 30MHz, was just too confusing. There are so many signals that I didn't know where to begin. Fortunately I found a couple of books that opened up a whole new world for me. The most well-known is the World Radio and TV Handbook. This lists the frequencies of almost every radio and TV station in the world and I now regularly listen to several of the more unusual ones, such as Radio Bahrain and Radio Vatican. In our November issue I reviewed The Confidential Frequency List. This book opened my eyes to some of the really interesting things that can be heard. Now I have found another book, the one I should have read when I first started

listening. Its rather overlong title is — 'How To Tune The Secret Shortwave Spectrum' with the subtitle 'An around the world guide to the unusual, the secret, the illegal, the unexplained on the shortwave radio bands'. Before continuing with the delights that are to be found in these pages, and those of the book I shall mention a little later, I must point out that these are American publications. With most books that would just mean that you have to ignore the way that they misspell words and torment the English language but as these are radio publications, readers should be aware of the differences in our laws. The various Wireless Telegraphy Acts in this country are not very clear but they can be summed up more or less accurately by saying that the average citizen in Britain is not allowed to receive anything other than transmissions from authorised broadcasting stations, licensed amateurs and, with the appropriate license, CB operators. This means that we can tune into the BBC, Capital Radio, Radio Prague and any other legitimate broadcasting station. We can also tune into any of the amateur bands and listen to them chatting to one another and, we can listen to breakers. Contrary to popular belief, we are not allowed to listen in on other transmissions, provided we





do not pass on any of the information that we may hear — we are not allowed to listen at all. This may seem a little ridiculous when the police use a portion of the band that has been internationally allocated to broadcasting and their conversations can be picked up by any £5 tranny but the law is that we are not allowed to twiddle our dials to that bit of the band.

In America the law is completely different. There listeners can tune into almost anything they want, including the police, fire services, FBI, CIA, military and so on. The only limitation is that they must not make use of any information that they may glean. So popular is this form of electronic eavesdropping in the States that there are dozens of clubs that have been formed expressly for the purpose of swapping interesting frequencies. Their Freedom of Information Act also allows books to be published that contain listings of frequencies and the avid American listener who decides that he would like to listen to his local nick has only to look up the frequency in the appropriate book.

The position in this country is somewhat different again. There does not appear to be a specific law that prohibits the publication of such frequencies, but publication could be construed as encouraging others to commit an offence by listening. In other words, if I were to say that Scotland Yard's Main Channel 1 is on ***** MHz for their money vans, I could be prosecuted for encouraging you to listen to those frequencies. Hence the asterisks!

There is another strange anomaly in British law that allows publication of

some frequencies that are definitely sensitive. A recent issue of the New Scientist carried details of the frequency used by the aircraft that are delivering missiles to Greenham Common. They also give details of the call signs that will be used and a sample of the type of conversation that could be heard, along with explanations of the various code words that would be used. They were able to do this because all of that information had previously been printed in assorted governmental publications. Someone had taken the time to sift through thousands of documents that relate to frequency allocation and they had come up with the relevant one.

Similarly, books that contain frequency information that have been published in America can be imported into this country, even though they may contain information that a British author could not put in print. The Confidential Frequency list was a good example. It contains dozens of spot frequency listings for several military installations in Britain yet it is on sale quite legally over here.

The Secret Shortwave Spectrum is possibly a more useful book than the Confidential Frequency List because it is not just a list of frequencies, it's a well written book that explains in detail the background to some of the things that can be heard. A good example of this is in Chapter Three, headed Government and Military Communications, under the sub-heading of 'Listening to the President'. A small box contains a list of the five frequencies used by Air Force One and Air Force Two, the 'planes used by the President and the Vice-President, and

the three frequencies used by Andrews Air Force Base near Washington. The text then explains in detail how most of the President's transmissions are scrambled but how he often uses a 'phone patch' when he is talking to his wife and family from the 'plane and that these calls are surprisingly not scrambled. Tips are also given on when to listen for these calls.

This book contains far too much for me to be able to cover it all in detail, ranging from the spot frequencies used by the Russian Soyuz space craft through to the origins of American pirate broadcasters. I can thoroughly recommend this book to anyone who would like to find out more about the strange transmissions that can be heard on the HF bands.

Helpful Hints

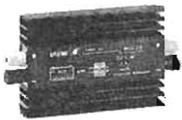
Another book that I have discovered is 'The Complete Action Guide To Scanners And Monitors'. As this is also an American publication, the relevant British laws should be borne in mind again when reading it. This book gives some helpful hints on what to look for when buying a scanner and highlights some of the differences between various models. It then goes on to explain how to install one as either a base station or a mobile. Almost all of the rest of the book is then taken up with explaining the different radio networks that are used by the police, mobile telephone, fire services and many others. Listings of spot frequencies are also given but as most of them are in the VHF and UHF bands, they will be inaudible in this country. Despite this, they are useful because several of these bands are in line with international allocations so they are much the same as the ones used in this country.

Much as I enjoyed reading this book, my overriding feeling was one of envy. How nice it must be to live in a country where you can buy a book such as this and legally make use of the information that it contains. To flick through its pages until you find the spot frequency that is used by your local fire station for instance, and then to be allowed to monitor that frequency — heaven! I can see that monitoring police transmissions could be of use to people engaged in naughty business, but for the life of me I cannot understand why it is illegal to listen to my local bus depot. However, the law is the law and therefore I should tell you that these books should be read for entertainment only and you must not put into practice anything that you may learn from them.

'How To Tune The Secret Shortwave Spectrum' is written by Harry L Helms and costs £6.50 and 'The Complete Action Guide To Scanners And Monitors' by Louis A Smith II costs £6.95. Both are available from South Midlands Communications, S.M. House, Rumbidge Street, Totton, Southampton SO4 4DP (Tel: 0703 867333) who I would like to thank for the loan of the review copies.

The best thing to happen to CB in the UK since the Rig

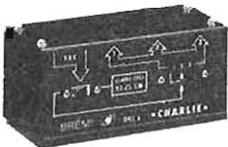
BREMI® The Power Pushers



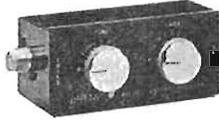
VOLTAGE REDUCER, MODEL BRS 25
Input voltage: 24 V DC (20 V min - 28 V max) - Output voltage: 13.8 V - Output current: 2 A - Stability: 1%, with rated voltage and current - Protection: current limiter, thermal overload block - Possibility of connection in parallel to multiply the available current - Dimensions: 155 x 80 x 25 mm - Weight: 250 gr. - 30/10 Aluminium case. RRP £12.85



STABILIZED POWER SUPPLY MOD. BRS 27
Input voltage: 220 V a.c. 50 Hz - Output voltage: 13.8 V d.c. - Current: 3 A max. - Stability: better than 0.1% with mains variations of 10% of load variations from 0 to 3A - Protection: electronic with current limiter - Ripple: 1 mV at 3 A load - Dimensions: 155 x 135 x 85 mm - Weight: 1.5 Kg. (240 V a.c. supply available). RRP £17.75



CB ANTENNA SWITCH 3 OUTPUTS WITH DUMMY LOAD MOD. BRL 5 "CHARLIE"
Impedance: 50 Ohm - Frequency range: 0 - 50 MHz - Max power: 500 Watt AM - Insertion loss: 0.2 dB - SWR: better than 1.2 - Connectors: SO 235 - Dummy load: 50 Ohm, 5 W max. It connects by means of the front panel selector - Weight: 0.32 Kg. - Size: 121 x 64 x 60 mm. RRP £9.50



ANTENNA MATCHER MODEL BRL 15
Frequency range: 25-40 MHz - RF power: 100 W max. - Weight: 0.32 Kg. - Dimensions: 120 x 55 x 55 mm - RF power loss: under 5% 0.2 db. RRP £7.50



CB LINEAR AMPLIFIER MOD. BRL 35
Input voltage: 12 - 15 V d.c. - Max current: 4-4.5 A - Input power: 0.2-5 W R.F. - Output power: maximum 50 W AM - Frequency: 26 - 30 MHz - Operation: AM - FM - SSB - Input SWR: better than 1.3, externally adjustable - Dimensions: 120 x 79 x 40 mm - Weight: 0.3 Kg. RRP £22.50



LINEAR AMPLIFIER MOD. BRL 500
Output power: 600 Watts AM maximum, depending on the input power - Input power: 0.5 - 6 W AM - Input voltage: 220 V 50 Hz - Frequency: 26-30 MHz - Operation: AM - SSB - FM - Input SWR: better than 1.3, internally adjustable - Instrument: class 1.5 mobile coil instrument - Output and SWR indicator, internally lighted - Controls: STAND-BY, AM - SSB, output power switching 250/500 W, SWR reading, instrument switch (reflected, direct power, Watt) - Protection: mains with 5 A fuse - Vacuum tube set: 5 x EL519 common grid connected - Cooling: by fan - Case: made of 10/10 sheet with two front handles and two handles on the upper cover - Dimensions: 400 x 220 x 210 mm - Weight: 20 Kg. (240 V a.c. supply available). RRP £298.95



STABILIZED POWER SUPPLY MOD. BRS 35
Input voltage: 220 V a.c. 50 Hz - Output voltage: 13.8 V d.c. - Current: 0-10 A - Stability: better than 5% with mains variations of ± 10% and load variations from 0 to 10 A - Protection: electronic with current limiter - Ripple: 1 mV with 10 A load - Weight: 4.2 Kg. - Dimensions: 180 x 105 x 300 mm. (240 V a.c. supply available). RRP £57.75



CB LINEAR AMPLIFIER MOD. BRL 31
Input voltage: 12 - 15 V d.c. - Max current: 2 - 2.8 A - Input power: 0.2-5 W R.F. - Output power: maximum 28 W AM - Frequency: 26 - 30 MHz - Operation: AM - FM - SSB - Input SWR: better than 1.3, externally adjustable - Dimensions: 120 x 50 x 40 mm - Weight: 0.2 Kg. RRP £16.50

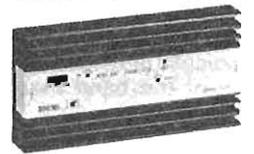


DIGITAL FREQUENCYMETER MOD. BRL 8100
Direct insertion between RF source and antenna - Display: 6 digits - Power requirement: 11 - 15 V d.c., 150 mA - Resolution: 0.1 KHz - Gate time: 1 sec. - Minimum RF input - power: 0.25 W - Max RF input power: 100 W - Range of frequency: 10-150 MHz - Dimensions: (LHP) 112 x 36 x 152 mm - Weight: 245 g. RRP £53.85

DIGITAL FREQUENCYMETER MOD. BRL 8150
Direct insertion between RF source and antenna - Display: 6 digits - Power requirement: 11 - 15 V d.c., 150 mA - Resolution: 1 KHz - Gate time: 0.1 sec. - Minimum RF input - power: 0.25 W - Max RF input power: 100 W - Range of frequency: 10-150 MHz - Dimensions: (LHP) 112 x 36 x 152 mm - Weight: 245 g. RRP £53.85



LINEAR AMPLIFIER MOD. BRL 210
Output power: 10 Watts AM maximum, depending on the input power - Input power: 0.5 - 10 Watt AM, 1 - 20 Watt PEP SSB - Input voltage: 220 V 50 Hz - Frequency: 26-30 MHz - Operation: AM - SSB - FM - Output impedance: 52 OHM - Input impedance: 52 OHM - Input SWR: better than 1.3, internally adjustable - Instruments: output power indicator and modulation percentage indicator - Control: stand-by AM - SSB - Protection: mains with 2 A fuse contained inside - Vacuum tube: EL609 - Dimensions: 174 x 100 x 257 mm - Weight: 4 KG. - It is advisable to use a RG 58 cable 70 cm. long. RRP £86.85



CB LINEAR AMPLIFIER MOD. BRL 40
Input voltage: 12 - 15 V d.c. - Max current: 7 A - Input power: 0.2-5 W R.F. - Output power: maximum 75 W AM - Frequency: 26 - 30 MHz - Operation: AM - FM - SSB - Input SWR: better than 1.3, externally adjustable - Dimensions: 160 x 79 x 40 mm - Weight: 0.39 Kg. RRP £36.55



SWR METER-WATTMETER MOD. BRQ 22
Range of frequency: 3 MHz - 150 MHz SWR meter, 26 - 30 MHz Wattmeter - Input and output impedance: 52 Ohm - SWR and Watt indicating instrument: 1 d. mobile coil, 50 uA i.s. - Connectors: SO 235 - Measures of the R.F.: up to 1000 W in 3 ranges 0 - 10, 0 - 100, 0 - 1000 W - Weight: Kg. 1 - Dimension: 217 x 118 x 83 mm. RRP £29.55

For many years BREMI have been active in the U.K. and being acknowledged as one of the leading lights with their various lines of electronic equipment they have achieved a striking commercial success. To back up BREMI'S confidence in the buoyant U.K. market they have now opened their own U.K. operation which offers the full range of products and a complete after sales service. Members of the trade are invited to contact Bremi direct for a trade price list and details of the nearest distributors.

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The best thing to happen to the Rig since BREMI arrived

WARNING

IF YOU BUY YOUR ANTENNA ON PRICE ALONE - THEN TURN THE PAGE. IF YOU WANT PERFORMANCE READ ON...

Everyone knows how good BREMI are, having set the standards worldwide with their quality electronic products. Now is your chance to set standards of your own with the fabulous BREMI B27S CB Antenna – the final step in the search for perfection. The BreMI Antenna doesn't just look good, it's simply an engineering master piece.

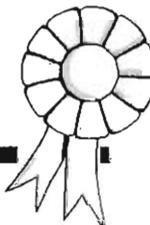
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If for any reason this product fails to live up to your requirements in any way whatsoever then please return to BREMI UK for full and instant refund.

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TELEPHONE: 082 77 2147.

system. You could also contact Datong Electronics at Spence Mills, Mill Lane, Bramley, Leeds (0532 552461) for details of their Codecall. The Daiwa Personal Call also has a group call facility and more information on this can be got from Lowe Electronics of Chesterfield Road, Matlock, Derbyshire (0629 2717).

SA

Radio Surprise

Sea Wolf is also picking up radio signals that he would rather not have to listen to . . .

Q I am writing to ask 'what's up doc?'. I have a Mustang 1000 and everytime I switch on I seem to pick up foreign radio stations. I have tried to find out the problem without any success. Is there any way it could be fixed that would help?

A Well, Sea Wolf, I'm not sure whether you mean foreign broadcasts or CB and amateur radio signals. I'll assume that you mean foreign CB stations, although this doesn't make answering your question any easier as you seem to be saying that the problem is there all the time and not just intermittently. This is most unusual.

If the freak reception is not in bursts and due to something like Sporadic E propagation, then I can only think that the rig itself is at fault and is receiving off frequency.

A simple test to confirm this would be to connect a friend's rig into your set up and see what the results are. If that is trouble free, then your set should be examined by a competent electronics engineer for him to pin point the trouble.

SA

S.W.R. Problem

G. F. Bloss in Greenhithe, Kent has got some strange readings from the meters he is using . . .

Q Here is an interesting S.W.R. problem for you. I bought a short mag mount antenna for the car and S.W. Red my rig down to 1.2:1 which is as near as I want it! The poundage on the CB meter read just over 4, which is O.K.

On removing the S.W.R. meter and then connecting the antenna straight to the set, the CB meter only reads about 2½ on keying the mike. On experimenting I extended the whip by an inch on the adjuster and the output reading showed 4. I left it like this and it gets out O.K. Perhaps you could comment upon why the poundage dropped and whether it is O.K. to use the CB meter as a guide? I trust it is safe to use?

A I'm not sure that it is, Mr. Bloss. I could load up any antenna to give a good power reading but that doesn't mean that there is a good match between the rig and the antenna. It is possible that the S.W.R. meter is introducing a bad mismatch into the

system and giving the erratic power reading and I would suggest that you use another S.W.R. meter and take the readings again. Compare the results, and if the two are similar, then believe the S.W.R. meter. If accurate, an S.W.R. meter is more likely to give a better reading than the meter on the rig, which should be taken as an indication only.

If the readings don't compare, then it is possible that the S.W.R. meter is faulty, and this should be checked out.

SA

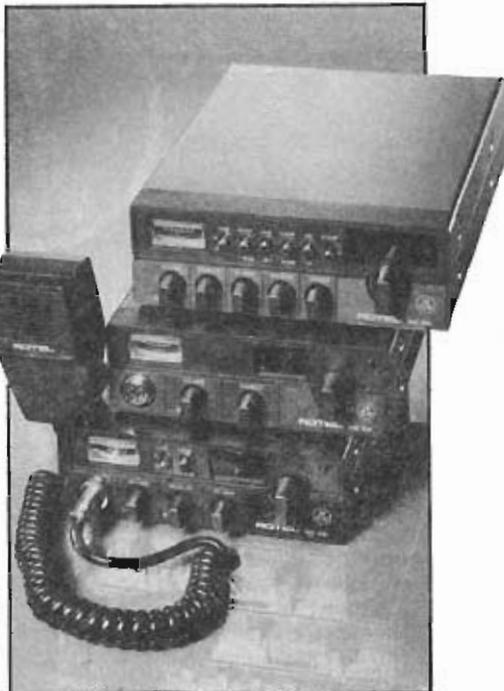
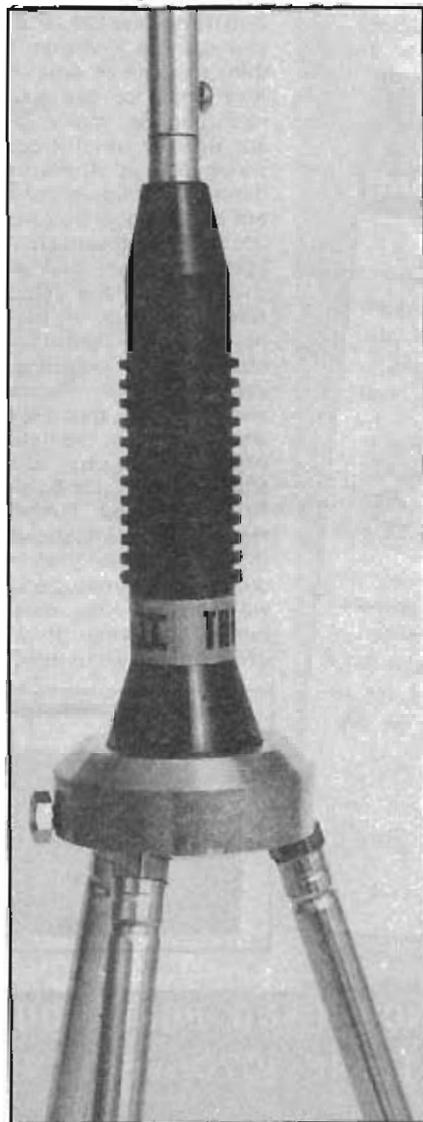
The old story

Mr. Hopson signs himself 'well and truly fed up' and you can see why . . .

Q Can you help me? I have a Rotel 240 with a Thunderpole twig and I am being wiped out on all forty channels by my next door neighbour. He runs a Fidelity 3000 and a Maxcom and has two twigs, a Silver Rod outside and a home brew out of a TV aerial in his loft — about fourteen feet from my aerial.

Another breaker down the road is also wiping me out on thirty channels.

The Thunderpole Mark II



All of the Rotel range benefit from the filter modification.

My rig has been checked out by a CB 'doctor' and it is O.K. I have asked the breakers to go on reduced power as they only talk to local breakers. I do not like the idea of calling in the G.P.O. as it would cause a lot of bad feeling. I have tried my best to reason with them but as soon as I come on channel I am keyed out within a few minutes.

A This is a tricky situation. Although I can give some general advice, there is no real solution without the co-operation of the other breakers in your area.

Firstly, the Rotel is a set that could benefit from the crystal filter modifications that have been covered in the magazine. The Rotel range use the Cybernet chassis and other modifiers report great success with bleedover rejection once the modification has been done. See December '83 Citizens' Band.

You could also try moving your aerial as far away from the chap next door as possible. If possible, put it higher too, so that the aerial next door is in your ground plane shadow.

The trouble is that your antenna is getting such an enormous signal from the adjacent antenna that it is almost impossible to cure it completely, although if it is any consolation you are probably affecting other breakers too.

It would be nice if you could all come to a friendly agreement over this, and although this is probably not a popular suggestion, it would help if breakers in close proximity to each other used the attenuator switch.

SA

Problems should be sent to
CB Q & A, Citizens' Band
No. 1, Golden Square,
London W1R 3AB



TELECOMMS

THE COUNTRY'S LEADING IMPORTER AND SUPPLIER OF CB EQUIPMENT

Well, hello once again out there. As you can see, we managed to survive the plague of Beta 3000s and the avalanche of Thunderpols so here I am once more for the May Issue.

With the continuing success of the Sadelta Echomaster and the beginning of mild motoring weather, lots of you have been asking what the Sadelta hand microphones are like. Well, there is, as yet, no mobile equivalent of the Echomaster, but the two mobiles they do make are excellent.

The HM30 Amplified Hand Microphone (£12.95) is a great favourite in our area as it amplifies



without that rasping distortion which you normally associate with inexpensive power mikes. At close range it hardly sounds like a power mike, but the modulation is still crisp and clear even when the signal strength is virtually nil.

For the Breaker with a few extra pennies to spend (when we find him) the HM20 is the really deluxe hand mike, featuring compression as well as amplification.

It is hard to describe what it sounds like. "Bootiful" would not be an exaggeration, but you would have to try one yourself to get the full benefit. And if you have £23.99 to spend, you can do just that. I don't think you will be disappointed! And whilst on the subject of microphones, many Breakers are worried when it comes to wiring them up. There are many different configurations used, but about eighty percent of the UK market is covered by the two systems shown. The pins are shown from the "soldering" side of the plug. On the left we have the order used in Cybernet chassis rigs, including York, Amstrad, Rotel, Radiomobile and Binatone, plus Ham, Colt and Tristar. On the right is the order used by Uniden, Superstar, Cobra 148, President and Grandstand Hawk and Base Stations.

If your rig doesn't fall in there somewhere, drop us a line and we can let you have your particular wiring. If you are ordering mikes or processors

from us, state which rig you have and we will send them ready-wired.

In the meantime, many people have been extremely impressed with the quality of the Nevada RF Amplifier mentioned last month and there will soon be a pre-amp available from the



1. AUDIO
2. SCREEN
3. RX-SPKR
4. PTT-TX



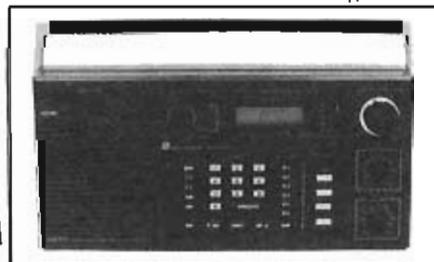
1. SCREEN
2. AUDIO
3. PTT-TX
4. RX-SPKR

same British stable.

Also proving popular is the Cybernet Easi-Com, which is a compact emergency rig which packs away in a box when not needed. It has a four watt output, plugs in the lighter socket of your car, and comes complete with pre-tuned mag-mount antenna for just £19.95. And that is not a mis-print! Finally, before I start getting hundreds of them wrapped up in anticipation of your orders, if you are wondering what is going on away from the 27 MHz band, the Uniden Receiver could be for you. The CR-2021 covers from 150kHz to 30MHz and from 76MHz to 108MHz VHF. It features keyboard programming, two scan facilities, 12 memories and fine tuning. It is fully portable, but can also be operated with a large base antenna at home, coming complete with mains adaptor for that purpose.

If you have already had our catalogue, but think that it may be getting out of date, just send us 50p, together with

the date you received your copy, and we will send you all the updated info. Our catalogue is reprinted every few weeks to keep pace with new products and developments so the catalogue now has a lot of goodies that were not in a couple of months ago.



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Dear Breaker,

As the UK's largest CB distributor we cannot hope to do justice to the vast range of items we stock by showing them in this advert. Our 1984 Mail Order Catalogue is now available, price £1, so why not send off for a copy now?

If you do so before April 24th, in addition to the £2 voucher, valid on any purchase worth more than £10, we will give you, absolutely free, either a CB Jargon Book or CB Log Book. Just state which you prefer.

Thousands of Breakers have already discovered how easy it is to shop with our Mail Order Service. Orders can be delivered within 48 hours, or a maximum of ten days if paying by cheque, so write to us today and get on the Telecomms wavelength.

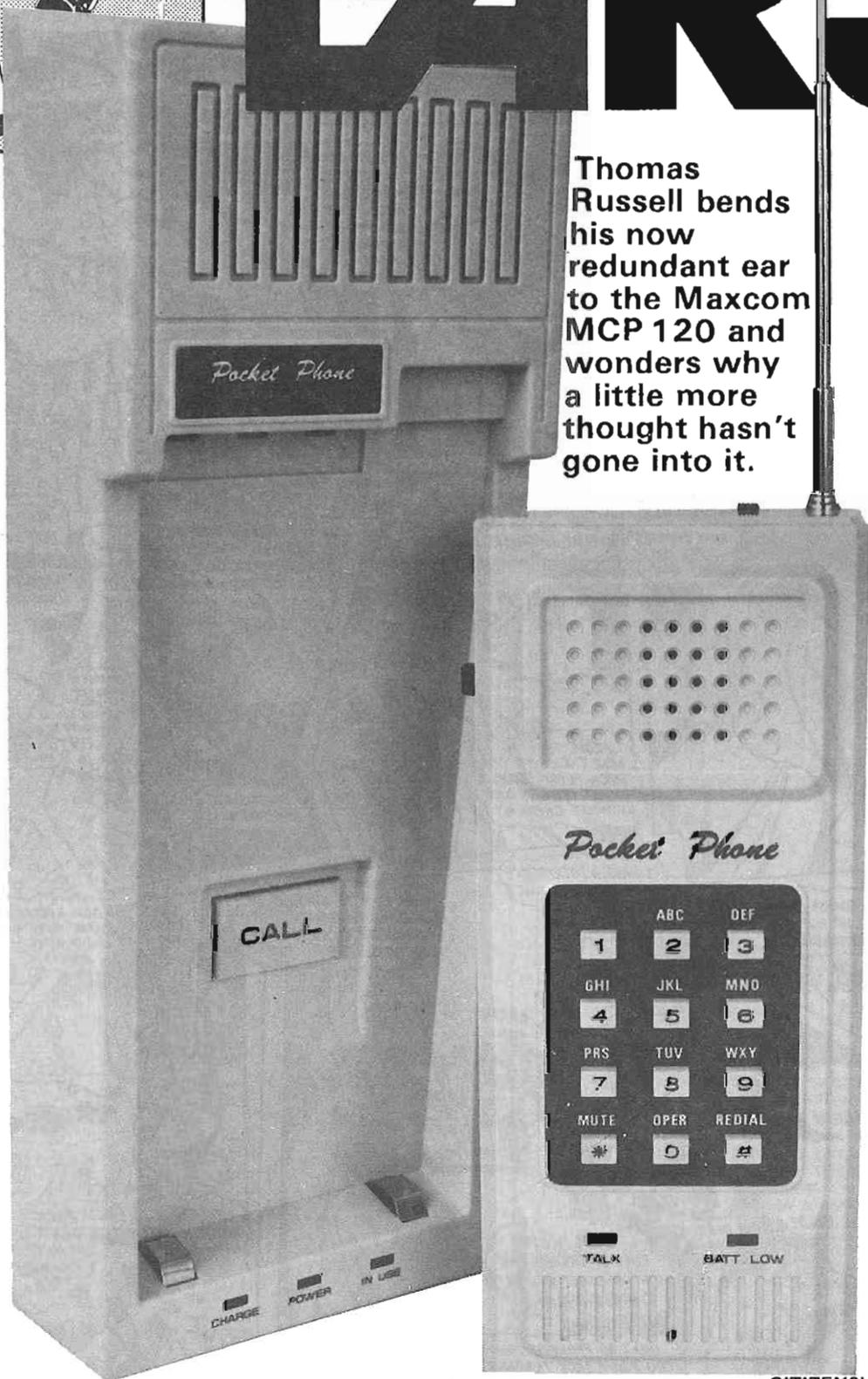
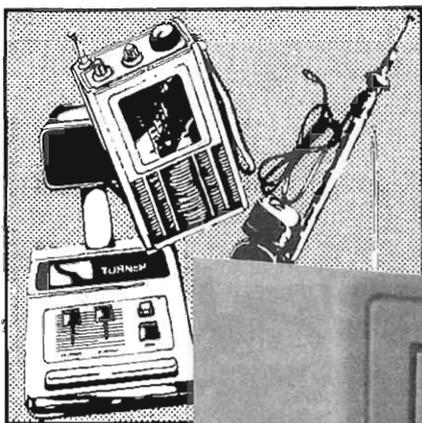
Take Care,

Bob Jenkins

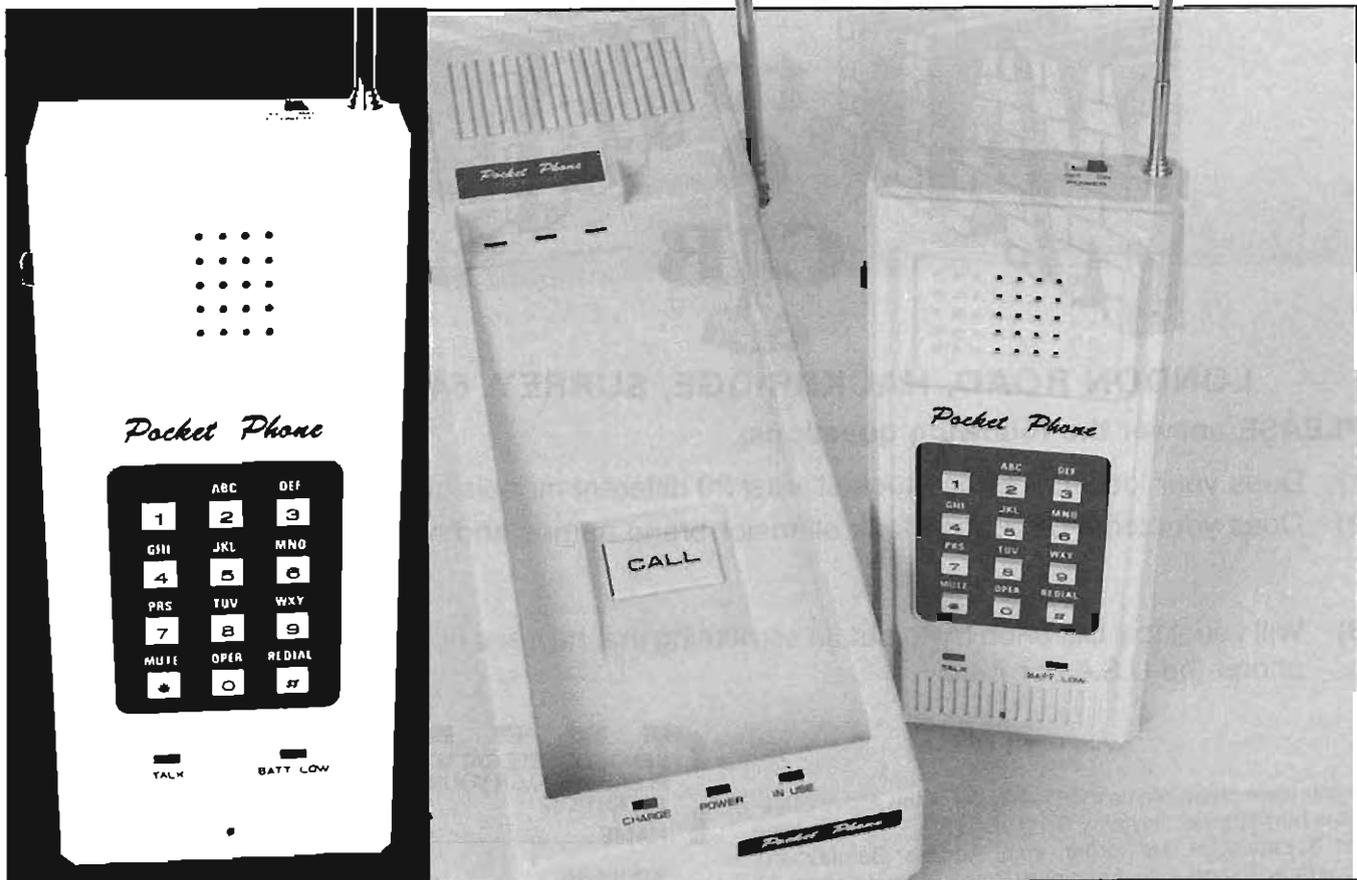
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HOTLINE: (0705) 662145

Pierced EARS



Thomas Russell bends his now redundant ear to the Maxcom MCP 120 and wonders why a little more thought hasn't gone into it.



There's an ominous little sticky label on the side of the Maxcom MCP-120 remote handset; it warns against putting the handset to one's ear whilst it is ringing. Being of a curious nature I waited some time for an incoming call, ready to fearlessly test the validity of the warning — I am now in the market for a cheap hearing aid; I'll swap it for a redundant Walkman, any offers?

The Maxcom MCP-120 does indeed have a loud ring and a particularly unpleasant one at that — I must admit I prefer a gentle warble, it doesn't need to be too loud after all. Minor gripes aside (we'll get to the major ones later) the 120 is small and compact but there seems to have been a lack of foresight when it comes to the control layout. Firstly the standby/talk switch — it's been mounted on the side of the handset and will neatly slide into the talk position every time the handset is tucked into a pocket. The digital keypad is stiff and unreliable. It's difficult to know whether or not a key has been successfully depressed as there's no feel to the buttons — it might ease up with use but it's a definite minus point.

The handset's not particularly comfortable to use and the keys leave a neat indent in the users cheek. Luckily the microphone is fairly sensitive so it's not necessary to shout though there's temptation as the small size of the handset means that the mike hole is some way away from the users mouth.

The base station is a bit of a

disappointment too, not because it is a bad design but simply it could have been so much better. In my opinion the whole thing is back to front — instead of the handset sitting in the cradle, face down, it perches rather precariously with the keypad, mike and earpiece uppermost. It looks and feels wrong. Secondly the base unit has to remain flat, there is no provision for wall-mounting, if you tried it the handset would fall out. It wouldn't have taken much imagination to incorporate a little more thought into the design.

In operation the 120 is OK and I'll say no more than that. The antenna might as well not be there as the range is rather poor, about 75 yards was the best I could get under known conditions. One answer may be that the individual sample was faulty but it operated satisfactorily in all other respects. A plus point for the 120 is the speech quality — in short it's excellent. Inside the rather meagre operating area you can expect high quality speech that only deteriorates at the limits of the range — at this point there's no gradual fade, the signal (and call) are abruptly lost so make sure you know the limits of the unit's operation before going walkabout.

The 120 is a fairly lacklustre cordless telephone that is saved only by the often low selling price. The design is crude by contemporary standards, the range is disappointing

but it does have a full line up of facilities: paging, mute, redial, hi/lo volume and speech quality control, so within its limitations and for the right price it may prove satisfactory to some would-be cordless phone users. If, on the other hand you're prepared to spend a little more there's much that's worthwhile.

CORDLESS PHONE REVIEW DATA PANEL

Model MCP 120
Distributor Maxcom
Typical Price £70

Features	Yes	No
Rechargeable Batteries	<input checked="" type="checkbox"/>	<input type="checkbox"/>
IN USE Lamp	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Intercom Facility	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Auto Redial	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Privacy Button	<input checked="" type="checkbox"/>	<input type="checkbox"/>
External Antenna Facility	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Security Code	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hand Free Operation	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Range	upto 700ft	

FREQUENCIES

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1.6 — 1.7 MHz



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UR67	Superior RG8 per metre...	£0.67
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UG176	Reducer fits PL259 to RG58/U...	£0.15
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David Shepherdson empties his post bag to catch up on the news and the clubs.

COMMUNICATION THE

QSL WAY

Welcome once again to the QSL Pages! Remember any and all information, moans and praises are to be sent to

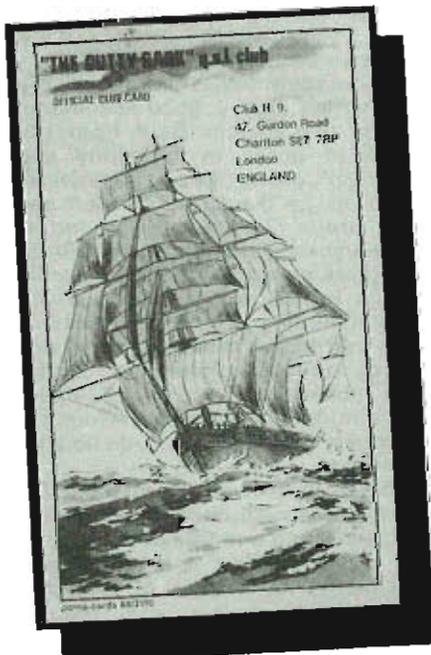
Dragonrider One at the club address please. I'd like to start this month's column with a few corrections of errors from a couple of earlier issues, before I took over!

The Anglo American Magna Carta International Sidebanders (AAMCIS) address was given as Coronation House Hotel, Newquay. But Mick Marks (AA 001), has moved and his postal address is now P.O. Box 13, but still in Newquay. *The Saxon Skippers* address is now P.O. Box 31, Fareham, NOT Sunningdale Road. Also the address of WDC (Whiskey Delta Charlie) is NOT P.O. Box 1a, Normanton, but P.O. Box 54 in Wakefield. It's P.R.O. is now Bill, WDC 393 and WDC 4 Martin is still secretary and welcomes new members. An S.A.S.E. will fetch details of membership. The above information was given to me by Gordon, Club President of the *Zulu Whiskey International QSL Club*. While on the subject of the *Zulu Whiskey*, in a long letter Gordon tells me that he has reduced the price of the club QSL cards to £2.50 per 100, postage paid (UK). His club stamps are still available at £3. The cards are made in UK, and the stamps in America. He does, however, hope to obtain a new design shortly which will be available as a special offer to existing members. Write with an S.A.S.E. for full details. Remember, to join the *Zulu Whiskey*, and any of the other *FREE* Membership QSL Clubs about these days, just send a large SASE with a minimum of a 17p stamp and five or more of your signed, dated and addressed cards. For anyone not quite sure just what an S.A.S.E. is, it's a Self Addressed Stamped Envelope. Gordon has also asked me to mention a little about the

subject that upsets many 100% QSLers.

This is the problem of people sending out scraps of paper and photocopies. There are now sufficient QSL printers about for the serious QSLer, like *Curries*, *Mr. Quiet*, *Sundown*, *Radar*, *Poma*, and others, to name but a few who do QSL cards at reasonable prices. Anyway, I'll quote from Gordon's letter. "Along with the *Dragonriders*, *Cutty Sark*, *Dayglo* and other reputable QSL Clubs, the *Zulu Whiskey* will reject tatty paper 'QSL's' sent for membership. These are QSL Clubs for QSLers, not just free clubs for anyone who can scrawl their address on a bit of chip shop wrapping! Several printers will supply 'stock' cards which are acceptable for membership as long as the sender's name and address is clearly included on each card. Personalised cards are preferred and are essential to anyone who intends joining any QSL club. The majority of QSL clubs exist to promote QSLing and swapping and anyone who joins and does not intend to QSL 100% is wasting their time and the club's! Now, while these comments may upset one or two people, I'm sure that the vast majority of QSLers would rather receive a card that shows that interest has been taken, as against a scrap of paper that suggests that the sender couldn't care less! Whilst in some cases, circumstances prevent the buying of full colour cards etc, by the time you add up the costs of photocopying and postage, which will probably be wasted because no one replies, £15-£20 for 1000 personal QSL Cards is quite a bargain!

Now, I've had a nice card from the *Big Squirrel*, also known as *Marc of Essex*. First one that I've seen like this. Drop him a line, he'll be happy to send you one or two. Also a colourful Club card from *John, Sierra Oscar 63* in *Sussex*. I've already mentioned *Sundown* as a printer, but they also



QSL. Lucille Bice is Sundown herself, the actual artist who draws those superb cards; send her or Mike a QSL for details of cards and of the *Sundown Collectors Club*.

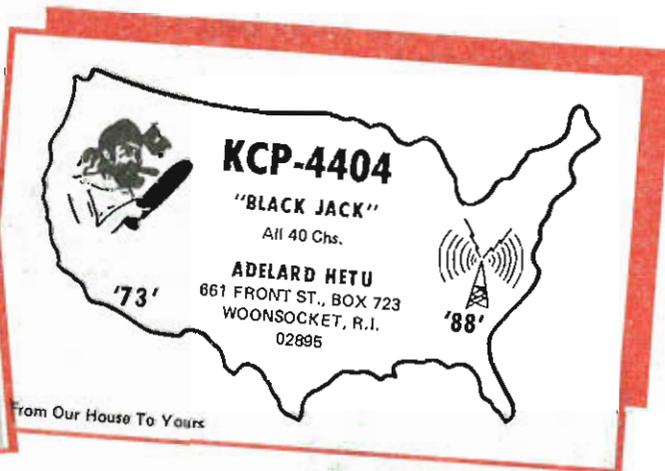
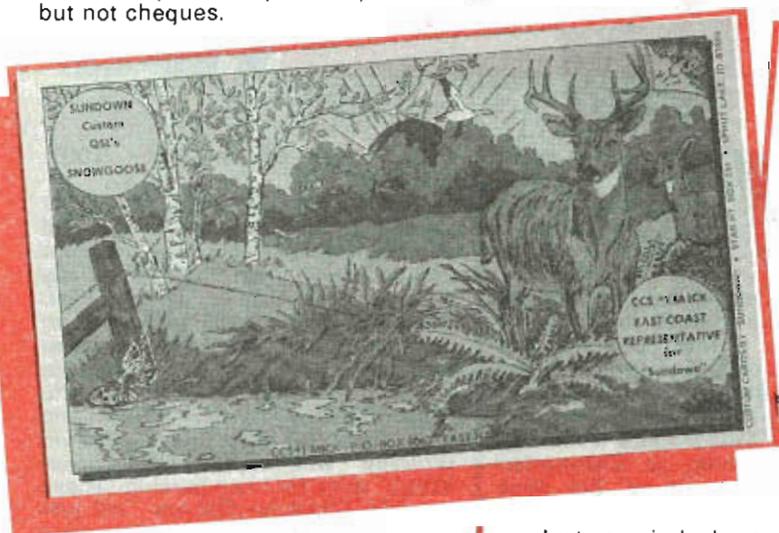
I've just had a card from Chris Potts (EW 14) of Cramlington of the *Echo Whiskey Group*. Drop him a line and say Hello!, he'll be glad to hear from you. Also, I've had a rather unusual card from Tony, BY 16 — Firecrest of Berkshire. A very nice good quality card. Must just mention a package from a pair of German clubs. The *MT QSL Club*, and the *QCS DX Club*. They send a very good package, but they do stress what "We NOT Spekys Englisch!". Tassilo (QCS) has an interesting card, but adults only please! Membership is \$14 (US), 10 cards and a photo for ID Card register. This gets you membership in both clubs. They do accept money orders, but not cheques.

your Unit number, ID card, certificate, club stamp, swap spoon, postcards, stickers, exchange cards and invites, and also a surprise item. Frans says you don't have to swap spoons to join as he welcomes QSLers as members too. Just remember to say so when joining and send 5-10 QSL cards instead of the spoon.

Another UK club to get a mention is the Wolverhampton based *Boomerang Radio DX - QSL Club*. For £6 and 10 cards (all signed and dated of course) you receive your Unit number (XYL/M free), ID card, certificate, club stamp, 10 large and 10 small club QSL cards, roster, exchange invites and ten exchange cards. Also a pen or key ring and use of the Club P.O. Box if required. One thing about their club stamp, it does remind me of Charlie Drake! If you join, you'll see what I mean.

of the Cardiff club, the *Hi-Flyers*, who tells me of a change he has had to make. Quote, "due to rising costs in printing", unquote, he now has to charge 50 pence plus a large S.A.S.E. with at least a 17p stamp on together with six of your personal signed QSL cards to join. In exchange you get a HF Unit number, ID card, exchange cards and invites, Welsh Tourist information, stickers, a club QSL card and a CB Code of Practice. His address is in the list at the end. I note that he has changed his printer for some reason.

If Elaine, Brown Bud of somewhere near Liverpool is reading this and would like to send an S.A.S.E., her return address and full name for details of the *Dragonmaster Club* and a return QSL, I would be very happy to oblige, but, as you sent an unaddressed card to me, I cannot do so!



People keep asking me where I got my "Thanks for QSL" Owl rubber stamp. This was obtained from Norwich Rubber Stamps of Norfolk. They offer an excellent service for all types of rubber stamp for both QSLing and business use. One thing I have found with this firm, any "Stock" items are sent by return of post and any special orders are also dealt with very rapidly. A large S.A.S.E. will fetch fuller details and current prices.

The *Zodiac QSL Club* of Spain writes with information of its pack. It is a prolific club, well run by Luis and for £2 plus five of your personal QSL cards, you will get your Unit number, ID card, certificate, five club cards, exchange cards and invites. Luis does ask that all cards are signed and dated, also that your full address is clearly printed on each card. A club stamp is also available. Remember not to use radio call signs on letters to Spain, as the eleven metre band is illegal there and any post with call signs, numbers etc, will NOT be delivered.

Here's one for the spoon collectors among you, it's the "V.W. 16 Spoonclub" of Holland. For \$9 (US) or 25 Guilder, about £5, and they do accept sterling, (BUT check the current exchange rate at a local bank before sending) and a souvenir spoon, you get a good package back. This includes

Just a reminder here, when writing to Belgium, do NOT use the name of the addressee on the envelope! The Belgian Post Office will not deliver, OR return, envelopes with names on! So, use only their address.

Now, I've had some news from the *Scottish Thistle Club*. They now offer two types of Club cards at £4 per 100 for either type. S.A.S.E. for details please. The club also supply a club stamp. To join this excellent club, just send a S.A.S.E. and five or more of your QSL cards. Evelyn is a lovely lady and returns 100% plus! From the *Cutty Sark Club* comes the news that they have reached the 600 mark with their membership in less than one year. Not bad for a young club like this. It is a very well run club and one that I am happy to recommend. To join this excellent club, just send five cards and a S.A.S.E. President Tony tells me that the Club now has some full colour PQMA cards available (members only) for £3 for 50, and can also offer personalised cards at £23 for 500. Not bad for full colour collectors' cards! Please do not forget when writing to any of the free membership clubs for any reason, please enclose a S.A.S.E to assist with a speedy reply. These clubs are run for QSLing and QSLers and finances are often very tight.

Talking of which, I have just received a letter from Tony Hailstone

I'll just slip a few QSLers' names in here who have written to me and deserve a mention. From Hatfield comes Diana Bagg, Crazy Cat, from Kilmarnock, KWW 24, the Sea Leopard himself, Andrew Brown, from Carmarthen hails Neil Evans, the Black Rat, whereas Cochise of Maidenhead wants to say Hi! That's Tony Grove, GVB 02, and from Hove in Sussex comes Neville and Tricia Kilshaw. Finally for just now, comes Reuben of Worcester. Reuben uses some Currie "Stock" cards, but he does sign each one!

I have some details of a French QSL Club which uses a good likeness of Asterix the ancient Gaul from the series of books by Goscinny and Uderzo. It's a long title and is known as the *'Deix Le Gaulois QSL Club and Deix Group De France'* For ten or more signed, dated with full address etc. cards plus either £18 (US) or 90 French francs, you will receive you DX-Unit number, ID card, Membership card, certificate, exchange cards and invites, tourist information, roster, club rubber stamp, sticker, Calendar and a multilingual lexicon, which my dictionary describes as a... dictionary! Oh well...

If you just want a membership number and card, then just send one QSL card with one US dollar. They do not accept Sterling, and allow about one month for delivery of your club package.

I have received a letter from *Currie Printers* letting me know that another one of those so called chain letters is on its disgusting way round! These items should be put in a bin or burnt as they are so often threatening in their approach as to what will happen if you break the chain.!! One going around last year threatened actual death would befall you! Anyone who passes one of these on, or considers starting one off, please just think about the effect this sort of thing has on the elderly or infirm QSLer!

This one started in Brazil in 1980, and asks for 2 QSL cards plus \$1 US to be sent to the name at the top of the list, then for you to make at least 20 copies. This sort of disgraceful thing is just another way of conning money out of people. My local Police inform me that these letters are not actually illegal, but in my personal view they are just as bad as obscene phone calls! So, if you get one, throw it in the bin, or send it to me with a covering note, and I'll use it to light the fire!

A little information arrived from Holland about Radar, the QSLer and printer of *Radar Full Colour* cards. He has now moved and any mail should be sent to the new address.

Information has also arrived about the *Happy Cobblers QSL Group*. It has now been taken over by HC 80, Fred (I don't know his last name) as of the 1st of February. Fred has sent me a long letter and asked me to publish it all, but for various reasons this is not possible so I will pass on the main points. Fred says that he has nothing to do with any post sent to the *Happy Cobblers* before this date, and any problems that anyone has had must be dealt with by contacting Chis Darlington direct. He

has also had nothing to do with the making of the club cards or stamps or stickers. However, the new HC package is not available for £5, presumably with 5-10 of your cards. Fred promises to dispatch these within 7 days of receipt. He hopes that any of the older members of the HC will put pen to paper and send him some of their own cards so that he can send them out to new members when they join. I join with Fred in wishing Chris good luck with his new interests in the future and I also wish Fred the very best of luck with setting the *Happy Cobblers* back onto the QSL circuit once more.

Now then *Des Currie (Printers)* have just sent me a few Adult Eyeball cards through, sorry Des, I can't print them, buy anyone who wants to see some, or order a set, the Currie code is CB 4, and they cost £1 per 100. A S.A.S.E for samples etc., but a signed declaration must accompany any request for these to the effect that you are over 18!



I've had a nice letter from Cathy 'Pontoon' Jones of Nottingham asking for anyone who would like to QSL with her, she promises to QSL back 100%. She also recommends the *Antenna QSL DX Swap Club of Spain*. Membership is £7 plus 10 QSL cards, all signed and dated with your full address on. Or, if you drop Cathy a line with a S.A.S.E. and mention CB's column, she will send details of the Club and all it offers.

Some nice cards I've received recently include an interesting one from The Ninja and Morning Glory of Brighton, Chris and Shirley. Staying down south for a moment, we move over to Southend-on-Sea and say hello to Alf Jackson. Hands up everyone who remembers Dan Dare! Is that all? Well, it shows my age! Dan Dare's favourite enemy was the Mekon, an evil little green critter, usually found floating in a deep saucer, so if you'd like to hear from the lad himself, then drop Alf a line and the Mekon will QSL back with a great Poma card.

The Craneman, Paul Gittos of Bridgnorth promises to QSL 100% to all cards he receives, as does Farmer Giles, Stephen Worsnop of Harrogate, a near neighbour of mine.

Another letter from *Des Currie (Printers)* arrives with the news that the second winner of the Great British QSL DX Club's Awards 1983-84 is Jean Chapple of Norwich. She collected 100 Currie Cards and received her 2500 entry Log Book free. She is now well on her way to the 200 cards mark for the 1000 free cards and a 5000 entry Log Book. There is still time to enter this competition! Des also has the first edition of a 100%



List of QSLer Addresses

Marc	PO Box 8, Wickford, Essex, SS11 7ER	Roger Powell	74 Smallwood, Sutton Hill, Telford, Shropshire
John, SQ63	PO Box 55, Horsham, Sussex	Alf Jackson	15 Coaster Steps, Southend-on-Sea, Essex SS1 2ST
Art Brodeur	6 Mt St Charles Avenue, Woonsocket, RI 02895, USA	Paul Gittos	11 Russell Close, Stanmore, Bridgnorth, Shropshire WV15 5JG
Adelard Hetu,	661 Front Street, Box 723, Woonsocket, RI 02895, USA	Chris & Shirley Willis	17 Upper Shelvington Pl, Whitehawk, Brighton BN2 5GY
Chris Potts, IW 34	PO Box 8, Cramlington, Northumberland, NE23 9HX	Stephen Worsnop	Hirst Grove Cottage, Birstwith, Harrogate, N. Yorks HG3 2HZ
Diana Bagg,	PO Box 14, Hatfield, Herts AL10 0DG	Cathy Jones	16 Park Avenue, Woodborough, Nottingham NG14 6EB
Andrew Brown, KWW 24	PO Box 34, Kilmarnock, Scotland	Jean Chapple TC 27	PO Box 27, Norwich, Norfolk NR6 7HU
Neil Evans	61 High Street, Abergwili, Carmarthen, Dyfed, S. Wales SA31 2JB	Tony BY 16	PO Box 18, Reading, Berks RG1 4LA
Tony Groves, GVB 02	PO Box 266, Maidenhead, Berkshire SL6 2XA	John Thoroughgood	11 Scotts Terrace, Hetton-le-Hole, Tyne & Wear, DH5 9HZ
Neville and Tricia Kilshaw	96 Mloyne Close, Hove, Sussex	David Shepherdson	Dragonrider One, c/o Club Address: 2 Travers Place, Dervock, Ballymoney, Co Antrim, N. Ireland
Reuben Gearstick	44 Ludlow Road, Kidderminster, Worcester DY10 1NW	Geoffrey McBride	
Tony Tatman CS 001	47 Gurdon Road, Charlton, London SE7 7RP		

QSLer's list available. There are nearly 100 names in this list and a S.A.S.E will fetch one, also details of the QSL Awards. Just remember to enclose a note letting the Curries know what it is you are interested in.

A letter from a well established Norfolk club arrived today from the Sea Dragon DX QSL Club. President Ken says that the club is a year old this May and hopes to crack the 1000 barrier anytime. Membership is free for 5 signed and dated cards (QSL or viewcard) and a S.A.S.E. The club package is very good, the ID card and mini-certificate have had a lot of thought put into them. Various club extras are also available.

Oh yes, before I forget, and end up with a violent Zulu Whiskey President banging on my door, if any ZW members, with numbers below 1500 are reading this (if not, why not?) could you drop a line to Gordon please as Gordon took over the club about this point. Therefore he has no record of any members of these numbers and would like to trace any still QSLing. A S.A.S.E for return would be appreciated. Just before I close for this month, a letter from Don E Blake of Kansas tells me that membership of the Mid-America Radio Club is available for

5 signed cards and \$1 (US) for postage. If you cannot get hold of a dollar, I imagine Don would accept three International Reply Coupons. These are available from your local Post Office. You receive your M.A.R. Unit number, ID card and an eight by ten certificate. A nice little package and it gets a recommendation from me. Finally this time round, just a few words about a new item to the column. It's "Vote for your favourite Club" timel Although this is very new, I've already received some votes from people who have heard of it, even before it's been printed! The TOP THREE UK Clubs for this month, in reverse order are, Number three, the Zulu Echo of Saffron Walden, number two, The Cutty Sark of London, and number one, is the Zulu Whiskey of Brighouse. The overseas Club is the Antequera QSL DX of Spain, and the outright winner of the "Top of the Flops" section has the initials "KK". To vote for the next poll, just jot down YOUR favourite three UK Clubs, one overseas and one club you wouldn't recommend! To forestall any cries of "Cheatl!" etc, the Dragonriders is exempt from voting. Any votes received after the 20th of the month will go forward to the next poll.

If you have any praises, moans, comments or just want a mention, then please drop me a line at the club address below. If you'd like a reply, then PLEASE enclose a S.A.S.E or return postage. If you'd like to become a Dragonrider, then please enclose a S.A.S.E. and five signed QSL Cards. But whichever it is, please, please mark the envelope or letter clearly. This will help me to reply as quickly as possible to all. I normally reply by return of post. Thanks, Dragonrider One. One last thing, watch this space for further details of the Delta Romeo Charlie Charliel

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COMMUNICATION THE QSL WAY

List of QSL Clubs etc:

Anglo American (AAMCIS)	PO Box 13, Newquay, Cornwall TR7	Deix le Gaulois Club	PO Box 38, 26150 DIE, France
Saxon Skippers	PO Box 31, Fareham, Hampshire	Antequera QSL DX Swap	PO Box 92, Antequera, (Malaga), Spain
Wakefield WDC	PO Box 54, Wakefield, West Yorkshire WF2 8UT	Sea Dragon DX QSL Club	PO Box 2, Sheringham, Norfolk NR26 8TY
Zulu Whiskey Int. QSL	PO Box 14, Brighouse, West Yorkshire HD6 2SE	Happy Cobblers,	PO Box 99 (or 105), Northampton
Cutty Sark QSL Club	47 Gurdon Road, Charlton, London SE7 7RP	Mid-America Radio Club	Rt.1 — Box 226, Cherryvale, Kansas 67335, USA
Dayglo Int. QSL Club	13 Syenite Place, Rostrevor, N. Ireland BT34 3EP	Great British QSL DX	PO Box 5, Consett, Co Durham, DH8 8NG
MT & QCS Club	Postfach 1313, D-6600 SAARBRÜCKEN, West Germany	Zulu Echo (UK) DX & QSL	PO Box 31, Saffron Walden, Essex
Zodiac QSL Club	PO Box 168, Sant Feliu de Guixols (Gerona), Spain	Dragonrider QSL Club,	3 Tarn Villas, Cowpasture Road, Ilkley, West Yorkshire LS29 9RH
V.W. 16 Spoonclub	PO Box 2243, 5600 NA Eindhoven, Holland	Sundown (Printers)	Star Rt, Box 251, Spirit Lake, ID 83869, USA
Boomerang Radio DX QSL	PO Box 156 Wolverhampton WV6 9DX	Curries (Printers)	89 Derwent Street, Blackhill, Consett, Co Durham DH8 8LT
Hi-Flyers QSL Swap Club	428 Cowbridge Road West, Ely, Cardiff, S. Wales CF5 5BZ	Radar (Printers)	Jozef Israelslaan 46, 2596 AR's — Gravenhage, Holland
Scottish Thistle QSL	51 Hathaway Lane, Maryhill, Glasgow G20 8NG	Norwich Rubber Stamps	111 Eade Road, Norwich, Norfolk NR3 3EP



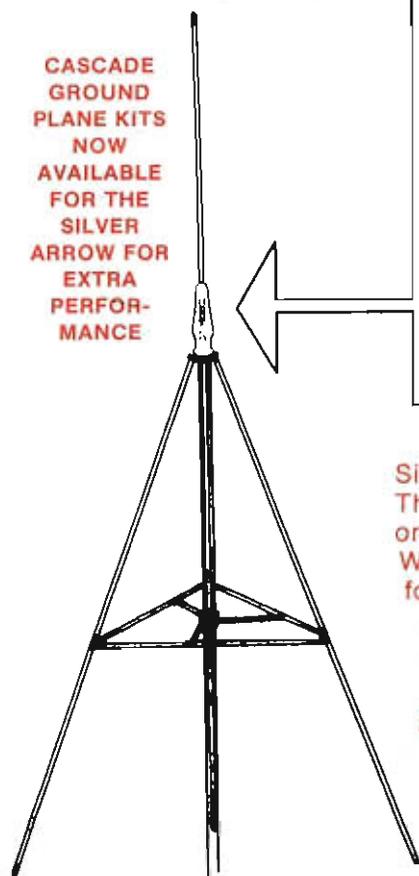
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TRADE ENQUIRIES WELCOME

ROAD Hazzard

Immortalised even in song, the Dukes of Hazzard have epitomised the secret fantasy of many a CBer. Sue Sharp wonders why.



"I was watching the Dukes on me colour TV" starts the song that circulated on record in the old days, as the band (Citizens' Banned) explained how they got lead into CB. "When I saw Boss Hogg had a big CB. So I went down the store to get all the gear . . ."

I wonder how many people started CB like that, particularly before we had the legal system and films like *Convoy* and *Smokey and the Bandit* gave us a glimpse of something that we never knew existed? For all the breakers that were influenced and intrigued by something they saw on the big screen, *The Dukes of Hazzard* played the same role for many more on the small screen. Prime-time TV, the programme is popular and prompted some pretty fancy driving as well as the urge to have a CB.

Although many of us would be quick to say we don't watch it, there are plenty of watchers behind closed curtains — including me. It has CB, fast cars, good triumphing over evil

(well, the Dukes triumphing over Boss Hogg, which is more or less the same thing), comedy, a strange fairy tale element where good will always win, and some sympathy for those that buck authority.

Of course the series has an uncredited star, the General Lee. Raced, abused, jumped over and driven through ponds, the orange car also asserts some personality of its own. A bit too much for comfort at one stage, which helped prompt the departure of the original Duke boys from the programme.

Now returned to the programme, John Schneider, who plays Bo Duke, was in London in March to host the Children's Royal Variety Performance and I spoke to him about the programme.

A little bit dazed by the time difference and the sudden fall of snow — which is uncommon in Atlanta, John said "We start shooting a new series in April so I will be soon back to 'yahooing and Uncle Jessieing'. We shoot about 22 episodes a year, about ten miles from where I lived for many years in Atlanta."

The subject of the General Lee quickly came up and John let me know some statistics from the show.

"We use the 1969 Chrysler Charger for the General, a model from the years of the muscle car and on average we wreck about three cars an episode. We have some cars that are used for the close up shots but the rest are junk when they land after being jumped — we've got through about three hundred cars since the series started. Chrysler didn't make that many so the series could come to an abrupt end if we use 'em all up and the transport people can't find anymore!"

John is interested in driving and cars himself, which is just as well as he has sixteen of his own, a collection which includes a Porsche, a Jaguar, two Aston Martins and 'a few Italian sports cars'. He and Tom Wopat (Luke Duke) do some of the stunt driving themselves but the studio are always apprehensive of letting them do too much.

"The only time there are arguments on the set is when someone comes down and uses stunt men for a basic car trick."

There was a stage, says John, when the show was "becoming the story of the car and we did the same show over and over again with different title." This was one of the contributory reasons for John and Tom dropping out of the show for some months but they are now back and in John's eyes, the scripts have changed for the better.

"It has some substance now, it's a story about people and it shows more concern about things that matter. As well as being 'good ol' boys' the two Dukes show more responsibility."

Although the show is set in South, the production company originally only held auditions in New York and California. After not finding their main characters, they went to Atlanta almost as an after thought. After reading the part, John was sent to California for a screen test that was supposed to take 'a few days'. Five and a half weeks later he was still there.

"My nerves were shot! They kept retesting and reshooting and all I wanted to know was yes or no. Four days after the last test I was back in Georgia shooting."

Enos, Cooter and Bo were all cast in Georgia so the show is more authentic than many that we see.

John has only good words to say about the rest of the actors in the programme, especially his arch-enemy Boss Hogg, played by Sorrell Brooks.

"Boss Hogg — he's great. Speaks Japanese, Russian, Italian, French.

He's a wonderful little guy and a very cultured man. If he's not on the set he's in his room or sitting at the side with his head in a book."

John's main problem with the programme is none of the things that spring immediately to mind. He's 6' 3" and has great trouble getting in and out of the General Lee through the window! The General is supposed to be a NASCAR vehicle and the doors are welded up for safety and John's frame tends to get stuck half way through. They usually have to cut the shot while John opens the door and gets in the normal way! If he and Tom do get out in the approved manner, they rip their jeans instead on the door handle!

So the original Dukes are back, the series is in its seventh year and the programme has come back from near the bottom in the ratings to near the top. John says "There's a frustration in doing a regular series, but a nice frustration" and barring any more difficulties of opinion or a sudden film career, he's back to stay. "I'd like to be 80 or 90 years old and still go out on to a set" — bet then he would really have trouble getting out of the car window!

The CB aspect of the programme has never ceased to amaze me, though. Is there no one else on channel in Hazzard apart from them Dukes and their friends and enemies?

Whatever the time of night or day, whatever the channel, perfect clear copies. I suspect some help from the sound men and a hitherto unheard of CB system called wishful thinking and dubbing.

However it's done it certainly fulfills a fantasy for many CBers. Dashing around in a fast car, co-ordinating a life-or-death situation with your CB and having a perfect CB system into the bargain. However much we decry CB's Americanisms, there's something highly satisfying in watching CB work in the way we would secretly like it too.

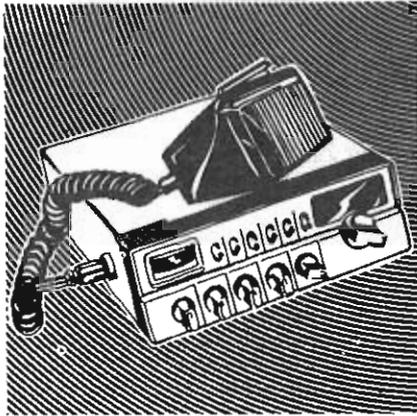
But is it the way CB *should* be working? In some respects, no. In the programme, CB is used as a weapon between authority and rebels, to thwart the law and by a small group of people who apparently keep everyone else off the air.

It also presents a false view of CB. It is often used when the emergency services (apart from 'Ros-coe-Peee-Coltrane') should be called in and perhaps encourages the view that CB is more effective than it really is most of the time — for the majority of us, anyway.

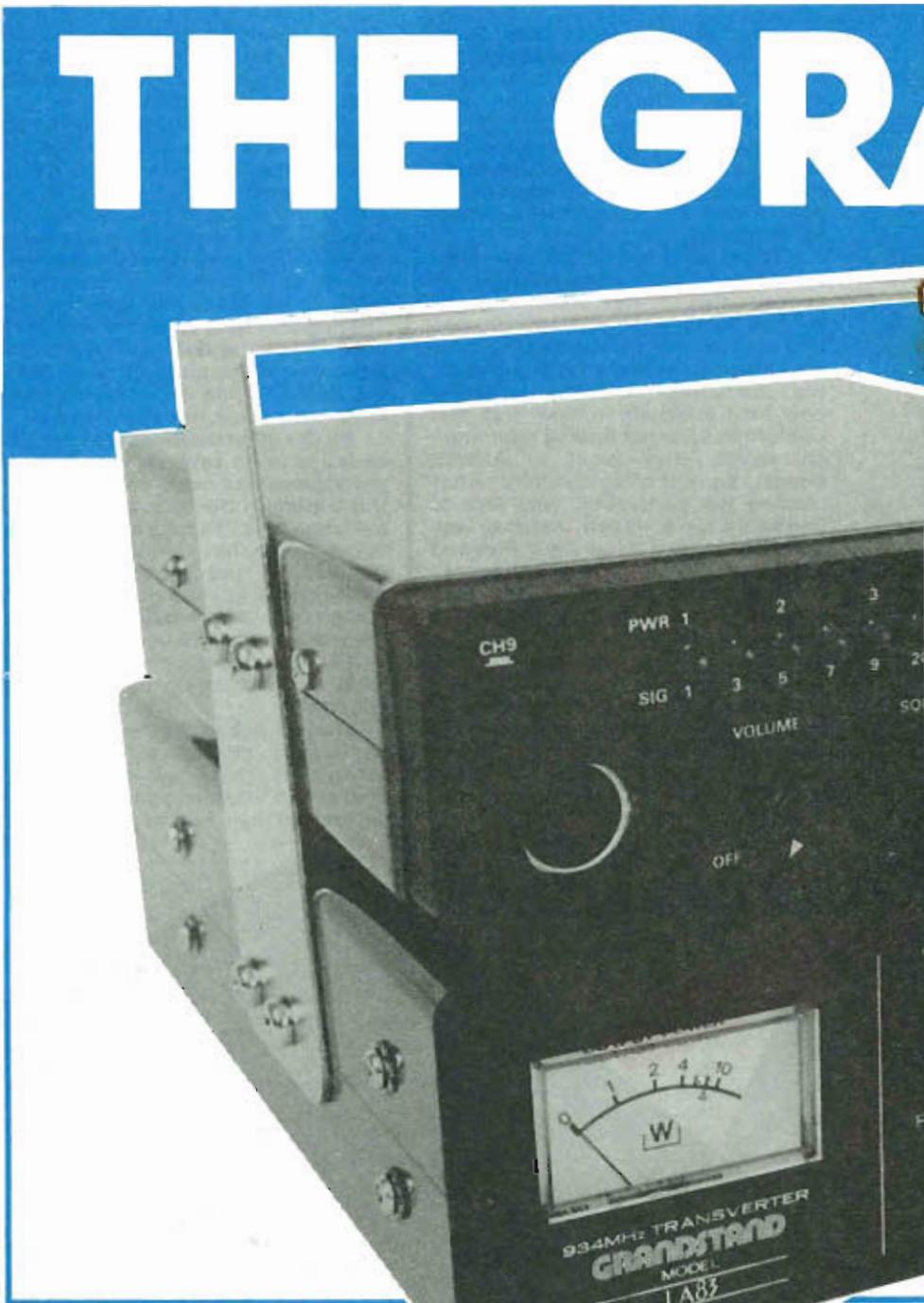
But it also presents a view of a CB service that we would like to see. No wallies and no bucketmouths — they wouldn't stand a chance with the Dukes and Cooter to exact revenge, and CB being used in some serious situations, rather than always being trivialised. And, with my rather tongue-in-cheek criticisms aside, usually used reasonably responsibly. Besides, don't you rather have a sneaking desire to take the place of at least one of them?



Rig Review



Chris Peterson looks at the test results and performance in this follow-up on the 'transverter' approach.



Above: The Bluebird 27MHz rig and LA83 Transverter.

Right: The omni-directional base antenna and ground plane.

The UHF CB band poses a lot of problems for those of us who have to carry out these tests! Most commonly available test equipment runs out of steam at around 520 MHz! However, we have done our best, and here are the results.

At 13.8 volts, the power was measured as 9.4 watts. This is slightly higher than the 8 watts permitted, but only by about 0.7dB. At the low power setting we obtained an output of 1.8 watts, which is over 3 dB high. The spectrum analyzer revealed a number of spurious outputs at levels greater than the -72/-79dB levels permitted. Only two of these were below the carrier in frequency, being a spur of about -50dB at about 560 MHz, and another of -56 dB at 175 MHz. Above 1 GHz, we found the second harmonic to be only -42 dB and a number of spurs

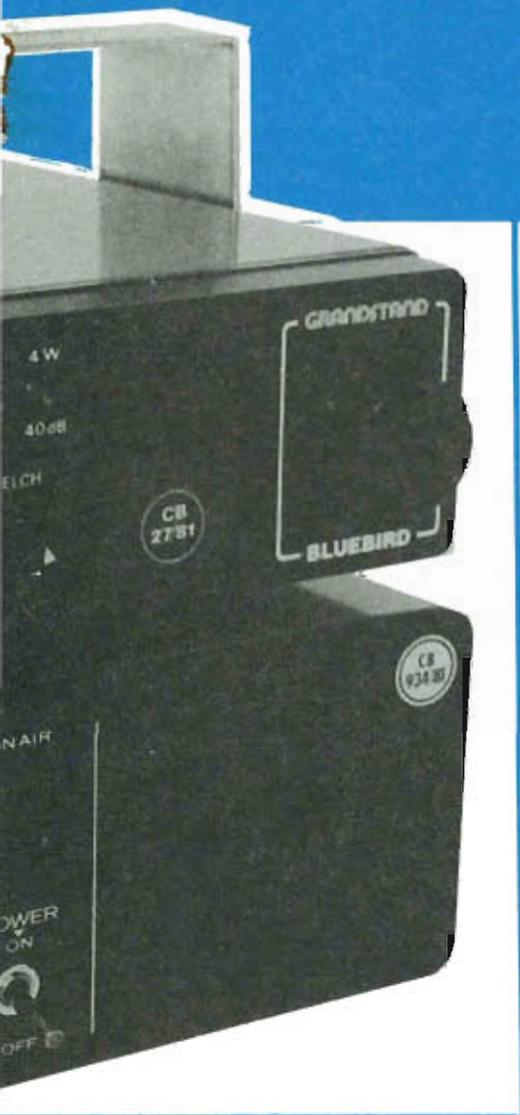
spaced 175 MHz from the harmonics of the order of 45 dBs down.

We should emphasize that these infringements of the specifications are unlikely to worry anyone outside the RRD. Certainly they do not affect the operation of the transceiver.

Being individually adjustable, each channel can be off frequency by a different amount, unlike a synthesized rig where errors tend to be constant. The worst error we noted in frequency was about 2 KHz, well within spec, and most channels were considerably better than this. They were all in error on the low side however.



GRANDSTAND VIEW



when we went on the air with the Grandstand was the increase in activity that has occurred over the last few months! Although the band could in no way be considered crowded, at least in West London you can put out a call and be reasonably sure of a response soon rather than later!

With the four element beam strapped to the antenna mast on the roof, we were almost immediately able to contact four stations in the locality, and over the next week were able to hear several more. Several of the local stations were using Grandstand equipment similar to that under test.

Right from the start we discovered that our review sample had a couple of minor, but irritating faults. One was an intermittent refusal to transmit. Keying the mic would produce an 'On

Air' light, but the power would remain obstinately at zero! Percussion maintenance, a sharp slap on the side of the case, cured it every time, but it was irritating. Also, occasionally on releasing the mic after transmitting, the receiver would indicate an S9 signal, but produce nothing but noise. This appeared to be a dirty contact on one of the relays as keying the mic momentarily would clear it instantly.

These minor hiccups aside, the rig behaved well. The Bluebird contains an exceptionally large speaker which made reception very clear. The transmitted audio quality was also clear and we received many complimentary modulation reports.

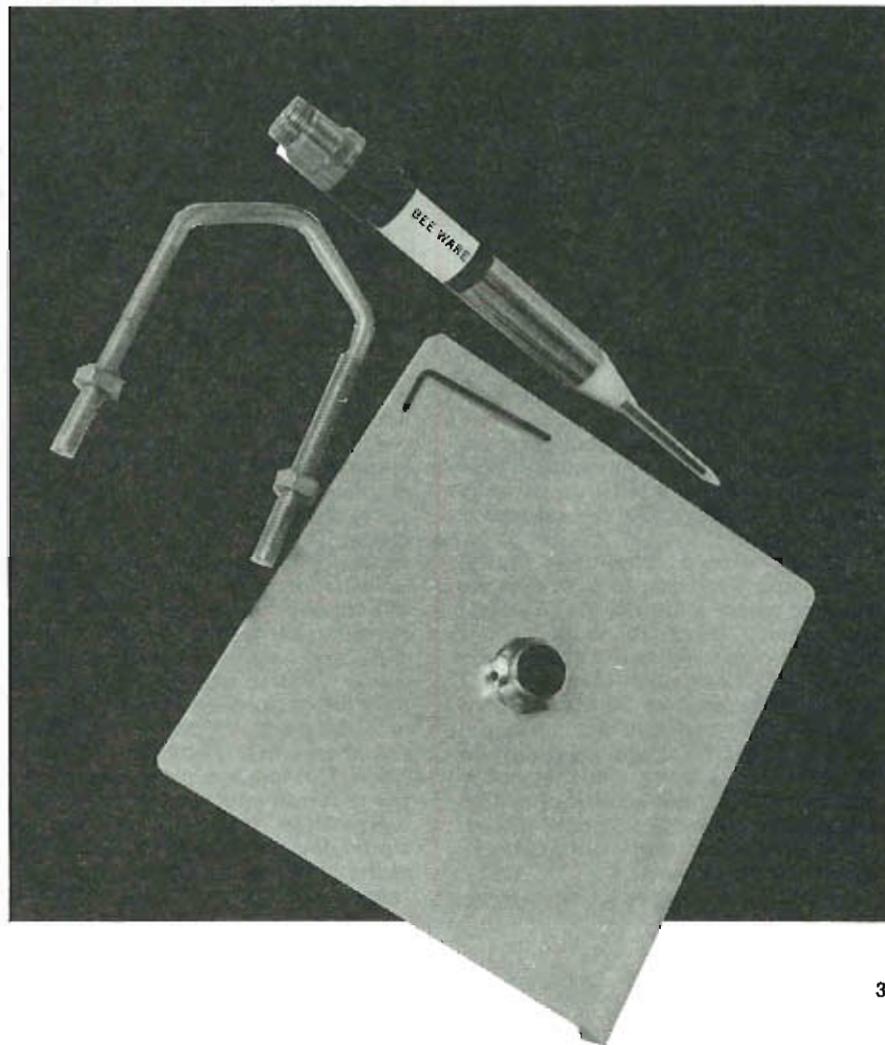
It has to be said, however, that this unit is BIG! Using it in the house as a base station doesn't present too

The manufacturers claim a receiver sensitivity of $.35\mu\text{V}$ for 12 dB sinad when combined with the Bluebird. We were unable to verify this, but can confirm that it is, as they say, adequate!

Because there is no frequency multiplication of the 27 MHz signal, the deviation at UHF remains the same as at 27MHz. In this case we were able to measure it as ± 3.2 KHz. The deviation specification for 934 MHz calls for a typical deviation of ± 3 KHz, and a 'never exceed' value of ± 5 KHz. Thus the system falls within the 934 MHz, but anyone using this particular Bluebird as a 27 MHz rig in its own right would be over-deviating by a considerable amount!

On The Air

One of the first things we discovered



much of a problem, but trying to find a hidey hole for it in the car most certainly does! In the end we gave up trying to locate it properly in the car and just left it on the passenger seat for our mobile tests. This is fine as long as you aren't carrying passengers.

The last time we had UHF equipment on review, we were a little disappointed with the mobile to mobile performance. This time we spent some time specifically investigating this aspect of the rig's performance. Base to mobile, the range tends to be better than 27 MHz ultimately, but more patchy. Also, whereas fading due to reflections tends to be fairly leisurely at 27 MHz, on 934 it is so rapid at anything above about 15 mph that it resembles ignition crackle! As with 27 MHz, reflections of this nature only seem to occur near large metallic objects, such as lamp posts or fences.

Mobile to mobile results were certainly quite encouraging. The landscape of the Chiltern hills doesn't provide ideal terrain for UHF mobile propagation. Communication remained solid while both vehicles were on the same road, but deteriorated rapidly when the courses of the two vehicles diverged. On the motorways we would expect range to be better than 27 MHz, but not so good around town.

Selectivity

Power line filtering appeared to be extremely good, and no real problems were experienced with ignition noise either transmitted or received! During our mobile to mobile tests we did receive some alternator whine from a local mobile station using a Grandstand transverter. However, he was using an Amstrad 901 to drive the transverter and it is probable that this unit was the source of the problem. Certainly there was no evidence of spurious transmitted noise when we were using the Bluebird as the driver.

Incidentally, as a matter of experiment, we did try using other rigs to drive the transverter without any problems.

One of our local UHF contacts also holds an amateur radio license. He assures us that the performance we experienced mobile to mobile on 934 MHz is comparable with that that is achieved using 70 cm amateur equipment.

There is one draw-back to the transverter approach to UHF that we became aware of during the course of our tests. Because a 27 MHz transceiver is used as the basis of the rig, then the selectivity is that of a 27 MHz rig designed for 10 KHz channel spacing. Unfortunately this is a bit too selective for UHF operation where 25 or 50 KHz spacing is the norm. Although we experienced no problems talking to other Grandstand users, communications with Reftec users were a bit more variable.

Because no frequency multiplica-

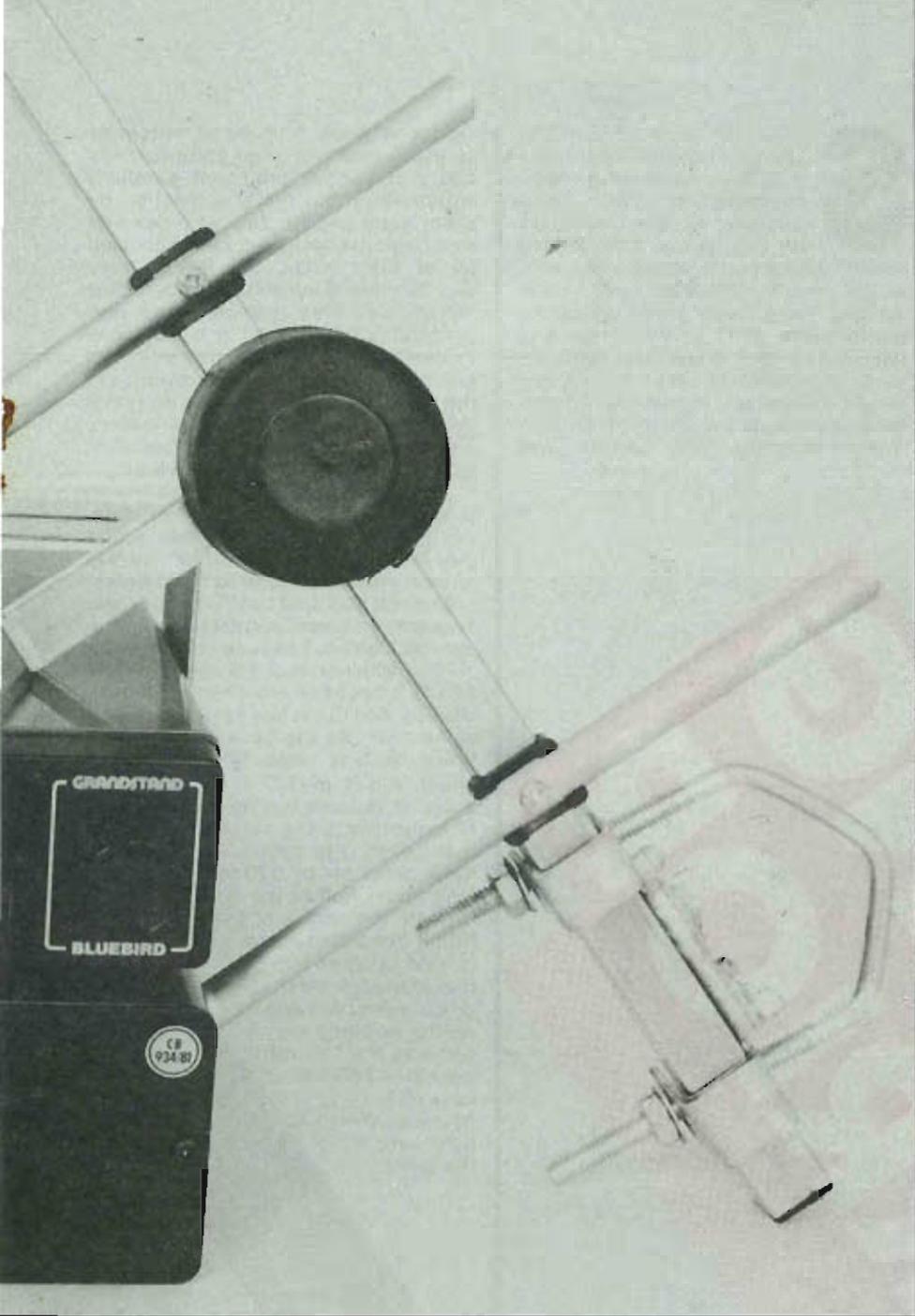


tion of the 27 MHz drive signal is employed, the deviation of the transmitted 934 MHz signal is the same as the 27 MHz signal. In the case of our review rig, this did not appear to have been turned up a bit, but still did not take full advantage of the deviation allowed at 934 MHz. This isn't a major problem when transmitting, but the same logic applies in the receive mode. The consequence is that the received signal will be shifted down to 27 MHz, but retain its full deviation. If the transmitting rig is using the full deviation permitted, then the Bluebird will 'see' a considerably over deviated 27MHz signal. The relatively tight filters used for the second IF filter in 27 MHz rigs will effectively 'clip' the deviation when it hits the edge of the filter. This causes peak distortion of the received audio. In fact it's slightly worse than this, because when the signal deviates outside the pass-band of the filter, the rig sees no signal and responds in true FM fashion with

white noise! This makes the recovered audio very harsh and distorted. Any slight frequency errors between the transmitting and receiving rigs aggravates the problem, as this causes asymmetrical clipping which sounds even worse!

The problem doesn't arise when working Grandstand to Grandstand, as the deviation is less. Also, because of the higher reference frequency (about 45 MHz) before the multiplier chain, the final output frequency tends to be more accurate and less prone to drift. However working Grandstand to Reftec produces more variable results. If the Reftec is under deviating, then it works fine, however if the Reftec is producing full deviation, then expect to receive a distorted signal. Working in the other direction poses no problems, and Reftec rigs receive the Grandstand without much difficulty.

We found the presence of a power output meter very reassuring. The 934 MHz band is still relatively quiet during



working hours, and some indication that you are in fact transmitting does wonders for your peace of mind when you don't get an answer! It is also nice to have a 10dB attenuator. Although of academic interest from a user point of view, it was very handy for evaluating the affect of antenna orientation on relatively local stations.

Remember that on 934 MHz you are allowed 10 metres antenna height before applying the 10dB attenuator rather than the 7 metres of 27 MHz.

Once again, we were impressed by the total absence of TVI, or indeed any other ill effects when operating on this band.

We hope that Grandstand may reconsider their decision not to market the transverter separately. Although we can understand their reasons for doing so, we feel that better compatibility with other UHF equipment could be achieved by using a 'driver' rig with some form of RIT or delta tune control.

We didn't encounter any problems

from 27 MHz feedthrough during our tests. Obviously, since a 27 MHz transceiver is the basis of the system, it must be susceptible to a strong signal on Ch1 of the 27 MHz band. However, our tests indicated that a 27 MHz signal level of 3mV was required at the input of the transverter to produce a response at the Bluebird output with a 10dB S/N ratio. This very high signal requirement combined with the extreme inefficiency of a UHF antenna at 27 MHz should provide more than adequate immunity from 27 MHz transmissions. However, if you insist on strapping your UHF antenna to the side of your 27 MHz antenna and then using Ch1 of 27 MHz at a high power level, do not be surprised if you get some breakthrough!

As regards desensing and swamping, the band really isn't crowded enough for this to be a problem. Whilst parked outside a UHF base station, we were aware of his presence on another channel as the

squelch would chatter slightly. This was the sole indication we received of any swamping effects during our trials.

We were well impressed with the overall performance and construction of the Grandstand UHF system. The system seemed less critical of installation than the other UHF system we have examined, and performed well in mobile operation. Against this has to be weighed the VERY high price (nearly £400 at the time of writing) and the sheer bulk of the unit. For such a high price one is entitled to expect something above average. It was therefore a little disappointing to find that our review sample had a couple of minor faults. However, these appeared to be isolated instances, as none of the other stations we talked to had had similar experiences.

The Radio Regulatory Department have always maintained that it was their intention ultimately to expand the UHF band to 40 channels at 25 KHz spacing rather than the initial 20 channels at 50 KHz spacing. Because of the approach adopted by Grandstand in using separate crystals for each channel, it is difficult to see how they will implement any future expansion in this direction. On the other hand, it took years to get a CB band established at all in this country, so it is possible that by the time the RRD get round to releasing the other 20 channels, all existing equipment could have rusted away anyway! You pays your money and takes your choicel

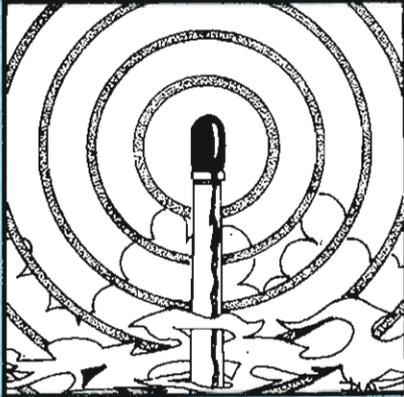
In some ways the Bluebird transceiver is slightly wasted in this application. Although a perfectly satisfactory 27 MHz rig, it is only ever used on one channel. To use it as a 27 MHz rig means scrabbling around the back of the transverter and reconnecting the antenna cables; it's a pity the unit wasn't wired so that when the transverter was switched off, the 27 MHz signal was looped through to another SO-259 socket on the back for connection to a 27 MHz antenna. This would then provide dual-standard operation. Power on and Bluebird on Ch1 and you operate on UHF. Switch the transverter off, and the 27MHz signal is looped through, allowing the Bluebird to operate as a 27 MHz rig in its own right. There is plenty of room inside the transverter for the extra relay and socket that would be necessary, and the added flexibility would help justify the high price tag. How about it Grandstand?

Acknowledgements

We would like to thank Bill Dewhurst of Grandstand for the loan of the test equipment.

Also our thanks to Malcolm and Dave from 'Simply CB' in Rickmansworth, and station Echo Bravo (Chalfont St Peter) and Golf Victor Bravo (Maidenhead) for their assistance during the field trials.

Antenna Review



We bring the first review to feature an antenna that is now legally centre loaded.

Since FM CB started in the UK, antenna manufacturers and suppliers have been handicapped in their designs, as the restriction of 1.5 metres, base loaded doesn't leave much scope — or so it would appear. However some novel designs have been produced; some giving quite good performance and some not so good. A few manufacturers have managed to get around the length restriction by having lengthy loading coils, as the length restriction was only on the whip. Others have

produced good homebase antennas by using well designed groundplanes and a few have produced excellent antennas within the specification by sheer good design. Just as it seemed as though the designers had exhausted all of their ideas, the R.R.D. have slightly relaxed the antenna regulations for UK CB. This change in the regulations, whilst allowing more scope in design, will rule out the very long loading coils mentioned above unless the whip length is reduced to bring the overall length within the specification. The coils would have to be adjusted, of course, to allow for shorter whips.

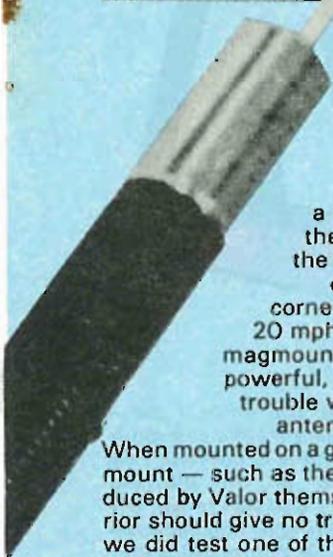
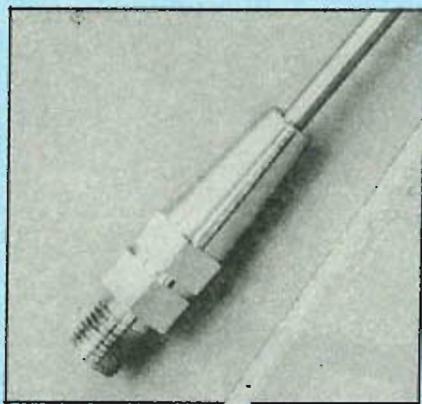
Since we at Citizens' Band like to keep you informed and up to date, this month we have been able to test the centre loaded 'Warrior' mobile antenna manufactured by Valor Enterprises and supplied by WTA of Norfolk. This antenna was prohibited under the old regulations, because of its design.

The Warrior is not a new antenna and as it has been manufactured in the USA for AM CB, it has been around for some time. At the base is a chromed fitting with a male $\frac{3}{8}$ " UNF thread which will fit most antenna mounts but no means of mounting to the vehicle is supplied. The approximately 4mm diameter by 670mm long lower half of the whip fits into the centre of the fitting described above and is held in place by two stainless steel grub screws. Moving up the antenna we come to the 12½mm diameter 180mm long coil housing, which is held onto the whip

by two more stainless grub screws. The coil housing itself comprises of a central coil covered in black plastic sleeving, with a chromed brass boss at either end. The 580mm long top half of the whip fits into the top of the coil and is held in place with another two grub screws. As the upper half of the whip is only about 2½mm diameter and the hole in the top of the coil is the same as the bottom, the two grub screws foul each other if tightened evenly. The best method is to tighten one to hold the whip in place and simply tighten the other onto the first one, thus locking it and preventing it from working loose.

When mounting the Warrior to a vehicle, a strong secure mount is required, due to the weight of the loading coil being half way up the whip which puts quite a strain on the mount. We were quite surprised

**YOUNG
WARRIOR**



when, having mounted the Warrior on a small magmount for a preliminary test, the antenna pulled the magmount right off the car when cornering at less than 20 mph! This particular magmount whilst not very powerful, had never given trouble with base loaded antennas, so beware.

When mounted on a good quality magmount — such as the large types produced by Valor themselves, The Warrior should give no trouble and in fact we did test one of these magmounts with no problems.

The SWR when checked was suitable for use without any adjustment as the SWR was 1.5:1 on 40 and 1.1:1 on 1 which is very good for an unadjusted antenna. After cutting a small amount off the top whip, the SWR was 1.1:1 on 20 and around 1.2:1 on 1 and 40.

The construction of the Warrior is of a high standard and should give a good service life.

On test the Warrior performed very well and contact was maintained without problems throughout the test route. Whilst signal levels appeared consistent with high performance base loaded antennas down to about S5, at distances where signals were lower than S5, readings were inclined to be higher than good base loaded antennas at the same range, with the exception of the K40.

The instruction sheet, although small, contains plenty of useful information, such as indicating whether to lengthen or shorten the whip by SWR readings taken on channel 1 and 40. (a point which frequently causes confusion to many breakers old and new alike).

In conclusion, we consider the Warrior to be a high performance, well made antenna that should prove to be a popular choice for breakers in the future. Having a total length of 1.45 metres the Warrior is well within the new length specification. Priced at around £12.95 it is good value for a high performance, well made antenna.

A similar antenna for performance that we have tested would be the base loaded K40.

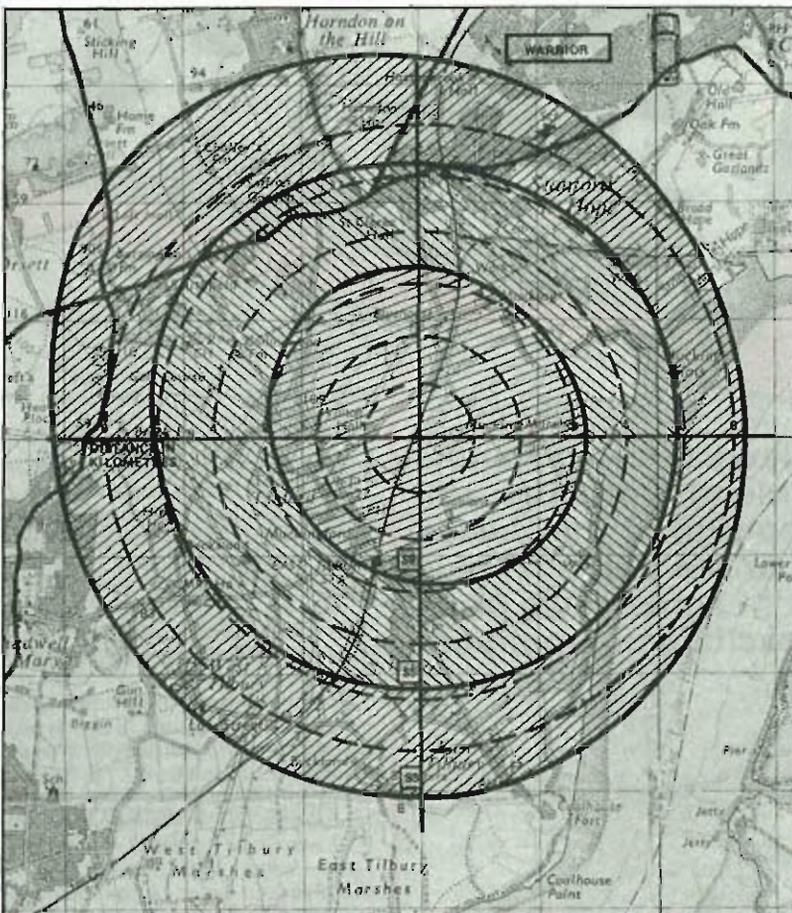
Our thanks to WTA of Norwich for supplying the test sample.

ANTENNA REVIEW DATA PANEL

SPECIFICATIONS

Model Warrior

Type Centre loaded mobile
 Length 1.45 metres
 Frequency Range 27-28MHz
 Max Power Handling —
 Impedance 50ohm
 Cable Supplied None
 Mounting Details 3/8 UNF
 Supplier WTA, Norfolk
 Typical Price, £12.95



REVIEW VERDICT

Performance XXXXX
 SWR Adjustment XXXX
 Construction XXXX

Installation XXXX
 Instructions XXX
 Value XXXX

We rate our samples on a scale of one to five. Five crosses is the highest rating, three and four stars are average to good and one and two crosses mean it's not doing so well.

The Tests

We have used our standard test procedure to assess the efficiency of this antenna. Just to bring new readers up to date this involves two tests; one static and one mobile. Our test sample is fitted to a stationary test vehicle and a second mobile follows a pre-arranged route that orbits the stationary test vehicle, sending and receiving signal reports at measured intervals. This is then repeated with the test antenna on the mobile test vehicle and the signals are sent and received between a stationary vehicle. A standard rig and antenna is used in all the tests. With the results obtained we are able to draw up the radiation pattern shown here. This is simplified to make the results more easily understood. The antenna is also subjected to a series of 'tab' tests to assess their durability, quality and construction, etc and finally we hand it over to a panel of CBers for comment.

933

FORUM

News of two sets this month (although still no sign of the Uniace or the Warlock) plus some news of an exciting competition.

We'll start off again with some reader's letters . . .

Tango Bravo in Walsall, West Midlands has an appeal to make:

I should like to appeal through the pages of your magazine for all operators on 934 to use channel 20 as their calling channel, as is now the case in the south-east of England.

As all 934 operators are aware, 'lift' can be directional and I am sure that this will be beneficial during lift conditions.

In my opinion, operators listening on different channels lose the obvious advantage and although we in the Midlands use channel 10 for calling, we would be only too happy to change to channel 20 to gain an advantage.

I would be grateful if you give this letter some publicity through your magazine in order to gain the views of all other 934 users nationally.

Not in common with the mail we have received so far, *John of North West London* is far from happy with the results he has had so far . . .

After some uming and ering I decided to buy a 934MHz. CB set. After reading all the rave letters, I thought I had to be on a better thing than 27MHz., which was getting me down in my area, where I am surrounded by other breakers. Well, I've had it for a few weeks now and I regard it as a total waste of money that I can't afford to throw down the drain. Don't get me wrong - I wouldn't begrudge the money for one moment if I had got a good CB system out of it but it has proved to be an expensive piece of silent hardware to have sitting on the shelf.

At the same time as the rig, I bought two antennas, a beam and an omni-directional one. Whichever direction I point the antenna in, or

wherever I situate the omni, I get - nothing. I don't know if I live in a ditch or the local geography is bad, but I do feel cheated after all the glowing letters I have read - and don't ask me if I have done something wrong because I have the right cable, connections and have checked out the installation thoroughly.

What a let down!

John has been very unlucky — as he points out later in his letter, you would think there were enough people around on the frequency now for him to copy someone. Still, at almost the same time I had a copy of Mike Delta 233's log book for one night last autumn. Out of eighteen contacts in a two hour stretch, six were over fifty miles with the furthest being 212 miles. You win some, you lose some . . .

Product News

It seems that after a rather slow few months, spring has got the manufacturers stirring and we have news on a lot of items this month.

First is a photo of the prototype and information on the Uniace Minster, a dual base station offering both sets of 934Mhz. frequencies and 27Mhz. The set will feature 8 Watts on 934, 4 Watts on 27 with a power attenuator and press buttons for tone, attenuator and band switching. CBers will recognise the basic design of the Uniace 300 underneath the new trimmings.

The 27Mhz. section has crystal filtering for sharper sensitivity whilst the UHF side has an ultra-low noise GaAsf.e.t. receiver and twin cavity aerial filter. A single loop synthesiser system is used.

At the same time the Minster was announced, at a price of £329.95, plans were also announced for the Uniace Britannia 201, a dual band mobile transceiver and an economy Uniace Cavalier 101, a dedicated 934

**CB
934/81
NEWS**

unit. No prices for these have been announced yet.

Second is news of the Reftec base station. This really is chock full of facilities but the price reflects this at £449.

Features include channel scan for seeking busy and clear stations, fine tune for reception, power S.W.R. transmit and received modulation, signal strength and received signal tune metering, speech processing and clock for keeping schedules. All in a teak case. More details from Reftec.

Last but not least, is the Nevada range from Telecomms in Portsmouth. They have been developing a range of 934Mhz. accessories that are now available in the shops.

The range starts off with a selection of antennas. The PA7 is less than five feet in length and is a stacked $\frac{5}{8}$ wave colinear and comes complete with connectors, mounting bracket and waterproof tape. Construction is of steel and chrome with a fibreglass whip.

The P7 and P7M are stacked colinear arrays with a $\frac{1}{4}$ wave stub section giving a uniform high radiation pattern. The P7 is gutter mount version, the P7M a mag. mount.

The high gain mobile antenna, the P714, is gutter mounted with a fibreglass whip and a sprung steel base.

All the antennas are pre-S.W.Red.

Next we move onto the long awaited S.W.R. meter. Although all the antennas for this frequency have been pre-tuned, many people want to reassure themselves of the S.W.R., especially when experimenting. The Nevada meter has been designed for British UHF CB and has an illuminated scale and N type connectors. There are two needles on the single display meter. On calibrating the forward power, the second needle gives an automatic reflected reading. In addition to being a S.W.R. meter, the unit measures power in two ranges;

Right: The Nevada range of CB accessories.



The Uniace Minster Dual Base Station.

up to 10 Watts and up to 50 Watts.

The other two accessories are a mast head preamplifier and an antenna splitter.

Preamps don't always operate too well under 27Mhz. conditions, but this isn't the case with 934Mhz. The Nevada unit has very good results for noise — an important factor at 934Mhz: 0.8dB with a gain figure of 15db.

One area that hasn't been explored much is the co-phasing of mobile or base antennas. The Nevada antenna splitter makes that possible and it is a low loss unit.

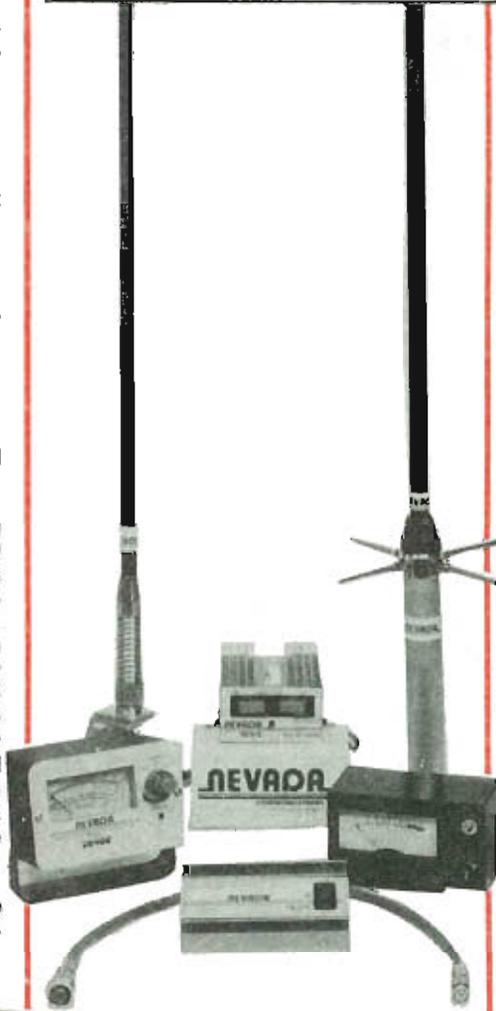
Unfortunately, I haven't been sent a price list for these goodies, but a call to Telecomms or a flick through their advertisement should do the trick.

Competition

Later in the summer (always supposing that we get one this year!), Citizens' Band magazine will be organising a competition weekend along the lines of those participated in by amateur radio users.

We will nominate a 'competition weekend' and certain times for operators to log as many stations as possible. Operators will then be invited to send in photocopies of their logs *and* copies of their confirmation of contact from the stations logged and we will sort out the winner. Certificates will be awarded and we are trying to organise a prize for the best results.

All this is still being planned but look out for more news in next month's magazine.



The Reftec BS-934 Base Station. Note the clock facilities.



Filly finds that her advice has unexpected and worrying side effects. Her reputation as the local CB expert leads her into a tricky situation with the local electrician.

LADY BREAKERS

Up until recently, I had always managed to stay out of the Citizens Band Radio-in-business debate. It's one of those fuzzy, dubious areas where the rights and wrongs aren't very clear, whatever the licence says. Too much depends on the commonsense of the people involved, and there are times when that commonsense can't be relied on!

Something happened recently that raised even more question marks in my mind and has left me feeling a little uneasy.

I was contacted a month or so ago by a friend of a friend who runs an electrical contracting business in and around a town a few miles away. He had heard I was something of an authority on CB (he said), and wanted some advice. Go ahead, I told him cheerfully.

"Well, it's quite simple", he said. "I employ an apprentice and a couple of electricians, you see, and they've all got cars. Sometimes they're working on long jobs, like rewires, but mostly they're skipping about doing bits and pieces, like finding out why someone's lights have all gone out. Thing is, when a call comes into the office for something urgent, we can't always get hold of them quickly and we lose the job. See?"

"Yes" I said. "Er — so?"

"Well, what I want to know is, can I put CB rigs into their cars, so we can contact them while they're driving around, like?"

Sparks Fly

I was aware of a craven impulse to tell him to write to *Citizens Band*, but I do have a reputation to maintain. Fortunately, I did know what the CB licence has to say on the subject of Citizens Band radio businesses, all that stuff about advertising or soliciting goods or services. I passed it on and told him it was probably OK to give directions to his electricians on an agreed channel — so long as it wasn't channel 9.

Well, he went off and did invest in a few rigs, and several times I caught snatches of what sounded like instructions to his electricians. It all sounds innocuous enough ("Sid, you toerag, I know you're there, will you call the office, you b*****!"). After a week, one or two other local firms followed suit, but they all stuck to little-used channels and it all seemed

OK, although one enterprising plumber had to be dissuaded from telling the world at large how great he was with ball-cocks.

But then a few days ago I met the electrical contractor by chance at a party, and asked him, like you do, how it was going. By 'it' I meant life in general, but his response was surprising. I found myself hustled into a corner, pinned with a most unnerving glare, and told I had very nearly landed him in court with my reckless advice.

"Pardon?" I said, blankly.

"Yeah, you know, telling me to go ahead and buy those radios!" he snarled. I began to think I was in the clutches of a madman.

"But I didn't", I said, gently, so as not to enrage him further. "I just told you what the licence says about using Citizens Band for business. What's happened?"

He calmed down in the end, and eventually told me his story. It seemed that one of the electrical jobs his firm had undertaken was the rewire of a large house on a wealthy estate on the outskirts of the town. One night, before the job had been completed and while the couple who lived there were away, the house was burgled.

"Ah", I said, "You mean the police suspected you or your men?"

"No, of course not," he said, affronted. "Only, you see, the electrician working there had earlier that day been chatting about the job on the radio with the girl in the office. Saying what good stuff there was in the house, and how the people were away. Stupid berk!"

I agreed with him. "Do you mean to say", I said, "he let out the address of the house too?"

"He reckons not", the contractor said grimly, "but the secretary told me he'd mentioned the name of the people. Someone could have looked it up, dead easy. Struth! when I heard, I thought we'd be sued."

There seemed to be no connection between the burglary and the indiscreet conversation over the air, but I could understand the contractor's fright. He had got rid of the rigs straight away.

He didn't really hold me to blame, but it left me with an uneasy feeling, all the same. I still wonder about that burgled house, and whether my advice could, in any way, have led to it . . . Nasty thought, that.

CB

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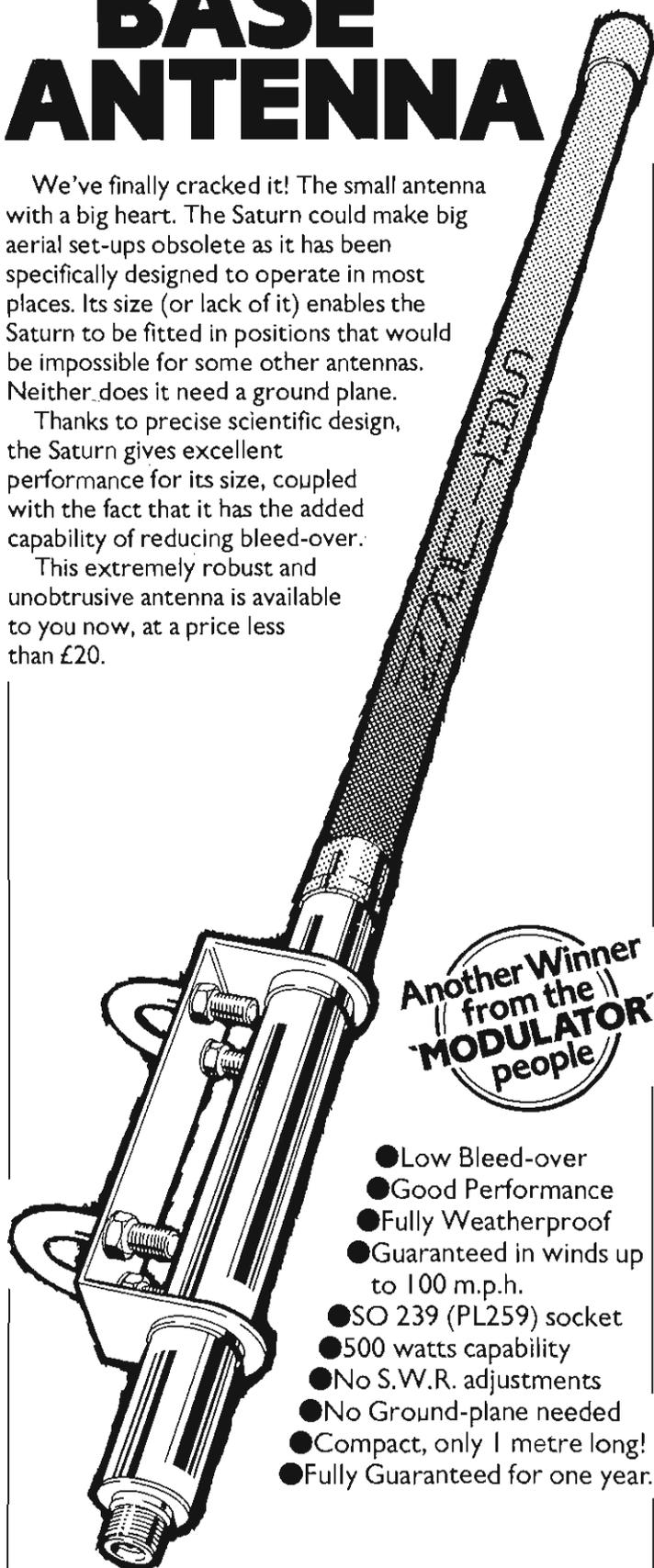
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Mack Chat

Mack reports on someone who was taken to court for his CB behaviour and wonders about the circumstances.

They do get caught. You might have heard them laugh as you try to tell them that they will come to a sticky end if they persist in their antisocial activities, but they then put on another record for the breakers that might be monitoring the channel in question. But they do get caught, so this extract from a news item that appeared in one of my local papers a few weeks ago might bring hope to some and fear to others. 'Police radio jammed by CB fan' read the header and continues 'A CB radio fanatic jammed a frequency used by the police for miles around Chingford by using an amplifier illegally. He also had a 22ft aerial — four times the permitted size. Garry Neale of Richmond Road, Chingford, was broadcasting a film soundtrack interspersed with bouts of swearing and conversation. But his transmission was stopped when Scotland Yard called in a detector van, Waltham Forest court was told'. The report in the Waltham Forest Midweek Extra continues 'Within half an hour they were round at his home. Neale (21) tried to hide the amplifier behind his back but it was taken away for examination. Mr. Stephen Rogers, prosecuting, said the interference had made the police channel useless for operations, causing immense problems. Neale pleaded guilty to two charges of unlawfully rigging up and using the equipment. He told magistrates being a CB enthusiast was like joining a sect where 'the biggest are necessarily the best.' Neale said a high percentage of CB 'freaks' used amplifiers illegally but were rarely caught. His equipment was by no means the most powerful. Because of an anomaly it was legal to buy but unlawful to use. Magistrates fined him £150 and ordered £50 costs against him . . .'

So he got his comeuppance, but will it deter him or will this incident make him a martyr amongst his friends? I don't know how the reporter of this item can call this wally a 'fan' and 'enthusiast' but he was right when it was stated that 'the biggest are necessarily the best' — I am sure he means 'wally'. I wonder what power this criminal was using so that he jammed the police frequencies for miles around Chingford? I know the area and the police station is in the opposite corner of the area to where Neale lives. Maybe a passing patrol car got 'bleed over' and investigated the interference. I like the bit where the police managed to call in a detector van (RRD?) and within half an hour they had nicked him. Has it become that the RRD (if it was the RRD) will only take action if police, ambulance or other emergency services are interfered with?

I was hoping to bring you news and reports of the new 934 Warlock rig but alas I have not been able to get my sticky hands on one yet. My hands are sticky because if and when I do obtain another 934 rig, it will get stuck and I should imagine that it could be difficult to prise the rig away from them.

But George Cole of Everite is keeping me informed of the progress. You may also have read somewhere in this mag that Uniden are planning to produce 934 rigs. There is not a lot known at the time of writing but there could be



a possibility of a home base combined 934-27, also a mobile dual unit and a small 934 rig as well. But when can we expect to see these 934 rigs on the market? Soon, say the manufacturers but as we all know from experience not to hold one's breath whilst waiting. Should I start my 'What I want for Xmas' list now? All I want for Christmas is a 934 rig . . . I think I have said that before sometime.

It was sad to hear that Mike Newbold had packed in his QSL column, together we saw the conception and birth of the present CB system. Mike's reasons for jacking it in are personal so he says, but from what I can gather it seems that some people weren't satisfied in Mike just giving them mentions to help their organisations, clubs, call them what you will, but tried to tell Mike what he should write. It's that same old story, help a friend and he'll stab you in the back with his gratitude. Still, it's none of my business but you have lost a super-fine columnist.

Whilst on the subject of QSL, I decided to have some new QSL cards made. So I contacted Des Currie and through subsequent letters and telephone chats I realise how big the QSL swap scene is. As I once said before and got told off by many of you, I could not see the point of swapping QSL cards for fun but before you start writing to me again, yet I know it's an off shoot from CB and yes, if it's what you want to do then by all means go ahead and enjoy it. But how 100% are these 100% QSL? On my early morning net ratchet to other stations many come to the channel saying 'we QSL 100%' and give a P.O. box number or address. Always eager, I will send a card to stations that are willing to swap cards to confirm QSOs and I have sent many. Yet I do not seem to get as many back. Is this another way to build up one's collection without cost to one's self, I ask? I suppose the answer would be to get myself a P.O. box no. and then I could say 100% QSL and wait for the cards to arrive, but £32 a year is a bit much I think. What we need is more QSL bureaus.

Of the many letters that I have received recently, there are hints in some of them that as I am a licenced amateur I don't really care what happens on the CB bands as I have at my disposal the many superior amateur frequencies. Not true, say I. During the day I use the 2 metre frequency because trying to use CB in central London is almost impossible. But during the evenings and weekends you will find me using my CB if and when I come on radio. Why, you may ask? Well it's people that make radio enjoyable and on CB it's a family hobby where any member of one's family can take part. You can discuss anything you want, you don't have to fill out logs or continually give call signs. But really I am finding it difficult to explain what the real reasons are. I like CB, I also like many of the amateurs that I have met through the amateur bands and many of these people were once CBers. If I didn't care for CB would I be writing this page every month? I can assure you it's not for the money!

CB

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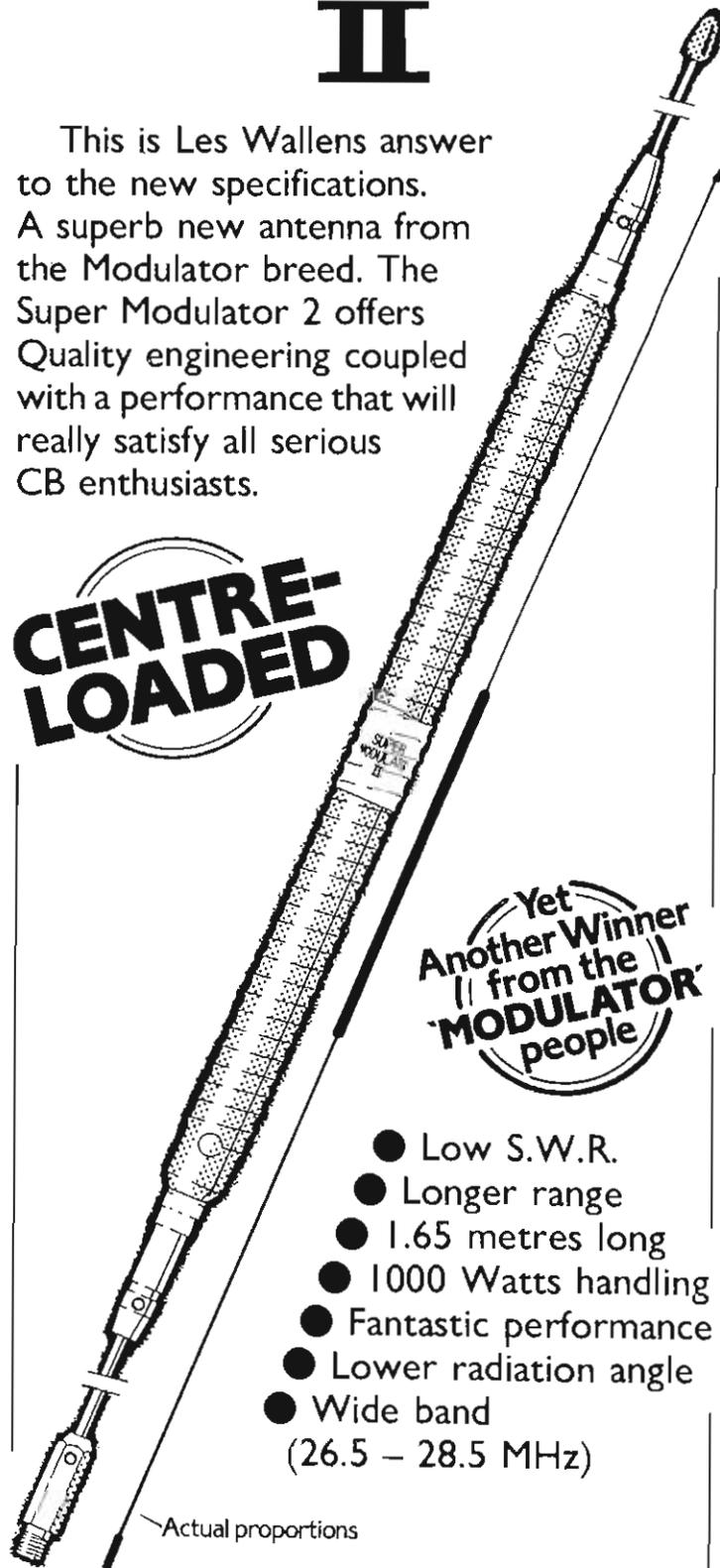
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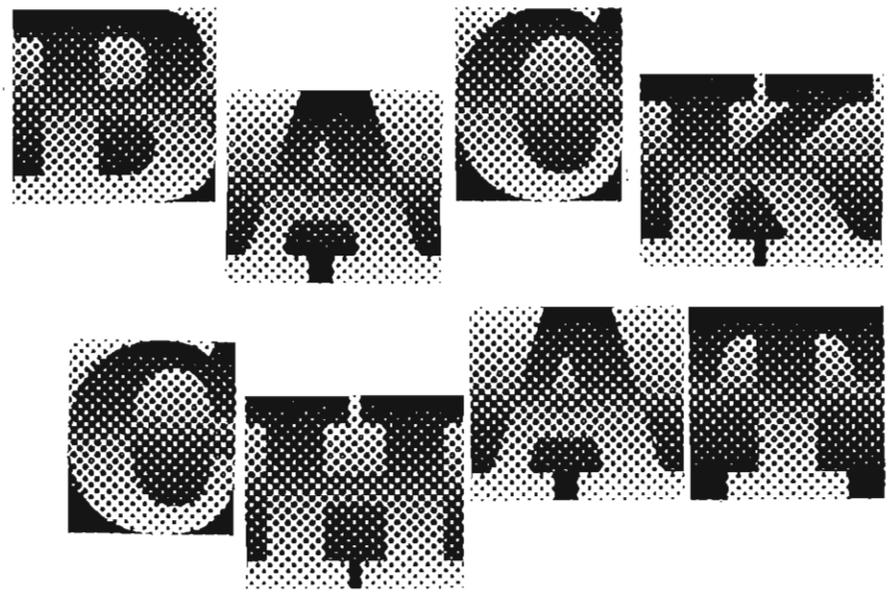
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The controversy still rages as readers take up January's challenge to take issue with J. D. Hirst and his views on channel use.



Patrick Granger of Rotherham in South Yorkshire has replied to the invitation . . .

In answer to your invitation in the January issue, I certainly want to take issue with J. D. Hirst.

According to the Citizens' Band Code of Practice, available from the Post Office, channels 14 and 19 are the breaking and mobile users channels respectively — 'by convention' only.

It is further stated that 'no individual or group has the exclusive right to any channel'.

We all have to contend with hassle of one sort or another — bucket mouths, stampers and the like.

If Mr. Hirst is incensed at all, it should be with the wallies who insist on relaying Radio 1 on channel 14, forcing us to 'poach' elsewhere for our copies.

It seems to me to be a simple case of 'if you can't stand the heat, keep out of the kitchen.'

A Real Headache

Hertfordshire, according to Derek of Hemel Hempstead, also has its problems . . .

In answer to Mr. Hirst regarding channel use.

Hemel Hempstead is in close proximity to the M1, M10, A41, A6, A5 and the North Orbital (M25). The local breakers must be a real headache to mobile CBers as 19 seems to be accepted as a breaking channel. On my way to work one afternoon, I was told to clear the breaking channel (19) by a very junior breaker after chatting to another mobile user about an accident-blocked road.

We also had a local group of breakers who have taken over channel 25. Lots of truckers passing through go up to this channel from 19 to be told abruptly that 25 is a local breaking

channel. I do not object to their using one channel, but I do object to their doctored rig, large antennas and power amplifiers. Some of them bleed over five channels either side. On mentioning to them about the bleedover they were causing, I was told I must have a cheap inferior rig. What a laugh! I own a Cybernet Beta 2000 with a crystal filter added.

I could also go on about a few local taxi drivers using 19 to ply for hire but I think I have said enough!

I think it's about time that we closed correspondence on this subject, as it's unlikely that we will all ever agree on it. It seems that most people have some sympathy with Mr. Hirst but feel that he is overstating his case and not being practical, bearing in mind the pressures on the channels available.

More Controversy?

Another letter that could have readers reaching for their pens, from G. Simpson in Bourne, Lincolnshire . . .

Your reader's letters about channel 9 have made me very angry and I would like to put my point of view.

FM CB users think that they can jump into a frequency that has many users all over the world already, and then want to keep it just for UK CB. It's not on.

I and lots of others have used the 27MHz. band for many years and you just cannot claim exclusive use of any part of this band.

Please, please all those who feel the need to do good and organise go up to 934MHz. and you can be in on the start. There are no other stations on the band and you can organise to your heart's content and leave us to have fun and much pleasure on eleven metres, dxing and making friends with the world.

There are many things I could say in answer to this letter, most of which would be in strong disagreement, but this is your page and I'll let you do the talking. Is G. Simpson right, in your view?

QSL Pleasure

A letter that speaks for itself from J. W Longson, officer-in-charge of the Quarry in Lincoln . . .

I have two mentally handicapped residents who are very keen on CB radio. The local breakers in Lincoln spend some time in talking to them, which gives a great deal of pleasure. Also, several breakers have sent QSL cards to the lads, Peter (Quarry 1) and Ernest (Quarry 2), (I should add that they are middle aged) and these have given endless hours of pleasure too.

Just try to imagine how you would feel if you had had no letters for many years and all at once people started contacting you. Could I therefore ask any breaker, who would care to, to send a QSL card and give even further pleasure. We are not able to purchase cards to return, so in that respect we are being selfish, but I have to admit that money is very tight and we could not afford to return QSL's at the moment.

However if you are passing through Lincoln one weekend, please call and have coffee and meet Peter and Ernest, plus many more. Thanks to the Lincoln breakers who have put up with us and thanks in anticipation to anyone who would care to contact me.

I know the readers of this magazine well enough to know that they will respond generously to this request to The Quarry, 18 Wragby Road, Lincoln LN2 5SL. Des Currie of Currie Printing has most kindly offered to provide some QSL cards for Peter and Ernest, so if QSLers would like to include a stamped, self addressed envelope with their card, they could well get a card back.

Thanks!

P. Ashe of Leicester wants to say thanks to some channel 9 monitors . . .

Would it be possible to borrow your magazine for a few minutes to thank all the 09 monitors in Leicester and the rest of the country, but in particular to a bloke called Northwest 2 who helped when I had the misfortune to slip on some ice during the winter.

It was because of Northwest 2 that I was not left at home in agony for hours but was able to be at the hospital in twenty minutes, so many thanks to all monitors.

One other thing. Could any QSLers drop me a line as I have just started to

collect QSL cards and would like a few more to add to my collection of fifty or so. Of course all cards will be returned 100%.

Cards can be sent to The Falcon (P. Ashe) P.O. Box 102, Leicester.

Wally Winner 2

Antony Jex has another candidate for the 'wally winner' category that was mentioned in February . . .

In reply to the letter headed Wally Winner from Lady S from Alton in Hampshire, the lady thought she had a wally in the local taxi firm operating on channel 9.

Here in Norwich in Norfolk I think we must have a wally to beat the lot.

As we all know, music played on channel 14 is a very common occurrence, but ours is special.

When going down for the night after a long day, I usually have a final flick through the channels, ending up on channel 14. You've guessed it, there was a music player, but what makes this wally special is the time he or she was on channel. It was 3am when the airways around here are dead!

Please tell me if you can see the point!

It Takes More Than One

A letter from the 'Advance Group' in Ayrshire who are hoping to do something very dear to all our hearts . . .

I am writing on behalf of the Advance Group which is a new Kilmarnock group dedicated to promoting and, more importantly, improving the legal FM CB system.

Like many reading this letter, much of the group membership (myself included) campaigned for years to have a CB system legalised in this country. Had we known then that we would be successful but that it would be so abused in the way that it is and that legalisation would be so lax and unenforceable, I don't honestly think that we would have bothered. At present all we have achieved is the introduction of a 'licence to hassle' for offenders. Once we could control and contain these people but now they hide behind the law whilst they go unchecked.

As I've said, the Advance Group is a group of CB enthusiasts dedicated to improving the CB system. To this end we plan to start a new national campaign for the introduction of new, stricter legislation which will cover the use and, more importantly, the abuse of FM CB. We plan to send a petition to the government demanding that something is done.

Any clubs or individuals who would be willing to assist in compiling this petition in their own areas or wishing

further information please write, enclosing an s.a.e to the following address: The Advance Group, Unit O1, P.O. Box 40, Kilmarnock, Ayrshire, Scotland. Remember, it takes more than one to get something done.

Needles and Pins

Little Daddy in Lymington, Hants, has some news of a breaker who is just that little bit different to the run-of-the-mill type . . .

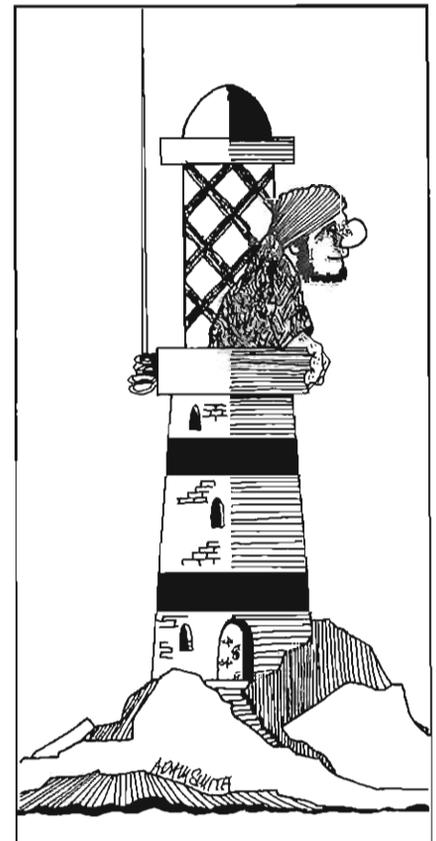
No doubt numerous readers of Back Chat noticed on the television news the lift off of the stranded lighthouse crew on the Needles lighthouse in the Solent Waters during the bad weather earlier this year. The keepers couldn't finish their course of duties on time due to the appalling weather conditions and were down to limited emergency supplies of food.

One of the men in question is the head lighthouse keeper, Mr Wally Long, better known to local breakers as 'Jack of Diamonds'.

In spite of the drama and those weather conditions they have to tolerate in the cause of duty, Wally is always that little bit unique.

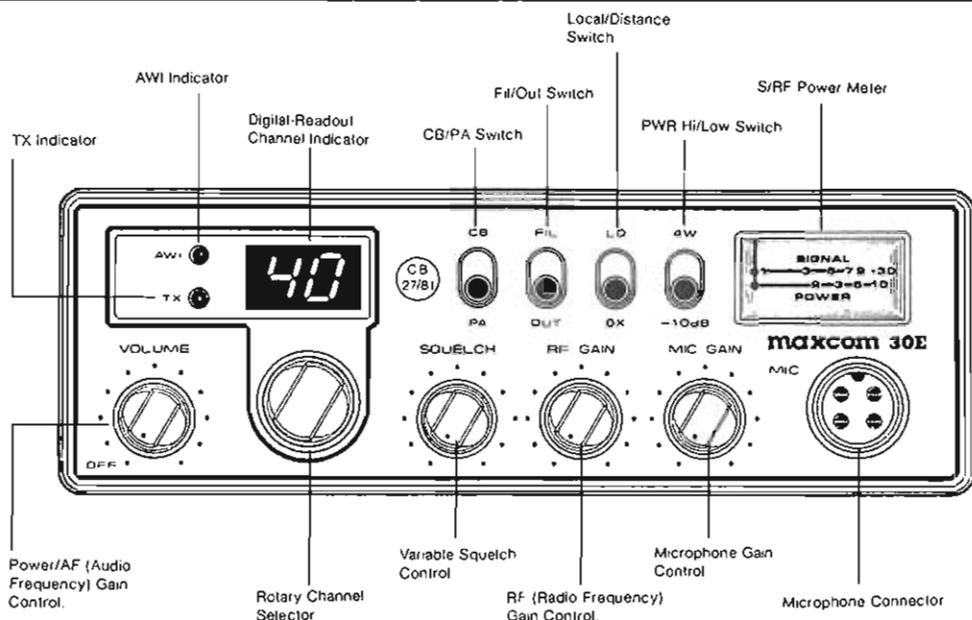
So if any readers are in the vicinity of the needles either on land or sea, give him a shout. It's a very lonely life on a lighthouse, a month at a time with just two mates to talk to and all you breakers out there! So try channel 31 and if Wally is about he will be only too pleased to have a chat with you.

CB



Citizens' Band

REFERENCE SECTION



A CB SET AND ITS CONTROLS

VOLUME
Sometimes called *Audio Frequency Gain* control. Usually combined with the 'power on' switch. The volume control will only increase or decrease the loudness of the incoming signal — it won't alter the strength of it or affect the transmitted signal.

CHANNEL SELECTION
For choosing the channel you transmit and receive on.

CHANNEL INDICATOR
Displays, usually by LEDs, the channel you have selected. Some channel displays are of liquid crystal or fluorescent. The digits are normally bright red, green, orange or blue and visible in all but the most direct sunlight.

SQUELCH
The squelch control is used for quieting background hiss or the babble of distant signals. The control is turned slowly, usually to the right, until the background noise disappears. The squelch circuit will then only open to let through a stronger signal than those you have quieted out. As soon as the stronger signal goes, the circuit closes. Care must be taken not to turn the squelch control up too far, as then only a very strong signal will open it.

SIGNAL/RF METER
On most sets this is of the 'moving needle' type against an analogue background. Some sets do have a bar of LEDs that light up to show the strength of either the received signal or the transmission. It shows the *relative* strength, not a reading in dB or Watts. These meters cannot be 100% accurate and different rigs will give slightly different readings for signals of the same strength.

RF GAIN
This controls the reception sensitivity of the set. When decreased the set is less sensitive, and when increased the set is more sensitive to weaker signals. Reducing the gain helps prevent overloading when talking to someone who is very close.

Some sets, instead of having a suitable rotary control, have a flick two position switch marked *local* and *distance*. Full sensitivity is the *distance* position.

MIC. GAIN
Adjusts the sensitivity of the microphone amplifier circuit and controls the audio from the microphone that is used to modulate the signal.

CB/PA SWITCH
This switch turns your CB set into a low public address amplifier, when an external speaker is fitted into the socket on the back of the rig. Anything said into the microphone is amplified and broadcast through the speaker and not transmitted from the antenna.

tone or Filter Control
This can either be a rotary or flick switch. It controls the tonal quality of received signals in accordance with the users preference.

POWER ANTENNA
Reduces the transmitter power from 4Watts to 0.4Watts. The attenuator should be used if your antenna is mounted more than 7 metres above the ground.

RX/TX INDICATORS
These light emitting diodes light up to show if you are receiving (RX) or transmitting (TX).

ANTENNA WARNING INDICATOR
This is a warning indicator which is activated by trouble in the antenna system a.g. a bad mismatch or damage to the antenna or cable. You should stop transmitting if this lights up, and correct the problem.

Your set may also have the following controls . . .

CHANNEL 9 SWITCH
This is an 'over-ride' switch that will immediately select channel 9 without using the channel selector to find it. It is fitted to save time in an emergency.

DELTA TUNE
This is not a common feature on British sets, where frequency and stability are closely specified. It is a fine tuning device for tuning in stations that are operating slightly off frequency.

DIMMER
Works on the same principle as a domestic light dimmer, and reduces the amount of illumination on displays and dials on the CB set. A few sets have an automatic dimmer built in, which measures the lighting level through a photo-electric cell and adjusts the illumination accordingly.

ANL/NOISE BLANKER
The Automatic Noise Limiter or Noise Blanker is designed to reduce interference from a car's ignition system by desensitising the receiver slightly. If the ignition circuit is already adequately suppressed it will not make any difference.

CHANNEL BUSY/FREE INDICATOR
This is usually a LED that illuminates when a particular channel is in use or is free. This is gauged by the amount of 'traffic' on the channel which has to be at a certain level before the indicator is activated. Sets have either a 'free' or 'busy' indicator, not both.

This listing includes most of the rigs available for FM CB. Some rigs are still not on the market, but may be picked up second-hand or may be found in old stock at some shops. The prices quoted are recommended retail prices or typical price — they may vary considerably from shop to shop and area to area.

MOBILES

RX IND. LIGHT	RX IND. LIGHT	CH 9 SWITCH	MIKE POSITION	COMMENTS	ADDRESS	NAME
●	●	●	SL	Report Feb '82	Amstrad Consumer Electronics, 1-7 Garman Rd., London N17	AMSTRAD
●	●		SL		Telecomms. 188 London Rd, North End, Portsmouth	AUDIOLINE
				Report Feb '82		AUDIOLINE
●						AUDIO LINE
			FL		K B & Co Ltd., 202 Cheetham Hill Rd, Manchester	COLT
		●	FL		Roger D, 831 Mansfield Rd, Notts	COMMTRON
			FL			COMMTRON
			SL		Goodmans Loudspeaker Ltd., Downley Rd, Havant, Hants PO0 2NL	CYBERNET
●	●		FL	Report May '83		CYBERNET
●	●	●	FL	Report September '83		CYBERNET
			FL	Report July '82		DNT
			SL	Report December '81	Fidelity Radio Ltd., Victoria Rd, London NW10	FIDELITY
		●	FL	Report March '82		FIDELITY
		●		Report September '82		FIDELITY
			SL		Bee-Ware Ltd., Ripon Way, Harrogate, N. Yorks	GRANDSTAND
●			SL			GRANDSTAND
			SL			GRANDSTAND
●			SL		Telecomms. 188 London Rd, North End, Portsmouth	INTERCEPTOR
●			FL			INTERCEPTOR
●			FL			INTERCEPTOR
			FL	Great GT868 chassis	Star Warehouse, Chalk Farm Rd, London	JOHNSON
			FL		Roger D, 831 Mansfield Rd., Nottingham NG5 3GF	LAKE
			FR	Report April '83		LAKE
●	●		FL	Report March '83	Low Electronics, Matlock, Derbyshire	LOWE
●		●	FL	Report November '82	Maggie Electronics, PO Box 35, Andover, Hants SP10 2LG	MAGPIE
●			FL		AM House, 8A Old's Approach, Tolpits Ln, Watford, Herts	MAXCOM
●		●	FL			MAXCOM
●		●	FL			MAXCOM
●		●	FL			MAXCOM
●		●	FL			MAXCOM
●		●	FL			MAXCOM
●			FL	Report Jan '84		MAXCOM

REFERENCE



NAME	MODEL	RETAIL PRICE	NO OF CHANNELS	SUPPLY VOLTAGE	SQUELCH	NB SWITCH	ANL SWITCH	MIKE GAIN	RF GAIN	STONE CONTROL	S/RF METER	S/RF LED R/O	HI/LO OUTPUT	PA FACILITY	EX. SPEAKERS
MERCURY	10 40	N/A	40	13.8VDC	•				•		•		•	•	•
MURPHY	DS-602	£25	40	13.8VDC	•							•		•	
MUSTANG	CB1000	£49.95	40	13.8VDC	•						•			•	•
MUSTANG	CB3000	£59.99	40	13.8VDC	•				•	•	•			•	•
NATO	40M	£69.95	40	13.8VDC	•			•	•	•	•			•	•
NATO	2000	£189.95	40	13.8VDC	•	•	•		•	•	•		•	•	•
OSCAR	OSCAR I	£85	40	13.8VDC	•						•		•		•
OSCAR	OSCAR II	£49	40	13.8VDC	•						•		•	•	•
REFTEC	934	£300	20	13.8VDC	•						•				•
ROTEL	RVC 220	£50	40	13.8VDC	•						•		•		•
ROTEL	RVC 230	£70	40	13.8VDC	•				•	•	•		•	•	•
ROTEL	RVC 240	£90	40	13.8VDC	•			•	•	•	•		•	•	•
SIRTEL	SEARCHER	£40	40	13.8VDC	•						•			•	•
TANDY	TRC2001	£80	40	13.8VDC	•						•		•	•	•
TANDY	TRC2002	£70	40	13.8VDC	•						•		•	•	•
TANDY	TRC2000	£100	40	13.8VDC	•			•	•		•		•	•	•
TANDY	TRC1004	£79	40	12VDC	•								•		•
TANDY	TRC2003	£130	40	13.8VDC	•								•		•
UNIDEN	UNIACE 100	£69.95	40	13.8VDC	•						•		•	•	•
UNIDEN	UNIACE 200	£89.95	40	13.8VDC	•			•	•	•	•		•	•	•
WAGNER	9000	£59.95	40	13.8VDC	•				•		•	•	•	•	•
WAGNER	COMPACT 40	£25	40	13.8VDC	•						•		•		•
WESTERN	COMPACT 40	£34.50	40	13.8VDC	•						•		•		•



NAME	MODEL	RETAIL PRICE	NO OF CHANNELS	SUPPLY VOLTAGE	SQUELCH	NB SWITCH	ANL SWITCH	MIKE GAIN	RF GAIN	STONE CONTROL	S/RF METER	S/RF LED R/O	HI/LO OUTPUT	PA FACILITY	EX. SPEAKERS
AUDIOLINE	346	£139.95	40	240VAC	•			•	•	•	•		•	•	
COMMTEL		£65	40	240/12V	•						•				
DNT	B40	£TBA	40	240VAC	•						•		•		
DNT	B2740	£TBA	40	240VAC	•						•		•		
DNT		£TBA	40	240VAC	•				•		•		•		
FIDELITY	CB 3000M	£125	40	240VAC	•				•	•	•		•	•	•
GRANDSTAND	BASE	£220	40	240VAC	•				•		•				•
HAM INT.	JUMBO	£254	40	240VAC	•		•	•	•					•	•
HAM INT.	CONCORDE II	£164	40	240VAC	•	•	•		•		•		•	•	•
HARVARD	H401	£149.95	40	240VAC	•			•	•		•		•	•	•
JOHNSON	XK2000	£99	40	240VAC	•				•		•		•	•	•
MIDLAND	76-200	£150	40	240VAC	•						•		•		•
UNIDEN	UNIACE 300	£149.95	40	240VAC	•			•	•	•	•		•	•	•
WAGNER	BASE	£150	40	240VAC	•		•		•	•	•			•	•

MOBILES

TX IND. LIGHT	RX IND. LIGHT	CH 9 SWITCH	MIKE POSITION	COMMENTS
●	●		FR	Report July '83
●	●		FL	
●	●		FL	
●	●	●	FL	
●			FL	
●			SL	Report January '83
		●	FL	Cybernet 134 chassis rep. April '82
			FL	Report Oct '83
●			FL	
●			FL	Cybernet chassis
●	●	●	SL	Cybernet chassis
●			SL	Cybernet chassis
●			FL	
●	●		SL	
●			SL	
●			SL	
●			—	
●			SL	Report Nov '82
●			SL	Report Sept '82
●	●		FL	Report Feb '83
●	●		FL	
●	●		FL	
●	●		SL	

ADDRESSES	NAME
E.M.S. Communications, Grove St. Wantage, Oxon LX21 7AD	MERCURY
Murphy Electronics, Wembley, Middx	MURPHY
K.B. & Co Ltd, 202 Cheetham Hill Rd, M/cr.	MUSTANG
	MUSTANG
Roger D, 831 Mansfield Rd, Nottingham NG5 3GF	NATO
	NATO
S.M.C. Runbridge St, Totton, Hants SO4 4OP	OSCAR
	OSCAR
RF Technology, Leyton Ave Ind Est, Mildenhall, Suffolk	REFTEC
Rotel Hi-Fi, 2-4 Erica Rd, Sacey Bushes, Milton Keynes	ROTEL
	ROTEL
	ROTEL
	SIRTEL
Tame Way, Tower Bridge St, Walsall, Staffs	TANDY
	TANDY
Cravenminster Ltd, Unit 8, Ind Est, Llandudno Junct, Gwynedd	UNIDEN
	UNIDEN
Knight Communications Ltd, Unit 19, Britanna Est, Leagrave Rd, Luton, Beds	WAGNER
	WAGNER
Western Electronics, Fairfield Est, Lough, Notts	WESTERN

TX IND. LIGHT	RX IND. LIGHT	CH 9 SWITCH	MIKE POSITION	COMMENTS
●				
			FR	Report December '83. Also comes with telescopic antenna
●			FL	
●		●	FR	Report May '82
●		●	SR	Report May '82
●		●	FL	
●			FL	
●			SL	
●	●	●	FL	
●			FL	
●			FL	
●	●		FL	
●			FL	Reviewed August '83
●			FL	

BASES

ADDRESSES	NAME
Telecomms, 189 London Rd, North End, Portsmouth, Hants	AUDIOLINE
	COMMTEL
	DNT
	DNT
	DNT
Fidelity Radio Ltd., Victoria Rd, London NW10	FIDELITY
Bee-Ware Ltd., Ripon Way, Harrogate, N. Yorks	GRANDSTAND
Telecomms, 189 London Rd, North End, Portsmouth, Hants	HAM INT.
	HAM INT.
	HARVARD
Star Warehouse, Chalk Farm Rd, London	JOHNSON
	MIDLAND
Cravenminster Ltd., Unit 8, Industrial Est, Llandudno Junction, Gwynedd	UNIDEN
Knight Communications Ltd, Unit 19 Britanna Est, Leagrave Rd, Luton LU3 1Rj	WAGNER

REFERENCE



NAME	MODEL	RETAIL PRICE	NO. OF CHANNELS	SUPPLY VOLTAGE	SQUELCH	NB SWITCH	ANL SWITCH	MIKE GAIN	RF GAIN	STONE CONTROL	S/RF METER	S/RF LED R/O	HI/LO OUTPUT	PA FACILITY	EX. SPEAKER
DNT	HF 12/3	£47.55	3	BATTERIES	•										
KAISER	CBX40	£80	40	BATTERY	•					•		•			•
MAXCOM	7E	£49.95	40	BATTERY	•								•		
MIDLAND	75-720	£59.95	40	12VDC	•										
TANDY	TRC1001	£119		BATTERY	•					•		•			•
WESTWARD	PT2	£130	40	240/12V	•					•		•	•		•

PHONE CHECKLIST

NAME	MODEL	PRICE	FREQUENCY	RANGE	RECHARG. BATT.	IN USE LAMP	INTERCOM	AUTO DIAL	EXTERNAL ANT.	SECURITY CODE	HANDS FREE
A-PHONE	TP125	£80	49MHz., 1.6-1.8MHz	230m	•	•		•			•
FIDELITY	WANDERER	£170	47MHz., 1.7MHz	200m	•	•	•	•	•	•	
FREEDOMPHONE	3500	£199	49MHz., 1.7MHz	200m	•	•	•	•			
HANDY PHONE	HP 1001	£199	49MHz., 35MHz		•	•	•	•	•	•	
MAXCALL		£116	49MHz., 1.7MHz	100m	•	•	•	•			•
MAXCOM	MCP150A	£89	49MHz., 1.6-1.8MHz	800m	•	•		•			
MAXCOM		£99	49MHz., 1.7MHz	200m	•	•	•	•			
PACER	7800	£149	49MHz., 1.7MHz	500m	•	•	•	•			
SUPERFONE	CT600	£115	49MHz., 1.7MHz	100m	•	•	•	•			
SUPERFONE	CT650	£199	49MHz., 1.7MHz	230m	•	•	•	•		•	•
SUPERFONE	CT505	£299	49MHz., 70MHz	1Km	•	•	•	•	•	•	

ANTENNA CHECKLIST

Here's a brief intro

Name

All antennas have a number or name. Or both. Here we tell you what it is.

Construction

Most mobile antennas are made of stainless steel and most home based ones are made of aluminium. This is not always the case though. There are fibre glass mobiles

The Home Office specs for CB antennas are lean and bordering on the mean. Still within that basic framework manufacturers have come up with some good designs. This newly laid out antenna checklist should help you

NAME	ADDRESSES	MODEL	CONSTRUCTION						PRICE RANGE
			LENGTH	MAX POWER	TYPE	MOUNT			
AERIAL SUPPLIES	Aerial Supplies, 5 Wilbury House, Bromsgrove Rd, Reddich, Worcs (Tel 0527 62620)	Silver Star	AL	1.5	100	B	Pole	D	
		Silver Arrow	AL	1.5	500	B	Pole	E	
		CBA 1500	SS	-	-	-	Various	C	
ANTENNA INC.		12510 Telecomm	SS	0.9	-	M	1/2ths	D	
		Super Persuader	SS	1.5	-	M	Mag	F	
		MR511	SS	1.2	-	M	Mag	G	
		M710	SS	1.5	-	M	1/2ths	G	
		AS M125	SS	1.14	150	M	1/2ths	C	
		AS M 12B	SS	1.14	150	M	-	C	
ANTENNA SPECIALISTS	Antiference Ltd, Aylesbury, Bucks HP18 3BJ	AS M131	SS	1.14	150	M	gutter	D	
		AS MR440	SS	1.2	100	M	mag	D	
		AS MT178	SS	1.2	150	M	mag	D	
		AS M510	SS	1.2	200	M	3/4"	D	
		AS M2000	SS	1.5	150	M	1/2"	D	
		AS 9812	SS	1.2	150	M	mag	D	
		IC B5	SS	1M	-	M	mag	O	
		IC B0	SS	1M	-	M	spring based mag	O	
		IC 15	SS	1	-	M	trunk	C	
ANTLER	Shakespeare, Performance Antennas, Bolton Rd, Market Drayton, Salop	IC 20	SS	1 1/2	-	M	roof	D	
		IC 30	SS	1	-	M	gutter	E	
		IC 40	SS	1 1/2	-	M	mirror	E	
		IC 80	SS	1 1/2	-	M	mag	C	
ARCHER	Tanby Corp, Tame Way, Tower Bridge St, Walsall, W Mid	21-904	SS	0.5	50	M	1/2" snap	D	
ARMSTRONG	Stateside Trading Ltd, Audley Ave, Newport, Shropshire	SAM 10	SS	1.06	1,000	M	surface	F	
		SAM 20	SS	1.06	1,000	M	surface with spring	F	
		TAK 10	SS	1.06	1,000	M	boot lip	F	
		TAK 20	SS	1.06	1,000	M	boot lip	G	
		MAG 10	SS	1.06	1,000	M	with spring	G	
		MAG 20	SS	1.06	1,000	M	magnetic	G	
		BDY 20	SS	1.05	1,000	M	with spring	G	
PEC 20	SS	1.06	1,000	M	side	G			
		TAK 101	SS	1.06	1,000	M	side & fold over & quick disconnect boot lip illuminator	G	
AVANTI	CB Radio Centre Ltd, 337 Kenton Rd, Harrow	AV 241 (Moonraker)	SS	1.22	-	M	stud	D	
		AV241 T	SS	1.22	-	M	trunk	E	
		AV241 M	SS	1.22	-	M	mag	E	
		AV241 MM	SS	1.22	-	M	super mag	G	
BADLAND	Badland, Rotton Ind. Est, Providence St, Lye, Stourbridge	B10	SS	1.22	-	-	mag	G	
BANDIT	Telecomm Ltd, 189 London Road, North End, Portsmouth, Hants.	B10	SS	1.42	-	M	mag	G	
		B15	SS	0.61	-	M	mag	F	
		B16	SS	1.22	-	M	mag	F	
		B20	SS	1.42	-	M	mirror	F	
		B30	SS	1.42	-	M	drill thru	E	
		B30	SS	1.22	-	M	drill thru	E	
		B40	SS	1.42	-	M	various	D	
		B40	SS	1.22	-	M	various	D	
		B50	SS	1.42	-	M	various	D	
		B50	SS	1.22	-	M	various	D	
C. BRIT	C Brit, Unit 3, 5 East Lane, Wembley, Middx	Stingray Whiplash	AL	1.5	500	B	pole	G	
			SS	1.5	25	M	1/2"	C	
CT INTERNATIONAL	CT International, CTE (UK) Ltd, Unit 3, Attingham Ind. Est, 85 Southam Rd, Mitcham, Surrey	MG27	SS	0.91	-	M	mag	C	
DIAL-A-MATCH	WTA Electronics, 370, 111 Caenier Rd, Hellesdon, Norwich (Tel 0606 47294)	Rubber Duck -	R	0.3	-	M	1/2"	C	
		530 (Cherokee)	SS	0.61	-	M	-	F	
		531 HBF	SS	0.51	-	M	-	F	
		531 SMF	SS	0.51	-	M	-	F	
		540	SS	1.22	-	M	-	E	
		541 HBF	SS	1.22	-	M	-	E	
		541 SMF	SS	1.22	-	M	-	E	
520 (Halfbreed)	SS	1.27	-	M	-	C			
DIGITEK UK LTD	178-181, Strachan Rd, Mitcham, Surrey	Falcon 27	SS	1.5	-	M	various	D	

duction to the world of antennas and what we tell you in our checklist.

and stainless steel home based antennas.

Length

The longer the better is always my motto. As long as it's not over 1.5 m. Otherwise it's illegal. We tell you the exact length.

Maximum power

This is given as a guide only. The law allows for a maximum

two watts. However, the higher the maximum power figure given the sturdier the antenna will be.

Type

It's no use buying a home base antenna if you want to use your rig from the car. We tell you which are which Mobile or Base. At the moment the number of mobile

antennas far outweigh the number of home based ones. But there are more and more home base antennas coming onto the market.

Mount

The majority of mobile antennas are held in place by a magnet - these are called mag mounts. Others are at-

to the boot or edge of the roof. Some are drill-through antennas which are just the same as normal car radio aerials.

Home based antennas are poles, tripods or gutter mounts. Tripods are free standing and gutter mounts are attached in a way similar to trunk or bootmounts.

Key:	C:- £10 - £14.99	G:- £30 - £39.99	AL - Aluminium	B - Base
Price Bands	D:- £16 - £19.99	H:- £40 Plus	FG - Fibreglass	
A:- £1 - £4.99	E:- £20 - £24.99	Construction	Application	Note: Prices are given as a guide only.
B:- £5 - £9.99	F:- £25 - £29.99	SS - Stainless Steel	M - Mobile	

CONSTRUCTION	LENGTH	MAX POWER	TYPE	MOUNT	PRICE RANGE
--------------	--------	-----------	------	-------	-------------

NAME	ADDRESSES	MODEL	CONSTRUCTION	LENGTH	MAX POWER	TYPE	MOUNT	PRICE RANGE
DIXONS	Dixon's Photographic	Harrier	SS	0.9	-	M	Mag	D
HOT ROD 200	Hot Rod 200, Stateside Trading Ltd, Aubrey Ave, Newport, Shropshire	FM UK	SS	1.27	-	M	3/4ths	B
FREEMAN & PARROW	Freeman & Parrow, Tyffling Rd, Arden Forest Ind Est, Alcester, Warwick	The Invader The Thunderpole	AL AL	1.5 1.5	250 500	B B	pole pole	E F
CB SERVICES	97, Crab Lane, Harrogate, N Yorks HG1 3RD	Bullwhip Knuckleduster	SS AL	1.5 1.5	-	M B	various	C D
MIDWEST		Dial-a-tune Dial-a-tune	SS SS	0.61 1.22	500 2	M M	various various	C D
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MOTOROLA	Motorola, Taylors Rd, Stratford, Herts	EC106M	-	-	-	M	-	F
OCT.	Unit 1 Eastfield Lane Ind Estate, Grantham, Lincs	K40 Z27	SS SS	1.4 1.45	500 200	M M	various various	G B
PANORAMA	Panorama, 73 Wadham Rd, London SW15 2LS	CB27	SS	1.22	-	M	mag	B
PRIDOW		KT40	-	1.5	-	M	trunk	C
REVCO	Telecomms, 189 London Road, North End, Portsmouth, Hants	Revco	SS	1	100	M	various	B
SHIRA		SYS 205M SYS 203C MA 62	SS FG	1 0.75 0.91	-	M M M	mag trunk -	C C C
SIRTEL	Sirtel, 24 Ailric Sq, Off Maxwell Rd, Woodston Ind Est, Peterborough	GP Messenger GP Signal Keeper	SS SS	1.5 1.5	-	B B	clamp tripod	E F
SMC	S.M.C. Rundlebridge Street, Tetton, Hants SO4 4DP	Oscar Base CBA 11GP Oscar Base IIVIIIS Oscar IICM Oscar IICE Oscar IINE Oscar IISE Oscar TMCAS	SS SS SS SS SS SS SS	1.5 1.5 1.2 1.2 1.5 1.5 1	- - - - - -	B B M M M M M	- mag foldover base 'pull-up' 'locking-collared' foldover base trunk	F F D B C C B
SPYDER		Spyder	AL	1.6	-	B	pole	B
TAGRA	CB Radio Centre Ltd, 337 Kenyon Rd, Harrow	T40	SS	1.4	500	M	various	E
THOROBREO	OCT, Unit 1, Eastfield Lane, Grantham	251 Z27 Locktune	SS SS SS	1.5 1.5 1.5	-	M M M	various 1/2 various	C B C
WITCHSTICK	CJM Motor Factors, Half Farm Ave, Levensham, Watford Herts O9273-74444	Witchstick homebase	AL	1.5	-	B	-	E
WTA ELECTRONICS	111 Clumber Rd, Heilston, Norwich, Norfolk	Wot Pole Wot Mag	AL SS	1.6 1.6	-	B M	pole mag	
VAN OROT	Van Orot, Knight CB Specialist, 204 Dunstable Rd, Luton, Beds	Audio King AKO-100	SS	1.6	2,000	M	1/2"	G

CB Citizens' Band

READER SERVICES

BACK NUMBERS

Due to the popularity of back numbers of this magazine, the Back Numbers department have informed us that the following back numbers only are available at the moment; September, October and November 1983 and February 1984. It is hoped over the next months to build up a stock of back numbers for the previous year's issues i.e. the eleven months preceding the magazine currently available and we will keep you informed of the situation. To order a magazine, fill out the form below (photocopies and handwritten orders are acceptable). The form and your cheque or postal order should be sent to Citizens' Band, Infonet Ltd., Times House, 179 The Marlowes, Hemel Hempstead, Herts HP1 1BB

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It is assumed that letters we receive are intended for publication unless they say otherwise. Letters for particular features like Back Chat, Q & A and Club News should have that marked on the envelope and the correspondent's full name and address, although this will not be published if requested. Readers who are hoping for publicity for events, competitions and 'other happenings' should bear in mind that the magazine goes to press at least two weeks before the magazine appears in the shops, and editorial copydates are usually a month before the 'press' date. Please remember this when sending any information in.

Writing for CB

We welcome readers contributions, especially if they cover a new aspect of CB or are D.I.Y. projects. Unless you are experienced in contributing to magazines you may not be aware of how work should be presented — if in doubt write for advice!

Telephoning

It is very difficult to deal with telephone queries, especially technical ones, as most of our energy has to go into putting the magazine together. If you can deal with it by letter, please do.

Back Numbers and Binders

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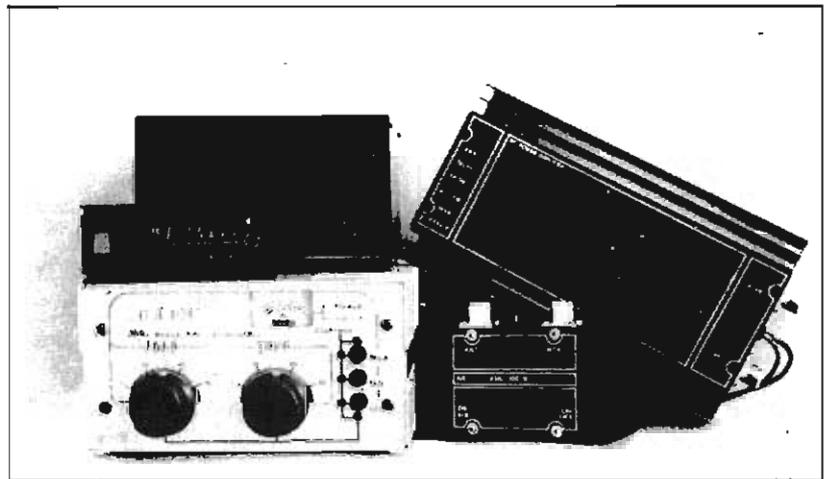


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From the mailbag

J.W. from Sheffield

"...I must congratulate you on your Magpie. I did not think it possible to obtain anything of this standard. It has cut out bleed-over which here in Sheffield is one big problem..."

S.A.M. from Suffolk

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