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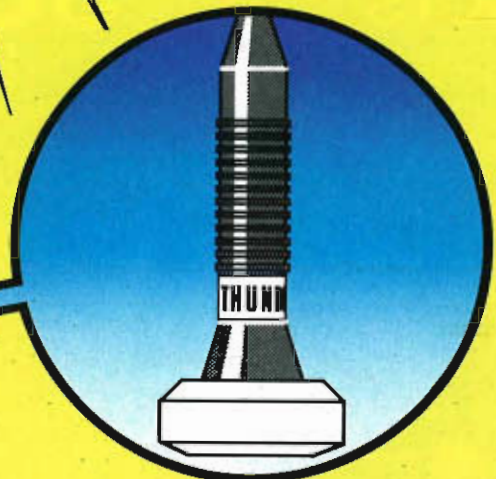
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CB Citizens' Band

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Cover the Month

The E.M.S. Poseidon graces the front cover this month. An extra special Christmas present at £300 upwards.

Talking of Christmas . . . all the occupants of Chessnade Zoo, especially the younger ones, were really looking forward to Father Christmas's visit. Now, not everybody knows that Santa visits the animal world as well as the human one, but the animals write out their Christmas lists like the rest of us, although they do have greater problems getting the list up the chimney.

Excitement was particularly intense in the aquarium and the bird sanctuary as all the youngsters discussed their lists and when Father Christmas would come. Like children everywhere, many of them decided to stay awake and catch Santa in the act of delivering their presents. But as the hour grew later, sleep gradually settled over the animals and when Santa quietly crept in . . . NOT A SOLE WAS STIRRING, NOT EVEN A GROUSE!

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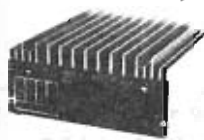


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Although basically a design company, Zenith handles all its own manufacturing on its own premises.





UPDATE

NEWS FROM THE WORLD OF CB NEWS FROM THE WORLD OF CB NEWS FROM THE WORLD OF CB

We have mentioned before on these pages that the Japanese have, after many years of making it for everyone else, been allocated a 'CB type' service of their own. This allocation is in the UHF band at 903-904MHz. Indications so far are that the Japanese are using the service very much for business, rather than in the traditional CB way. It is proving to be very successful and many big Japanese consumer electronics companies, after turning their backs on public radio service manufacture for the last five or ten years, are once again making radio transceivers.

Item two. We have also mentioned the movement of 934MHz CB frequencies from their original allocation to slightly higher frequencies to allow for 'compatibility with a European UHF system.'

Item three. There is an increasing American and international interest in a UHF public radio service, although not necessarily CB as we know it.

Put these three items together and you can start drawing some conclusions. First of these is that it is becoming increasingly obvious that radio authorities are turning on an international scale, to UHF for communications systems with public access. This is not only true for CB but for cellular radio, which is under development now. Second of these conclusions is that there may be a far

greater market for UHF equipment in the 900MHz region than was ever anticipated when the British CB systems were announced nearly three years ago.

Thirdly, it's easy to see that the Japanese, who are justifiably renowned for spotting a good market when everyone else is still trying to make up their mind, are going to be in ideal situation to exploit this potential market to the full.

To a certain extent this is inevitable. The Japanese have the resources for high technology development and manufacture and have learnt the lessons of earlier years over marketing. Their attention has already been drawn to the British market and I understand that there may already be plans to move into this area with UHF CB perhaps as a package with other in-car audio. More importantly, the Japanese can usually offer most goods at a competitive price, especially when they anticipate selling a high volume.

It will be tragic if the early lead that was offered to British industry is lost and the Japanese once again sweep the board. Major British manufacturing companies have ignored UHF CB in the same way that they ignored 27MHz CB. Perhaps the bait wasn't big enough. But with a European or international market to consider, the outlook might be different. There are plenty of British

companies that specialise in communication systems and services that could take advantage of the need for radio equipment in the 900MHz region without turning to the Far East for manufacture and then putting their own brand name on it.

The other option is that Japanese radio equipment intended for the 'home' service will become yet another pirate system in Europe. There were enough sets illegally imported during the CB boom in the late seventies to make an entrepreneur think that he had a licence to print money — and the same could happen again, particularly if demand for UHF equipment continues to outstrip supply. This would be especially hard on the UK companies persevering with 934MHz CB.

Well, once again the writing's on the wall for those who care to read it. It would be a shame if the efforts of companies like Reftec (and others who haven't get got sets on the market but are working hard on their planned equipment) and antenna companies like Les Wallen, are lost in a tide of Far Eastern imports when they have hard won expertise to offer — and not necessarily restricted to the CB field. These companies have proved that Britain can do it, and it's only our lack of confidence that makes us believe that others do it better.

Sue Sharp

Playhouse

Capital Radio listeners in the London area who tuned in to Capital Playhouse on Sunday, 2nd October will have heard 'One Nine for a Lady Breaker' by Peter Simpkin presented at 8.00pm as one of a regular Playhouse series.

In the past Capital have had an adventurous selection of topics which they have handled well. But

I must admit that I cringed slightly when the press department at Capital rang to tell me about the play. CB has suffered so badly from the image that the media have presented that I didn't entertain high hopes for a play with such a title.

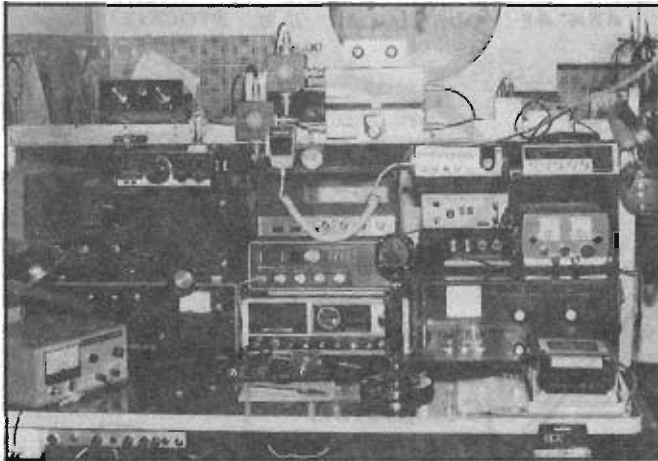
However I was pleasantly surprised. Although the central characters do have fun with CB radio, and, at times, make fun of it, there is

nothing malicious or offensive in their attitudes. Nick, Basil and Gloria use CB like many other young Londoners; for a laugh; to chat up the opposite sex; for traffic information and, central to the play's theme, to present an image of themselves that they wish that they lived up to. The play also uses CB as a background for some barbed comments on the colour problem.

Hello, my friend!

This photo was passed on by an awe-stricken reader after receiving it from a contact in Italy. It shows Delta Bravo Pietro's CB equipment and you might like to know that Pietro also has two Avanti antennas, the AV 170 five-eighths wave and the AV 140 directional. I've identified the following: a enormous CTE burner, at least two

power supplies, a tape recorder, *at least* five rigs, two antenna rotators, headphones, a speech compressor, a Turner base mike, an Astatic 'Golden Eagle' mike, several SWR meters and enough cable to knit a sweater. Some of the things aren't clear enough to identify properly, but the amazing thing is that it looks as if it is all connected and used. No wonder the Italians step on everyone else . . .



Competition Results

The September 'Fidelity' competition bought the usual onslaught of postcards and it does seem to finally be getting through that you should send postcards and not letters.

As you may remember we were asking for a caption to the photograph of the young lady sharing her bath with a Fidelity cordless phone. Many of the answers concentrated on plumbers, a famous bath soap, videophones, window cleaners and back scrubbing and a few had to be chucked out before the cleaner could be offended by them.

On a musical note, T. De-La-Lour in Birmingham suggested "I'm the kind of girl who like to Wanderer around, I've got a Wanderer, a Wanderer . . ." whilst Lawrence Pringle in County Durham was less than polite with "I know, I'll ring the editor of Citizens' Band

and tell him he's a wally". That blew any chance you might have had of winning. Lawrence! The Duncanson family came up with a selection of captions between them, although William Duncanson should be ashamed of his choice in postcards. B. D. Pibworth of Chard in Somerset (not far from Bath!) had a more 'CB' caption with "Fantastic, it only fell in for a moment and now I can DX Bulgaria".

But my favourite was from Harry Calder from Cornwall and his "This is no place for a hedgehog, I'm calling for a rubber duck." Well done, Harry, your prize will be on it's way to you. Runner up is B. Proctor, who hales from Sheffield, and the much used but nearly always funny "Beam me up, Scottie".

These two gentlemen earn themselves an AKD precision direction finder and a Zenith Speech Processor respectively.

'Phone In

Not many rigs have the facility for connecting headphones, although I bet there are plenty of people who wish more of them did! For those who enjoy reading the mail or who are monitors and need to listen — perhaps without disturbing the rest of the family, an Audio Monitoring Unit from Weston Developments will be ideal.

This small and inexpensive accessory provides a jack plug input for mono or stereo headphones and a 3.5mm jack socket for an external loudspeaker. Other socket

types are available to order. If the headphone socket is used it will automatically cut out the external speaker. If the loudspeaker plug is accidentally pulled out whilst in operation a resistive load protects the transceiver's output stage.

The unit measures 90mm x 70mm x 30mm and weighs 80 grams and comes supplied with self adhesive feet and double sided adhesive pads. The AMU 1 is made in the UK and costs £5.50. This price includes VAT and postage. More information from Weston Developments, 33 Cherville Street, Romsey, Hants. SO5 8FB. Telephone 0794 517497.

Book Review

Recently published by Newnes Technical Press, the Servicing UK CB Radio Manual is a long awaited and badly needed addition to the book shelf of the radio service engineer or competent amateur. Although there has been no shortage of general books for the CB hobbyist or text books for the professional radio engineer, up to now there has been nothing published specifically for the CB repairer. This paperback, written by one of the designers of the P.E. Ranger, Michael Tooley, is a comprehensive and readable guide to the problems and faults of CB circuits and, perhaps more importantly, how to put them right.

The book doesn't stop there. There is a recommended equipment and tool section, how to use and get the best from them,

layouts and designs for workshops for the professional and layman, suggested business practices and organisation (a section a good few shops should read), sample circuits for popular chassis'.

My only reservation is the price. I can appreciate that Newnes have had to settle on a comparatively high price — the book, after all, has a limited market and is not going to sell like the latest Harold Robbins. But £14.95 is a lot to pay for a paperback book, especially one that will get a bit knocked about in a workshop. That reservation aside, an excellent book and congratulations to both Michael Tooley and Newnes for persevering with it. **SERVICING UK CB RADIO** By MICHAEL TOOLEY, Price £14.95. Published by NEWNES TECHNICAL BOOKS, Borough Green, Sevenoaks, Kent TN15 8PH. ISBN 408013 354.

Reference Section

available. Les Wallen CB's answer to 'Gone With The Wind', the reference section is an epic to produce and it's easy for mistakes to creep in on a feature of this size. Many of you readers and members of the trade are very helpful in notifying us of errors or equipment that is no longer

available. Les Wallen Manufacturing has pointed out that we had quoted the wrong address for them in the October issue. They can of course, be found at Pembroke Works, Sandwich Road, Sandwich, Kent and all enquiries about the Modulator range should be made to this address.

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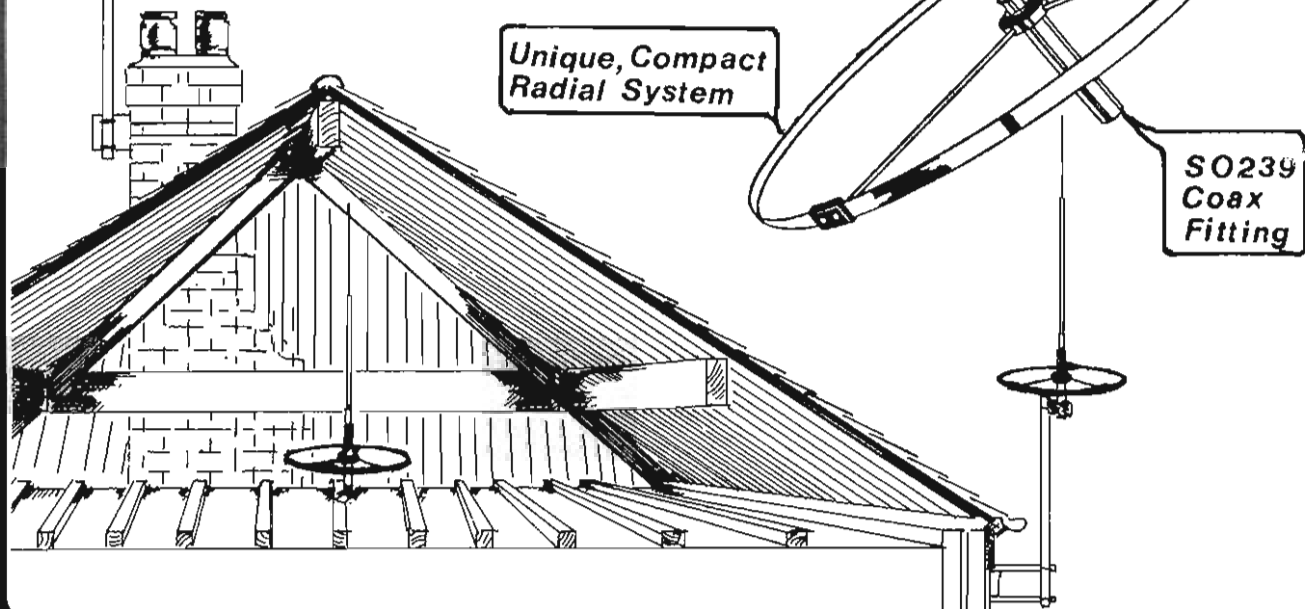
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Feature



A visit to Electro Medical Supplies provides a look at some of the alternative uses of CB and the ingenuity of one manufacturer.

CB and beyond



As I left London the day seemed full of autumn promise, the forecast was good and although a slight haze lingered in the sky, it was warm and bright. Optimistically I left my jacket behind and set off down the M4. A few hours later, as I shivered in the damp and clinging fog on the downs outside Wantage, I wondered if I should have remembered the thermal underwear.

The rather dramatic change in temperature and the sudden descent into winter aside, the days' visit to E.M.S. in Wantage, (the manufacturers of the Mercury), was an insight into the success that more and more British companies are having with C.B. Whilst none of them are yet in a position to rival the great American or Far Eastern names many of them are offering a quality and service that the 'foreigners' can't rival.

Electro Medical Supplies venture into communications is a recent one. Although they have over fifty years experience in working with 27MHz this experience has been gained with electronic equipment for surgery and physiotherapy, rather than two-way communication. The company is one of the leading British manufacturers of this equipment and export orders account for over fifty per cent of their

production, although their major customer is the National Health Service.

E.M.S. doubled the size of the factory in 1977 and with the additional space and expertise of design and development staff, were looking for a suitable field to diversify into. The works manager, Derek Witts, has had an interest in radio for some years and the impending legalisation of CB on a frequency that the company had worked with for many years seemed to give the ideal solution.

E.M.S. may have had the expertise and the enthusiasm, but unfortunately, for six months at least, they didn't have the necessary research and development license from the Home Office. The four month delay in issuing the license meant that E.M.S. slipped behind in the race for 'L' day but did give them the chance to survey the market. In having an entirely British designed and manufactured product, they realised that they were not in the same area of the market as the Far Eastern giants, in either price or product. It is this difference that has protected them from the violent swings of the CB industry and left them at the forefront of development.

Although they number amongst many contented CBers their customers, E.M.S. are the first to



Left and above: the Mercury and Poseidon in production

realise that the price of their equipment means that only the enthusiastic, committed CBer is buying the Mercury and, more recently, the Poseidon base station. The majority of their production is sold to the professional user and their reputation is particularly good in the farming fraternity.

Derek Witts told me, "We did our market research and found that congestion on the breaking channel was the biggest stumbling block for many would be users. It seemed that the market also wanted a base station and a portable unit. For many users the 'hand held' type wasn't enough as they don't have the range and power. We designed a portable version of Mercury which will operate for a day on stored power and added a sel. call facility. Adding sel. call has made CB much more attractive for, say, the farmer."

The Poseidon base station is proving to be very popular amongst Mercury fans. Like the Mercury, it is manufactured at the Wantage factory, where even the case has been designed in detail and fabricated. The most outstanding features of the set include a noise limiter and options for 'Cat-call', paging and alarm systems. These options give E.M.S. equipment great flexibility, which in turn has meant that the company are virtually designing individual communications systems for individual customers.

The prototype for the pig breeder!



A good example of this is a recently completed system for a pig breeder. I'm no expert on pigs, but instead of the happy-go-lucky creatures they appear, they are apparently fussy creatures who need closely controlled conditions to thrive. The pig breeder has installed a computer controlled monitoring system that sounds an alarm denoting particular conditions; a window left open, an intruder, lack of water etc. This works very well but even the alarms are not effective in the evening when the stockman and the farmer are at home. The farmer wanted a CB system, not only to co-ordinate work on the farm but to transmit the alarm to his home if it was activated.

E.M.S. came up with a system that will do just that. The Poseidon base has had an extra row of indicator lights fitted, each light signifying a particular condition. The base station is located in the farmhouse and if the alarm is triggered the farmer can see instantly and exactly what the problem is.

Derek Witts took me to see a local farmer who has five Mercury sets which are very definitely working tools. They are located on various vehicles used on the farm and one is kept as a base in an outbuilding. The farmer had used CB previously but had found that they could not cope with the hilly terrain and did not have the sel. call facility. The Mercury sets are now exclusively used with sel. call — they

are switched on in the morning on the pre-arranged channel and the days work is co-ordinated through CB. I was told that the years harvest had been much more efficient with the help of CB and that there were other benefits, apart from efficiency. Many of the days chores are solitary and lonely, especially if in a tractor all day. The CB gives some contact with the outside world and is immediately to hand in the event of an accident. With crop spraying over several hundred acres, calculating the exact amount needed is difficult, and it's easy to underestimate by a bag or drum. That extra amount can be run out to the tractor, rather than the other way round (as in the past), after a quick call on the CB.

Back in the warmth of the office, Derek spoke to me about future plans. "We see 27MHz. radio products going even further. Whilst we have complete control over manufacture; development, design, assembly, and we can add extra refinements like sel. call, design features like the power saving 'sleep' mode on the portable and the 'alarm' system, we have a good future in CB.

"We do have ideas for new products too. We have had several enquiries recently from riding schools, racing stables and motorcycle users for small transceivers that can be fitted in helmets. We are also working hard on 934MHz, but I won't say anymore on that until we have something to show for it."

Backbone of CB

To their credit, E.M.S. have seen beyond the obvious limitations of 27MHz and are concentrating on the applications of one of the best transceivers on the market. This is unlikely to put them in the massive sales league but does mean that CB is being raised above the level of a toy and helps demonstrate the potential to the majority of people who remain unconvinced by CB. The limitation of sel. call (needing to be by the rig when a call comes through) has even been overcome by the addition of a 'horn pager' which is set off when a call is received. As long as the recipient is within reasonable hearing distance, he is available for any call.

It's worth speculating that in time that E.M.S. and similar British companies will become the backbone of the British CB system. After the major importers and foreign manufacturers become disillusioned with the size of the U.K. market, and look for greener pastures, the specialist market will be catered for by companies with a real understanding of the needs of the user.

The success that E.M.S. have had with CB has given them the confidence to look at other communications and frequencies to develop their range. At a time when many engineering firms are struggling to survive the effects of today's economic realities, one company is at least looking optimistically to its future.

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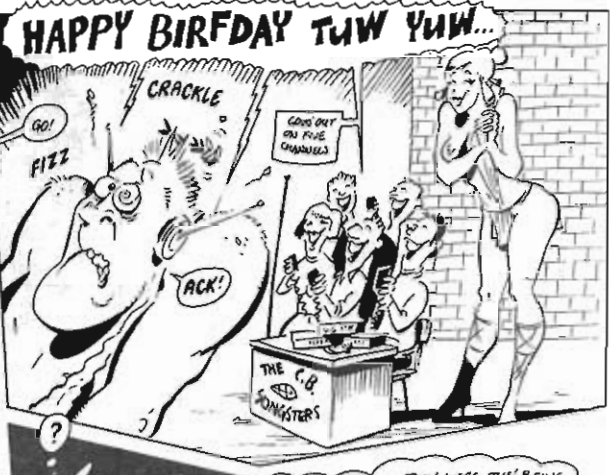
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A real assortment of problems for our resident expert but, as usual, Smart Alec comes up with the goods.

QUESTIONS & ANSWERS • QUESTIONS & ANSWERS • QUESTIONS & ANSWERS • QUESTIONS & ANSWERS • QUESTIONS & ANSWERS • QUESTIONS & ANSWERS

Pecking Order

An unusual problem from the Scottish isles and our first correspondent this month.

Q For weeks now I have been getting interference from 'woodpeckers' — the Russian radar stations that scan the globe. I would like to know if there is any way I can get rid of them.

A You are quite right, James, the 'woodpecker' is a result of pulse transmissions for over the horizon radar. Over the horizon radar systems are used for the detection of aircraft, ballistic missiles and other air-bourne weaponry and use very high powered pulse transmissions of varying rates and duration. The signals have a distinctive 'tock' sound and can be found in several frequency ranges, particularly around 14MHz and 21MHz, although anywhere between 7-30MHz can be affected. The transmissions can last from a few seconds to a few minutes and can sometimes be heard on more than one frequency at a time. Not surprisingly, the source of the 'woodpecker' is Russia or the U.S.A.

Returning to your question, I'm afraid there's not a lot you can do about them if your radio is picking the signals up — with powers of up to 100,000,000 watts used and a range of approximately 4,000 miles they are difficult to escape!

SA

R.I.S. Key

This next one isn't exactly a technical problem but it arrived addressed to Smart Alec, so I'll try to oblige.

Q I, like so many others, monitor channel 9. My question is: do British Telecom still monitor the breaking channels and channel 9? When monitoring I have often been told by different breakers that 09 is no longer the emergency channel. Is this true? I belong to a CB club and most of the members say 09 is for emergencies only. If this is true why do wallies and bucketmouths abuse me and my fellow monitors?

A Why indeed? No sensible breaker can understand why some breakers need to spoil things for the majority of users. How and why they get away with it is another matter.

Like many other breakers, M. Gregory doesn't really appreciate how the Radio Interference Service works. Neither the Government or British Telecom have the financial or manpower resources to constantly monitor one individual frequency band — nor do they claim to. What the R.I.S. will do is monitor when a complaint is made or very occasionally, randomly monitor if resources permit. They are most likely to act quickly against people operating off frequency, with large amounts of power or being grossly offensive.

There is no official recognition of breaking channels or an emergency channel, although the CB Code of Practice does ask breakers to respect the traditional channel allocations. There is no legal protection for the specific use of one channel — which is why so many breakers get away with abusing the emergency channel. So the real answer is that while the majority of breakers accept the need for an emergency channel and respect channel 9, there is no legal requirement for them to do so and the authorities are not prepared to legislate for it and do not have the facilities to enforce even the existing regulations.

SA

Down to the Ground

Shaun Gilks of Cambridge brings us back to one of those eternal problems that crops up regularly on this page.

Q We are getting a car with a fibreglass body and we're also thinking about installing a Magpie Auto-Scan 5000. As I said, the body is fibreglass, so do you know if anyone makes an antenna that will work on fibreglass. If not, have you got any ideas as to how we can get round the problem?

A At one time there were several companies making antennas specifically to get around this type of problem, for cars and boats. However, the withdrawal of many companies from CB unfortunately means many of the specialist products are no longer available. Try looking out, though, for an Antenna Specialists product that was designed to operate without a ground plane and I think Radiomobile also did a similar aerial. The Dial-a-



The Magpie Auto-Scan 5000.

Match (recently reviewed) also operates with a minimal ground plane, a small square of aluminium foil for example.

Otherwise, you can add a ground plane to the car with the aid of a ground plane kit, available from CB retailers or by lining an area of the car (between the body work and the headlining or boot/engine compartments) with aluminium foil.

You could also contact Magpie Electronics for their advise - their technical expertise is excellent and they are usually very helpful.

SA

Circuit Section

Our monthly quest for technical details and circuit diagrams starts this month with a request from M.K. Lonergan of Horsham, West Sussex.

Q Could you possibly supply me with some technical info. on the Maxcom 6E rig. The sort of information I am after would be a photostat of the circuit diagram or a copy of the service manual.

A I have approached Maxcom Europe Ltd of Rickmansworth on your behalf (and of readers who may want the same type of information) and they inform me that they will be pleased to help any Maxcom owner with this type of request. They asked me to pass on their apologies to you for the lack of success you have already had, Mr. Lonergan.

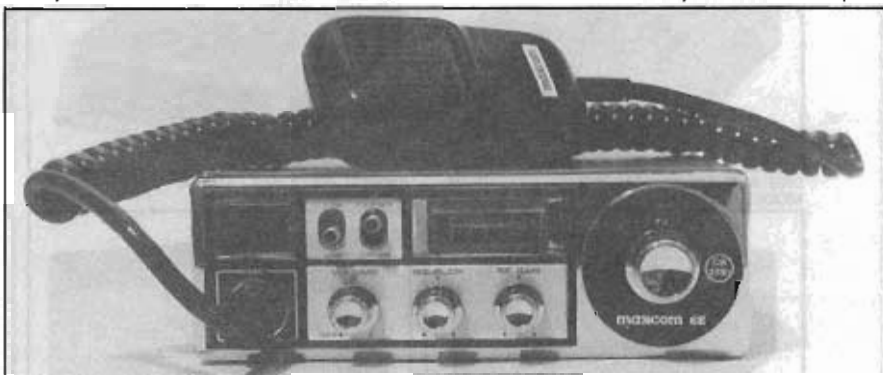
Q I have had trouble obtaining an owners manual or handbook for a Hy Gain 5 2795 120 Channel SSB transceiver. Through your columns, I hope you can help me to obtain one.

A If anyone can oblige, John Burman can be found at Toft House Cottage, Toft Newton, Market Rasen, Lincs. LN8 3NE.

Q I wonder if you could advise me on where I could purchase a circuit diagram/service manual for my rig - a Communicators NI-440DX. I've had no success with the shop where I purchased the rig, who also inform me that they are unable to tell me even the importers address. Any help would be appreciated.

A I don't know who is handling the Communicator now, after L.C.L.'s demise, although I am surprised that the supplying shop couldn't at least go through its' wholesalers to find out who handles the distribution. Any reader who can help will be able to contact Rob McEwan at 11 Maitland Road, Kirkliston, West Lothian.

Q I am writing to ask you if you could ask if anyone could help supply a circuit diagram for my Colt 720 Black Shadow rig. Also could you let me have the name and address of the distributor for Ham in this country as my Ham Master 4200 has a broken component.



Information required on the Maxcom 6E in Circuit Section.

A Well, if anyone can help Elaine Winter with her search for a circuit diagram, you can write to her at 123 Kipling Avenue, Woodingdean, Brighton, Sussex. BN2 6UF. The British distributor for Ham is Telecoms, 189 London Road, North End, Portsmouth. Phone 0705 662145.

Thanks to everyone who wrote in with details of Eurosonic for Cathy. The address is Britannia Works Building, Sherbourne Street, Manchester M3 1EF. Telephone 061 834 8818.

SA

Mike Banger

Q Smart Alec, I own a Cheiza power mike which cuts out quite frequently. Banging it against the wall seems to rectify the problem temporarily. I have tried putting a

new battery in, but could you tell me what's wrong and how to fix it and also advise me on a mike for the future?

Also my Thunderpole Mark II, mounted on a ten foot pole on my chimney with thirteen metres of thick co-ax, is giving me S.W.R. problems. I can't shorten the co-ax as it only just reaches my Harrier CBX. Have you any suggestions?

A Long distance diagnosis is almost always impossible and in this case I can only guess at what the problem is. It sounds to me as if it is an intermittent electrical fault and most probably something like a dry solder joint or faulty wiring which is knocked back into contact when it is banged against the wall. This, incidentally, is not the best form of repair and is definitely not recommended! Unless you can see something obviously wrong which you are competent to repair, I suggest a trip to your local rig doctor or repair shop.

Choosing another mike is a case of looking at the selection available for the money you have, comparing the features, using them if you can and selecting the most suitable for your needs - long distance choosing is as bad as long distance diagnosing!

As far as your Thunderpole is concerned, there are two main alternatives. The first is that the antenna itself is faulty (I am not necessarily suggesting that this is the most likely cause although Freeman and Pardoe will be pleased to help if

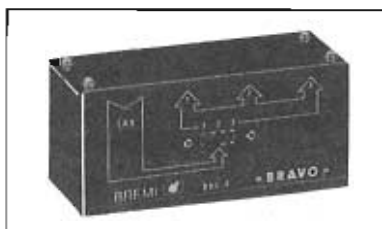
this is the case) or that the installation has deteriorated in some way. You have not said in your letter whether the antenna is new and that you have never been able to SWR the aerial, or if this is a recent development of an existing installation. If the antenna has been installed for some time it is worth making some basic checks; checking connections and soldering of plugs, the condition of the co-ax, ensuring that all waterproofing is still sound, that the antenna has not been blown about and pulled away from the connections - and lastly, that there isn't a fault with the rig rather than the antenna.

SA

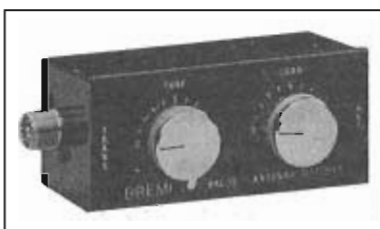
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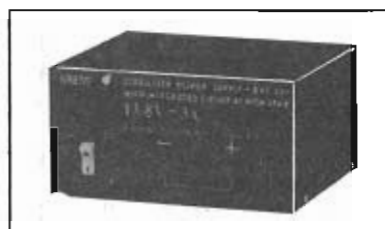
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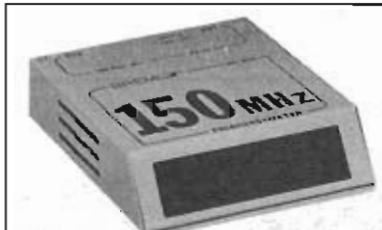
CB ANTENNA SWITCH
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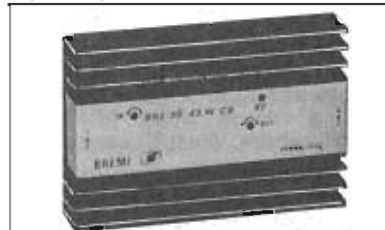
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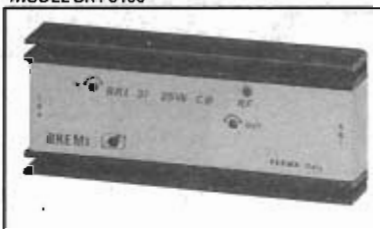
DIGITAL FREQUENCY METER
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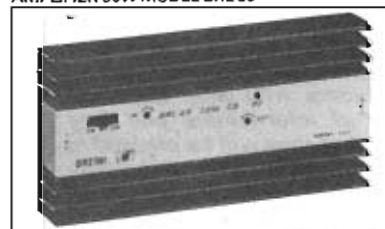
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Mack chat

Mack's feelings get the better of him this month and he's all set to call it a day.

I have been writing this column in this magazine since it was first published 3 years now, and every month it gets more difficult to find topics to write about. Nothing unusual seems to be happening, very little new equipment is appearing on the market, and the progress of CB seems to have come to a full stop. How many years ago was it when as a keen short wave listener I heard my first British CBER? It was a good few years ago that I became interested in radio, building crystal sets and single valve receivers. The amateur licence seemed as far away as the moon so I contented myself to listening. It was also some time ago that when I listened to the 11 metre band, I could hear the powerful stations in the USA and other European CB stations and it all sounded good fun. When I first heard British stations I was eager to learn where one could obtain one of these CB rigs. It did not dawn on me that it was illegal and I found myself enquiring around the shops in the Edgware Road but with no success. One Saturday morning I was in my local library and I found an old friend of mine also browsing amongst the books. Mike (Flyboy) and I flew model radio controlled aircraft together for many years, and my enquiry of 'what you on now' revealed that he was into CB. That same Saturday evening found the two of us in my car with a funny kind of antenna stuck on a magnetic disc that in turn was stuck on the roof of the car, cruising around the lanes in Epping Forest chatting to others doing the same. That's how it all started for me, as it was not long after that, through a contact, I purchased a rig and most of my evenings were spent CB cruising. Soon the talk on the channels were of campaigns to get CB legal in this country, letters were written to MPs, meetings were held and many feet marched to Waterloo Bridge House.

For many it was a great achievement when CB was finally legalised although there was, of course, many moans and groans about the frequencies given but really they were no worse than what we had been using illegally. When I listen now from my home 20, I keep asking myself "Was all the time and effort that I and the hundreds of others spent in our campaigning worth it. Did we write a letter every week to this MP or the Home Office asking 'when will the government give us a frequency for the citizens of this country to use — to enable us to help one another should the need arise if in trouble, or for simple road and traffic information.'" Or even for a friendly chat to other users. Was it worth it, I ask again? to hear the screaming, swearing, pop music, jamming, squeaking funny voices, and the 'you'll hear me because I'm running a hundred watts brigade.' What's the cause, whose fault is it? Mine and the other hundreds who wasted three years getting CB legal. It's such a shame. CB, as we have proved years ago could have been fun. It's no wonder that the licenced amateurs have renamed CB and 'Childrens Band' or 'Cretin Box'. I have tried many times to defend the hobby even though for the last year and a half I reached and found the moon



with what I once thought was so elusive, the Amateur Licence. Every day I find some of my old good buddies from the 'forest cruising' days who are now licenced amateurs. We have at our disposal hundreds of frequencies where we can go for a chat about the good old days, without interruption from wallies. Mind you we do get wallies on the amateur bands but they mostly haunt the repeater frequencies where they can find larger audiences, but repeater working is not the be all and end all of amateur radio. There are still times and place where with CB, one can go and have an interesting chat with other breakers, but the times are difficult for the average working 9 to 6 man and the places are, for some, a long way from home.

In about 3 years time we could see the return of the skip. You might say goody, but I remember switching on a rig and hearing S9 of noise from all over the world and don't be kidded that this country is the only one on FM frequency. Many use it abroad illegally of course. So for the last 3 years I've had my say and my fun, I have enjoyed many of the ratchets and made many new friends. But I have had enough and it's time to move on. I shall always keep my rigs and from time to time I'll switch on and have a listen around the band. Who knows one day when I do switch on I might hear people talking, no music, swearing, screaming, or funny squeaking voices but real talking, intelligent type talking — but maybe I'm reaching for the planet Mars.

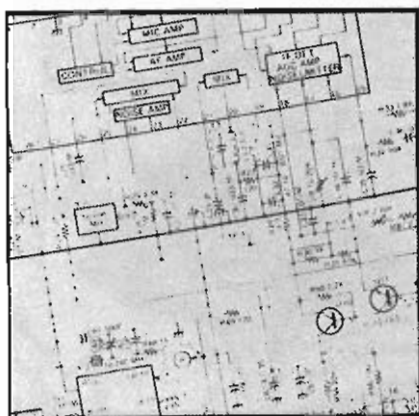
As you can see, Mack wrote this and brought it into the office in a fit of despondancy, totally disillusioned with CB and its users. Those who campaigned along side Mack in the early days will understand his feelings, although at the magazine we would like to think the days for such pessimism are over.

That aside, there is no way we can let an institution like Mack the Hack throw in the towel. Over the past few years Mack has offered his comments on the CB scene and has aired his sometimes controversial views on the radio fraternity in general.

I am glad to say that after some straight talking from the staff at the magazine, he has agreed to at least reconsider his decision and we might still be hearing from the fastest cabbie in the west. This relies on YOU, to some degree. Want to take Mack up on something? disagree or agree with him? want him to let everyone else know about something you feel strongly about? Write to Mack c/o Citizens Band and we'll pass on your letter. The answer is in your hands!

CB





Chris Peterson gives a 'nuts and bolts' run down on crystal filter modifications for a range of popular rigs.

The comments I have made over the past months on crystal filters seem to have generated a fair degree of interest. Most of the correspondence we have received has been embarrassingly complimentary. We have had quite a few enquires as to the possibilities of modifying a range of rigs, particularly the Cybernet range, in a similar manner. However, one or two problems appear to have arisen in a few instances which deserve further comment, so here it is.

Firstly, following the article in October 1982, at least two suppliers are now making available genuine 10.695MHz crystal filters with a bandwidth of about 8KHz.

P. R. Gollidge Electronics of Merriot, Somerset, TA16 5NS (0460-73718) offer a two pole filter with a bandwidth of ± 3.5 KHz for £4.30 inc VAT. This filter is pin-compatible with the standard ceramic types, so direct substitution is possible. This is made easier as the terminating impedance is 1 Kohm instead of the more usual 3 Kohm. Although this isn't a perfect match where the ceramic filter is replaced, it is close enough for most purposes.

Bonex Ltd. of 102, Churchfield Road, Acton, London, W3 6DH (01-992-7748) are the West London agents for Ambit International. They offer a similar filter for £4.30 inc VAT & P&P. In this case, however the terminating impedance is the more usual 3 Kohm. In this case rigs will require some modification as detailed in the October 1982 issue.

Ambit also offer an 8 pole filter for the real enthusiasts. This has a stop band attenuation of 80dB, and a price tag to match at £14.50 + vat + p&p! Also this filter is physically incompatible with the standard ceramic types, so you will need to be really keen to attempt to fit it!

Midlands, Maxcoms et al . . .

We have been fairly scathing in our Cybernet 135 chassis. Beware the double tuned transformer between the first mixer and the filter on the Beta 2000.

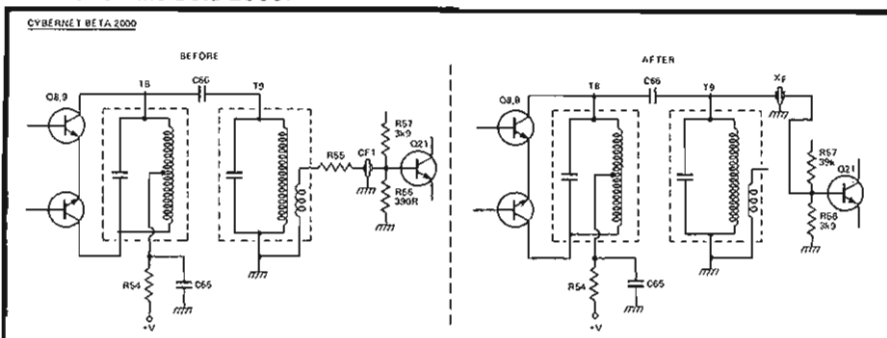
criticism of this receiver and its shortcomings. One of the problems is that some of its shortcomings are disguised by the others. Eliminate one fault, and the others become apparent!

In the original review on this rig we commented on the rather unusual method of applying a crude agc action to the front end. This consists of using a transistor to short out one of the RF coils at the front end (UGH1). In some cases this can go unstable causing a lack of sensitivity and funny squealing noises at certain signal levels. A simple cure in most cases is to add a 10 Kohm resistor between the base of Q104 and earth. There are a suitable pair of vacant holes on the board between R107 and C190 (wonder what they were for . . . ?).

One of our correspondents who suffered this problem cured it by re-inserting C110 (27 pF). In theory this mucks up the terminating impedance of the filter, but he claims it works so I pass it on here!

Several people have complained of audio peak distortion; that is distortion on loud signals. This is almost always caused by the transmitting station over-deviating. Remember, adding a crystal filter will make a rig more selective. Many people have discovered that by turning up the deviation on their rigs they sound louder. This should only be attempted by people having the necessary equipment to measure deviation. Aside from splattering into adjacent channels, over-deviation will cause distortion on highly selective receivers!

We have been asked why we didn't recommend connecting the input end of the crystal filter to the top of the L104 in the original article. In theory this would provide a better match at the input end. Well we did try it, but connecting it this way instead of to the secondary, as the ceramic filter is, increases the sensitivity of the receiver. You might imagine that this would be a good thing, unfortunately the increase in sensitivity is such that the old problems of blocking and cross-modulation re-appear! You win some,



the Mods.

you lose some . . .

All in all it has to be said that the receiver can be something of a disaster! The mods described in the October 1982 article and above will improve it considerably. The performance will become quite adequate where before it was appalling. However, as one of our correspondents said, if you want a really good receiver, then buy a Uniden . . . Quite!

And the next one, please . . .

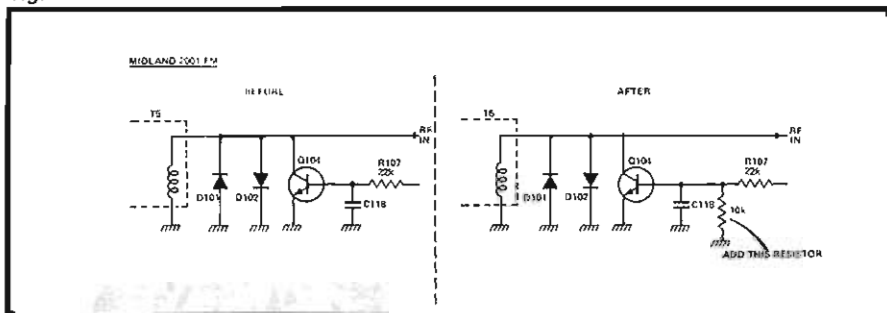
Moving on to other rigs, we now provide a brief description of how to fit crystal filters to a few others rigs. We are not going to give detailed fitting instructions! If you can't work it out from the details given then YOU SHOULD NOT BE ATTEMPTING THE MOD. This is only for those of you who are able to read circuit diagrams and carry out intricate soldering work!

Midland 100M

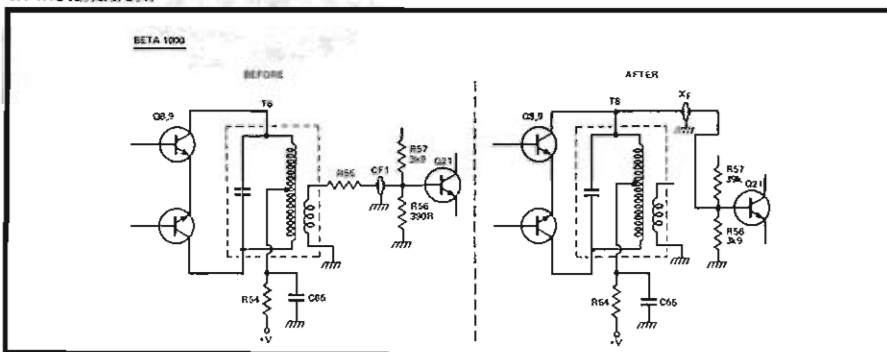
This is a 'converted' AM rig. Its basic performance was quite good before, but is now excellent. There appear to be no variations in sensitivity or stability problems at all.

Remove CF1, the existing ceramic filter. This is not easy, as it is well and truly buried inside the receiver! The crystal filter should be connected between the 'hot' end of L103, (collector of Q102) and the 'hot' end of the PRIMARY of L104. That is the corner pin on the 3-legged side that is

The addition of the 10K resistor cures the lack of sensitivity sometimes found with this rig.



The double tuned transformer is omitted on this Beta 1000 so there are slight differences in installation.



nearest Q105. It is almost impossible to get the filter in on the component side of the board, so the best thing is to tag it across the back of the board.

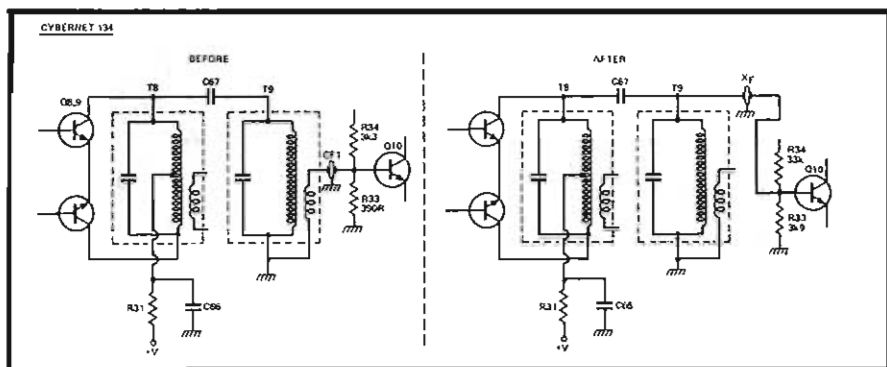
Wrap the filter in insulating tape so that the can doesn't short out the PC

tracks. Solder the middle wire of the filter to a convenient earth land, and the outer wires to the points indicated. Keep the connecting wires as short as possible consistent with the filter lying flat, and make sure that the wires can't inadvertently short to anything underneath them. No retuning or adjustments are necessary.

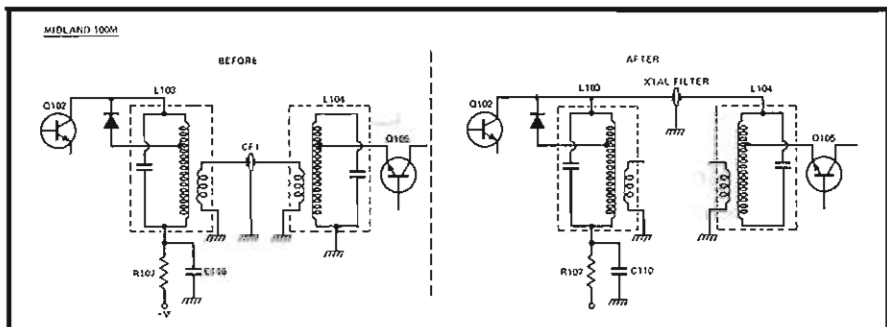
Low TX 40

The TX 40 doesn't have a ceramic filter in the first IF stage, just a band-pass pair of coils. In this case the filter is

The sensitivity of this chassis is slightly improved by the crystal filter modification.



Locating CF1 is not easy on this Midland 100M chassis.



used to replace the top coupling capacitor across the band-pass pair.

Locate and remove C65, near L17 and L16. The outer wires on the filter are connected where the capacitor was, and the middle wire is connected to a convenient earth point. As with the Midland 100M, this is probably best done across the back of the board, taking the same precautions to avoid inadvertent short circuits.

Cybernet 134 chassis

This chassis is found in a vast number of rigs under a variety of badges (Cybernet Beta 3000, Rotels, Harriers, Fidelity 2000, York, etc.) If it's so good you might wonder why bother to fit a crystal filter anyway. Well even the Cybernet gets overloaded sometimes, and besides, why not make a good rig even better?

Locate and remove CF1, the 10.7MHz ceramic filter. Locate and remove R34 (3.3 Kohm) and replace it with a 33 Kohm resistor. Locate and remove R33 (390 ohm) and replace it with a 3.9 Kohm. This correctly matches the filter at its output end. Next insert the crystal filter in the holes vacated by the ceramic filter and solder it in. Now carefully cut the PC

track joining the filter to T9. This is best achieved VERY CAREFULLY with a Stanley knife. Check with an ohmmeter that the track really is cut. Using a short piece of insulated wire (to prevent accidental shorts) connect the now isolated pin of the filter to the 'hot' end of T9, that is; the end connected to C67.

The sensitivity is slightly improved after this mod.

Cybernet 135 chassis

This chassis is used in the Cybernet Beta 1000 and 2000 chassis. The 2000 has a double tuned transformer between the 1st mixer and the filter. In the 1000, the second transformer is omitted and jumpered over, and this obviously leads to slight differences in the installation.

First remove CF1, the first ceramic filter. Next remove R56 (390 ohm) and replace it with a 3.9 Kohm. Remove R57 (3.9 Kohm) and replace it with 39 Kohm. Put the crystal filter in the holes vacated by the ceramic filter. Remove R55 or the jumper in its place. Using a piece of insulated wire connect the R55/CF1 junction to the 'hot' of T9 ie the end connected to C66. On the 1000, T9 is omitted, so take the wire to the 'hot' end of T8. That is the end that would be coupled to T9 via C66 if it were fitted! This isn't as daft as it sounds, as the missing component locations are silk screened onto the component side of the PCB!

Once again, there is a slight increase in sensitivity with this mod!

Noise Squelch

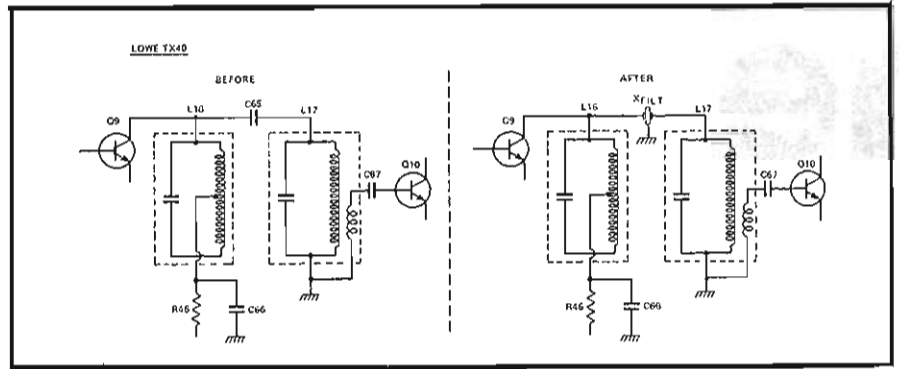
As a final mod, a well worth-while addition is one of Ambit's noise squelch kits. These are a bit fiddly to assemble, but are well worth the effort. Basically they by-pass the internal level dependent squelch, and replace it with a proper noise dependent squelch. As a bonus it eliminates that annoying rumble that Cybernet rigs are prone to when the squelch is hovering on its threshold. A combination of crystal filtering and the Ambit noise squelch makes the Cybernet chassis about the best thing ever to happen to CB!

The instructions that come with the kit are quite adequate for fitting to the Cybernet 134 chassis. Beware with the 135 chassis however. This uses a different detector chip to the 134 and you will need to take the precautions outlined in the instructions against IF breakthrough. That having been said, once fitted the squelch becomes a true 'set and forget' control.

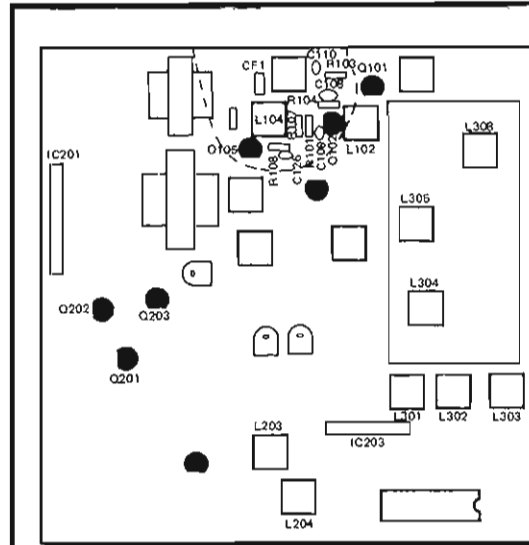
Well, here's hoping that this further update will stimulate some developments amongst the design and manufacturing side of the industry. Meanwhile, if you've got any good, worthwhile mods, don't keep them to yourself . . .

Note

You should not be attempting these modifications unless you are familiar with electronics diagrams and construction. Citizens' Band magazine cannot be held responsible for any



The crystal filter is used to replace the band-pass pair of coils in the Lowe TX 40.



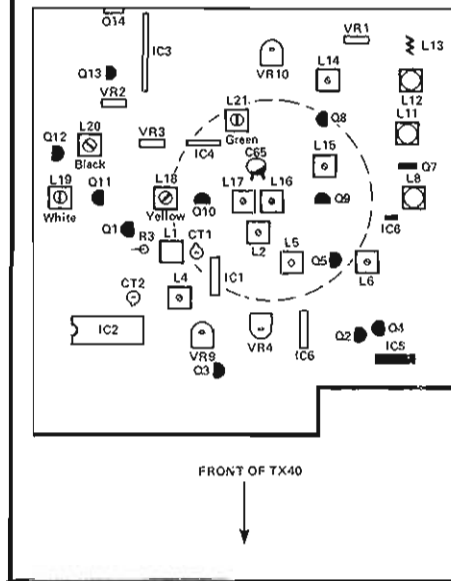
Midland 100M

This should help you locate the ceramic filter that needs to be replaced. It is not necessary to retune or realign the set after modification.



Lowe TX 40

C65 is next to the IF cans, L16 and L17. The filter should be soldered in place as shown in the p.c.b. and should be insulated to prevent shorting. As with the Midland above the set should not be realigned.



damage to readers equipment resulting from these modifications. Readers should satisfy themselves

that they are not invalidating the manufacturers guarantee or warranty in performing these alterations.

AUTOSCAN 5000

'The technical performance is unimpeachable... the designers have got it right.'
CB Magazine JUNE 1983

CB MAGAZINE VOTES THE AUTOSCAN 5000

TOP RIG OF THE YEAR

★NEW crystal filter version now available



- Bleed-over virtually eliminated for most situations – 80dB (typical 100dB) adjacent carrier rejection
- Crystal clear modulation
- Instant return to breaking channel
- Beautifully styled
- British designed and tested in British conditions
- Guaranteed for 12 months

Mic control automatically searches for busy or free channel

What CB Magazine said in April...

All in all, we have to say that this is the best rig we have tested to date.

At no time during testing was there the slightest evidence of swamping, blocking, cross-modulation, bleed-over in spite of 4 giant twigs within a 200 yard radius.

The transmitted audio quality was excellent, crystal clear with real punch to it making any sort of power or processor mike totally unnecessary.

Inside, you will find the kind of construction normally found in computers and professional equipment. A marked contrast to imported rigs.

The performance has been a revelation compared to anything we have seen before, and what's more it's BRITISH!

...and in June.

The technical performance is unimpeachable, with an exceptionally high degree of immunity to bleed-over.

The designers of the Magpie Autoscan 5000 have got it right and during our tests we could detect no signs of desensing, bleed-over or any other misbehaviour despite severe provocation.

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
"... My son brought an Autoscan 5000 for me to try... Breakers came in from all over the place and remarked on the 100% clear modulation. How soon can you let me have one? ..."

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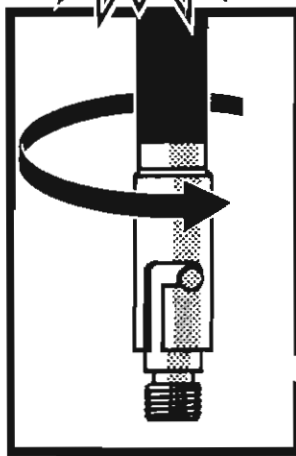
THUNDERSTICK

MOBILE

When you live life in the fast lane, you need the LEGAL antenna with the super-tough macho looks.



- Fibreglass whip encased in 1.5m of broad-band copper.
- Individually pre-tuned SWR.
- Chrome-plated, quick ¼-turn disconnect for security (see inset).
- BIG POWER handling — tested to over 1000 watts R.F. power.
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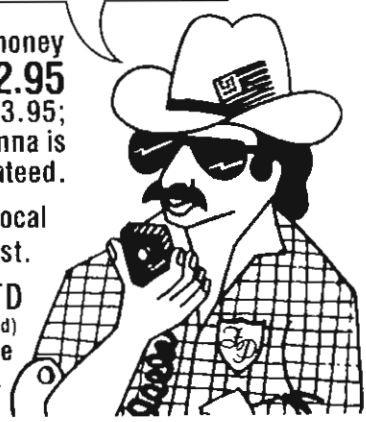


"Hi Breakers! Tex Thunder here! Have you eyeballed our new THUNDERSTICK, the red-hot legal-but broad-band-mobile twig? ...capable of zapping out over 1000 watts of power — fan-tas-STICK!"

■ A real value-for-money antenna — just **£12.95** incl. VAT + carriage £3.95; and each antenna is individually guaranteed.

Contact us today or ask at your local CB stockist.

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British Patent App. No. 8304169.





Seasonal greetings from the Medic Man and his usual collection of news, views, comments, cards, lists and praise from the QSL scene.



COMMUNICATION THE QSL WAY

Well, here we are again ready to dive headlong into yet another bulging postbag. Since we started this column,

I have never quite managed to get to the bottom of this sack, suppose it's a bit like painting the Forth Bridge, but don't stop sending those letters and cards, we love to hear from you. I was amazed at the response when I asked for the address of the RHEIN MAIN SIDEBANDERS — I was pleasantly deluged, more of that later. For months now I have been asking you lot to let me have some photos of your ugly mugs so that we can all have a good laugh, no seriously, I would like to include some of your photos in the column, especially those with super base-stations or pretty faces (or both!), so don't be shy, let's have some black and white photos. Each month we always seem to run out of space and it's the Club of the Month feature that usually has to go, so this month I will pull a fast one by including it at the beginning and hope no one notices!

Pride of Place this month goes to THE VOICE OF SCOTLAND INTERNATIONAL DX CLUB — THE VICTOR SIERRA DX CLUB of P.O. Box 29, Kilmarnock KA1 4QG which comes very highly recommended by one of their members — Bill VS 669. He writes, "The VICTOR SIERRA DX CLUB is Scotland's first and largest DX club, and I have been a member of this exceptional organisation for over two years now. I have found it to be a first class serious club for DXers, whether on AM, FM or SSB. Its aim is to reach out to the farthest corners of the world, thus creating a great understanding and friendship between different peoples. It has members in over 50 countries world-wide, stretching from the Arctic Ocean in the North to the Southern Ocean in the South, to the mysterious seas of the Caribbean to the magical waters of the Far East. I also believe that it is exceptional value

for money, and being a member of many clubs it far outstretches the opposition in both quality and quantity. It also offers free to members Amateur classes and technical talks on all aspects of radio operation and interference. The membership fee for joining this wonderful club is just £6.00 which includes the following:

1. A multi.coloured Membership Certificate.
2. An I.D. Card.
3. A Club Unit Number.
4. A Club Rubber Stamp, fully mounted.
5. 10 QSL Cards — Club emblem.
6. Full club directory with 1400 members, and club constitution.
7. Information about the club.
8. DX Information and charts.
9. A list of VS materials available.
10. You become a member of 5 other





Brian from PO Box 123 (BT160), Reading, Berks, he writes, "Thought I must write to you, have been meaning to for some time. It might help readers of the column to know some information that I have only learnt by bitter experience. There are four countries who, when you QSL with anybody there you should put NO skip name on the envelope. If you do there is an extremely high chance that it will end up as a dead letter and never get delivered. The countries are 1) Spain; 2) Canada; 3) France; 4) Belgium, especially Belgium as it would appear they are really cracking down over there, both on the Citizens Band fraternity and the Amateurs.

Now to the regular QSLs, first this month is a huge pack from Michael Lacey MIKE LIMA, Ferns P.O., Co Wexford, Ireland, who has put together a very informative QSL package with lots of information about his native country, his station, maps, details of his club membership, and not least of all a super collection of Irish QSL cards, definitely an ace package with a lot of thought put into it. Michael says there are not a lot of folk left on CB in his area now, and they cannot get any CB magazines, so if you do not save your copies of CITIZENS' BAND MAGAZINE when you have finished reading them, Michael can find them a good home amongst his CB friends over there. Had an interesting letter from YELLOWJACK — Robert Elam a QSLer from 49, Northdean Avenue, Keighley, West Yorkshire BD22 6QJ, he had some decent returns from a previous mention in these columns, but took time out to complain that several QSL Clubs were a bit lax in not sending out regular newsletters. Also heard from Peter Lutak of Kurzerweg 3, 4953 Petershagen 1, West Germany, he has been a 100 per cent QSLer for over two years now but is a little disappointed that all those out there who advertise they are a 100 per cent QSLer aren't, especially in the UK — so come on lads and lassies, let's show him. Peter sends out a good selection of cards, mainly full colour.

Two CURRIE cards in this month from PEACEMAKER — William Strachan of 30, Tollesbybridge, Coulibnewham, Middlesbrough,

- DX clubs, all international.
11. VS Club Group badge in 4 colours.
 12. Miniature Scottish Flags (5)
 13. Scottish Sew-on patch.
 14. Other materials supplied when available, tourist information etc.
 15. Fully embroidered club sew-on patch £1 extra (4 colours)
 16. We print your personal QSL card with photograph extra."

Thanks Bill, a nice write up and recommendation for your club. I have had personal experience of the VICTOR SIERRA DX CLUB and can also add my seal of approval for a great club.

For the past two months we have mentioned a very keen QSLer, 14 year old SEAN GOOCH YB 001 who founded the YANKEE BRAVO QSL Swap Club at Gernel, Woodend Green, Henham, Bishops Stortford, Herts CM22 6AZ. This is a super FREE club, membership is just 3 personalised QSL Cards and a large SAE for which you will receive a membership unit number, cards and lots of other goodies, can't be bad can it? Before you ask how Sean manages to get a mention every month the answer is quite simple — he is a very prolific letter writer, and at least two letters every month arrive on my desk — so how can you ignore this sort of enthusiasm?

I love being bribed, Bribe of the Month came from BARNABEE BEAR, alias Martin Edwards, President of the BRAVO BRAVO INTERNATIONAL QSL CLUB of 27, Manse Road, Carrowdore, Newtownards, Co Down BT22 2EZ. The Bravo-Bravo costs just £1 plus a SAE to join which includes a Club Unit Number, ID Card, applications to other clubs, plus a selection of Club QSL Cards (Currie QSLs) plus lots of special offers, drop Martin a line for full details. Oh yes — the bribe — I was enrolled as an Honorary member — great stuff! One of the introduction forms that arrived this month was for the KEEP IN TOUCH INTERNATIONAL DX-QSL CLUB OF NEW YORK, a really great club from way back. Formed by Tom Sowden in October 1979, the club has

run well, and can probably boast as being one of the longest established in the CB-QSL world. I joined this one way back in the early days, and remember being thrilled by the package. Membership is about £5, but if you wish to write to Tom first no doubt he will forward full details — his address is Tom Sowden, KAUB 1913, PO Box 61, Richmond Hill, New York 11418-0061, USA — enclose an IRC (International Reply Coupon) available from any Post Office to help towards postage.

Now back to the RHEIN MAIN SIDEBANDERS saga. You might recall that we always try to index and file every CB-QSL club that comes our way, but we were beaten by a request for the RHEIN MAIN SIDEBANDERS and I appealed to you lot to help. Quite a mixed bag of offers for help arrived, so I have selected a few to thank for their help. First to arrive believe it or not was one from the president himself — Jerry Willis of Rheinstrasse 4, D 6070, West Germany, so there we have the answer, and the evasive address, now preserved for posterity — some super club cards they have too — if any of you join this one, please let me know how you get on.

A great letter with some very poignant comments received from



Les Howard, founder member of the Round Robin CB Radio Group.

Cleveland TS8 OSD, and what must be the most beautiful CURRIE QSL from James Symm of 18 Orchard Avenue, Ayr, Scotland, KA7 3EJ who finishes off each individual card with a hand-painted flower — a really nice touch. A very prolific letter writer by the name of PISCES 10 — Lambert of 20, Birchgrove Street, Porth, Rhondda, Mid Glamorgan, sent in a nice photo of himself, but alas it is in colour, so it will not reproduce well. Lambert sends his thanks for all the friends he has made through out column, and now regularly writes to many people, especially WHISKEY MIKE 50 in Stornoway, Isle of Lewis, and welcomes any QSLs for which he promises a 100 per cent return.

A great letter and QSLs received from ANDY CAPP — H. Les Howard from 56 Playstool Road, Newington, Sittingbourne, Kent ME9 7NL, who is the Secretary and Founder Member of the ROUND ROBIN CB RADIO GROUP which started on Legal Day 1, currently some 50 plus members strong, dedicated to raising funds for Guide Dogs for the Blind. Their commendable efforts to date have resulted in some £900 being raised towards their target of £1000 to pay for the training of a guide dog for a blind breaker, what a magnificent effort. Les is also an avid QSLer, and if you would like to contribute towards this magnificent cause I am sure your donation, however small, would be most welcome.

Philip Gibbons of 19, Bromley Gardens, Houghton Regis, Nr Dunstable, Bedfordshire has collected nearly eight hundred QSLs and needs your help to reach the

magic 1000, he QSLs with a nice personal card, and will answer all letters. Barbara Guthrie HIGHLAND LADY of 45, North End, Caine, Wiltshire SN11 9DH is a newcomer to QSLing, and invites all you to QSL her, welcome aboard Barbara. Always happy to give our Channel 9 monitors a special welcome — Dave Daddy of HULL and DISTRICT of 4, Iona House, Honiton Road, Bransholme, Hull HU7 4JP will have a supply of QSLs by the time you read this, and welcomes a swap, as does DINO and JOAN OF ARC — Arnold & Joan Young, members of NAILSEA REACT TEAM at 21, Derham Park, Yatton, Avon BS19 4DZ, again some nice QSLs with the REACT symbol.

Before we close this month, must just mention a card received from SHERRY DOG and BIG AL of 1, Coleridge Gardens, Dipton, Stanley, Co Durham DH9 9LH, they are collecting toys for children in need as Christmas Presents, any offerings will be greatly appreciated not only by our



fellow QSLers but also, I am sure, by the children, and after all, that's what Christmas is all about.

Well that's all we have space for, shame how quickly we can fill these pages up. May I take this opportunity to thank you for all your cards, letters, QSLs over the past year, keep them coming, I always try to cram as many as possible into our column. In closing this month may I wish you all a very Happy and Peaceful Christmas, let's pray for peace in the world next year. God bless you all — until next year — take care, We care.

Mike Newbold
THE MEDICMAN
Your QSLs can be sent direct to Mike at
124, Hillcross Avenue, Morden,
Surrey SM4 4EG.

CB



Citizens' Band Magazines List of QSLers

TERRY ANDERSON
Charlie Delta 150
GORDON & NAN
Bullfinch & Chilli Pepper
PAT PALCIC *Stargazer*

GEORGE BATES
Jack of Hearts

FRANCES KESTLE
Captain Cornetto
BENJAMIN P MILLS
Charlie Two
MARK *Benn Gunn*

JUNE WATSON
Moonshine June
PHILL *Flying Scotsman*

P.O. Box 233, Brighton, BN2
2YW, Sussex
SR02, P.O. Box 3, Houghton-le-
Spring, Tyne & Wear DH4 4DB
31 Park Hill, Amptill, Bedford
MK45 2LP
23, Highfield Crescent,
Aberbargoed, Bargoed, Mid-
Glam CF8 9DW
1 Station Road, Rhoose, Barry,
South Wales, CF6 9EY
203, The Pasture, Downley,
High Wycombe, Bucks
102, Rempstone Road, Merley,
Wimbourne, Dorset
50, Ilchester Close, Dorchester
Rd., Bransholme, Hull HU7 6AU
P.O. Box 27, Bolton, BL3 3TS,
Lancashire

BILL JONES *Hurricane*

IAN HARRISON
Night Hawk

IVAN *Kilo Alfa 23*

DAVE PALEY *Delta Papa*

CHRIS HENRY *Seagull*

RICHARD *Postbox*

RUDD *Romeo Bravo*

STEPHEN WORSNOP

Farmer Giles

ADELARD HETU

Black Jack

JIM ELMS *Coachman*

'Tawton', 35 Hillview Drive,
Hucclecote, Gloucester GL3 3LL
2, Wells Heads Lane,
Sedgewick, Kendal, Cumbria
LAB 3JS
P.O. Box 141a, Surbiton,
Surrey KT6 4AN
35, Dunn Grove, Eastfield,
Scarborough, N. Yorks
YO11 3EN
P.O. Box 143, Wolverhampton,
West Midlands
Post Office Stores, Little Oakley,
Harwich, Essex CO12 5JF
P.O. Box 99, 6230 AB Meersen,
ZL, Netherlands.
Hirst Grove Cottage, Birstwith,
Harrogate, North Yorks HG3 2HZ
P.O. Box 723, Woonsocket,
Rhode Island, 02895, USA
11, Hall Lane, Ocker Hill, Tipton,
DY4 0XN, West Midlands

All I want for

A selection of Christmas goodies for your nearest and dearest that won't break the bank — they're all under a tenner. All are available by mail order if your local CB stockist doesn't have them

Speak Out

An extension speaker is invaluable for mobile and base use, if you use your mobile set indoors.

The Altai TC-40 is a four inch diameter extension speaker with a mounting bracket and screws for in-car installation. It has a power handling capacity of 10 watts and a response range of 500-10,000Hz. It has a neat and tidy design and shouldn't look out of place in any car, and comes with the standard extension speaker jack plug.

Also available on mail order from Telecomms or from local CB shops, it costs approx. £6.50.



Meter Made

This Academy test meter costs about £8.00 and has three measuring positions; standing wave ratio, field strength and percentage reflected power and includes a small wire antenna for measuring field strength. It comes complete with full instructions for use and the specifications claim an accuracy tolerance of $\pm 5\%$.

The Academy CB-34 is available from CB shops or from Telecomms in Portsmouth.



Listen Hear

Another Ross product is the RE-234 lightweight stereo headphones. Although I don't know of any stereo CB rigs, they are an inexpensive pair that would be useful for the sets that do have a headphone socket or for use with the Audio Monitoring Unit in Update this month. They have a Variplug connector for use with either the standard 6.4mm jack socket or the 3.5mm mini-jack socket.

Also available from those awfully nice Telecomms people or from hi-fi shops, the RE-234 costs around £7.95. They may be an improvement on the headphones on your personal hi-fi too.



Wrap up for Christmas

The embroidered sweatshirt from Tarmeco, featured in the March '83 edition, is still available in a range of sizes and colours. This British product comes in Navy, Greymarl, Bottle Green and Maroon in the following sizes: Childs — 24", 26", 28", 30" and 32" at £6.49 including packing and posting, and Adults — 34", 36", 38", 40", 42" and 44" at £7.99 including packing, posting and VAT.

Tarmeco can now monogram your handle, call sign or personal of up to twenty letters for £2 extra per garment. If buying more than one personalised sweatshirt please state very clearly which name belongs with which size and colour.

When ordering please include exact chest measurement (not nearest size), second colour choice and an SAE which will be used for sending detailed confirmation of order. Allow 28 days for delivery, and send cheque or postal order with order to Tarmeco, P.O. Box 94, Pulborough, West Sussex RH20 2RS.



Trunk Calls

If there are any DXers in the family they will particularly appreciate a proper log book for recording all those long distance copies. The Breakers Info and Log Book is ideal for this but has too much in it for it to be restricted to DX enthusiasts.

It has been compiled by breakers, so they have had first hand experience in knowing what to put in and what will be most useful. The book includes a comprehensive range of codes; international morse code; signal and phonetic codes and the familiar 10 and 13 codes. For international DXers there is a glossary of basic terms in English, German, Spanish and French. There is also a helpful list of legal European CB frequencies.

The rest of the book is made up of log sheets for recording contacts and a network log to help keep order and track of participants. The Breakers Info and Log Book cost £3.25 and can be obtained from The Breakers Enterprise, 82 Kenwood Road, Portchester, Hants. (Tel. 0705 326628). Only available through mail order so allow time for order processing and delivery.



Christmas

Pocket money pocket breaker

This isn't going to break the bank for present givers who are a bit short on cash this year. The Pocket Breaker is a neat little pack of cards giving both information and space for adding your own and costs just 85p.

There are cards listing the 10, 13 and 18 codes, Q codes, R-S reports and a phonetic pronunciations plus blank ruled cards for handle and eyeball logs. Each section is in a different coloured card.

Available from CB shops or directly from Telecomms, 189 London Road, North End, Portsmouth. Telephone 0705 662145.



Power Plus

The Ross RE-328 is a budget priced power microphone with a built in pre-amplifier and a variable output control. A dynamic mic, it is impedance matched for most input requirements and has a frequency response of 300-5000Hz. The RE-328 has an amplifier gain of 43 and a mic. element sensitivity of -75dB.

It is powered by a 1.5V battery (HP7 or equivalent) which is not included in the purchase price of £8.95.

The mic has the standard spiral cable and a retaining clip and fixing is included.



Cut the cackle

Present givers with their own interests at heart might be interested in two interference filters from Solid State Electronics. The BSF-10-8, at £4.00, is a very inexpensive narrow band stop filter and is very versatile. It can be used on low band VHF TV, UHF TV and the FM broadcast band. It is adjusted to give maximum attenuation in the centre of the CB band at approx. 60dB.

The LPF 1040CB is 50p more expensive and is a low pass filter which allows signals under 36MHz. to pass through and suppresses the harmonics of the transmitter. Used, of course, with the CB rig. Both of these items are designed and manufactured in Britain and are guaranteed for one year. Available directly from the manufacturer at 6 The Orchard, Bassett Green Village, Southampton, Hants. (Tel. 0703 769598).



Cheap Cheep

The Baidon Electronics 'Roger Cheep' almost needs no introduction as it has been a great favourite amongst CBers for some time. When fitted, the circuit gives a clearly heard 'cheep' when the mic is keyed — a variation on the roger beep that some sets have fitted as standard.

The circuit itself is very compact (40mm x 25mm) and should fit inside most rigs easily. Comprehensive fitting instructions are included. A further resistor is included for fitting if the 'cheep' tone is too high.

The Roger Cheep costs £4.95 and can be bought through Telecomms, 189 London Road, North End, Portsmouth.



Safety First

How many of you drivers out there (including me) have ended up weaving across the road with the microphone cable wrapped around the steering wheel? Or used your rig as a home base and sent the coffee cup flying pulling the microphone over to your chair. Despair no longer. The SSE 2-way switchable extension lead, the TW-ME-04, is available in two versions; the TW-ME-04C and the 04U, covering the two most common 4 pin microphone wiring schemes. Other types are available to order.

The extension lead will allow two microphones to be connected, allowing a passenger and driver to have their own without passing the mic back and forth. It will also allow a power/speech processor mic to be connected.

At £7.95 the SSE extension box is very much cheaper than some of the other safety devices or purpose designed microphone systems and doesn't require specialised installation. Order directly from Solid State Electronics, 6 The Orchard, Bassett Green Village, Southampton, Hants. Telephone 0703 769598.



All I want for

Just to get you in the mood for the coming festivities we've been asking around to see what people connected with Citizens' Band want for Christmas. After they had their flights of fancy we made them be more practical and choose something related to CB. Most of it will get down the chimney, but we're not sure about some of it — the Porsche will have to be a kit car for a start and the Yaesu's not going to be up much after it's been forced down a sooty tunnel

Branston

A hedgehog's life is not an easy one, we're the wrong shape for one thing and our legs are rather short. That makes it difficult to get out of things like cattle grids, and because of our legs we can't run away from things like cars very quickly.

So really, I'd like more hedgehog amenities like ramps in cattle grids and places to cross roads, especially motorways, and I'd particularly like those rotten cats and dogs to stop sniffing around and rolling us about.

I know these things aren't going to happen overnight so I'll settle for a nice regular supply of slugs and bread and milk. Since this is a CB magazine, I'd also like an antenna. Not that I can go on channel but it would be very handy for scratching in between the spikes — those fleas are a worse nuisance than the cats and dogs! I reckon the K40 would do it and it's widely available from CB shops. Trouble is I don't have £32.50 — we hedgehogs don't use money very much!

Smart Alec

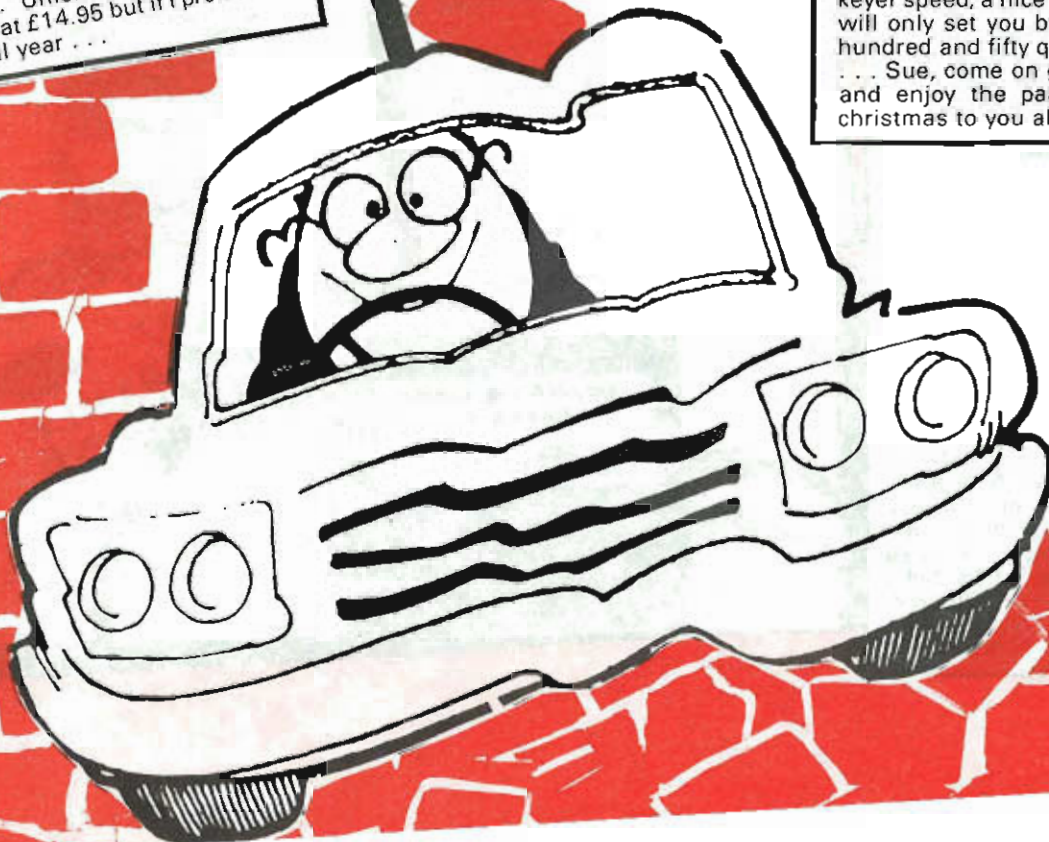
Given a completely free choice for a Christmas present, I'd greatly appreciate a big book with all the answers. Most of the time I can cope with readers questions and can come up with a reasonable answer but every once in a while someone poses a problem that really stumps me. It would be great to have just one book that covered everything I could possibly want to ask.

If I can't have that then a good substitute would be the 'Servicing UK CB Radio' book by Michael Tooley. It's published by Newnes Technical Books and is definitely the best book of its type that I've come across. It doesn't have everything of course, like my mythical ideal book, but it's the next best thing. Unfortunately it's a bit expensive at £14.95 but if I promise to be good all year . . .

Mike Newbold

Oh! isn't it great, Christmas — I love it. Lots of lovely presents, mistletoe, holly and goodwill. Sue Sharp our Editor asked me what I would like for a Christmas present, and without the slightest hesitation I asked for the long-awaited CHANNEL 9 ABUSER-FOUL MOUTH EXTERMINATOR, LASER ACTIVATED IDIOT ERADICATOR-DEAD KEYSER GALLIUM ARSENIDE INJECTOR, TURKEY TALKER AND WHISTLING BURKE REVERSE-BIASED ANNIHILATING TRANSMITTER, the long-sought after pollution clearing machine for Channel 9, but alas the local CB shop was clean out of these, so I will have to wait.

OK! peace on earth at Christmas even to those narrow minded cretins, so what can I seriously ask Sue for? I already have my ideal base set up, and all the hand-helds I can carry, so I thought I would branch out a little and strolled down to our local radio emporium to inspect the stock and make my selection of Sue's present to me. After much deliberation and twiddling of knobs I selected a reasonably-priced little number — a YAESU MUSEN FT-980 All-mode High Frequency Computer Aided Transceiver incorporating the highest level of microprocessor controlled control ever offered in an HF solid-state radio, including a general coverage receiver 0.15 to 30MHz, keypad or tuning dial selection of frequencies, and additional controls for Automatic Mike Gain, ALC Meter function, IF Notch and audio peak filters, transmit monitor, noise blanker and CW full break-in. Controls also provided for FM squelch, and CW keyer speed, a nice little number and it will only set you back a mere twelve hundred and fifty quid — Sue . . . Sue . . . Sue, come on get up off the floor and enjoy the party. A very happy christmas to you all.



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Christmas

Mack the Hack

'All I want for Xmas is my two front teeth' goes an old song. All I want is one front tooth as earlier this year it got loose and had to be removed. It was a very useful tooth especially for stripping outer plastic coatings from wire or co-ax, but then I expect that's what made it loose in the first place. But CB wise, I would like this Christmas that all wallies, music players, and other abusers of the CB frequencies to vanish up their antennas in a puff of R.F. (I wonder how many others are wanting this.) I would also like the authorities to come to their senses and abolish the antenna restrictions, and maybe give us more channels which would be especially useful for our larger towns and cities where the channels tend to get rather over-crowded.

As for a personal item of CB ware, I would ask him with the white bear, beer gut, and red dressing gown for a Uniace 300 base rig. Why's that, you want to know. Well for a start I haven't got a base rig at present and I already own a Uniace 200 that I am very satisfied with as it's well made with very good adjacent channel rejection. (bleedover to you). Plus I notice that the 300 base rig has the 13.8V facility as well as mains and I'm sure this could be useful if I ever wanted to run the rig mobile or in a caravan that normally uses 13.8 volts. Even in the possible event of a mains power failure the rig could still be used (if, of course, one had a car battery standing by as an alternative power source. Well doesn't everybody?) Merry Christmas.

Chris Peterson

Our lovely lady Editor has asked me to make up a shopping list of desirable goodies for Christmas. What can this mean? How far will she go? (financially, that is!)

The most desirable items are not always the most available. Around London, the biggest drawback to CB is without doubt Wallies. Unfortunately, the Ron-Tel Universal Wally Filter (only £4.99 mail order only) has had its launch date postponed yet again due to unforeseen technical difficulties. Most of the Wallies were too thick to force through the gauze, and it had to be stripped down every half-hour for cleaning . . . !

Perhaps an alternative would be a pair of bricks! The New-Wave Wallies seem to have this desire to speak in a voice several octaves higher than normal. Unfortunately many of them seem unable to keep this up for long without going hoarse. Suitable application of the aforesaid bricks could bring an end to all their problems! Could be painful though! Must be careful not to get my fingers caught between the bricks . . . !

No, I think the best solution would be to get away from them altogether. I wonder if she'll run to a UHF rig or a month in the Bahamas? Sue? er . . .

Sue Sharp

Dear Santa,

Please can I have: a Porsche, Richard Gere, a house in the Bahamas, all of Paul McCartneys money or all of the money in the world, which ever is greater, a gold American Express card with unlimited credit, 100,000 shares in Sinclair Research Ltd., New York (well, someone's got to like it and I do), an account at Harrods, the new data-linked Bang and Olufsen hi-fi system and a Christmas card from the Queen.

Whatcha mean, greedy? O.K. then, how about an abbreviated list. I'm prepared to reduce the list to the money and Richard Gere -- the rest will follow.

O.K., O.K., how about a Magpie Autoscan 5000. It's just about the best rig I've come across and nearly as much thought has gone into the styling as the technical design. To make things easy for you, it's available from Magpie Electronics, P.O. Box 35, Andover, Hants, SP10 2LG and its costs £120.

P.S. I'll leave the back door unlocked, Santa. The chimney's gone since you last visited. We've had central heating put in.

Andy Giles

When I was asked what I would really like for Christmas, I was lost for an answer. Not because I can't think of anything that I want, but because I want everything. I am a natural consumer durables. I only have to see an ad for the latest Bentley Turbo or Moonraker power boat and I start to drool. I like to think that I would be the ideal person to win the pools because I would thoroughly enjoy every last penny, so maybe any answer should be just money, lots and lots of money.

What I shall almost certainly treat myself to is a new scanner. I enjoy listening around far more than I do transmitting and there is a new scanner on the market that covers from 25 to 550MHz -- without any gaps. This is a breakthrough in scanner design and it will let me listen to all those frequencies that have been hidden from me in the past. The machine is called the AOR 2001 and its costs £298, which is about the price of existing models. It is available from Lowe Electronics, Chesterfield Road, Matlock, Derbyshire (Tel: 0629 2817) and with a bit of luck I will be able to scrounge one from them for review in this magazine.



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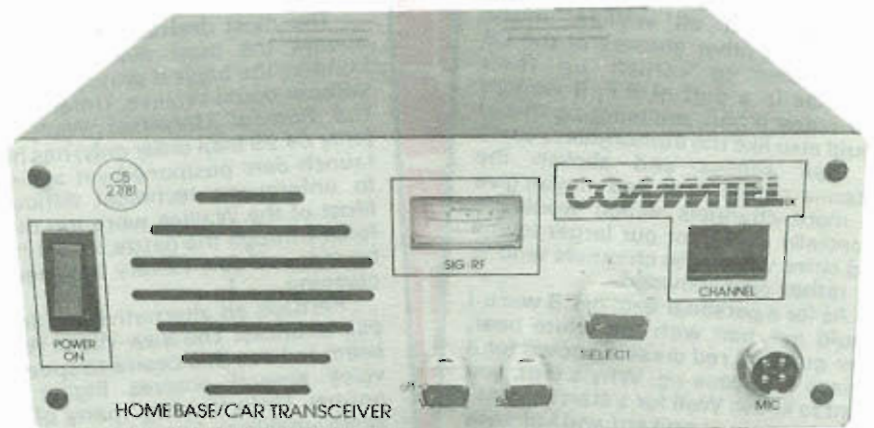
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Rig Review



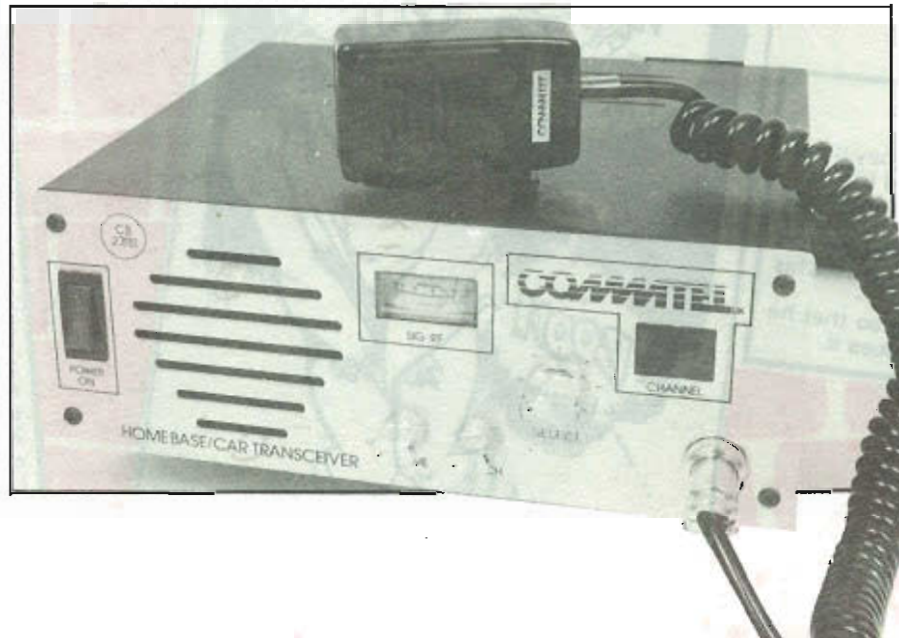
This month Andy R Giles has been having a look at the Commtel combined home base station and mobile CB transceiver with its own mag. mount antenna.

PUBLIC SPEAKER



The Commtel transceiver that I borrowed from Lucky Numbers is a slightly unusual rig. It has been designed as a base station primarily, but it can also be used as a mobile, just by plugging in the dc power lead. Admittedly, it is rather large (approximately 9ins wide x 3.5ins high x 7.5ins deep) for mobile use and even though it is supplied with two small angled brackets for mounting it underneath a dashboard, I can't think of many cars that have enough room for it. It should, I think, be looked on as a base station that can be used temporarily in a car. The manufacturers seem to have designed it with this in mind because the mains power lead is an integral part of the unit but the 12V lead, which is a

separate item that plugs into a socket on the back, is terminated in a cigar lighter plug. This would suggest that it is not really intended for permanent use in a vehicle. The antenna that is supplied with the unit also has a distinctly temporary look about it. It's an eight section telescopic whip approximately 35 inches long (a third of a quarter wave?) with a magnetic mount. The lead from this is terminated in an ordinary car radio type of plug which fits into the appropriate socket on the rear of the rig. This arrangement makes it quite a useful rig to carry in the boot of a car for use in an emergency, much like those small S.O.S. type of rigs that are currently on sale. Except, of course, that this one has the added bonus of a built-in power supply. Just plug it into





the mains, attach your own antenna to the SO 239 socket on the back and you have a fully fledged base station.

I played with this one at home, using my own outdoor antenna and with the set plugged into the mains, and I found that it performed well. The board inside is the traditional Cybernet-style one based on the LC7136 chip and its power output, spurious emissions and so on all conform to MPT 1320, the legal specifications for British CB rigs, so it gets out as well as most other rigs. It is housed in a very solid metal case which should not only protect the delicate innards, but also prevent any possibility of case emissions.

The controls on the front panel are all straightforward. On the left-hand side there is a large On/Off switch that lights up when the power is turned on. Immediately next to that is the grille for the loudspeaker. How nice to find a rig with a forward facing speaker. When mobile units are used indoors, they usually have to be used

with an extension speaker, or with the front of the rig resting on something because the speaker is usually mounted underneath and the sound can't get out. Some base stations have their speakers on the top and this is fine unless, like me, you find that you never have enough room to put things down and you start putting books or magazines on top of the rig. Then the sound disappears again. A front facing speaker solves all those problems.

Just to the right of the speaker there is an illuminated Signal Strength/RF meter and just below that there are two knobs. One is the rotary On/Off Volume control and the other is for the Squelch. To the right of them is the Channel Selector Knob and to the right of that is the red LED Channel Display. In the bottom right-hand corner is a four pin microphone socket.

The rear of the rig has a standard SO 239 socket, a car antenna socket, a 12V socket and a built-in three core mains lead that enters the case

through a very sturdy looking rubber grommet.

Just to test the full potential of this rig, I took it out with me in my car. I found that it worked well enough but I can only repeat what I said earlier, this is definitely not a mobile rig. There was nowhere at all where it could be mounted in my old but reasonably large vehicle and the trailing mains lead was a nuisance. It is solid enough to be carried around in the boot without suffering too much damage and I would think that if you are looking for a base station that can double as an emergency rig, this would fit the bill.

While I was just sitting back and thinking about this rig, I asked myself who the manufacturer had in mind when he designed it and I think that I have found the answer. The CBER for whom this rig would be ideal should use it on mains power whenever possible and at the same time have a vehicle that has enough room to accommodate it. Looking at it that way, the answer seems fairly obvious — caravanners. Those hardy souls who spend weekends away in caravans, campers and mobile homes could make full use of this rig. They could sit it on a table or in a cupboard and then, with a decent antenna on the roof, they would be able to put out a very good signal. When they are not parked on a site, the rig could be connected to the 12V vehicle supply and when they are on a site that has full facilities, such as plug in water and mains electricity, the set can be powered from the 240V supply. The versatility of this radio could then be exploited to the full.

The Commtel costs £64.95 and is available from Lucky Numbers, 97 Coldharbour Lane, Hayes, Middlesex (Tel: 01 573 4848) who we would like to thank for the loan of the review unit.

RIG REVIEW DATA PANEL

Model Commtel
Distributor Various
Typical Price £64.95

Features	Yes	No
PA Facility		●
External Speaker Jack		●
TX Indicator Light		●
RX Indicator Light		●
PA Indicator Light		●
S/RF Meter	●	
Hi/Lo Power Switch		●
ANL/NB Switch		●
CH9 Switch		●
Variable RF Gain		●
Mike Gain		●
Delta Tune		●
Tone Control		●
LED Channel Readout	●	

Facilities

Ease Of Controls				
Built In Speaker	●			
Microphone Location		●		
Cabinet Construction	●			
Quality Of Control Switches		●		
Channel Indicator Readability			●	
Mounting Bracket				●
Hand Book/Instructions				●

	Superb	Good	Fair	Poor
Ease Of Controls				
Built In Speaker		●		
Microphone Location		●		
Cabinet Construction	●			
Quality Of Control Switches		●		
Channel Indicator Readability			●	
Mounting Bracket				●
Hand Book/Instructions				●

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

Specifications

Modes Of Operation	FM Only
No. Of Channels	40
Weight	3.25Kg
Dimensions	9"x3.5"x7.5"
Supply Voltage	12V/240V
RF Output Power	4W
Frequency Stability	Within MPT 1320
Swamping	Fair
Sensitivity (RX)	Good
Spurious Emissions	Within MPT 1320

CB VERDICT

Range	XXXX
Clarity of TX	XXXX
Clarity of RX	XXXX
Ease Of Controls	XXXX
Ease Of Installation	XXXX
Performance	XXXX

NEXT MONTH

JANUARY
ISSUE WILL BE ON SALE
FRIDAY
16
DECEMBER

The articles mentioned are in an advanced state of preparation but circumstances may affect the final contents

Time for Hogmanay, time for New Year resolutions, time for the hangover cures . . . and time for a 1984 issue of Citizens' Band. No 'Big Brother' or 'Newspeak' in this issue, but all last years favourites plus some exciting new features for the new year.

Keith Townsend (a name that should be familiar to many breakers) looks back at the old days 'when breakers needed eyes in the back of their heads and a healthy aversion to little yellow vans'. More seriously, he asks if we have got what we fought for, or a pale imitation.

We all complain about 'urban CB'. The number of users, the congestion on the channels, assorted bleepers, squeekies, frustrated D.J.s and 'why don't they do something about it'. We hope very much that 'they', the Radio Regulatory Dept., will be telling us why not in a special interview next month.

Someone who doesn't know what

urban CB is like is Malcolm, chairman of the Viking Radio Group in the Shetland Isles. He'll be telling us what CB is like in the northern-most tip of the UK.

Brian Wright, apart from his usual antenna spot will be looking at the Datong Tone Squelch and will be giving us his opinion on this and one of the Oscar mobile antenna range.

COMPETITION

A completely different competition this month — something to really get the grey cells working. Here are two cartoons, superficially the same, but with ten subtle differences. All you need to do is to list those differences on a post card with your name and address and send to the usual address.

Since more than one of you is likely to get the right answers, it will be the first one out of the hat that wins the prize. Well, not quite true as there is more than one prize, as it's Christmas.

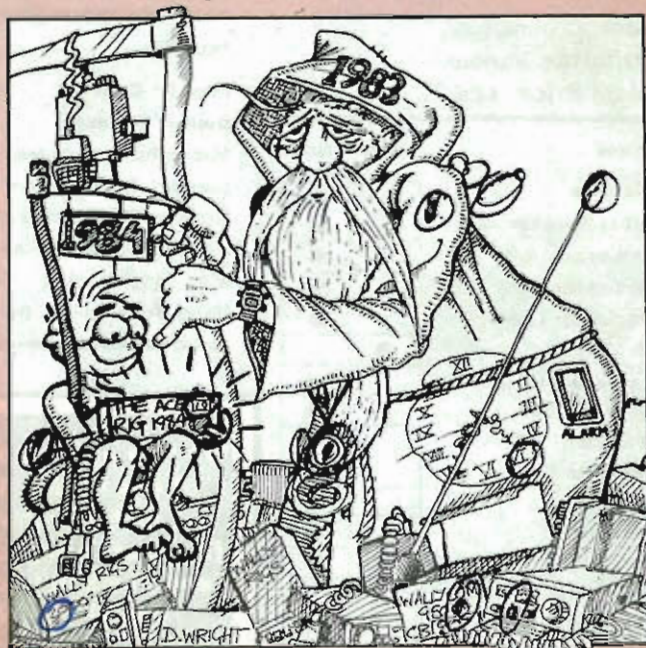
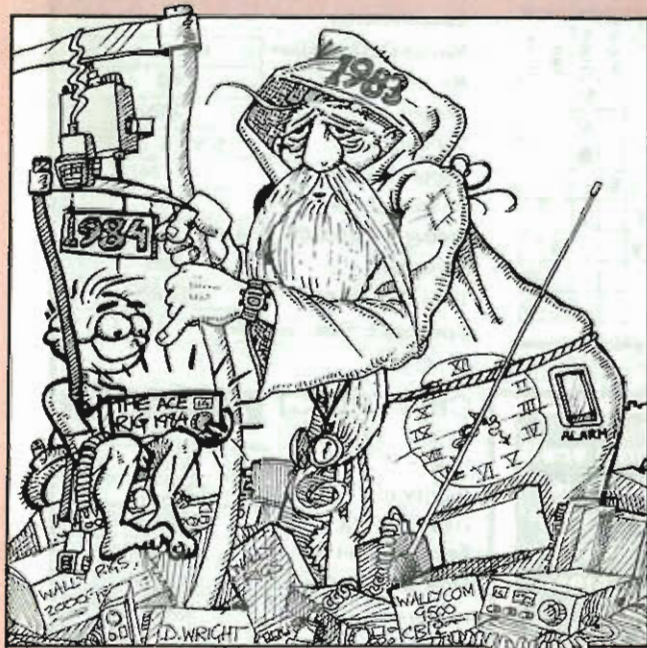
First prize will be a Harrier Base Station, a handsome piece of equipment with tone control, channel 9 switch, delta tune, RF gain and the not-often-seen headphone socket.

Second prize is a Fidelity 2001 mobile rig, which also has tone and channel 9 controls, dimmer switch and mic. gain as well as RF gain. Are we good to you, or what? Third prize is a base station console, a neat item of furniture that takes a mobile rig and converts into a tidy base station, instead of a propped up rig with wires trailing everywhere.

Fourth, and last, prize is a handful of CB books. So you can actually know it all, instead of just thinking you do!

Usual rules apply and can be found below in the now-standard microscopic print.

De rules.
No employee of A.S.P. Ltd. is allowed to enter. All entries must be on a postcard and arrive here by second post, Friday 16th December. Don't forget your name and address. Editor's decision is final. Entries to Cartoon Competition, Citizens' Band, A.S.P. Ltd., 145 Charing Cross Road, London WC2H 0EE





Filly finds that fame isn't always fun and that being a celebrity has its drawbacks when you're not immune to flattery.

LADY BREAKERS

Being a local celebrity is no joke, let me tell you.

I was commenting on the fact only the other day to another breaker, the owner of the local garage.

"Yes, maybe, but how would you know?" he asked—or I think he asked. I may have misheard. Everyone hereabouts know I'm a celebrity. I tell them often enough.

But let me give you an example of what I mean. I can tell you, you'll be positively *glad* you're not a famous columnist. A couple of weeks ago, one Friday night, a few of us were sitting cosily by our base stations, idly chatting, like you do on a Friday night. Then a voice I didn't know broke in (how rude, I thought).

"Hello, breakers", said the newcomer, an elderly, well-spoken man.

"Tommy Tucker here. Excuse me for butting in like this . . ." and, oddly enough, instead of a chorus of complaint, the channel cleared as if by magic. Mass desertion of the airwaves. (Even ruder, I thought).

"Er," said poor old Tommy Tucker. "Is anyone still there?"

Well you know me, all heart.

"Hello Tommy", I said, feeling sorry for him. "Oh hello there. Who is that, please?" he asked, sounding more cheerful.

"You've got Philadelphia Judd", I said, with a deprecating cough.

"Philawhat?" he asked, puzzled. I brightened; you can have no idea what a relief it is sometimes to go unrecognised. Just another breaker.

"Call me Filly", I said, generously.

"Ah, Filly! I've heard of you!" he said with excitement (ah well, such is fame). "I've been out of the country, Filly, so I don't think we've spoken. But you are *just* the person I'm looking for!"

"I am?" I said.

"You are. A local personality".

"Oh, well . . ." I said, modestly.

"A well-known local name".

"Well, so they say . . ."

"An authority. An expert in your chosen hobby".

"Er—" I said. And that was how it happened. Tommy Tucker, you see, is a local figure notable for his, well, good works, apparently always on the lookout for speakers for his various fellowships and brotherhoods and sisterhoods and circles and at-homes. Only I didn't know that, then, and fell alive into his clutches, with the result that before I knew where I was I had promised to give a talk the following night to his Saturday Circle of Friendship in the local church hall.

It struck me later that night what a

wily old bird he was. Playing on my well-known good nature, I though indignantly. Flattering me. Pretending he'd heard of me. (Yes, but you rose to the bait, didn't you, said the voice of my conscience. I stifled it. Vain? Me? Perish the thought!). I tossed and turned all night and thought wild thoughts, about emigrating to South America in the morning, but come Saturday evening there I was, standing in the hall confronted by rows of eager beady eyes, lines and lines of shrewd and experienced pundits skilled in the art of pinning nervous guest speakers to the wall.

Tommy Tucker, looking benevolent and saintly, introduced me, the old horror, and sat down, leaving me standing there alone. I wondered for a mad moment if my reputation would be shattered beyond repair if I made a break for the door, and decided it would. There was nothing for it. I opened my mouth and croaked something, good evening I think it was, and dried up completely. I tell you, mike fright is nothing to it.

But I survived. Trust Filly to fall (eventually) on her feet. As I was totally unable to speak in anything but a sort of hoarse squeak (like a drowning gerbil, someone said afterwards), I decided to go straight into my demo. I'd checked the rig I'd set up in the hall at least fifteen times, but my hand was still shaking as I picked up the mike. What if a wally was listening in? What if *nobody* was listening in? There was a crackling silence as I released the button after asking for a copy, and I saw my life flash before my eyes. You don't have to be drowning. And then, bless her, there was Daisywheel, articulate, amusing, and loud and clear. (Well, I had told here to park just outside the hall).

And the demo went like a dream. They were queuing up for the privilege of talking to Daisywheel. And afterwards, I was (almost) my own witty, assured, informed self. Almost. True, I went completely blank when someone asked what squelch was. True, I couldn't remember how much my rig had cost. I remember telling them with the utmost confidence that the HI/LO switch was for adjusting sound volume, and I couldn't for the life of me think what SWR stood for. But at least they all went home laughing.

And there it is, breakers, it's not all champagne and caviar. Come to think of it, it's never champagne and caviar. But next time you think to yourself, I wish I was as famous as Filly—well, ask yourself, is it really worth it?

CB



Newcomers and recent converts start here for a course in all you need to know about 934MHz.

934MHz

For all that plans for a 934MHz service were announced at the same time as the legal 27MHz CB service, it has remained strangely unexplored. Much of this has been due to the difficulties in obtaining equipment on the customers side, and problems in actually producing it on the manufacturers side. Now that these major obstacles are being overcome, there is a minority of enthusiastic users. But there are still a lot of breakers who know absolutely nothing about UHF CB. So here is the first in an occasional series of updates on the world of 934MHz.

Questions, questions . . .

First off is a question and answer session on the most asked about topics.

How much will it cost me to set up a reasonable home base on 934MHz?

The Reftec transceiver costs just under £300 and this is the only one widely available at the time of writing. Home base antennas range from £9.00 to £98. The cost of cable and connectors must be added to this too. I have had a lot of problems with T.V.I. on 27MHz and the neighbours are going barmy! Would it be better or worse on 934MHz?

Better! The technical and propagation characteristics of UHF means that interference is most unlikely.

Will my 27MHz twig work with a 934MHz set?

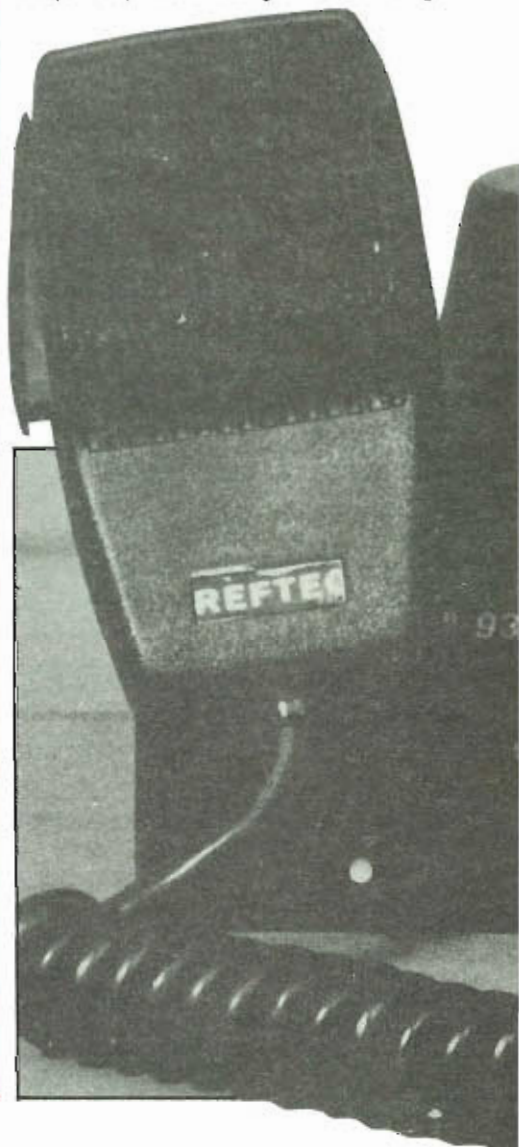
No, no, no. The antenna will not be tuned to the correct wavelength and you may risk permanent damage to your set.

What sort of distances can I expect to get with 934 CB?

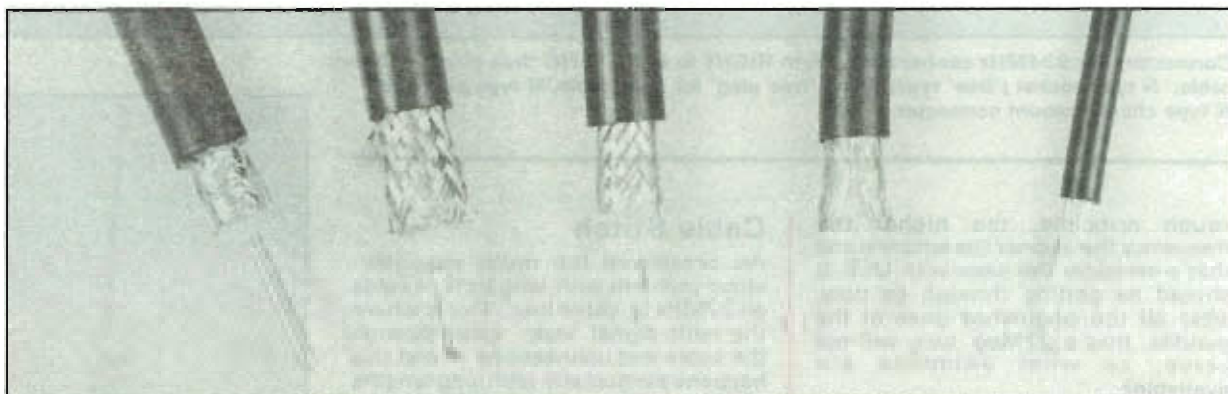
It's very difficult to give exact answers to this type of question. Generally speaking, similar distances to 27MHz can be expected, but without the attendant 'hash' on channel. However 934MHz doesn't obey the same rules as 27MHz CB and there are reports of much greater distances. Any radio signals will be affected by antenna efficiency, operating conditions and geography. With 934MHz mobile to mobile will be least effective with base to base achieving the best results.

If I'm not going to be able to copy greater distances why bother with something so expensive?

Well, once again the technical characteristics of 934MHz means that transmissions will not 'skip' so channels will not be full of that annoying high noise level all the time. Since it is unlikely to be so popular or as cheap as 27MHz there will be fewer users, giving freer channels. There is very, very little danger of causing



FORUM



Grades and types of cable for use with 934MHz equipment. From RIGHT to LEFT: RG 58, RG 8, RG 213, UR 67 and H 100. See table on next page for comments.

interference to other RF system users. Finally, for the business user it is a cheaper alternative to Private Mobile Radio.

Is there a calling channel?

No, not really. Different groups of users tend to agree a channel between them.

What about the recent frequency changes?

In a rare attempt for international or at least European unity, the Government has moved 934MHz frequencies slightly to fit in with other as-yet-nonexistent UHF systems. Sets on the original frequencies can be sold up to 31 December this year and can be used until 31 December 1987. Reftec are now marketing sets on the new frequencies and will alter existing sets to the new frequency.

Can my 27MHz set converted to 934MHz?

Not internally. Two companies (Grandstand and AKD) have announced plans for a transverter and these may well be available by the time this article appears. These will be separate units which will be connected to the 27MHz set.

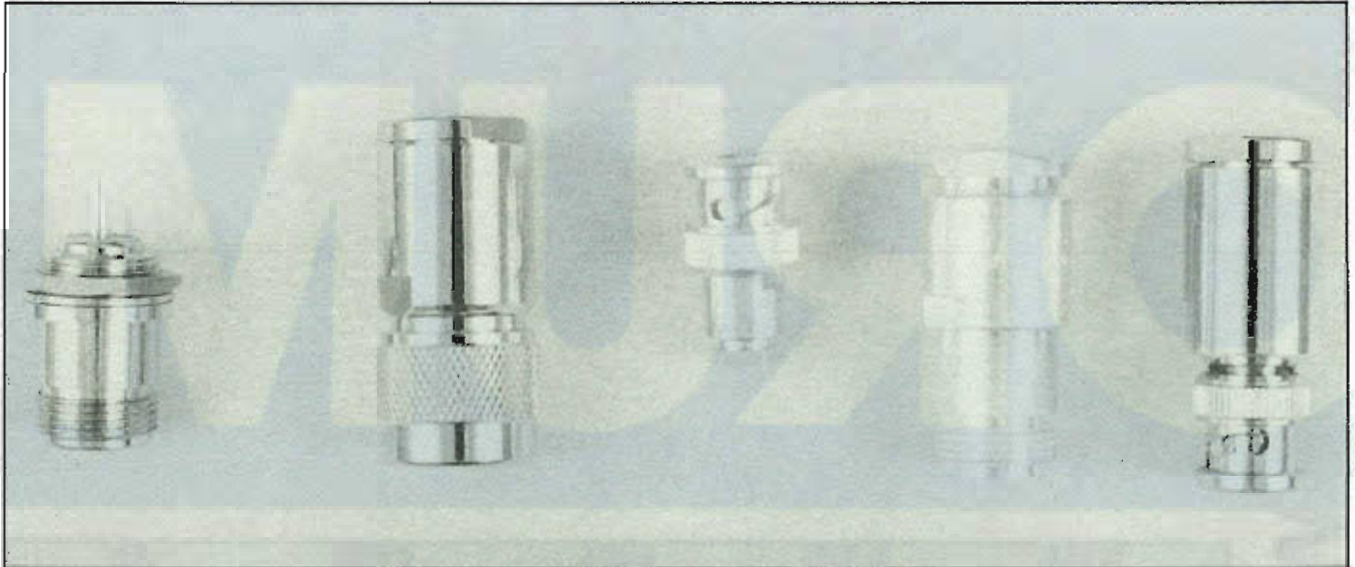
Will there be anyone else to talk to? The numbers of sets in use hover around the thousand mark. Admittedly that's not a lot of people when they are scattered across the country but there are 'pockets' of users. 934MHz CB is getting increasingly popular though and networks of users cover large areas.

All of these are pretty basic questions and we hope to go on to some more technical topics in following issues.

Antennas

Antennas are strange things and I'm inclined to think that antenna design is black magic rather than science. As a





Connectors for 934MHz connections. From RIGHT to LEFT: BNC 'free plug' for heavy cable, N type socket ('free' type), BNC 'free plug' for light cable, N type plug and N type chassis mount connector.

rough principle, the higher the frequency the shorter the antenna and that's certainly the case with UHF. It should be getting through by now, after all the anguished cries of the pundits, that a 27Meg. twig will not serve, so what antennas are available?

The Government in it's wisdom has been far more relaxed about the type of antenna permitted at 934MHz, so beams and similar far more efficient designs are for sale.

Reftec, as the pioneers of UHF CB, have a large range on the market and their base types include a four element yagi with 4dB gain, a full wave omni directional giving 3dB gain and a 7dB gain colinear stack pole.

Mobile antennas from Reftec include an omnidirectional quarter wave (which is only 2 inches high) and a similar antenna with a half wave colinear, giving a gain figure of 3dB.

A similar situation with antennas is arising to that of 27MHz. There is a busy antenna industry, comprising British firms designing and manufacturing a range of products for the British market. They are now turning their attention to UHF and the first of these products from Les Wallen have been available for some months. Both antennas, one mobile and one base, are colinear.

Although there is no definite news at time of writing it seems there are a good handful of other companies with positive plans for 934MHz antennas too.

Sets are another problem, though. The design principles and technology for this frequency are far removed from the familiar 27Megs. and it has proved a stumbling block for more than one company. But with Grandstand, A.K.D. and Magpie still in the running, with a few others further behind in the field, it looks as if the Reftec monopoly will not last for ever.

Cable Stitch

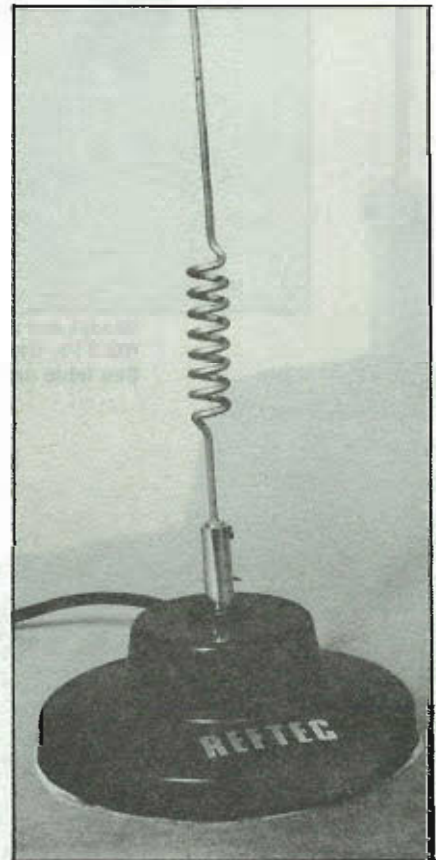
An occasional but much misunderstood problem with long runs of cable on 27MHz is 'cable loss'. This is where the radio signal 'leaks' away through the cable and connections — and this happens particularly with long lengths of cable. Losses at 934MHz are far higher than at 27MHz and to combat this better quality cable and connectors are necessary.

Strictly speaking the usual 27Meg. cables can be used for very short runs but on the whole it is best avoided.

A rough guide is shown below . . .

Lastly . . .

Are there are specialist 934MHz clubs out there, or CB clubs with 934 sections? There is such a shortage of users and especially knowledgeable users that we would like to publish details for clubs or nets where the newcomer could get advice and chat to other users who may have already encountered problems. If you can help then please send in the relevant information to 93Forum, Citizens' Band Magazine, ASP Ltd., 145 Charing Cross Road, London, WC2H 0EE.



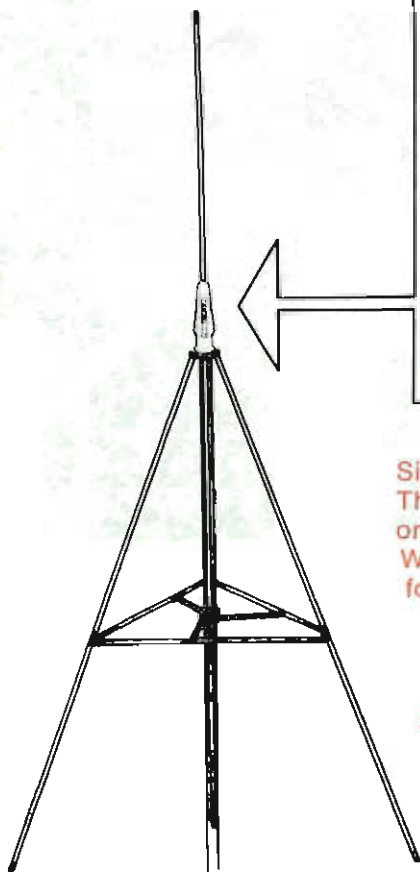
CABLE		COMMENTS
RG78	Flexible	Not suitable except on very short runs
RG 8	Flexible	Just usable if cable length does not exceed 5 metres
RG 213	Flexible	Reasonable quality cable for lengths up to 10 metres
UR 67	Flexible	Ideal general purpose cable and suitable for 10-15 metre runs.
H 100	Stiff	Less 'loss' than UR 67 but rather stiff to use (i.e. round curves and fitting connectors). All joints must be waterproof. Hard drawn solid copper centre and semi air space around it.
Helix	Foam Dielectric 3/8"	Superb cable but very expensive and difficult to use. Requires special connectors. Rather unnecessary for 934MHz.



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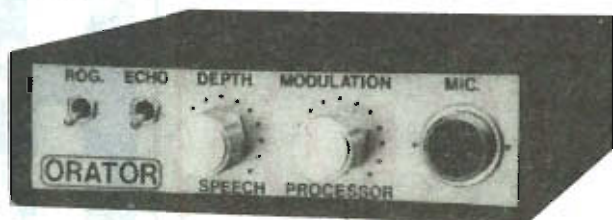
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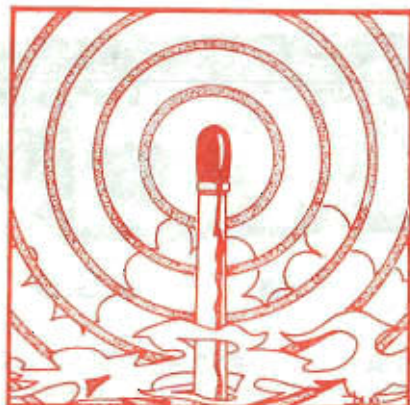
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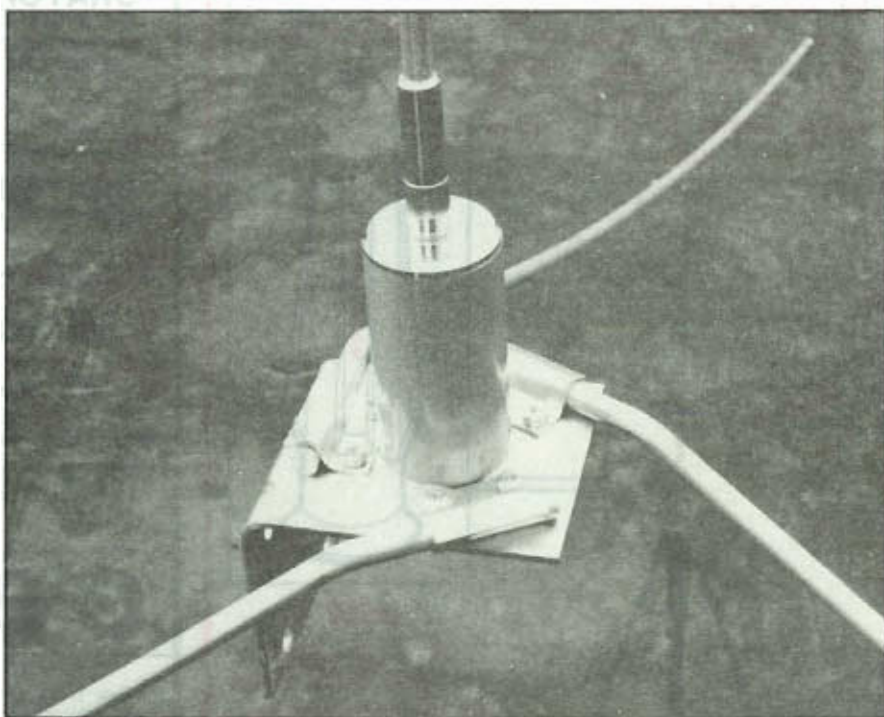
ACCESS AND BARCLAYCARD ACCEPTED

Antenna Review



Brian Wright turns his enquiring eye on to the pre-tuned Oscar CBA 11GP base station antenna.

Plane to see



For those breakers who live in flats or houses with small gardens, the choice of antenna can sometimes seem a bit limited unless you have access to a chimney stack or somewhere similar. Even then you need the nerve to climb to the top of the roof clutching your prize aluminium construction, a feat that is nearly impossible without the assistance and reassurance of a friend. You will certainly need a fair bit of space to erect the impressive antenna that is the subject of this month's review — the groundplanes measure about 4½ metres from the tip of one to the tip of the opposite one! We were keen to test this antenna, the Oscar CBA 11GP base station antenna from South Midlands Communications Ltd to see if it performed as well as it looked and the results of the tests and our comments are, as usual, included below.

The Oscar CBA 11GP is supplied packaged as a bundle of solid aluminium rods rather than tubes, as

is usual with other antennas. The radiating element is in two halves, the top half being 5mm diameter and bottom half 8mm diameter. At the lower end of the top half is fitted a chromed hexagonal-threaded joiner piece, which screws onto the nicely threaded lower half. All of these joiner pieces including those on the groundplanes, which we will come to later, are 38mm long. At the lower end of the bottom half is another chromed fitting which screws onto a stud protruding from the loading coil.

The loading coil is a well made unit, consisting of a 38mm diameter, 70mm long piece of grey plastic, which has a chromed washer-like trim at each end. At the base of the coil protrudes an SO 259 socket with a nut and spring washer for mounting the antenna to the groundplane assembly and of course for connecting the feeder cable. A spring washer is also provided for the top end thread to prevent the antenna rod from loosening in the wind.

A 2½mm thick steel mounting



bracket is supplied and the SO 259 socket is mounted through a hole in this. This is the only part which spoils an otherwise excellent standard of construction as the only weather protection on the steel bracket appears to be that it is zinc passivated. If this is correct, this would rust within a few weeks as it is not suitable for external use. The only real protection for this type of bracket is to be galvanized after manufacture.

The three groundplane 'legs' are supplied in two halves and are of the same thickness as the two halves of the vertical element and are joined in a similar manner. The length of each of these 'legs' is 2.8 metres when joined. At the inboard end, the rod is bent at an angle and a roll pin fitted so that it protrudes about 10mm. The roll pin is inserted through a hole in the mounting bracket and the rod held in place by a clamping plate which in turn is secured by two screws. The roll pin thus prevents the groundplane 'leg' from twisting round.

The whole antenna assembly is intended for pole mounting, although it would be possible to mount onto some other structure (but the groundplanes would probably prevent this in most cases). Pole mounting is by means of two 'U' bolts which go around the pole and through holes in the mounting bracket. Again these 'U' bolts appear to be zinc passivated and subject to rust problems.

The instructions consist of a large sheet with instructions, data and a parts list on one side and a large detailed assembly drawing on the other. The instructions sheet is quite adequate and we always like to see an assembly as this leaves no doubt as to correct assembly.

No need to tune.

As to tuning, the answer is you don't. This is another 'proper' homebase antenna in that it is pretuned. The SWR on the test sample was from 1.1:1 to 1.2:1 across the band. In fact after the tests were complete, we lowered the Oscar CBA 11GP on its mounting pole so that it was nearly horizontal, being supported on a stepladder, a breaker called us and when we transmitted rather cautiously to reply, we found the SWR was still below 1.3:1!

On test the Oscar CBA 11GP performed very well and good contact was maintained over the whole test area.

In our opinion the Oscar 11GP is a good performer, a well constructed antenna (apart from the bracket finish) which will need plenty of space to erect. Priced at £29.90 it is reasonably priced especially considering the quality of most of the construction (some mobile antennas can cost you more).

Similar antennas for performance would be the Channelstar or Silver Arrow.

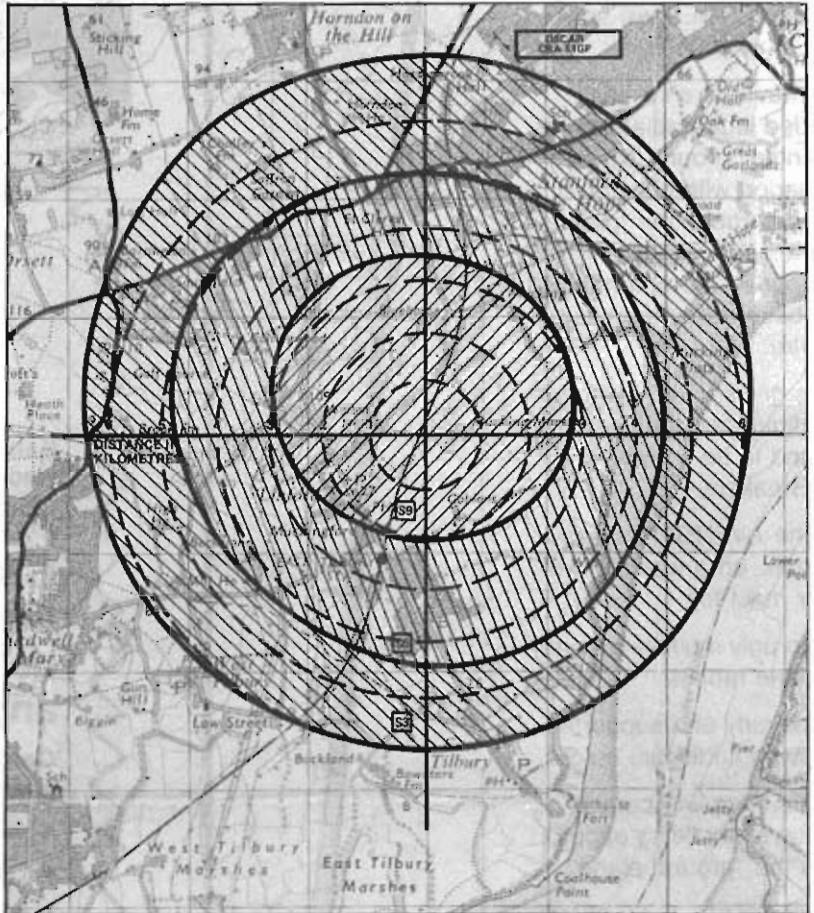
Our thanks to South Midlands Communication Ltd., Southampton, for supplying the test sample.

ANTENNA REVIEW DATA PANEL

SPECIFICATIONS

Model OSCAR BASE CBA 11GP

Type Base Loaded — Home Base Antenna
 Length 1.5 Metres Radiator + Three 2.8 Metre G/Planes
 Frequency Range 27MHz
 Max Power Handling 100 Watts PEP
 Impedance 50 ohms
 Cable Supplied None
 Mounting Details Pole Mounting — See Text
 Supplier SMC Southampton
 Typical Price £29.90



REVIEW VERDICT

Performance xxxx	Installation xxxx
SWR Adjustment xxxxx	Instructions xxxx
Construction xxxx	Value xxx

We rate our samples on a scale of one to five. Five stars is the highest rating, three and four stars are average to good and one and two stars 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 mobile 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 'lab' tests to assess their durability, quality and construction, etc and finally we hand it over to a panel of CBers for comment.

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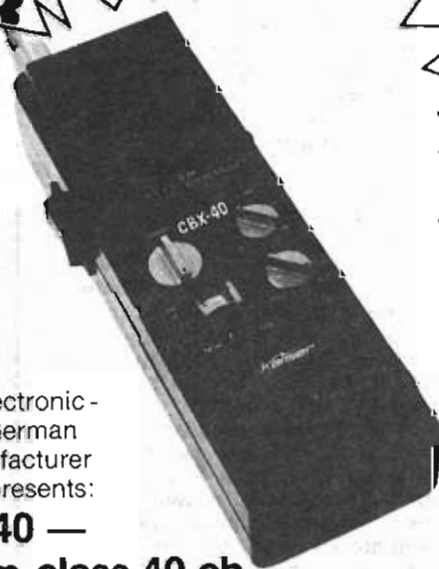
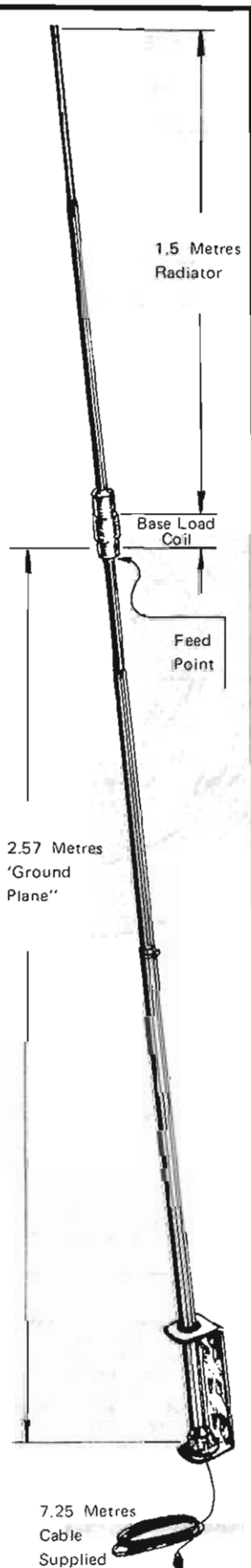
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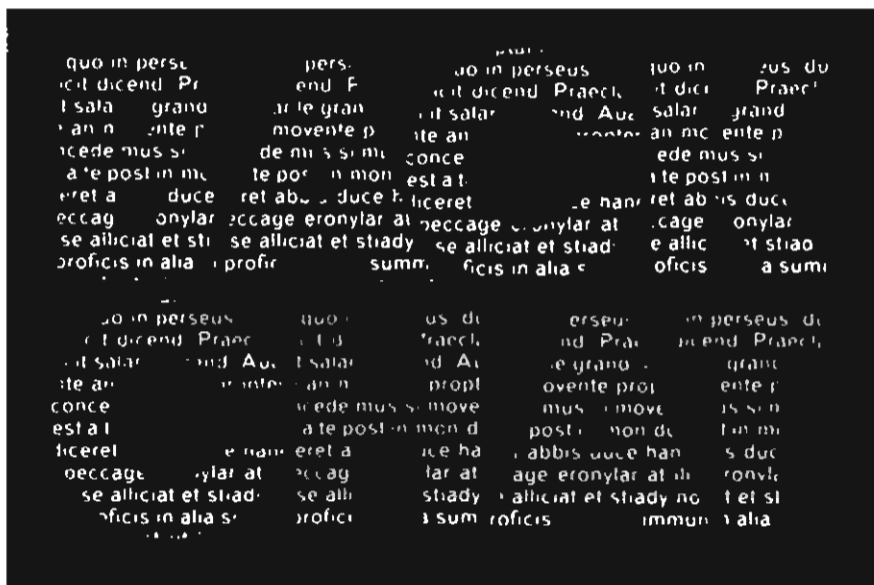
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Some strong opinions and controversial views from CB readers this month and lots of 934MHz letters



Any REACTION

First up this month is a short but direct request from A. Jones in North London. He needs some volunteers... I have a problem. I need new members for REACT North London to aid breakers who need help. People who would like to join should contact A. G. Jones, North London REACT, 3, 'Beauvale', Ferdinand Street, London N.W.1. for more information and full details.



AM do or die?

Next, some strang words from Farmer Brown in the West Midlands. He has some very definite opinions on modes and particularly on FM. Does anyone want to support his views - or disagree with them. Let us know...

I am writing to tell you that in my area there are only a few AM stations on the air. It seems that nearly all of the breakers have gone off to rotten old FM. I also used to use FM but I gave it up because there were too many wallies and channels were too congested. You could not get a decent copy without people broadbanding you. I think that most FM breakers believe that AM is a load of rubbish, but really, it is better than FM. On AM and SSB there are hardly any wallies and you can easily DX into other countries.

In my opinion AM/SSB rigs are much better quality than those cheap, nasty FM rigs. On AM/SSB you don't

need massive big burners to DX. So if there are any breakers in the Alcester area reading this, give me a call on 14 AM or 50 USB, I would like to copy them.

Black Beauty in Brum

Jackie Cooper, also in the West Midlands (Birmingham, to be precise) has word of praise and protest in her letter. Offenders, take note...

Here in Brum, a very fine lady, Black Beauty (personal Margaret), runs a channel for handicapped and blind breakers on channel 40 FM between 6.30 am and 9.45 am every weekday. This channel is open to all breakers, handicapped or not, but is primarily for housebound breakers who find that their rig is their only contact with the outside world.

Margaret has recently handed over a cheque for £700 to a school for handicapped children. Channel 40 and the fund raising are just a part of the good work she does for the community while looking after her own mentally handicapped son.

Why, oh why, is there always a minority who want to break things up? Each morning Margaret has to contend with wallies, mike keyers and bucket mouths who try to break up this channel. They must have tiny minds to do such a thing.

Margaret is very patient and has never lost her temper, despite the fact she has between forty and fifty in her circle and a couple of bucket mouths are trying their best to teach everyone their new found language.

So come on all of you, think how miserable you are making these breakers. Why not talk to them? They all have something to offer. Why sit there with nothing better to do than key your mike when you could be actively helping to raise funds. It's more fun — honest.

What gentleman?

S. G. A. Morton in Telford agrees with Peter Drake (October Back Chat) over the 'gentleman's agreement' on 934...

Blow the gentlemen agreement to keep channels 1 to 10 clear for business users. If you read paragraph 9 of the licence conditions it is illegal to use CB for taxi's etc. I paid £312.55 for my 934 set up and another £50 for a colinear aerial in spring this year and I have been talking to my contacts on any channel.

I am with you all the way, Peter Drake in Southend!

More on UHF

Another 934MHz breaker singing the praises of the 'alternative' CB. Shirley Francis in Bridgewater, Somerset has some thoughts for other breakers to ponder . . .

As a Reftec 934 breaker I should like to bring the attention of breakers on 27MHz to the number of us now on 934MHz. From my home in Bridgewater I can copy breakers in Castle Cary, Yeovil, Bristol, into Wales, Street, Wells and Hampshire. From our mobile with a colinear twig or Reftec beam, copies as far away as Exmouth, Gloucester, Surrey and Torbay can be obtained (square wheeled on the nearby Quantock Hills).

Copies mobile to mobile leave something to be desired, but breakers unable to make copies of any distance on 27MHz can do much better on 934.

Although breakers may have been told that copies are line of sight only, this breaker lives in the bottom flat in block, surrounded by other houses and blocks and successfully makes the copies listed above. So, come on, Citizens' Band readers, it may be expensive, but it sure is a beautiful frequency.

EuroCB

Some thoughtful comments on CB and it's future from N. J. Wilcox of Ipswich. As he points out, it's not just the UK systems that have to be considered . . .

The recent change in the 934MHz CB channels must hopefully indicate a parallel move towards the adoption of an international system for 27MHz. At the present, few countries use the same system; international drivers are obliged to either remove their equipment whenever they intend to cross a frontier or risk possible prosecution and confiscation of equipment.

A resolution such as 'The use of a mobile CB radio system conforming to the legal specifications of one member state be permitted by nationals of that state whilst visiting other E.E.C. member states' would overcome these restrictions without adversely affecting other countries CB systems.

The use of the FCC AM system and the so-called 'DX' frequencies would still remain illegal, but until the authorities agree to an international CEPT system, this resolution would overcome some of the problems that European travel with a CB equipped vehicle can currently present.

Any potential international agreement must be forthcoming in the

not too distant future, before the legislation association with the freeing of Band I and Band III 405 line TV frequencies diverts energies and interest away from CB commonality.

Wheelchair Whizzkid

From eleven year old Kate Wintle of Stroud in Gloucester comes a letter with a hand drawn 'CB' logo and details of her particular type of mobile . . .

My name is Kate Wintle, I am eleven years old. I am one of the many disabled breakers and after seeing your article 'On your Bike' I decided to write to you.

I have an electric wheelchair which was presented to me by Eddie Large — although that's a different story. My brother, who is two years older than me, had a CB for his birthday. Later on he bought another rig to go onto his bike and the rig was eventually passed on to me.

I asked my Dad if I could have the rig on my wheelchair and he said 'yes'. I had the rig, a Maxcom 20E, screwed onto the handle bar, a rubber duck fixed on the back of the rig and the rig connected to a 12V motor cycle battery.

It works well although there is one problem — the electric motor interferes with the CB when I'm mobile. But I'll just have to put up with that. The CB is very helpful to me because it connects me up with the outside world.

When the motorists see me travelling along the pavements talking to someone on CB, it certainly raises a few eyebrows.

The rig is also very handy for keeping in touch with my brother, just in case I get into some bother and for my Mum, as she calls me in over the airwaves when my dinner is ready.

I hope it will become the real CB enthusiasts band and hope 'Citizens' Band' will support it and keep us up to date on 934 info.

A 934MHz column would be a brilliant idea and I hope there is to be one on a regular basis . . . no sooner said than done, Colin. The first such article appears this month.

Thanks, good buddies.

Remember Tim Gough and the April edition of CB? He was having trouble tracking one down and asked for help through these pages . . .

May I take the opportunity to thank everyone involved for helping me to get a copy of the April '83 issue of the magazine. I had such a terrific response, it was really appreciated! Thanks to: Mr. W. Barker of Reddish, Stockport; Country Squire of Stratford, East London; and an anonymous issue which was sent to me, all of whom surrendered their precious magazines!

Thanks also to Mr. Grounds of Rhos, near Wrexham for his letter. He, too, was searching for the April issue! Hope you got it O.K. Mr. Grounds!

Finally thanks to all the other letters and telephone calls which I received from people prepared to part with their copies. It certainly shows that there are many kind hearted breakers who read the mag. Thanks once again.



Yet again!

A letter concerning 934MHz from another of our Birmingham readers, with some very valid comments to make. Colin Marks from Chelmsley Wood wants to say . . .

It seems to me that 934MHz has a big part to play in the future of CB in the UK and in the rest of Europe.

Letters intended for publication should be addressed to: Backchat, Citizens' Band, 145 Charing Cross Road, London WC2H 0EE. Letters not containing a name and address will not be considered for publication.

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Three new clubs to add to the list this month and news from a team of local emergency monitors in Robin Hood country

CLUB NEWS

Echo Bravo Club

I would like to tell you a little about our club. It was formed this year with half a dozen breakers - we now have twenty two members. We meet every second Monday in the Golden Cross lounge at 8.00 pm and we have appointed a committee to look after things for us and to arrange all our activities. We are holding a sponsored 100 mile cycle ride, the proceeds of which are going to the local Sunshine Club.

We make all visitors welcome and we would like to hear from members of other clubs to perhaps arrange exchange visits.

Membership of the club costs £5.00 for three years membership, half price for juniors and senior citizens. Family membership costs £12.00, which covers two adults and up to four children.

**Black Widow (Ann)
Echo Bravo Radio Club
12 Bayview Terrace,
Kirkcolm,
Stranraer, Wigtownshire,
Scotland.**

Hayle Breakers Club

I am writing on behalf of the Hayle Breakers Club in Hayle, Cornwall. We are a newly formed club with a membership of 40 and growing steadily. We meet every Friday evening, two Fridays a month for meetings and two a month for socials. Our venue is the Hayle Rugby Club.

We welcome all visitors and we also have a DX group called Hotel Bravo DX Group.

As we are a new club we would be pleased with some publicity in Citizens' Band, which we find very interesting.

**Lyn (Hotel Bravo 77)
Hayle Breakers Club,
P.O. Box 10,
Hayle,
Cornwall.**

Wye Dean DXers Club

We have formed a new club in the Ross-On-Wye and Forest of Dean area. It was started in the summer of 1983 and at present has eighteen members and is growing steadily.

We meet fortnightly on Wednesday nights at 8.00 pm at the Crown and Sceptre Inn, Ross-On-Wye.

Our club went to an eyeball at the Abergavenny CB club during the summer and was made very welcome by their members and a good night was had by all.

If any breaker travelling through Ross-On-Wye gives a shout for a Whiskey Delta member, I am sure one will be listening and the visitor will be made welcome.

**K. Blackwell
Wye Dean DXers Club,
P.O. Box 3,
Ross-On-Wye,
Herefordshire.**

Lima Echo Mike Group

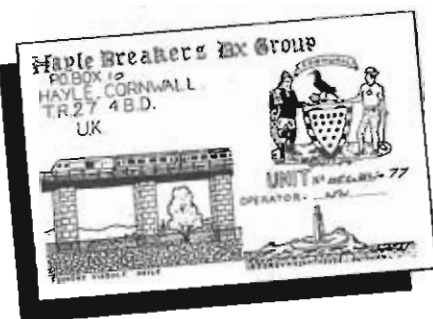
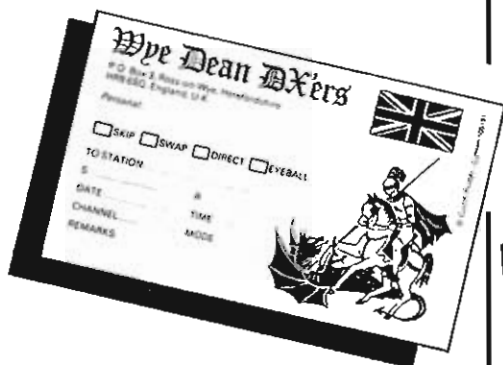
As public relations officer for the Lima Echo Mike Group I would like to explain briefly what we do.

We are a group of Citizens Banders that like to keep in touch with our other good buddies and assist them when they are in trouble. We have monitors on channel nine specifically to deal with emergencies directly involving the emergency services and we also deal with calls of a less urgent nature. These include directions, various 'checks' and relaying messages.

We will respond to all reasonable calls for assistance and welcome calls from breakers passing through the city. We aim to give them a safe passage through Nottingham. If a breaker wishes to visit, communication with our address will give them details of accommodation and a run down on places to visit. (Please include and S.A.E. for this information).

Our organisation is completely run on good will and is provided free to those in need.

**Alan Lewis
Lima Echo Mike Group,
33 Crossman Street,
Sherwood,
Nottingham.**





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OR Debit my Access/Barclaycard
(Delete as necessary)



Name (Mr/Mrs/Miss/Ms)

Address

.....

.....

Signature..... **Date**.....

Daytime Tel. No......

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All classified advertisements must be paid for in advance.

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From the number of letters and phone calls we are receiving about our product it appears that some breakers are unable to purchase genuine G.A.P. antennas from their local shops.

We have recently started supplying our products direct to the public and this is proving to be very successful.

If you have any difficulty in obtaining our products you can order them direct from the factory, at the following prices:

G.A.P. Skybreaker	£18.95
G.A.P. 27MHZ 1/2 wave	£14.95
G.A.P. 27Mhz 5/8 wave	£16.95
Gamma SupaMag	£7.50
G.A.P. Avenger	£19.95
G.A.P. Lofty.....	£19.95
G.A.P. RingoPlane	£T.B.A.

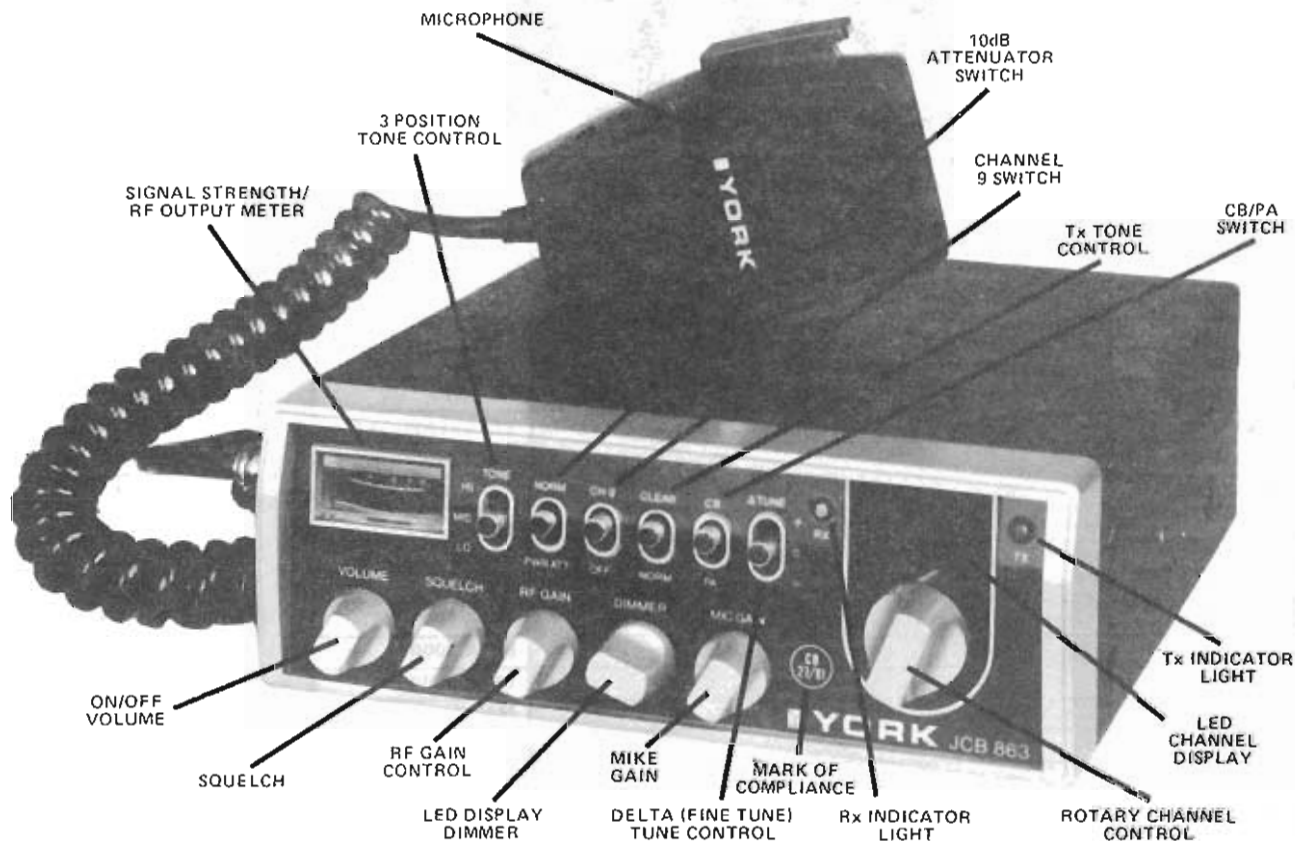
These prices include V.A.T. Please add £1.15 for postage and packing. All cheques and postal orders should be crossed and made payable to:
Gamma Aerial Products Ltd.

Gamma Aerial Products

MANUFACTURERS OF AMATEUR RADIO & CB ANTENNAS
LYE, WEST MIDLANDS
TRADE ENQUIRIES TEL. LYE 891132

Citizens' Band

REFERENCE SECTION



SQUELCH

For anyone who has never used a rig before, this is probably the control that is the most difficult to understand. It exists to remove the background noise, that hissing sound that you can hear when there isn't a signal present. Nothing happens when the squelch knob is turned slowly clockwise, until it reaches a point just above the level of the background noise. Then, suddenly, the noise will totally disappear and you will hear nothing at all until a signal that is stronger than the background noise is received. This signal will cause the squelch to *open* as you will hear it, but as soon as it disappears, the squelch will *close* again and no sound will come from the rig. Care should be taken when adjusting this control because the higher it is set, the stronger the incoming signal has to be in order to open it. For the best results, the control should be left at the position just past the point where the background noise vanished. It will then let through any signal that is stronger than the background noise but not the noise itself.

RF GAIN

This is a variable attenuator that cuts down the amplification which is given to incoming signals and the more it is turned, the less the gain of your rig. This helps to prevent overloading when you are talking to someone who is very close by.

SIGNAL STRENGTH/RF METER

This is a dual function device that shows the relative strength of the signal you are receiving and of the signal you are transmitting. The S-Meter is usually calibrated 1-9 and the nearer to the 9 the needle is when you are receiving a

signal, the stronger that signal is. If someone asks you for a signal report, all you need to do is quote the number that is indicated on your S-Meter. This will give them a good idea of how well you are receiving them but you should remember that this is a *relative* indication and another rig under exactly the same circumstances could well give a reading that is 2 or 3 points different.

The same applies to the RF Meter. It also gives a *relative* indication of the power, you are putting out and it doesn't give a reading in watts. When you have properly tuned your antenna, you should note the position of the needle when you transmit, it should be around the 8 mark. If it suddenly moves from this position when you are transmitting, you should immediately re-check your antenna as there will almost certainly be something wrong with it.

NOISE BLANKER

These two functions are often combined on one switch and although they operate differently, they both exist to cut down interference. Most ANL systems work reasonably well but an NB is a far more efficient device that will remove almost all of the crackles and pops that are caused by interference.

LEDS (RX TX)

The appropriate one of these light emitting diodes lights to show if you are transmitting or receiving.

PA/CB

This switch turns your rig into a low power public address amplifier when it is set to the PA position. There is a socket on the back for an exten-

sion horn type speaker to be plugged into and anything you say into the microphone will be amplified and broadcast through the speaker.

MIC. GAIN.

This control alters the amount of audio from the microphone used to modulate the outgoing signal. When it is set to minimum, you are transmitting a blank carrier regardless of whether you speak into the microphone or not but when it's set to maximum, your signal is at almost 100% modulation.

HI/LO

This switch cuts down the output power of your rig so that you can conform to the rule on the back of your licence that says that you must reduce your power by 10 dB if your base station antenna is more than 7 metres above ground level.

CHANNEL SELECTOR

This is the knob that you use to change channels.

CHANNEL INDICATOR

This window displays the number of the channel in use. Most sets use LEDs for this display but some manufacturers prefer to use liquid crystal or fluorescent type displays. Displays will normally be bright red, orange or green and visible in all but the most direct sunlight.

CH 9 PRIORITY

This switch allows you to go immediately to channel 9 without having to use the channel selector.

REFERENCE

FM RIG CHECKLIST

MOBILES

NAME	ADDRESSES	MODEL	NO. OF CHANNELS	SUPPLY VOLTAGE	RETAIL PRICE
AMSTRAD	Amstrad Consumer Electronics, 1-7 Garman Road, London N17	CB901	40	13.8VDC	£40
AUDIO LINE	Telecomms, 189 London Road, North End, Portsmouth	341	40	13.8VDC	£60
AUDIO LINE		340	40	13.8VDC	£40
AUDIO LINE		342	40	13.8VDC	£115
BARRACUDA	Halfords Motor Accessory Shops	GT 868	40	13.8VDC	£70
BARRACUDA		HP 940	40	13.8VDC	£85
BINATONE	Binatone House, Beresford Av., Wembley, Middx	BREAKERPHONE	40	13.8VDC	£99
BINATONE		ROUTE 66	40	13.8VDC	£79.95
BINATONE		5-STAR	40	13.8VDC	£100
COLT	K B & Co Ltd, 202 Cheetham Hill Rd, Manchester	295	40	13.8VDC	£49.99
COMMTRON	Roger D, 831 Mansfield Rd, Notts	CB40F	40	13.8VDC	£70
COMMTRON		CXX	40	13.8VDC	£69.95
CYBERNET	Goodmans Loudspeakers Ltd, Downloy Road, Havant, Hants PO0 2NL	BETA 1000	40	13.8VDC	£70
CYBERNET		BETA 2000	40	13.8VDC	£85
CYBERNET		BETA 3000	40	13.8VDC	£100
DNT	Radiotechnics Ltd, Grove Way Bel Royal, St Lawrence, Jersey CI	M40FM SPECIAL	40	13.8VDC	£100
FIDELITY	Fidelity Radio Ltd, Victoria Rd, London NW10	CB 1000M	40	13.8VDC	£70
FIDELITY		CB 2000M	40	13.8VDC	£90
FIDELITY		20001 FM	40	13.8VDC	£70
GRANDSTAND	Bee-Ware Ltd, Ripon Way, Harrogate, N Yorks	BLUEBIRD	40	13.8VDC	£50
GRANDSTAND		HAWK	40	13.8VDC	£30
GRANDSTAND		GEMINI	40	13.8VDC	£60
HARRIER	Dixons Photographic Ltd	CB MOBILE	40	13.8VDC	£49
HARRIER		CB X	40	13.8VDC	£89.99
HARVARD	Harris Overseas Ltd, Harvard House, 14-16 Thames Rd, Barking, Essex	400M	40	13.8VDC	£80
HARVARD		402 MPA	40	13.8VDC	£69.95
HARVARD		H403 GOOD BUDDY	40	13.8VDC	£50
HARVARD		420M	40	13.8VDC	£100
INTERCEPTOR	Telecomms, 189 London Road, North End, Portsmouth	INTERCEPTOR	40	13.8VDC	£80
INTERCEPTOR		TC400	40	13.8VDC	£95
INTERCEPTOR		ONE HANDER	40	13.8VDC	£100
JOHNSON	Star Warehouse, Chalk Farm Rd, London	JOHNSON	40	13.8VDC	£50
KAISER	Kaiser Electronics Nevrottsstrasse 21-25, Waldorf Baden, W Germany	UK 40	40	13.8VDC	£TBA
LADYLINE	Market Drayton, Salop	QUASAR	40	13.8VDC	£80
LAKE	Roger D, 831 Mansfield Rd, Nottingham NG5 3GF	MANXMAN 850	40	13.8VDC	£32.50
LAKE		MANXMAN 950	40	13.8VDC	£37.50
LOWE	Lowe Electronics, Matlock, Derbyshire	TX 40	40	13.8VDC	£50
MAGPIE	Magpie Electronics, PO Box 35, Andover, Hants SP10 2LG	AUTOSCAN 5000	40	13.8VDC	£120
MAXCOM	A M Telecommunications, AM House, 17 Shepherds Way,	4E	40	13.8VDC	£50
MAXCOM	Rickmansworth, Herts	6E	40	13.8VDC	£48
MAXCOM		20E	40	13.8VDC	£50
MAXCOM		21E	40	13.8VDC	£50
MAXCOM		16E	40	13.8VDC	£40

Remember — Shop around as prices can vary

REFERENCE

On the following pages you will find listed just about all of the CB rigs available for use on UKFM CB. We have split the reference section into three parts; mobile base and portable to make individual rigs easier to find.



SQUELCH	NB SWITCH	ANL SWITCH	MIKE GAIN	RF GAIN	STONE CONTROL	S/RF LED R/O	HI/LO OUTPUT	PA FACILITY	EX. SPEAKER JACK	TX IND. LIGHT	RX IND. LIGHT	CH 9 SWITCH	MIKE POSITION	COMMENTS	
•				•	•	•	•	•	•	•	•	•	SL	Report Feb '82	AMSTRAD
•			•	•	•	•	•	•	•	•	•	•	SL		AUDIOLINE
•					•	•	•	•	•	•	•	•		Report Feb '82	AUDIOLINE
•					•	•	•	•	•	•	•	•	-		AUDIOLINE
•				•	•	•	•	•	•	•	•	•	FL	Great GT868 chassis	BARRACUDA
•			•	•	•	•	•	•	•	•	•	•	FL	Cybernet chassis	BARRACUDA
•					•	•	•	•	•	•	•	•	-	Report Feb '82	BINATONE
•			•	•	•	•	•	•	•	•	•	•	FL	Report Dec '81	BINATONE
•					•	•	•	•	•	•	•	•	SL		BINATONE
•					•	•	•	•	•	•	•	•	FL		COLT
•					•	•	•	•	•	•	•	•	FL		COMMTRON
•				•	•	•	•	•	•	•	•	•	FL		COMMTRON
•					•	•	•	•	•	•	•	•	SL	Ultra compact performer	CYBERNET
•			•	•	•	•	•	•	•	•	•	•	FL	Report May '83	CYBERNET
•					•	•	•	•	•	•	•	•	FL	Report September '83	CYBERNET
•					•	•	•	•	•	•	•	•	FL	Report July '82	DNT
•					•	•	•	•	•	•	•	•	SL	Report December '81	FIDELITY
•			•	•	•	•	•	•	•	•	•	•	FL	Report March '82	FIDELITY
•			•	•	•	•	•	•	•	•	•	•		Report September '82	FIDELITY
•					•	•	•	•	•	•	•	•	SL		GRANDSTAND
•					•	•	•	•	•	•	•	•	SL		GRANDSTAND
•	•				•	•	•	•	•	•	•	•	SL		GRANDSTAND
•					•	•	•	•	•	•	•	•	SL	Report Feb '82	HARRIER
•			•	•	•	•	•	•	•	•	•	•	SL		HARRIER
•					•	•	•	•	•	•	•	•	FL		HARVARD
•					•	•	•	•	•	•	•	•	FL		HARVARD
•					•	•	•	•	•	•	•	•	SL	Report December '82	HARVARD
•					•	•	•	•	•	•	•	•	SL		HARVARD
•					•	•	•	•	•	•	•	•	SE		INTERCEPTOR
•		•	•	•	•	•	•	•	•	•	•	•	FL		INTERCEPTOR
•			•	•	•	•	•	•	•	•	•	•	FL		INTERCEPTOR
•					•	•	•	•	•	•	•	•	FL	Great GT868 chassis	JOHNSON
•					•	•	•	•	•	•	•	•	FL		KAISER
•					•	•	•	•	•	•	•	•	FL	First marine rig	LADYLINE
•					•	•	•	•	•	•	•	•	SL		LAKE
•					•	•	•	•	•	•	•	•	SL		LAKE
•					•	•	•	•	•	•	•	•	FL		LOWE
•			•	•	•	•	•	•	•	•	•	•	FR	Report April '83	MAGPIE
•					•	•	•	•	•	•	•	•	FL	Report March '83	MAXCOM
•					•	•	•	•	•	•	•	•	FL	Report November '82	MAXCOM
•					•	•	•	•	•	•	•	•	FL		MAXCOM
•					•	•	•	•	•	•	•	•	FL		MAXCOM
•					•	•	•	•	•	•	•	•	FL		MAXCOM
•					•	•	•	•	•	•	•	•	FL		MAXCOM

considerably from CB shop to CB shop!

REFERENCE

MOBILES

NAME	ADDRESSES	MODEL	NO OF CHANNELS	SUPPLY VOLTAGE	RETAIL PRICE
MICROLINK	Warran-Freed Ltd, 82 Golders Gr. Rd, NW11	CB401	40	13.8VDC	£115
MIDLAND	Plustronics Ltd, Hempstalls Ln, Newcastle-under-Lyne, Staffs	2001	40	13.8VDC	£70
MIDLAND		3001	40	13.8VDC	£80
MIDLAND		4001	40	13.8VDC	£90
MIDLAND		2001T	40	13.8VDC	£100
MERCURY	EMS Communications, Grove Street, Wantage, Oxon, LX21 7AD	10 40	40	13.8VDC	N/A
MUSTANG	KB & Co. Ltd, 202 Cheetham Hill Rd, M/cr.	CB1000	40	13.8VDC	£49.95
MUSTANG		CB3000	40	13.8VDC	£59.99
NATO	Roger D, 831 Mansfield Rd, Nottingham NG5 3GF	40M	40	13.8VDC	£69.95
NATO		2000	40	13.8VDC	£189.95
OSCAR	S.M.C. Osborne House, Totton, Southampton	OSCAR 1	40	13.8VDC	£85
OSCAR		OSCAR II	40	13.8VDC	£49
RADIOMOBILE	Goodwood Wks, North Circular Rd, London NW2 7JS	201	40	13.8VDC	£80.90
RADIOMOBILE		202	40	13.8VDC	£120
REFTEC	RF Technology, Leyton Avenue Ind. Est, Maldenhall, Suffolk	934	20	13.8VDC	£200
ROTEL	Rotel Hi-Fi, 2-4 Erica Rd, Stacey Buses, Milton Keynes	RVC 220	40	13.8VDC	£50
ROTEL		RVC 230	40	13.8VDC	£70
ROTEL		RVC 240	40	13.8VDC	£90
SHOGUN	Colliers Fm, Freith, Henley-on-Thames, Oxon, RG5 6NR	SHOGUN	40	13.8VDC	£100
SIRTEL	24 Ailric Sq, Off Maxwell Rd, Woodston Ind. Est, Peterborough	SEARCHER	40	13.8VDC	£40
STEEPLETONE	Park End Works, Croughton, Nr Brackley, Northants.	SCB1FM	40	13.8VDC	£103
TANDY	Tame Way, Tower Bridge St, Walsall, Staffs	TRC2001	40	13.8VDC	£60
TANDY		TRC2002	40	13.8VDC	£70
TANDY		TRC2000	40	13.8VDC	£100
TANDY		TRC1004	40	12VDC	£79
TANDY		TRC2003	40	13.8VDC	£130
UNIDEN	Cravenminster Ltd, Unit 8, Industrial Estate, Llandudno Junction, Gwynedd	UNI ACE 100	40	13.8VDC	£69.95
UNIDEN		UNI ACE 200	40	13.8VDC	£89.95
VIPER	Radio 88, Barking, Essex	VIPER 88	40	13.8VDC	£29
WAGNER	Knight Communications Ltd, Unit 19 Britannia Est, Leagrave Rd, Luton	9000	40	13.8VDC	£59.95
WAGNER		COMPACT 40	40	13.8VDC	£25
WESTERN	Western Electronics, Fairfield Estate, Louth, Notts	COMPACT 40	40	13.8VDC	£34.50
YORK	Sulkin (UK) Ltd, 73 Grosvenor Street, London W1X 9DD	JCB 861	40	13.8VDC	£69
YORK		JCB 863	40	13.8VDC	£89



REFERENCE



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 JACK	TX IND. LIGHT	RX IND. LIGHT	CH 9 SWITCH	MIKE POSITION	COMMENTS	
•			•		•			•	•	•	•			FL		MICROLINK
•					•			•	•	•	•			FL	Report August '82	MIDLAND
•					•			•	•	•	•			FL		MIDLAND
•			•	•	•			•	•	•	•			FL		MIDLAND
•					•			•	•	•	•			FL	The talking rig	MIDLAND
•			•		•			•	•	•	•	•		FR	Report July '83	MERCURY
•					•			•	•	•	•	•		FL		MUSTANG
•			•	•	•			•	•	•	•	•		FL		MUSTANG
•		•	•	•	•			•	•	•	•	•		SL		NATO
•	•	•	•	•	•			•	•	•	•	•		SL	Report January '83	NATO
•					•			•	•	•	•	•		FL	Cybernet 134 chassis Report April '82	OSCAR
•					•			•	•	•	•	•		FL	Report October '83	OSCAR
•					•			•	•	•	•	•		FL	Cybernet chassis Report October '82	RADIOMOBILE
•			•	•	•			•	•	•	•	•		FR	Report September '81	RADIOMOBILE
•					•			•	•	•	•	•		FL		REFTEC
•					•			•	•	•	•	•		FL	Cybernet chassis	ROTEL
•					•			•	•	•	•	•		SL	Cybernet chassis	ROTEL
•			•	•	•			•	•	•	•	•		SL	Cybernet chassis	ROTEL
•			•	•	•			•	•	•	•	•		SL	Up market elegance Report June '82	SHOGUN
•					•			•	•	•	•	•		FL		SIRTEL
•					•			•	•	•	•	•		SL		STEEPLETONE
•					•			•	•	•	•	•		SL		TANDY
•					•			•	•	•	•	•		SL		TANDY
•			•	•	•			•	•	•	•	•		SL		TANDY
•					•			•	•	•	•	•		—		TANDY
•					•			•	•	•	•	•		SL	Report November '82	TANDY
•					•			•	•	•	•	•		SL	Report September '82	UNIDEN
•			•	•	•			•	•	•	•	•		SL	Report February '83	UNIDEN
•			•	•	•			•	•	•	•	•		FL		VIPER
•					•			•	•	•	•	•		FL		WAGNER
•					•			•	•	•	•	•		FL		WAGNER
•					•			•	•	•	•	•		SL		WESTERN
•					•			•	•	•	•	•		SL	Report October '81	YORK
•			•	•	•			•	•	•	•	•			Cybernet 134 chassis	YORK



REFERENCE

BASE STATIONS

BASES



NAME	ADDRESS	MODEL	NO OF CHANNELS	SUPPLY VOLTAGE	RETAIL PRICE
AUDIOLINE	Telecomms, 189 London Road, North End, Portsmouth, Hants.	345	40	240VAC	£139.95
DNT	Radiotechnics Ltd, Grove Way, Bel Royal, St Lawrence, Jersey CI	840	40	240VAC	£TBA
DNT		B2740	40	240VAC	£TBA
DNT			40	240VAC	£TBA
FIDELITY	Fidelity Radio Ltd, Victoria Rd, London NW10	CB 3000M	40	240VAC	£125
GRANDSTAND	Bee-Ware Ltd, Ripon Way, Haregate, N Yorks	BASE	40	240VAC	£220
HAM INT.	Telecomms, 189 London Road, North End, Portsmouth, Hants.	JUMBO	40	240VAC	£254
HAM INT		CONCORDE II	40	240VAC	£164
HARRIER	Dixons Photographic Ltd	CB HQ	40	240VAC	£130
HAVARD	Harris Overseas Ltd, Harvard House, 14-16 Thames Rd, Barking, Essex	H407	40	240VAC	£125
HARVARD		H401	40	240VAC	£149.95
JOHNSON	Star Warehouse, Chalk Farm Rd, London	XK 2000	40	240VAC	£99
MIDLAND	Plustronix Ltd, Hempstalls Ln, Newcastle-under-Lyme, Staffs	76-200	40	240VAC	£150
UNIDEN	Crownminster Ltd, Unit B, Industrial Estate, Ulandodno Junction, Gwynedd	UNIACE 3001	40	240VAC	£149.95
WAGNER	Knight Communications Ltd, Unit 19 Britannia Estate, Leagrave Rd, Luton LU3 1RJ	BASE	40	240VAC	£150

PORTABLES

NAME	ADDRESSES	MODEL	NO OF CHANNELS	SUPPLY VOLTAGE	RETAIL PRICE
BEAR	Air Bear (UK) Ltd, Wortley, Sheffield	RBH 35	3		£44
BINATONE	Binatone House, Bensford Avenue, Wembley, Middlesex	LONGRANGER	40	BATTERIES	£59.95
DNT	Radiotechnics Ltd, Grove Way, Bel Royal, St Lawrence, Jersey CI	HF 12/3	3	BATTERIES	£47.55
HARRIER	Dixons Photographic Ltd	WT1	2	BATTERIES	£25
HARRIER		WT2	40	BATTERIES	£59.99
HARVARD	Harris Overseas Ltd, Harvard House, 14-16 Thames Rd, Barking, Essex	0-2-0	2	BATTERY	£20
HARVARD		410T	40	8xAA cells	£69.95
HARVARD		10-4 CONVOY	2	BATTERY	£19.95
HARVARD		H6	2	BATTERY	£29.95
KAISER	Solid State Electronics (UK), 41 Twyford Ave, Shirley, Southampton (Tel: 0703 780235)	CBX40	40	BATTERY	£80
MAXCOM	A.T.M., AM House, 9a Old Approach, Tolpits Lane, Watford, Herts	7E	40	BATTERY	£49.95
MIDLAND	Plustronix Ltd, Hempstalls Ln, Newcastle-under-Lyme, Staffs	75-720	40	12VDC	£69.95
TANDY	Tan Way Tower Bridge St, Walsall	TRC1001		BATTERY	£119

HAND HELDS



It's much more fun breaking from home when the car's too cold to start - and it saves petrol!



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 JACK	TX IND. LIGHT	RX IND. LIGHT	CH 9 SWITCH	MIKE POSITION	COMMENTS
•			•	•	•			•	•					FL	AUDIOLINE
•														FL	Review May '82
•														FL	The most expensive base!
•													•	FR	Report May '82
•													•	SR	Report May '82
•														FL	FIDELITY
•														FL	GRANDSTAND
•	•	•	•	•				•	•	•				FL	HAM INTERNATIONAL
•	•	•	•	•				•	•	•				SL	HAM INTERNATIONAL
•				•	•			•	•	•	•	•		FL	HARRIER
•			•	•	•			•	•	•	•	•		FL	HARVARD
•			•	•	•			•	•	•	•	•		FL	HARVARD
•			•	•	•			•	•	•	•	•		FL	JOHNSON
•			•	•	•			•	•	•	•	•		FL	MIDLAND
•		•	•	•	•			•	•	•	•	•		FL	Reviewed August '83
•		•	•	•	•			•	•	•	•	•		FL	UNIDEN
•			•	•	•			•	•	•	•	•		FL	WAGNER

Why not get out and about with a portable rig? Not only is it fun, there's fresh air too.



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 JACK	TX IND. LIGHT	RX IND. LIGHT	CH 9 SWITCH	MIKE POSITION	COMMENTS
•										•				-	BEAR
•								•	•	•				-	Report July '82
•														-	BINATONE
•														-	DNT
•														-	HARRIER
•														-	HARRIER
•														-	HARVARD
•														-	HARVARD
•														-	Report April '82
•														-	HARVARD
•														-	HARVARD
•														-	HARVARD
•														-	Report August
•														-	KAISER
•														-	MAXCOM
•														-	MIDLAND
•														-	TANDY

REFERENCE

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		MAX. POWER	TYPE	MOUNT	PRICE RANGE
			AL	SS				
AERIAL SUPPLIES	Aerial Supplies, 6 Widney House, Bromsgrove Rd, Redditch, Worcs. (Tel 0527 82820)	Silver Star	AL	1.5	100	B	Pole	
		Silver Arrow	AL	1.5	500	B	Pole	
		CBA 1500	SS				Various	C
ANTENNA INC.		12510 Telecomm	SS	0.9		M	1/4ths	D
		Super Persuader	SS	1.5		M	Mag	F
		MR611	SS	1.2		M	Mag	G
		M710	SS	1.5		M	1/4ths	G
		AS M125	SS	1.14	150	M	1/4"	C
		AS M 128	SS	1.14	150	M		C
ANTENNA SPECIALISTS	Antiference Ltd, Aylesbury, Bucks HP19 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 M610	SS	1.2	200	M	1/4"	D
		AS M2000	SS	1.5	150	M	1/4"	D
		AS 9812	SS	1.2	150	M	mag	D
		IC 85	SS	1M		M	mag	D
		IC 80	SS	1M		M	spring-based mag	D
		IC 15	SS	1		trunk	C	
ANTLER	Shakespeare, Performance Antennas, Berton Rd, Market Drayton, Shrop	IC 20	SS	1 1/2		M	roof	D
		IC 30	SS	1		M	gutter	E
		IC 40	SS	1 1/2		M	mirror	C
		IC 80	SS	1 1/2		M	mag	C
ARCHER	Tandy Corp, Tame Way, Trierer Bridge St, Walsall, W Mid	21-904	SS	0.5	50	M	1/2" snap	D
ARMSTRONG	Stateide Trading Ltd, Austley 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	with spring	G
		MAG 10	SS	1.06	1,000	M	magnetic	G
		MAG 20	SS	1.06	1,000	M	magnetic with spring	G
		BDY 20	SS	1.06	1,000	M	side & fold over & quick disconnect	G
PEC 20	SS	1.06	1,000	M	boot lip illuminator	G		
		TAK 101	SS	1.06	1,000	M		G
AVANTI	CB Radio Centre Ltd, 337 Kenon 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, Rozen Ind Est, Providence St, Lye, Stourbridge	B10	SS	1.22			mag	G
BANDIT	Telecomms Ltd, 189 London Road, North End, Portsmouth, Hants	B10	SS	1.42		M	mag	G
		B15	SS	0.61		M	mag	F
		B20	SS	1.22		M	mag	F
		B30	SS	1.42		M	mirror	F
		B30	SS	1.42		M	drill-thru	E
		B30	SS	1.22		M	various	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	AL	1.5	500	B	pole	G
		Whiplash	SS	1.5	25	M	1/4"	C
CT INTERNATIONAL	CT International, CTE (UK) Ltd, Unit 3, Mitcham Ind Est, 85 Streatham Rd, Mitcham, Surrey	MG27	SS	0.91		M	mag	C
DIAL-A-MATCH	WTA Electronics Ltd, 111 Cromer Rd, Halesdon, Norwich (Tel 0606 47694)	Rubber Duck --	R	0.3		M	1/4"	C
		530 (Cherokee)	SS	0.61		M		F
		531 HBF	SS	0.61		M		E
		531 SMF	SS	0.61		M		E
		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	179-181 Streatham 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 attached by means of a clamp

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	

NAME	ADDRESSES	MODEL	CONSTRUCTION	LENGTH	MAX POWER	TYPE	MOUNT	PRICE RANGE
DIXONS	Dixons Photographic	Harrier	SS	0.9	-	M	Mag	D
HOT ROD 200	Hot Rod 200, Sirens Trading Ltd, Audley Ave, Newport, Shropshire	FM UK	SS	1.27	-	M	1/4ths	B
FREEMAN & PARLOW	Freeman & Parlow, Tything Rd, Ashby 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, Hemmings, N. Yorks HG1 3BG	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
MODULATORS	Leo Walton Manufacturing, Pentonville Works, Sandwich Rd, Sandwich, Kent	MOBILE LC MOBILE SC MDX LC MDX SC 934 BASE 934 MOBILE VHF MOBILE VHF BASE 27 L/C BASE 27 DX BASE	SS SS SS SS FG FG SS SS AL AL	1.3 1.3 1.5 1.5 1.5 1.3 1.3 1.5 1.5 1.5 1.5	1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000	M M M M B M M B B B	Pole Gutter Pole Wall Pole	C C C C C C C C D D
MOTOROLA	Motorola, Taylors Rd, Sturford, Hitchin, Herts	EC106M	-	-	-	M	-	F
OCT.	Unit 1, Epsfield Lane Ind. Estate, Gosham, Uxbridge	K40 Z27	SS SS	1.4 1.46	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	Telecomm, 189 London Road, North End, Portsmouth, Hants	Revco	SS	1	100	M	various	B
SHIRA		SYS 206M SYS 203C MA 62	SS FG	1 0.76 0.91	-	M M M	mag trunk -	C C C
SIRTEL	Sirtel, 24 Alton Sq, Off Maxwell Rd, Woodson Ind. Est, Peterborough	GP Messenger GP Signal Keeper	SS SS	1.5 1.5	-	B B	clamp tripod	E F
SMC	Oscar, South Midlands Communications, Osborn House, Tatten, Southampton, SO4 4DR	Oscar Base CBA 11GP Oscar Base IIVITS Oscar IICM Oscar IICE Oscar IINE Oscar IISE Oscar TMCAS	SS SS SS SS SS SS	1.5 1.5 1.2 1.2 1.5 1.5 1.5 1	- - - - - - - -	B B M M M M M M	- mag foldover base 'pull-up' locking- collar' foldover base trunk	F D B C C B
SPYDER		Spyder	AL	1.5	-	B	pole	B
TAGRA	CB Radio Centre Ltd, 337 Keston Rd, Harlow	T40	SS	1.4	500	M	various	E
THOROBRED	OCT, Unit 1, Epsfield Lane, Gosham	251 227 Locktune	SS SS SS	1.5 1.5 1.5	-	M M M	various 1/4 various	C B C
WITCHSTICK	CJM Motor Factors, 188 Farm Ave, Leasden, Bedford, Herts G927J, 74648	Witchstick homebase	AL	1.5	-	B	-	E
WTA ELECTRONICS	111 Cromer Rd, Newadden, Norwich, Norfolk	Wot Pole Wot Mag	AL SS	1.5 1.5	-	B M	pole mag	
VAN ORD	Van Ord, Knight CB Specialist, 204 Dunstable Rd, Luton, Beds	Audio King AKO-100	SS	1.5	2,000	M	1/4"	G

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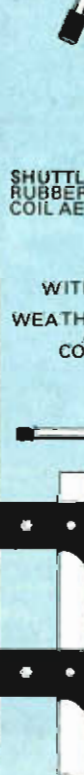
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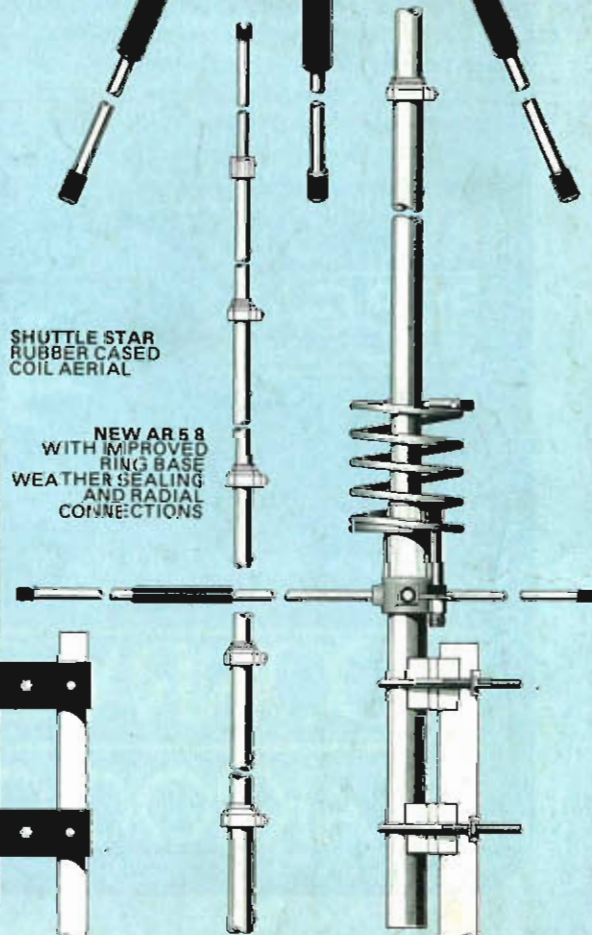
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