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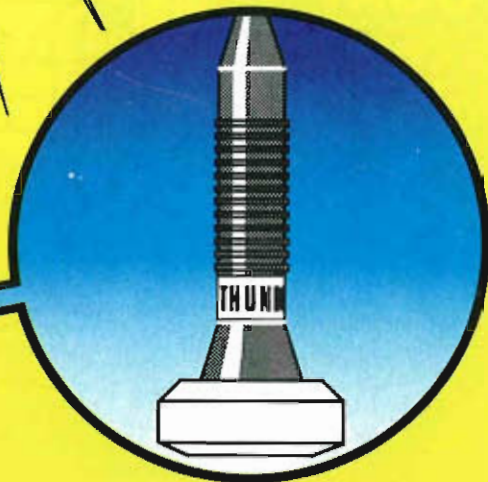
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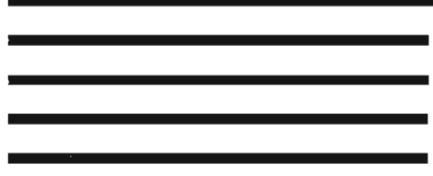
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Citizens' Band



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Cover this Month

Now that you've finished feasting your eyes on the Reftec adorning our front cover, let us bring you down to earth with a little story.

It's all about a young breaker who was fed up with the wallies he encountered in the city. Seeking cleaner airwaves, he packed his bags and left for a life in the country.

Although he was inexperienced in country ways a kindly farmer took him in and put him in charge of his herd of prize pigs. And what pure bred specimens they were too, and together with the prize boar he had just bought, the farmer reckoned he would have one of the best herds in the country.

Come breeding time, and the farmer instructed the young lad to collect the prize boar from his sty and put him with the sows. Now since coming to the country the young breaker had found the airwaves a revelation and walked round with his hand held jammed to his ear. Unfortunately, he didn't copy the farmer's instructions too well and opened the sow's sty instead of the boar's.

Within seconds a common old male pig had nipped in. So when the farmer came back he saw the boar still in his own sty, but also noticed that the sows were all very happy. Hence the saying . . . BOAR CHASTE — GUESS BREED!

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TELECOMMS



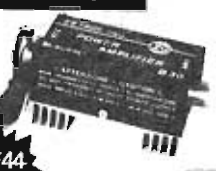
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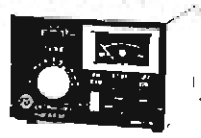
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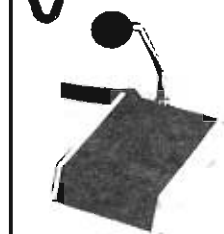
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gear lever knob (which is available in
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pany, Zenith handles all its own man-
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TELECOMMS





UPDATE

NEWS FROM THE WORLD OF CB

NEWS FROM THE WORLD OF CB

NEWS FROM THE WORLD

Elsewhere on this page we have the pleasure of reporting on the successful prosecution of a bucket mouth, and as far as we know it is the first one that has been widely reported. It is interesting to note that the person in question did not even have a licence for his rig.

It is only through prosecutions like this, and the subsequent publicity, in this case the Birmingham Evening Mail, that we can begin to clear the airwaves and bring respectability to CB. The paper also reported that British Telecom were mounting a campaign against bucket mouths in the Midlands area and we can

only hope that this will be emulated in other parts of the country.

So many of the letters we receive complain about the wallies and all the others who abuse the airwaves, we think it is about time that the authorities really had a purge to try and get the situation under some kind of control. Of course it's never going to completely eliminate the problem, but it can certainly go some way to improving the current situation.

On a different topic, we have been giving our Reference Section an overhaul. With so many companies going to the wall

or changing distribution, it has become a major headache to try and keep on top of the situation. Pricing is also a problem, because we're obliged to put in the recommended retail price despite the fact that Joe Bloggs down the road may be selling it for a third off.

However, if you spot something which is wrong or needs amending, then by all means write in and let us know. Readers have done in the past and we have implemented the changes. The prime aim is to give you a magazine which is the best, and if you can help us to do this, then so much the better.

David Lawrenson



Breaker Queen

Attractive Janey Maughan, 18, was chosen as the Deal Breakers Club queen to take part in the Kent coast town's carnival procession. Janey, whose handle is Charlie after her favourite perfume, was highly commended by the carnival judges. She has just qualified as a hairdresser and beauty specialist. The Deal Breakers Club entered their own float, based on Snow White and the Seven Dwarfs, in the carnival and won their class and a trophy for the second year running.

THAMES Address

Following our article on the THAMES emergency monitoring service in our July edition we have been asked to point out that the address for Norman Raven, the national director, is 39 Mount Pleasant Road, Lewisham, London SE13 and not 36 as was stated in the article.

Sharp Eyed Scoop

A youth who snatched a pensioner's handbag was caught two days later thanks to a sharp-eyed East Kent breaker.

A woman walking in Dover had her bag snatched when two youths pushed her to the ground and ran off. A member of the public gave chase, and the youths dropped the bag and escaped.

Police issued descriptions of the youths, and two days later local newspaper reporter Graham Tutthill — handle Scoop — saw them in Dover Street.

He followed them and used his CB radio to call the police via a Kent Coast monitor. Within minutes the youths were in custody, and one of them admitted the offence.

It was the second time in a few weeks that Scoop had helped the police. . . . Earlier, there had been a mystery over a car and boat

trailer found parked in Dover for several days. There was a report of a boat having launched in the harbour which sailed out into the English Channel, but no-one had seen it since.

By co-incidence, Scoop had been talking to Sea Dart from the north east of England a couple of days earlier and he had said he was going to Calais, in a boat of the same name, for a week.

Sidewinder at St Margaret's Bay, near Dover, put out a call which was relayed by Bosun on board a cross-Channel ferry and contact was made with Sea Dart in Calais.

He confirmed that it was his car and they were safe and well. In fact, he had given details of his journey to the proper authorities, but there was a break down in communication. Kent police thanked the breakers who had helped solve the mystery.

Knights of South Humberside

Breakers in South Humberside who are having problems locating various accessories could do worse than check out Knights, Kirton CB Centre. They

seem to have an impressive range of gear ranging from mobile antennas through to SWR meters, plugs and connectors by all the leading makers. The centre can be found at Queen Street, Kirton-in-Lindsey, South Humberside. (Tel 0652 648378).



Uniace Competition Winner

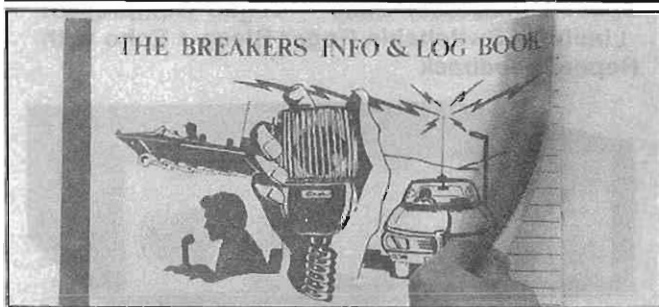
Judging by the number of entries we received for last month's competition, an awful lot of you were very keen to win the Uniace 300 home base.

Now I know that we always say we've had a fantastic response blah . . . blah . . . blah but this month we really ain't joking. Our poor old post girl has risked serious injury carrying down the thousands of postcards and the odd letter (naughty!). I mean on one day alone we received over one hundred entries.

So anyway we decided

that it was right and proper that our poor old post girl should be given the privilege of delving into the mountain to pick out the lucky winner. Down she went and after much rooting around out came a nice beige coloured postcard from B. Cornhill of 2 Penrith Way, Aylesbury in Bucks. So Mr (or Ms) Cornhill, you'd better start clearing the decks because the Uniace is on its way.

Before we forget, the answers of course were very straightforward. The dimensions were 340 by 120 by 284, it has four sockets and power reduces from four watts to 0.4.



Breakers Log Book

An enterprising printing company from Portchester in Hampshire have come up with an interesting Breakers Log Book. The company, who are a family concern, are all breakers, and the book contains some useful information, in addition AM/FM log pages, a Sideband log, and Eyeball log and Run-a-Net pages.

The book carries the international morse code, signal codes and phonetic codes. It also runs a glossary of terms in four languages, English,

German, French and Spanish. Along with the usual 10 code, there is a full listing of the 13 insult code. So if you want to use such gems as 13-20 (Is the mike chinking or is it your loose uppers?) or 13-14 (Great sound your new rig, when did they discontinue making it?), then this book could be the one for you.

The Breakers Info and Log Book can be purchased from Breakers Enterprises Ltd, 82 Kenwood Road, Portchester, Hants (Tel 0705 326628) price £3.25, p&p £1.00.

934 Latest

As we informed you last month, Reftec units are now being supplied on the new frequencies, but the original ones are still available.

The company have modified the transceiver slightly, so that the mike plug is on the front right hand side, where the Squelch control used to be. Also, the mike plug is now a four pin instead of the rather unusual six pin that they have been using. Squelch is now automatic, which can be overridden by

pressing a small red button located to the left of the channel selector. Work is also progressing on a handheld 934.

As far as antennas are concerned, Gamma are pleased to make enter this highly specialised field. Welz are bringing out a new SWR/Power meter to operate specifically on 934 Mhz and these will be available from 934 Communications, of 64 Footscray Road, Eltham SE9 (Tel 01 859 0933). Cost in the region of £80-£90.

National Eyeball

Santa Pod Raceway in Northamptonshire is the venue for what we believe is the first national eyeball on October 23. The event is being organised by the Container Town Breakers Club from Felixstowe, and they are hoping that breakers from all over the country will turn up.

Track racing will be one of the main events, but

there will be many other attractions, and it is planned as a day out for all the family. Although the club have organised many local events, this is the first time they have attempted anything on this scale, and are hoping for a lot of support from breakers all over the country.

If you want any further information, the man to contact is the appropriately named Dave Mann (Tel Felixstowe 283444).

Two local Kent clubs linked up to help in a local event at Tonbridge Castle recently Kent Unicorn Breakers and Castle Breakers organised the security for the event which involved about seven breakers all using hand-holds.

The clubs are in the process of amalgamating and are organising a sponsored bike ride with

proceeds going to the Great Ormond Street Hospital in London. The club meet down at Angle FC in Tunbridge every Thursday between 7.30 and 10.30. Single membership is £3, family membership is £5 with OAPs half price. For further details the man to contact is Stuart Nolan at 9 Kemble Close, Tunbridge Wells.

Bucket Mouth Busted

The end of the 'bucket mouth' could be in sight, if recent events in Birmingham are anything to go by. In the first case that we've heard about, British Telecom brought a successful prosecution against a CB user who was using bad language over the airwaves.

Michael Daniels of Bromford Bridge in Birmingham, was fined a

total of £90 after he admitted three offences of publicly broadcasting offensive language. He was also fined £60 for not having a CB licence, £20 for deliberately interfering with the radio system and ordered to pay £60 costs.

According to the Birmingham Evening Mail, who carried the story, BT are launching a clean-up campaign in the area, and are checking out a number of complaints relating to the use of obscene language via CB radio.

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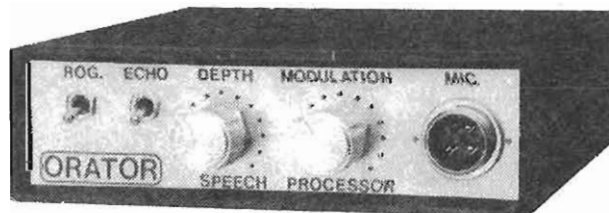
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with a crystal filter with a much steeper skirt, or to put it in simpler terms, it makes the rig much more selective in what it hears on a given channel. If an AM or SSB signal appears next door to the one you want, it won't help a lot. However, if it is more than about (depending on strength) 5 KCs away, your normal rig will hear the modified one. Also you won't get the interference from a strong FM signal further up the band due to the greater selectivity of the modified set.

Further, a strong SSB signal from out of the British group of channels could desensitise the standard set due to the poor strong signal handling design of most CBs, the narrower IF filter will go along way to cure this too.

A Thanks very much Andy, and if anyone wants more information then you can contact Andy at the Rabbit Rabbit Hutch, 45 Cambridge Road, Kingston, Surrey KT1 3NS.

Midlands Mods

The Phantom Plumber writes from Reading with a suggestion for some modifications which might prove interesting...

Q Just thought that I would write to tell other CBers about some mods that I have made to my homebase set up.

I run a Midland 4001 and have, by way of an extension speaker socket, incorporated an equalizer/amp then connected up to an extension speaker. This not only allows weak signals to be heard better, but also allows a lot of the noise to be altered to suit my ears.

I have also made what I believe to be a legal home base twig, using a dipole with the top radiator taken out and replaced by a mobile twig, the Z27, which gives really good results. I have copied breakers as far as 15 miles away without any problems.

A If any breaker is interested in doing the same, please contact The Phantom Plumber at 41 Stockton Road, Reading, Berks RG2 8AM, and he will only be too happy to help.

Antenna Accidents

Yet another confused reader who is making enquiries about his favourite antenna.

Q In the July edition you tested the Thorobred Z27 of which I have one. However, could you clear up some confusion on my part. There appears to be two makes — Oct in Grantham, Lincs and Thorobred in Norwich, Norfolk. The mobile antenna I have is

the Thorobred Z27 but manufactured in the USA. Could you enlighten me in my ignorance.

A Of course I can, the fact is that the Thorobred Z27 of which you are so proud, is in fact manufactured in the good 'ole US of A. However, it is distributed in this country by Oct International of Grantham, Lincs. Now Oct supply all the CB shops with these antennas, so you will probably find many shops stocking them, but invariably they can be traced back to OCT.

The Sign Of The Sigma

Once again a 'made in the USA' mark has caused much scratching of the head, this time for Paul Williams of Caernarvon in Gwynedd.

Q I am writing to you regarding an aerial I bought second hand a month ago. The aerial is a Sigma 4 (Avanti) which works very well. However, I have a minor problem now, and need a part for it.

I had a manual with the aerial which encloses addresses for spare parts, however they all appear to be in the USA, which seems a bit stupid to me. Obviously I would like to find out the address of a dealer in the UK.

A There are likely to be several dealers who handle the Sigma, but as far as we know one of the main ones is the CB Radio Centre at 337 Kenton Road, Kenton, Harrow, Middlesex (Tel: 01 907 1106/7).

As we so often point out in the magazine there are people coming into CB all the time, so we're only too glad to enlighten people like B. Howard of Chippenham in Wilts on is simple query...

Q As a new breaker, I read quite a lot about CBing, but have come across one problem. In the magazine you have quite a lot about QSLing. I do not know anything about this. I have read books the library and they don't have any information on QSLing. Could you please tell me what its for, its need and how to start.

A If you can get hold of a copy of the February '83 magazine you will find a full explanation from the QSL supremo Mike Newbold. However, here is a brief run down of what it is.

QSLing is simply the postal exchange of postcards that you have printed with a design which illustrates your handle, call sign or station. There is a code of QSLing which is necessary to follow if you are to have any success.

Always send two or three of your

cards and include one or two of your friends' cards. Personalise your card with a greeting and where you received your contact's name from. Always exchange at least the same number of cards you receive and pay the correct postage. Make sure you QSL back for each one you receive and use club rubber stamps and unit numbers on your cards.

Try to exchange on a 1-4-1 basis, colour and black and white cards, and try an use commemorative postage stamps and include little extras like view postcards or brochures of places of local interest.

Don't send one card and expect six in return or receive six and send one. Don't expect a quick answer if you send by Surface Mail, and don't write on scraps of paper. Don't forget to include your name and address and finally don't join a QSL swap club unless you QSL 100 per cent.

For any further information you can always write direct to Mike Newbold at 124 Hillcross Avenue, Morden, Surrey SM4 4EG.

In Search of Elftones

J. Durant of Nailsea in Bristol is throwing himself at the mercy of the readers with his query...

Q I run a DNT FM40 Super tuned rig as a home base which must be better than anything you have recently described — no arguing please. I also have two Elftone CB6000 rigs as mobiles and no money. The Elftones get out alright, or good enough, but the bleedover and squelch control is dreadful.

Can any kind breaker who has worked to improve such a great chassis such as the Elftone boasts, and succeeded, as a kind act, impart such information. I have no guts map of the great chassis, and I'm pretty dim but very willing to listen and learn. If no one can help, then two rigs are to be confined to the dustbin.

A Well I know that readers have come up with the goods in the past, you'll just have to keep your fingers crossed and hope for the best.



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CB Q & A, Citizens' Band
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London WC2H 0EE**

AUTOSCAN 5000

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'The technical performance is unimpeachable...
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CB Magazine JUNE 1983



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- Instant return to breaking channel
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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 mailbox

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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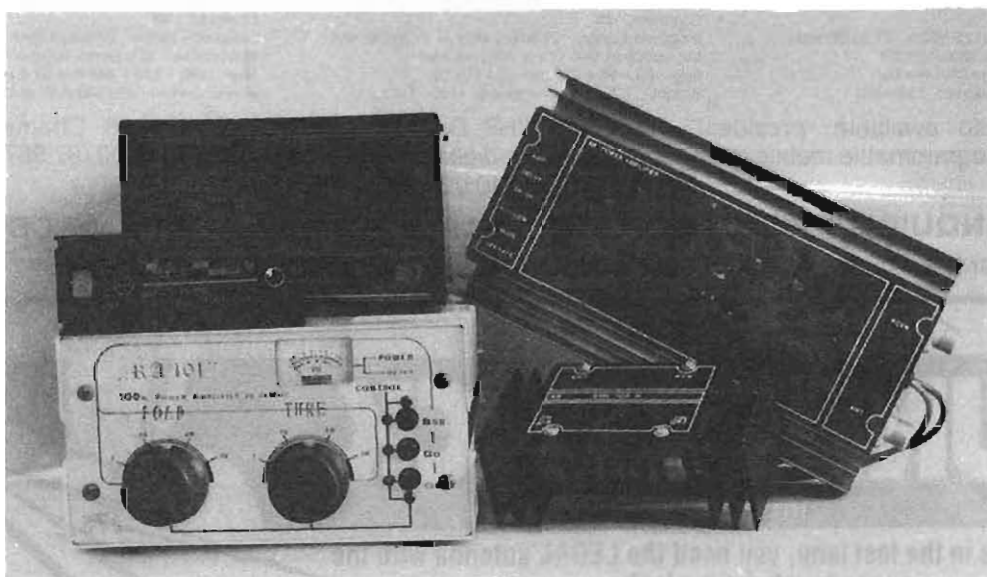
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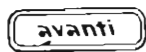


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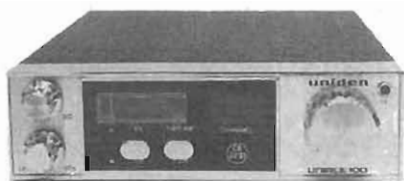
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GENERAL SPECIFICATIONS UNIACE 100

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Frequency range: 27 60125 Mhz — 27 99125 Mhz
Microphone: 600 Ohms, dynamic type
Size: 140 x 40 x 205 mm (W x H x D)
Weight: 1 kg Power source: 13.2v D.C.



UNIACE 200 MOBILE

FEATURES Rotary on-off volume and squelch controls • Tone switch • PA/CB switch • Power switch 4W-0.4W • Brite-dim switch • 40 channel LED indicator • Signal strength meter • Rotary RF & mic. gain control • Supplied with fixing brackets and leads • External speaker socket

GENERAL SPECIFICATIONS UNIACE 200

Channels: 40
Frequency range: 27 60125 Mhz — 27 99125 Mhz
Microphone: 600 Ohms, dynamic type
Size: 160 x 55 x 217 mm (W x H x D)
Weight: 1.2kg. Power source: 13.2v D.C.



UNIACE 300 HOME BASE

FEATURES Rotary on-off volume and squelch controls • Tone switch • PA/CB switch • Power switch 4W-0.4W • 40 channel LED indicator • Signal strength meter • Rotary RF & mic. gain control • Supplied with fixing brackets and leads • External speaker socket • Head phone socket

GENERAL SPECIFICATIONS UNIACE 300

Channels: 40
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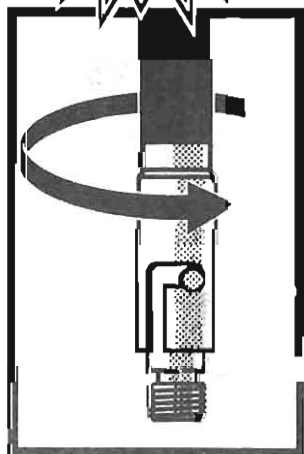
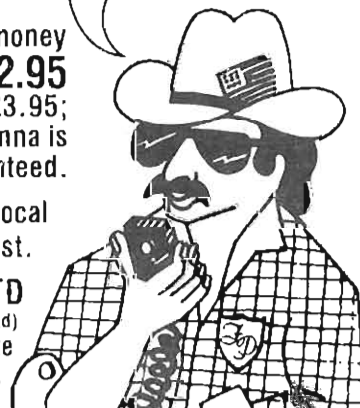
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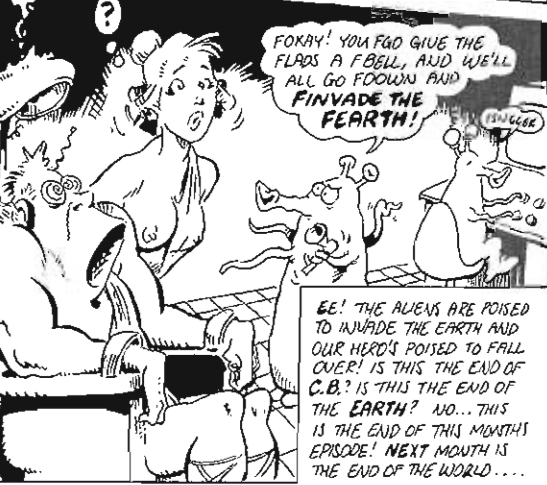
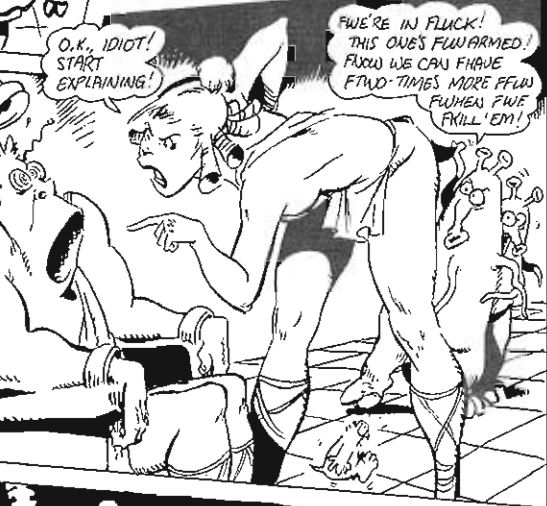
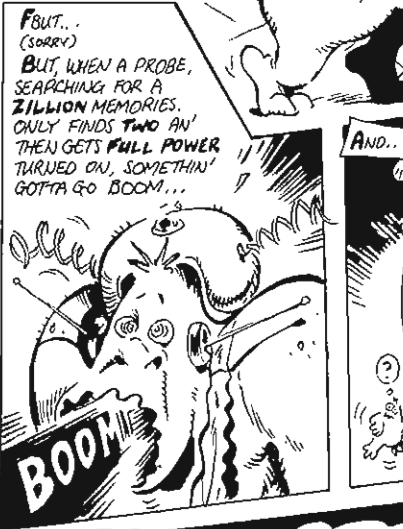
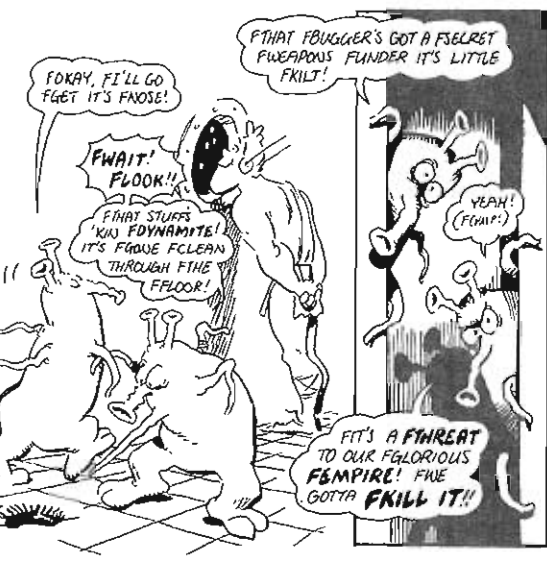
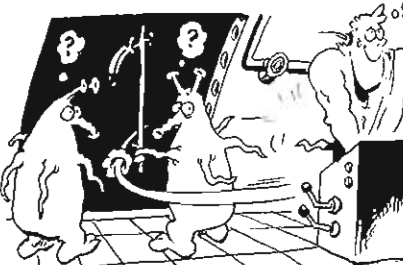
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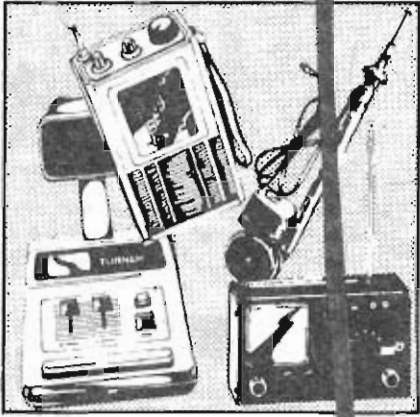
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TWONG

OUR HERO, THE GODLING TWONG, NOT WANTED ON EARTH, NOT WANTED IN HEAVEN, HAS RUN AWAY TO OUTER SPACE AN' GOT LOST! HE PUT OUT A MAYDAY ON HIS BUILT IN RIG AN' WAS CAPTURED BY TWO ALIENS WAVING A BANANANA ON A STICK! THAT IS... THEY WAS WAVIN' THE BANANAWA, NOT TWONG! HE WAS JUS' LOOKIN' FOR SOMEWHERE TO PEE!





Andy R Giles, the well-known wally hater, has been trying out a new DF unit that is portable, easy to use, reasonably priced and very accurate.

HEADLINE

THE RIGHT DIRECTION



Regular readers of Citizen's Band Magazine will know that I have already reviewed several direction finding devices, ranging in price from £10 to £250. Most worked reasonably well but even the most expensive was of limited use when it came to pinpointing the source of an offending signal. It's fairly easy to obtain a heading when looking for a transmitter that is some miles away, but when faced with a high-rise block of flats or a large Victorian house that has been split up into 35 bedsitters, finding the exact source of a signal is almost impossible.

AKD of Hendon have just introduced a portable direction finding device, the PDF-11M, in an attempt to overcome this problem. The unit is a broadband CB receiver that is not much bigger than a calculator. It has been designed for short range

direction finding and when it is used with its own directional antenna, it has an effective range of approximately 50 metres, if the offending signal is at the maximum legal strength of 2W erp. However, most of the wallyies who enjoy bucketmouthing and playing music also tend to use high power and this gives the unit a greater range.

I tried out the PDF on a warm summer's evening. The sun was

ING IN

shining, the road was melting and my car was boiling over. Tuning around the band I soon found an obliging idiot who was playing records on channel 19. This is not a wise thing to do as this channel has long been recognised as the driver's channel and several of the legitimate users were getting very wound up. If a few of them had been equipped with DF units, the budding disc jockey might well have been visited by several hairy-armed truckers. As it was, the people who were trying to use the channel vented their anger by shouting at the wally while the music was playing. This was completely ineffective, partly because wallies never go away while they have an audience, but mainly because it is no use talking to someone while they are transmitting — they can't hear you.

The offending signal was reasonably strong with me, about a 7 on my meter, so it seemed the ideal time to try out the PDF. Not being one for too much forward planning, I had not read the instruction book. I took the unit out of its box, attached the triangular antenna to the bnc socket on the top and then wondered what to do next. Ten minutes later I had read

the comprehensive instruction manual and discovered how to operate the device. I also discovered that I needed a PP3 battery to make the thing work. Fortunately there was a shop nearby, one of those well-known multi-national tobacconist/news-agent/greengrocer/mini-super-market/hardware store/hot food take-away 24 hour emporiums, so I popped in and bought a battery.

The PDF proved very easy to use. The On/Off switch is a three position slider control on the left-hand side of the case. When it is in the central position, the unit is turned off. In the forward position both the RF receiver and the 1w audio monitor are turned on. With the slider in the rearward position, only the RF receiver is on. This is useful for conserving the battery. Just underneath the On/Off control there is a small push-button switch that turns off the internal lamp for the S-meter on the front panel. Just above the On/Off switch there is a 3.5mm jack socket for an earpiece that allows you to monitor the signal, to make sure that the right one is being traced. The only other controls are the two rotary ones on the front of the case. One adjusts the RF sensitivity and the other sets the volume level in the earpiece.

All directions

Having inserted the battery, attached the antenna, plugged in the earpiece and set the volume control, I was ready to go. Standing outside my car, I held the PDF out in front of me and turned through 360 degrees. The built-in audio amplifier immediately proved its worth. The S-meter was registering signals from all directions but the audio monitor allowed me to look for the one that I wanted. It proved to be coming from somewhere directly in front of me. The audio was present over an arc of approximately 38 degrees but by watching the S-meter I narrowed it down to about 10 degrees. I started driving in the direction indicated by the PDF but because the roads that I was driving on tended to curve away from the direction in which I wanted to go, I had to stop several times to take fresh readings. I tried to do this while driving but it proved to be too difficult, so I stopped and took a new reading every four or five minutes. This also allowed my car to cool down.

In a surprisingly short space of time I had arrived outside the door of a house that had a vintage Starduster lashed to its chimney stack. I drove

past the house. I drove round it, I even tried driving directly away from it, there was no doubt about it. The readings given by the PDF were quite positive and almost impossible to misinterpret. The audio amplifier confirmed that I was listening to the right signal and the S-meter gave unmistakable and consistent readings when the unit was pointed at the house.

Had I not been so much of a coward, I might have knocked on the door, but I have often noticed that a wally's lack of braincells is often made up for by an over abundance of muscle though sometimes they are weedy spotty-faced ill-fitting sports jacket wearers, but I was taking no chances. I stayed in my car outside the front door and sounded my horn several times. Sure enough the curtains twitched and a face appeared. I waved and pointed to the K40 on my roof. The face vanished and about 10 seconds later the music stopped. It may have been a coincidence, but I prefer to think that the PDF-11M is a great little gadget that will cause a few wallies to think again.

No tuning

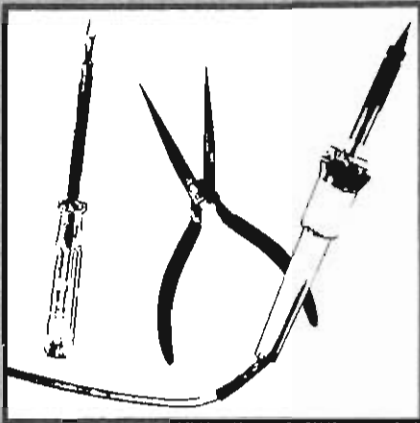
As the PDF is a broadband receiver, it does not need to be tuned. It will pick up a signal in both the old and the new CB bands. The detector will resolve AM signals and FM tones at a lower volume level, but it will not resolve ssb, although the distinctive Donald Duck sound of an ssb signal can still be heard through the earpiece. The audio monitor works very well and allows the user to check that the signal he is watching on the S-meter is the one that he wants to find. It can even be used to find sources of interference such as central heating thermostats and fluorescent lights. It will also find hot spots on the case of a rig where there is some case radiation.

The PDF has a standard bnc socket and this allows other antennas to be plugged in. In a previous issue of CB I reviewed several df loops and I think that they are the ideal antennas to use with this device as they would increase the range considerably. For even greater range a roof mounted beam could also be used.

I had a lot of fun using the PDF-11M and I would recommend it to anyone who feels like finding a few wallies. It must be good, as I am reliably informed that British Telecom have been buying these units for their RFI squads. It costs £49.95 and is manufactured by AKD of 10 Willow Green, Grahame Park Estate, Hendon, London NW9 5GP, who give a two year guarantee against faulty workmanship or defective components. The factory appointed distributors are Telecomms of 189 London Road, North End, Portsmouth (Tel: 0705 662145).

CB

D.I.Y. Project



No matter how much money you spend on a CB rig, it will only work well if it is served by a good antenna. Here we look at a DIY long wire . . .

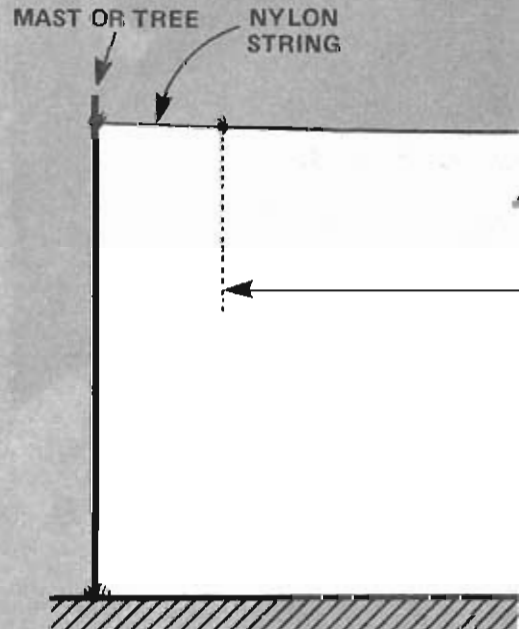
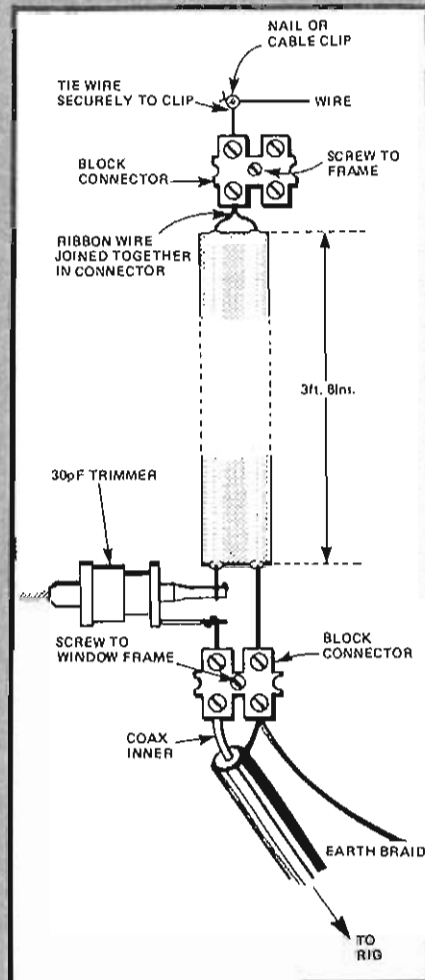
LONG WIRE ANTENNA

A lot of interest has been shown of late in long wire antennas so here is a design to get you thinking and doing.

The basic antenna is 32 feet long — one wave length — and the whole thing is simple to construct. The wire used is ordinary multi-stranded bell flex. This is just thick enough to withstand a windy day and thin enough to allow the window to close. It is not very noticeable and should not draw too much attention.

First cut yourself 33 feet of wire, tie a loop in one end and tie some nylon string to the loop. Nylon string is the best for the job because it insulates the antenna from the mast or, in our experiment, the tree. Do not tie the wire directly to anything except at the rig end.

The next step is to tap a cable tie or nail into the window frame and

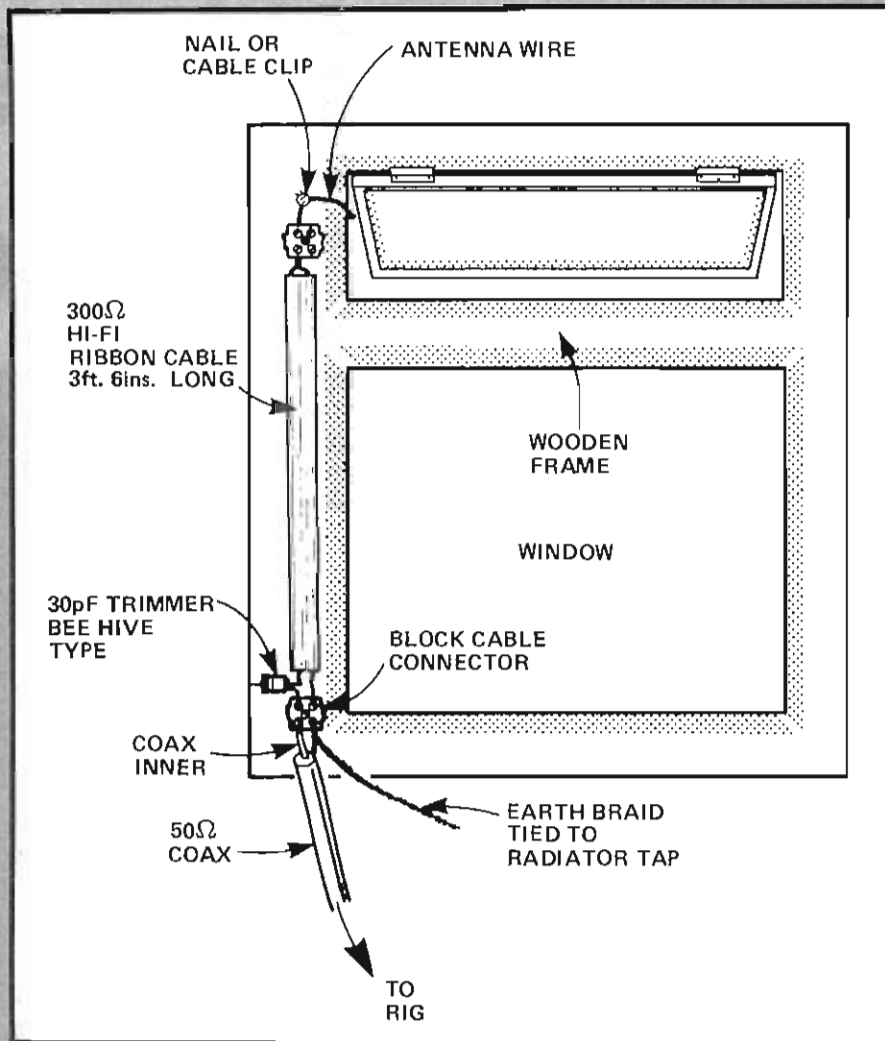


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secure the wire to it, leaving about six inches of wire for attaching to a block connector. Throw the wire, with nylon string attached, from the window and tie the nylon string to a mast or tree.

At this point it must be remembered — the higher the antenna the better it will perform. If you live in a bungalow, the antenna could be fed into the loft with the matching section tied to a beam, the Earth braid could be attached to the water tank.

This matching section is made from a 3ft 6in (approx) 300Ω Hi Fi ribbon cable — the type used in our experiment was white semi-transparent cable. Other types are available but, if used, may need



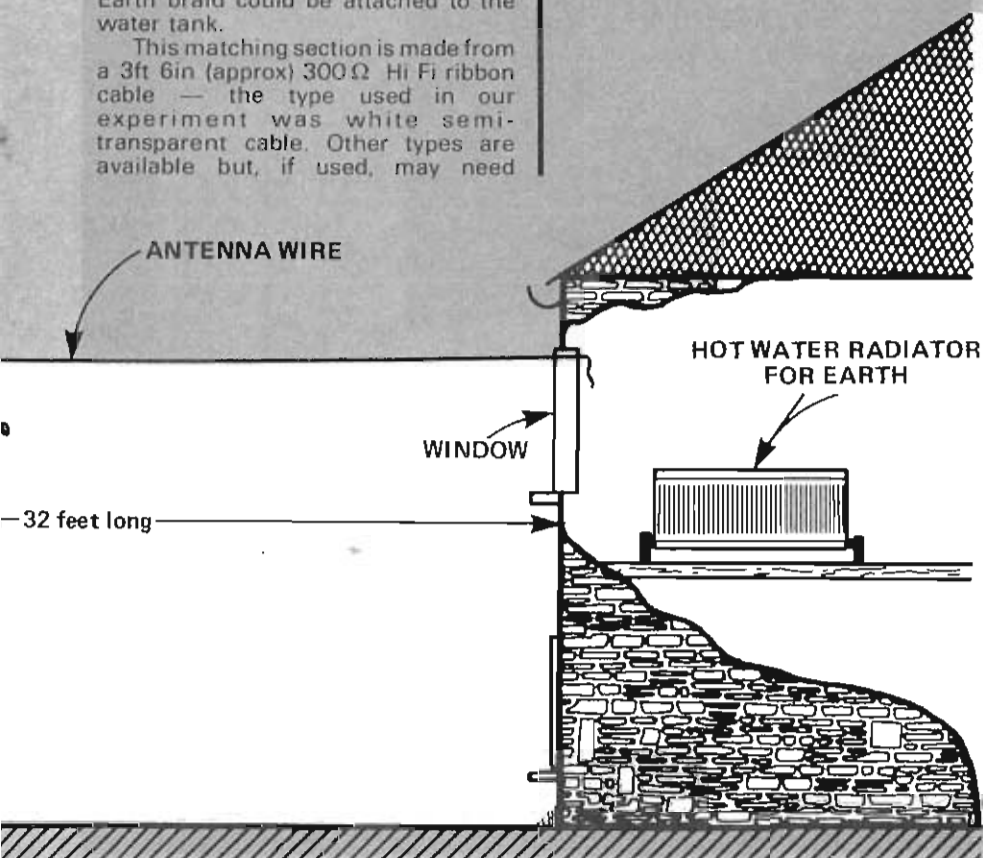
lengthening. As with ordinary antennas, some experimentation will be needed to obtain the best possible SWR. One end of our 3ft. 6in cable was shortened together and screwed into a block connector and then onto the end of the wire antenna. Then, screw the block connector to the window frame.

The other end of the ribbon cable is connected to another block connector — but in one of the ribbon leads, solder a 30pf trimmer. We used a beehive type, as shown in the diagram, but any 30pf trimmer should work. This is used to trim the SWR.

Next connect the 50Ω coax to the connector block. Connect an Earth wire to the outer braid of the co-ax — this can be made from 50Ω co-ax. After stripping, the insulation braid is ideal for an Earth connection. This Earth wire must only be used on water pipes. We connected ours to a radiator pipe. Any paint etc must be scraped off to ensure a good connection, and we connected the Earth wire to the pipe with a small screw on pipe clip.

Finally, screw the block connector to the window frame, connect the rig to the antenna via an SWR meter and tune the 30pf trimmer for the best reading. It should be better than 1:5:1 ours read 1:1:1. Tests conducted so far show that this antenna to work as well as a dipole and, in some cases, better.

CB



Equipment Review



Ron Harris turns an inquisitive eye onto the Maxcom MCP 150A — it looks good and it's legal too.

Home On the Range



It is always a pleasant experience to encounter something which is well thought out and well made. The MCP-150A was quickly appreciated on both counts. Being of the conventional "base-and-handset" type, the Maxon is slimmer than most such devices I've come across; it stands only 3" high, with the hand-set in the rest.

Facilities offered include redial, privacy switch and a "call-to-remote" switch, intended to tell whoever has the hand-set that they should answer the call. It would also do nicely to summon in wandering family members - say from the garden shed!

Base Methods

The frequency of operation is between 1.6 MHz and 1.8 MHz for base-remote transmission and 49.8 - 49.9 MHz for remote-base signals. The MCP-150A utilises the mains wiring as an additional aerial and this may cause slight complications. You may find that some mains outlets will produce better results than others, depending on how the wiring is channelled through the wall. If your house has metal conduit, for example, this would screen the wiring and reduce the range drastically. Experimenting a little may be all that is required to obtain the best results.

When the hand-set is in the cradle, the base automatically trickle charges the batteries. Outside the cradle the hand-set can still be kept fully charged by use of an external power pack. Details of how to do this are contained on the excellent

instruction booklet provided.

On the underside of the base there is a switch labelled "TX" and which offers the choice of balanced or unbalanced output. The instructions entreat you to find the setting which offers the clearest sound and use that. I could determine absolutely no difference whatsoever whatever I did to the switch. The sound was always clear and refused to get any clearer!

Also fitted into the base are the cords to the telephone and mains point. The base is moulded to accept both and retain them neatly in place, even with the extension fitted to the phone wire. A nice touch this and one which adds to the units acceptability in a living-room. If you have a wall mounted phone, it might be more convenient to wall-mount the MCP-150A base too. No problem. The fitting to do so is already present on the base, and the instructions cover the procedure adequately.

Handset and Match?

There are a great number of buttons, switches and indicators on the hand-set and it looks somewhat crowded as a result. The keyboard is standard enough and the set is well laid out, which makes the mic and ear-piece easy to use. The privacy switch - to blank out the mic so that you can discuss the person on the other end of the line without their hearing you, is placed above and back of the mouth piece.

The unit is activated normally by picking it out of the cradle, which allows the 'talk' switch to open and

turn on the set. This can be locked with a plastic slider on the bottom of the handset which is handy if you're carrying it around a good deal.

Packed onto the top of the unit are the antenna, the battery (low) indicator, the volume switch and the power on/off switch. The only thing that saves this from being troublesome is that the two switches will be used infrequently and thus you're unlikely to be fumbling around trying to find these two often.

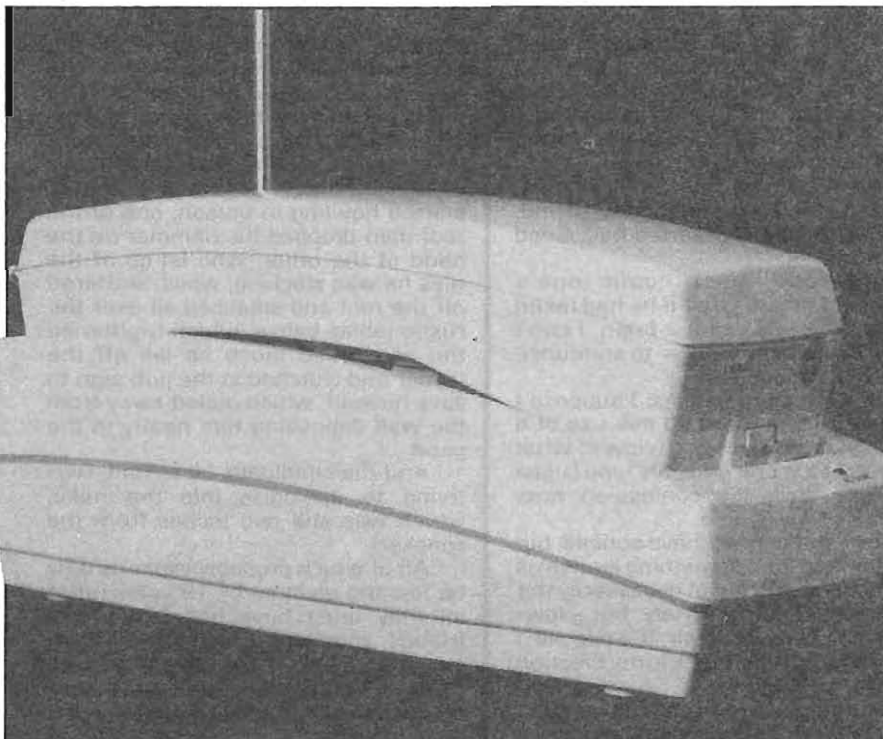
There's room down on the face of the set, however, to have mounted, say, the volume control next to the microphone, where it could be easily operated - a minor grumble.

Connecting Line

Hooking up the Maxon should be very straightforward. It wires straight across the normal phone and as long as the mains wiring is considered for screening as I mentioned earlier, no problems should be encountered. I found a socket on the other side of the room - with the wire running around gave the best results. The aerial was not even required to be fully extended to cover the whole house and about 300' beyond it!

Despite the manufacturers somewhat conservative claims, I found the maximum range to be not far short of half a mile! If I'd wanted to I could have gone for a walk around the shops and still answered the phone!

All in all a very good product and one which offers a high standard of construction and good design for its price. Value for money and recommended without reservation.



CORDLESS PHONE REVIEW DATA PANEL

Model Maxon MCP 150A
Distributor Maxon Europe
Typical Price £89.00

Features	Yes	No
Rechargeable Batteries	<input checked="" type="checkbox"/>	<input type="checkbox"/>
IN?USE Lamp	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Intercom Facility	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Auto Redial	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Privacy Button	<input checked="" type="checkbox"/>	<input type="checkbox"/>
External Antenna Facility	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Security Code	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hand Free Operation	<input type="checkbox"/>	<input type="checkbox"/>
Range	800 yds approx	

FREQUENCIES

1.6 - 1.8 MHz,
 49.8 - 49.9 MHz



Filly joins a destruction team and finds that politics and CB don't always mix with the peaceful atmosphere of a country village.

LADY BREAKERS

It's been a long, hot, brain-addling sort of summer, and thank goodness it's nearly over. I can't take the heat. If I wanted to swelter in 90° I would go to the Middle East, for heavens sake.

Talking of heat, I was contacted by a breaker a few days ago who was literally boiling over with rage, and after hearing her story, I'm not surprised. So am I. It seems that the wallies are getting bolder and more ingenious. Not content with their usual endearing little habits, like button pushing, playing music over the popular channels, colourful language and the like, one of them has found a new game to play.

He must have discovered that his rig had a quaint little feature on it, namely a public address system. These are very simple to use, even for a wally. The rig has a PA speaker socket which you use to connect a speaker placed outside your car. This will cut out the speaker in the rig, and all transceiver functions, and then you simply speak into your mike and have the dubious pleasure of hearing your dulcet tones blasting forth.

These things have perfectly respectable uses, of course. You can advertise local fetes and activities, serenade that dishy male/female down the road in the middle of the night, that sort of thing. This particular gentleman, however, thought up a particularly good wheeze. He drove through a quiet estate housing elderly and disabled people (I wonder if he knew?) announcing a bumper sale in the local community hall, everying at knock down prices, hurry before everything goes.

So out come all the old folk, clutching their pension money, to find, needless to say, a deserted hall. Good joke, huh?

Still, one must count one's blessing. I mean, what if he had taken it into his — I'll call it a brain, I can't think of a suitable word — to announce a nuclear holocaust?

But enough of wallies. I suppose I shouldn't be so hard on mis-use of a public address facility, in view of what happened the one and only time I used my own. Yes, it's confession time again.

Now, you may not have noticed, but from time to time something known as an election occurs. Not necessarily the full-blown General variety, but a low-key local council affair. I suppose I really should have stuck to my Election Survival Technique — fending off canvassers and making paper aeroplanes out of the steady stream of

leaflets and election addresses. Taking an intelligent interest in the running of the country, you know. However, in one of my inexplicable fits of excessive zeal, I offered the use of my Harvard Good Buddy PA system to one of the candidates in a recent local by-election. Perhaps his politics were the least bizarre — or was it because I saw a chance to promote the cause of CB with a potential councillor? All right, all right — they offered a hire charge.

So he and his agent turned up one sleepy Saturday afternoon, and off we went to blast the peace and quiet of the more remote villages in the area. It seemed to be going quite well, people dozing in deckchairs were seen to leap to their feet in sudden enlightenment, others cheerfully waved clenched fists, some chased us shouting down the road, no doubt eager to learn more.

Eventually we came to a peaceful village green, you know the sort of thing, ducks lazing on the pond just outside a picturesque pub, flowers rocking in the gentle breeze, flies humming, a dog gambolling in the distance — er, where was I? Oh yes.

There were these two men working on the roof of the pub, another on a ladder painting, and spotting a captive audience (you might say), the candidate leapt out of the car, clutching the mike, stood all of two inches from the PA speaker, and proceeded to address them at the top of his voice . . . (pause while Filly shudders at the memory). Well, the microphone howling sounded as if the Hounds of Hell were upon us. The ducks set up a fearful quacking and set off at Mach 1, the candidate, the agent and muggins here were practically deafened, every dog in the county started howling in unison, one of the roof men dropped his hammer on the hand of the other, who let go of the tiles he was stacking, which slithered off the roof and smashed all over the rustic tables below, which frightened the painter so much he fell off the ladder and clutched at the pub sign to save himself, which pulled away from the wall depositing him neatly in the pond . . .

And the candidate, bless him, was trying to apologise into the mike, which was still two inches from the speaker!

All of which probably explains why he lost the election by 19 votes (after all they must have had family and friends, and there was the landlord, or course, and the local Duck Preservation Society), and why I took off for an unexpected holiday in the Isle of Wight . . .

CB



This month's exotic spots include Denmark, Spain, Michigan . . . and not-so-exotic Manchester, Birmingham and Wolverhampton!



COMMUNICATION THE

QSL WAY

Hello again, here we are with all the latest on the QSL scene, but before we dive deep into the postbag, please, please, please stop sending me those silly chain letters that promise doom and despair if I do not carry on the chain — you are wasting your hard earned money — I throw them all away — all 36 of them to date — and I am still alive!

Had two letters this month, both of whom ask for tips on QSLing, and how to get involved in this great hobby of ours. First was from Benjamin P. Mills of 203, The Pastures, Downley, High Wycombe, Bucks HP13 5RP and the other from P. J. Conway of 54, Beacon Street, Low Fell, Gateshead, Tyne & Wear NE9 5XN, by the time you read this they will be well into QSLing, so you are sure of a good return on these. As promised we list some tips that will make you all Gold-Star QSLers:-

- ALWAYS send 2 or 3 of your own QSL cards.
- ALWAYS include 1 or 2 of your friends, or 'floater' cards.
- ALWAYS personalise one of your QSL cards with a greeting, and where you received their name from.
- ALWAYS send at least the number of cards you received in return.
- ALWAYS ensure that you have prepaid the correct postage.
- ALWAYS QSL return every one you receive or you will not only be black-listed in the QSL World but you are defeating the purpose of our hobby.
- ALWAYS use your club Rubber Stamp and unit numbers on your cards.
- ALWAYS try to exchange 1-4-1 Colour and Black and White.
- ALWAYS try to use commemorative postage stamps.
- ALWAYS try and include some little extras, such as view post-

cards, or brochures of places of local interest — especially to overseas contacts.

- DON'T send one card and expect six in return.
- DON'T receive six cards and send one in return.
- DON'T send QSLs by Surface Mail and expect an answer in a week — some surface mail takes six weeks to get there!
- DON'T send scraps of paper with your name and address scrawled on them, they usually end up in the waste-paper bin where they belong.
- DON'T forget to include your name and address on EVERY QSL CARD or you cannot receive any replies.
- DON'T join a QSL swap club unless you QSL 100% — Clubs only work for you when you do your part.
- DON'T FORGET TO READ 'COMMUNICATION THE QSL WAY' — that's where all the very best and latest contacts are!

The next part of our fellow QSLers letters leads me straight into the next envelope out of the huge postbag — the request was 'Where do I get my QSL cards printed' — this question is easy — perhaps one of the foremost colour QSL Card printers in the country is CHRIS DARLINGTON of HAPPY COBBLERS DX-QSL GROUP of P.O. Box 99, Northampton NN2 6HU, Chris is responsible for the production of thousands of beautiful cards every week, from full-colour personalised cards to four-parters and club cards, the list is endless. If you would like full details a QSL to Chris with a stamp will bring full details of the cards and his ever-excellent HAPPY COBBLERS DX-QSL GROUP.

For those of you who require something a little more modest, but nevertheless just as collectable, then a

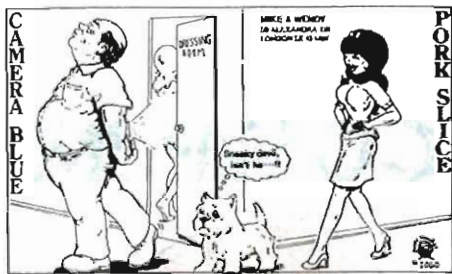
QSL to D. Currie Printers — sponsors of our latest competition — at 89, Derwent Street, Consett, Co. Durham DH8 8LT will bring full details — don't forget to enclose a SAE.

Getting back to the Competition announced last month — the race is on for the first QSLer to collect either 100 different D. Currie QSL Cards — or go on to collect 200 different, and I already gave you a head start last month. This month we have some more Currie cards in — first was from P. J. Conway, at the address already given above, a nice club card of the Little 'F' Breakers club, another from FISHIS LIMB alias J. Cox of 21, Norham Court, Oxclose, Washington, Tyne & Wear NE38 0JJ, another from GOLLIWOG alias Joe S Moser of Callymains, Gatehouse of Fleet, Castle Douglas, Kirkcudbrightshire DG7 2DN, Scotland, another from LOTTA BOTTLE alias Tony Cowell, of 1, Greenway, Sedgley, West Midlands DY3 1PG, yet another from SMOKE POLE — D. Hinnett, 1970 Coventry Road, Sheldon, Birmingham B26 3HJ, Warks, and from KING CRIMSON — Alan, of 2, Willow Road, Hunstanton, Norfolk PE36 5DE who reckons our column is amazing, great, wonderful, brilliant, fantastic and a multitude of other praises — I reckon he is only saying that to get a mention — works doesn't it Alan!

Must always encourage the young QSLers, heard from Sean Gooch aged 14, who is starting a FREE QSL club — THE YANKEE BRAVO QSL CLUB, membership is just three QSL cards, signed and dated, and a stamped addressed envelope, sounds good! Another FREE club just discovered is the ROMEO-BRAVO DX QSL CLUB run by Tony IRB 001 of 3, Branden Road, Alvechurch, near Birmingham B48 7PE, already with over 200 members in 14 different countries, membership is just five QSL cards and a SAE. Tony also QSLs 1-4-1 with anyone, and tells us he regularly QSO's with Dave and Jackie Cooper who run the METRO CITY QSL CLUB — another free club from 95, Greenoak Crescent, Stirchely, Birmingham B30 2TD.

Very interesting pile of QSLs in from THE WIZZARD — Alex Scott, of 1, Farnham Avenue, High Blackley, Manchester M9 2GN, Alex is a member of a long list of QSL clubs, and has a very attractive personalised QSL — he does all his own artwork, and excellent quality it is too. Alex is currently in touch with HAPPY COBBLERS and you might well be seeing the WIZZARD logo on some of their new cards. Some new QSLs in from THE MAFIA (No not THE Mafia) and his brother BANDIT who hail from 35, Hildyard Close, Hardwicke, Gloucester GL2 6PZ, both nice cards, although all their 'floater' cards are address-less!

Andrew from 6, High Croft, Spennymoor, Co Durham writes to say he has recently joined the MERMAID DX & QSL CLUB and he



says it is one of the best — better than all the others he has joined, so there's a recommendation for you. Andrew QSL's allcomers, but like me he is fed up with those stupid chain letters — the ones he has received ask for money, they are worse than the ones I threw away.

Letter in from Dave Shoppard of 6, Terrell Gardens, Redfield, Bristol BS5 9NY, Dave is no newcomer to these columns, and the regular readers among you will know Dave is the British Representative for BALL-LIGHTNING QSL SWAP CLUB of Germany. Dave tells me he was offered the rep-ship of the B-L Club way back last December, but he actually went to the expense and trouble to go to the B-L home town of Bochum in West Germany and visit the President of the club and his family to make sure it was on the level before he became the clubs British rep, that's dedication for you! If you would like details of this club, a SAE to Dave will bring the desired results. Dave also kindly thanks us for producing this column which he says has made many friendships worldwide, including many for himself, thanks Dave, very kind of you.

What a nice QSL in from John Hienriech McArthur who lives at 26, Gravir, Stornoway, Isle of Lewis, Scotland he sends some home-brew QSLs bedecked with a unique tartan bow, and some samples of the tweed that he weaves, really clever John. He also collects patches, bookmarks and keyrings and will swap 1-4-1 with anyone interested. David, DELTA MIKE 35, writes from 59, Arlescote Road, Solihull, West Midlands and he will have his own personalised cards by the time you read this. David regularly writes to a super QSL Club in Spain, which asks just £1 towards postage, for this you get diploma, QSLs, stickers and a rubber stamp — seems too good to be true, anyway if you want to chance a quid, the club is: St Toreador, Juan-Aguado, Marcues Hermida, 26-8D, Santander, Spain, let me know how you get on folks!

Had a great letter in from THUNDERBIRD, Alex of The Shieling, Castlebay, Isle of Barra, Outer Hebrides, PA80 5XD, Scotland, he writes 'Just thought I'd drop you a line to back up your claims in CITIZENS' BAND MAGAZINE about the service provided by Des Currie (I do have regular order for your mag by the way). I was fortunate enough to QSO Des during the fantastic skip conditions we've been having, and he sent his brochures to me along with his QSL. To enlighten, this is a small island, and printing facilities are non-existent, so I

took the opportunity offered by Des and sent away for QSLs etc., and also joined his GREAT BRITISH DX CLUB at the same time. The speed with which I received the various items back was absolutely tremendous, as was the quality.' Another pat on the back for Des.

I also think the club pack was excellent value for money, well done, and I hope they keep it up. As I mentioned already, I live on a very small island in the Outer Hebrides, and we are fortunate with our local copy here as we can normally get perfectly readable copies over distances of up to 80 miles, but the skip lately has been really welcome. It has opened up whole new horizons (so much for the government limitations on CB). My best copy yet on FM4 watt is a copy I had into Palmi in Southern Italy. This copy we had two days in succession, and has been confirmed by a QSL. I've also joined the British Concorde International CB-QSL Club (187, Walton Road, East Molesey, Surrey KT8 0DY) another great club and an excellent deal. Better finish off now, so keep up the good work, in the mag (which is read from cover to cover and is eagerly awaited for the next issues), all the best — Dave. Many thanks Dave, a super letter, very informative, and an independent testimonial for Des Currie Printers.

Do you know, I try and list every QSL club that passes through our grubby mits, and currently have a bulging file of over 1500 different QSL and DX Clubs from all over the world, so when a reader asks for the address of a club we have always got it on file. Calamity! not one but two letters this month asks for the address of the RHIEN MAIN SIDEBANDERS QSL CLUB — and I am well and truly stumped — can anyone out there help? — if so the inquirers are Cole MU 589, Renegade 001, P.O. Box 233, Brighton, BN2 2YW, Sussex, and David Stanworth of 147, Wyatt Road, Sutton Coldfield, West Midlands B75 7QA. David also QSLs 100% and especially collects the glamorous ENSIGN GOLD-BLOCKED QSL CARDS produced by my friend Wendy from Brownhills in West Midlands.

Every month without fail we receive new ENSIGN cards, and this month is certainly no exception, one from BLUE GIRL Pat, of Flat 1, 24B The Close, Nr Newtons College, Litchfield, Staffs WS13 7LD, I've seen some writing on some cards but Pat has almost managed to obliterate the back of the card with lots of interesting writing she must write under a microscope (only joking Pat).

Two different ENSIGN QSLs in from CAMERA MAN Graham of 16, Parkfield Crescent, Wolverhampton, West Midlands, he QSLs with a personal card and one of his CB club, the STAR BREAKERS FAMILY CB CLUB who meet Tuesday evenings at the United Services Club, Humber Road, (Off Great Bricklin Street),

Wolverhampton. These ENSIGN CARDS are really great!

From Steve Flux, president of the SAXON SKIPPERS INTERNATIONAL CB-QSL CLUB of 9, Sunningdale Road, Portchester, Fareham, Hampshire, PO16 9PD who regularly writes to update us on the club's



development and of course we are always pleased to hear from clubs. Steve writes 'Many thanks for the mention in July's Citizens' Band Magazine, shame you got the name wrong (oop's — sorry!) I seem to remember not so long ago that you would be interested to hear how new clubs progressed, well this is a letter to do this. Membership is now over 300, fast approaching 400 already — since our start in November/December 1982, which can't be so bad. Developments include a new club stamp and a 20 page booklet on QSL/DXing, bound in a plastic folder. We have managed to get the club card number 4 done on glossy double-side card.

The first of these new developments should be full-colour cards of Number 1, and special club envelopes. One thing we believe stands out with our club is that we listen to our members — it's done in regular mail contacts, with as many as possible, through club representatives in areas of high membership density in a survey given with each pack. One question on the survey is "Which club does each member consider the best that they are already a member of" and we are in the top 3 of most! Perhaps you will consider us good enough for a regular mention in the magazine, even to be considered for 'Club of the Month' when we are good enough!

Many thanks Steve, brings out some interesting points, first is a regular question, how do I normally choose 'Club of the Month'? — that's easy — when a club has become reasonably popular, and well established, and I can quite happily

include them in our column secure in the knowledge that our readers won't suffer a rip-off. I also like to either join the club of my own free will, or have the loan of a guaranteed-typical membership package.

The other question sometimes asked is why don't you ever include information on my club — answer is simple again — because the club does not keep us fully informed of developments in their running and membership. We cannot invent information — if club presidents keep us informed I assure you we will include as much as possible in these columns.

An important note to all club presidents — please allow at least three months for inclusion of your clubs details, as sorting and preparation takes a long time — I often get letters from readers asking why they didn't get a mention in the mag for a letter sent a couple of weeks ago — I am afraid patience is the name of the game, allow three months and you should be lucky — one way or another.

As we get so much mail from home these days, we seldom get space to include overseas QSLs, but for those who ask for these contacts, just received a nice colour QSL from Robert and Donna Longcore of 1620 W.48th Street, Fremont, Michigan 49412, USA., and some super cards

from both ZARRA and LADY CAMPARI of Deurnebaun 49, B2060 Merksem, Belgium, ROMEO DELTA of Tongersesteenweg 28, 3800 St. Truiden, Belgium, and ERIK of Naamsesteenweg 39, 3800 St. Truiden, Belgium, so there are a few to see you over to next month.

Before we close this month, I must thank you all for all your mail, we are always anxious to hear of your news, unusual DX's, and club news — it's your column, and we do our best to include as much as possible. If you would like a mention, send your QSL to Mike Newbold, THE MEDICMAN, 124 Hillcross Avenue, Morden, Surrey SM4 4EG — be seeing you — Take Care, We Care.

CB



Citizens' Band List of QSL Contacts

BOB BREWER *Kestrel*

DOREEN PEACOCK *Sunflower*

JOHN T. CLARK *Black Shadow*

MIKE & WENDY *Camera Blue & Pork Slice*

PETER WALDER *Panda*

PHILL COUPE *Flying Scotsman*

LESLEY *Ice Pop*

LORRAINE *Barley Sugar*

KEN PORTER *The Peanuts*

STUART & ANN *Giant & Lady Haystacks*

ALEX LAWLER *Tango One*

TERRY LAWLER *Sherry Dog*

ROY PITMAN *Wagtail*

RON BROOKER *Top Dog*

SEAN GOOCH *Hermetite*

MICK & SUE *Silver Cloud & Golden Girl*

RAY ME 43

Kevin Dyson *Beefeater*

SUT & SAN HIPWELL *The Judge & First Lady*

KEN Nuts & Bolts

REG Grandad
FRED HC 80

20, Masefield Road, Cirencester, Glos. G17 1SN

17, Dolphin Villas, North Gosforth, Newcastle Upon Tyne NE13 7NG.

75, Bean Oak Road, Wokingham, Berkshire.

59, Alexandra Drive, London SE19 1AW.

P.O. Box 141A, Surbiton, Surrey KT6 4AN.

12, Waggon Road, Brightmet, Bolton, Lancashire, BL2 5AB.

79, Auckland Way, Whitby, Yorkshire YO21 1LL.
P.O. Box 55, Leeds LS5 3ED.

Redworthhall Residential School, Heighington, Nr Darlington DL5 6NL

1, Colteridge Gardens, Dipton, Stanley, Co Durham DH9 9LH

32, Llys Gwyn Terrace, Pontardulais, Swansea, South Wales.

31, Lyppincourt Road, Bristol Avon, BS10 7FJ.

Gernel, Wood Green, Henham, Bishops Stortford CM22 6AZ.

TE 013, P.O. Box 63, Woking, Surrey GU21 5HU.

72, Courtenay Road, Dunkirk, Faversham, Kent ME13 9LH.

46, East End Road, Charlton Kings, Cheltenham, Glos.

368, Stourbridge Road, Kidderminster, Worcs DY10 2QE.

91, Peckmill Green, Netherley, Liverpool L27 6PG.

P.O. Box 24, Faversham, Kent. P.O. Box 99, Northampton.

Rig Check



Yes it's here. After an endless wait, Chris Peterson has finally managed to get his hands on a Reftec 934. Here is the first instalment of a comprehensive report on this magic box.

One of the most frequent questions that we get asked here at Citizens' Band is "whatever happened to 934 MHz?". Its a question

we've been trying to get the answer to for quite a while! At the time of writing only one company have demonstrated UHF equipment, though rumours persists that others are about to launch equipment for this band.

Reftec have been delivering sets to customers for some time now, though our efforts to tease a rig (or preferably two!) out of them for review have not been particularly fruitful! Actually, Reftec are not particularly easy people to get hold of! The rare occasions

THE REVOLUTION IN REFTEC

when we have managed to speak to them have resulted in vague promises to send a rig for evaluation "when demand permits"! Needless to say it never has!

To be fair to Reftec, the demand for their rigs has been running slightly ahead of supply ever since they were released, and you are likely to have a two or three week wait from placing your order. This is with virtually no publicity at all, so perhaps there is method in their apparent marketing madness!

Following Mack the Hack's article on 934 MHz in our August issue, the ever helpful Tony Lane of 934 Communications offered to lend us a couple of rigs for evaluation. He reckons that its about time the 934 gospel was preached a little wider! Tony has been handling Reftec gear since it was released. He has amassed a wealth of knowledge on the practical aspects of UHF communications, and anyone considering trying 934 MHz operation would be well advised to give him a ring on 01-859-0933.

One very hot day last July, saw me crawling along the notorious South Circular road to pay him a visit. (Forget the East African Safari Rally. The REAL test of endurance is getting from North-West London to South-East in a heatwave!). The effort was worth it! I came away with two rigs and a selection of aeriels to try out for a couple of weeks. To pacify any of Tony's customers who may be reading this, the supply situation did not permit him to release new rigs to us. He lent us his personal rig and his



demonstrator. There's a brave man for you!

A manufacturer of 934 MHz is at a considerable disadvantage compared to his 27 MHz competitor. He not only has to produce a much more sophisticated rig, but must also supply all the antennas and accessories as well! Reftec have to be congratulated on this score, as they are manufacturing a wide range of antennas for a variety of applications. They are providing a commendable back-up service in this respect. Once again, this is partly due to necessity, as no-one else is at present manufacturing for this market. Certainly I was unaware of, and rather staggered by, the range of antennas they provide.

Prices for the antennas are not unreasonable, considering the precision necessary in their construction. They are comparable with top-of-the-line 27 MHz equivalents, except perhaps at the very top of the range. It is probable that eventually 934 will become more of a competitor to PMR (Private Mobile Radio) rather than 27 MHz. At 934 MHz, not only does the manufacture of the rig become more complex, but antennas have to be built to much tighter tolerances. Antenna length must be related to wavelength. At 27 MHz, a wavelength is about 33 feet. At 934 MHz, it is about 32 cms! Quite a difference. An error of half an inch may be acceptable on an antenna several feet long. It is clearly unacceptable in an antenna only a few inches long.

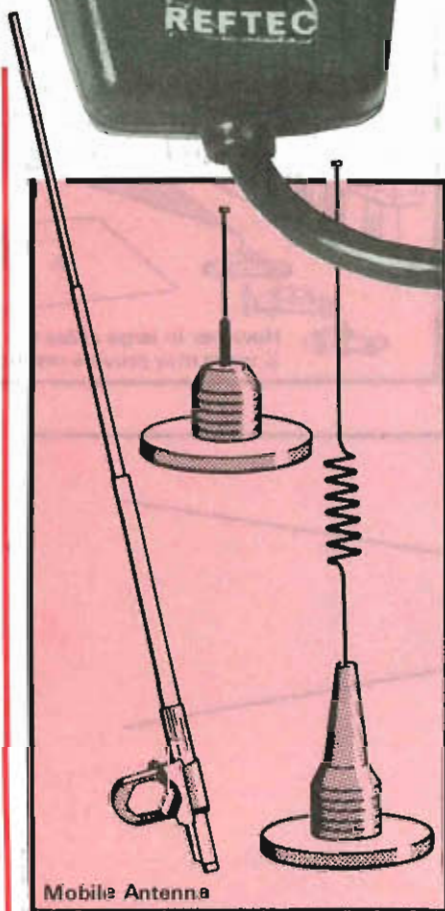


NARY

934 MHz does not lend itself to the "DV27 on a biscuit tin" approach that is common on 27 MHz. To work at all, not only must the antenna be correctly installed, but the correct antenna for the application must be chosen. This is not always the highest gain antennal Unlike 27 MHz, the regulations for 934 MHz permit the use of antennas with genuine gain. The rigs have a maximum permitted output of eight watts, and sufficient antenna gain is allowed to provide 25 watts ERP (Effective Radiated Power).

First of all, let's look at the antennas available and the sort of applications for which they may be used. The simplest antenna is a $\frac{1}{4}$ -wave vertical. This is intended for mobile use, vertical polarization. It is available either as a hole-in-roof fixing, or as a mag-mount. It needs a ground plane, as does any $\frac{1}{4}$ wave antenna. In fact, the base of the mag mount is about $\frac{1}{2}$ a wavelength in diameter, and will provide an adequate ground-plane on its own, though a car roof would be better. These antennas are roughly equivalent to K40's on 27MHz, though they are relatively more efficient due to the absence of loading coils. Radiation angle is high, meaning that much of the signal is radiated skywards. This can be an advantage in inner city areas as we shall see later. The antenna is only about $2\frac{3}{4}$ " long, which looks a bit ridiculous at first after 27 MHz antennas, but believe me it really does work! One of these antennas will cost you about £14 or £20 depending on the mounting.

The next antenna is a mobile colinear. This consists of a quarter wave section with a half wave section on top of it. The coil, a third of the way up, is a phasing section rather than a

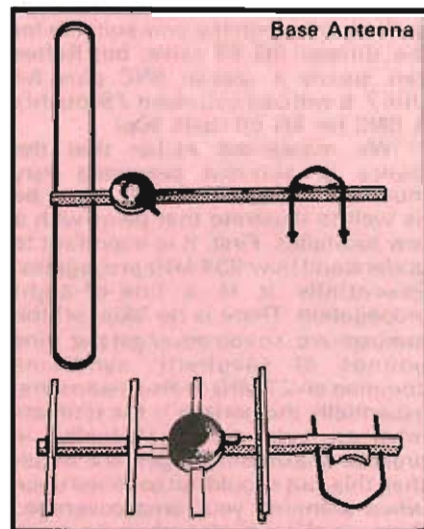


Mobile Antenna

loading coil. Once again this is a vertically polarised ground plane antenna and can be hole or mag mounted. The gain of these is a useful 3dB, and they are probably the best general purpose mobile antenna. In 27 MHz terms it is roughly equivalent to a K40 with a Silver Rod perched on top, if you can imagine such a thing! Overall length of the antenna is about 11 inches, and it will cost you £20-26,

depending on mounting.

Moving on to base station antennas, the simplest available is a full-wave folded di-pole. This can be vertically or horizontally polarized, and is omni-directional when vertical. Gain is a useful 3dBi, it will cost you about £16, and is designed for mounting on a two inch pole. Next up the scale is a neat little four element yagi antenna. It looks like a mini TV aerial, which is hardly surprising as most TV aerials are yagis. Gain is 5dBi, and it may be vertically or horizontally polarized. This antenna is highly directional, and as the band slowly becomes more occupied, may eventually become useful for nulling



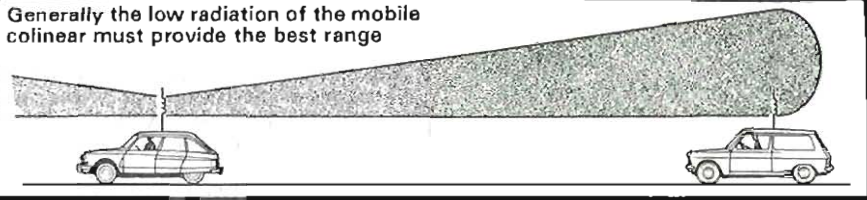
out unwanted stations. This is not a problem at present! The yagi antenna will set you back about £10.

The 'ultimate' home base antenna is the Reftec Professional four element colinear. The antenna proper is hidden inside a black plastic protective sheath, and is about four and a half feet long. It is intended for vertical polarisation and has a gain of no less than 7.5dBi! This means that it is only legal when used with 10 metres or more of UR67 cable! the loss in cable compensates for the extremely high gain of this antenna. Although it is omni-directional, the bandwidth is only 20 degrees. This means that it may not necessarily be the best antenna for purely local communications, though for distance work it is the ultimate! Indeed, although it is intended for base station work it is compact enough to mount on a mobile. though the restricted beam width may give problems on other than perfectly level ground! This antenna will set you back no less than £98!

All the antennas are pre-adjusted, and no attempt should be made to "SWR" any of them. Indeed SWR meters for this band are not exactly ten-a-penny anyway. Anything accurate enough to be meaningful is likely to be extremely expensive professional equipment!

As for connectors, you can forget the old faithful PL259s used at 27 MHz. In truth, they are well past their design maximum at 27 MHz, and will stop a 934 MHz signal dead. Only BNC

Generally the low radiation of the mobile colinear must provide the best range



and 'N' type connectors are suitable at this frequency. Reftec have standardised on BNCs, though the Professional colinear uses an 'N' type at the antenna end. Similarly, cable losses are much higher at 934 MHz than at 27 MHz, and only the best coax is good enough. For base stations use with long cable runs, UR67 cable (the thick stuff) is essential. BNC sockets are normally only suitable for the thinner RG 58 cable, but Reftec can supply a special BNC plus for UR67. It will cost you about £9 (ouch!). A BNC for RG 58 costs 90p!

We mentioned earlier that the choice of antenna depended very much on the application. It might be as well to illustrate that point with a few examples. First, it is important to understand how 934 MHz propagates. Essentially it is a line-of-sight propagation. There is no 'skip' off the atmosphere, so you never get the 'nine pounds of spaghetti' syndrome common on 27 MHz. It also means that essentially the horizon is the ultimate limit on your range. (Actually, in practice maximum ranges are better than this, but should not be relied upon when planning your area coverage.) Because the wavelength is so much shorter, 934 MHz will cast sharper shadows (ie dead spots) than 27 MHz. Electro-magnetic waves tend to flow round objects smaller than about a wavelength. 27 MHz will flow round even a largish house quite well. 934 MHz can be stopped dead by anything much bigger than one foot across,

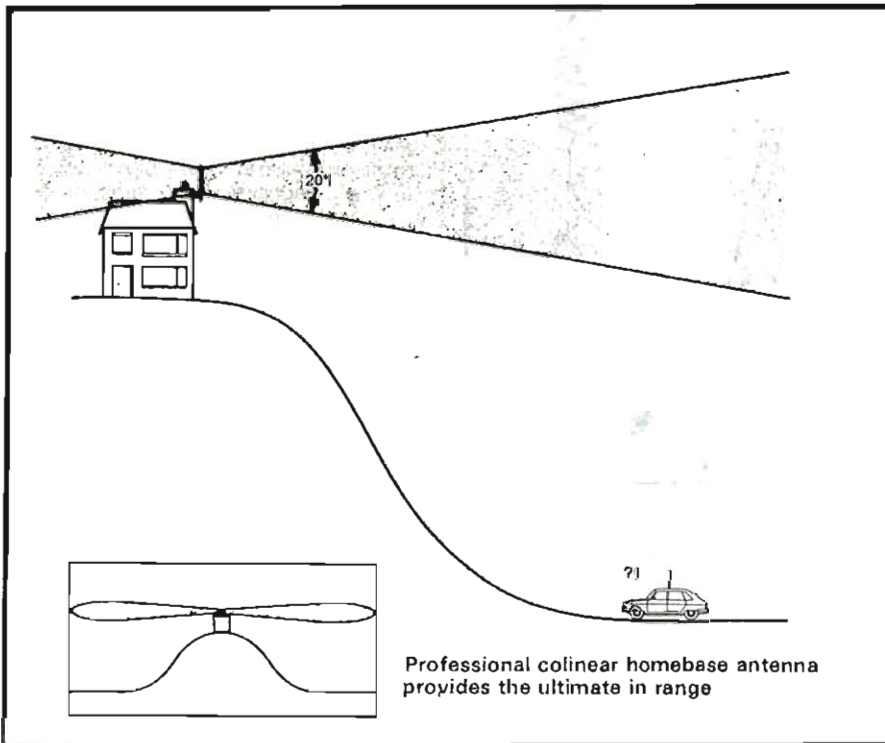
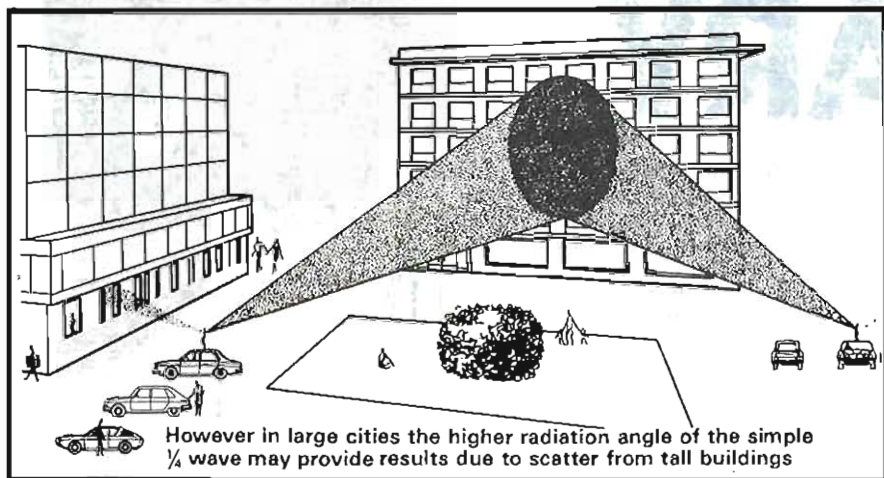
which means that a house will cast quite a big shadow on 934 MHz. Trees and foliage in general are highly absorbant at 934 MHz, however it isn't all bad news, as 934 MHz is reflected and scattered much better by buildings than 27 MHz, which can be advantageous at times.

As with all antenna installations, the golden rule is 'the higher the better'. On 934 MHz you are allowed 10 metres rather than 7 before you are required to use a 10dB attenuator. Use all of it!

For a permanent base to base circuit, horizontal polarisation will provide better coverage (range). A pair of yagis, one at each base station,

horizontally polarized would provide very good range. For mobile operation, vertical polarization is essential. Therefore a permanent link between two bases using horizontal polarization would provide a useful degree of immunity from unwanted mobile interference!

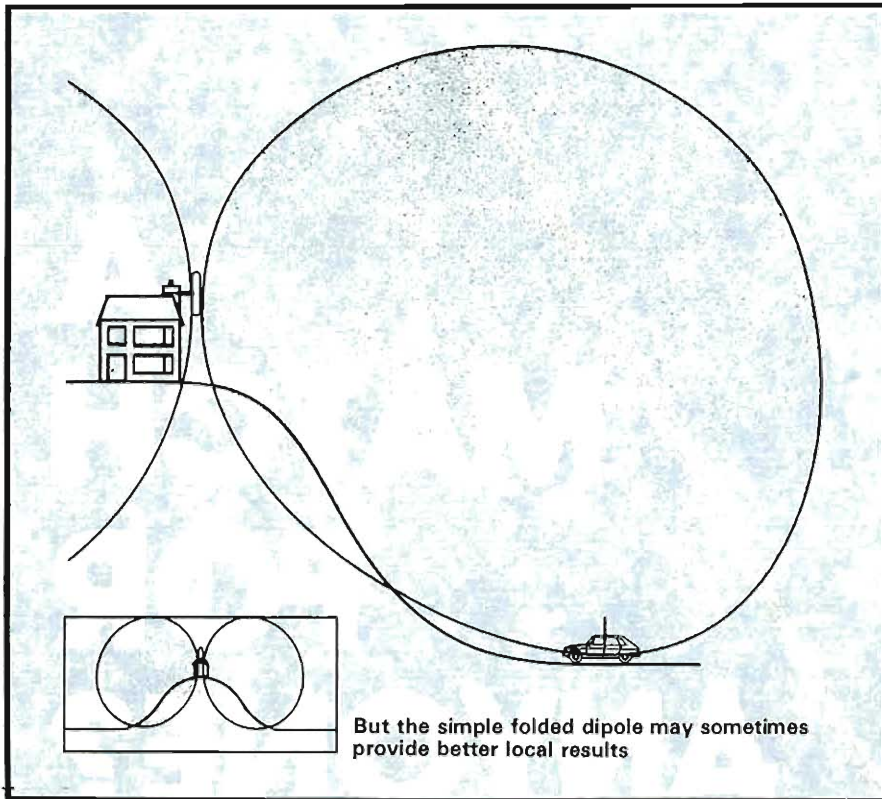
As a general rule, the higher the antenna gain, the better. There are a number of exceptions to this rule that should be carefully considered, as I discovered the hard way. My home location is on a hill top near Gerrards Cross, West of London. The local village and main road are at the bottom of the valley. I pulled down by 27 MHz antenna, and installed a Professional colinear 934 MHz antenna in its place. Now even on 27 MHz, communication between my home and the village is not easy, as the village is underneath the beam of my aerial. On 934 MHz the problem was even more severe and despite being less than a mile away, communication was almost impossible! The diagram illustrates



why quite clearly. Had I been using the simple full wave antenna, local communication would have been much better. However on the plus side, once out of the 'shadow' in the valley, reliable communication could be maintained up to at least double the 27 MHz range, and was intermittently extremely good well beyond that.

Again, although the colinear is the best all-round mobile antenna, in the inner city, the smaller quarter wave antenna had an advantage due to its higher radiation angle. Alas, my location seems to be particularly poor for 934 MHz. Immediately to the east of my house, about 100 feet away, is a long row of very high trees. These seem to effectively cut me off from central and south east London, where the bulk of 934 activity seems to occur. However mobile operation around the London area proved a revelation!

Having spent two evenings vainly trying to raise someone in the Gerrards Cross area (other than my wife and the other rig!) I set up the mobile rig and drove down to Uxbridge. Parking in a suitable open space near Northolt aerodrome. I put out a call on channel 14 and was immediately answered by a breaker in Kenton about four miles



away. Much relieved that the rig was OK, we chatted for a while when another station came in on the side. From Clapham! Now I don't know how far Clapham is from Uxbridge, but I would guess about 15 miles, and I could hear him clearly (Hi there Unit 77, and thanks for your co-operation!) I was struggling a bit to get back to him, but consider this a resounding successful contact for a mobile to base across London.

A few days later, while driving into work, I heard Unit 77 again, picking him up about Uxbridge. By the time I reached White City in West London, I was in full clear two-way communication with him and remained so until I reached Oxford Circus! Indeed most of the time he was lighting up 3 of the Reftec's 5 signal strength lights, and sounded as if he was 100 yards away rather than several miles! Very impressive, as this sort of contact is just totally impossible.

The vagaries of the band need a little getting used to. While I was at 934 Communications picking up the rigs, the demonstrator suddenly burst into life as a mobile in Croydon, a few miles away, made a contact. By turning the squelch down we were just able to make out the station at the other end. In BRIGHTON!!!

One thing that ought to be mentioned is TVI. When my 27

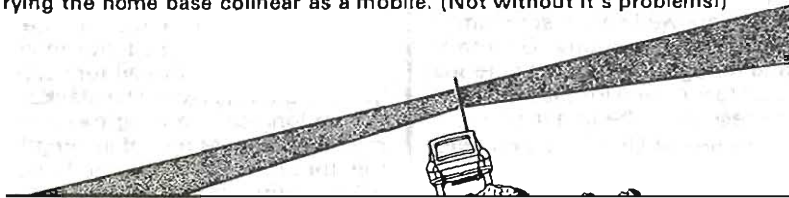
MHz aerial is up, it is right next to the TV aerial, and inevitably it upsets my TV. It doesn't affect any of my neighbour's, nor strangely does it affect the video. The 934 MHz rig doesn't even make it twitch! Despite having something like seven times the ERP from an identical position, the TV is not affected in the slightest. At least the Home Office were right about that!

934 MHz is most certainly a viable and very useful citizens' band. At present it is quiet, and mercifully free from wallies! It is more expensive than 27 MHz, but provides superior range (neglecting intercontinental contacts, which are not what CB is for anyway). The choice and siting of antennas is critical for good performance. I cannot emphasise this point too much as it is very easy to be disappointed by too casual installation.

Although the overall coverage is better than 27 MHz, and probably much PMR as well, it has more 'holes' or dead spots in it. Fortunately such dead spots as there are, are smaller anyway, and can generally be driven through fairly quickly. It works as well if not better than 27 MHz in inner cities, provided the correct antennas are used.

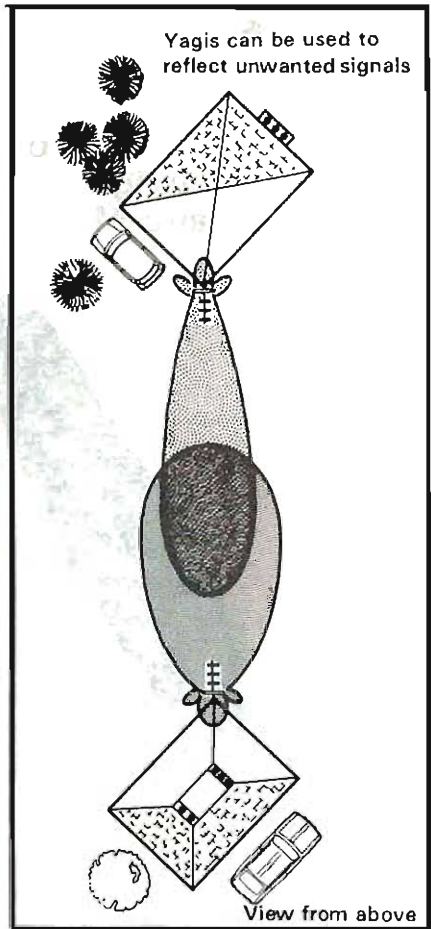
Best results will probably be obtained over flattish or gently sloping terrain. Hills and valleys can present severe obstacles to the signal path. If

Trying the home base colinear as a mobile. (Not without it's problems!)



you are the only house in a deep but small valley, forget it! Large trees also produce noticeable screening effects, especially when wet! Most locations will find that they can achieve a very satisfactory performance PROVIDED they choose their antennas carefully and locate them correctly.

It is unlikely that 934 MHz will ever replace 27 MHz, despite the wishes of the Radio Regulatory Department. The price alone will ensure that. However, for those willing to stand the extra cost, it is a very rewarding band to use. I can see it becoming very popular with small business users, as compared to PMR it is quite cheap and free from restrictions. This has only been a quick look at a few first impressions of using this UHF band, and I look forward to future developments of this fascinating band.



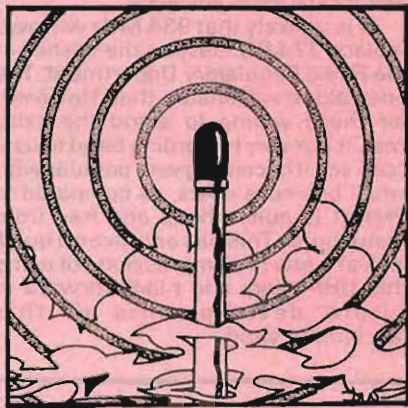
Postscript

The Radio Regulatory Department have been instructed by the EEC to move all the UHF channels down by 12.5KHz! This is despite the fact that Britain is at present the only country using this band! Tony Lane tells me that he will be recalling all the sets he has sold area by area, to try to minimize the inconvenience to his customers.

Our thanks to Tony Lane of 934 Communications, 64 Footscray Road, Eltham, London, for the loan of the equipment. 934 Communications can be reached on 01-859-0933.

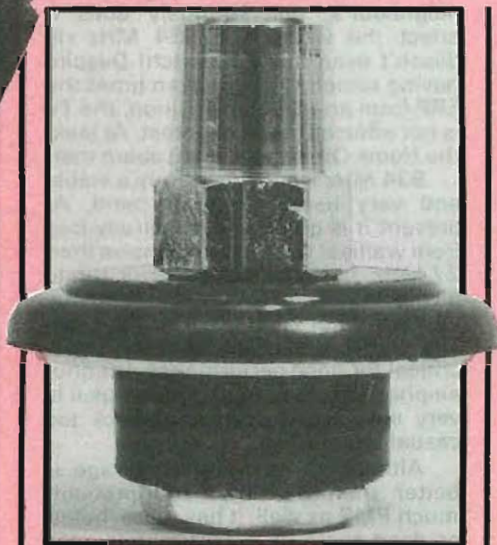
CB

Antenna Review



Biggest isn't always best as Brian Wright finds out in this test of a 24 inch twig from Dial-a-Match

A MATCH FOR ANYONE?



was the 48 inch Dial-a-Match. Some breakers say they were not impressed with the performance of this antenna but I suspect that they may have purchased one of the copies and not a genuine Dial-a-Match. I personally have had some good long copies with breakers using the genuine article and several breakers that I know are quite satisfied with theirs. Even bearing this in mind we didn't think that we were going to maintain contact for very long on our test route, when we set out with this month's antenna — the 24 inch Dial-a-Match, as this is a very short antenna indeed.

The specimen from W.T.A. Electronics Ltd. is a $\frac{5}{8}$ wave antenna, i.e. its base loading coil is wound so as to make the antenna electrically equivalent to an antenna of $\frac{5}{8}$ of a wavelength in length, rather than the usual $\frac{1}{4}$ wave. The $\frac{5}{8}$ wave antenna is usually favoured as it tends to radiate its energy low to the ground where it is needed (unless you are trying to contact an aircraft).

The Dial-a-Match has a ground stainless steel whip protruding 600mm out of the coil and on the top of the whip is a small aluminium ball. The whip fits into a chromed fitting on top of the coil housing and is retained by a stainless steel grub screw in the normal manner, a key for this is provided. At the base of the coil housing is a chromed hexagon nut with a $\frac{3}{8}$ 10 UNF thread for screwing into a mounting base. The black plastic 60mm long coil housing has a thread moulded for over half of its length. On this thread are two chromed rings for SWR adjustment, the rings are screwed up or down the thread until

When it comes to antennas most breakers are usually of the opinion that biggest is best, mobile or home base, and they are not usually far wrong. There are some surprising exceptions to this rule however, as you will realise if you have been reading this magazine for some months. It is not only that some small antennas work well either, sometimes large ones perform poorly. Generally speaking though a very short antenna is difficult to tune and the performance is much less than the larger one.

On day one of UK FM, when legal antennas were in short supply, one antenna that was popular in our area mainly because they were available,



the SWR is satisfactory, then they are locked together to prevent them from moving. This very useful feature is of course what gives the Dial-a-Match antennas their name.

The Dial-a-Match is supplied shrink wrapped, with instructions and grub screw key, on a black cardboard backing. No mounting base or coax is provided, but W.T.A. Electronics kindly supplied us with a suitable roofmount which is sold separately. The 142 Roofmount which is manufactured by Valor in the USA, as is the antenna, is a neat little mount which requires no soldering when fitting to the co-ax. This mounting has a very low profile on the underside so as not to protrude through the head-lining. The cable enters through a shallow side entry and the centre core and outer braid are clamped in position without soldering. As this very small antenna is obviously mainly meant for roof mounting, we mounted the test sample in the centre of the roof rather than the usual wing or boot position.

The first problem that we thought we would have, would be to tune such a short antenna or at least to keep it reasonably in tune over the 40 channels. When mounted on the roof it was easily tuned in a few minutes, by means of the rings, to an SWR of just over 1:2:1 on channel 20 and never went over 1:8:1 from 1 to 40 when tuned properly. You may not consider this very satisfactory but this is extremely good as tuning on such short antennas is usually very critical. A point of interest to boat owners or Fibreglass car owners is that the suppliers claim that the $\frac{5}{8}$ wave Dial-a-Match requires very little groundplane and will operate with a small piece of foil stuck inside of the Fibreglass whereas a $\frac{1}{4}$ wave would not. A word of warning to the owners of those naughty black boxes, the maximum power handling of this antenna is 25 watts, any more and damage might result.

With this tiny stick on the roof we set out sceptically on test and as you can see from the test pattern the results were quite surprising. Performance was comparable to much larger antennas that we have tested. Transmitting contact was only lost once briefly at the outer limits of the test route and receiving contact was never lost as this antenna not only got out quite well, it received even better.

In conclusion we consider the 24 inch Dial-a-Match to be a very useful little antenna for breakers requiring a short twig. Performance is not up to many of the larger antennas of course, but is very good for its size and very usable. Construction is of a high standard and should give a long service as we know many have. Priced at £11.50 it is reasonably good value as the coil includes the very useful and fast tuning method.

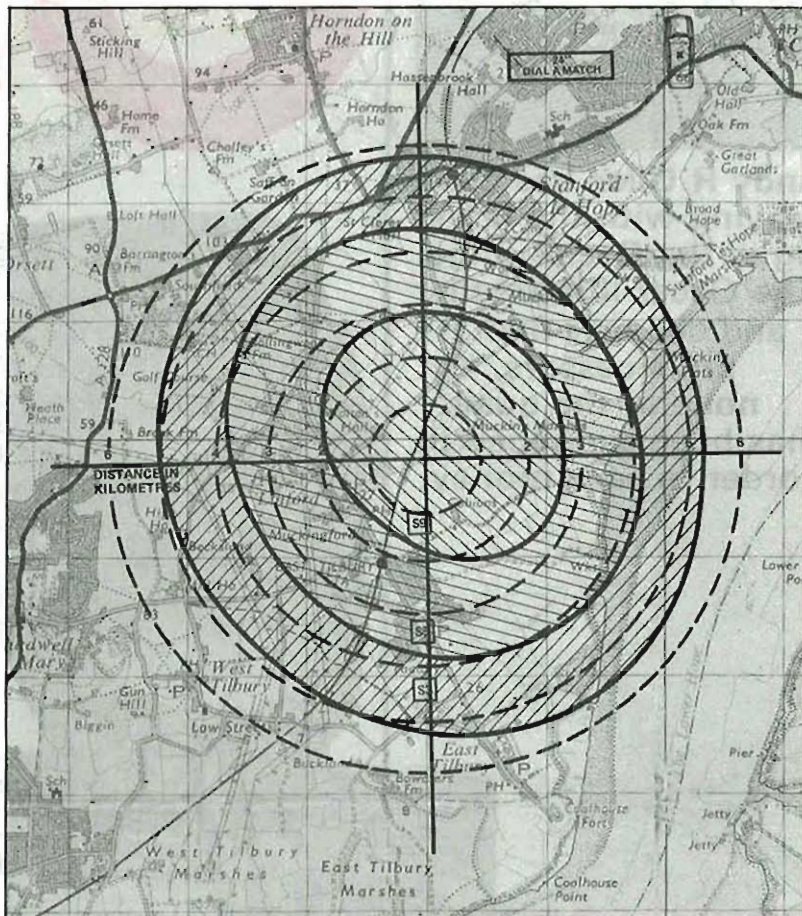
A similar antenna for performance would be the Copperstik, a much larger antenna indeed! Our thanks to W.T.A. Electronics Ltd. for supplying the test sample.

CB

ANTENNA REVIEW DATA PANEL

SPECIFICATIONS

Model	24 inch DIAL-A-MATCH
Type	Mobile
Length	Whip .6 metre overall .67 metre
Frequency Range	27MHz
Max Power Handling	25 Watts
Impedance	50 Ohm
Cable Supplied	None
Mounting Details	$\frac{3}{8}$ 10 UNF
Supplier	W.T.A. Electronics Ltd., Norwich.
Typical Price	£11.50



REVIEW VERDICT

Performance XXX
 SWR Adjustment XXXXX
 Construction XXXX

Installation XXXX
 Instructions XXX
 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.

Rig Review



Andy R Giles has been playing with the latest rig in the Oscar range. The Oscar II is smaller and cheaper than its predecessors, but none of the quality has been sacrificed in order to save money.

WINNING OSCAR

Way back in our April '82 issue we reviewed the Oscar I. It proved to be a very nice rig but a little expensive by today's standards. Now South Midlands Communications, the importers and distributors of Oscar equipment, have introduced an economy version, the Oscar II. It is smaller than the original (approximately 6 ins wide x 12 ins high x 8 ins deep) and it has a few less features, but that is more than made up for by the price — just over half that of the Oscar I.

The layout of the MK II's front panel is fairly standard. The S/RF meter is in the top left-hand corner and directly underneath is the four pin microphone socket. Just to the right of this there



are the two rotary controls for Volume and Squelch. The knobs are bright silver and they would be difficult to grip if the manufacturers had not thought to put fluting along them. Even then I found that my sweaty fingers sometimes slipped. The same is true of the channel selector knob which is just a larger version of the other two.

The channel display, which is just above the Squelch control, is bright

NG AR

green and very easy to read. I always have preferred green displays. They seem easier to see in bright daylight and less harsh when viewed at night. The only other control on the front panel is the Hi/Lo switch. This is an attenuator that reduces the output power by 18 dB, i.e. from 4W down to 400mW, as required by law if your base station antenna is more than seven metres above ground level. Lastly, just above the channel selector knob there is a tiny red LED that lights whenever you are transmitting. The rear of the rig has the usual SO 239 antenna socket, a 3.5mm extension speaker socket and a non-reversible power socket.

In Use

In use the Oscar II performed well and although we did not subject it to

laboratory tests, we were impressed by the way that it did not let strong nearby signals or adjacent channels interfere with its performance. Its sensitivity was also very good, constantly picking up signals that other rigs could not hear.

The Oscar II is supplied complete with a mobile mounting bracket, a microphone, a DC lead and a superb 30 page handbook that is one of the best that I have ever seen. It not only gives the usual description of the rig's controls, it also looks at mobile and base station antennas, antenna matching and the effects of various levels of SWR. There is also a well written and excellently illustrated section on installing the rig in a car. There is even a comprehensive section on dealing with vehicle noise suppression that includes a full circuit diagram of a typical car's electronic system.

The last portion of the handbook is a rig doctor's delight. Not only is there a complete circuit diagram of the Oscar II, there is also a full PCB layout, a parts location guide and a component list that gives a part number for every single component. It is a remarkably thorough handbook that I wish other manufacturers would copy immediately.

Conclusions

The Oscar II is a basic rig that performs very well and despite its lack of facilities such as Delta tune and P.A., it is still good value for money. It costs £49.00 and is available from South Midlands Communication Ltd of S.M. House, Rumbidge Street, Totton, Southampton (Tel: 0703 867333). SMC are also able to offer the complete range of Oscar accessories and antennas.

CB

RIG REVIEW DATA PANEL

Model OSCAR 2
Distributor SMC LTD
Typical Price £49.00

Features	Yes No	
	<input type="checkbox"/>	<input type="checkbox"/>
PA Facility	<input type="checkbox"/>	<input checked="" type="checkbox"/>
External Speaker Jack	<input checked="" type="checkbox"/>	<input type="checkbox"/>
TX Indicator Light	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RX Indicator Light	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PA Indicator Light	<input type="checkbox"/>	<input checked="" type="checkbox"/>
S/RF Meter LEDs	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hi/Lo Power Switch	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ANL/NB Switch	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CH9 Switch	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Variable RF Gain	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mike Gain	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Delta Tune	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tone Control	<input type="checkbox"/>	<input checked="" type="checkbox"/>
LED Channel Readout	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Facilities	Superb Good Fair Poor			
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ease Of Controls	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Built In Speaker	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Microphone Location	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cabinet Construction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality Of Control Switches	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Channel Indicator Readability	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mounting Bracket	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hand Book/Instructions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Specifications	
Modes Of Operation	FM Only
No. Of Channels	40
Weight	- 1.1 kg
Dimensions	182x80x145mm
Supply Voltage	Spec
RF Output Power	Spec
Frequency Stability	Spec
Swamping	Spec
Sensitivity (RX)	Spec
Spurious Emissions	Spec

CB VERDICT

Range	XXXX
Clarity of TX	XXXX
Clarity of RX	XXXX
Ease Of Controls	XXXX
Ease Of Installation	XX)(X
Performance	XXXX

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.



NEXT MONTH

NOVEMBER

ISSUE WILL BE ON SALE

FRIDAY

21

OCTOBER

Remember Remember the fifth of November, gunpowder, treason and so on . . . Yes the season of fireworks is upon us. Now there are probably a few of you out there who think that Guy Fawkes had quite a good idea, still we mustn't get into politics now must we.

We've got plenty of fireworks of our own in the November issue of Citizens' Band, so make sure that you tag along to enjoy the celebrations. First off, we've got Chris Peterson with the second instalment of the Reftec review. Now if you've read the first instalment, there's no way you can miss his journey through the transistors and all the untold goodies he's about to un-earth. I mean if you're remotely interested in the future of CB can you afford to miss this.

Twigs I hear you say! No problem, why even as I write, Brian W. Wright is hard at work going round in circles testing a Modulator, a very popular antenna we understand. Talking of twigs, we hear some very strange stories of unscrupulous people copying well known antennas and bunging a much cheaper version out on the market. Well apparently one such unscrupulous individual has been brought to task by Gamma. We'll be taking a look at this whole counterfeit business, and talking to the people who are being affected by it.

It looks like being a real Twiggy issue because we've asked Brian 'Twigman' Wright to tell us about his set up and why he chose it. Expect him to wax lyrical on his choice of antenna.

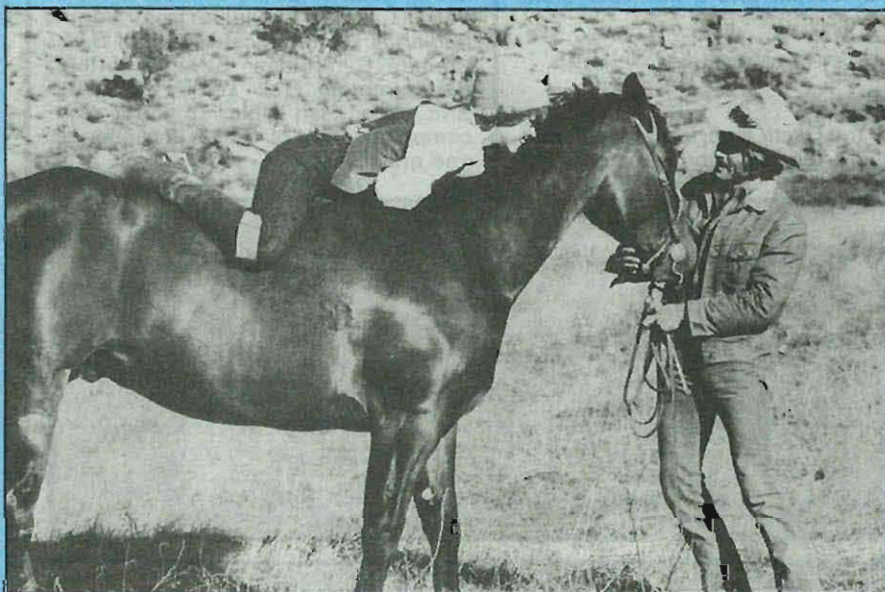
Wot? No Twong! Yes the second instalment of 'Twong In Space' is already in preparation and John Richardson will soon be blasting off to us. Plus Mack the Hack, Mike Newbold's QSLs, Ladybreaker, and all the usual goodies. So don't forget to light up the sky with CB Magazine — you know it makes sense.

COMPETITION

COMPETITION

Since we had the usual enthusiastic response to last months caption competition, we are following up with

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



more of the same. The prize up for grabs this month is a Mustang CB2000 with the usual fixtures and fittings — and very smart it is too. To acquire this highly desirable piece of equipment, we'd like you to compose a witty, apt and clean caption for this picture from the Electric Horsemen.

After an afternoon considering the possibilities; him talking to her, her talking to him, them both talking to the horses etc., we decided the greatest scope lay in what the horse (the

mustang, geddit?) was saying to them. It makes a change for the horse to get a word in edgeways, especially starring with Jane Fonda and Robert Redford.

Answers on a postcard please, to reach us by second post on Friday 21st October. Rules, as usual, at the bottom of the page.

Don't forget the rules
No employees of ASP are allowed to enter. All entries must be here by second post, Friday, 21st October. The Editor's decision is final, and don't forget your name and address. Entries to Mustang Competition, Citizens' Band, ASP Ltd., 145 Charing Cross Road, London WC2H 0EE.

Mack Chat

Our own Mack the Hack
comments on American vigilantes,
novice licenses in Belgium and a
very British problem.

Did you read that item in the national newspapers about some people talking naughty to young lady breakers, and it seems that some authorities believe that CB radio should be banned. These authorities have only themselves to blame, they were warned that these sort of incidents would happen and a possible solution was offered to them.

Some time before CB was made legal in this country, when the authorities were contemplating introducing an Open Channel system (as they called it then) a government green paper was published setting out proposals for this Open Channel. At the end of the paper was an invitation for interested parties to submit ideas that would benefit from such a system.

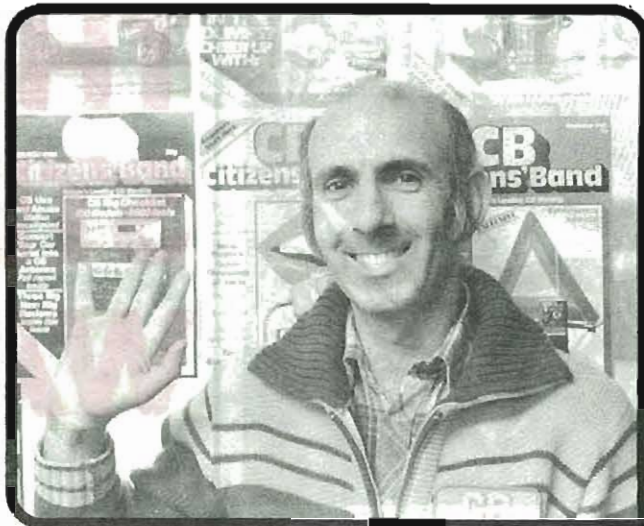
Yours truly (me) did so, and one of the suggestions was that all rigs should be fitted with ident. circuits. I felt sure that at the most it would have put about a pound on the price of a rig, but as you know the idea was not adopted, mainly because the early rigs were converted AM sets and to modify them would have been costly.

Some of you may be wondering what an ident. circuit is? It is a small integrated circuit (IC) or silicon chip, that costs a few pence to produce and each one can be programmed to emit a different identifiable code. When one keys off, it can be heard as a series of tones very similar to a roger bleep but much faster. An eight digit tone would only take about $\frac{1}{10}$ of a second to transmit but unless you had a decoder you would not be able to identify the station transmitting. This is not just theory, as many professional two way radio stations use this system and I have seen it in operation many times. Also it is not a new idea as it was first demonstrated to me some years ago.

One system that it is widely used for is taxi radio circuits. When a mobile station calls in, the stations ident. shows on a LED display for a few seconds before decaying, but a touch of a button will hold any ident. that the controller wishes to check. So if these ICs had been fitted in CBs just try to imagine how problem free our CB system could be. Music players, squeakys, bucket mouths etc, would think twice before doing their thing.

Another topical subject that has been in the news lately is of the vigilante groups. Of course, this is happening in the USA at present but there are signs that it could catch on in this country. CB plays a leading role in this activity as the means of communication for the groups. The word 'vigilante' might conjure a picture of lynch mobs, but these people are not taking the law into their own hands. The object of these groups is to patrol their own local areas looking for possible lawbreakers and hopefully, with the aid of the CBs, contact a base control station that in turn notifies the police.

The police in the USA welcome and encourage these groups as, like most police forces in many parts of the world, they are low in manpower and any help the public



offer is appreciated. The successful working of these groups means that they only cover a small area of their neighbourhood, any bad areas such as places where frequent muggings are rife could be patrolled by a small group. For example, someone going on holiday could notify the local vigilante group, H.Q. notified and a watchful eye kept on the property, again an eye could be kept on the elderly of the area with occasional checks for their safety. Being a local operation it would be expected that a rota system could be used with participants doing their turn of duty with the group.

One wonders if our CB system would be able to cope with an idea such as this. In the suburbs of our big towns I am sure it would, and even in our cities, if the areas the groups patrolled were not too large, remembering how overcrowded our channels are. But a good base station should easily copy the mobile units in a two square mile area.

Licence Campaign

A couple of times in the past I have mentioned Ian Able and his novice licence campaign. I just thought that you might like to know that CBers in Belgium, who have been campaigning for the same thing, are to get a novice licence system. They will be given part of the two metre band, 145 to 145.8 Mhz with maximum power of 15 watts. Candidates for the exam will have to take a simple exam. Of course the amateurs in Belgium are up in arms about the novice licence being allowed in their two metre band, so could a feud develop between the full licenced amateur and the novice? Listen on that frequency with interest.

It seems that I upset a few people a couple of months ago when I wrote about this idea of QSL card swapping for fun and not just for QSOs. I got quite a few letters from readers telling me off, many explaining that QSL card swapping is an offshoot from CB and many feel it's almost another hobby. OK, that's fine, as I said before do your own thing, but many go on to say 'what's the point of QSL card swapping if the only QSOs one has is with other stations down the road. We only run legal FM, so how can we work DX to swap cards'.

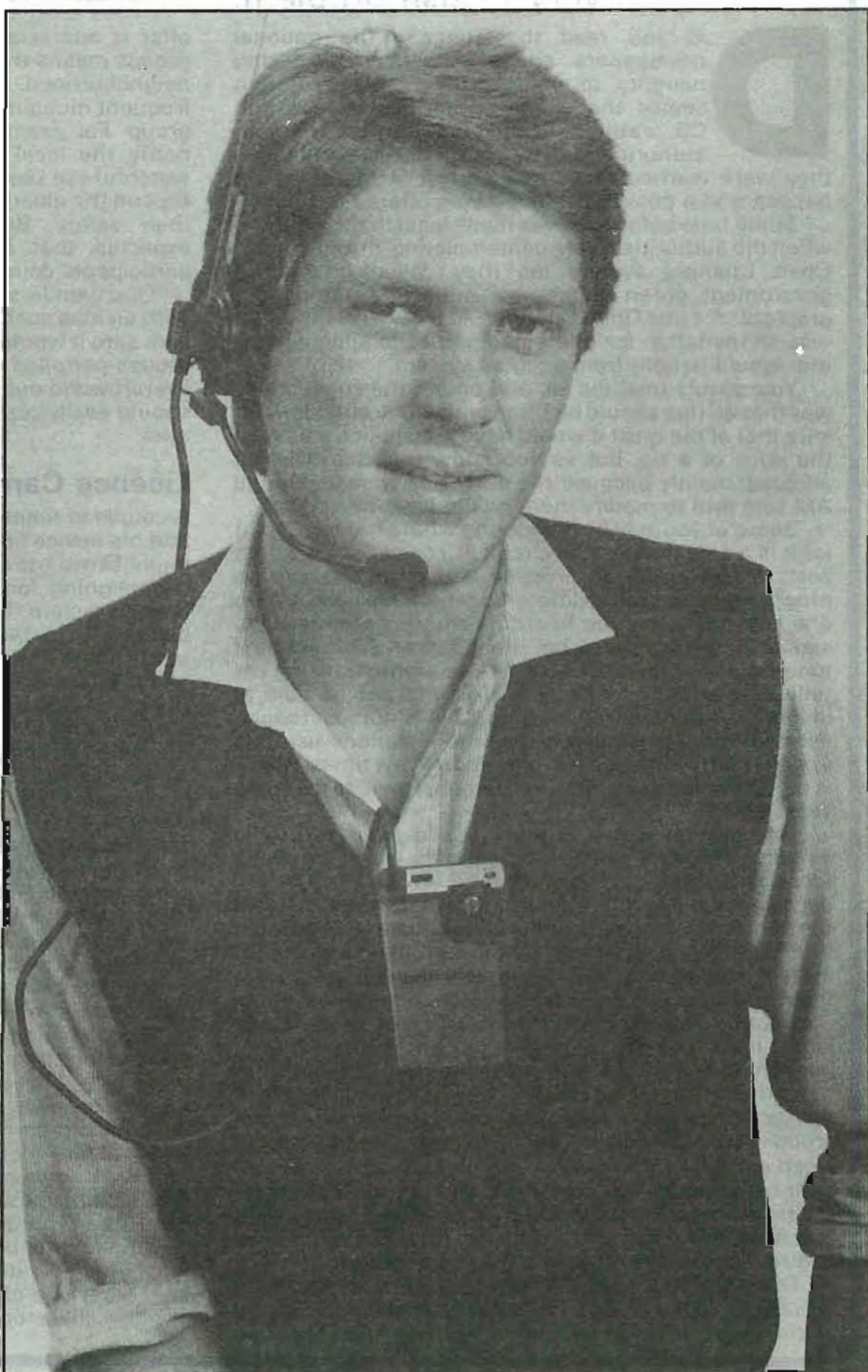
From my home in Chingford, which is not a good RF spot, using the same rig and mike but with a GAP half wave twig, I have been in QSO with stations 50, 60 and more miles away. There is no magic, only that I get on the air with the early weekend morning nets, and I mean early, before 5 or 6 am. If you are a true CB enthusiast and wish to chase the DX stations for QSL confirmed QSOs then these time should present no problems. I have had reports of French, German, Dutch and even Italian stations being worked early mornings and all on legal FM. How much more satisfactory it is to receive a card from one of these worked stations than from just another collector. Well I think it is.

CB



First we had the Shuttlecock, then came the Maxcom Speakeasy, and now we bring you the very latest in hands-free walkie-talkies — the revolutionary Walkphone

THE HIGH STEPPING WALKPHONE

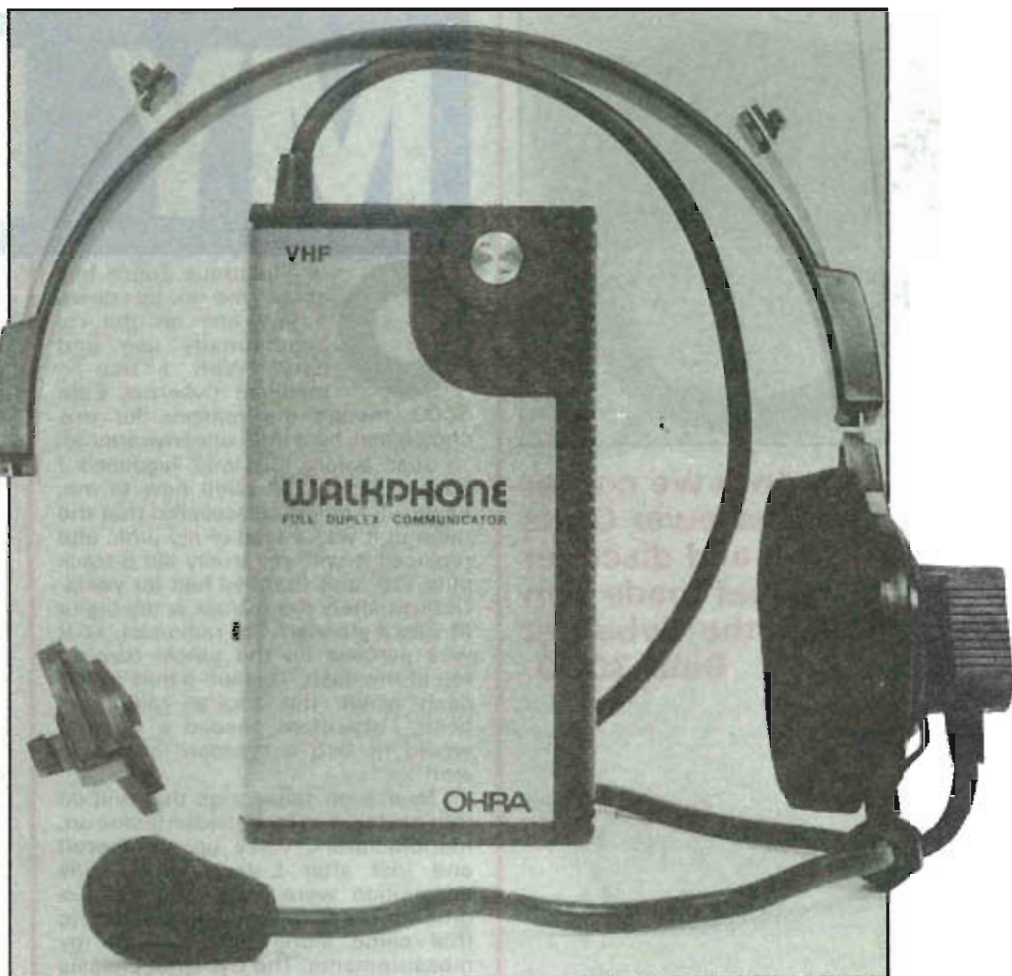


Regular readers will be aware of the 'hand free' walkie-talkie type units which we have tested from time to time. It certainly seems to be a growing market, and the latest one to find its way into our grubby hands is the Walkphone.

The Walkphone is made by the OHRA Corporation, which sounds very Far Eastern, but in actual fact they are Far Western, California to be precise in the good 'ole US of A. Now to begin with, the units are illegal, operating just under 50Mhz, so while we were able to describe the units in the comfort of the palatial CB office, as far as the actual testing went, it was all down to a day out sur le Continent.

To begin with, the Walkphone is a very smart piece of technology indeed. The unit itself is about the size of a packet of King Size cigarettes, and indeed not much heavier, coming complete with the usual headset arrangement.

Controls are down to a minimum, there's an on/off switch at the side, a standby/full switch on the top (the standby preserves the battery when not conversing) and a rotary volume switch which is set neatly into the top. A sturdy clip is provided for clipping onto a belt, and the nine volt battery is fitted by means of a slider cover along the spine of the unit. In fact this cover proved more than a little difficult to remove and needed prising away before the battery could be fitted, but this just might be down to the newness of the unit. An external battery can also be used.



Full duplex communication

Approximately two and a half feet of flex connects the Walkphone to the headset which has one padded earpiece and a microphone on a stalk emanating from it; a short aerial completes the headset. The set is adjustable and is fairly comfortable, although I feel another padded earpiece would have been better than the small triangle which fits over the non receiving ear, because after a while this proved quite irritating.

'But what does it sound like?', I hear you ask, well, hang on while I book my passage and take to the high seas, to the land peopled by reviewers testing illegal equipment. Right, here we go.

Well the first thing to note about the Walkphone is that it is a full duplex communication system. This quite simply means that you don't have push any buttons or wait your turn when talking to your partner. In this respect it really is just like a normal phone, you can rabbit away to your heart's content and not have to worry about mounting phone bills.

This is quite a breakthrough, and it works very well indeed. It means you can get on with your work or whatever else you are doing without keep having to stop and flick a switch to talk, and even when the pair of you talk at the same time neither takes preference.

The advantages over the voice activated units are also fairly significant, because we have noted that on these units, any strong extraneous noise could trigger the mike off, and also there's often the problem of the beginning of your sentence not coming over.

No such problems with the Walkphone, the reception was clear, and the more we tested it the more impressed we became. Inside on office building, with all the problems of concrete, metal etc, it worked remarkably well with clear speech being recorded through a four storey building. Obviously there was a little fading when using lifts etc, but the overall performance remained impressive.

Outside, communications remained good over a fairly built up 200 yards, so we would expect maybe even greater ranges in open country. The headset stayed in place throughout, although the mike needed adjusting from time to time. Quite simply, it is by far the best unit we have tested so far — however there is one major drawback.

So far the other units of this type that we have tested retail at around £40 each, but for the Walkphone you will have to pay double that price. Naturally we were a little taken aback by this and in fact felt the need to check with the manufacturers a couple of times, but the official prices remains £75 plus VAT for each unit.

Obviously, the company have run into a similar reaction to ours among dealers, because they take great pains to point out just how different the Walkphone is to anything else on the market. As they say in their brochure, 'although the Walkphone is similar in appearance to the other communicators, the contents are as different as night is to day. Just as there is a difference between the components of monaural radio and stereophonic radio; a black and white TV set to a colour TV set; there are different communication systems.'

Having used the Walkphone you see what they are getting at, because it is so much better than the others we've featured, but whether it is worth paying twice as much for, is purely up to the customer, his needs and his budget.

Already, people who tried the Walkphone suggested television studios and building sites as potential areas where this would be useful. The company themselves suggest everything from cycling through to mountain climbing and security.

Remember that you will need two of the units which have to be matched together, so you can only use model A with model B, and model D with model E etc.

Our thanks to Electronic Impulses of 12 South Street, Havant, Hants (Tel: 0705 484133) for the loan of the two Ohra Walkphones for review.

CB



This month we corner ace reviewer Chris Peterson and discover what made him choose the Cybernet Beta 3000.

MY RIG

Our illustrious Editor has asked me to jot down a few lines on the rig I personally use and why. Well I use a modified Cybernet Beta 3000, though the reasons for this choice may be a little unconventional.

Just before CB was legalised I bought a new car (well new to me, anyway). I quickly discovered that the radio in it was a load of old junk, and replaced it with my trusty old 8-track plus VHF unit that I've had for years. Unfortunately the 8-track is too big to fit into a standard car radio slot, so it was perched on the parcel tray on top of the dash. This left a hole in the dash where the original radio had been. I therefore needed a rig that would fit into a standard car radio slot!

Now even today, rigs that will do that are few and far between (come on, manufacturers, wake up out there!) and just after L-day, rigs of any description were pretty thin on the ground. The Cybernet was the first rig that came along that met all my measurements. The Cybernet chassis is a well known good performer, it had all the functions I wanted and it would fit into the car radio slot! All I had to do was wrap a thin piece of foam around the rig and slide it in! Simple! I also find the styling attractive and the mike lead is on the front!!!!

Although the Cybernet is an excellent rig as supplied, the congestion on 27MHz around West London eventually caused even that rig to hiccup occasionally. A crystal filter on the first IF stage (from Ambit International) has improved the 'bleed-over' immunity to the extent that it is as good as any of the 'super rigs' we've tested. If the Cybernet chassis has a weakness it is the squelch circuit which is a hangover from AM days. An Ambit Noise Squelch kit has dramatically improved the squelch performance to the point where it now rarely ever needs adjusting!

The rig has proved totally reliable in use with the standard mike, the modulation is crystal clear. It is normally used in conjunction with either a Ferrolite 27 or a Harada disguised telescopic antenna. This latter has tuned up perfectly on the UK FM band despite all the warnings I was given that it would never work! Indeed it seems to work as well as some very much more popular and highly rated antennas. It does need careful tuning to get the best out of it, however. Although an SWR of almost 1:1 is possible on channel 20, it rises to just under 2:1 on channels 1 and 40. In other words it is very sharply tuned and needs to be checked periodically to maintain optimum performance. However it is very convenient, almost vandal proof, and doesn't advertise the presence of a rig in the car!!!



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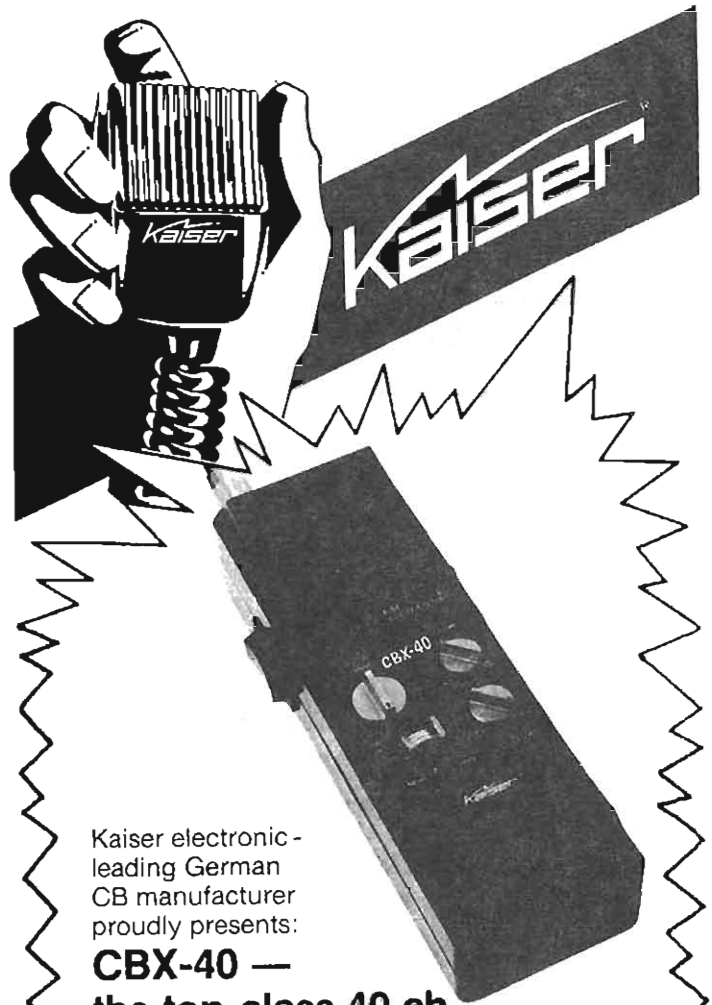
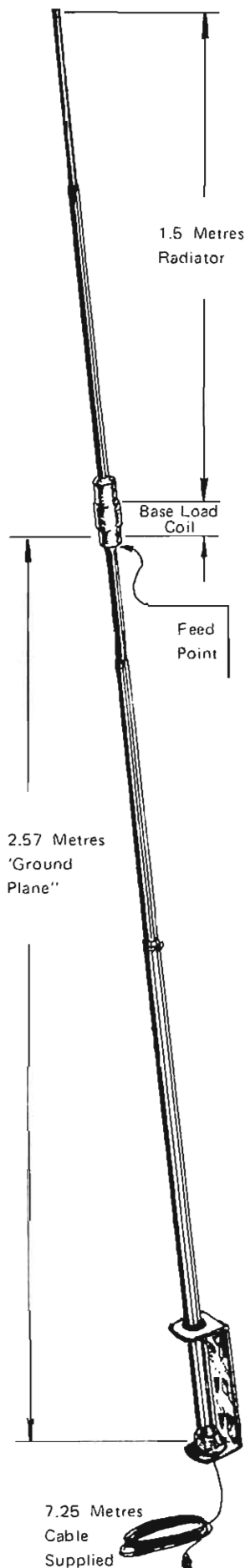
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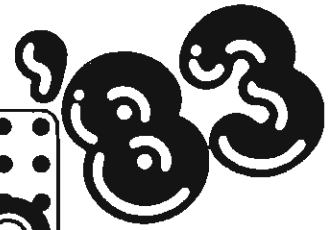
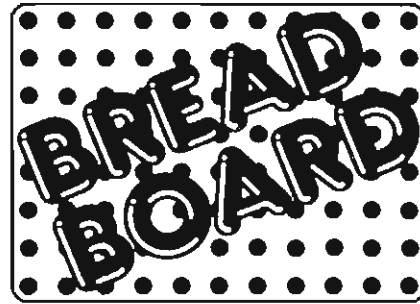
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*see next page

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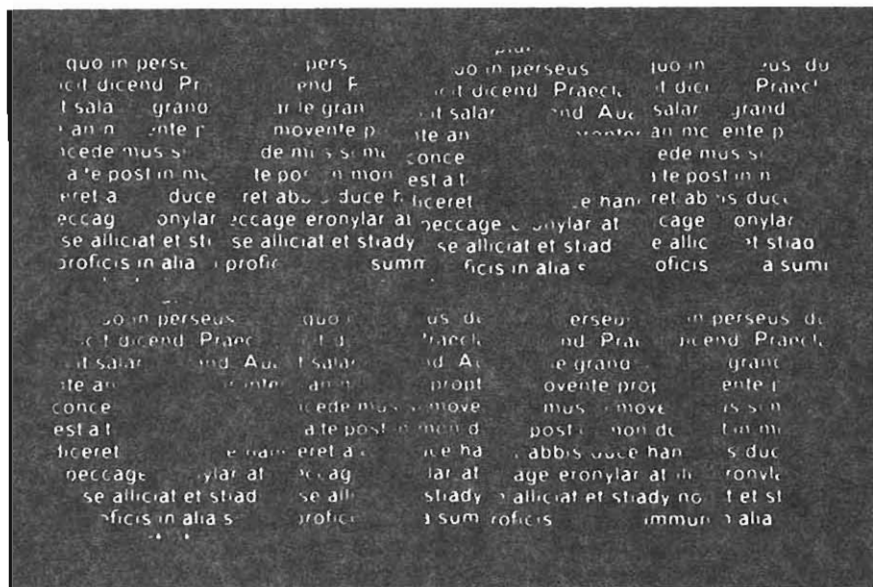
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This month's letters include a follow-up to the story of 'Scruffy' and some stern words from a young breaker.



Fully Licenced

All the way from Denmark comes Per Kim Hardysøe, a regular reader of the magazine, who has kindly written in with an offer to all British CBers who may be going over to Denmark . . .

I have now been in the QSL column several times and had some very nice QSLs from fellow CBers of your country for which I thank you. However, the reason why I write to you is that I have heard so many readers complain about getting their rigs confiscated due to not having the permission to bring them into the foreign country. I have therefore contacted the people who control these permits in Denmark and have got them to send me some applications. Therefore, if anyone in the UK is going on holiday to Denmark they can send me an IRC and I'll send them an application form by return mail. I have applications written in German, English and Danish, so please mention which you'd like. Finally I'd like to thank you for an excellent magazine which I read every month, thanks to a good friend of mine, R. Durrant in Shildon, Co. Durham. Best wishes to all the DXers I have spoken to and all QSLers that I have swapped with.

You can write to Per c/o the Mermaid DX-QSL Club, PO Box 77, 8500 Grenaa, Denmark.

Happy Breaker

Always nice to find someone who is actually happy with life and Malcolm Fisher from County Donegal is such a person . . .

I have been on CB for five years now, my first rig being a Sharp 40 channel AM rig. I thought it was great, and then a year later I purchased a sideband radio and got into DXing which I thought was even better.

Last March I decided to go FM but still keep the sideband, and now I think

with legal UK FM I've got one better again. I've copied into Dorset, Lincolnshire, Kent, Cornwall, Devon, Hampshire, Berkshire, the Channel Islands and I've even copied British stations on holiday in Central Europe. So I say that 27FM and 27SSB is very hard to beat. *See it isn't all bad news.*

Keyed Up

Thirteen year old Robert Higton is an angry young man, and he's angry about something which breakers of his age are usually associated with . . .

I was reading the article about Breaking The Code, and when I read that mike keyers and music players had finally closed a monitoring station down, I nearly smashed my rig to pieces I was so upset. Mind you, I know a few channel 9 monitors who have given it up as a bad job, or sometimes even sold up.

My little motto is I detest Mike Keyers. If I get a mike keyer I always say 'you've found your new toy'. And I can tell you now its not all youngsters who do it. Is there anything we can do?

Channel Crossing

Big D from Bootle in Cumbria writes in with a problem which perhaps some one out there can shed some light on . . .

We had a good network on channel 36 on Sunday afternoon, there were breakers from Scotland, Lancashire and Cumbria all having an enjoyable afternoon. We started the network at 2pm and then at 6pm a breaker came on channel and said we were wiping the emergency channel out.

Now I understand that channel 9 is the emergency channel, but it seems that breakers in the Penrith area use channel 36 as their emergency channel. Rather than cause any hassle with the Penrith breakers, we closed

the network down. My question is, if Penrith can do this, and everyone follows suit, we will have no channels left to talk on.

They said they had permission from the police and ambulance services to take over channel 36, but I thought that the GPO was in charge of CBs for the Home Office? *We'd be happy to hear from some of the Penrith breakers to explain the situation, because it seems mighty strange to us.*

Base Comments

Mr. Mick Miller of Leigh-on-Sea is not a happy man and takes us to task on couple of things. But first off his target is our reviewer Andy Giles . . .

Sorry, but I have a few complaints to voice about your mag. Firstly, I feel very strongly about remarks made by Andy Giles in his rig review on the Uniace 300 home base (August 83). He says, 'I can't think of a reason why anyone would want a PA on a base station.' Well, sorry Andy, but I run my home base from upstairs in my bedroom and my PA is connected to and extension speaker downstairs. If I want a coffee, or the kids are wrecking the lounge, I can push my PA and have instant contact with my family.

Secondly, why so much about cordless phones. OK maybe one month, but it's been going on now for some time. If I wanted to buy a cordless phone, I would buy the relevant mag, which brings me to my third point. Why the in-car radios and cassettes. Please remember lads this is a CB mag. After all that, I must say that yours is the only mag I buy. . . *Well that's something anyway, we take your points, but to begin with we feel that many of the people who are into CB are also likely to be interested in things like cordless phones, after all their main purpose is easier and better communications - and we haven't done that many, simply because there's aren't many on the market. Regarding the in-car entertainment, that is really a one-off, but don't forget almost all breakers who have a mobile rig will have a radio or cassette or both, so we do feel that an occasional feature such as this is of some interest. Finally, we don't know of any specific mags who cater for cordless phones, it's usually left to magazines like ours to do something about it. But thanks for the information on the use of the PA facility on a base station. Has anyone else got any similar uses for it.*

Gentlemen Prefer 934

Mack The Hack is under fire from Peter Drake in Southend, over something he wrote when using a 934 rig . . .

Regarding Mack The Hack's article on 934 in your August issue. I was amazed to read that apparently there is a 'gentleman's agreement' for use of channels 1 to 10 for business users, and that the remaining channels were for 'fun use'.

That's all very well, but if I were in a position to purchase a 934 transceiver, I wouldn't feel bound by any gentleman's agreement, considering the price of such equipment to transmit on a limited number of channels. I also feel it would be a totally unreasonable arrangement considering any business or minicab should be in a position to use Home Office frequency allocations, not CB frequencies. Doesn't this contravene paragraph nine of the licence conditions. I'd be interested to know what other readers think.

All At Sea

Roger Large of Crewe in Cheshire writes in with some views on CB and its use on boats . . .

I am sorry to find in your magazine that land based and mobile breakers are shunning boat users who are on CB. As a member of the RNLI, I am glad that more and more boat users are getting CB rigs, and as long as they stay within the three mile limit they are legal.

However, I must warn breakers who use CBs in river estuaries, bays and coastal waters, that it is best to use mobile rigs run off car batteries rather than hand held sets because the range of the latter is unreliable. I hope that one day all boats not on maritime radio have CBs fitted, no matter where they are used.

One day a land breaker might well be glad that a marine breaker exists because they might well be the only ones in range able to get to a land line. As you know, there are many near canals, rivers and by the coast in farm houses and of course the inevitable public house.

Scruffy Award

Regular readers will remember the story of Scruffy the labrador who saved a missing person from dying by

lying on top of him and keeping him warm until an ambulance arrived. Well Scruffy's owner, Mr. Eric Stanhope, has written to us again with a happy conclusion to the saga . . .

I received a letter from the RSPCA which said 'I have much pleasure in advising you that your recommendation of an award in connection with Scruffy has been approved by the Awards Committee of the Council, and a plaque, suitably engraved will now be processed.'

This special award for Intelligence and Courage is awarded by the committee in circumstances where the animal acts in a manner which is more than instinctive, and from the details you have provided it would seem that this person owes his life to your dog'.

I am so proud of her, I am a pensioner over 70 and she is my companion as I live by myself. I do not use the CB much as I cannot find many breakers round here who want to talk to an old man. My handle is Fusebox, and I would welcome anyone who wants a chat. *Once again thanks Mr. Stanhope, come on now you local breakers let's see what you can do.*

Continental Drift

Eddie from Norfolk has some thoughts on DXing and the perennial problem of TVI . . .

I am a DXer, and when I get the chance I run a Ham International jumbo through a three element directional antenna. I have been operating for two years now and have not encountered any TVI as yet.

I can't help noticing the fact that when any bleedover or static is encountered on channel, more often than not, it's Jack sidebanding down the road who always seems to cop the blame.

Ninety nine per cent of sideband interference is continental, as more of the overseas stations work the hi bands for DXing, which unfortunately clashes with UK FM. I always DX on the lo band away from the hi channels to avoid any aggro, which I get from time to time anyway regardless.

All the time I have been working SSB, I can't ever say I have heard any DXing over the FM channels as yet. So any legal FM stations who may be reading this who are inclined to blame us DXers, all I can say to you is you don't know what you're talking about. As far as I am concerned SSB is respected by its users which is more than can be said for the so-called legal UK FM.

CB

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.





Three very different clubs this month, from Scotland to the Home Counties, by way of Omaha, Norfolk.

CLUB NEWS

If you thought Omaha was just somewhere in the far flung wastes of the USA then you'd be mistaken, because it is also the name of a very successful breakers club.

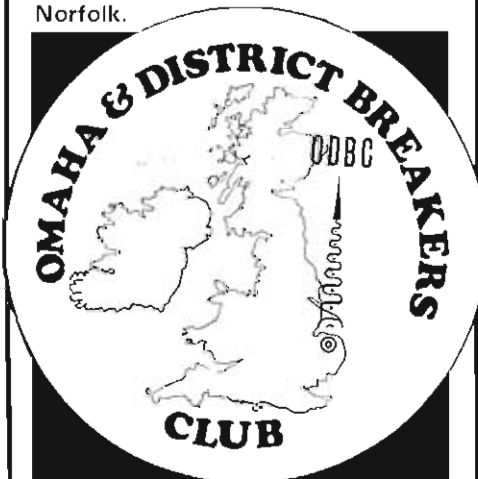
Omaha and District Breakers Club

I am writing to tell you of our very successful club. Membership currently stands at 713 members and is continuing to grow steadily. We have a monthly eyeball which is very well attended, and also a news night on channel two, every Wednesday evening at 9.30.

We try to maintain an active social side to the club, with dances, treasure hunts, beach parties and a pram race in the offing, and also help the community in various ways. We have many fundraising events and last year we raised well over £1,000 for charities and this year hope for even more. In June our chairman handed over a cheque for £740 to Hellesdon hospital, which was raised by a very successful sponsored walk.

We try to maintain a good relationship with our local authorities and are always ready to offer our services at various functions. If any breakers out there are passing our 20, don't hesitate to give us a shout.

Ma Baker
7 The Drift,
Fakenham,
Norfolk.



Chiltern CP/M Users Club

We are starting a local CP/M users group with support from the CP/M UK. We plan to hold meetings at the Stevenage library. For further information contact K. Hirst of 40 Moors Walk, Welwyn Garden City or E. Brown, 21 Willow Way, Hatfield.

R Clement
4 Copper Beach Close,
Boxmoor,
Hemel Hempstead,
Herts.

The Tartan Pirates DX Group

By forming this DX group, we hope to encourage friendship between nations and further the good name attached to two meter band DX operators. The group will be national in its outset, but we hope it will become international as it develops.

We will primarily be a QSL swop club, but will support its members in whatever way they require. We hope to be able to compile a regional directory giving club/group monitor frequencies, meeting places and addresses where they may be contacted.

Membership will be granted by founder members only and all applications must be accompanied by five QSL cards confirming five DX contacts outwith 50 miles of your QTH. Any mode of transmission is eligible.

The Secretary
The Tartan Pirate DX Group,
8 Woodpark,
Lesmahagow,
Strathclyde,
Scotland.

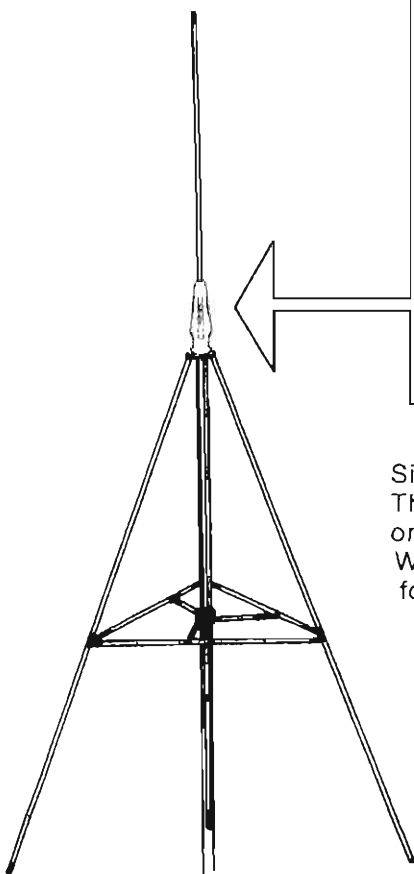




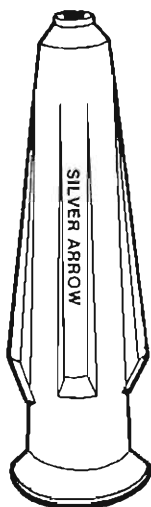
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Ham Big Mac Base Ant 7/8 Wave.....	£79.95 (E)
Ham Frequency Counter plugs into Ham models.....	£45.00 (C)
Frequency counter for any rig.....	£39.99 (C)
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Ham 232DX Processor Base Mike.....	£39.99 (D)
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Ham 6-9 amp Power Supply.....	£34.99 (E)
Ham 10-12 amp Power Supply.....	£49.99 (E)
Ham 15-18 amp Power Supply.....	£69.99 (E)
Ham Multimode II Front Fascia.....	£8.00 (B)
Ham Concorde II Front Fascia.....	£8.00 (B)
Ham Service Manuals (state model).....	£6.00 (B)
Ham replacement mike (as originally supplied by Ham).....	£6.99 (B)
Ham LA 120 100 watt am/fm - 200 watt ssb variable with preamp.....	£129.95 (E)
Ham LA 60 50 watt am/fm - 100 watt ssb variable with preamp.....	£79.95 (E)
SEIF reverberator RA 201.....	£34.95 (D)
Ham Viking 80 AM/FM (plus U.K.F.M.).....	£79.99 (E)
Ham Puma 120 AM/FM (plus U.K.F.M.).....	£99.99 (E)
Superstar 2200 200 AM/FM SSB.....	£175.00 (E)
Ham extension speaker with filter.....	£7.25 (B)
Ham Hand box.....	£3.00 (A)

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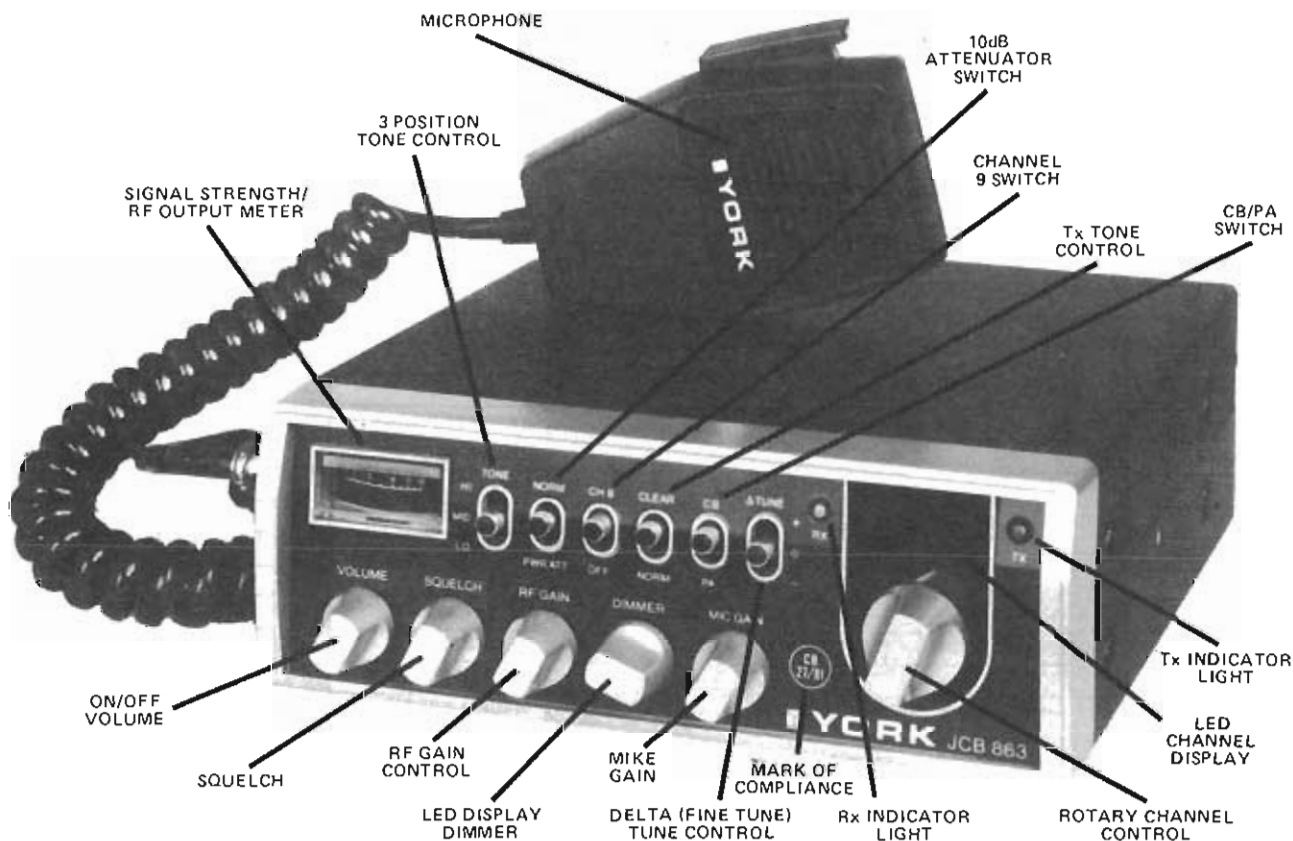
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Citizens' Band

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* and 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 of 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.

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, Downley 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 Nevrötstrasse 21-25, Waldorf Baden, W. Germany	UK 40	40	13.8VDC	£1BA
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 2JG	AUTOSCAN 5000	40	13.8VDC	£120
MAXCOM	A. M. Telecommunications, A.M. House, 17. Shoppers 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	£46

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	tone 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
•													SL		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

considerably from CB shop to CB shop!

MOBILES

NAME	ADDRESSES	MODEL	NO OF CHANNELS	SUPPLY VOLTAGE	RETAIL PRICE
MICROLINK	Warman-Freed Ltd, 82 Golders Gn. 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	OSCAR1	40	13.8VDC	£85
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, Mildenhall, Suffolk	934	20	13.8VDC	£200
ROTEL	Hotel Hi Fi, 2-4 Erica Rd, Stacey Bushes, 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, Freeth, Henley-on-Thames, Oxon, RG6 6NR	SHOGUN	40	13.8VDC	£100
SIRTEL	24 Alfric 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	£80
TANDY		TRC2002	40	13.8VDC	£70
TANDY		TRC2000	40	13.8VDC	£100
TANDY		TRC1004	40	12VDC	£79
TANDY		TRC2003	40	13.8VDC	£130
UNIDEN	Cravenmaster Ltd, 31 Madoc St, Llandudno	UNI ACE 100	40	13.8VDC	£59.95
UNIDEN		UNI ACE 200	40	13.8VDC	£79.95
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





SQUELCH	NB SWITCH	ANL SWITCH	MIKE GAIN	RF GAIN	TONE CONTROL	S-7RF METER	S-7RF 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	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 eleganca Report June '82	SHOGUN
•														FL		SIRTEL
•														SL		STEEPLETONE
•														SL		TANDY
•														SL		TANDY
•														SL		TANDY
•														SL		TANDY
•														SL	Report November '82	TANDY
•														SL		UNIDEN
•														FL	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
DNT	Radiotechnics Ltd, Grove Way, Bel Royal, St Lawrence, Jersey CI	B40	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 Wave Ltd, Ripon Way, Maregate, N Yorks	BASE	40	240VAC	£220
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	Crownmaster Ltd, 31 Madoc St, Llandudno	UNIACE 3001	40	240VAC	£129.95
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	BATTERIES	£44
BINATONE	Binatone House, Beresford 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 780325)	CBX40	40	BATTERY	£80
MAXCOM	A.T.M., AM House, Be Olds Approach, Tolpits Lane, Watford, Herts	7E	40	BATTERY	£49.95
MIDLAND	Plustronix Ltd, Hempstalls Ln, Newcastle-under-Lyme, Staffs	75-720	40	12VDC	£59.95
TANDY	Tame Way, Tower Bridge St, Walsall	TRC1001	40	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	Review May '82
•						•				•				FL	The most expensive base!
•			•			•				•			•	FR	Report May '82
•			•	•	•	•		•	•	•			•	SR	Report May '82
•			•	•	•	•			•	•	•			FL	New base from Havard
•			•	•	•	•			•	•	•			FL	Cheapo base
•		•	•	•	•	•		•	•	•	•		•	FL	
•		•	•	•	•	•		•	•	•	•		•	FL	Reviewed August '83
•		•	•	•	•	•		•	•	•	•			FL	
•		•	•	•	•	•		•	•	•	•			FL	
•		•	•	•	•	•		•	•	•	•			FL	
•	•		•	•	•	•		•	•	•	•			FL	
•			•	•	•	•		•	•	•	•			FL	

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
•										•				-	Report April '82
•										•				-	HARVARD
•										•				-	HARVARD
•										•				-	HARVARD
•										•				-	Report August '83
•										•				-	KAISER
•										•				-	MAXCOM
•										•				-	MIDLAND
•										•				-	TANDY

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		LENGTH	MAX POWER	TYPE	MOUNT	PRICE RANGE
			AL	SS					
AERIAL SUPPLIES	Aerial Supplies, 6 Widney House, Bonington Rd, Redditch, Worcs (Tel 0527 62620)	Silver Star Silver Arrow	AL AL		1.5 1.5	100 500	B B	Pole Pole	D E
AMSTRAD		CBA 1500	SS					Various	C
ANTENNA INC		12510 Telcomm Super Parsuader MRS 11 M710 AS M125 AS M 128	SS SS SS SS SS SS		0.9 1.5 1.2 1.5 1.14 1.14		M M M M M M	1/2ths Mag Mag 1/2ths -	D F G G C C
ANTENNA SPECIALISTS	Antifence Ltd, Aylesbury, Bucks HP13 3B2	AS M131 AS MR440 AS MT178 AS M510 AS M2000 AS 9812 IC 85 IC 80 IC 15	SS SS SS SS SS SS SS SS SS		1.14 1.2 1.2 1.2 1.5 1.2 1M 1M 1	150 100 150 200 150 150	M M M M M M M M	gutter mag mag mag mag mag spring-based mag trunk	D D D D D D D D E C
ANTLER	Shakespeare Performance Antennas, Barton Rd, Market Drayton, Salop	IC 20 IC 30 IC 40 IC 80	SS SS SS SS		1' 1' 1' 1'		M M M M	roof gutter mirror mag	D E E C
ARCHER	Tandy Corp, Tandy Way, Tower Bridge St, Walsol, W. Mid	21 904	SS		0.5	50	M	" snap	D
ARMSTRONG	Stateside Trading Ltd, Audley Ave, Newport, Shropshire	SAM 10 SAM 20 TAK 10 TAK 20 MAG 10 MAG 20 BDY 20 PEC 20 TAK 101	SS SS SS SS SS SS SS SS SS		1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06 1.06	1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000	M M M M M M M M	surface surface with spring boot lip with spring magnetic magnetic with spring side side & fold over & quick disconnect boot lip illuminator	F F F G G G G
AVANTI	CB Radio Centre Ltd, 337 Kenson Rd, Harrow	AV 241 (Moonraker) AV241 T AV241 M AV241 MM	SS SS SS SS		1.22 1.22 1.22 1.22		M M M M	stud trunk mag super mag	D E E G
BADLAND	Badland, Breese Ind, Est, Providence St, Lye, Stourbridge	B10	SS		1.22			mag	G
BANDIT	Bandit, Roughan Ind, Est, Bury St Edmunds, Surrey	B10 B16 B16 B20 B30 B30 B40 B40 B50 B50	SS SS SS SS SS SS SS SS SS SS		1.42 0.61 1.22 1.42 1.22 1.42 1.22 1.22 1.42 1.22		M M M M M M M M M M	mag mag mag mirror drill thru drill thru various various various various	G F F F E E D D D D
C. BRIT	C. Brit, Unit 3, 5 East Lane, Wembley, Middx	Singray Whiplast	AL SS		1.5 1.5	500 25	B M	pole	G C
CT INTERNATIONAL	CT International, CTE (UK) Ltd, Unit 3, Marham Ind, Est, 95 Searham Rd, Mitcham, Surrey	MG27	SS		0.91		M	mag	C
DIAL-A-MATCH	WTA Electronics Ltd, 111 Connaught Rd, Halesowen, Northwick (Tel 0626 47834)	Rubber Duck - 530 (Cherokee) 531 HBF 531 SMF 540 541 HBF 541 SMF 520 (Halfbroed)	R SS SS SS SS SS SS SS		0.3 0.61 0.61 0.61 1.22 1.22 1.22 1.27		M M M M M M M		C C F F E E C
DIGITEK UK LTD	179 181 Stroudham Ind, 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 out 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: £15 - £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 Photographs	Harrier	SS	0.9		M	Mag	D
HOT ROD 200	Hot Rod 200, Stateside Trading Ltd, Audley Ave, Newport, Shropshire	FM UK	SS	1.27		M	Mag	B
FREEMAN & PARDOW	Freeman & Pardow, Tipton Rd, Arden Forest Ind. Est, Alcester, Warwick	The Invader	AL	1.5	250	B	pole	E
		The Thunderpole	AL	1.5	500	B	pole	F
CB SERVICES	47, Crab Lane, Hemington, N. Yorks YO11 3BQ	Bullwhip Knuckleduster	SS	1.5		M	various	C
			AL	1.5		B		D
MIDWEST		Dial-a-tune Dial-a-tune	SS	0.61	500	M	various	C
			SS	1.22	2	M	various	D
MOCDM	Mocon, Mito Communications Ltd, 140 Sand's Lane, Campbell Birmingham	Ruvco	SS	1		M	various	B
MODULATORS	Aerial Supplies, 8 Wilby House, Broomgrove Rd, Radstock, Wiltshire (Tel 0527 62620)	MOBILE LC	SS	1.3	1,000	M	Pole Gutter Pole Wall Pole	C
		MOBILE SC	SS	1.3	1,000	M		C
		MDX LC	SS	1.5	1,000	M		C
		MOX SC	SS	1.5	1,000	M		C
		934 BASE	FG	1.5	1,000	B		C
		934 MOBILE	FG	1.3	1,000	M		C
		VHF MOBILE	SS	1.3	1,000	M		C
		VHF BASE	SS	1.5	1,000	B		D
		27 L/C BASE	AL	1.5	1,000	B		D
27 DX BASE	AL	1.5	1,000	B	D			
MOTROLA	Motorola, Taylor Rd, Stratford, Solihull, Warks	EC106M				M		F
OCT	Unit 5 Earlsfield Lane Ind. Estate, Grantham, Leics	K40 227	SS	1.4	500	M	various	G
			SS	1.45	200	M	various	B
PANORAMA	Panorama, 73 Waltham Rd, London SW15 2LS	CB27	SS	1.22		M	mag	B
PRIDDW		KT40		1.5		M	trunk	C
SHIRA		SYS 208M SYS 203C MA 62	SS	1		M	mag	C
			FG	0.75		M	trunk	C
			SS	0.91		M		C
SIRTEL	Suite 24 Alton, Sq. Off Market Bx, Woodston Ind. Est, Peterborough	GP Messenger GP Signal Keeper	SS	1.5		B	clamp	E
			SS	1.5		B	tripod	F
SMC	Oscar, South Midlands Communications, Osborn House, Totton, Southampton, SO4 4DN	Oscar Base CBA 11GP	SS	1.5		B	mag foldover base "gull-rig"	F
		Oscar Base IIVIIIS	SS	1.5		B		F
		Oscar IICM	SS	1.2		M		O
		Oscar IICE	SS	1.2		M		B
		Oscar IINE	SS	1.6		M		C
Oscar IISE	SS	1.5		M	"locking-collared" foldover base trunk	C		
Oscar TMCAS	SS	1		M		B		
SPYDER		Spyder	AL	1.5		B	pole	B
TAGRA	CB Radio Centre Ltd, 437 Keston Rd, Warron	T40	SS	1.4	500	M	various	E
THOROBRED	OCT Unit 1, Earlsfield Lane, Grantham	251 227 Locktune	SS	1.5		M	various	C
			SS	1.5		M		B
			SS	1.6		M	various	C
WITCHSTICK	CJM Motor Factors, Hill Farm, 500, Leawoods, Watford, Herts SG2 7J, 74444	Witchstick homebase	AL	1.5		B		E
WTA ELECTRONICS	111 Conner Rd, Halesworth, Norwich, Norfolk	Wot Pole Wot Mag	AL	1.6		B	pole	
			SS	1.6		M	mag	
VAN OROT	Van Orot, Knight CB Specialist, 204 Dunstable Rd, Luton, Beds	Audio King AKO-100	SS	1.6	2000	M		G

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