

CB Citizens' Band

Britain's Leading CB Monthly

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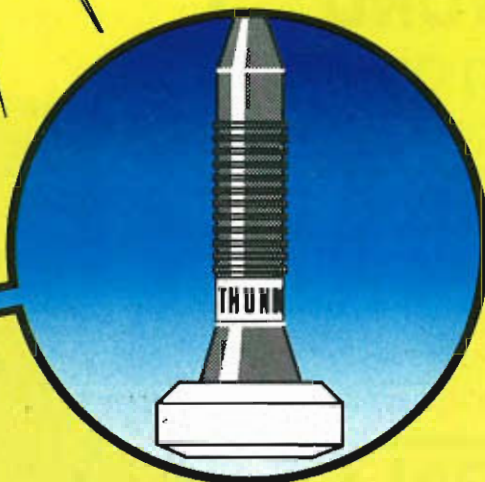
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CB

Citizens' Band

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Cover This Month

The cover this month shows the Murphy DS-602 — a snip at £25 — which reminds me. There was this young breaker — well young at heart anyway — and breaking was his whole life. He would come home from work in the evening and chatter away to his local mates in the beloved jargon of the young at heart CBer. He never bucket mouthed and he always followed proper procedure when on channel. In short a true CB fan and great admirer of this august magazine.

Alas, as is often the case, he fell into bad company and bad habits. He wanted more power and in that search for power he bought a power mike. This, as we have often said, did little to increase his range. So he bought a cheap and nasty burner, and settled in his little room, he began to block out Coronation Street and The News At Ten — severely dent the Archers and, above all, ruin the transmissions of all of his nearby onetime friends. "Enough", they cried "That lad's burner must go. No matter how fond he is of breaking we can't put up with that". They reported him and the man from R.I.S. came and took his burner and CB radio away. This only goes to show that in this world . . . YOU CAN'T HAVE YOUR BREAK AND HEAT IT TOO!!

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A PERSONAL LETTER FROM THE U.K.'s LEADING C.B. DISTRIBUTOR



**189 LONDON ROAD
NORTH END
PORTSMOUTH
PO2 9AE**

Dear Breaker,

As the country's leading CB Distributor it would take us virtually the whole of this magazine to tell you about all our CB equipment in sufficient detail - so we don't intend to try! Instead, why not send us £1 for our super new 1984 catalogue and lists, and in addition to the usual £2 voucher we will send you either a CB Jargon Book or a CB Log Book (state which you would like) which usually retail for 99p

Now the free book offer was due to close on 31st December, but I took the boss down the pub and, with the help of the old golden nectar, persuaded him to keep it going until February 21st. Judging by the way you all swamped us with your greenshields before Christmas, this is good news to all.

I don't have to tell you how many CB shops are disappearing from the scene, and many of you have said how much you wished that we could open a branch of Telecomms in your area, only to find that we are already your local experts - as close as your nearest telephone or post box!

While all the others are spreading gloom and despondency, we have dramatically increased our CB turnover, and the reasons for that are simple.

Firstly, all of us here share the bug of being on channel ourselves, so we know exactly what the average Breaker is looking for, secondly, among the vast range of gear always on our shelves you will find the latest and the best, all backed by a comprehensive guarantee and our own extensive workshops, thirdly we care about the small customer of the Breaker who just wants to phone up for a bit of advise, and lastly, and most important, the insurance on the boss's Roller went up, so he needed the money!

Seriously, we believe that what we offer you is without equal anywhere in the U.K., perhaps even in the world, and you must agree with us if figures are anything to go by. In the last three months alone, the number of Breakers turning to the Telecomms Mail Order Catalogue for all their needs has trebled, making us the biggest "club" in the history of CB.

So grab your pen and pad and write to us today ... and by the way, if you look at the page opposite you will see the first of our new monthly news columns, keeping you up to date with all the latest developments and products.

Look forward to hearing from you soon. Till then, take care cos we care.

Simply 'phone - quoting Barclay or Access number for immediate despatch

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CHATTERBOX

Well, we may have given up the unequal struggle of trying to tell you about all the goodles we stock within the limitations of two pages, but I expect that you, like me, are ever keen to know what is new in the world of C.B., so each month, on this page, you can keep abreast of all the latest gen.

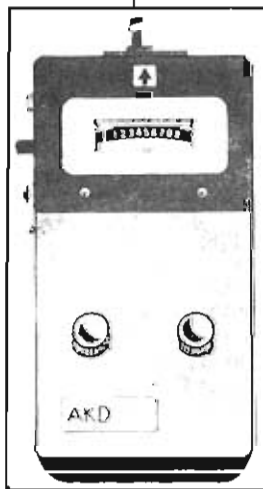
I am a typical Breaker in as much as I love to experiment, and of course I'm luckier than most in that I've got the pick of our stock shelves to play with and play I most certainly do!

So where shall I start? No doubt most of you have already heard about the A.K.D. "Wally Hunter", or Precision Direction Finder, as it is officially known. I don't suppose that I am the only Breaker to suffer from wallies, and many is the time I've borrowed our display model for a night's happy hunting. In fact, before they were even commercially available, I was fortunate enough to obtain the loan of one of the prototypes.

Several early morning strollers around the estate where I live were surprised to see me wandering around waving the unit about one Sunday. One lady asked if I was a water diviner and another wit asked if I wanted to buy a jacket to put on my coat hanger, but if they were surprised, it was nothing to the reaction I got from a certain young man who had been doing Tony Blackburn impressions on Channel 19 all that morning, especially when I knocked his door and suggested "Silence is Golden", not as a request, but as a bit of sound advice!

He now leaves the disc-jockeying to the professionals, and since we started selling the PDF11 (£49.95) the airwaves around Portsmouth have become noticeably more bearable. It is now so easy to track down the airwave idiots. Just get close with a normal mobile or handheld, then switch on the PDF and you can go right up to their door. Buzby also uses these units, so dare we suggest that the days of the wally are finally numbered?

Remember in December's advert we mentioned Ham International Big Mac base antenna? Reputably the



worlds highest gain omni-directional antenna (which means that it ain't a dirty great beam) and seven eighth wave length and all that stuff, and if there is intelligent life on 27MHz at the other end of the galaxy then you could probably

have a decent back and forth with it. Well, a mate of mine came across the water from the Isle of Wight, brave lad, and took one home with him for £72.50. He phoned me up next day and described its fully-erected beauty to me whilst looking at the top of it through his

Government surplus binoculars.

Apparently his next door neighbour was a bit put off at first by the sight of this splendid aluminium column disappearing into the low clouds above, but my mate is no fool. He told him it was a new device to give a four minute warning in the event of a nuclear attack and the guy went off

quite happy, having extracted a promise that he would be the first to know if Armageddon did arrive. Though what he expected to do with that four minutes escapes me! Suggestions on the back of a pound note . . . ?

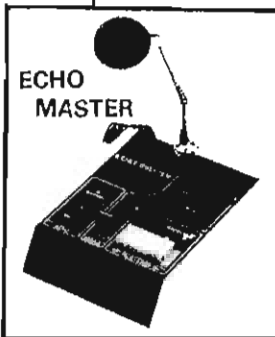
Anyway, my mate is well pleased with the performance, even if the local RSPCA have issued a warning to all pigeons and seagulls in the vicinity.

Personally, I cannot put up a big antenna as the local council are a bit anti, but one of the best things I ever did was to liberate a Sadelta Echomaster Base Mike

for the weekend. The electret condenser mic capsule, backed up by a whole host of sophisticated electronic wizardry packed into the bottom gave me the best radio reports

I've ever had — and that is saying summat. The think I liked about the Echo facility was not just that you could switch it off, nor even that it was beautifully variable, but that no matter where you set the Echo level it does not over ride the modulation, unlike a few I've tried in the past.

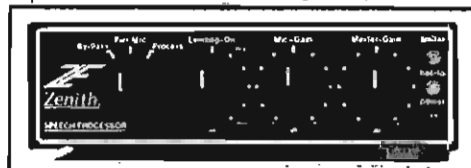
Quite a few people have taken my advice and bought one recently (£57.56) and I am happy to report that not a single one has been less impressed that I was in the first place. And no prizes for guessing where that original Echo-master is now.



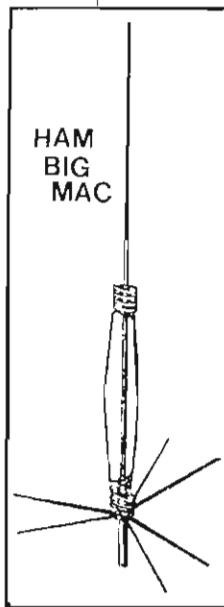
Another microphone from the Sadelta range is the Bravo 2, which comes complete with separate slider controls for compression and modulation, as well as twin meters for those of you who would be happier piloting Concorde, at £39.95.

If you want more talk power while you are mobile, how about the Zenith Speech Processor? The novel feature here is that it has a simple switch to move to power mike setting, or even to by-pass the unit altogether and revert to standard microphone working, which means your dulcet tones are probably annoying only one third of the Breakers that they were when you were using it as a Processor. Again, all round excellent reports from my own use and from everyone else I've talked to who has used one.

Another Zenith goody worth



looking at for mobile use is the ZX4 Safety Microphone. The goose-neck microphone mounts in any convenient place around the dashboard, and the PTT switch fits on top of your gear lever. Push once to talk; push again to revert to receive. Look Mum — no hands! Only thing was, my daughter commented that the mike stalk reminded her of the Martian fighting machines in War of the Worlds, but then E.T. turned out to be a good guy!





UPDATE

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

There are plans afoot for the revision of the CB licence and there may well be an announcement by the time you read this. The Radio Regulatory Department has had a number of consultations and discussions with the leading user groups, the CBA and NATCOLCIBAR, on several issues, including the introduction of an age limit, protection for channel 9, antenna restrictions and similar subjects.

Any measures that are aimed at improving the CB service must be warmly greeted by anyone with the interests of Citizens Band radio at heart and it is gratifying to see that the R.R.D. is discussing the revisions with CBers and are listening carefully to what they say. Many of the early 'campaigning' CBers were very mistrustful of the R.R.D. and it's motives and it would be a shame for that attitude to persist unnecessarily.

As I said, anything that improves CB must be welcomed, but I do wonder if the cure for CB's ills lie in legislation. Many of the things that we complain about are already prohibited

and, lets face it, the people that abuse CB are hardly likely to be intimidated by an additional regulation. I rather suspect that the operation of a successful and effective communications system, for leisure or business, lies in the hands of the operators themselves, rather than in Government action.

Of course, the authorities have a responsibility to the community and this includes the administration of communications systems. But we also have a responsibility to ourselves and to other CB users. CB has become so debased in urban areas that no-one really expects CB to be taken seriously anymore, so it's not surprising that newcomers don't feel the need to keep certain standards. I'm not necessarily referring to radio standards either, although those are important. At the risk of sounding as if I have climbed on my soap box, what about old fashioned notions like like courtesy and good manners? All the legislation in the world can't ensure those. Like Mack says this month, where

have all the friendly breakers gone? Who's interested in Big Mouth's love life? Where is the CB that we all wanted?

I don't want to be unduly pessimistic. There are many areas that have a CB fraternity that show good manners and an interest in their fellow breakers. I have recently been accused of giving too much coverage to the wallies and too much space to CB deficiencies, rather than it's successes, and I can see what my complainer is getting at — perhaps if publicity was restricted to the good aspects there would be no encouragement for the 'baddies'. But I get so frustrated at having to tell another caller or letter writer that there are no real answers to their local lunatics, and I get so angry at hearing of another breaker who has gone down, 'fed-up' with CB. No country has the perfect CB service and we aren't the first or last to struggle with this problem, but is human nature really so bad that we just have to endure?

Sue Sharp

Competition Results

October's competition asked for a caption again — not for a lady covered in bubbles but for the poor horse trying to get a word in edgeways between Jane Fonda and Robert Redford in 'The Electric Horseman'.

Lots of answers concentrated on 'Mustang' jokes, which were appropriate as the prize is a Mustang CB2000 rig. Many captions centred on 'mustang on', dummy loads, mag. mounts and 'get off my back'. Mr. A. Bennett from Warwickshire came up with "Oh no, not you two from the G.P.O. I have already told you that I have paid my licence." Whilst R. J. Waymont in Calne had a pointed remark about Ms. Fonda's other claim to fame



"Are you sure she follows her work out programme?"

F. L. Mitchell from Newtonabbey in Northern Ireland worked in the maximum number of puns into "This little lady may be 'Fonda' the ol' CB but this one 'Mustang' she won't fit into her 'Red-Ford'" and Mr. D. G. Willats of Clacton-on-Sea has the disbelieving horse saying "Are you sure this is the way Silver started?" — but I must be

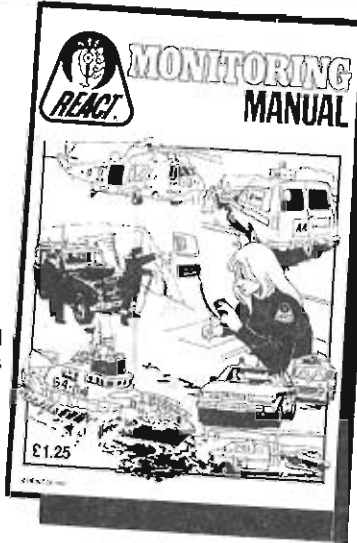
careful of showing my age here quite a few breakers are looking up, saying "Dad, who's Silver?"

Honours go to Mick Galliers of Bricket Wood in St. Albans for "Hard luck Bob. I see that I'm not the only one to get lumbered with an old nag for a mate!" so the Mustang (the rig, not the horse) will be on it's way to Bricket Wood. It shouldn't cost much in hay, Mick!

Quick REACTion

The REACT UK MONITORING MANUAL, previously unobtainable by non-members, is now available at a cost of £1.25 (post free) from REACT UK Headquarters. The manual is the culmination of six months writing and collating and has contributions from the Police, Fire Service, Ambulance Service and HM Coastguards. The manual is the standard monitoring aid used by REACT UK members and has now been published on a wider scale to encourage the adoption of a single standard for all emergency monitors, irrespective of which organisation they belong to.

It is available from REACT UK



HEADQUARTERS, 142 Lutterworth Road, Nuneaton, Warwickshire. CV11 6PE. Telephone 0203 383005.

A.L.C. Network

The Active Line Communications Network is a contact organisation of CB operators with their enthusiasm for radio in common. A.L.C. hopes to encourage a greater field of interest in CB radio through participation in community events and are particularly keen to include housebound and disabled users. Their main aim is to join together people with the same interests and to educate the newcomers into good radio practices.

A.L.C. members are identified by a call sign that is allocated according to town and number.

Membership, which includes the allocation of the personal call sign and a badge, costs 50p.

For those that are

prepared to volunteer their time on a regular basis Active Line Emergency Radio Teams have been established, using a network of base station users, mobiles and those with hand sets or walkie talkies. A.L.E.R.T. see themselves of having more than one function — apart from the emergency monitoring, they hope to help with less urgent problems like directions, local information and community help and to control the abuse of channels by actively discouraging the abusers and by showing a good example.

More information can be obtained from D. G. Metcalfe, c/o 3 Baker Street, Blackburn, Lancs, BB1 1NZ.

Land Mobile Radio Specification

A new specification for land mobile radio services operating in the frequency range 174 to 225 MHz has been published by the Radio Regulatory Division of the Department of Trade and Industry. The use of this range of frequencies is a result of the decision to close down 405 line television services on 31st December 1984. The specification was prepared after consultation with radio equipment manufacturers and lays down the parameters for frequency modulated equipment (FM) including digital signalling.

The methods of measurement described in the specification are in agreement with C.E.P.T. recommendations to enable British manufacturers to compete in European markets.

The frequencies will be available to business users like the National Power Industries, who will be moved from the 105 to 108 MHz band when it is re-allocated to FM broadcasting. It will not be a public access frequency.

Forthcoming Attractions

Since there will be a new crop of CBers in the new year, with rigs being given as Christmas presents and Christmas money being taken down the shops quicker than you can saw SWR, Citizens' Band will be featuring a Beginners special in the February magazine.

Any new hobby is bewildering, with certain phrases and words meaning absolutely nothing to the

newcomer — but everyone else seems to know what they mean. And lets face it, no-one likes to be the one that asks! So, to stop red faces and broken rigs the staff at CB will take pity on you and let you in on the secrets of CB.

We get an enormous amount of letters on interference and particularly T.V.I. Smart Alec does his best to answer individual letters but it's obviously a big problem for many breakers. Over the next few months we will be

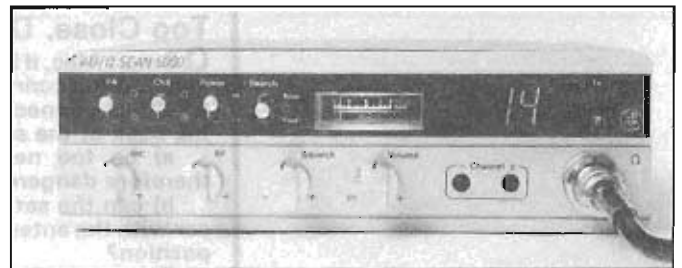
having a detailed look at the causes and cures of interference, both in the home and in the car.

Mind you . . . February magazine. Hmm. After the office Christmas party and New Year celebrations. Depends on when the hangover recedes and whether the typewriter recovers from having Newcastle Brown spilt on it (Twong staggers a bit after his twenty-seventh). Lets leave it that the magazine should have all the usual stuff and cross our fingers .

Watch The Birdy

News from Magpie Electronics, makers of the much-praised Auto-Scan 5000, is that a crystal filter can be fitted as standard in the factory for an extra £7.50. This makes reception even better and shows no decrease in sensitivity.

They are also pleased to announce that the waiting list which had developed has now been cleared and sets are available for customers immediately. So much of their time has been taken up by manufacturing they have not been able to do as much development



work as they would hope and plans for a 934MHz transverter are still at the 'thinking' stage.

Magpie have been very pleased at the response to the 5000 and the feedback they have got from users, although it has posed some

problems for them. They have to order specialised components some months in advance

Magpie emphasize that would-be purchasers shouldn't be discouraged by this 'list' as supplies are no longer a problem.



A slightly different Q & A in CB this month to help solve some of those perennial antenna problems.

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

Rubber Duck

Colin Marks from Chelmsley Wood in Birmingham is confused by the law and antennas — especially the Rubber Duck.

Q. I see in the August '83 Rig Check the Kaiser CBX 40 is supplied with a small Rubber Duck antenna.

Could you tell me if a helical antenna like the Rubber Duck or the Firestik is legal for use in this country and if it would be legal to use the Kaiser with the antenna supplied.

A The Rubber Duck and antennas like the Firestik are continuously loaded along the entire length of the radiating element. Described like that, you can see that they are outside the Government regulation which calls for a base loaded single element rod. The Rubber Duck is not a very efficient antenna but is good for walkie talkies where a whip or telescopic antenna is likely to get in the way or cause injury to people close by.

As I said, strictly speaking, the helically wound antenna is illegal. However, if it is used on walkie talkies (and bearing in mind it's inefficiency) I think it would be very unlikely that steps would be taken against anyone 'caught' using one. This doesn't mean that I am condoning anyone breaking the law, but any law is open to interpretation and I doubt if the authorities would over react to this transgression.

S A

Too Close, Ducky!

Q. Smart Alec, if I buy a Rubber Duck antenna and connect it to the rig with an elbow connector to the socket at the back of the set, will it

a) be too near to the set and therefore dangerous?

b) can the set be operated in the car with the antenna still in the same position?

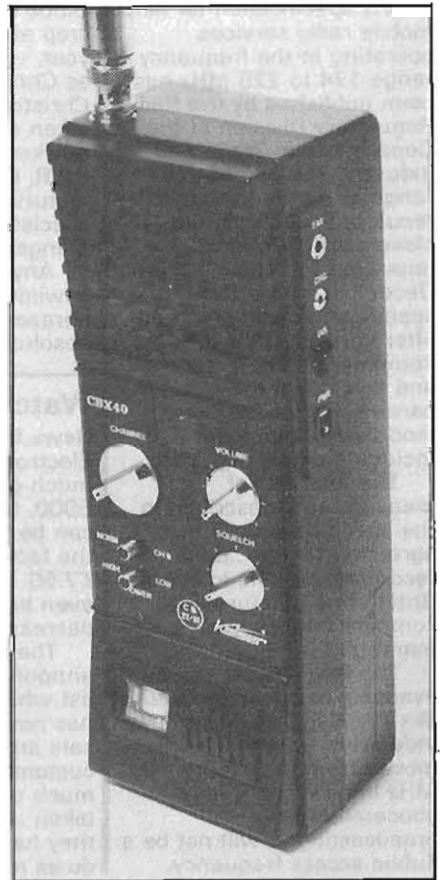
Thanks for the ace magazine, I find everything in it of great interest.

A Thank you for the kind words, S. Crockford. Enough of this flattery, on with the questions — and answers. There is not going to be any damage because of the proximity of the antenna to the rig but the set-up will be very inefficient. This is because the

Rubber Duck is not the best antenna design, aeriels should be where possible outside and the increased possibility of a bad match between the rig and antenna. An SWR meter kept in line will help monitor this. The other possibility, without trying to sound too alarmist, is that since the 'radiation' from the antenna will be inside and may be very near people (which, incidentally, will also absorb the signal) and anyone with something like a heart pacemaker may be at risk. I realise this is an outside chance but I ought to mention it.

As for as operating with this set up in a car, the same things apply — only worse. It will be even more inefficient in a tin case as the metal body work of the car will attenuate the signal and there is the same possibility of a bad match and SWR. All in all, this is not recommended as a good way to run a station.

S A



Travellin' Man

A. F. Brown of Frinton-on-Sea in Essex has got a very unusual problem to cope with.

Q I have a Morris 1000 Traveller which is a positive earth. Having tried three different rigs in it, I get the same result — NOISE, when the engine is running. To block out the background noise the squelch has to set about threequarters of the way round. The noise is also transmitted to a lesser extent. I have suppressed the coil, dynamo and H.T. leads with no effect.

Could it be the ground plane i.e. screening of the twig cable being to a positive charged car body? Should I earth the rig casing?

The same gear fitted to my wife's Mini works fine.

A It's a good job you mentioned your car, or otherwise I would have only been able to make the standard suggestions for curing the noise. However if my car construction knowledge is correct, the Traveller is coachbuilt with separate steel panels joined to a wooden frame. Therefore the steel shell isn't continuous and the only earth is the bulkhead of the engine and chassis.

You need to run earth lines to the roof panels, all rear body panels, the bonnet and possibly the doors, using a decent gauge wire. Hopefully this should cure the problem!

S A

Three Of A Kind

These next three problems have a lot in common and the answer is intended as general advice for any breaker who experiences the same thing.

Q I have a G.A.P. half wave antenna and I seem to have an SWR problem.. I have to SWR the antenna quite frequently I don't know if it is working itself loose in the wind or something similar. Can you help?

Q I've had my Electronica Mark 2 up two days. It was all well and good until it got windy — or wet, then the needle only rig and SWR meter would go loopy with the reflected power as high as the forward. Received signals would go down at the same time.

All the joints seem solid and silicone rubber sealed. I made sure that the antenna was a sturdy one as I have had similar problems before. Why do none of my aeriels work?

Q When I got my rig, my Dad helped me set it up. We had great trouble getting a good SWR on a mobile rig so we bought a base antenna. This had a good SWR reading straight away. But now the SWR keep rising and we are constantly adjusting the antenna, although there doesn't seem to be anything wrong with it. Is it the SWR meter?



A If you come up against this problem there are some basic checks to make before you assume that there is something seriously amiss;

plugs, connectors and connections — undo and check soldering on antenna leads and connections and patch leads. When reconnecting, ensure that the plugs are fully pushed home and tightly done up.

check the weatherproofing and protection on the antenna, check the condition of the co-ax. If water has got into the co-ax through a poor connection or nick in the casing, the co-ax will be useless.

borrow a friend's SWR meter and confirm the readings that you are getting from your own. It's possible that your meter has sustained some damage that isn't obvious and is giving you totally false readings.

You must expect to check and possibly retune an antenna at regular intervals. When something is exposed to the elements for long periods of time it is not surprising that it should sometimes deteriorate.

S A

Ill-gotten Gain

Q I was wondering if you could help me with one particular problem. Reading through CB magazines and books I have come across the mystic word 'gain'. I understand that gain is an increase in RF power, but I am confused by the limit, if there is one, imposed by the government. If so, what is it? The Moonraker AK1000 for example has a 3dB gain and according to a certain book, that is an apparent doubling of power. If a rig runs 4 Watts output, then the AK1000 increases this to 8 Watts. The manufacturers say this antenna is legal — surely with 8 Watts this cannot be?

A Well, C. P. Mayo from Brentwood, we need to sort out a few basic definitions here. 'Gain' is simply 'amplification' so RF gain is a type of 'volume' control in the rig which amplifies the received signal from the antenna. There is no Government legislation on this control or figure.

The Government, in an attempt to restrict the efficiency of antennas and

therefore the 'interference potential' specified base loaded antennas with a limited whip length. Their reasoning was that with a transceiver output of 4 Watts the e.r.p. (effective radiated power — the amount of power actually transmitted after taking into account losses from transmitter inefficiency, connections and cable) will be about 2 Watts. The 3dB gain of the antenna is, in effect, doubling the e.r.p. It doesn't increase the power of the rig, just the ability of the antenna to radiate more power sideways instead of straight up.

Therefore the legal restriction on transmitter power output are not infringed at all. The antenna doesn't actually break any regulations either, although it goes against the Governments intentions. But that isn't a crime — yet!

S A

Standing Wave

Peter Webster has an unusual solution to his SWR problem.

Q I have a Commtron 40F and a 4' Firestik in my room and to get the SWR down without trimming the twig, I twist and move the co-ax. Like this I have got an SWR of 1:1.5 — will this damage the rig?

A The 1:1.5 match between the antenna and rig won't damage the rig, if that's what you mean. Anything below 1:3 is 'safe'. What worries me, though, is that this isn't a true reading but a freak result caused by the black magic of co-ax jiggling and that the true reading may be far higher.

I think it is a far more likely possibility that by co-incidence you have 'twisted' the co-ax into such a position that it is acting as a freak ground plane. I'm wary of saying any more as this is a bit outside my experience and without actually seeing the set up it's difficult to comment any further. I'm inclined to say that if you are getting good results then O.K.

S A

Problems should be sent to
CB Q & A, Citizens' Band
145 Charing Cross Road
London WC2H 0EE

SHARMAN'S WHOLESALE

3 BURY NEW ROAD, MANCHESTER M8 8FW
Tel: 061-834 9571 TELEX 665446 Sharma G

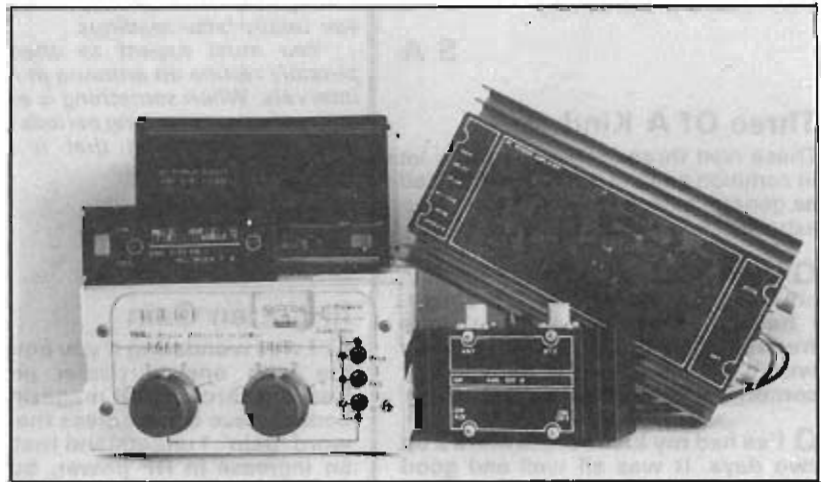


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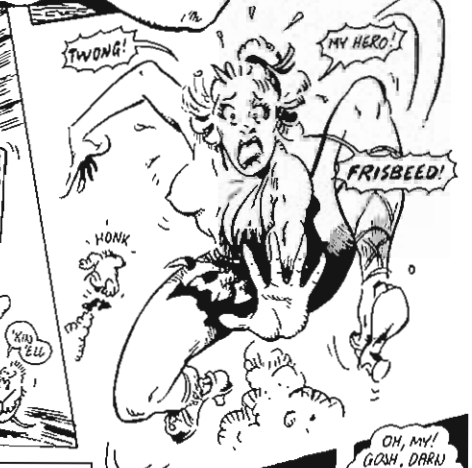


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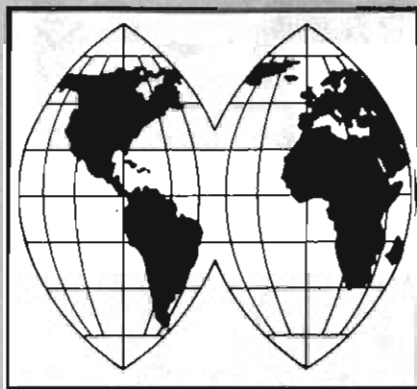
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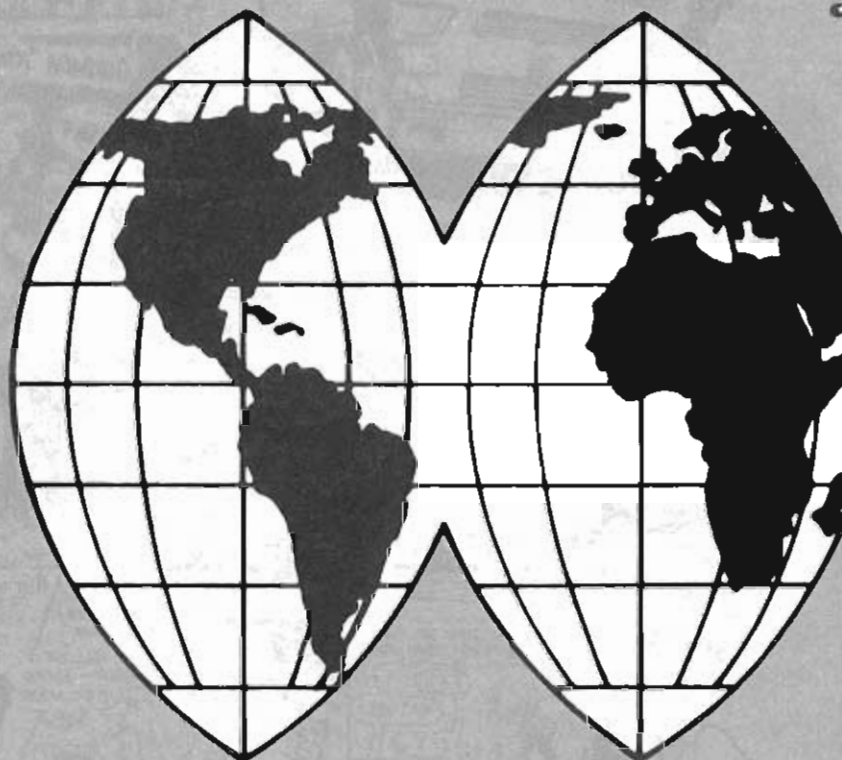


Feature



Sue Sharp takes a look at the world of short wave listening and international radio

LONG DISTANCE INFORMATION



For many people there is a particular fascination in listening to radio transmissions that have travelled hundreds or thousands of miles, especially if they originate from another country. Listeners are immediately whisked away from their own mundane surroundings to the home of the broadcast and its unfamiliar and exotic surroundings.

For some, particularly those who enjoy transmitting, this enjoyment of short wave listening is difficult to understand and it's easy to regard it as a 'passive' interest in radio. Short wave listeners (SWL) would be quick to deny this, as it's not only escapism that motivates them, but technical knowledge, practical ability and great pride in their radio equipment.

Why Short Wave?

Quite simply, the technical characteristics of short wave are such

that signals will travel a great distance and stay 'receivable' thousands of miles away. This means that signals from short wave broadcast stations and amateur radio transmissions can be received by radio equipment many miles from its intended audience or recipient (although, of course, short wave is deliberately used for international coverage).

Not all long distance listeners restrict themselves to short wave — there are many who also listen to medium wave broadcast bands from abroad, tune into DX television and the range of amateur radio frequencies at home and abroad.

It doesn't cost anything to be a DX listener, as the radio receiving licence was abolished some years ago when it was combined with the television licence. Many listeners join the Radio Society of Great Britain, as apart from the normal benefits of subscription to RadComm, technical advice and support, discount on publications, etc.,

membership includes use of the QSL bureau (more of this later) and a BRS (British Receiving Station) number which can be used for reception reports, etc. This number is unique to the individual and will not be reissued, even if the holder discontinues his hobby or goes on to become a licensed user. Strictly speaking, the number is allocated for administration purposes but many listeners use it as a recognition and identification number.

Broadcast Stations

Short wave listeners can be overwhelmed with the number of stations that broadcast in the 2300kHz region and many concentrate their efforts on stations in individual

details on programming, if available.

Some countries also do specific DX Programmes for enthusiasts and there are also clubs and newsletters for the socially minded.

For those who want more information, especially on identifications of stations and an up-to-date view of the world radio scene, the World Radio and TV Handbook cannot be too strongly recommended. This directory of international radio and television runs to several hundred pages and is the 'Bible' for broadcast SWL's.

Listening to Amateur Radio

Lots of listeners who specialise in listening to British and international

obtained from the RSGB publication, Amateur Radio Awards.

SWL's and DX listeners often have their own QSL cards for sending reception reports to amateur radio operators or station managers. This can be a very expensive business — not only in printing costs but in mailing out to the various recipients. The RSGB, in common with many other national radio societies, runs a QSL bureau (free to its members) which will forward batches of cards to the QSL bureau managers of other countries, who in turn forward cards on to individuals. This obviously not the quickest way of mailing cards but is often the cheapest. Unfortunately, reception reports to short wave broadcast stations cannot be sent by this method.

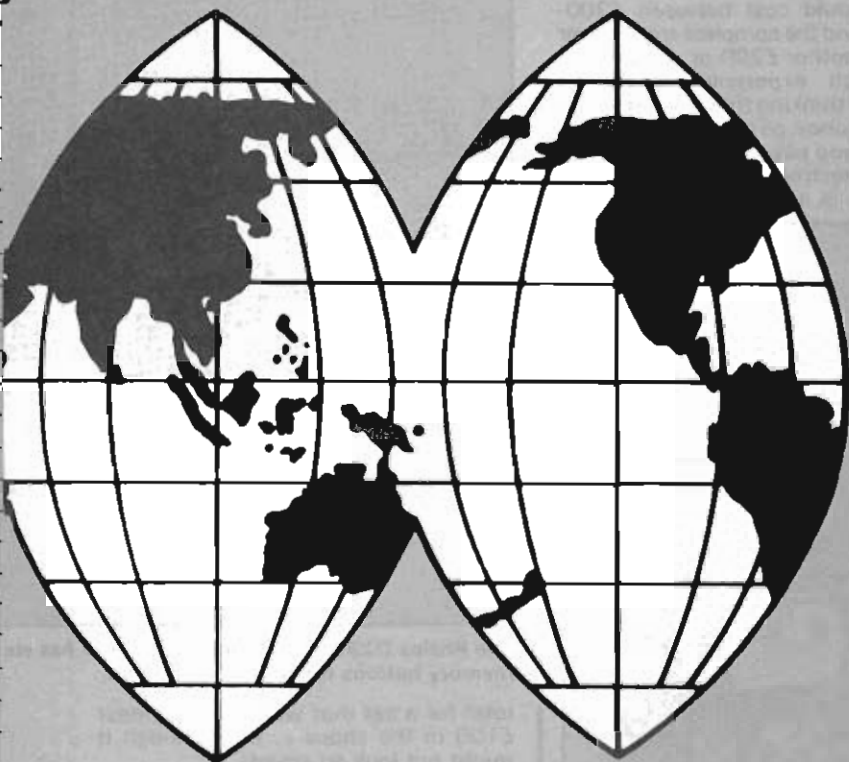
Equipment

For many people, their introduction to other areas of radio is through tuning around the frequencies on their domestic radio. Quite often this will pick up tantalizing glimpses of foreign stations and a whole world of broadcasting beyond Radio 1. Unfortunately, it's unlikely that it will do more than pick up glimpses!

For somebody showing serious interest in short wave and DX listening there are three alternatives:

- 1) To buy a sophisticated version of the domestic radio, which covers a broader range of frequencies. These are available from well-recognized names in consumer electronics such as Philips, Sony, Grundig, etc, and cost between

A typical listing from the Amateur Radio awards, an RSGB publication.



frequency bands, countries or other such qualifying factors.

Obviously many of the stations are broadcasting to their own national listeners but there are services like the BBC World Service, the Voice of America and Communist bloc stations that broadcast internationally for information, political or propaganda purposes.

These stations can be particularly interesting to listen to, especially as they can give quite different political interpretations of the same event!

Almost all stations are pleased to receive reception reports from international listeners, as this is positive proof that their transmissions are being received and are up to standard. Reception reports are usually replied to with a confirmation but to ensure this, it is necessary to send as complete a report as possible, giving details of time, date, frequencies, music or programme heard, station identification and

amateur radio transmissions concentrate on working for particular awards or listening to and identifying rare or unusual stations. These SWL's also send reception reports — more usually in the form of QSL cards, also confirming date, time, frequencies and, sometimes, details of the transmission to help verification. These usually prompt a return QSL from the operators involved.

There are a vast number of awards available from the various national radio organisations for special achievements in receiving (with confirmation) amateur radio transmission in specific areas or countries. These are listed by country and a typical entry is shown on the right.

There are a number of British awards, including special SW awards, like the DX listeners' century award which is given for confirmation of QSL's from 100 countries in the RSGB countries list. More information can be

Belgium

WABP AWARD

General

1. The award is available to licensed amateurs and swis.
2. There is no date limit.
3. Do not send QSL cards. A list showing full details of the contacts should be certified by the awards manager of a national society.
4. Any bands and modes may be used.
5. The fee for the award is five francs.
6. The address for applications is:

ON5TO,
UBA Awards Manager,
PO Box 634,
Brussels, Belgium.

Requirements

Confirmed contacts are required with each of the nine provinces on two bands.

PROVINCES FOR WABP AWARD

WV	West Flanders	LX	Luxembourg
OV	East Flanders	NR	Namur
AN	Aniwerp	HT	Hainaut
LM	Limburg	BT	Brabant
LG	Liege		



£50 and £400. It's perhaps unfair to class the Grundig Satellit range in this category; particularly the 3400 model as it costs around £400 and it doesn't bear much resemblance to my old tranny at all!

These sets have the advantage of being more streamlined and are more 'presentable' to have sitting on a sideboard or table. However, although these low-priced receivers are a good introduction to the novice, they have two main disadvantages:

- (a) the cheaper ones don't have the very specialized short wave circuitry for very precise tuning and reception and
- (b) there isn't usually a provision for a separate antenna connection. This can be an important point as, obviously, a good antenna is one of the main components for good reception and the combination of a cheap receiver and a good antenna can equal the performance of a much more expensive receiver.

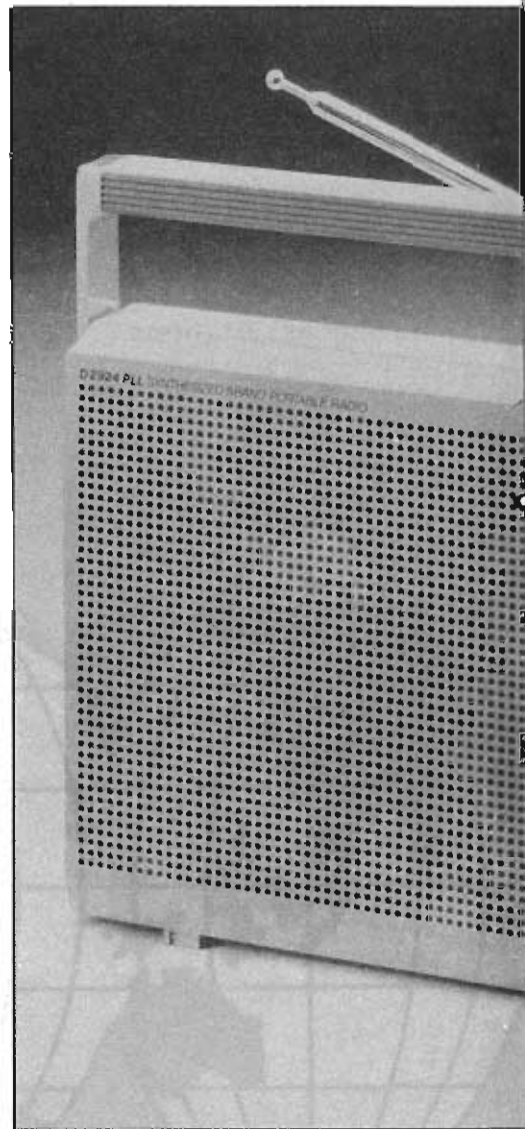
need plenty of space — besides not being very attractive to look at. They do represent good value for money though and there are still spares and replacement parts available.

More modern second-hand equipment, like the Yaesu FRG 7, can be picked up for about £150.

This is a good starting place for the very interested listener on a restricted budget.

- 3) The third alternative is a full-blown communications receiver with one of the famous amateur radio names, like Icom, Trio, etc. These are very expensive and if you are hoping to go on to be a licenced amateur they don't necessarily represent best value for money, as the receiver on its own could cost between £300-£800 and the complete transceiver only another £200 or more.

Although expensive, don't be misled into thinking they are not worth the extra money, as the old adage "you gets what you pays for" usually holds good for electronics and this sort of equipment is usually the long-term



The Philips D2924 costs under £100 and has six memory buttons for stored frequencies.

total for a set that would cost at least £100 in the shops — even though it might not look so smart.

It must be emphasized that the antenna can make or break the system. A long length of wire down the garden with a good earth will give better results than a telescopic antenna on most sets.

Where To Go

The RSGB (current membership costs £14.50 annually) caters for the interests of all radio enthusiasts and will usually readily offer help to the short wave or DX listener. It will advise on technical matters and can invariably put you in touch with someone or a publication who can offer further help if required.

Equipment hunting can be approached in several different ways. New equipment at the lower end of the scale can either be found in large electrical stores or traced through the appropriate company's catalogue.

Secondhand equipment can be obtained through amateur radio shops, the classified columns of radio and electronics magazines, radio club



The Grundig Satellit 1400. Digital frequency readout and covers 1.6 to 28 MHz. Approx £250.

- 2) There is quite a selection of second-hand equipment, ranging from army surplus to more recent equipment that the original purchaser has replaced.

Some of the early military equipment, like the AR88, can be picked up from £40 upwards, as can other well recognised 'abbreviations' like the RA17, the CR100 and the PCR3. These are very cumbersome though and will

ambition of many short wave listeners. It is designed and manufactured to a high standard and is intended to pick up those frustratingly-weak signals.

There is in fact a fourth alternative and this is to build a short-wave receiver. There are many good, simple receiver designs and this would also give the constructor an insight into how a receiver works and its capabilities. The individual components could cost about £20 in



'swap shops' or equivalent or, occasionally, through publications like Exchange and Mart. New equipment is always lavishly advertised in amateur radio publications and, of course, amateur radio shops have a range on display or to order.

Reading electronics or radio publications is usually very helpful, either for equipment or circuit designs and because they feature broadcast reception columns for SWL's, giving forecasts on expected reception conditions for the rare-station-chaser.

Useful Addresses And Further Information

The World Radio TV Handbook is published by Billboard Ltd., with a Danish editor and editorial address. It can be purchased from the RSGB and some other booksellers — the 1982 edition cost £9.95. Not cheap but invaluable. The Amateur Radio Awards handbook is published by and obtainable from the RSGB also.

The RSGB has moved address and can now be reached at Alma House, Cranbourne Road, Potters Bar, Herts, EN6 3JW.

There is a range of publications for the amateur radio user that contain useful information for the listener.

Past editions of Ham Radio Today (a sister publication to Citizens' Band) have featured articles on the mechanics of both HF and VHF propagation and the December issue had an in-depth look at DX propagation on the lower shortwave frequencies. RadComm, published by the RSGB, and Practical Wireless also have articles on expected radio conditions, broadcast bands and the principles of reception and antenna design. All these publications will also have information on equipment for sale.

The World Radio TV Handbook has listings for DX clubs and associations covering the world. Useful British addresses are:

The European DX Council, P.O. Box

The Trio R600 covers 150 KHz to 30 MHz in 30 bands, and has two built-in IF filters. Cost about £290.

4, St. Ives, Huntingdon, PE17 4FT. This is the umbrella organisation for DX clubs throughout Europe, publishes a newsletter and holds annual conferences.

The British DX Club (BDXC-GB) of 55 Boundary Road, Worthing, Sussex, BN11 4LL, has an international as well as British membership and publishes 'Communication' monthly.

The DX Association of Great Britain can be contacted at Five Acres, Whiteditch Lane, Newport, Saffron Walden, Essex, CB11 3UD, the Medium Wave Circle at 7 The Avenue, York, YO3 6AS and the World DX Club at 17 Motpur Drive, Northampton, NN2 6LY. This last group publishes 'Contact' monthly.



36th Edition

WORLD RADIO TV HANDBOOK

The Authority on International Radio and Television

UNITED STATES OF AMERICA

L.T.: See World Time Table—Pr.L: English

VOICE OF AMERICA (Gov.)
THE VOICE OF AMERICA is the Broadcasting Service of the US International Communication Agency. The VOA seeks to improve the world and to strengthen co-operative international relations.
ADDR: Voice of America, US International Communication Agency, Washington DC 20541
L.P. Dir: US International Communication Agency, Charles Z. Work, Dir. Broadcast Sec: James B. Conline, Dep. Dir. Prog. Coord: George Chief, Financial Officer: Mrs. Anna L. Case
STATIONS: Call letters not used.
Greenville, Pa.: 222W, 23.32K, Bethany 86.21W, 31.21K, Detroit 119.17W, 31.45K, Marathon 81.05W, 31.42K
East Coast Stations: "Some are operated by the USIA."
MHz kHz kHz kHz kHz kHz
 6020 9245 11715 15150 15270 17785 21550
 6020 9215 11715 15150 15270 17785 21550
 6080 9500 11730 15165 17715 1885 21615
 6125 9615 11730 15175 17730 1780 21670
 8125 9630 11850 15205 17740 21460 21480
 8130 9630 11850 15205 17740 21460 21480
 8190 9745 11805 15210 17775 21540 24040
West Coast Station: Delano
MHz kHz kHz kHz kHz kHz
 6075 9465 11745 15185 15420 17740 21495
 6125 9640 11850 15230 17750 21460 21745
 6180 9750 11850 15240 17755 21570 25675

ANN: Station identifiers as announced in English. **Y** is the beginning and conclusion of transmissions and with programs.

RELAY STATIONS: For lists of relay stations, refer to the individual countries: Angola, Botswana, Germany, United Kingdom, Greece, Liberia, Morocco, Philippines, Sri Lanka.

ANN: This is the Voice of America. It is announced in the language of the program or a guest and in English.

INT-50: Mutual signature. **YANKEE DODDLE** is played at the beginning and conclusion of transmissions and with programs.

PUB: Prog. schedule available upon request—V. by CSL card

PROGRAMS IN ENGLISH
 Nov. 1981 11:00-11:30 AM
To Europe
 0300-0700 9770 0500-0700 9675
 0300-0700 9670 0500-0700 9675
 0300-0700 7329
 0300-0700 7200 1700-2200 6060
 0300-0700 6060 2000-2200 6060
 0400-0700 6040 1700-2200 6040
 0500-0700 5995 1700-1900 5995

PROGRAMS IN OTHER LANGUAGES
To EUROPE
 Albanian 12785 1600-1800 15205
 15205

USA 263

To East, Central & South Africa
 1800-2300 21660 1500-1900 15395
 1800-2300 17670 1500-1900 15395
 1900-2300 13440 1300-1900 15100
 1730-2200 9370 1300-1900 15100
 1730-2200 629 1300-1900 15100
 0600-0700 1500-1900 6180
 0600-0700 1500-1900 5930
 0600-0700 1500-1900 6045
 0600-0700 1500-1900 7125
 0600-0700 1500-1900 7195
 0600-0700 1500-1900 6110
 0600-0700 1500-1900 5075

To West Africa
 0600-0700 1500-1900 5930
 0600-0700 1500-1900 6045
 0600-0700 1500-1900 7125
 0600-0700 1500-1900 7195
 0600-0700 1500-1900 6110
 0600-0700 1500-1900 5075

To Southeast Asia
 0600-0700 1500-1900 5930
 0600-0700 1500-1900 6045
 0600-0700 1500-1900 7125
 0600-0700 1500-1900 7195
 0600-0700 1500-1900 6110
 0600-0700 1500-1900 5075

To South Asia
 0600-0700 1500-1900 5930
 0600-0700 1500-1900 6045
 0600-0700 1500-1900 7125
 0600-0700 1500-1900 7195
 0600-0700 1500-1900 6110
 0600-0700 1500-1900 5075

To Latin America
 0600-0700 1500-1900 5930
 0600-0700 1500-1900 6045
 0600-0700 1500-1900 7125
 0600-0700 1500-1900 7195
 0600-0700 1500-1900 6110
 0600-0700 1500-1900 5075

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CB Magazine JUNE 1983

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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

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Marathon copies have fast become one of the biggest charity fund raisers in the CB field.

MARATHON MAN

Many clubs and groups of breakers are raising large sums of money for different causes by marathons or sponsored 'modulations'. They are justifiably proud of their efforts, as these events take a lot of organising, but often the participants are unsure of how long they have to go on before they beat any previous record attempts.

Both clubs and Citizens' Band magazine have contacted Guinness Superlatives to enquire about an entry in a forthcoming Guinness Book of Records. The publishers are keen to list a CB record but feel that until there are widely agreed ground rules and sufficient verification material to ensure accuracy, they can't do a lot about it. And, as they admit with great honesty, they know nothing about CB so they aren't in a position to verify any record attempt.

There are two types of marathon event. The first is an endurance event — simply, to do the longest event of it's type. The second is try for the most copies within a specified time. Either of these can give an aggregate score, e.g. 30 an hour. Both types can be done by individuals or relay teams, although this will obviously give different final results.

It remains to be seen which type establishes itself as the standard, although I think it's likely that the endurance record set by a team will be the most popular.

In an attempt to get a recognised and accepted standard we'd like to hear from clubs or groups of breakers that have taken part in a recordbreaking or sponsored marathon, with a view to establishing some ground rules and an entry in the Guinness Book of Records.

To start things off, Tim Beaumont of Kenilworth in Warwickshire and five friends held a sponsored endurance modulation, which resulted in a 168 hour modulation and £308 raised for a local mini bus appeal. Copies came from as far afield as Scotland, Kent and South Wales. We'd like to hear from anyone that has done better than that. Be warned — if we don't hear anything, we will be telling Guinness Superlatives that, as far as we are concerned, that's the record.

Some Rules

Two sets of rules, or suggestions really, one from us and one from Guinness.

The editorial staff at Guinness point out:

(a) Organisers of any event which involves long periods without sleep should seek medical advice before and during the event.

(b) Records that are qualified by age or a similar factor are not really suitable for a general reference book like the Guinness Book of Records.

(c) People hoping to claim a record should send independent evidence (that's where Citizens' Band comes in) of their efforts. This could include local or national newspaper cuttings, TV coverage reports or similar media reports.

(d) It is very important that there is signed authentication by independent adult witnesses or representatives of organisations of standing in their community. Signed logs books should show constant surveillance of the events.

(e) Five minutes rest period must be permitted after each hour, even in 'non-stop' marathon events. These rest periods can be 'saved up' to give, for example, a fifteen minute break after three hours.

Citizens' Band magazine also suggests that:

(1) Suitable authentication could be given by club committee members, the chairman of local monitoring services, people associated with the charity concerned if it is a charitable event or members of local Round Table clubs etc.

(2) Numbers of copies are not boosted by repeating contacts with the same individual.

(3) That very young breakers are not involved, particularly in endurance events.

(4) That operating and procedural rules are sorted out in detail and agreed with those participating well in advance of the event.

We would be pleased to receive copies of rules already drawn up by clubs for similar events.

So, send in your details and let's get something in the next edition of the Guinness Book of Records.

CB

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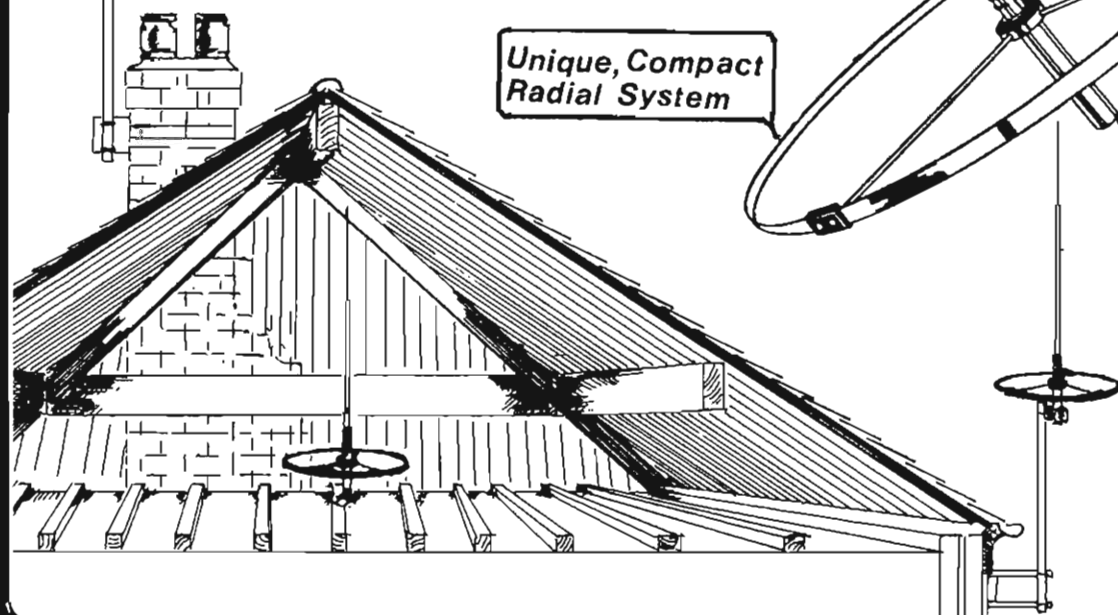
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A
RIG!

Win a Uniace 100 in
this free to enter
competition

COMPETITION

Going by the amount of answers we had to the Mustang competition, you all enjoy turning your talents to writing captions. So much so that we are going to sharpen up your wit after the excesses of the holiday season by asking for another one, this time to the photo featuring Polly, below.

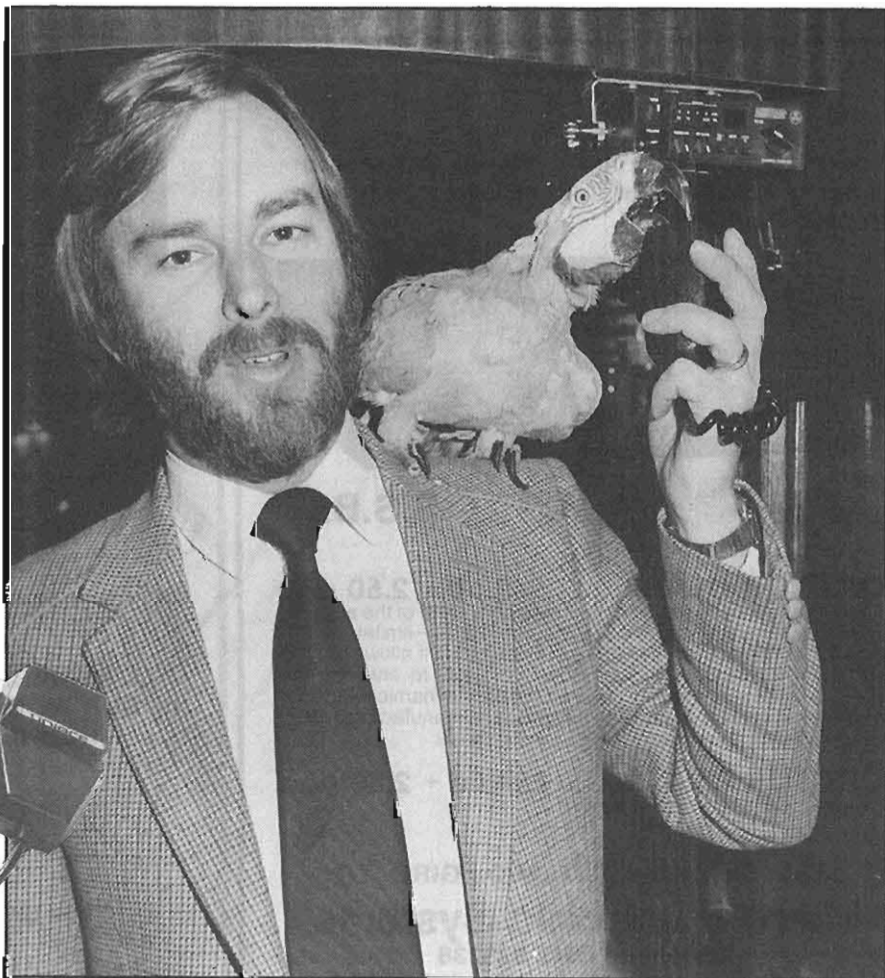
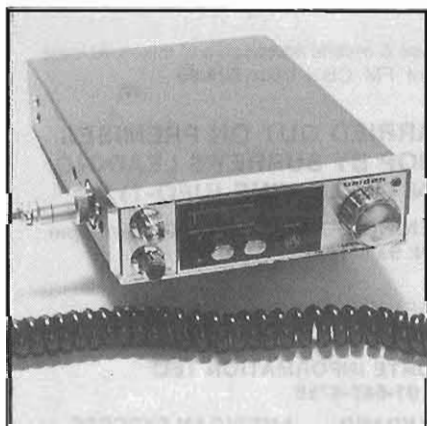
As you can see, Polly is perched comfortably on the shoulder of publican Roger Burston (he's got the right name, but actually the parrot is called Jim) at the Phoenix pub in Chelsea. And, right, you've guessed it, we want you to write a witty, apt, pertinent, appropriate etc., etc. and non-smutty caption to the photo. To cut down the scope a little, what do you think the parrot is saying into the microphone which Roger is holding up for him?

Answers, as usual, on a post card please and include your own name and address. It's no good thinking up the funniest caption ever and we don't know where to send the prize, is it? Post cards must be received in this office by second post, Friday the 20th January. Bribes to the editor—either money or crawling comments on the magazine are gratefully received but will make no difference whatsoever to the result.

The rules are below in the smallest type we could find. A free magnifying glass will be given away in next month's issue!

Rules.

No employees of A.S.P. Ltd. are allowed to enter. All entries must arrive by second post, Friday 20th January. The editor's decision is final and no correspondence will be entered into. Answers must be on a post card or sealed envelope and posted to: January Caption Competition, Citizen's Band, A.S.P. Ltd, 145 Charing Cross Road, London, WC2H 0EE.



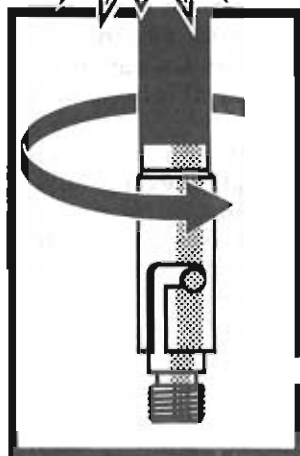
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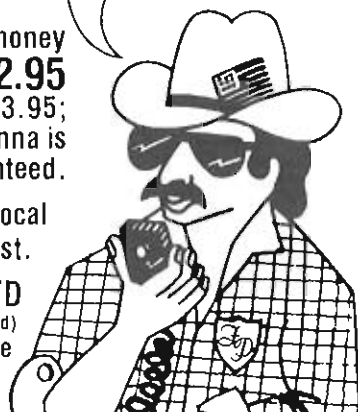
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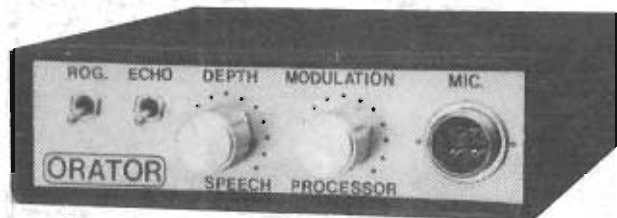
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**Filly's family visit
and have a strange
effect on the local
air waves.**

LADY BREAKERS

I was being driven mad a week or two ago by a wretched button pusher, blocking out my favourite channel. I don't know why people do it. I've had people playing music over the air which is irritating enough, but this was just silence for minutes on end. A novice with mike fright? A pig-headed idiot?

Not that I'm one to talk, I must confess. I caught myself doing it once, sitting in a 10 mile tailback on the M1 clutching the mike and staring into space. I don't know how long I was holding the button in, but as it was channel 14 I made myself really popular, as you can imagine.

Talking of button pushing . . . shall I tell you or shan't I? This is one incident I much prefer to forget — I still wake up sweating in the middle of the night, dreaming of it. One of those occasions when you wish for nothing better than for a large and very deep black hole to open up beneath your feet, or your car if you happen to be in it, and swallow you up. Whole.

A few weeks ago, you see, my family descended upon us for a short stay, one of those little trials we all have to bear. They're all right really — I suppose — a trifle eccentric, perhaps, But this time they really excelled themselves.

My husband had disappeared somewhere into the woodwork at first sign of the family car, leaving me completely in the lurch. Within two hours, we had exhausted coffee, the photograph albums, the cat's health, my sister's unsuitable engagement (to a busker), and the state of the garden, and were sitting there with sickly grins wondering what to do next. At which point my little brother discovered my base station in the next room.

None of them had ever seen a CB radio before, so in they all trooped to have a look. They gave me a few funny looks too — I discovered later that they were convinced only American truck drivers/hippies/drug addicts/down-and-outs used the things. But after they had listened to a few channels for a bit, they came to the conclusion that it was perfectly respectable, not to say mundane, and seemed to forget all about it.

Later on, heaven help me, I left them alone in the house while I dashed out in the car to get some milk. And then it happened. Waiting at some traffic lights, I switched on the rig and flicked through the channels and — was that my father's voice? No, couldn't be. Could it? I went back to the channel.

"It seemed simple enough when

she showed us", said my father's unmistakable voice, horribly loud and clear. "I can't understand why we don't hear anything". Oh no, I thought. He's picked up the mike and pressed the button.

"If *she* can do it, I can", said my delightful brother, somewhere in the background. There was silence for a moment, and I thought, thank God, they've put the mike down. Then I heard my mother. "I really don't think you should touch it", she said, anxiously. "Rubbish, it's not even working", said my brother. "Trust her to get hooked on something as stupid as this. What is it they say? Er — calling all good buddies, got yer ears on? What a load of old rubbish."

Sitting there paralyzed, staring in horrid fascination at the rig, I became aware of a lot of noise, like angry car horns . . . heavens, the lights were green! I shot forward, stalled, panicked, restarted and headed for home. *I'll strangle them!* I resolved, *with my bare hands!*

It was like a nightmare. Those terrible voices went on and on. "Why should I stop? She'll never know."

"I'm sure she will, and she was always an excitable little thing" (my grandmother).

"Are you quite sure that button is safe to press? (my father).

"Well, it's not doing anything". "Yes it is, you little monster!" I shrieked at the rig, and grinned feebly at the passerby who jumped three feet, nearly throttling her dog. I turned a corner, and tore up the hill towards home.

"Anyway, I thought this was illegal? Should the naughty girl have one at all?" (my grandmother).

"She'd never do anything illegal", (my brother, with contempt).

"She's far too wet". At which point I screeched to a halt, leapt out of the Mini, fell back into the seat, flung off the seat belt, raced round to the back door, tripped over the cat, dropped the milk, burst into the front room like an avenging Fury — only to find them all sitting innocently watching the telly as though they'd never heard of Citizens Band Radio.

And to this day they will not believe that they could have been heard arguing and bickering for miles around. Simply will not believe that merely pushing that button had allowed them to transmit ("yes, dear, but we weren't speaking the right language, surely?").

And you can stop laughing, it could happen to you. It's like they say — you can choose your friends . . .

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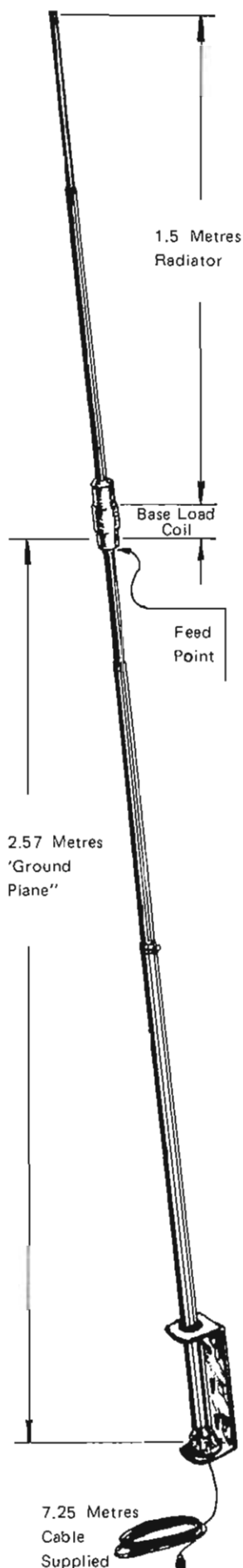
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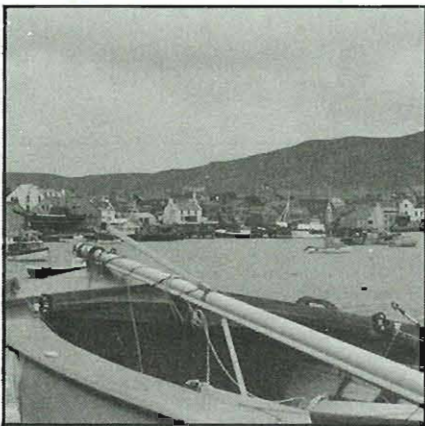


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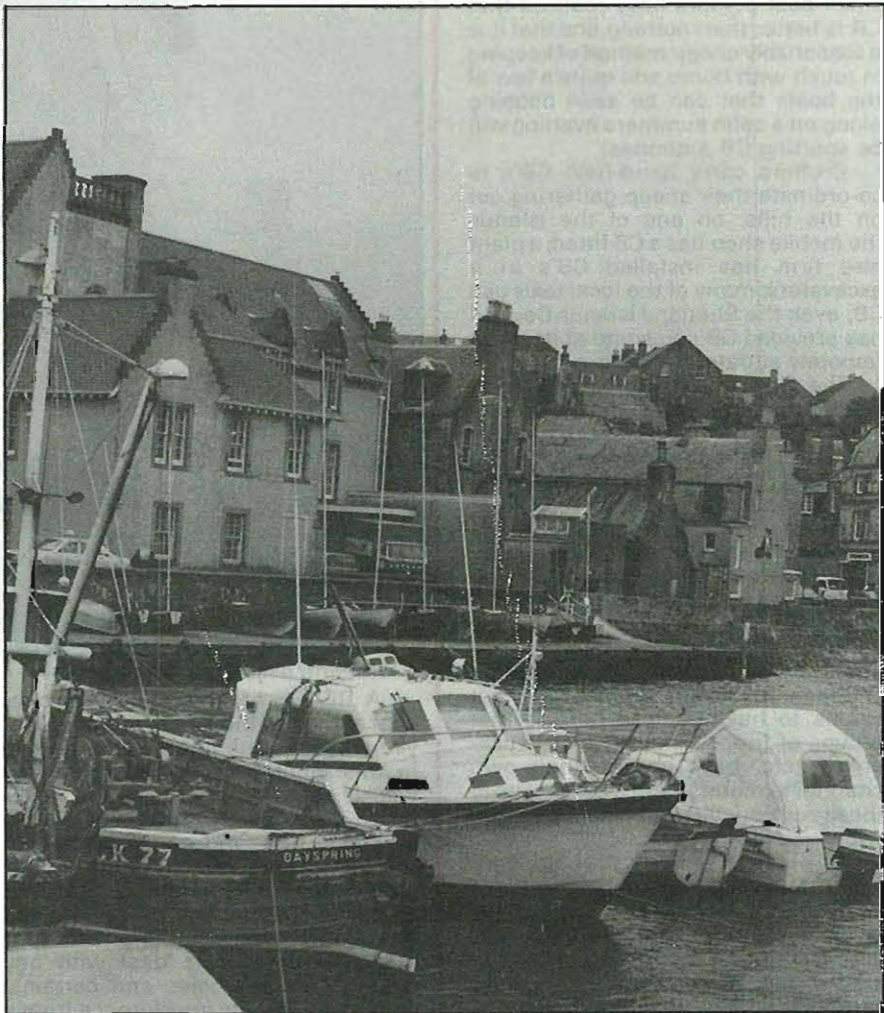
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HANDS ACROSS THE WATER



Those of us who live in built-up areas forget what CB can be like for those who live in more rural surroundings. Here's a reminder from the Shetland Isles.



Shetland is usually shown on maps floating in a box off the East Coast of Scotland. This causes some confusion over its real position. Lerwick, the main town, is actually 220 miles NNE of Aberdeen and the same distance from Bergen. The 16 major islands of the group cover an area of 540 square miles and support a population of approximately 23,000. Four of the islands are connected to the Shetland mainland by road bridges, the rest rely on the Councils inter-island ferries or on Loganairs internal air service. In this isolated community Citizens Band has become an invaluable communication aid.

In the old AM days CB was a toy with a bad reputation and the increasing use of dreadful American jargon did nothing to improve the situation, but it was fun being a 'pirate' and there were a great many people using the frequency. A Home Office raid in 1981, which resulted in several prosecutions, quickly cooled the

excitement however and although the fine for those who pleaded guilty was only £10 the majority of AM rigs were safely hidden away, never again to see the light of day.

Everyone looked towards November 1981 with some excitement, for at last our hobby would be legal, but also with some disappointment for CB magazines reported that 4W FM CB would be "useless, unattractive and expensive" (Breaker, Oct. 81) with local transmitting ranges of about 5 miles and DXing being impossible. How wrong they were! 25 miles mobile to mobile is easily accomplished and as for DXing, well the local record is 1800 miles!

As the usefulness of CB becomes more apparent the number of users increases and the social stigma previously attached to its use has now completely disappeared.

On these isolated and rural islands, where ones nearest neighbour may be several mile away and where one can



travel great distances without meeting another vehicle an instant communications system like CB can be quite a comfort.

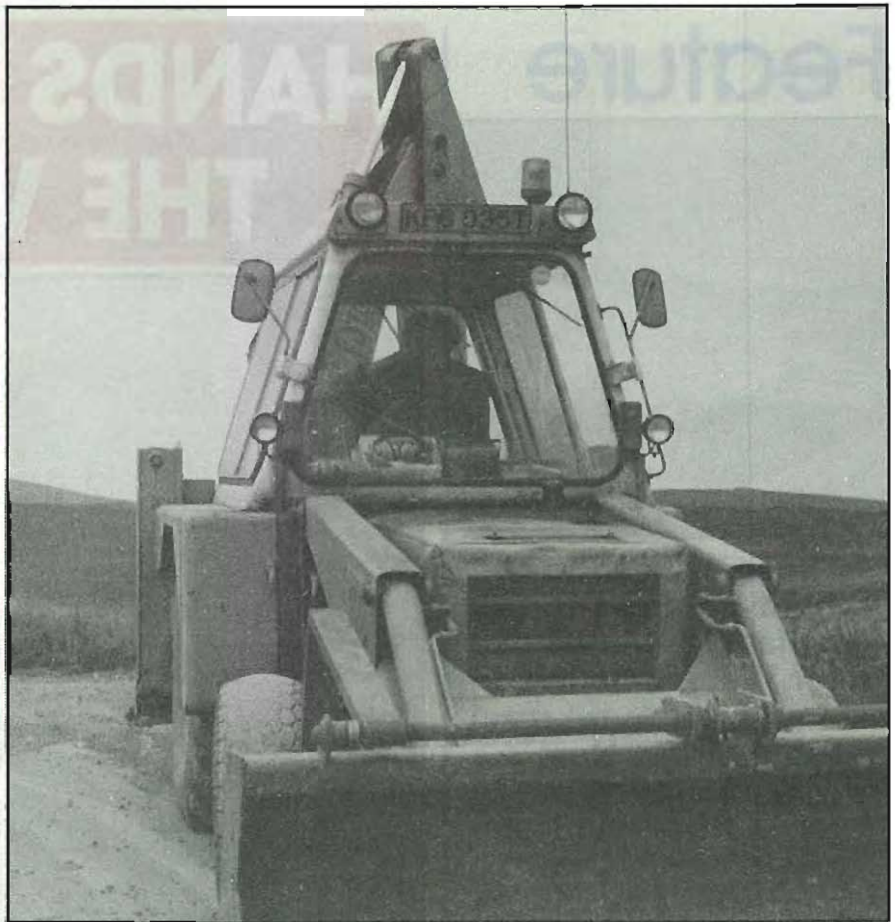
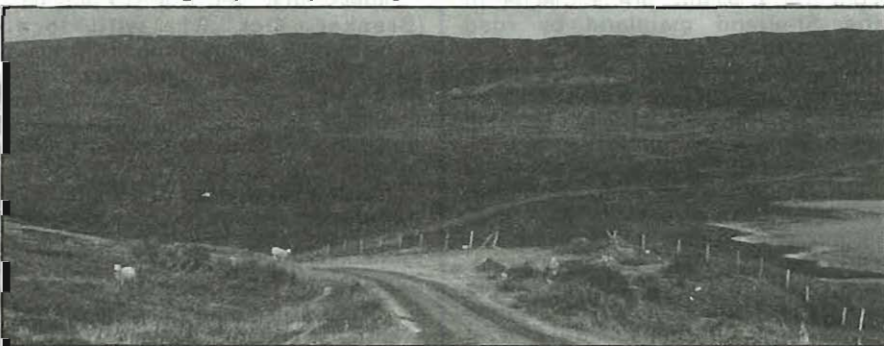
Comforting, too, for the many wives whose husbands are away fishing. Many fishing boats now have CB's fitted alongside their marine VHF radios in order that they can chat to their families on shore. Although CB is no substitute for marine radio many small boat owners have realised that CB is better than nothing and that it is a reasonably cheap method of keeping in touch with home and quite a few of the boats that can be seen bobbing along on a calm summers evening will be sporting CB antennas.

Crofters carry hand-held CB's to co-ordinate their sheep gathering out on the hills; on one of the islands the mobile shop has a CB fitted; a plant hire firm has installed CB's in its excavators: many of the local taxis use CB; even the Shetland Islands Council has provided CB's in some of its more remotely situated vehicles.

The first thing you would notice about Shetland CB is that it is very quiet. We do not have an endless stream of calls on Channel 14. One call every 5 minutes or so would be seen as an extremely busy time. This may sound rather boring to those who are used to the babble of a big city but a search through the channels will usually find two or three in use at most time of the day — from 6am through to 2am the following day. How do they get together without going through channel 14? Well, the system that seems to have evolved here is that groups of friends, housewives, truck-drivers etc. have chosen their own channel to monitor and a call on one of these will usually find someone to chat with.

Secondly, Shetland CBers are very polite, but then there aren't a great many of us so I suppose we can afford to be. This is especially noticable during DXing. A Shetland breaker will always ask if someone is using a particular channel before making a call and if there is then the enquirer will move away. One person per channel during DX is the rule. On the UK mainland I presume that everybody must be competing for airspace and that even for local copys amplifiers and illegal antennas are being used. Here in Shetland here is no need for such things. A base loaded 1.5m antenna and a 4w rig is quite sufficient for most requirements.

You can be a long way from your neighbour in the Shetlands.



A local firm uses CB in its excavators.

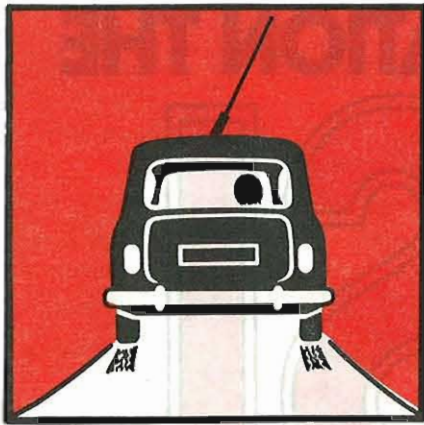
A REACT organiser made a brief appearance on the airwaves a couple of years ago, but no interest was shown in this whatsoever and after a few weekly weather reports he was never heard from again. This was hardly surprising. The thought of paying for the privilege of listening to a permanently quiet channel does not appeal to anyone. The Police, Fire and Ambulance services here are well enough equipped to deal with any potential emergencies and certainly do not require any interference from a 'para-medical' organisation. It has been suggested to the local Police that they should install a base station at their Lerwick HQ. The Police station is manned 24 hours a day so having a CB permanently tuned to channel 9 on the off-chance that a call might come through would be no hardship. If an emergency did arise I think most people would probably shout on 14 anyway.

Several attempts were made to form CB clubs prior to 1982 but lack of organisation led to their early decline and eventual disappearance. During the first few months of 1982 the Lima Charlie DX Group was formed. This was limited to Shetland Islands Council employees to simplify such organisational problems but its obvious success and the success of two further radio clubs — the Yell Radio Club and 60° North Breakers — showed that a club was badly needed by CBers on the mainland of Shetland and this led to the formation of the Viking Radio DX & QSL Club. 80



people joined within the first four weeks and, since offering membership to CBers world-wide membership has jumped to almost 400 and it has gained a very good reputation.

Obviously CB has made a great impact in Shetland and the polite, considerate and intelligent use of the channels has surprised many a visitor from the south.



Have you ever woken up and, even before you've got out of bed, had an uneasy feeling . . .

PLUTOS PROGRESS

Did you ever have one of those days? Mine started that morning when my twig fell down.

I was on my way to work, earwigging on the one-nine as usual. Some unmusical moron was piping pop music in to the channel and a couple of breakers were reacting in just the way he wanted them to.

I was just feeling sympathy for the breakers and contemptuous pity for the wallie when my twig fell across the windscreen and instinctively I slammed on the brakes.

The car coming towards me, not seeing the reason for an emergency stop, decided to stop also, just in case. This caused the lorry behind him to bump into his rear.

There was no damage but as the gentle voiced lorry driver opened his door to jump down he nearly hit a cyclist.

The cyclist swerved and ran over the lead connecting a pekinese to a lady who looked like Giles' grandmother. The pekinese bit him and the lady hit him on the head with her umbrella.

A passing poodle added his voice to the melee. This startled a cat which ran up the nearest tree. Unfortunately it wasn't a tree but the leg of a man who ejaculated an

oath which made the lorry driver stop and stare.

The cat continued up the vicar's leg to his shoulders and from there jumped over a fence into a front garden.

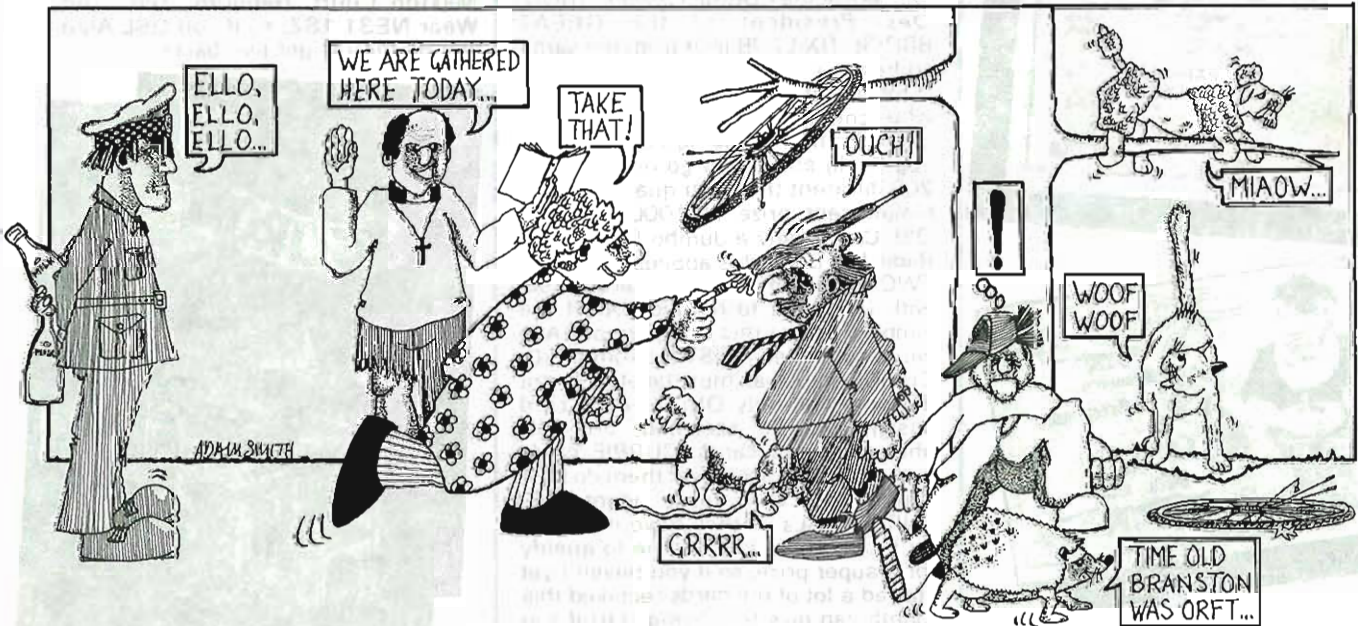
The owner, who was not a cat lover, was just putting out the milk bottles, so he threw one at the cat.

The milk bottle ricocheted off a fence post, passed through the open back of a milk float and into the open window of a police car.

At this point I decided that, like a true Englishman I did not want to become involved.

As I drove away the two policemen were explaining to a bewildered, beturbanned milkman that throwing milk bottles at the police was not good for race relations; the man at the door had gone in to make a cup of tea; the lorry driver was back in his cab using his duplicate key on the tachograph; the poodle was disappearing over the horizon pursued by the cat; the vicar had one trouser leg rolled up and was examining the punctures in his leg; the cyclist was sitting in the road with his chin in his hands, the pekinese was sitting in his lap licking his face and the lady was still hitting him on the head with the remains of her umbrella.

Life is never dull when you have a CB.





COMMUNICATION THE

QSL WAY

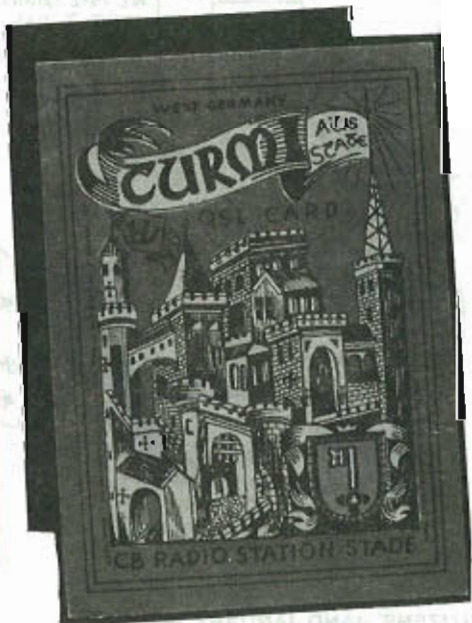
A very happy New Year to your all, I sincerely trust you did not suffer too much from the festivities and it's after-effects, and before I forget thanks to all those of you for your Cards and good wishes, of course these are heartily reciprocated. We all had a great time here, although I didn't get that rig our Editor Sue was supposed to buy me for Christmas, — it was only twelve hundred quid — some people are mean aren't they?

This month is going to be something of a hotch-pot of bits and pieces as there is quite a lot to include.

Well, it's certainly take-over time by Des Currie Printers, of 89, Derwent Street, Consett, Co. Durham DH8 8LT, we have had literally dozens of new CURRIE QSL CARDS arrive this month, poor old Des must be working real hard, hope you managed to get a short holiday in, Des. We are still awaiting news of the first winners of the CURRIE COMPETITION. Des, President of the GREAT BRITISH DX CLUB (run from the same address) is currently running a super competition for the first FIVE QSLers who collect 100 different CURRIE CARDS, (the prize being a Currie Radio Log Book) and if you go on to collect 200 different then you qualify for the magnificent prize of 1000 Rainbow QSL Cards, plus a Jumbo 5000 entry Radio Log Book, this applies to the first TWO QSLers to lodge their cards direct with Des. Just to remind you of the simple rules of this Competition, ALL cards submitted MUST be from the D. CURRIE stable, all must be of different designs, and only ONE of each card design will be accepted, and NO photocopies of cards. CURRIE cards with SAMPLE printed on them do NOT count, you can easily identify D CURRIE QSLs — they have it printed on them. There is still time to qualify for a super prize, so if you haven't yet started a lot of the cards received this month can give to a flying start if you

QSL them. For ease of identification and to save space we will identify the D CURRIE cards with a (C) now off you go ...

OK, lets be funny — Des, handle BLACK DOG RHYMER, himself will QSL you, and send you details of the GREAT BRITISH DX CLUB upon receipt of a SAE, so a QSL to Des at the above address will get you your first (C). Super pile of cards in from Les Halliday alias DARTSMAN (C) of 43, Broadfield Road, Accrington, Lancashire BB5 0NI, and from the same address another (C) card from CAMERA LADY — Trish Halliday, nice little package that one — make sure yours are something you would be please to receive yourself. From way down there in Hampshire comes a QSL from HAGGIS BASHER (C) of 3, Snoddington Farm, Shipton Bellinger, Tidworth, Hants SP9 7YB, and from KID CURRY (C) comes an unusual QSL — but no address on it. Enclosed with it was a QSL from THE SWAGMAN (C) Alan Jones of 50 Maxton Court, Hebburn, Tyne and Wear NE31 1SZ, so if you QSL Alan you might just get two back!



A well put together package from North 'O the border — some (C) stock QSLs, GREAT BRITISH QSL DX CLUB Card, SIERRA WHISKY BRAVO DX QSL Club Card, and lots more, including a sprig of Lucky Heather, what a nice thought from HAPPY DUCK (C) alias **Robert Brown of 140, Branshill Park, Sauchie, Alloa, Clackmananshire, Bonnie Scotland**, well worth a QSL. Hello GRANDAD (C), alas no personal name, except a 'please QSL' — also goes under the name of FOXTROT ECHO 103, P.O. Box 29, Faversham, Kent, might be worth a swap.

A plea from THE EXPLOITED (C) — **Allen Burdon of 79, Greenways, Delves Lane, Consett, Co Durham DH8 7DH** — he asks for a mention as he has had these new QSLs printed — sorry old son — no chancel, nice card though (C), and he signs off with BREAKER BROKE — aren't we all after that holiday? From DOUGAL and FROME LADY (C) comes details of the SUNDOWNERS DX CLUB from **141, Ashbourne Croft, Leeds LS10 2TZ**. They announce a super new 1984 club package for just £7.00 and whilst we have not had a sample pack to inspect the items listed on the application look real impressive — if any of you take up the offer, let me know how you fare, we like to hear from the horses mouth as they say.

Wow-O-Wow great little QSL in from ORCHID MAN and AFRICAN VIOLET not only a (C) QSL, but no less than three different magnificent cards from ENSIGN QSLs — the really striking Gold-Blocked cards that look like a million dollars. A really worthwhile swap this one, their address is SIERRA TANGO 149, P.O. Box 19, Sudbury, Suffolk CO10 0EB. If you want details of these superb range of personalised QSLs they are produced by two great CBers — TONGUE TIED (she's not really) **Wendy and SLAVE TRADER John from 107, Howdells Lane, Brownhills, West Midlands**.

Nice letter from THE SPITFIRE (C) alias **Scott Urquhart of Bank House, Bridgend, Isle of Islay, Argyll PA44 7PH**, lots of QSLs, swaps, postcards.

Tony and Carole Stevenson QSL with a club card of the FARNBOROUGH DX GROUP (C) from **P.O. Box 20, Farnborough, Hants GU14 9AT**, and include no less than 10 different cards of theirs, including personal ones for their handles RUNNER BEAN and SUGAR FROSTY. Our old friend **David Sheppard** UK Representative of the BALL LIGHTNING QSL SWAP CLUB writes from **6, Terrell Gardens, Redfield, Bristol BS5 9NY**, seems he had an accident a while ago and some of your QSLs to him got destroyed. If you are waiting for a return from David, please drop him another line, and he promises to answer by return. Incidentally with David's overseas contacts there are always some excellent full-colour QSLs for swapping! Some well-assorted QSLs received from **Ian Baikie MOLE-SKINNER (C) of 1, Monkton Cottages,**

Stogursey, Nr Bridgewater, Somerset, and includes some of the COBRA DX GROUP, COBRA INTERNATIONAL DX GROUP, WDC GROUP, and some excellent personalised cards, good swap this one, well done Ian.

Very neat photocard from a member of SOUTH COAST RENEGADES DX GROUP, **Mark Wilson**, Handle EARLYBIRD. Clever QSL this one, actually a photograph of an owl produced from a water-colour painting, a very collectable card indeed. Before we move on to some overseas mail, must just squeeze in three special ones. From fellow REACT members MANALISHI — **Dez Green of 6, Brick Road, Sunk Island, Patrington, North Humberside HU12 0QN**, some nice personal cards, from MOUNTAIN WANDERER — **Darren c/o REACT ROCHDALE P.O. Box 60, Rochdale OL12 9JN**, he QSLs like mad, and wants to know how to cure bleed-over. It's all a question of filters Darren, anyone out there like to help? One of the best packets this month from **Dave and Linda Young of 95, Tollohill Drive, Kincorth, Aberdeen AB1 5DJ, Scotland**, members of ABERDEEN REACT TEAM. Some full colour HAPPY COBBLERS QSLs, and a home-produced informative booklet with all sorts of information, including how to grow a Haggis.

Right-ho, lets have a look at the overseas mail, first out is from **Tony Kompier of Schouw 53-04, 8232XH Lelystad, Netherlands**, and a nice letter and cards from DARWOOD BASE XM4435598 — run by **A W Trollope at Hyde Park, Ontario, Canada NOM 1Z0**, he welcomes all swaps, especially from the UK. From CB Station NARZISSE at **Am Volkspark 81, 1000 Berlin 31, West Germany** and **Volker Iffland** operator of Station ANKER 01 from **Kaiser Wilhelm-Ring 43, 5000 Koln 1, West Germany** some better than average colour QSLs, well worth a swap. Some well-produced cards in from QSL CLUB AUSTER of **Postbox 65 01 30, 1000 Berlin 65, West Germany**. Well we are beaten by sheer lack of space this month, but if you haven't been included, don't despair you might get in next month, better still write again — double your chances. Drop me your news, views, information or QSLs to **THE MEDICMAN, 124, Hillcross Avenue, Morden, Surrey SM4 4EG**, until next month, TAKE CARE, WE CARE — Be seeing you.

International 'Q' Codes

By popular request we have collated some of the most-used 'Q' Codes on CB: Each can be phrased as either a question or statement.

QRA: What is the name of your station? The name of my station is . . .

QRB: How far are you from my station? The approximate distance between our stations is . . . Kilometres.

QRG: What Frequency/Channel am I on?

QRH: Does my frequency vary?, Your frequency varies.

QRI: How is the tone of my transmission? The tone of your transmission is . . . (CB use Y1-T9 on RST Code).

QRK: What is the intelligibility of my signals? The intelligibility of your signal is . . . (CB Use R1-R5 on RST Code).

QRL: Are you busy? I am busy. Please do not interfere.

QRM: Are you being interfered with? I am being interfered with.

QRN: Are you being troubled with static? I am being troubled with static.

QRO: Shall I increase power? I shall increase power.

QRP: Shall I reduce power? I shall reduce power.

QRT: Shall I stop transmitting? I shall stop transmitting.

QRU: Have you anything for me? I have nothing for you.

QRV: Are you ready? I am ready.

QRW: Shall I inform . . . you are calling them? Please inform . . . I am calling them.

QRX: When will you call me again? I will call you again at . . . hours.

QRY: What is my turn? Your turn is number . . .

QRZ: Who is calling me? You are being called by . . .

QSA: What is the strength of my signals? The strength of your signals is . . . (CB Use S1-S9 on RST Code).

QSB: Are my signals fading? Your signals are fading.

QSI: I have been trying to break into your transmission.

QSK: Can you hear me between your signals, and can I break in on your transmissions?

QSL: Can you acknowledge receipt? I am acknowledging receipt.

QSM: Can you repeat last message? I am repeating last message.

QSN: Did you hear me? I heard you on . . .

QSO: Can you communicate with . . . direct or by relay.

QSP: Will you relay to . . . I will relay to . . .

QSR: Shall I relay the call on the calling channel? I shall relay/repeat the call on the calling channel.

QSS: What is your working channel? I will/Normally work on channel . . .

QSU: Shall I reply on this channel or channel . . . ? I will reply on channel . . .

QSW: Will you send on this channel? I will send on this channel.

QSX: Will you listen to . . . I will listen to . . .

QSY: Shall I change channel? Please change channel.

QTH: What is your position in latitude and longitude? My position is . . .

QTO: Can you communicate with my station by means of International 'Q' Code of Signals. I am going to communicate with

your Station by means of International 'Q' Code of Signals.

- QTR:** What is the correct time? The correct time is ...
- QTV:** Shall I monitor this channel for you? (from ... hrs to ... hrs) I shall Monitor this Channel for you (from ... hrs to ... hrs).
- QTX:** Will you keep your station open for further communication (or until ... hrs) I will keep my station open until ... hrs.
- QUA:** Have you any news of ... (Call-sign)? Here is news of ... (Call-sign).
- QUM:** May I resume normal working? Normal working may be resumed on this channel.
- QUP:** Will you search for ... ? I will search for ...
- These are the most commonly used International 'Q' Codes in Amateur Radio, and have long been in use by SSB-DXers, mainly with foreign stations. The complete list of International 'Q' Signals is obtainable from Her Majesties Stationary Offices, but the codes not reproduced deal mainly with shipping. For quick reference we give below the accepted informally used 'Q' Codes as adapted to Citizens Band use:
- QRM:** Interference from other stations.
- QRN:** Atmospheric noise or Interference.
- QRO:** High Power.
- QRP:** Low Power
- QRT:** Closing Down
- QRX:** Stand by
- QSB:** Fading
- QSL:** Verification of contact card
- QSO:** Radio contact
- QSY:** Change channel
- QTH:** Location

The RST Code

The RST Code was developed many years ago by amateurs who needed a simple means of reporting the quality of a respondent's signal under difficult conditions. Originally the only code available was the arbitrary scale of R1 to R9. The most important part of giving signal reports on radio is that it must be a honest report — your contact will find no satisfaction in receiving a S9 report just to keep him happy when his signal is S3 and R3 at that. Most Citizens Band transceivers are fitted with 'S' meters, and these are generally useless for a sensible report as they are very inaccurate, and can be adjusted to read whatever the owners wants them to read — so do not trust a signal report read off an integral S Meter. The RST code as used by both amateurs and professionals alike is reproduced below:-

READABILITY

- R1 Unreadable
R2 Barely readable, occasional words distinguishable.



A Merry Christmas from Orchid Man and African Violet

- R3 Readable with considerable difficulty.
R4 Readable with practically no difficulty.
R5 Perfectly readable.

SIGNAL STRENGTH:

- S1 Faint, signals barely perceptible.
S2 Very weak Signals.
S3 Weak Signals.
S4 Fair Signals.
S5 Fairly good signals.
S6 Good signals.
S7 Moderately strong signals.
S8 Strong signals.
S9 Extremely strong signals.

TONE:

- T1 Extremely rough hissing note.
T2 Very rough a.c. note, no trace of musicality.
T3 Rough, low-pitched a.c. note, slightly musical.
T4 Rather rough a.c. note, moderately musical.
T5 Modulated note, slight trace of ripple.
T7 Near d.c. note, smooth ripple.
T8 Good d.c. note, just a trace of ripple.
T9 Purest d.c. note.

A letter is sometimes added to the 'T' report to give further information:-
C Chirp K Key clicks D Drift
X Very stable note.



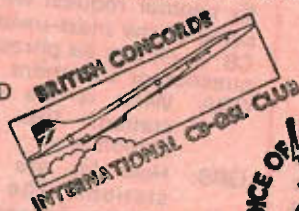
Citizens' Band Magazines List of QSL Clubs

- ANGLO AMERICAN MAGNA CARTA INTERNATIONAL SIDEBANDERS**
Coronation House,
Tolcarne Road, Newquay, Cornwall.
- BRITISH CONCORDE INTERNATIONAL CB-QSL CLUB,**
187, Walton Road, East Molesey, Surrey KT8 0DY
- CHARLIE BRAVO INTERNATIONAL**
P.O. Box 2, Barmouth, Gwynedd, North Wales.
- DRAGONRIDER QSL CLUB**
3, Tarn Villas, Cowpasture Road, Ilkley, West Yorkshire LS29 3RH
- GREAT BRITISH DX CLUB**
Radio Headquarters, P.O. Box 5, Consett, Co Durham DH8 8NG
- HAPPY COBBLERS DX QSL GROUP**
P.O. Box 99, Northampton
- METRO CITY QSL CLUB**
95, Greenoak Crescent, Stirchley, Birmingham B30 2TD
- RAMPANT LION SIDEBANDERS**
P.O. Box 101, Dundee, Scotland.
- SAXON SKIPPERS INTERNATIONAL CB-QSL CLUB**
9, Sunningdale Road, Portchester, Fareham, Hants PO16 9PD
- SIERRA VICTOR INTERNATIONAL DX-QSL CLUB**
43, Greendon Rise, Sibley, Leicester LE12 7TE

- TIGER INTERNATIONAL QSL SWAP CLUB**
57, Mikado Street, Tonypany, Mid Glamorgan CE40 1EH, South Wales
- UNITED KINGDOM INTERNATIONAL RADIO GROUP**
P.O. Box 13, Long Eaton, Nottingham NG10 1BU
- VOICE OF SCOTLAND INTERNATIONAL DX CLUB**
P.O. Box 29, Kilmarnock, Scotland
- WHISKEY DELTA CHARLIE INTERNATIONAL**
P.O. Box 1a, Normanton, West Yorkshire WF6 2RX
- ZULU ECHO UK DX & QSL CLUB**
P.O. Box 31, Saffron Walden, Essex

Please Note.

This list is supplied for information only and does not endorse the clubs mentioned, nor by the omission of any names or addresses is anything detrimental inferred. There are many good British clubs NOT mentioned above, we will endeavour to produce further lists as space allows.





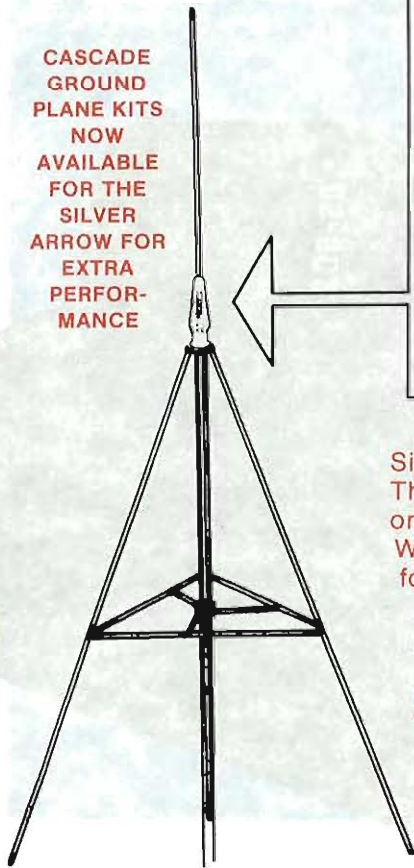
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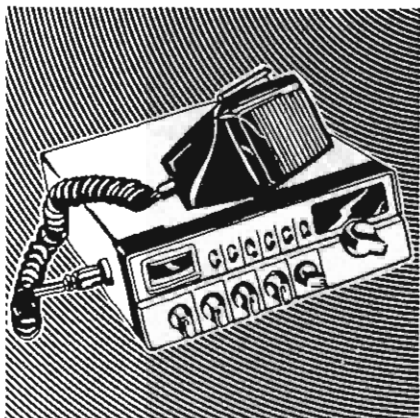
Due to great demand, we have largely increased our production capacity and offer prompt delivery.

Please ask your local dealer or contact us directly.

Kaiser electronic GmbH

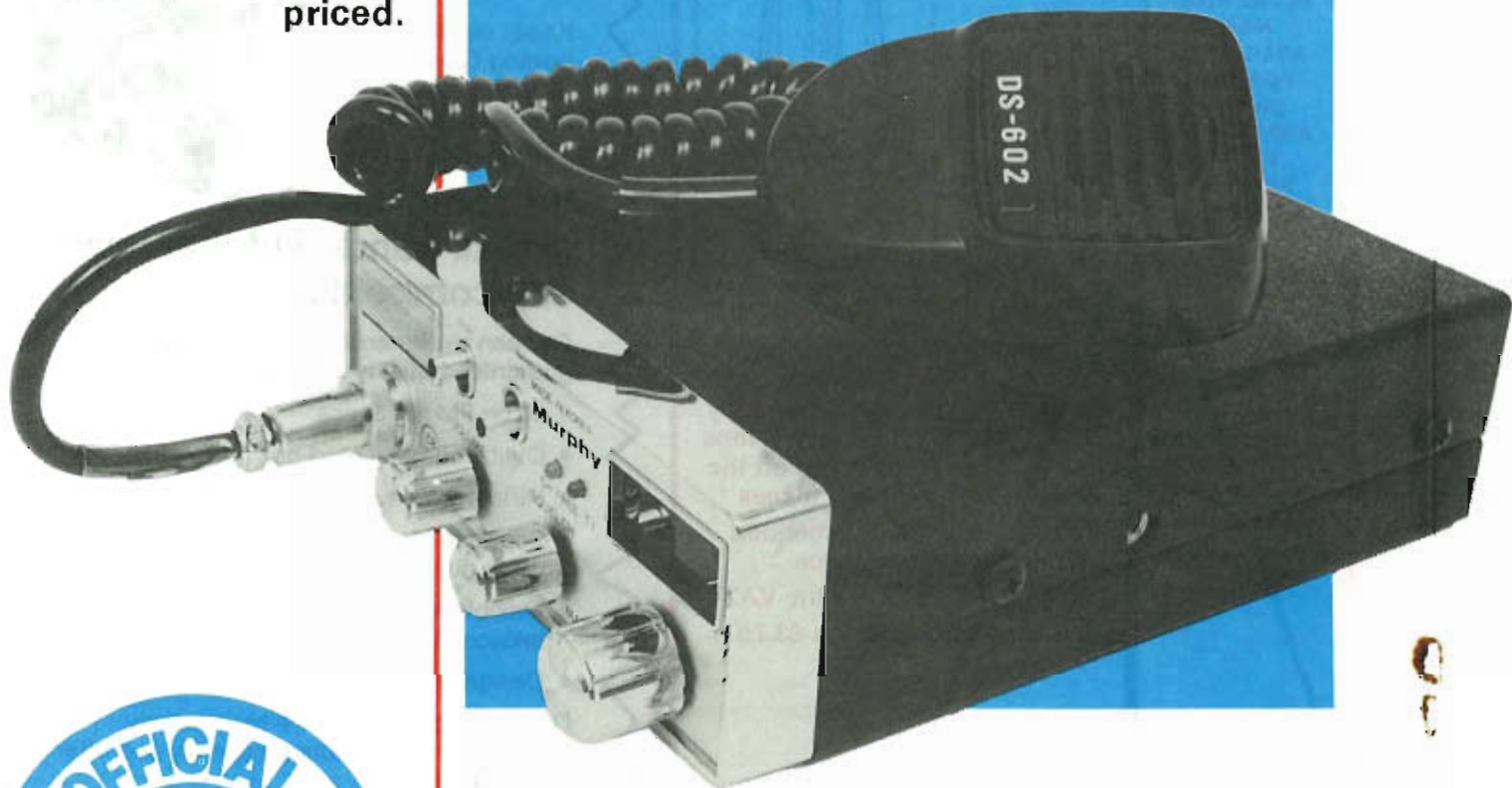
32 Daimlerstrasse D-6909 Walldorf · Germany
Tel.: 06227/62016 Telex: 466017 kai wa, or 461883 kai hd

Rig Review



This month we asked Andy R Giles to take a look at a rig that makes up for its lack of features by being very reasonably priced.

Cheap and Cheerful!

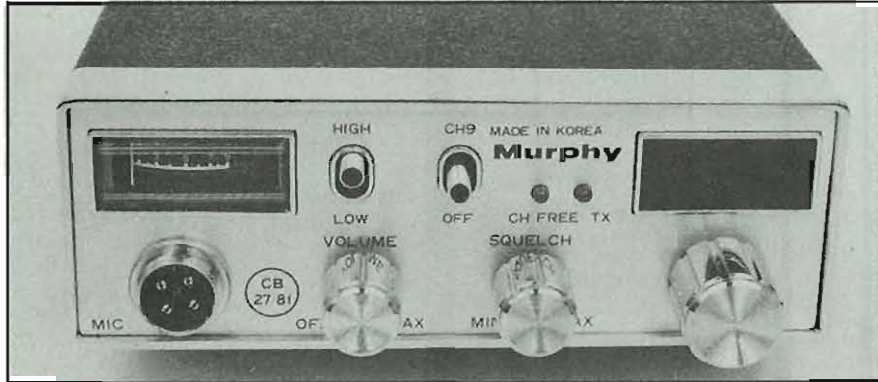


Despite the wails of woe from those entrepreneurs who had anticipated making their fortunes by importing vast quantities of rigs, there are people who are still buying new CB sets, although not at the prices that were being asked two years ago. The average price of a basic rig was then about £50. Some makes were even selling for £80 plus and some very healthy profits were

being made. When the slump came, there was a marked reluctance on the part of the importers to lower their prices, so naturally sales dropped off. Then the realisation dawned on them and several companies lost a lot of money when they dumped their remaining stock at giveaway prices. Now prices seem to have stabilised at a realistic level and there are some rigs on the market that represent good value for money.

I've been looking at the Murphy DS-602 which, despite being a very basic rig, is well worth considering because it only costs £25. It's nice and compact, measuring only 5.75 inches by 2 inches by 7.25 inches and it comes complete with a small mounting bracket that should allow it to be fitted into most cars, even those with very little room under the dashboard. The case is matt black with chrome plated front trim and a brushed aluminium front panel. The knobs on the rotary controls have also been chromium plated and even though they are fluted, I still found them a little slippery when I was twiddling them with my hot sweaty fingers.

The controls are all straightforward and the layout of the front panel is



fairly standard. In the upper left-hand corner there is a reasonably large illuminated relative signal strength/power output meter that has a matt black background that makes it easy to see the white and red scale and the white needle. Immediately below that there is the four pin microphone socket. The microphone that is supplied with the rig is slightly unusual in one small respect — the push to talk switch is hinged at the top. This may not sound like much of an inconvenience but I found it most disconcerting. With the mic held in my left hand, my left thumb naturally presses on the top of the switch, and nothing happens. It's not until I remember to slide my thumb down the switch and press again that it will work. I wonder why the Murphy has a wrong way round switch? There is a temptation here to concoct an Irish joke to explain it, but I will resist — mainly because the rig was made in Korea.

The three rotary controls along the bottom of the faceplate are all standard. There's a combined On/Off Volume control, a Squelch control and a Channel Selector. Just above the selector knob is the red LED Channel Display and to the left of that there are two small LED indicators, one for TX and one for Channel Free. To the left of those there are two toggle switches. One is the High/Low power switch that attenuates the output power by 10dB, as is required by the licensing conditions when the antenna is mounted more than 7m above ground level. The other one is a channel 9 priority switch that lets you jump to

that channel immediately without having to twiddle the Channel Selector knob.

The rear panel has a standard SO 239 antenna socket, a 3.5mm jack plug socket for plugging in an extension speaker and a three pin non-reversible socket for the DC power lead. There is also a very large sticker that warns the user that his rig is for use in 12V negative ground vehicles. The letters are bright red and the sticker is so big that I suspect that the manufacturers have had experience of wallies pugging their rigs in the wrong way round. If this is the case, it is a shame that the otherwise excellent handbook says quite clearly 'The transceiver is designed for use with either negative or positive ground electrical system'!

The eleven page handbook is good and reasonably comprehensive. It starts by listing the specifications, which show that the rig is within the governments limits set down in MPT 1320. It then goes on to describe the functions of the various knobs and switches and to explain how to use the rig. There's also a section on installing the set in a car and a page on positioning a mobile antenna. Simple fault finding, noise suppression techniques and a guide to operating frequencies are also included. A very useful little booklet that would certainly help a beginner to install his rig.

I used the Murphy DS-602 for a week or so and found that it performs as well as most other rigs, which is not bad when you consider its price. Obviously it does not have some of the features of the more expensive models, but I have often wondered if it is worth paying the extra for facilities such as mic gain and delta tune. Mobile rigs tend to attract the unwelcome attentions of the less honest members of society, especially if they have lots of knobs, switches and coloured lights on the front panel, and taking the rig out of the car every evening can be quite a chore. The Murphy DS-602 is small enough to be hidden in an inconspicuous place in a vehicle and even if it is stolen, the loss of £25 is not too much of a disaster.

The Murphy DS-602 is a smaller than average rig at a below average price. It costs £25 and is available from Lucky Numbers who we would like to thank for the loan of the review sample.

RIG REVIEW DATA PANEL

Model Murphy DS-602

Distributor

Typical Price £25

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

Facilities

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

Specifications

Modes Of Operation	FM Only
No. Of Channels	40
Weight	
Dimensions	5 ³ / ₄ " x 2" x 7 ¹ / ₄ "
Supply Voltage	12V
RF Output Power	4W
Frequency Stability	Within MPT 1320
Swamping	"
Sensitivity (RX)	"
Spurious Emissions	"

CB VERDICT

Range	XXXX
Clarity of TX	XXXX
Clarity of RX	XXXX
Ease Of Controls	XXX
Ease Of Installation	XXXX
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.

Antenna Review



For all you breakers out there who are about to purchase a new antenna, whether it is for the first time or because you fancy a change, we have tested yet another antenna to help you in your choice.

HIGH PERFORMER



Second from the left, the Oscar 11 CM with the rest of the Oscar family

Some of you like them big and some of you like them small, but I think I'm safe in saying you all like them to perform well, (for those of you in any doubt, we are still referring to antennas). Well this month we are reviewing one of the Oscar range of mobile antennas the popular Oscar 11 CM from South Midlands Communications, Southampton. This is an average size antenna and therefore should be of interest to the majority of breakers, including the users of small or large antennas.

The Oscar 11 CM is supplied complete with magnetic base, coax and plug, thus it is a complete mobile system rather than whip and coil only, as is often the case. Starting at the whip, this is in two parts the top part being .95 metres long in taper ground stainless steel finished with a nice looking tapered chromed knob at the tip. This fits into another large tapered, chromed fitting on the top of the lower part of the whip. The lower part of the whip is much bigger in diameter than the top part and is around 300mm long

and again appears to be stainless steel. This lower part then fits into a long chromed fitting on top of the coil housing. A special feature of this fitting is that the lower part consists of a sleeve which, when unscrewed from the top of the coil, can be slid up against a spring. This then exposes a hinge, rather like that found on some VHF portable radio antennas, which allows the whole whip to be layed horizontal without removing the antenna from the vehicle. A feature which is very useful when putting your car in the garage or going under some low obstruction. When the whip is lifted upright again the sleeve, being spring loaded, then springs back over the hinge holding the antenna vertical. The sleeve should be screwed up tight on the thread if you intend to go mobile, or the threads may be damaged by the slight wobble on the antenna when this is loose.

The coil housing is made of black plastic and is about 60mm long and nearly 30mm in diameter. It is shaped so that the largest diameter is about $\frac{1}{3}$ up from the bottom and tapers down to each end. On the bottom of the coil



housing is a PL 259 plug fixed to the coil in such a way that the whole antenna is rotated in order to tighten or loosen the locking ring. When assembled the 11 CM antenna has a total length of 1.37 metres.

The magnetic base is just over 85mm diameter, very low profile and chromed. In the centre of the base is a black plastic insulator which houses the SO 259 socket, into which the antenna fits securely. The feeder cable enters through the side of this insulator and not through the metal base as with some magmounts.

Ample cable is supplied for boot mounting on a large car and this cable has a PL 259 plug already fitted on the end to plug directly into the rig. Two cable fixings are supplied, these have double sided sticky tape on the base so that they may be stuck to the vehicle and the cable clipped in to keep the wiring tidy inside the vehicle.

With the antenna all screwed together and mounted on the car (this literally took only a few minutes) the SWR was 1.5:1 on channel 20. After cutting a small piece off the whip (as it indicated that it was too long) the SWR was 1.3:1 on 20 and never went over 1.5:1 across the band. We decided to settle on this, but if you are an SWR fanatic we are sure that it would come lower than this without too much difficulty.

Instructions consist of a single sheet and include diagrams of the various parts. Although the instructions are very brief, they should be adequate as assembly is very simple. One odd instruction which is probably the result of a Japanese translation says "Caution — please refrain from keeping the antenna on car body while running the car. The excessive sudden shock might cause serious matters." From this you might think that the antenna is only suitable for stationary use!

Conclusion

On test the Oscar 11 CM performed extremely well. In several places on the test route where we normally receive about an S9 signal, we were getting 10 dB over 9. Captain Pugwash who always insists on our antenna tests was heard to say more than once, "I'm certainly impressed with this one, I wouldn't mind one of these myself", and he is not one to hand out compliments on antennas lightly. He always uses a K40 himself. In fact we never came near to losing contact throughout the entire test route even in the 10-1 spots.

Being a complete antenna system the Oscar 11 CM was a pleasure to install. Construction is of a very high standard and therefore the 11 CM priced at £19.50 is very good value as there is nothing further to buy, not even a plug.

A similar antenna for performance would be the legendary K40.

Our thanks to South Midlands Communications of Southampton for supplying the test sample.

ANTENNA REVIEW DATA PANEL

SPECIFICATIONS

Model OSCAR 11 CM

Type Mobile

Length 1.37 metres overall

Frequency Range 27MHz

Max Power Handling —

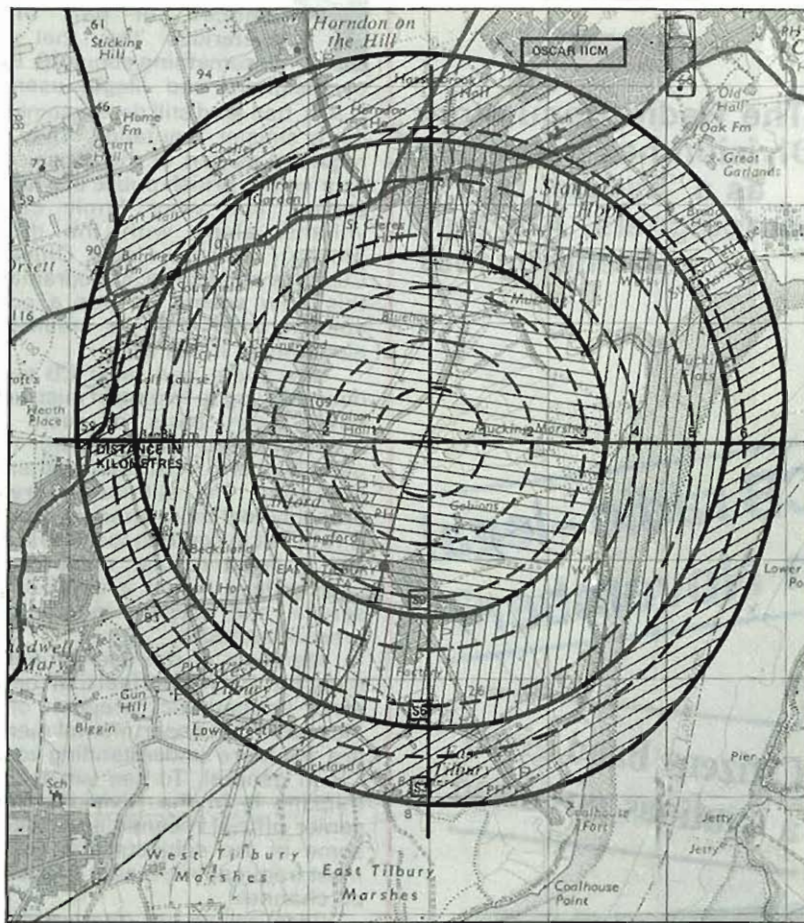
Impedance 50 ohms

Cable Supplied Yes and Magmount and plug

Mounting Details Magmount (supplied) or panel mount

Supplier South Midlands Communications Ltd.

Typical Price £19.50



REVIEW VERDICT

Performance XXXXX
SWR Adjustment XXX
Construction XXXXX

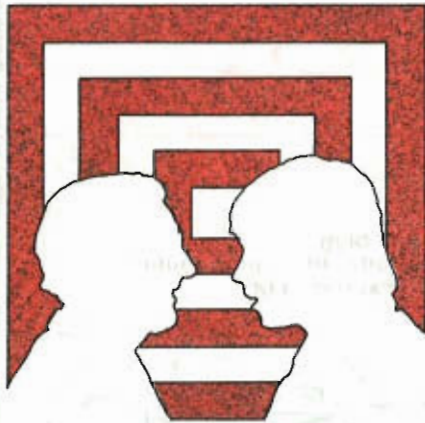
Installation XXXXX
Instructions XX
Value XXXX

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.

Interview



The Radio Regulatory Division has been cast as a 'baddie' by CB campaigners. Are they friend or foe?

CB radio—legal in November?

Citizens band given a cautious go-ahead

Open Channel

A SYSTEM OF PERSONAL SHORT RANGE RADIO COMMUNICATIONS IN THE UNITED KINGDOM

a discussion document

Comments should be addressed to
Radio Regulatory Division
Home Office
Marlborough House
Whitehall Road
London SW1 8LN

Copies of this document may be obtained from
Officer in Charge
Home Office
Supply and Transport Branch
Poynton Road
Cotton
Gatwick GU2 2JH

THE OTHER SIDE OF THE FENCE

For more recent CBers, the Radio Regulatory Division are 'that bunch that make us pay licences' or part of the mysterious 'they' that should do something about CB. But for campaigners and illegal users the R.R.D. had (and still do, for some) a far more sinister reputation. They were regarded as part of the conspiracy to deprive the British public of a legal CB service and were firmly cast as villains, along with the dreaded 'Busby', and the Home Office and Customs and Excise. Melodramatic as this now seems, it was a popular opinion with many a breaker and elements of it still exist.

Now there is a legal CB service, does this vague feeling of mistrust still have much basis in fact? Sure, many breakers complain, but this is usually due to frustration rather than suspicion. The still-illegal breakers probably feel most strongly about the R.R.D. but in contrast to the past, there are at least regular meetings with user groups aimed at improving the service and keeping in touch with present attitudes.

Members of the user groups that meet R.R.D. officials feel that there is a more sympathetic reception of new ideas and that departmental members are far more understanding towards CB in general. To see what current thinking is in the Division, I met a senior official recently and discussed some of the subjects that come up most frequently in reader's letters and on channel.

Because we are interested in CB and it's future, it's human nature to regard our interest as the most important, without realising the range of subjects and frequencies that the R.R.D. has to administer. To illustrate this, here are some of the R.R.D.'s responsibilities;

- the licencing of all non-crown radio use,
- the drafting and production of technical specifications for existing and prospective services,
- planning and administration of frequency allocations,
- representing the Government's and user's interests at national and international meetings
- and the enforcement of the relevant regulations and legislation.

The department was created in the sixties with the formation of the Ministry of Post and Telecommunica-

tions and has since moved to the Home Office and recently to the Department of Trade and Industry.

I wondered if the R.R.D. ever got caught between the interests of the Government and the different but legitimate interests of radio users. It was felt that there wasn't any area of conflict but that it was impossible to please all the parties competing for a piece of the radio spectrum. One of the biggest problems for the department is dealing with the growing demand for communications frequencies in a spectrum which isn't infinite. Inevitably there are those that are disappointed who subsequently feel badly treated.

I also asked for comments on the type of criticism that started this article; that the R.R.D. and the Home Office (at the time) were too protective of the radio spectrum and were too resistant to change. Many CBers felt that this was the main stumbling block to the introduction of CB. The department is conscious of this type of criticism but felt this reputation was, and is not justified. It was pointed out that the UK is a small, densely populated island with extensive use of radio and that if things were not closely regulated, a free for all would result in chaos. As far as the R.R.D. is now concerned, CB is another new, but established radio service.

Public Reaction

I have always been interested to know the reaction to both the campaign for a public radio service and the numbers of people actually using the illegal FCC equipment. The department at the time had no basis for comparison and therefore had no way to gauge expected public reaction, but admitted to being surprised by the depth of feeling and the numbers of people who were prepared to break the law. Although initially surprised, they were well able to monitor the rise in users as the interference statistics showed a marked increase as estimates of users grew. It was also difficult for the authorities to reach a realistic estimate of illegal breakers—a situation everyone else shared in as guesstimates varied between a quarter million to a million. Whichever was nearer the truth, it meant that the projections for licences for the legal service were higher than has proved to be the case.

This comment lead us on to what,

in many breakers eyes, is the most serious problem, and the only way they feel they can protest. The R.R.D. realise that the current level of abuse on CB is one of the major reasons for the low number of licences sold and renewed. Renewals are about 40% of the licence sales and the R.R.D. are disappointed by this figure. It was not entirely expected however as they feel that for many people CB is a novelty hobby, which may pass quickly, but they are deeply conscious of the number of people who are refusing to buy a licence as a protest at the apparent inaction against offenders. The R.R.D. are in an awkward position, as it is their responsibility, along with the Radio Investigation Service, to deal with offenders. However the funds and manpower available means that their first priority is interference to broadcast services.

They accept that the level of abuse has affected further use by the public and they have studied similar effects in other countries. There have been local efforts to deal with the problem when manpower has become available and this has proved to be very effective, but it unlikely that this will be done on a national scale.

Counterproductive

The department was particularly keen to point out that the lack of licences was counterproductive to CBers interests. They cannot justify improvements or futher developments to the service whilst it appears *on paper* to be under-used. The Minister in office at the time will only be prepared to accept official figures of licence holders and will not consider estimates of 'several hundred thousand' who would also like to see a better service but are not contributing to it or acting outside it's legal boundaries.

When I visited Waterloo Bridge House, the R.R.D. were in the middle of discussions with CBers and were planning some licence changes. These may well have been announced by the time this is published by I brought up some specific suggestions that readers are eager to see implemented. The department are anxious to avoid adding too many restrictions as they regard CB as an informal service with a minimum of regulations, but they are sympathetic to the complaints they receive.

The C.E.P.T. frequencies are receiving serious consideration and it is one of the aims of the R.R.D. to adopt these recommendations. They have yet to decide the best way of dealing with the existing British system and are not sure if C.E.P.T. will replace British frequencies or will replace them. There is scope for a further 40 channels if they are retained. There is also the possibility of a further 20 channels on 934MHz but as UHF CB is in it's infancy this will not be in the immediate future.

The suggestion of AM or amplitude modulation was firmly squashed. It

was emphasized that there was no prospect of AM ever being permitted for a CB service in this country because of the potential level of interference to other services. Changes involving Channel 9, age limits, Roger Beeps etc. are being reviewed at this moment. The antenna restrictions are seen as a practical compromise between efficiency and the need to restrict range and interference and are unlikely to be significantly altered. It was made clear to me that CB is considered a short range service and those wishing to cover greater distances (one of the reasons for wanting better antennas) have the alternative of licenced amateur radio use.

The timing of eventual harmonisation with Europe is crucial as existing users have to be moved and new allocations taken into account. If C.E.P.T. frequencies are adopted, it is likely to be two to three years before they are in use. I did get the feeling that although the Government are virtually committed to the C.E.P.T. proposal, the R.R.D. is not convinced of the need for them, especially if the frequencies are not accepted throughout Europe.

We then returned to the problem of licencing and the level of abuse in some areas. As CB is a 'non-protected' service, it was explained that the £10 licence fee simply buys permission to use a CB transceiver and doesn't buy the automatic right to the services of the R.I.S., although they will obviously investigate complaints and investigate abuse where possible. Quite what will happen when the R.I.S. is disbanded isn't clear, and this is a worry to radio users and the broadcast services alike. It seems likely that the R.R.D. will assume this responsibility and have it's own investigation section, although no information has been released on this.

The department concedes that the introduction of 27MHz CB was a 'stop

gap' measure and this frequency was never (and probably never will be) regarded as a suitable frequency for Citizens Band. At one time it was the Governments intention to only permit 934MHz CB and this was the case until very late in the day, when public opinion forced their hand. It is clear that the authorities are expecting 934MHz to be a better service, both technically and socially, and see more scope for business users. My own opinion was that there might be a more sympathetic ear for UHF CB improvements when there are more users than for 27MHz, which is regarded very much as a compromise.


The R.R.D. has been having some fruitful talks with both NATCOLCIBAR and the C.B.A. and have welcomed this opportunity to speak more directly with interested parties. It was impressed upon me that the R.R.D. were keen that the British CB service should succeed and that they needed to have feedback from users and, in return, be able to inform users of the reasons for certain actions. Hopefully this will avoid the bad feelings that have developed in the past.

It seem obvious that there is a greater degree of understanding between CBers and the authorities than there was at one time. I suspect this only extends to legal CBers though, as it seems most unlikely that the aims of illegal users will be met or even considered whilst they remain illegal. For them, the suspicion of a few years ago is likely to remain. The R.R.D. are unable to offer easy answers to the problems of CB radio and does not appear to be in a position to do much about them. Whether this is true it is impossible to tell but it is at least encouraging to find the Government department prepared to listen and plan in consultation. What result this has in the long term remains to be seen.

CB



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YOUR VOICE, YOUR CHOICE




Natcolcibar
The Voice of Citizens Band radio users



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CHAIRMAN: P. A. BEVINGTON.
Joint Secretaries: MADELINE PARKES, MCDRC, STEVE DONOHUE, NWCF.
The U.K. affiliate of the European CB Federation and The World CB Union



The RRD were taken aback about the strength of feeling for a legal CB service. Natcolcibar organised rallies to bring this to the public and Government attention.



Keith Townsend takes a nostalgic look at the early days of CB and ponders on what is to come.

The good

I have spend a fair bit of time lately musing about 'the good old days'. The very early days of CB, when to be a breaker meant that you needed eyes in the back of your head and a healthy aversion to little yellow vans.

It was a vastly different scene in those days. Rigs, totally illegal, of course, were only available under the counter, or courtesy of the neighbourhood rip-off artist, who invariably held court in the smoke filled corner of the local alehouse. All that has changed and these reflections led me to wonder what has become of many of the early campaigners with whom we used to plot nefarious ways of bringing Busby to heel.

Back in the mid seventies, when most of our energies were directed towards the formation of the first CB clubs (I wonder which of them still exist?) almost every week brought forth new and often improbable stories of breakers being 'busted' and the relationship between authority and the various clubs seemed at times to have the aura of team opposition.

Rumours of imminent legalisation were rife and, had you believed the popular press of the day (there were no CB mags in those days) our hobby was destined to become respectable on every day from Candlemas to the equinox, on just about every frequency from audio to light waves. To be a breaker in those days was to consider yourself part of an elite brotherhood, membership of which was a privilege and without exception the clubs had strict, and somewhat unenforceable, rules which might lead to excommunication for the breaker found guilty of swearing on the air or, even worse, shopping a fellow member to the meanies. In an attempt to create an air of respectability many

Yet another petition or report being handed in at Downing Street.

clubs also prohibited members from taking rigs to meetings, though this was done as much for the protection of club officials as for any other reason, since it had been suggested on a number of occasions that our activities might be contrary to the conspiracy laws. Nobody really knew the truth of that one but we were all disinclined to take chances.

The early CB clubs performed a dual function. Apart from the obvious social aspects they catered for the herd instinct. At a time when almost every CB enthusiast faced possible prosecution there was safety in numbers. Many clubs established 'Rig Funds' specifically to provide



old days?

replacement radios for those members unfortunate enough to have seen their gear confiscated by the authorities. (Remember all rigs were illegally imported in those days and were forfeit if discovered by H.M. Customs & Excise.) Often these funds were sufficient to cover the attendant fine as well, as each successive meeting brought new members. Among the larger clubs a membership roll of 1,500 plus was not unusual and a meeting night could lead to as many as one hundred enrollments.

Whether this protectionism really succeeded is open to debate but the number of busts seemed to diminish almost in direct proportion to the

increase in membership, whilst the existence of such large and well organised numbers of 'criminals' began to arouse considerable interest among the press and media. (I often used to wonder whether the reduction in the number of prosecutions might not owe more to the adverse publicity gained by the authorities than to the undeniable difficulties posed by the attempt to obtain a conviction.)

For a time each of these clubs happily did its own thing with little or no concern for its contemporaries but it soon became apparent that the only chance of ever achieving a legal system lay in a large degree of co-operation. It was not long before rallies, press and media coverage and general publicity was being organised on a national basis and I well remember the discussions which led to the inauguration of Citizens' Band magazine.

Although it was among the first to be published professionally, Citizens' Band was far from being the first ever CB mag, as nearly all of the pioneering clubs produced its own newsletter, many of which have become collectors' items. I wonder how many

of you cherish early copies of the CBA's '10-4' or have fond memories of 'Bandstand', a sort of broadsheet,

roughly duplicated and distributed through the clubs for a few pence a copy?

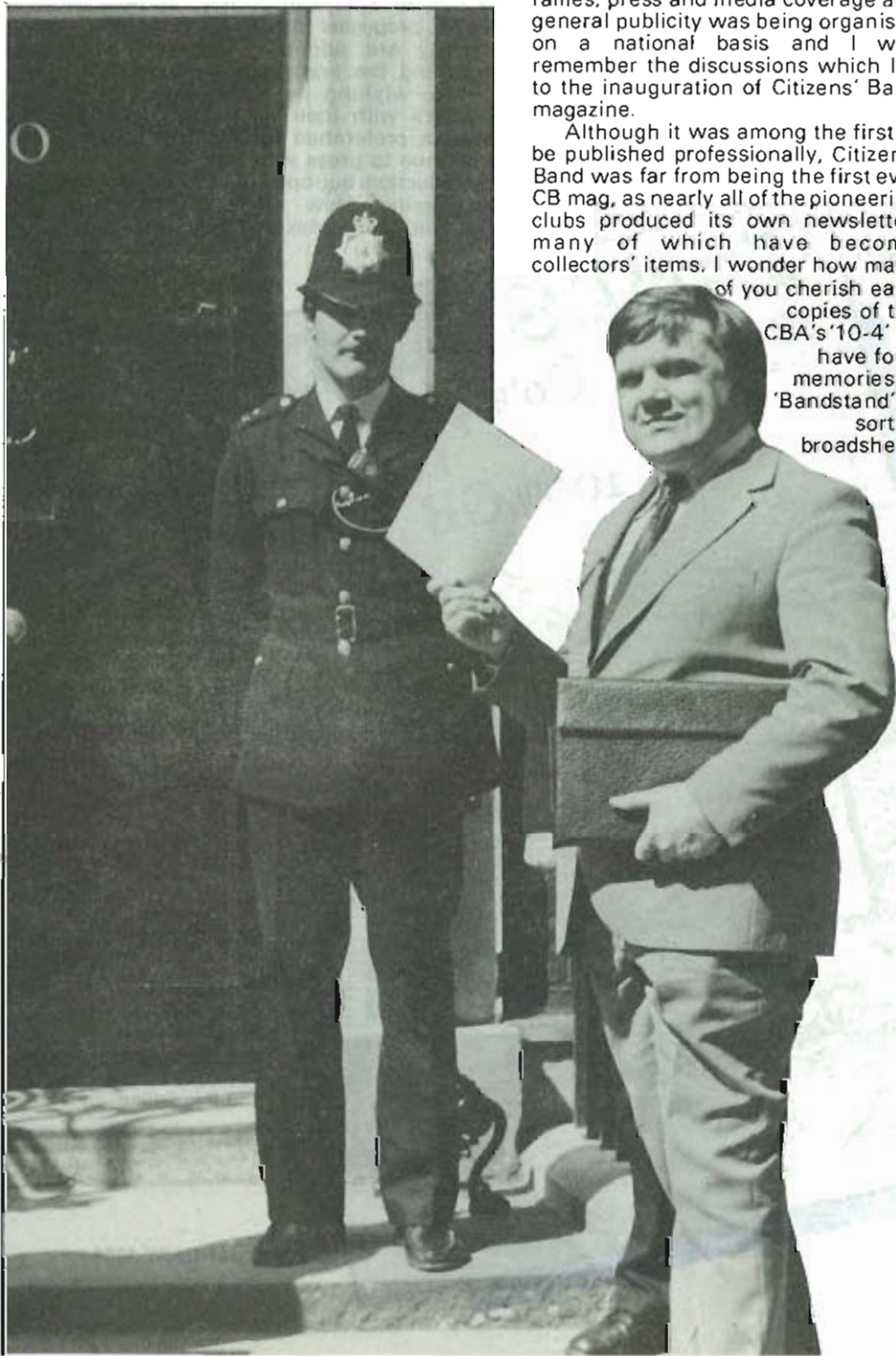
Inevitably there was dissent among the clubs, usually the result of differences of opinion as to the frequency and mode of transmission needed for a legal system and there was a sizeable minority who maintained that 'it wouldn't be fun if it were legal'. Nevertheless I very much doubt that we would have a legal CB service today were it not for the spirit of these pioneers. Not only did they provide a forum for discussion but they can also honestly claim to have been the source of sufficient official embarrassment to ensure that the only solution was to legalise CB radio.

Such a momentous occasion could not, of course, occur without breeding its own crop of rumours, with the inevitable result that the volume of illegally imported AM and SSB rigs rose dramatically just before the announcement, as large numbers of enthusiasts and dealers fell prey to the propaganda of those who claim that an FM based system just would not work and would be quickly superseded. This in turn led to such a glut of illicit rigs that you couldn't even give 'em away in cereal packets within a few months, as the legal system proved its value.

Legal FM CB has been with us for a couple of years now and the entire CB scene has changed dramatically. Despite early fears that FM rigs could cost an arm and a leg and have an effective range somewhat less than that of a good public address system, the number in use has continued to grow steadily and, even at the outset, rarely cost more than their predecessors, whilst enthusiasts are constantly reporting DX contacts far in excess of the norm. The modern breaker also has the added advantage that the 'capture' effect of FM relieves him of the necessity of finding the desired signal in amongst an incredible babble from all points of the compass.

The club scene has also changed. The emphasis today rests more on the social life available to those with a shared interest. Many clubs make important contributions to charity and the huge increase in interest in CB among the younger generation has led to the formation of dozens of junior breakers clubs, where young enthusiasts can pursue their hobby under the tutelage of experts.

Legislation has had another positive effect in that the level of technical understanding among breakers is far higher than it was a few short years ago. In general the first generation wanted only the right to communicate. Technical knowledge was at a premium. The legal situation ensured that you couldn't get a rig repaired at the local TV shop, with the result that those with the ability could charge what they liked and; though the majority were honest, it was not at all unusual to hear stories of £5, even £10 being charged to carry out the



most trivial repairs. All that was needed to convince the customer that he had been given value for money was a lengthy, often unintelligible, technical explanation of the problem. About the most common fiddle, even after legislation, was the one whereby a simple adjustment to the circuit controlling the 'S' meter caused an increase in its deflection. Many an unsuspecting soul went away happy in the belief that a little extra power had been squeezed from his rig.

Today's breaker has a healthy thirst for knowledge and there is no shortage of willing teachers. Just look at the unprecedented growth in the number of amateur radio licences over the last couple of years and ask yourself how many of them belong to breakers. Many CB clubs now run their own RAE courses, with an enviable success rate and amateur clubs continue to report large numbers of breakers enrolling for their courses.

Perhaps the most dramatic change of all has been the way in which the regulatory authorities, once openly

scornful, now discuss the development of CB with open frankness. At the time of legalisation breakers' representatives were treated with thinly veiled hostility by officials who left us in no doubt that our hobby had become legal against their better judgement. Two years has seen a total change in attitude as the task of radio regulation has passed into new hands. Now CB is treated with respect. Serious suggestions are treated seriously as enthusiasts and officials alike seek to improve the service. Changes in frequency to bring us into line with the rest of Europe are envisaged, the restrictions on aerials are to be relaxed and a number of minor regulatory changes are in the pipeline, all of which will benefit the service.

My one regret is that the authorities have, in general, done little to discourage those whose pleasure consists of broadcasting a tirade of four letter words. The breakers themselves would not have tolerated this behaviour prior to legalisation and

it is unfortunate that they seem unwilling to complain about it now.

Even this may now be changing. Only recently Britain's first successful prosecution for broadcasting obscenities was recorded in Birmingham, at considerable financial cost to the perpetrator. In saluting the RIS officers responsible I feel obliged to wonder why it has taken two years for such a case to be brought.

So where does CB go in the next two years? The 934MHz system is still in its infancy, with early indications suggesting that it will prove far more useful than was initially realised. But why has it taken so long? I have lost count of the time I have been asked where to buy 934MHz equipment and I must confess that still I don't know. There are sets around but no-one apart from Reftec seems to have taken a real initiative in this field. It's a pity, because the potential for a high quality service at this frequency is tremendous.

27MHz should, at last, develop into a unified European system, as new CEPT proposals for a 4 Watt, FM facility are adopted, considerably reducing the present frustrations of those wishing to cross national borders with their rig intact. Those with a preference for AM and SSB continue to press vigorously for their introduction but once again I am left wondering. How many of today's generation of breakers really care?

10-4

EDITORIAL

We did not publish a copy of 10-4 in October because the editor was abroad. Members subscriptions will run on extra 3 months to compensate for the missing issue.

On rereading the last few Editorials I find that there is a certain sameness about them all: apologies for lateness; a strong exhortation to keep up the letters to politicians and the media; encouraging words to members who have done well in helping our campaign; and a reminder that wishing for C.B. will not get it - what is needed is action.

I'm not going to repeat it all this time - the contents of 10-4 convey the messages without the editor rubbing it in. So - carry on with the news.

REACT

REACT INTERNATIONAL is the organising body of the many thousands of REACT teams around the World who organise C.B. emergency monitoring services.

REACT teams monitor the emergency channel (in most countries channel 9, 27.165 MHz) on a 24 hour basis and send help to emergencies ranging from the trivial ('Where's Christine Avenue?') to life and death ('Tornado lost (just struck Dean Farm seventeen miles out of town by Instonke 7B. Six dead, seventeen wounded - nine seriously - and four trapped in factory building. All power and communications lines are down. Please send help!'). REACT teams are active in over 12 countries and many thousands of people owe them their lives.

REACT International's constitution does not allow REACT teams to be organised where C.B. radio is illegal. However, Ivan Francis (an experienced REACT worker from Canada) and David Fairbrother are laying the ground for the formation of REACT teams in Britain when we are successful in our campaign and C.B. is legalised.

They are also, of course, supporting the C.B. campaign in the U.S.A. Anyone who is interested in this aspect of C.B. should become involved should contact Ivan at 152, Red Bank, Bristol, BS6 6YD or David at 84, Wington Close, Bristol, BS12 0EY.

Ivan has a fifteen sound film running for a year describing REACT's work. Part of it was shown on Anglia TV during December. If you think it would be a campaign sufficiently it may be possible either to borrow it or to buy it - contact Ivan.

The following 'letters of intent' have been received from international in the U.S.A.:

WE THE UNDERSIGNED DO HEREBY COMMIT OURSELVES TO PROMOTE THE LEGALISATION OF CB RADIO IN THE UNITED KINGDOM, AND THE

Citizens Band Association

BANDSTAND
20 PENCE MONTHLY
(Totally Independent)
Edition 7
100% CB

THE RADIO HUT
4 MILLS ANKAP
BS12 0EY

These should be familiar to early CBers and campaigners. The CBA's 10-4 and Bandstand.



Under the spotlight this month is Sue Sharp, editor of this revered journal and part time breaker

MY RIG

After reading that introduction you are probably thinking to yourself 'why part time?!' Well, I can only echo Chris Adam-Smith's sentiments of a few months ago — when your work with CB all day and virtually every day (I do get weekends off) you'd be a candidate for the white jacket with the funny sleeves if it was a full time hobby too. So while I have been a CBer for many years. I now mainly use my rig for mobile use; routes I'm not familiar with, if I'm not sure where my destination actually is (my driving tends to be like that) or if it's a long journey and I want someone to talk to.

In the early days of CB I had a superb Midland AM set. It was fairly antiquated by today's standards — the channel display was a rotating dial, no pretty LEDs, and more than one breaker asked me where the socket for the gas was. Since then rigs of all types have come and gone, but I still have a soft spot for that old Midland.

Once again I have to echo Chris's comment and say that I have a Radiotechnic Supertuned DNT M40. To me, it has the right combination of good performance, good looks and reliability. I really can't think of a time when it has needed attention or given anything but it's best.

Its' big advantage for me is that it has particularly crisp TX and RX. As I said earlier, it is used almost exclusively in my car, which is a collection of rattles held together by rivets, and I need something I can hear

over the background noise. Because of this, I have fitted a cheap extension speaker too.

On the rare occasions I do operate a base station, then I just use my M40 with a power pack etc. However I did have a play with one of the Midland base stations a while ago and if I ever have a couple of hundred pounds spare I'd buy the 76-300 — just for all the knobs and dials and flashing lights and meters and chrome and the way it looks on the sideboard and being able to tell people that it cost over two hundred pounds.

Antennas are a less precise subject. Both my mobile and base antenna are 'home brew' and designed and made by my husband. A combination of shop bought aerials and his own special brand of genius (that's what he says, anyway) they also get sideways looks from other breakers, but they work very well indeed. I hasten to add they are legal versions of some of his earlier designs and fit very neatly into the government regulations and recommendations.

I've never really been one for roger beeps, echo boxes and the like. The only real gadget I have used is the Datong Speech Compressor, which is intended for the amateur radio user rather than the CBer and is more effective on AM than FM. It is very good at giving your signal that extra bit of punch, though, which is helpful in built-up areas.

P.S. Please don't inundate me with requests for antenna designs, he's gone on to computers now!

CB



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Mack chat

Mack's back! Here's a dose of his controversial opinions and unmistakable style

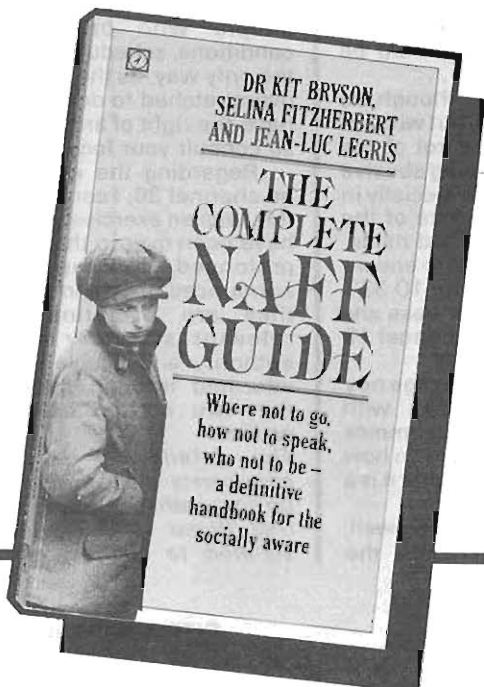


Yes, I am still here. As you may have gathered from last month I'm not very happy with the CB scene and when I visited the CB office announced that I was chucking it all in. I was surrounded by the members of staff or should I say ganged up on with promises of this, that, but none of the other or any more cash. So once more I put pen to paper in an attempt to bring you some happenings of CB. Did you read the 'Screws of the World' or as you may know it as the 'News of the World' on Sunday 9th of October. In the said paper 2 main articles with CB connections were featured and neither had kind words for the hobby. The first item was about the supposedly sexy goings on in 'Silver Rod City' or, as it is known by its residents, New Addington in Surrey. However all it was about is that eternal triangle of he fancies her and she fancies the other bloke. But of course the villain is CB radio as it was claimed that it was through CB and resultant eyeballs the affair took place. The tale goes on about other jealous partners shooting up one another, prison sentences dished out to the gunners, lives being ruined and all because of CB. Well, doesn't this thing go on all the time without involving CB?

The second main news item about CB in the paper was headed 'Crackdown on the CB sex boasts' and goes on about the supposed tough new laws to ban foul mouthed teeny horrors from CB radio. This item it seems was the result of an interview with my old mate Keith Townsend (he's also now a licenced amateur) secretary of the CBA. The tough new laws (thats a laugh for a start) plan to ban kids under 14 from holding a CB licence. (No law to stop them holding a CB mike). Outlaw signal amplifiers. (Blimey, no one told me they were legal, quick

whilst I've still got the chance, where I can get a kilowatt burner plus a couple of ex-submarine batteries to power it for mobile use). Ban transmission of music, (Yeah, yeah, yeah). Increase the £10 licence fee (no comment). Crackdown on the tens of thousands of pirates who do not hold a licence or use illegal frequencies. (Unemployment rate down as H.O. employ thousands of new RRD staff). Introduce a new wave band common to all European countries?? When I read this last proposal I thought that maybe it referred to the change in the 934MHz frequency. But it seems not, there is still a chance that in the future another frequency might be allocated on 27MHz (near or the same as the old AM band). Both this frequency and the present 27 FM will be 2 separate systems, so with the 934 we might have 3 CB frequencies. The question arises 'what advantages will the new 27MHz offer?' Not a lot really except that if the C.E.P.T. proposals are accepted by other European countries you could find yourself talking to other foreign people. But I feel that temptation to obtain and use burners could arise. So we sit, watch, and wait with interest. Whilst on the subject of knocking CB I'll ask you what is Naff? I've looked it up in the dictionary and I can't find a meaning for the word. But then I'm not surprised because it's one of those words that people make up to suit their own purpose. In this case it's part of a title of a book 'The Complete Naff Guide'. This naff book is a guide, so the title suggests, to what the author's believe are things that are worthless or useless and have no use to anybody and, don't you know, CB is naff. I wonder when the author listened on CB? Could it have been one evening in London or another large town and hearing the noise that was on the frequency, switched off after a few seconds saying "this is e-naff" or maybe the author listened on morning deep in the highlands and hearing nothing on the frequency said "Can't hear naff all on this CB box". One item that the author failed to quote as a naff object is a book called 'The Complete Naff Guide'.

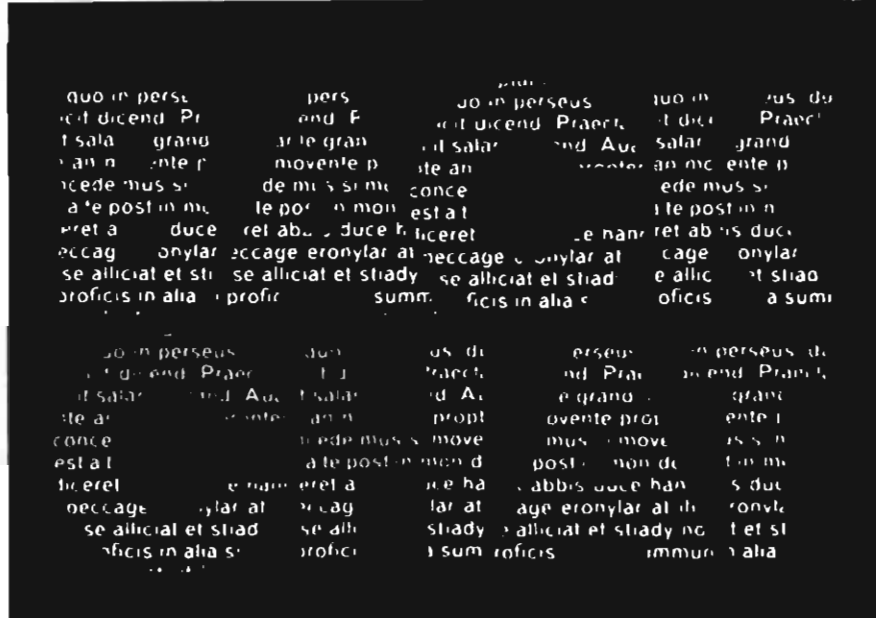
CB has taken on a very low profile these days. I can remember just before and after legalisation the hobby did get some publicity, but that did not last long. A few exhibitions allowed CB a small space, the news journals were interested for a short time, but now many people have forgotten that it even exists — except the dedicated users. I still can find a use at time for my rig when mobile on a long drive out of town, especially if I can pick up another mobile breaker to keep me company on my journey. One thing I find now is that it seems very difficult to converse with a breaker that you have not spoken to before. I get the impression that many of the users of the frequency have formed themselves into their own little groups and if you are not one of them, you are given the cold shoulder. Of course this doesn't happen all the time, and it never used to happen in the old days. Where have all the friendly breakers gone?



CB



CB forecast for this month has some gloomy clouds over Back Chat but brighter prospects for the future.



Stamps A Lot

Betty and Don Thomas write from South Wales with praise for the many breakers who have helped them in their fund raising . . .

Having been on the CB scene since day 1 and knowing what the media makes of us, we have decided to put pen to paper and let you know that there's quite a few breakers that have only kindness in their hearts.

We collect used postage stamps for leukaemia research and have been overwhelmed by the response we have received from breakers. Their handles are too numerous to mention, but if you could print this letter as a thanks to them we would be grateful. If any other breakers wish to send their used stamps we would be pleased to receive them.

You can write to Betty and Dan Thomas at 43, Nant-y-Coed, Troed-yrhiw, Near Merthyr, Mid Glamorgan. CF48 4HF.

Down And Gone?

Another slightly pessimistic letter from Paul Wright in Kidderminster. It looks as if another breaker could be lost to the amateur bands . . .

When CB was made legal, I thought we would have a good system, but without further legislation and control of the idiots playing music and being abusive on channels 9, 14 and 19 (especially in towns) it has become a waste of the £10 licence and has got a bad name. Something needs to be done to ensure that channel 9 is kept clear for 10.33's and 10.13's, channel 14 for base and mobile use in towns and channel 19 for mobile use on motorways.

Perhaps the CB emergency networks could get together with television information programmes and inform and instruct people on how to use the system properly so that it is a benefit to all and enjoyable.

If the system cannot be used well, I will join my 2 metre friends, the

amateur radio operators.

Slightly different suggestions to those of J. D. Hirst, whose letter also appears this month. But do the media, particularly television, take CB seriously enough to partake in such a programme? This is very definitely one area where the image of CB has acted against it, and I can't see the television companies co-operating unless CB appeared more responsible - and in that case we wouldn't need the programme!

More On Monitoring

Roger Large is advocating some strong action against those who persist in interfering with the monitoring groups . . .

Reading your magazine, I find it disappointing to find that some people have closed down their monitoring stations due to the abuse of channel 9. As a member of both the R.N.L.I. and my local REACT branch who monitor regardless of how much channel 9 is abused, CB will only get cleaned up if the CB user does what we radio amateurs do - and that is to inform on people who break the licence conditions, schedule or the law. This is the only way, as the authorities are too overstretched to do much. Citizens do have the right of arrest in many cases, so consult your local police.

Regarding the emergency station on channel 36, I can only assume that this was an exercise and that it should have been over in three days. If it was prolonged and an exercise not announced, they should be ignored. If they are operating without the relevant statutory organisation's authority and people have not been informed through their local press, they are not on exercise and are wallies.

The details on the channel 36 emergency station has been cleared up in another letter. Do readers feel that Roger is going too far in his solution to channel abuse and his

attitudes to the Pennine group? Are breakers justified in operating a scheme on a channel apart from 9? Let's hear your views.

Those Gents Again

From Banbury comes a letter from T. Smith, concerning 934MHz. CB.

I have been reading your articles about the future of 934MHz radio. I bought my Reftec about the end of March 1983 but then read about the chap in London who also had a Reftec but had been unable to get a copy. My father had bought one at the same time as me so I had someone to talk to locally, but it took me two weeks before I got any distance, when I spoke to David and Brian on Dunstable Downs.

I have read the article written by Mack the Hack and regret that he was not able to get onto a piece of high ground — then he may have had the same opinion as myself and other 934 MHz operators.

Now the moans. As Mack wrote, 10 channels have been agreed locally for business, etc. Well I can only say that if every locality let 10 channels go to these people, it would be totally wrong. They should be using the proper radio for their purpose, which cannot be much more in price if they are prepared to spend £300 for 10 channels.

My view on the future of this system is that it is up to the operators using it to educate new operators into using this frequency and the equipment in a sensible and proper manner. Every station I have spoken to avoids CB jargon and some of the operators are radio amateurs. All of them use 934MHz in a similar way to the good sidebanders and conduct themselves in the same way. I see 934MHz filling the gap between CB and the amateur bands and I hope the newcomers will use this frequency in the same way as the amateur would use his allocated frequencies.

Cross Channel Return

Big D from Cumbria queried the use of channel 36 for emergency use in October's issue of the magazine. A speedy reply came from J. E. Merrie in Penrith. This letter has been abbreviated slightly as it was rather lengthy.

Just after legalisation a club was formed in Penrith to monitor channel 9. The few members that started the Penrith Monitoring Service attempted to monitor the channel as best they could until they got more members.

After briefly joining REACT, they withdrew and carried on with their own club, renamed Pennine Monitoring Service. When more monitors were available coverage was extended and was given approx. 18 hours a day.

Early morning monitors were getting bleedover from the BBC World Service relay station six miles away. After about eight months and a lot of hassle and mike keyers it was decided to abandon the monitoring of channel

9 and to take emergencies on 14 or 19.

Four of the club members decided to leave their sets switched on to channel 35 to talk to each other but moved to 36 after a while. This worked well and as three of the four were unemployed, they regarded 36 as an emergency channel as they were available on it 18-20 hours a day. Word was passed around and it became known on the truckers channel. Unfortunately the 'muppets' moved in again and some local breakers complained that the channel had been taken over by the four users. However, although the monitors did modulate on 36, it was understood that there would be a break between each transmission.

There were some DXers on 36 but the majority understood and moved although there was the odd stubborn one that would not. To say that they had permission from the police and ambulance services is not true but they did have their support.

After about ten months, these four monitors could stand the hassle no longer and closed their channel 36 emergency monitoring down. So please note there is no emergency service on CB in the Penrith, Appleby and North Lakes area.

That's the story then, Big D. Unfortunately it's not a new one or the last such one we're likely to hear.

Circuit Chat

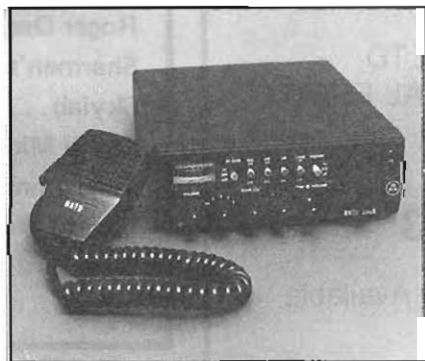
This letter may go some way towards relieving Smart Alec's anguish each month as he opens the requests for circuit diagrams. This letter is from Roger D in Nottingham.

In a recent edition Mr. D. Bailey of Sutherland was enquiring for sources of information with regards to modifications and repair, sources of circuit diagrams etc.

As you are aware, our company, Roger D in Nottingham, are old established suppliers of I.C.'s and transistors. We also distribute Nato, Stalker etc. and are the sole distributor in the U.K. of 'The Screwdrivers Expert Guide' and 'P.L.L. Data Book' (see our latest advertisement).

If anyone has a problem, write in enclosing a S.A.E. and we will help you if at all possible.

There's an offer! Thanks to Roger D who can be contacted at 831 Mansfield Road, Nottingham, NG5 3GF.



Channel Control

J. D. Hirst has strong views on channel use. This is another problem that has been with us since the beginning of CB in this country and has caused a lot of controversy in the past. Have any of us the right to insist on channels being restricted to specific uses? . . .

I feel that the letter from Mr. W. S. Loxton in the September 1983 edition of Citizens' Band cannot pass without further comment. He states that 14 and 19 are breaking channels. I would like to clarify the point by adding that 14 is the base station channel and 19 is for mobiles and mobile information only.

As a big wheeler I am incensed by base stations calling for copies on 19 instead of 14. Channel 19 is the accepted mobile/'truckers' channel and, barring emergencies or base stations calling mobiles, this channel is for mobile use only.

Does anyone want to take issue on this subject with Mr. Hirst? Letters to Back Chat please.



Channel 19 — for motorway and mobile uses only?

Club Strikes

Next letter concerns the Big Ben DX QSL Club, a well known name in the QSL world . . .

Please could I inform your readers, through the magazine, that mail intended for the Big Ben DX QSL Club or myself, Mr. C. Light, should be addressed to 17, Longbourne Green, Godalming, Surrey, England, and not to the P.O. Box 14 address.

Jim Galvin no longer runs the club and to prevent delay in members mail, it should be posted to the new address given.

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.

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

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

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

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

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

Gamma Aerial Products Ltd.

Gamma Aerial Products

MANUFACTURERS OF AMATEUR RADIO & CB ANTENNAS
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 Tel: 0274 568428 Please rush me (write in quantity required)

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Address.....

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Cavalier Base 20	22
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Gamma Aerial Products	18,22,44
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Some more new clubs but no space once again for the directory. We will have a bumper listing within the next few months.

CLUB NEWS

Mike Alpha DX Club

On Saturday August 6th, the Mike Alpha DX club held their annual eyeball. We made over 400 DX copies during the weekend on channel 10 FM, including modulations to Scotland, Wales, Liverpool, Scilly Isles and the Channel Islands. We are still receiving from these copies donations to train a guide dog for a blind person.

The modulating station consisted of a Mini Traveller with a mast for the three element beam through the centre of the roof and rotated manually from the inside of the car, plus a home made base mounted copper centre-fed dipole on the top of a fir tree, fed with a twin feeder cable and balun. (Does this Mini qualify for the Guinness Book of Records for the biggest twig on a mobile???)

We have also started a DX contest for breakers and operators are welcome to send in for further details. The contest will be running for a year, up to August 5th, 1984 and will consist of collecting souvenirs by QSL from a list of states and countries.
MA 01 Victor
Mike Alpha DX Club,
P.O. Box 3,
Sidmouth,
Devon.

November Charlie Breakers

I have been reading your magazine for quite a time and have noticed that there has been no mention of clubs in this area. So I would be grateful if you could publish this letter. The club is the November Charlie Breakers and meets at Northallerton Football Club in Ainderby Road. It was formed in September 1983 and is held every second week on Tuesday.

The club caters for FM and SSB and will have a post office box and speakers who will give talks on CB subjects. We hope to help charities too.

J. Price,
2 The Fairway,
Romanby,
Northallerton,
North Yorks.

South Cambridgeshire Breakers Club

I would like to introduce the S.C.B.C. This is a small, recently formed club which has as yet 30 members. At the moment we offer a QSL bureau and regular eyeball.

Our aim is to encourage sensible breakers (no wallies) to join us and expand the ideals of CB radio. We are hoping to arrange events such as foxhunts and outings etc.

I would also like to ask all QSL organisers to contact me with a view to a national QSL distribution network to our mutual benefit.

Jon Hirst,
S.C.B.C.,
P.O. Box 180,
Comberton,
Cambridge,
CB3 7DP.

Breaker One Four Club

I am chairman of a Citizens Band Club in Wrexham. The club is called the Breaker One Four Club and we also have a DX section called the Oscar Foxtrof DX Group. We have fifty members up to date. It costs £1.00 to join and in return you receive a unit number and membership card. The club post office box is also available.

I include a QSL card and would be pleased to hear from any other QSLers. We look forward to many contacts with the help of your magazine.

We hold our meetings at the Rhosddu Cunliffe Centre every other Wednesday and they start at 7.30pm. All are welcome.

Mountaineer
Breaker One Four Club,
P.O. Box 94,
Wrexham,
Clywd.



CB Citizens' Band

READER SERVICES

BACK NUMBERS

Simply fill out the form below — photocopy it or write a quick note if, like me, you don't want to spoil your file copy — pop in your cheque or postal order and sit back and wait.

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AUGUST 81/82/83
SEPTEMBER 82/83
OCTOBER 81/82/83
NOVEMBER 80/81/82/83
DECEMBER 81/82/83

NAME

ADDRESS

.....

.....

Back issues at £1.25 each

I enclose £

Cheques and postal orders should be made payable to ASP Ltd.

Letters

We are always pleased to receive letters from readers, but at times it is impossible to answer them all. We do try to eventually get round to answering letters with an S.A.E. but this may take some time.

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

Writing for CB

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

Telephoning

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

Back Numbers and Binders

See left for details of back numbers available and the ordering details. Binders for Citizens' Band magazine are also available from the same address at a price of £4.25, inclusive of postage and packing.

CB Citizens' Band

GET A GOOD COPY

CITIZENS' BAND SUBSCRIPTION ORDER FORM

Cut out and SEND TO: Citizens' Band,
513, LONDON ROAD, THORNTON HEATH,
SURREY, ENGLAND

Please commence my personal subscription to Citizen's Band with the issue

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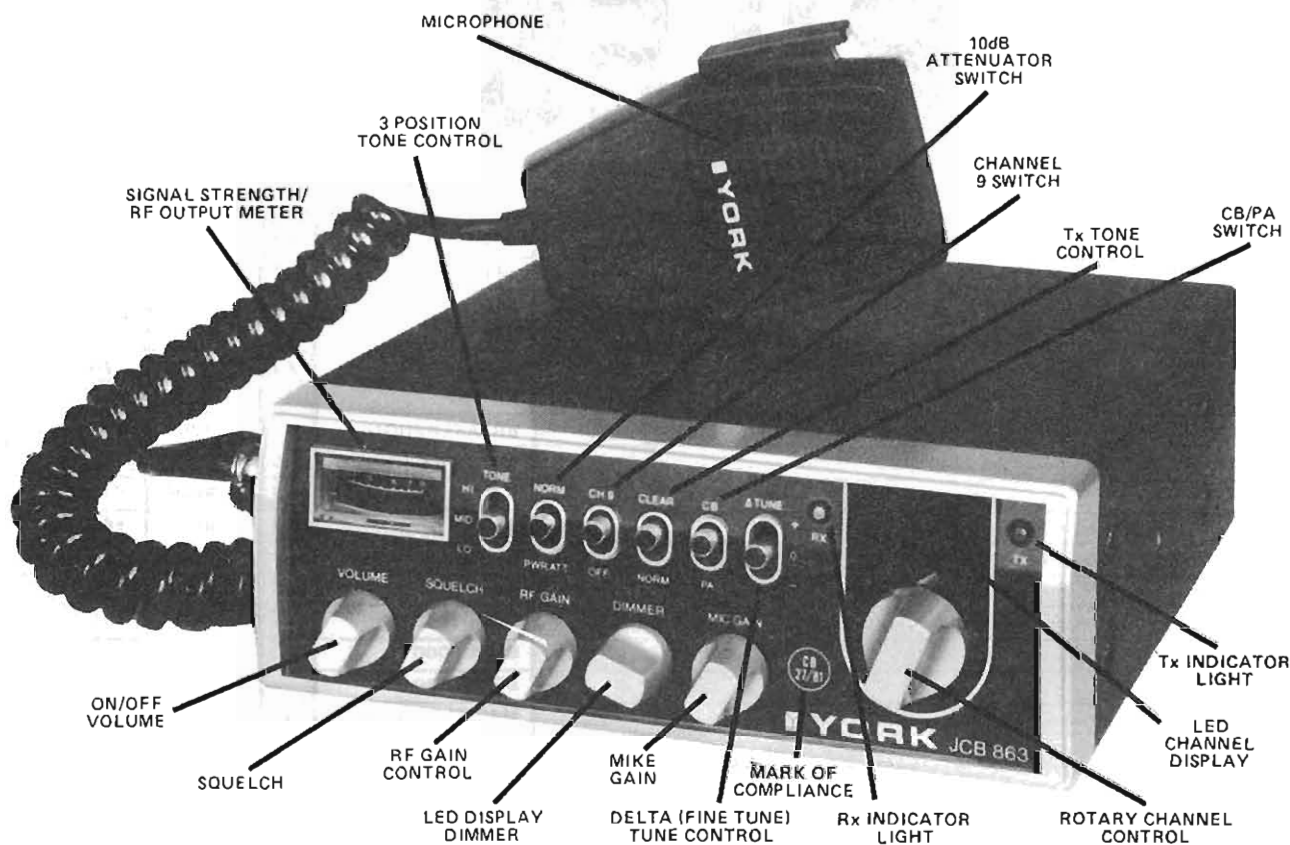
.....

.....

Signature Date

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 or fluorescent type displays. Displays will normally be bright red, orange or green and visible in all but the most direct sunlight.

CH 9 PRIORITY

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

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, Bessford 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 PO9 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	See-Ware Ltd, Ripon Way, Harrogate, N. Yorks	BLUEBIRO	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		£60
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, Childs Farm Rd, London	JOHNSON	40	13.8VDC		£50
KAISER	Kaiser Electronics, Neuwottrasse 21 25, Waldorf Bieden, W. Germany	UK 40	40	13.8VDC		£75A
LADYLINE	Marker Drayton, Suffolk	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
LDWE	Lowe Electronics, Market, Derbyshire	TX 40	40	13.8VDC		£50
MAGPIE	Maggie Electronics, PO Box 35, Andover, Hants SP10 2LG	AUTOSCAN 5000	40	13.8VDC		£120
MAXCOM	A.M. Telecommunications AM House, 17 Shepherd's 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		£60
MAXCOM		16E	40	13.8VDC		£40

Remember — Shop around as prices can vary

REFERENCE

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



SQUELCH	NB SWITCH	ANL SWITCH	MIKE GAIN	RF GAIN	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	BINADONE
•				•	•	•	•	•	•	•	•	•	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
•				•	•	•	•	•	•	•	•	•	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	OSCAR 1	40	13.8VDC	£85
OSCAR		OSCAR II	40	13.8VDC	£49
RADIOMOBILE	Goodwood Wks, North Circular Rd, London NW2 7JS	201	40	13.8VDC	£80.90
RADIOMOBILE		202	40	13.8VDC	£120
REFTEC	RF Technology, Layton Avenue Ind. Est, Mildenhall, Suffolk	934	20	13.8VDC	£200
ROTEL	Rotel 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, Freith, Henley-on-Thames, Oxon, RG6 6NR	SHOGUN	40	13.8VDC	£100
SIRTEL	24 Ailric Sq, Off Maxwell Rd, Woodston Ind. Est, Peterborough	SEARCHER	40	13.8VDC	£40
STEEPLETONE	Park End Works, Croughton, Nr Brackley, Northants.	SCB1FM	40	13.8VDC	£103
TANDY	Tame Way, Tower Bridge St, Walsall, Staffs	TRC2001	40	13.8VDC	£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	Cravenminster Ltd, Unit 8, Industrial Estate, Llandudno Junction, Gwynedd	UNI ACE 100	40	13.8VDC	£69.95
UNIDEN		UNI ACE 200	40	13.8VDC	£89.95
VIPER	Radio 88, Barking, Essex	VIPER 88	40	13.8VDC	£29
WAGNER	Knight Communications Ltd, Unit 19 Britannia Est, Leagrave Rd, Luton	9000	40	13.8VDC	£59.95
WAGNER		COMPACT 40	40	13.8VDC	£25
WESTERN	Western Electronics, Fairfield Estate, Louth, Notts	COMPACT 40	40	13.8VDC	£34.50
YORK	Sulkin (UK) Ltd, 73 Grosvenor Street, London W1X 9DD	JCB 861	40	13.8VDC	£69
YORK		JCB 863	40	13.8VDC	£89





SQUELCH	NB SWITCH	ANL SWITCH	MIKE GAIN	RF GAIN	TOONE CONTROL	S/RF METER	S/RF LED R/O	HI/LO OUTPUT	PA FACILITY	EX. SPEAKER JACK	TX IND. LIGHT	RX IND. LIGHT	CH 9 SWITCH	MIKE POSITION	COMMENTS	
•				•		•		•	•	•	•			FL		MICROLINK
•						•		•	•	•	•			FL	Report August '82	MIDLAND
•						•		•	•	•	•			FL		MIDLAND
•			•	•		•		•	•	•	•			FL		MIDLAND
•						•		•	•	•	•			FL	The talking rig	MIDLAND
•						•		•	•	•	•			FR	Report July '83	MERCURY
•						•		•	•	•	•			FL		MUSTANG
•						•		•	•	•	•		•	FL		MUSTANG
•	•	•		•		•		•	•	•	•			SL		NATO
•						•		•	•	•	•			SL	Report January '83	NATO
•						•		•	•	•	•		•	FL	Cybernet 134 chassis Report April '82	OSCAR
•						•		•	•	•	•			FL	Report October '83	OSCAR
•						•	•	•	•	•	•			FL	Cybernet chassis Report October '82	RADIOMOBILE
•				•	•	•		•	•	•	•		•	FR	Report September '81	RADIOMOBILE
•						•		•	•	•	•			FL		REFTEC
•						•		•	•	•	•			FL	Cybernet chassis	ROTEL
•						•		•	•	•	•			SL	Cybernet chassis	ROTEL
•			•	•		•		•	•	•	•		•	SL	Cybernet chassis	ROTEL
•						•	•	•	•	•	•			SL	Up market elegance Report June '82	SHOGUN
•						•		•	•	•	•			FL		SIRTEL
•						•		•	•	•	•			SL		STEEPLETONE
•						•		•	•	•	•			SL		TANDY
•						•		•	•	•	•			SL		TANDY
•			•	•		•		•	•	•	•			SL		TANDY
•						•		•	•	•	•			SL		TANDY
•						•		•	•	•	•			SL	Report November '82	TANDY
•						•		•	•	•	•			SL	Report September '82	UNIDEN
•			•	•		•		•	•	•	•			SL	Report February '83	UNIDEN
•						•		•	•	•	•			FL		VIPER
•						•		•	•	•	•			FL		WAGNER
•						•		•	•	•	•			FL		WAGNER
•						•		•	•	•	•			SL		WESTERN
•						•		•	•	•	•			SL	Report October '81	YORK
•			•	•		•		•	•	•	•		•		Cybernet 134 chassis	YORK



BASE STATIONS

BASES



NAME	ADDRESS	MODEL	NO OF CHANNELS	SUPPLY VOLTAGE	RETAIL PRICE
AUDIOLINE	Telecomms, 189 London Road, North End, Portsmouth, Hants.	345	40	240VAC	£139.95
DNT	Radiotechnics Ltd, Grove Way, Bel Royal, St Lawrence, Jersey CI	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-Ware Ltd, Ripon Way, Haregate, N Yorks	BASE	40	240VAC	£220
HAM INT.	Telecomms, 189 London Road, North End, Portsmouth, Hants.	JUMBO	40	240VAC	£254
HAM INT		CONCORDE II	40	240VAC	£164
HARRIER	Dixons Photographic Ltd	CB HQ	40	240VAC	£130
HAVARD	Harris Overseas Ltd, Harvard House, 14-16 Thames Rd, Barking, Essex	H407	40	240VAC	£125
HARVARD		H401	40	240VAC	£149.95
JOHNSON	Star Warehouse, Chalk Farm Rd, London	XK 2000	40	240VAC	£99
MIDLAND	Plustronix Ltd, Hempstalls Ln, Newcastle-under-Lyme, Staffs	76-200	40	240VAC	£150
UNIDEN	Cravenminster Ltd, Unit B, Industrial Estate, Llandudno Junction, Gwynedd	UNIACE 300	40	240VAC	£149.95
WAGNER	Knight Communications Ltd, Unit 19 Britannia Estate, Leagrave Rd, Luton LU3 1RJ	BASE	40	240VAC	£150

PORTABLES

NAME	ADDRESSES	MODEL	NO OF CHANNELS	SUPPLY VOLTAGE	RETAIL PRICE
BEAR	Air Bear (UK) Ltd, Wortley, Sheffield	RBH 35	3		£44
BINATONE	Binatone House, 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 780339)	CBX40	40	BATTERY	£80
MAXCOM	A.T.M., AM House, 9a 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		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	TONE CONTROL	S/RF METER	S/RF LED R/O	HI/LO OUTPUT	PA FACILITY	EX. SPEAKER JACK	TX IND. LIGHT	RX IND. LIGHT	CH 9 SWITCH	MIKE POSITION	COMMENTS
•			•	•	•			•	•	•				FL	AUDIOLINE
•					•			•		•				FL	Review May '82
•					•			•		•				FL	The most expensive base!
•				•	•			•		•			•	FR	Report May '82
•				•	•			•		•			•	SR	Report May '82
•				•	•			•		•	•			FL	FIDELITY
•				•	•			•		•				FL	GRANDSTAND
•	•	•	•	•	•			•	•	•				FL	HAM INTERNATIONAL
•	•	•	•	•	•			•	•	•				SL	HAM INTERNATIONAL
•				•	•			•	•	•	•			FL	HARRIER
•				•	•			•	•	•	•	•		FL	HARVARD
•				•	•			•	•	•	•	•		FL	HARVARD
•				•	•			•	•	•	•	•		FL	JOHNSON
•				•	•			•	•	•	•	•		FL	MIDLAND
•			•	•	•			•	•	•	•	•		FL	Reviewed August '83
•	•		•	•	•			•	•	•	•	•		FL	UNIDEN
•			•	•	•			•	•	•	•	•		FL	WAGNER

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



SQUELCH	NB SWITCH	ANL SWITCH	MIKE GAIN	RF GAIN	TONE 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
•										•	•	•		-	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		MAX. POWER	TYPE	MOUNT	PRICE RANGE
			AL	SS				
AERIAL SUPPLIES	Aerial Supplies, 6 Widery House, Stomsgrove Rd, Redditch, Worcs. (Tel 0527 62620)	Silver Star	AL	1.5	100	B	Pole	
		Silver Arrow	AL	1.5	500	B	Pole	
		CBA 1500	SS				Various	C
ANTENNA INC.		12510 Telecomm	SS	0.9		M	4ths	D T C C C C
		Super Persuader	SS	1.5		M	Mag	
		MR511	SS	1.2		M	Mag	
		M710	SS	1.5		M	4ths	
		AS M125	SS	1.14	150	M		
AS M 128	SS	1.14	150	M				
ANTENNA SPECIALISTS	Antiference Ltd, Aylesbury, Bucks HP15 3BJ	AS M131	SS	1.14	150	M	gutter	D D D D D D D D D D
		AS MR440	SS	1.2	150	M	mag	
		AS MT178	SS	1.2	150	M	mag	
		AS M510	SS	1.2	200	M		
		AS M2000	SS	1.5	150	M		
		AS 9812	SS	1.2	150	M	mag	
		IC 85	SS	1M		M	mag	
		IC 80	SS	1M		M	spring-based mag	
		IC 16	SS	1		M	trunk	
					SS			
ANTLER	Shakespeare Performance Antennas, Berton Rd., Market Drayton, Salop	IC 20	SS	1 1/2		M	roof	D E R E C
		IC 30	SS	1 1/2		M	gutter	
		IC 40	SS	1 1/2		M	mirror	
		IC 80	SS	1 1/2		M	mag	
ARCHER	Tandy Corp, Tame Way, Tower Bridge St, Walsall, W. Mid	21-904	SS	0.5	50	M	snpp	D
ARMSTRONG	Stateside Trading Ltd, Aisleby Ave, Newport, Shropshire	SAM 10	SS	1.06	1,000	M	surface	F F G G G G G
		SAM 20	SS	1.06	1,000	M	surface with spring	
		TAK 10	SS	1.06	1,000	M	boot lip	
		TAK 20	SS	1.06	1,000	M	boot lip	
		MAG 10	SS	1.06	1,000	M	with spring	
		MAG 20	SS	1.06	1,000	M	magnetic	
		BDY 20	SS	1.06	1,000	M	magnetic	
		PEC 20	SS	1.06	1,000	M	with spring	
AVANTI	CB Radio Centre Ltd, 337 Kenton Rd, Harrow	AV 241 (Moonraker)	SS	1.22		M	stud	D E E G
		AV241 T	SS	1.22		M	trunk	
		AV241 M	SS	1.22		M	mag	
		AV241 MM	SS	1.22		M	super mag	
BADLAND	Badland, Rowden Ind Est, Providence St, Lye, Shropshire	810	SS	1.22		mag	G	
BANDIT	Telecomms Ltd, 189 London Road, North End, Portsmouth, Hants	B10	SS	1.42		M	mag	G F F E E D D D D D
		B15	SS	0.51		M	mag	
		B16	SS	1.22		M	mag	
		B20	SS	1.42		M	mirror	
		B30	SS	1.42		M	drill-thru	
		B30	SS	1.22		M	drill-thru	
		B40	SS	1.42		M	various	
		B40	SS	1.22		M	various	
		B50	SS	1.42		M	various	
		B50	SS	1.22		M	various	
C. BRIT	C Brit, Unit 2, 5 East Lane, Wembley, Middx	Singray Whiplash	AL SS	1.5 1.5	500 25	B M	pole	G C
CT INTERNATIONAL	CT International, CTE BUK Ltd, Unit 3, Micham Ind Est, 85 Sheatham Rd, Mitcham, Surrey	MG27	SS	0.91		M	mag	C
DIAL-A-MATCH	WTA Electronics Ltd, 111 Cromer Rd, Helleston, Norwich (Tel 0626 47894)	Rubber Duck -	R	0.3		M		C C T E E E C
		530 (Cherokee)	SS	0.61		M		
		S31 HBF	SS	0.61		M		
		531 SMF	SS	0.61		M		
		540	SS	1.22		M		
		641 HBF	SS	1.22		M		
		641 SMF	SS	1.22		M		
620 (Halfbrood)	SS	1.27		M				
DIGITEK UK LTD	179 181 Soudham Rd, Mitcham, Surrey	Falcon 27	SS	1.5		M	various	D

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

and stainless steel home based antennas.
Length

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

Maximum power

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

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

Type

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

antennas far outweigh the number of home based ones. But there are more and more home base antennas coming out to 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	Note: Prices are given as a guide only.
A:- £1 — £4.99	E:- £20 — £24.99	Construction	Application	
B:- £5 — £9.99	F:- £25 — £29.99	SS — Stainless Steel	M — Mobile	

CONSTRUCTION	LENGTH	MAX POWER	TYPE	MOUNT	PRICE RANGE
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NAME	ADDRESSES	MODEL	CONSTRUCTION	LENGTH	MAX POWER	TYPE	MOUNT	PRICE RANGE
OIXONS	Dixons Photographics	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	thru	B
FREEMAN & PARDOW	Freeman & Pardow, Tything Rd, Arden Forest Ind Est, Alrester, Warwick	The Invader The Thunderpole	AL AL	1.5 1.5	250 500	B B	pole pole	E F
CB SERVICES	57, Crab Lane, Harrogate, N Yorks HG1 3BD	Bullwhip Knuckleduster	SS AL	1.5 1.5	—	M B	various	C D
MIDWEST		Dial-a-tune Dial-a-tune	SS SS	0.61 1.22	500 2	M M	various various	C O
MODULATORS	Lee Walker Manufacturing, Pimblecks Works, Sandwich Rd., Sandwich, Kent	MOBILE LC MOBILE SC MDX LC MOX SC 934 BASE 934 MOBILE VHF MOBILE VHF BASE 27 L/C BASE 27 DX BASE	SS SS SS SS FG FG SS SS AL	1.3 1.3 1.5 1.5 1.5 1.3 1.3 1.5 1.5 1.5	1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000 1,000	M M M M B M M B B	thru thru thru thru Pole Gutter Pole Wall Pole	C C C C X G C D D D
MOTOROLA	Motorola, Taylors Rd, Stretford, Hitchin, Herts	EC106M	—	—	—	M	—	F
OCT.	Unit 1 Earfield Lane Ind Estate, Graham, Lincs	K40 Z27	SS SS	1.4 1.45	500 200	M M	various various	G B
PANORAMA	Panorama, 73 Waltham Rd, London SW15 2LS	CB27	SS	1.22	—	M	mag	B
PRIDOW		KT40	—	1.5	—	M	trunk	C
REVCO	Telecomms, 189 London Road, North End, Portsmouth, Hants	Revco	SS	1	100	M	various	B
SHIRA		SYS 206M SYS 203C MA 62	SS FG	1 0.75 0.91	—	M M M	mag trunk —	C C C
SIRTEL	Siriel, 24 Allen St, Old Maxwell Rd, Woodtree Ind Est, Peterborough	GP Messenger GP Signal Keeper	SS SS	1.5 1.5	—	B B	clamp tripod	E F
SMC	Oscar, South Midlands Communications, Osborn House, Totton, Southampton, SO4 4DN	Oscar Base CBA 11GP Oscar Base IIVIIS Oscar IICM Oscar IICE Oscar IINE Oscar IISE Oscar TMCAS	SS SS SS SS SS SS	1.5 1.5 1.2 1.2 1.5 1.5 1	— — — — — —	B B M M M M	— — mag foldover base 'pull-up' locking- collar' foldover base trunk	F F D B C C B
SPYDER		Spyder	AL	1.6	—	B	pole	B
TAGRA	CR Radio Centre Ltd, 327 Rantall Rd, Harrow	T40	SS	1.4	500	M	various	E
THORBRED	OCT, Unit 1, Earfield Lane, Graham	251 Z27 Locktune	SS SS SS	1.5 1.5 1.5	—	M M M	various 'S' various	C B C
WITCHSTICK	CJM Motor Factors, 161 Farm Ave, Leavenston, Walford, Herts O9273, 74646	Witchstick homebase	AL	1.5	—	B	—	E
WTA ELECTRONICS	111 Cromer Rd, Redwood, Norwich, Norfolk	Wot Pole Wot Mag	AL SS	1.5 1.6	—	B M	pole mag	
VAN ORDT	Van Ord, Knight CB Specialist, 204 Dunstable Rd, Luton, Beds	Audio King AKO-100	SS	1.5	2,000	M	thru	G

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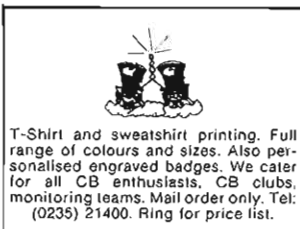
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3-9 Wembley Commercial Centre, East Lane, Wembley, Middx. Tel: 01-904 3507

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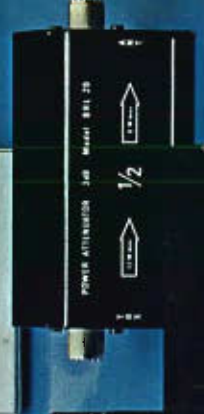
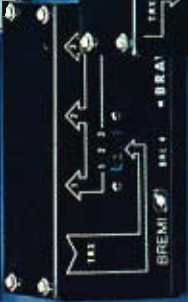
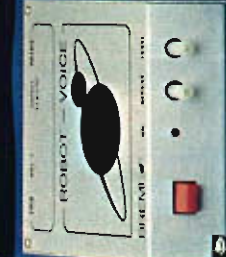
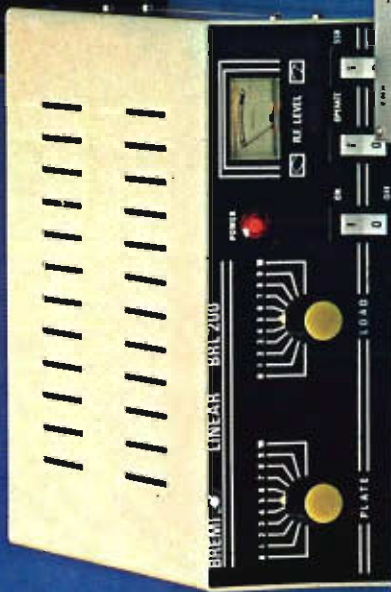
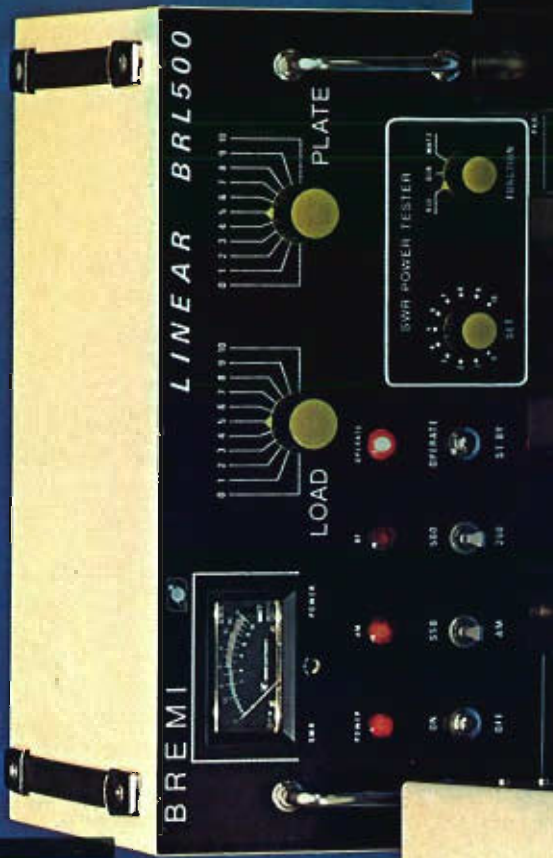
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