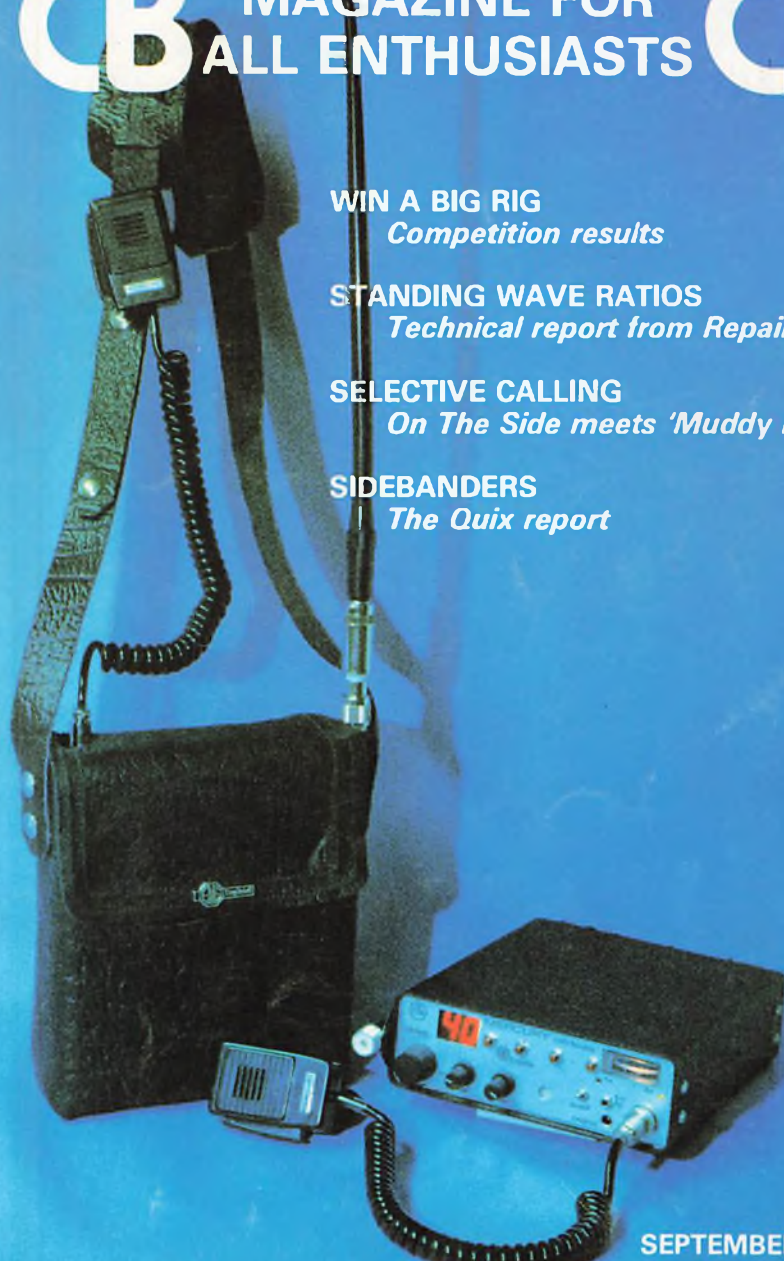


ON THE SIDE

70p

# CB MAGAZINE FOR ALL ENTHUSIASTS CB



**WIN A BIG RIG**  
*Competition results*

**STANDING WAVE RATIOS**  
*Technical report from Repairman*

**SELECTIVE CALLING**  
*On The Side meets 'Muddy Boots'*

**SIDEBANDERS**  
*The Quix report*

SEPTEMBER 1983

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## DESCRIPTION

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IT'S AWFULLY LONELY  
BEING NO.1



# Breaker, break

Literally hundreds of questionnaires have dropped onto the editorial desk — completed of course, and for which we say many thanks. The majority were intelligent comments on the state of CB in the UK at the moment, although the odd few were ridiculous. We won't mention who sent them, but in your local club, you probably know the wallies who are most likely to . . .

Anyway, we promised, some time ago, to cull out the 'orrible ones, and finish up with an all-time international winner of the excellent, all-singing, dancing, juggling Radiomobile CB202 transceiver. The winner is *Billy Dunne*, of Brightlingsea, Colchester, Essex, who answered all the questions correctly, and whose slogan summed up all that is desirable and necessary with CB in the future. Many of you were stumped by the first question, which asked what "boob tube" means in CB lingo. Yer, it could mean the YL's T-shirt, but it don't. It means "television" for those who don't know. How many channels are legalised currently is 60, and not 40, as the majority suggested. How count them; 40 on 27 megs, and 20 on 934 megs. See? QED.

CEPT means the Conference of European Postal and Telecommunications Administrator, for your information, and the Chairman of Natcolcibar isn't Andy Donovan, nor Jim Bryant. It's Tony Bevington.

The rest were easy, and for Billy Dunne, the Radiomobile rig is on its way.

We hear rumours that there will be changes to the CB licence on January 1st, but at the time of going to press, haven't been able to pinpoint exactly what they will be. Needless to say, we'll publish them here as soon as we know the facts.

There might also be changes to the amateur radio licencing regulations too, but again, we have no facts to go on. Rumour has it that there might be a novice amateur licence in the pipeline — a sort of halfway point between CB and full Home Office callsign status. What do you think? How many of you would like to get into amateur radio and how many don't give a whatsit? We'll publish the letters received, and throw the article (soaked in orange juice) through a window of the Home Office. Won't result in anything, mind you, but if enough of us react to the rumours, they might just take a bit of notice . . .

Oh, by the way, we're looking for people who can write freelance articles for *On The Side*. The subjects include technical projects, DXing, rig impressions, and so on. So if you want to stun us with your brilliant journalistic and creative abilities, write to me . . .

10-10  
Frank V — Editor

## Production

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The publishers of *On the Side* magazine cannot condone the use of illegal CB equipment, and illegal ancillary equipment. Also, we do not accept responsibility for any damage, hardship, or other unfortunate happening which might have taken place as a result of editorial or advertisement material published in this magazine. In other words, if your new rig (which we might have recommended!) blows up, we won't pay.

# CONTENTS

## 3 *Breaker, Break*

Turn one page back for this one. The rest of the magazine simple pales in comparison to this page – or so the Editor says. It's the figurehead of the magazine, he says . . .

## 6 *Copying the mail*

Where we attempt to put the words you write into some sort of order. Thanks for all the word-anagrams readers! Seriously, these are your pages, and you'll never believe it, but the letters are becoming more interesting. Didn't think it was possible.

## 10 *CB update*

Important things happening in the world of CB that might make a big difference to its future. Compiled by the staff of *On The Side*.

## 12 *Campaign for real CB*

Meetings, meetings . . . Yes, we know, but it is where things get decided, and where things get done. Steve Donohue reports on the latest discussions taking place on the future of AM and SSB CB.

## 17 *Pluto's progress*

Some days, nothing goes right. You win the race to the revolving doors, but for some reason, the other chap comes out the other side first. Some days . . .

## 18 *Standing wave ratios*

And how to produce the best figure possible, by Repairman, our tame technician with a brain like the British Electronic Encyclopaedia . . .

## 20 *SECON on the map*

The initials stand for Southern Emergency Citizens' Operators' Network. They're now fully recognised, and spend their time assisting the public services with crimes (preventing them, that is), helping clear traffic problems, find missing persons and so on. It's an emergency CB network we can be proud of.

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# ON THE SIDE

## 24 *Disabled on channel*

There's a young chap not three doors away from the Editor who became crippled in a car crash. Now his best bet in life is the CB radio. Read all about the Disabled on Channel Society, and how it works.

## 28 *On the other hand*

A new column where Blue Meanie puts Fleet Street under his microscope and asks for your stories of good CB in action.

## 30 *Sidebanders, or tricky dicks*

What some sidebanders are up to, by one man who has seen it all, and who says he can see how things are going in the future. The man's name is Lucius Quix . . . we think.

## 34 *Up Up and Away*

Susie Brain drops in on the high numbers club and reports on a daring fund raising feat high over Yorkshire

## 36 *How to check co-ax*

It's simple really. Here's a graph of readings that should tell you how to go about making sure that co-ax you bought from the chap down the road is up to scratch.

## 38 *Via the satellite*

Or not, as the case may be. A reader's call for QSLs from people heard on the wireless.

## 39 *Be selective about CB*

*On The Side* reviews the Mercury selective calling system, through the eyes (ears and mouth) of a local enthusiastic user. It's a good alternative to mobile radio, for a start.

## 42 *What is sporadic E?*

Well, it's a sort of, um, cloud, and radio signals bounce off it, or something like that. Anyway, the Editor wrote it, and it's on this page.

## 47 *Spotlight on*

We continue with our feature of turning the spotlight on companies' activities in the CB field.



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# COPYING THE MAIL

LETTERS

LETTERS

LETTERS

## WANDERERS BREAKERS CLUB

I am writing on behalf of our club to see if you could include us in your list of CB clubs. We are a new club, formed in March 1983, and have a membership of 70; we're growing all the time!

At present we have adopted the geriatric ward at Hull Royal Infirmary as our charity, and were recently involved in a sponsored walk which raised £400 for them. We are also organising a treasure hunt for junior breakers, and are trying to set up somewhere, where we can entertain people, and show them how to use rigs properly. Also, show them how to cut down some of the mike keying and wallying. We have noticed a lot of people don't know how to use a rig.

We have a club rig available to members if their own is being repaired or whatever. Well, here's hoping you'll print this ad!

Wanderers meet fortnightly on Tuesdays at 8.30pm, at The Drake, Bodmin Road, Bransholme, Hull. PRO is Taffy, FM channel 19.

**Frank O'Connor,  
42 Ashworthy Close,  
Bransholme, Hull HU7 4EX.**

## JARGON?

### WHAT JARGON?

Being a (thick?) female of 45 years of age and married, I need your advice on CB rigs etc.

I have become very interested in CB and have purchased your magazine for the first time today. Although I find this very interesting, I do not as yet understand the jargon. The reason for my letter is that my husband does a lot of climbing and back-packing, in the mountains of Glencoe and Torridon in Scotland, and as I do not climb, wish to keep in touch with him from ground level.

Could you please therefore, advise me on what rig I could purchase and if a hand held set could be used by my husband for us to be able to keep in touch with one another? It would be very much appreciated if you could provide any information.

**Jeanette Matthews,  
Cumbria.**

*First of all, Jeanette, thanks for the letter, and we'll say that CB is an extremely efficient way of keeping in touch with your climber-husband, as long as the mountains aren't more than about five miles high. . . . As far as recommending a particular rig, we can't really do this, because while some rigs might work well at ground level, without buildings or mountains between the two hand-held sets, others won't, and we haven't had the opportunity of checking out every possible situation.*

*I'm afraid it's a case of suck it and see, and taking technical advice from the man behind the counter. The only alternative is to go in for something more powerful, in the ham line. — Ed.*



## UP TO STANDARD?

Please could you do a rig report on the Amstrad 901. I have one of these myself, and would like to know for sure whether it comes up to normal standard.

By the way, *On The Side* is the best CB mag I've read yet. Keep it up!

**Paul Berry (13), Wild Fire,  
Bolton, Lancs.**

*It's a fact of life, unfortunately, that if you buy CB equipment (or any other goods for that matter) you can't tell whether yours is actually as good as the specifications say. Or on the other hand, whether it's worse. Might well run an article in a future issue on this subject. Thanks for the comments Paul. — Ed.*



## SPARE KNOB WORKS WELL

I am writing to thank you for the information and enjoyment I get from your magazine *On The Side*. Also, I would be glad if you could pass on my thanks to Repairman for his excellent article in the July issue, on "Have you got a spare knob?" I promptly went to our local electrical spares store and got the parts, made the board as described and fitted it to my

Realistic 2000. And the effect was amazing.

I can now talk to breakers in Banbury, 16 miles away at a Super Radio 5, with the power only half on. My friends were also amazed and are fitting it to their rigs. Price of the parts was just £1 — a considerable saving compared with buying a power mike.

By the way, this was my first attempt at making and fitting anything to a radio and I am fair chuffed that it was a success. Can we have some more constructional diagrams please? If possible, one on increasing the RF gain.

**G. Moss, Mallard MC68,  
Daventry, Northants.**



## KIDS ARE GOOD BREAKERS!

I normally do not write to magazines of any kind, but after reading *On The Side* magazine (May 1983) I felt I just had to put pen to paper over your article on page 23.

I must say that I agree with most of what you had printed; however, the last paragraph could have been worded differently. I know a lot of children that use CB and they are sensible, polite breakers. Where you are could be a lot different!

But here in Liverpool I find most of the young ones are good breakers, but it's a big BUT. The breakers over 13 to 20 are a different kettle of fish — you only have to listen to the channel 9 to hear the way the monitors get bucket mouthed. These are not children though — they're teenagers and in their twenties.

*continued on page 8*

# COPYING THE MAIL

continued from page 7

Don't get me wrong. There are lots of excellent breakers in that age range as well, but sad to say in the main, in all Liverpool areas these are the trouble-makers, and not the little breakers. So I for one hope they make number 9 the channel for emergency 10-33s only. There should be NO AGE RESTRICTIONS.

We are losing too many good breakers because of the bucket mouths. We can't afford to lose the young ones as well, although I must admit I know a lot of them are not allowed on the radio as much as they would like. Mainly because of the planks. The youngsters would possibly be attracted by the "excitement of the plank talk", or something like that.

I have two young ones, aged seven and 10 — and everybody on CB says what good breakers they are. But, sorry as I am to admit it, I do not let them on the rig nearly as much as I used to. They have even been to Alder Hay to modge with the long term children in the wards on CB. Thankfully the hospital not has rigs brought in instead of hand held sets. So now the gang of bad breakers (shall we say) cannot break up the kids' network as they used to do, deliberately.

I was going to mention the error in your last issue (page 19, 10-13 instead of 10-33) but I'll forget it, because my own letter is probably full of errors or spelling mistakes (*well, not too many — Ed*).

Sorry I have rambled on and on. Now you know why I don't write to magazines and newspapers, don't you?

**Sleepy Lady,  
Blood City — Bird City — Holy City — or  
even Liverpool.**

## HOW TO BEGIN

I have just purchased your magazine *On The Side*, and think it's just the thing for the likes of myself. That is, a person who has listened to CB and has given it a long

time before making up my mind finally.

Now, I know I would like to be a CBer. I am glad to see your mag starts off as it has done, ie, first things first. Now, many people, like myself, a loner, would like you to start to write chapters on "How to start in CB." What to buy, what books to read and so on. Does one buy a receiver which covers FM and AM? I ask this question because I understand that AM is likely to be adopted by the Home Office in the near future. Also, what aerials do I need, or twig to use in the flat where I live?

There are very many people in flats who would like a CB rig. We would never be alone again.

Kind regards and good luck to your magazine.

**Sqdn/Ldr C. G. Jackson,  
Gosport, Hants.**

*Well, we can answer your first question anyway; although it is not illegal to buy a rig that receives and transmits AM, it is still illegal to use it, even if you use only the FM side of it. Here at On The Side, we're right in the middle of the hurricane, if you understand what we mean; on the one side the Government are saying that AM will never, NEVER, be legalised, and on the other, organisations such as Nat-colcibar say (or at least suggest) that it will, and in the very near future. Us? We're sitting on the fence for a while . . . — Ed.*

## YOU'RE ON THE MAP!

First of all I would like to congratulate you on an excellent CB magazine *On The Side*.

I would like to put the Oyster Breakers and Social Club on the map, as this club was formed back in February 1982 and was attended by about 200 breakers from both AM and FM. We are an active club, and not a bunch of boozy breakers, although our club does meet in a hall off a



pub called the Harbour Lights every other Tuesday at 8pm.

Recently we held a Mass Eyeball on the sea front at Whitstable with a raffle, stalls, food etc. About 700 breakers came from all over Kent and Essex. The eyeball was meant to start at 5.30pm, but breakers began to arrive in Whitstable before 11am to do a bit of sightseeing.

The Essex breakers, after an enjoyable evening, left for their coach at about 11pm. As I mentioned, we hold our meets every other Tuesday evening, and amongst these activities we hold bingo nights, video films, discos and have a good chat. We also arrange outings — last year we went to Windsor Safari Park, and a trip coming up is to Thorpe Park. This Saturday some members are going on a sponsored walk in aid of Save and Whale, from Whistable Harbour to Herne Bay and back again; 10 miles.

More information about our club is available from Barefoot Boy, Oyster Social Club, P.O. Box 18, Whitstable, Kent.



## WHEREVER YOU MAY BE . . .

At long last, the "Lazy Racer" has decided to put pen to paper and compilation *On The Side*.

I have for five years been operational on the 11 metre band and have seen many CB magazines come and go in this time. *On The Side* I find both interesting and informative and I would certainly recommend a copy to any breaker who has not read one yet. Long may *On The Side* continue to please both myself, and I am sure, many other breakers.

I am the President of a new DX group which my friends and I are forming. The group will be ready to accept membership applications by the time the September issue hits the newsagents. We will be known as: "The Tartan Pirate DX Group" and we will monitor 27.535MHz USB.

Anyone interested and seeking further information should write enclosing an SAE to either myself 1TP01, or Kevin 1TP02 at the address below. As a special item for our members, we intend to compile a directory of DX clubs/groups around the UK, complete with postal addresses and monitor frequencies where applicable.

The basis behind this idea is that no matter what area of the country you are in, you should, by consulting the directory, be able to contact the DX club/group in that area. With this in view, I would be very pleased to hear from clubs and groups throughout the country.

Sorry if this letter appears a bit long, but it really only covers the basics of what I would like to write. I hope you can find space for it in the September issue.

I particularly liked the article on the SL250DX solid state linear amplifier, and if you could come up with a circuit diagram I would very much appreciate a photo-copy of same, as I have been using one for three years now.

Keep up the great work with the mag. 73s and 51s.

**Bruce 1TP01 (Lazy Racer),  
c/o 8 Wood Park, Lesmahagow,  
Strathclyde, Scotland.**

# QUESTIONS.....

## QUESTIONS.....

### QUESTIONS.....

No doubt the European Commission have many things to do, but discussing citizens' band radio must be one of them, albeit a little one. Much of what they do doesn't get back to we Brits unless (a) somebody is there with their minds SWLed into the goings-on of the various committees, or (b) various people in this country get to hear about things through official documents.

The following question and answer sequence was found when certain people were researching through the CEE files. Take a close look at paragraphs six, seven, and eight. If you happen to be writing to your MP, or MEP, draw their attention to them . . .

This is a written question (no. 1963/82) by Sir Fred Warner, to the Commission:

"As the French government is liberalising its standards on CB by sanctioning the use of 40 channels spread over AM, FM, and SSB from January 1st 1983, and as the UK government continues to sanction the use of FM channels only, and to prohibit the import of rigs with other capabilities, contrary to Articles 30 to 36 of the EEC Treaty, can the Commission say what action it is taking to achieve a Community standard for CB users so that they can take their rigs from one Member state to another, and use them freely there?"

Answer by Mr. Narjes, on behalf of the Commission:

**1. The Honourable Member suggests that the actions of the UK government are contrary to Articles 30 to 36 of the EEC Treaty. The Commission has not yet reached any such**

**conclusion. The fact is that the Member states each allege particular interests (including public order, public safety) in support of their individual rules. If proved, these matters would permit an exception to Article 30.**

- 2. The Commission has therefore looked into the question whether there is evidence to support the contentions of the Member states and has discussed the matter with certain of the Member states whose rules are complained of with CB users and with a representative of the body primarily responsible at european level for questions of standards for radio equipment and allocation of radio frequencies, the CEPT (European Conference of Posts and Telecommunications).**
- 3. It has also had an expert study done, details of which were communicated to the Parliament in late 1982.**
- 4. Some of the relevant evidence has still to be made available to the Commission; no final decision on the Articles 30 to 36 issue is yet possible.**
- 5. The CEPT discussed a new recommendation on CB radio at the beginning of 1983. It is hoped that it will be formally adopted later in the year. The Commission hopes to be able to base its own initiatives on this new document.**

6. In the meantime, the Commission also proposes to take action independently of the CEPT recommendation on the more specific question of difficulties in crossing frontiers in vehicles fitted with CB equipment.
7. It has concluded that certain penalties imposed on such occasions for mere *possession of non-conforming equipment are unjustifiable* under Articles 30 to 36, and will take infringement proceedings in appropriate cases. The Member states are being informed of these conclusions and invited to take the necessary steps to abolish the offending practices.
8. The primary effect of this initial action will be to enable people to move freely within the Commun-

ity without dismantling the CB equipment in their cars. It should have the further effect in a significant number of cases of ensuring that equipment approved in one Member state can actually be used in another – this is, however, unlikely to be so where the case involves the United Kingdom. That situation must await either the final decision on the Articles 30 to 36 issue or a successful Commission initiative based on the CEPT's planned new recommendation.

Does this mean that in future, the British government could find it difficult to enforce a law making it unlawful to be in possession of sets capable of AM and SSB operation? Usage is a different matter, we know, but any progress is better than no progress at all.

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# Campaign

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# for Real CB

**Steve Donohue continues his commentary on the war still raging over Europe's need for a much more effective citizens' band system. This month, we carry summaries of reports of the European Parliament Committee on Transport. Really though, it's a "draft opinion" of the Committee on Youth, Culture, Education, Information and Sport, on co-ordinating regulations relating to citizens' band. Sounds heavy, but it isn't. Steve Donohue is Secretary of Natcolcibar.**

Things are happening thick and fast in the campaign, and sometimes it's difficult to keep up with all the meetings throughout the world and Europe, let alone all the decisions, comments and movements outside the inner core of CB rule-making!

There was an important meeting in London in May, of the EEC Transport Committee, responsible for co-ordinating regulations relating to CB. The man who put these regulations together (for discussion) is M. Horst Seefeld.

Main point of the meeting was to try and reject the CEPT proposals that specified a European system of 40 channels FM (FCC), output not exceeding four watts, and the introduction of quality control for "reception parts". Back in April, the European CB Federation (ECBF) met at Bexley in Kent, and it was reported that the Secretary General of the ITU (International Telecommunications Union) said that by 1990, "only international CB will be recognised". In other parts of the world, other than Europe, CB means freedom of speech. Europe is a joke, it was said at the meeting. "The proposals that CEPT have offered to the ECBF are a joke. We must use political pressure to get what we want, and vote only for MPs and MEPs who support us."

At the same meeting, Ian Leslie stepped down as Vice President of Natcol-

cibar, and Madeleine Parkes nominated in his place.

Later on, Walter Stephenson of the MRUA set out the position of the ITU, and that it was a member of the United Nations Treaty. All countries have signed the treaty and as such, are members. So, he said, CEPT is unique in this case. "They are elected by no one and are supported by manufacturers. They have been fighting against CB and other forms of mobile land radio services. The delegates to CEPT from each country take instructions from no one, and make their own decisions. They are not carrying out instructions of their national government."

Mr. Stephenson told the meeting that he wanted the ECBF to convince CEPT to "our way of thinking." Further investigation into the workings of CEPT revealed that the people selected as members were "usually responsible to public services and the telephone organisations, who in turn, want the monopoly in this field."

The British Home Office, it was claimed, were the most successful in suppressing CB, and their mandate came from British Telecom and the police, whose interests are against citizens' band.

Hungary could be the catalyst needed

to turn CB into a world-wide standard operation. Their regulations covering CB are the model of that required in other parts of the world, and naturally, Europe. Technical specifications put forward by the WCBU on 27MHz include the need for better receiving equipment. And on the question of Articles 30 and 36 of the Treaty of Rome, it was said that the communications routes should be free for Europeans to DX on. Free speech was also an important requirement, of course. Some countries already accept DXing, while others don't but turn a blind eye to it.

These technical (and other) proposals should be brought up at the WCBU Congress in 1984, after discussions have taken place with the ITU.

Joseph Pete, who represented Hungarian CBers, explained that in his country, there were 40 CB channels, and an extra 25 channels for business and institutional use; all three modes (AM, FM and SSB) were allowed along with a maximum of four watts output. No directional beam antennas were allowed.

Walter Stephenson spoke again about his talks with the Home Office at ministerial level. The Home Office, he said, would prevent the furtherance of CB in the United Kingdom. So, new submissions should be made to the Home Office and to the EEC Commission from each country. All ECBF delegates should contact Alisdair Hutton as well as their own MEPs, and tell them that "we want a common European CB licence, 40 channels on AM, FM and SSB, and aerials with

five watt minimum output. We must fight on all these points."

CB could well become like amateur radio in one way — callsigns and cards / identification. The WCBU are to make out application forms for registered members of the WCBU. These callsigns will consist of a set of numbers of the national organisation, plus a set of letters for individual members. There was some talk about where the registration fees would go, so it was decided to bring up the subject again at the next meeting of the ECBF council.

Everybody it seems, is having their say about CB. But that's not a bad thing — the more people who know the situation, the more likely are organisations to know the details, and consequently be in a better position to make up their minds properly. After all, you can't make a decision knowing only half a story, can you? Or can you?

Not only do we get the reports from the aforementioned meetings, but here at *On The Side*, we get the reports of reports of meetings. Mind you, it's just as well, because otherwise we (even we!) might not understand everything that's going on, what with the EEC jargon, committee procedures and so on. Anyway, let's give you an example; the Transport Committee report already outlined on these pages has been commented upon by none other than Enrico Campagnoli, to whom we say many thanks. He says that in the European community, there are many more than 10 million CB sets built to Federal Communications Commission

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(FCC) standards; in other words, these rigs are of United States specification — five watts AM, and 12 watts PEP SSB. Mr. Seefeld had said at the meeting that there were only "several million" so Campagnoli was obviously anxious to get the records straight!

Seefeld also said that CB had developed primarily in the US, where it was used by truck drivers. Campagnoli's answer is that this is not correct; there are two million licensed CBers in America (1976 figures) but only a minority were truck drivers. 220MHz was used right from the beginning, but "very few" lorry drivers used this particular frequency.

Campagnoli added that CB in the USA can be used for personal and business purposes. On the subject of interference, which, he says, has been used as a weapon to keep CB under control, Enrico says that interference can also be caused by all other radio users. It was CEPT, for example, that fixed the "interference capacity" of CB sets and this happened to be "many thousand times less" than the usual radio amateur's equipment.

On a technical note, Seefeld claimed that the term "citizens' band" meant "the range of frequencies between 26.9 and 27.2MHz on the 11 metre short wave band. CB sets are transceivers that use these frequencies."

Campagnoli argues that CB isn't a band of frequencies. "It's a way to use a radio. CB in America was born using 220MHz, but now mainly 27MHz is used. Different countries use different frequencies."

On the subject of the 900MHz band, Enrico says that it would be a useful band

in the US and in Europe. Uses of these communications frequencies would allow good long distance links in highly populated areas. The only problem, he comments, is that it is not yet clear whether these ultra high frequencies are dangerous to the health.

Coming back to interference capacity, he says that it is possible to do this by reducing the overall power, but if the power was reduced from five watts to say, one watt, the power decrease would be out of proportion. On the other hand, if we applied an external filter, we could cut down the interference (with a minimum decrease in power) by an extremely large amount. Also, if we use this latter system, it doesn't decrease the distance you can work.

Antennas didn't escape the Campagnoli commentary; the height of the antenna is very important, he says, because it could allow communications over longer distances. "It is not always true that a beam antenna increases interference, but Europe outlaws the use of directional antennas which can mean the difference between getting through from one country to another, or not.

The Sub Working Group R22 of CEPT had already prepared the draft of a new recommendation, which proposed a power of four watts FM. Basically this means a similar distance of communication that would be allowed with AM and seven watts. And in a built up area, this would mean, approximately about six or seven hundred metres.

Campagnoli put CEPT in the picture for many people. CEPT, he says, is a techni-

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cal structure, not a political one. And it was a political decision that was needed on CB. If we understand his broken English correctly, he adds that the majority of CEPT members were not members of the European community, and in this case they might have little to gain by manipulating the regulations in Europe.

Enrico Campagnoli answered Seefeld's final comment that any European Community regulations should be drawn up on the basis of recommendations by CEPT. Enrico's answer was that the European rules did not have to be made on this basis. There were other methods, he said, although he agreed that the European Commission should formulate as soon as possible, a proposal "for harmonising Member States' national legislation to satisfy the concerns of CB users, and at the same time to reduce the nuisance caused by such sets to a minimum."

On ECBP headed paper, the following statement has been put forward, and signed by many prominent delegates to the ECBF Congress in April this year:

**"The ECBF Congress totally rejects the (CEPT) proposal made in that the text is completely against the principles which are in Article 10 of the Human Rights Charter 1948, on which UNO assembly decided to designate this year as World Communications Year.**

**"The European Parliament is making a mistake by considering this (CEPT) proposal, as it does not represent the wishes of more than 20 million existing CB users.**

**"Our technical proposals afford greater protection for TV and broadcast users, and also allows for the rights of freedom of speech. On behalf of CB users, the ECBF invites the members of the European Parliament to mark the World Communications Year by taking the necessary steps to prepare a common technical basis for CB users according to Articles 30 and 36 of the Treaty of Rome.**

**"The ECBF will issue the complete text of this document on May 15th using any means at their disposal, and CB users are invited to follow their example."**

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# PLUTO'S *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, earwiggling on the one-nine as usual. Some unmusical moron was piping pop music in to the channel and a couple of breakers were reacting just the way he wanted them to.

I was just feeling sympathy for the breakers and contemptuous pity for the wally when my twig fell across the windscreen and *I reacted* by slamming 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's 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, 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 on the road with his chin in his hands; the Pekinese was sitting on 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 radio.

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# Checking your SWR

**Repairman continues his technical discussions this month with the advice: make sure your SWL meter tells you the whole truth — it shouldn't be too much of a problem to get that "perfect" reading . . .**

Is your SWR meter telling the truth, the whole truth, and nothing but the truth? That is the question.

Testing your SWR meter for accuracy is quite simple. If you recall the article on antennas in our June issue, you will have seen the remarks about transmitting without an antenna. To check your SWR meter you go through a similar procedure. Connect your SWR meter to your rig with no antenna and transmit for a short period (see June issue). Both your forward and reflected readings should be identical, simply because the power has nowhere to go so everything going forward comes back again.

Next, try to get hold of (or even buy) a 50 ohm dummy load, or a 50 ohm one watt resistor, and connect this to your SWR meter in place of the antenna. The SWR should now read 1:1, or perfect; everything going forward, and nothing coming back.

A further check can be made with a 75 ohm dummy load or resistor. Your rig is supposed to be 50 ohm; 50 into 75 goes 1.5 times, therefore a 75 ohm dummy load should read 1.5 to 1.

Another interesting check is to reverse the connections on your SWR meter. The meter will still function, but the forward reading will now be the reflected, and vice versa. Having decided that your meter is working OK, you are all set to check your antenna.

Because of the way an SWR meter operates, the reading you obtain on it is not the same as the SWR at the rig, unless (that is) the meter is built into the rig. If you had a means of moving your SWR meter along your coax cable, you would find the reading changing, and if you measured the points on your cable where the reading was the same, you would be able to calculate your wave length. Now because the reading along the cable alters, it follows that the reading at your SWR meter is not the same as the reading at the rig.

You can get round this problem by making your patch lead a certain length. If you look at fig. 1 this should be made clear, if the SWR meter was connected at point 0 and a reading of 1:1 obtained the SWR at the rig would also be 1:1 but only if the length of coax between the SWR meter and the rig was half wave or one wave long.

So let's calculate the correct length for a patch lead:

Channel 20 is 27.79125MHz.

300 divided by 27.79125 is one wave — that's 10.79 metres. A half wave is 5.39 metres. You then have to multiply this by the velocity factor for your coax cable; for the type of coax we use, the velocity factor is 0.66, so 0.66 times 5.39 equals 3.56 metres.

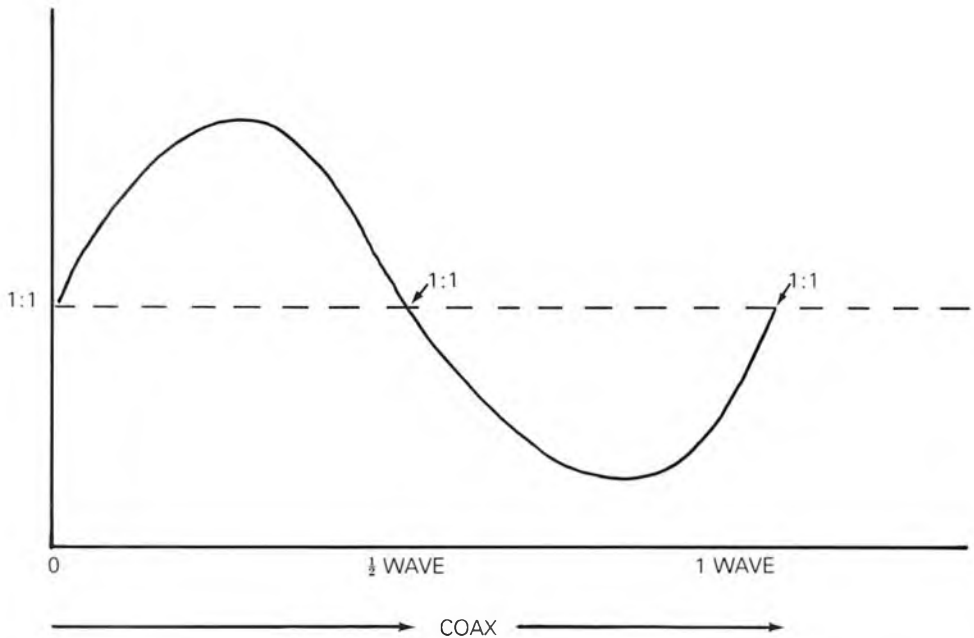
The ideal length for a patch lead for CB then is 3.56 metres including the length

of your SWR meter. Because the SWR reading you obtain appears to alter as you lengthen or shorten the coax, some manufacturers have suggested that you SWR your antenna by shortening the coax. This is wrong. The SWR might appear to alter along the coax, but it does not. Only cheap SWR meters make it appear to alter; my SWR meter for instance cost me £300, which is a guide to how expensive they can be.

You should alter the length of your coax for the worst possible reading and see things as they really are. Having got your really lousy SWR, you should now correct it in the usual way at the antenna. This way you know your antenna really is 1:1 and not just being disguised by the coax.

On very short runs of coax (such as in your car) you can't really chop great lumps off it, so try and keep the length to multiples of 3.56 metres. Good SWLing.

FIG. 1



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# SECON.

*get put on the map*

The Southern Emergency Citizen's Operators Network (or SECON for short) are now fully recognised by the nobility, as Lord Montagu has agreed to become Honorary President of the emergency service formed originally by David Kingston, of Dorchester, in Dorset.

It is on July 24th that David Kingston hands over the plaque of office to Lord Montagu, at the latter's motor museum at Beaulieu.

**But what exactly is SECON? How do they work, and what do they do? We take this opportunity of delving into their business, in order to explain why such an occasion has arisen.**

It is a two-way radio emergency network. The initials stand for; Southern Emergency Citizen's Operators Network and it consists of trained radio operators from all walks of life, ranging from the national emergency services to housewives and disabled persons. They are dedicated people who give their services free to the community in times of need.

*Do SECON monitors go out and assist in road traffic accidents?*

The answer is emphatically no. If a mobile is at the scene of an accident or nearby when it occurs, his/her first priority is to pass all relevant information to the 999 emergency system if a telephone is nearby. Where no telephone is available the monitor would contact a SECON home base radio station or any channel 9 monitor, giving the following information: nature of emergency, exact location and what assistance is required, using his/her transceiver on emergency channel 9.

The home base monitor would then relay the information via the telephone, instructing the mobile monitor to await further instructions on another channel, thus clearing the emergency channel.

*What other facilities do SECON offer?*

Services are used by the police, in search and rescue, general relaying of information to motorists in adverse road conditions, missing persons etc. They have worked with other emergency services and have provided radio communications for the Red Cross, Scouts, St. Johns and many others.

Recently, SECON was responsible for the setting up of "The Dorset Federation of Channel 9 Monitors", a unique co-ordination of CB emergency networks and RAYNET to assist the emergency planning officer in times of natural disasters.

*Can SECON monitors get into trouble for passing on a hoax call?*

Yes in theory, but if the monitor passes on information in good faith then he should not be liable for any backlash if the information is false. The originator of the false information has broken the law and can be prosecuted.



### *How is SECON financed?*

It is a non-profit organisation who relies heavily on the goodwill of the public and local traders. They have continual fund-raising events to provide equipment to maintain high standards of efficiency and the training that is required to enable them to function as an emergency network.

### *How often is channel nine monitored?*

SECON in Dorchester provides 24hr cover and as more monitors join the federation so too will the whole of Dorset benefit from the same coverage. The "federation" consists of THAMES, REACT, plus SECON.

### *How successful has SECON been as a back-up emergency service?*

When the national emergency services and the County Emergency Planning Officer for Dorset ask for assistance, they must have faith in SECON. Training and co-ordination is the foundation on which the network is based and it has paid dividends. SECON has already proved that as a communication network its services are heavily in demand by such bodies as the Lions, Round Table, Rotary etc.

## **SECON — A brief history**

SECON was founded by David W. Kingston in Seaford, in East Sussex, officially on 2nd November 1981, although the two-way radio emergency network has been operational for a year previously. But of course it could not be officially recognised by the police and other national emergency services because CB on the old American system was illegal.

So it was not until the 2nd November 1981 (when CB became legal on FM) that the network could be recognised by the national emergency services, although the potential had already been seen by "certain powers that be" by the work that had already been performed.

In Seaford the network has now some 150 monitors, 40 of these are home base stations, 80 are mobiles, and a further 30 dual role home and mobile units. The network has spread since the early days along the south coast in all directions and continues to increase every week, even as far as Scotland.

SECON on the Eastern part of the coast has 24 hour, 365 days a year constant monitoring on channel nine, the emergency channel for CB users and as more monitors join they will have the same. Already the network has spread from Dorchester, east, west, north and south, forming a communications link with other nets.

SECON has, in the past, been used by the police for search and rescue with great effect and has been praised for its high standard of training and co-ordination by the police, coroner's office and the other emergency services. They have been called in by the Forestry Commission to help find people who have lost themselves on walks, by schools, scouts, Red Cross and St. John's Ambulance Brigade where radio communications have been required.

## **Main aims and functions of SECON**

1. To monitor channel 9, the emergency channel for CB 24 hours a day
2. To render its services to any of the national emergency services and other sections of the community.
3. To encourage participation in crime prevention by reporting any suspicious activities to the police and rendering assistance if required.

# Emergency C.B. network

A BRANCH of the Southern Emergency Citizens Operators Network has started in Dorchester.

The group uses Citizens' Band radio in an emergency communications network available to the community to help emergency services or anyone in need.

It is the brainchild of Mr David Kingston who started it in Bedford, East Sussex, before moving to Dorset in February, 1982.

He said: "When SECON was accepted by the national emergency services we received valuable help in return.

## TRAINING

"The police helped us design our missing persons form and instructed us on various procedures and the fire brigade gave us basic training on how to deal with vehicle fires and provided us with the chemical code.

"Our original monitors came from all walks of life and included doctors, fishermen, disabled people



S.E.C.O.N. chief co-ordinator Mr. David Kingston, who has opened a Dorchester branch of his Citizens' Band emergency communications network.

4. To aid motorists using CB with traffic reports, directions, weather reports and any other assistance that is possible.
5. To be an available communication link available not only to the national emergency services, but to the community in general.

Any persons or bodies interested in SECON, please contact by telephone or SAE the organisers in:

- |              |   |
|--------------|---|
| EAST SUSSEX: | Mr. W. Purcell, 18 Millberg Road, Seaford, East Sussex.<br>Tel: Seaford 897455 or 895754.   |
| SCOTLAND:    | Mr. I. Inglis, 17 West Winnel St., Edinburgh, Scotland.<br>Tel: 031 3461338.  |
| DORSET:      | Mr. A. Gould, 35 Monmouth Road, Dorchester, Dorset.<br>Tel: Corchester 66620.<br>Mr. K. Bird, The Post Office, Maiden Newton, Dorchester.<br>Tel: Maiden Newton 20238.<br>Mr. R. Oliver, 56 Cambridge Road, Dorchester, Dorset.<br>Tel: Dorchester 62277. |
| SCUNTHORPE:  | Mr. C. Wilkins, 24 Richdale Ave., Kirton in Lindsey, Gainsborough, Lincs.   |
| CORNWALL:    | Mr. G. De Winter, 'The Cottage', Fore St., Polgoot, St. Austell.  |

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# Disabled on Channel Society

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There are now a number of organisations who realising the importance of CB radio as a medium of communications for disabled persons, have formed Societies to provide assistance in installing CB equipment in disabled persons' homes.

One such Society is the D.O.C.S. of Braintree, Essex, and 'Lumberjack' sets out the history and organisation of this Society for the benefit of others considering similar ventures in other areas.

## **HISTORY:**

The Society was formed in December, 1981, when a group of 'breakers' in Braintree got into a discussion on channel and decided to raise money to provide CB equipment for local disabled and housebound people.

The original meeting raised £80 and the first disabled person was on the air by Christmas 1981. Our first fund raising event was a forty eight hour non-stop ratchet which took place over the New Year weekend 1982 and with ninety six 'breakers' taking part, two per hour and each individually sponsored, we raised over £900.

A committee was formed to administer the workings of the Society and it was decided by meetings with all the local 'breakers', including representatives from the local clubs, that the Society would not function as a CB club, as such, rather that it would operate alongside the clubs and liaise with them for fund raising events. We do not, therefore, hold regular meetings, excepting of course the committee, but we do distribute regular newsletters through the clubs and CB shops to keep 'breakers' acquainted with the current situation.

The area covered by the Society has grown from the original concept of just Braintree and we now work in the area covered by our local district council, some 236 square miles, incorporating three towns of 20,000 plus population and numerous villages. The separate clubs in these areas support the Society and assist with fund raising events. Further financial support came from the Braintree branch of the Royal Antidiluvian Order of Buffaloes (RAOB), who adopted the Society as their charity for the year, and other organisations who have organised sponsored events. About seventy letters sent to manufacturers and importers of CB equipment resulted in several donations of rigs, cash and gifts for fund raising.

Soon after the inception of D.O.C.S., the RAOB felt that it would be beneficial for the disabled if the local police station was fitted with a rig to monitor the emergency channel. As I am a local police sergeant, this did not present too much of a problem and, after obtaining permission from senior officers, an FM set was added in January, 1982 to the existing channel 9 A.M. monitoring set-up. The call sign is Smokey One. (The A.M. set, for receiving only, had been bought and installed about six months perviously by voluntary contributions from all the station personnel.)

One of our long-term fund raising ideas is the annual publication of a local handle directory. Breakers pay 25p to insert their handle and the 1,000 copies sold at 50p each. Printing costs were off-set by advertisements placed by local firms.

We have also had tremendous support from our local district council, which runs a lottery to raise funds for local youth and charitable organisations. We have been given over £900 by the lottery fund, who are very enthusiastic about the contact that CB brings for the disabled.

*N.B.* Total amount raised by events and donations to date is over £4,200. Forty disabled persons are currently benefiting from CB

## **ORGANISATION:**

The committee consists of twelve members at present, with the normal offices of chairman, vice-chairman, secretary and treasurer. Each CB club in our area of operation is entitled to appoint one member as a committee member of the Society to have a say in the running of its affairs. The President of the Society is the Member of Parliament for most of our area, Mr. Tony Newton, OBE, who is at present a Junior Minister in the Department of Health and Social Security. He has a special



interest in helping the disabled and has helped at several of our fund raising events.

Our criteria used to decide whether an individual disabled person receives a CB set is as follows:

1. The person must be disabled and primarily housebound.
2. They must be unable to afford to buy their own rig.
3. They must have, or develop, sufficient interest in CB to make full use of the equipment.

The equipment remains the property of the Society and we reserve the right to remove it in the event of abuse, misuse, or lack of use. In the event of the person who can afford some of the cost of equipment, but not all, we will help out with providing the equipment at reduced cost.

We also cover the cost of the licence for the first year, and subsequently the disabled person will be asked for a contribution towards the next licence. They have the set on a permanent loan basis.

Equipment is installed by committee members and/or other local 'breakers'. Committee members interview prospective recipients to assess their eligibility and requirements in the way of rig adaptations to suit their disability and maintain regular contact after fitting. Most adaptations can be done simply by ourselves, but we have set up liaison with a local group of engineers who will develop ideas for individual applications. We have, however, found that most disabled persons need little adaptation to their sets.

## NOMINATIONS

Initially, our recipients were runners-up in a local newspaper competition to win a rig. From there, nominations were received from 'breakers' who got to hear about the Society. Also, we approached the local Social Services Department and told them about the Society and subsequently several nominations (about 50%) have come from them. They have found that CB has a very beneficial effect on housebound and depressed disabled people and they are very enthusiastic about it.

Talks on CB and D.O.C.S., illustrating the benefits for the disabled, have been given to local organisations; viz Round Table and Age Concern, Essex Branch (Age Concern being a national charity for helping the elderly. They were particularly interested in the use of CB as an emergency aid to the elderly.)

## EQUIPMENT

Obviously, cost is of prime importance when deciding on equipment, as the less you pay the more people can be provided with sets. It is best to shop around the local suppliers and find one that is willing to give you trade prices and, if possible, buy in quantity for further reductions, e.g. buy a reel of coaxial cable rather than odd lengths.

We tend to use 'WOT POLE' aerials for ease of installation and cheapness, but other than that we do not stick to one make of rig. Rigs used so far include Fidelity, Harvard, Major, Maxcom, Uniden, Binatone, Audioline and LCL. Although, like most breakers, we now tend to use rigs with a better adjacent channel rejection.

**I would be grateful if you could print a request for any CB clubs in East Anglia who provide CB equipment for disabled persons to contact me, in order that I can pass details of the club to any members of Age Concern who may wish to seek follow-up advice from their local club after the conference which is to be held at the Arbury Community Association Centre, Campkin Road, Cambridge and will commence at 9.30 am on 27th September 1983.**

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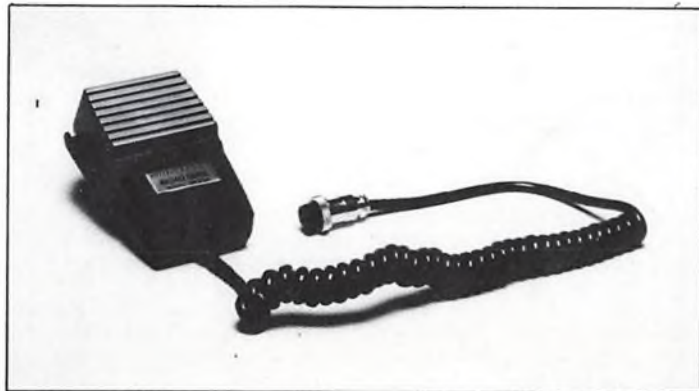
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# ON THE OTHER HAND!

by Blue Meanie

So there was this bunch of guys sitting around a Fleet Street Office, discussing the Royal Wedding and how there had been so much good news lately that nobody was buying newspapers and pretty soon they would all be out of a job along with the other three million that everyone was getting fed up reading about.

"Who can we have a go at this week?" asked the one with the half-chewed dog-end, tipping back his Humphrey Bogart regulation reporters hat. Originally he had had a ticket with PRESS stuck out of the band, but his wife had got hold of the wrong end of the stick and ironed it flat. It might not have been too bad, but he had still been wearing it at the time. Still, that's another story . . .

The other occupants of the dimly lit room scratched their heads in consternation and the lino on the floor fairly hummed to the reverberation of concentrated thought. At last, one of them spoke.

"I think," he began, overstating the case immediately, "that as this is still 1981 and no-one has invented Koo Stark yet, that I've got a good idea." He was small and fat and had just failed his audition for Lou Grant. The others waited with bated breath.

"Has anyone heard about this crowd that goes round the countryside driving into ditches, sticking microphones up their noses and calling out Biker-Bike, 10-4 Good Bidet and other such things?"

There was a momentary pause, followed by a longer pause, then suddenly the Editor, who had got the job because he was the oldest, broke the silence.

"Oh!" he said. "You mean the Conservative Government." Which immediately killed off any hopes he had of getting an O.B.E.

Well, maybe that's not exactly how it happened, but the fact remains that almost as soon as C.B. in the U.K. was declared legal the popular press discovered a new journalistic sport called "Breaker Baiting", wherein on those few occasions that their smudged pages were given over to stories about Citizens Band it was always to the detriment of the new hobby.

Bad news may well sell more papers, but for two years now we have been confronted with headlines such as "C.B. MARRIAGE BREAKER - WIFE DESERTS HUSBAND AND 14 KIDS FOR LOVER OF THE AIRWAYS", "BAD BUDDIES HOAX SAMARITANS", "POLICE RADIO BLOCKED BY PIRATE BREAKERS", etc, etc.

Had the wife met her new lover at the meat counter of the local Sainsbury's the story would hardly have been newsworthy. Besides which 14 kids could make anyone leave home. Hoaxers have been around since long before the advent of C.B., using the phone for the most part, and it was the Home Office who picked the legal frequencies, so whose fault is it if they clash with Emergency Service repeaters in some areas?

Regardless of these facts the newspaper industry could not resist stabbing us Breakers in the back. It might, of course, have helped if some of the stories had been covered by reporters who knew what they were talking about.

No good Editor would send his gardening correspondent to cover a Test Match in Australia, but in effect they were often guilty of allowing uninformed journalists to make sweeping generalisations on a subject about which they knew nothing.

When did you last read in a national newspaper about the work done by the emergency monitoring organisations such as REACT, or the hours of work put in by teams of Breakers searching for lost children or stolen vehicles? Never?

And when did you read a story about how much benefit is derived from CB by

housebound, elderly or disabled Breakers, and how CB has helped an awful lot of very lonely people? Shall I guess, or would that be too easy?

On the other hand . . .

The anonymity of Radio does lend itself to the malicious use of people who are warped, nasty or just plain thick, and the childish behaviour of some of these Wallies and Bucketmouths is enough to put anyone off at times.

Personally, I find the best way to get rid of these idiots is to treat them with a sort of placid disdain. After one particularly vehement outburst I asked the perpetrator if he used CB as a substitute for an inadequate sex life and invited him to discuss his problems with me whilst the rest of the network moved up a channel. After his very worst efforts had been met with the vocal equivalent of a smile and his inadequate vocabulary had failed to impress, he disappeared without trace, even wishing me a fairly polite "goodnight".

In the meantime, several other Breakers sitting on the side had been treated to twenty minutes entertainment at his unsuspecting expense. The moral is: "Stay cool at all times – patience is a commodity not often bestowed upon idiots."

But to return to our original theme, as I'm sure we have all heard more than enough about the idiots, we are faced with a problem concerning what to do about the image of CB at large.

Without a doubt, there must be plenty going on in your area to illustrate the positive aspects of our mutual hobby, so don't keep it to yourself! Let me know about it.

Write to The Blue Meanie *On The Side* with all the details of what your local clubs and even individuals are doing to promote CB and help their fellows, Breaker and non-Breaker alike. Write to those aforementioned daily papers too. I'm reliably informed that they employ people who can read the letters they receive.

They may not take any notice at first, but eventually the message will get through, and I promise you that we will try as hard as humanly possible to cover anything you draw to our attention. And while you are about it, how about the campaign to legalise the whole of the 27MHz band for CB?

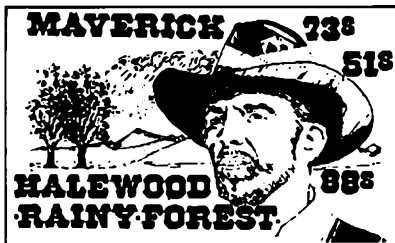
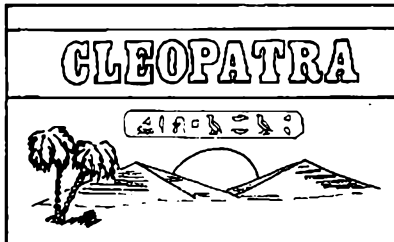
Oh, and one final word about the Wallies. Did you know that you can now get a very cheap and easy to use accurate Direction Finder? Several Wallies in the South have found out already . . .

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# Sidebanders – or Tricky Dicks



*Lucius Quix looks at the amazing world of SSB*

Some people might argue that SSB stands for 'Sanctimonious, Snobbish and Boring', or alternatively, a last ditch fight to keep one area of CB radio fit for *thinking* human beings. The excerpt from a recruiting advert (below) may give you an idea. Lord Kitchener, the ace recruiting poster star of the first world war (remember "Your country needs you"? ) would have been well satisfied with that high class kind of copy-writing:

**"Old timers, newcomers, future operators!  
Do you care what happens to Sideband?  
We do, too.**

**Let's insure that we all get the very most out of Sidebanding  
now, and in the future . . . Let's save Sideband!"**

You don't get high class prose like that in the House of Lords!

Sideband (or Single Sideband, SSB) has been remarkably popular in the world of CB, partly because it demanded a little more care and attention than the average AM or FM CB rig. Magazine illustrations (early ones) usually showed respectable old timers using SSB gear, but as the system is ideal for the stay-at-homes (ie, base to base communication) that may not be too surprising.

Whilst you can purchase some excellent AM/SSB mobile rigs, relatively few people use SSB on the highway, for obvious technical reasons (eg, AM is far better to grab a signal when you are on the move). Recently, a US Sidebander complained that when he tried to secure help via the AM monitoring groups for a distress call he had picked up, he was generally told to mind his own business. Sidebanders, he suggested, ought to be more active in the monitoring groups, which may use 462MHz UHF rather than SSB as an alternative to AM. Sideband is sometimes called the 'Stay in the Parlor' medium in the USA, but Sidebanders are certainly as public-minded as anyone in hobby radio.

Sideband rigs were originally slow to make much of a mark on the US market, though an SSB-only set was available in 1964, the same year in which the SSB Network, America's most prestigious SSB group/net, was formed. Many British Sidebanders linked up with the SSB Network, the British Sideband Network being affiliated to it. The SSB Network issues prefixed ID (Identification) numbers to members, these being used for contact and transmission, as (very) distinct from the casual and maybe merry handles of 'ordinary CB'.

Originally, the campaign to promote SSB was done with the kind of flamboyant appeal you might expect of a very respectable golf club. To put it more succinctly, you had to be on your best behaviour and show you were a true gent.

Getting into Sideband was a whole lot easier than getting into the marines. Perhaps the Sidebanders took themselves a little too seriously (though if you are out to save civilisation for CB, some pride is permissible). In rather grandiose terms, they were described as 'America's rugged CB individualists', and 'The States' politest people on air' — and so on. Not that they always spoke with a plum in their mouth. Let a buffoon get onto the SSB channel and waffle on about handles, truckers or girl friends and he would soon be told to

take up another hobby — like shark fishing, or skydiving without a parachute.

This may have been due to a generation gap, since many SSB users will never see 21 again, or even 42 . . . Indeed, SSB has often been the bridge between AM or FM CB and the world of amateur radio. Thus, much of the chat on air is about equipment and other serious stuff. One AM lad told me that 'listening to SSB was like going back to school'. So, with any luck, the Youth Training Scheme may offer a three-month course in SSB and other high class knob-twiddling. Well, it's an idea.

Sidebanders in the USA seemed determined to maintain standards and (some would say) a public school atmosphere. You almost certainly needed some kind of accreditation to get onto channel, eg an ID number issued by a Sideband organisation. In theory — and to a large extent in practice, the possession of an ID from a well-known SSB group meant that you had been able to write a detailed letter, and otherwise shown signs of high intelligence. But some of the Sideband Mills that grew up seemed to have possessed no more permanence than the British geniuses who promised 'official' registration of CB handles, for a few bob, here or there.

Some SSB clubs came and went quickly because their purpose was simply to get IDs around a county, or state area. Others more glamorously offered patches, cards, rubber stamps, streamers and other worthy CB ephemera. And why not? You need *something* to cover up the patches in your radio shack.

Today, the better known SSB groups remain, though there are a few of them worldwide. In Australia, where so much follows US trends, there are affiliate members of the SSB Network, but Sideband never took off in the noble land of Oz. Some fine rigs are available, but any move from AM has been to UHF 40-CB (otherwise known as the Community Radio Service). But for the arrival of UHF down under, Sideband business would certainly have been more impressive.

Inevitably, Sidebanders suffer from noisy neighbours, including those running over-powerful 27MHz (legal or illegal) rig models. That's certainly true in Britain, where Sideband has had a lot of attention (albeit on a keep-it-quiet, the kids-might-hear approach). The FCC in the States seems to have had a love-hate relationship to Sideband, as indeed to much else in CB. But since the hard working officials of the FCC have never been able to secure funds adequate to actually doing the job of enforcing the rules, this is hardly to be wondered at. For a few years, roughly from 1976 to 1979, the USA enjoyed a boom in Sideband business. Some manufacturers were just too optimistic, made too many rigs, and took the quick walk to the bankruptcy court.

It's likely that Sideband rig "bargains" in Britain during the past couple of years represent over-production in the States. AM/SSB transceivers usually look impressive — discouraging the chump who merely wants a mike to play cassettes down, and impressing the older chap who wants to have a good twiddle, as well as quiet chat in the evening. The extended transmitting range permissible with SSB was always a major sales advantage, though in recent times, the advertising appeal has been as much on the



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technical excellence of the advanced circuitry. Right, too. If we had cars as appealing as those rigs, most of us would have at least three in the garage and one in the radio shack.

Inevitably, the Sidebanders pressed the FCC for better service, and for a while there were suggestions that CB itself might be extended by more frequencies assigned specifically to Sideband. Sidebanders were considerably disappointed at their lack of progress — and were flexible in their approach, eg, suggesting a 'high band' SSB service in the 220MHz region. None of the 27MHz AM channels were reserved for SSB use, but the Sidebanders asked the breakers to voluntarily avoid operations on several channels, eg channels 16 and 32 to 39.

Exclusive use of a CB channel for SSB gives an important benefit in absence of heterodynes — that whistling sound. In practice, this voluntary agreement did not work, at least not in areas of high population density where even 40-channel AM became clogged up.

By the beginning of 1981, Sidebanders had come to the conclusion that no one was really going to do much for them. As a result, you will find Sidebanders moving to what are called the 'upstairs' frequencies, unassigned frequencies between 27.405 and 27.535MHz. You won't need telling that the Americans are old hands at using frequencies that aren't in the rule book, but it is a measure of the frustrations of US Sidebanders that they had to take the law into their own hands. Well, that raises a lot of questions, beyond mere CB use. I don't have to tell you that, as far as the UK authorities are concerned, *all* Sideband operations are illegal. The Yanks have done a UDI on the frequencies above 27.405MHz, as they asked for them.

As CB interest developed in Britain, Sideband itself was little discussed. Most of the reformers' energies went into a campaign to legalise 27MHz AM. Indeed, there was no shortage of cross words from the Sidebanders, who felt that they were being ditched. It seems odd to recall from this vantage point that only three or four years ago, it was entirely possible to use an AM mobile, and maybe hear only one or two other breakers in a relatively long trip along the concrete slab. It was all quite orderly, and some say a lot more interesting than FM has been since (that's *their* point of view, not mine).

The Sidebanders thought, in the pre-legal CB years, that you could let sleeping dogs lie. Ensure that you did not annoy the neighbours, keep your conversation quiet and decent, keep to the rules of the local CB fraternity, and all would be well. Buzby, it was argued, would just not bother about the small numbers involved. You may even find Sidebanders who declare that the campaign for the legalisation of CB was the worst thing that ever happened, as far as their pursuits were concerned. It associated their quiet musings with the local TVI and bad language, also getting the authorities a little riled.

If the Powers That Be had thought CB worth organising — and had made a far more rapid decision on legalisation — life might have been easier for all of us. It might.

Suppose, for instance, the authorities had recognised the creative possibilities of Sideband, and legalised a bunch of frequencies to users who took out a special licence, somewhat more expensive than the CB ten-quid-a-year edition. Retail sales could have been arranged in conjunction with issue of the SSB licence. The equipment would have been made in Britain, since there would be (and is) a quality-conscious market here.

Sidebanders face some problems, even apart from finding their rig. Choice of antenna can be rather more critical than with 27MHz CB, though there is a good choice of fine gain antennas, beam type for the most part, available. Outdoor arrays are always to be preferred, but if you did not want to advertise your activity, you might cope with an antenna in the attic. Many people do.

One hears that Sidebanders continue to get good DX communication, even though they may have to burn the midnight oil to do it. It would indeed be ironic if the move from old-time AM, was to Sideband rather than to legal FM, but this could be the case. The serious champions of the FCC 27MHz AM frequencies seem to be thin on the ground now (and, more likely, want to limit the chat on those illegal channels to the better variety

around now — or less).

American hobby radio journals advertise, and review, remarkably few AM/SSB rigs today. Perhaps the best-known range is that of President from the American Radio Corporation of Minneapolis. These models are well known in Britain, and you may encounter breakers who have owned two or three of the range at different times. President rigs come in mobile or base station form, on AM/SSB, the range described in the brochures as 'the ultimate in Single Sideband'. Ironically, perhaps, the Sidebanders represent the serious lobby for an expanded CB service, on both sides of the Atlantic. Maybe, as those involved in frequent nets, diverse discussions and self-help CB, they can see the potential.

The British Sideband Network, founded in 1978 (well before we had our legal CB system) has several thousand members. This is a remarkable achievement, and — though the number may seem modest on the basis of general CB use — the BSN represents a movement for expanding hobby radio horizons.

Shut-ins, handicapped people and many others, have found that Sideband is their perfect CB style. A young man told the writer of an 'S9' regular column, that Sideband had turned him from "one more shouting voice" into "somebody with discipline, direction and dignity, communicating with others who are similarly oriented". That kind of confirmation ought to reach someone in the Home Office, concerned with CB development. And, as they used to say in the car ads, if you have any doubts on the medium itself, "ask the man who owns one". But remember, it is still against the law, at least for the time being . . .

Meanwhile, Sidebanders the world over suffered a sad loss a year or so ago, namely the end of S9's distinguished career as an international hobby radio magazine. It ran a lot of features on SSB. For example, during 1981, *S9 Hobby Radio* devoted an entire issue to Sideband, which was itself described as "still our best bet when it comes to enjoyment and usefulness". Such enthusiasm was to be expected. S9 had always championed Sideband, with a regular monthly feature by a well known writer. And the magazine's editorial director, Tom Knieta, has authored perhaps the best known book on Sideband Operation.

Nevertheless, only a year or so after all this excitement, S9 had ceased to exist as a separate journal, and had been absorbed by that other worthy monthly, *CB Radio Times*.

Alas, *CB Radio Times* also hit the dust. American journals rely on a high percentage of personal paid subscriptions, and need a lot of advertising. Although both of these US magazines included a lot of excellent features, they couldn't make enough dollars. While the SSB literature may be in temporary eclipse, this aspect of hobby radio is as bright as ever.

As a car sticker used across the USA puts it, 'Sidebanders Do It With More Frequency'. And if you ask what 'It' is that they do so often, it will show you ought to read this article through again, *slowly!*

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# BALLOON GOES UP

When it comes to fund raising, the members of the North Yorkshire High Numbers Club are not just full of hot air.

In the coming weeks two death defying CBers will be flying high over their 20, Malton, in the latest publicity and fund raising stunt writes Susie Brain.

The 100 members of the four year old club have collected sponsorship for the two to go up in a hot air balloon, raising cash to replace the failing roof at the venue of a Malton and Norton pre-school play group.

It may be the most daring stunt so far, but the High Numbers Club is no novice when it comes to raising money for needy causes.

Club treasurer, founder and former chairman, taxi-driver Mr John Brayshaw explained: "We raised £480 for Jimmy Saville's appeal for Stoke Mandeville Hospital.

"And we have raised £700 for Malton Hospital to buy an arthroscope, used in knee operations.

"That was in memory of a taxi-driver Eddie Suddaby. He was not a member of the club, but everybody liked him in the town. Sadly he was killed in a road accident and we wanted to do something in remembrance of him."

Mr. Brayshaw, aged 39, has seen a great change in the use of CB since he founded the High Numbers Club in the old FM days.

"I was one of the first in Malton to have a set. Then I was a lorry driver and the lads who did the continental runs used to come back with sets from America," he said.

His first set, an American Midland cost him £85. He was too scared to talk to anyone he did not know at first, but as he learnt how to use it he adopted the handle 'Red Ranger' and carried the set in his lorry cab picking up news of road accidents and traffic snarl-ups as he did his long distance runs.

"I used to find out where the police and British Telecom were the keenest, and I would pull over and hide my set when I was approaching their position.

"I was once on the M62 near Brigg-house when the police saw my CB aerial and stopped me. I persuaded them that I ran my television from it.

"Another time I was stopped in Kings Lynn. At that time I had a hand-held set. I received a call to say a vehicle check was ahead. I stopped and put the transceiver in my pocket.

"While the Customs and Excise were checking the cab I was chatting to the policeman who said 'have you got one then-' I said 'no, they are illegal aren't they?'

"He said 'what about that curly piece of wire hanging out of your pocket' - it was the cord from the transceiver. He told me to put it away before the British Telecom man saw it!"

At its height the High Numbers club had 200 members. "It was like an insurance policy for the lads. If they were prosecuted for having an illegal rig we used to give them up to £30 to help with their fine."

Now there are fewer members but it is more a family club than ever before.

"Committee meetings are held on the



second Wednesday in each month at the British Rail Social Club, Church Street, Norton. The eyeball is the following Wednesday starting at 8pm.

"The junior CB club will start up again after the summer holidays at Malton Secondary School. It meets every other Saturday."

Mr. Brayshaw's children, Mandy aged 13, and Andrew aged 11 are keen members. His wife Joan says the good thing about the CB habit is "it keeps them all out of mischief."

John now has a £700 amateur radio set and is awaiting the results of his Radio Amateurs Exams.

"When I get a class A licence I will be able to talk to people all over the world. But it will never replace the CB for local calls.

"I do not think CB is on the decline. It is used just as much for pleasure as it was, and plays a greater role in people's working lives.

"I use it at work to find out where the next pick-up is. People like television repair men use them.

"And those lorry drivers who would not dare use one when it was illegal are now buying them, with an extra set for the wife, so they can contact her and say they are on their way home."

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## *It's always worth checking the co-ax*

**Frank Voller tells you how to check that length of co-ax cable you bought from the chap down the road.**

Everybody takes for granted that co-ax cable bought from a shop, or mail order from a reputable company, will be AOK. But what of the cable that the chap down the road is selling off cheap?

At first sight it might well be perfectly OK, with shiny bits of cable glistening in the ends of the cable, and the outer covering itself looking as if it's just been taken from the manufacturer's box.

But think again — there might be a possibility that it isn't what you hope it is. Ask yourselves these questions: how long has the chap had the stuff in his garage (or wherever)?; how did he come by it?; and if he has stored it for some time, where did he leave it — in a damp area?

Come to think of it, you should ask these questions of the "chap" who's selling it, and you should be satisfied with his answers. A quick and possibly adequate

method is to snip off an inch or two off the end of the cable, and look closely at the cable inside. Is it corroded or damaged in any other way? If it looks perfect, then you will probably be on to a good thing. Buy it as long as the price is right.

If this "chap" doesn't allow you to snip a piece off the end, take our advice and don't buy it. The next step then, is to take your checking further if you feel it necessary. This is quite easy to do, and all you need is a VSWR meter.

What you've got to do is short circuit the cable at its distant end. A few watts of RF are fed into the cable via the meter. This amount of RF is sufficient only to operate the meter, by the way, and no more is necessary.

Note the reading on the meter, and then refer to the graph on opposite page to discover the line loss (when perfectly terminated).

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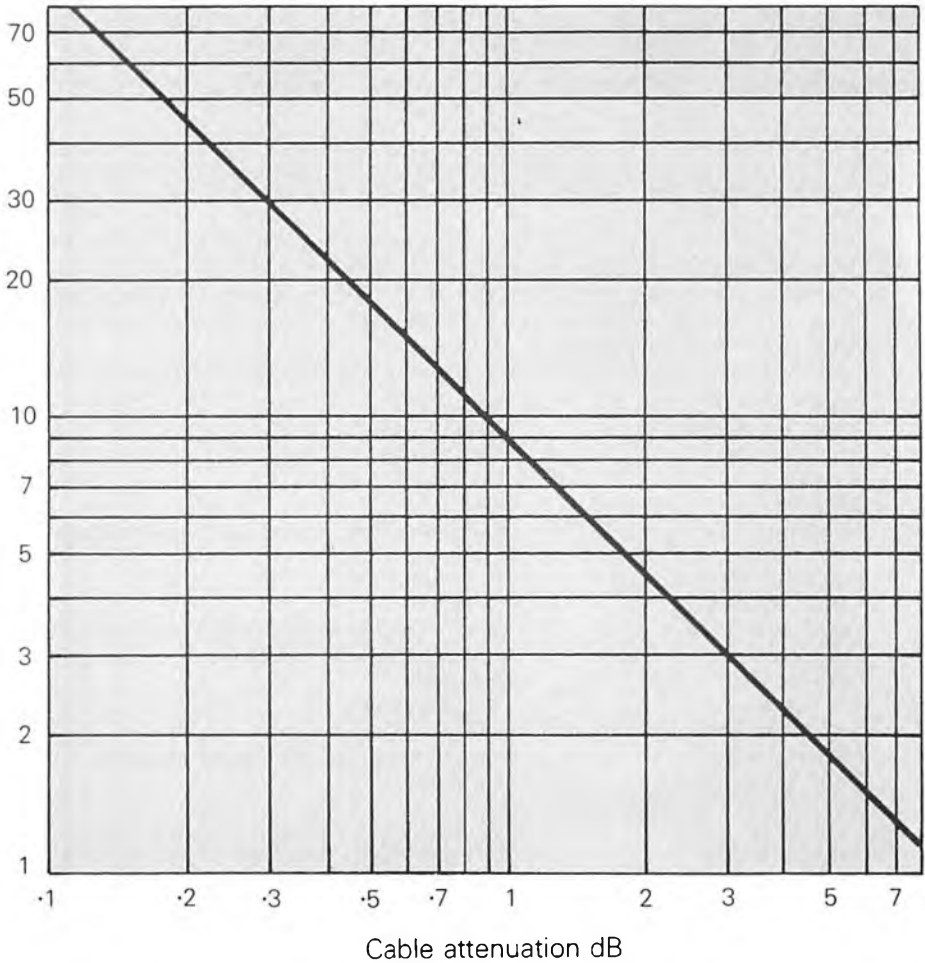
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# Hands across the sea.....

I am sending this letter in the hope that you could print the attached list of Charlie Bravo stations I have heard during the wonderful weather we've been having, between the 16th and, I believe, the 26th is the last day we can take advantage of the skip propagation that has made it all possible.

It was possible for me to monitor, and sometimes speak with these stations from West Germany, although my Ham International UK (10 watt), and giant aerial, the Avanta AV190, or when I was mobile through my (surprise) PWR 2m (4 watt) rig. That's advertising — do you think I'll get a free rig from PWX for that? — I also run a mobile aerial, the DV27 spiral (with no helping hands).

English and other CB stations heard in Germany between 16th to 26th June, 1983.

Romeo Golf 07	N. Ireland
Alpha Victor Bravo 37	Lyme Regis
Tropical Lady	Lyme Regis
Lone Dog	Portland
Delta Mke	—
Alpha Tango 24	Morpeth (Tony, I need your home address)
Delta Yankee	Scotland
One Hotel 20	Scotland
Romeo Whisky 24	Scotland
Sierra Whisky 74	Southport (My friend, I need your address)
MAC 226	Isle of Skye (QSL on its way)
Kilo Alpha	Sweden
Kilo Tango	N.E. England
November Victor	—
Yankee Delta	Yorkshire (eh lad, I'd like yer address)
Alpha Sierra Bravo	N. Wales
Golf Sierra/Tango Bravo Mike	—
Treasure hunt	Brighton (QSL by Eagle Supreme Glass City)
Papa Delta 433	Wales (Rossie, I was not a Scottish station.)
Jack (no QRA)	QSL by Eagle Supreme (I didn't get town!)
P.O. Box 27 (no QRA)	Hanover, Hants
Kilo Alpha 67	Cornwall
Mike Bravo 72	Cornwall
Sierra Tango 64	Cornwall
Whisky Alpha 07/Mike Tango	
Mike/Delta Echo/Echo Bravo 1.NO.	
Golf Charlie/Alpha Charlie/Delta	
◦ Whisky 15/Hotel Charlie.	QTH
Tango Tango 18.	No QTH (10-20s)
Alpha Charlie 36.	Ireland
Sierra Lima	No QTH
Yankee Zulu 01	Midlands
Charlia Papa 66	Penzance (Don, QSL on its way)
Whisky whisky	Lisburn, N. Ireland

And to Unit Bravo 47, sorry my friend, but the skip dropped like a stone but I did receive you.

Awaiting QSLs . . .

**David E. Lamb, Eagle Supreme**  
**Am Gansebrink 2 4370 Marl-Huls, W. Germany.**

# SELECTIVE CALLING

A couple of issues ago, we reported on a new system called selective calling, and on the face of it, the idea looked as if it could catch on, not only for family use, but also business use where employees (or employers!) are everywhere where they shouldn't be.

The whole system appeared as if it would be of great use on a farm, or by an area manager who needs to be in touch with his reps. Even in a large office, where telephones might be a little cumbersome.

Anyway, *On The Side* decided to look into this a little deeper, and find out whether the idea could be attractive to businesses, farms, and so on. Around and about Leeds, there is a lot of farming of one sort or another, and it seemed a good idea to make for the hills. It was a nice day out, anyway . . . And I hope accounts pass my expenses!

Muddy Boots is, needless to say, a farmer who has used CB for a number of years, not only on his grounds, but for worldwide contacts. "It has been very useful on many occasions," he says. "When I have had problems, and been out of touch with others on the farm, there's a choice left open to me - walking, or CB."

This particular farm employs a small number of people, but it is essential that everybody knows what everybody else is doing. Sounds like the story of business, to this jaded Editor . . . On this farm each person has a variety of responsibilities. "We find ourselves in situations where we are invariably waiting for the next person to return in their vehicle. Quite often the process involves two or three of us on tractors with trailers and combines at harvest time.

"A lot of time is wasted waiting for each other. There have been numerous occasions when one of us has been in trouble with breakages, or failures with equipment, running out of fuel.

"Over the last six or nine months it has not been easy to contact each other on a regular basis through the open channel system we have at the moment. We used to choose the channel that was the most convenient, but during the summer months it's been almost impossible because other breakers are on holiday in the area, and contact has not always been very reliable."

Muddy Boots added that he then heard about a "selective calling" system (read it in *On The Side*, didn't he?) but when he tried his local CB shop, they didn't want to know, preferring to try and sell him one of several of their imported rigs instead. Our farmer went straight to the manufacturers, in Wantage, Oxfordshire, and eventually bought two radios, a magnetic aerial, power supply and extension speakers.

"I was impressed, and the casings were of metal, more suitable for farm use, bouncing around in farm vehicles. On the air, I noticed immediately that the adjacent channel and bleedover was not there. The receiver was much better than that I had got used to, while the actual selective calling system seemed to suit us down to the ground!"

Muddy Boots described the system. "The calling system I was using had on the front panel, a red button which transmits a binary code signal. In practice, what happens is that the rig buzzes when someone is calling me. When no one needs to make a call, the rig is absolutely silent, the volume is simply turned down.

"This was new to me. I have been used to listening to noise, and for calls from my friends on 14 or 19."

Muddy Boots is now used to "plus 30" radio reports. And when Muddy Boots needs



*The Home Base, portable and mobile from E.M.S. Communications.*

to re-call a particular employee/friend, all he needs to do is press a particular button (each Mercury 1040 transceiver can be fitted with up to 18 selective calling channels) to make contact with somebody. When the button is released, it enables a signal to be passed back automatically to the calling station, which means, briefly, that definite contact had been made with the other station.

According to this farmer, contacts are improved "through buildings" as compared with his previous rigs' performance. Another useful point is that if the person you're calling is away from his vehicle (or office) or the engine's running, you can arrange things so that the vehicle's horn sounds briefly, acting as a "paging" system.

Even if the "base" vehicle was in a nearby valley, and facing the wrong direction, the farmer received a three pound report back, and with readability five.

EMS Communications (of Wantage, Oxfordshire, OX12 7AD Telephone Wantage 4291) also sell a portable version with the same performance, ie 4 watts and 40 channels, as the Mobile Mercury 1040 reviewed in the July issue of *On The Side*, fitted with a rubber duck and leather carrying case (photo on the front cover) although this has been available from last month (August). Another version is the rather impressive Poseidon base station, a desk-mounted unit with its own power supply built in. It can also run off a battery — another plus point on a farm where during the winter months there might be the odd electricity breakdown. The Poseidon, which comes with 11 red buttons (11 selective calls) is priced at around £300.

The electronics and basic design of the Poseidon is the same as in the Mercury 1040, although the loudspeaker is fitted on to the rig's front panel. Delivery is around six weeks, if you're thinking of buying one, because, said EMS, the initial production batch had been sold prior to the equipment's announcement.

Design of the equipment is "entirely British", *On The Side* was told, and the pcb is



*The Poseidon Home Base*

double-sided with plated through holes. Modern technology finding its way to the consumer. Some say it makes a nice change . . .

To sum up then, Muddy Boots was very impressed with this British company selling well-designed and produced British goods that can outsell the foreigners in a developing market. He commented that this system operates at a fraction of the cost of a private mobile radio system, and while the EMS selective calling system is not private (other breakers can listen in) it was still good value for his purposes. After all, he had been quoted something like £1,500 to install a private radio previously!

*On The Side* has found out from first-users of the new portable Mercury, that the user's body can shield some of the aerial's effectiveness, so it is a case of facing the right direction so the rubber duck has little or no barrier between it and the other station. We gather that the microphone — a small handy device clipped to the leather strap — has a neat control to transfer the speaker facility to a small but effective speaker in the mike itself.

One user has connected up the portable to the aerial on his car and found the performance as good as the mobile version. A good way of conserving the batteries' charge; EMS tell us that the life of the batteries before they need recharging, is between eight to 12 hours, depending upon the type of use.



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# E-IT'S GRAND

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**Sporadic E is still a mystery, but it remains one of the very few ways we can make contact with foreign CBers. But what is sporadic E? And how does it work? Editor Frank Voller tries to explain what even the scientists don't know for certain.**

There is still a lot not known about sporadic E. It's probably caused by something called wind shear, a strange phenomena where right up into the upper atmosphere, the fantastic winds move in different directions. Now, when two winds meet (that are travelling in different directions), static electricity is formed or generated and this is the thing that forms the well known ionisation which enables us to skip and make contacts over long distances.

These ionisation clouds form at a height of around 110k, and in the same way as the winds travel at high speeds, the clouds move similarly — it is believed they move at a speed of approximately 100kph, and generally drift towards the Equator.

The end result here is that they enable skip in one area for short periods only. This propagation then, affects only "small areas" at any one time. Naturally, in this case, "small" means a very wide area, but you know what we mean. And as certain areas fade out, others (in the line of the cloud route) will come into operation.

Sporadic E is most common on SSB when working long distance, as we know, and the basic belief is that radio waves that hit them, are bounced back to earth. Normally, best propagation is to be found between the middle of the morning, and late afternoon, and between the months of May to August.

Contrary to what some people believe, radio waves are not bounced off the E-layer, but they are refracted — in the same way as a light beam is refracted into different colours when it is aimed into a glass prism. Remember how some colours were "bent" more than others, producing a sort of rainbow? Well, the same thing happens to radio waves when they enter the E-layer in the ionosphere. Low frequencies are put through a greater angle than high frequencies, and the stronger the E-layer, the greater the waves are bent.

To put this into another language (one that Assistant Editor Simpson will understand!), it means that, say, a 144MHz will probably not be affected that much, but a 90MHz FM signal (Band 2) will be bent back to the earth's surface from a weakly ionised cloud. A cloud that is more strongly ionised will bend signals through a sharper angle, and in these cases, the signal will return to the earth's surface nearer to the transmitter than otherwise.

Now, we know that the distance between the receiver and transmitter is called the skip distance, and while not many CBers will be that enthusiastic about the technicalities of skip, there are many amateurs who make it a science, and monitor the bands to discover which clouds are performing best, and then, when a desired condition occurs, they immediately try to contact somebody they've been after for months and months!

During the sporadic E season, you could find there are openings almost every day on some bands, but rubbish on others. E openings (as they are called) are less frequent and more brief on two metres than on the lower bands because it requires a higher level of ionisation to achieve this propagation at higher frequencies.

Going back to the amateur band of 144MHz for a bit, we know that skip is likely to be possible on no more than four occasions during, say the month of June. This is an average



of course, and some openings might occur for only a minute or two, while others for much longer.

Those CBers who are fairly new to the hobby will probably be asking themselves: why all the fuss for something that happens only rarely? Well, it's the pleasure of talking over long distances, and to people hundreds, possibly thousands, of miles away. It's the unknown quantity and quality of the contact. And it's the luck that goes with it, like fishing, watching your float or line for hours in case it suddenly goes under, providing you with that elusive fish!

Amateur radio enthusiasts will only find such long distances possible using something called meteor scatter, where they bounce signals off the "trails" left by meteor showers, and possibly by moon bounce, or EME (Earth Moon Earth) as it's called in the trade. And on the subject of amateurs, about the shortest skip they will encounter on two metres is around 1200km, while the maximum distance is something like 2400km. Normally, these sporadic E contacts come across with a good strength, and sometimes they happen so suddenly that right in the middle of a chat with the girl friend down the road, somebody butts in, loud and clear, talking in some foreign language . . .

To give you some idea of the countries you can contact during a good sporadic E opening, they form a sort of arc across Europe, from Portugal in the west, and forming a shape around Corsica, Northern Italy, Austria, Czechoslovakia, Western Poland, Sweden and Norway. That's the nearest edge of our arc. At the outer edge the shape crosses Africa, an area south of Malta, the southernmost tip of Greece, into Bulgaria, Eastern Romania, and well into Russia. The edge of the arc finishes somewhere in Finland. If we can get our artists out of the dole queue, we'll have a map drawn up, but if not, read the aforesaid information again!

Most of the sporadic E contacts are made on SSB, and Morse (CW) although there's absolutely no reason why you shouldn't be able to skip on FM (although on amateur bands). Low power can give you as good reports over distances of more than 1000km, on a good day with a following wind.

The biggest problem, as we've said before, is that sporadic E openings are unpredictable, and unexpected, and they can last for only minutes. We have heard of some amateur radio clubs setting up their own network of warning signals, but this involves a lot of organising, and dedication, so you must ask yourself, is it worth it?

The RSGB are receiving reports of these openings as and when they occur — not for general release to CBers or amateurs — but so they can research the subject, and try to formulate some pattern or a method where they can predict when an opening will occur. A long job though, so I wouldn't hold my breath if I were you.

Rigs with multiple memories can be useful in the absence of an early warning system; it means you can enter a frequency on which you last heard some DX, and at any

The logo for CBI (Circuit Breaker International) features the letters 'CBI' in a bold, stylized font. The 'C' is a thick, rounded shape, and the 'B' and 'I' are also thick and blocky. The letters are white with a black outline, set against a dark background.

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given moment, you can press a button to find out whether an opening exists. As you become more proficient in skip operation, you'll notice how a lot of CBers will pounce as soon as they learn that an opening is happening! Unlike the ham fraternity, there is no set-down procedure in such instances, but perhaps *On The Side* can offer a few suggestions to prevent (a) pile ups as too many CBers try to make contact during an opening, and (b) bad feeling between CBers as a result of that juicy DX not being completed. This could lead to a more split CB world, and it's something we can't afford to have if an international system is being talked about, worked on, and possibly formulated for the future.

Make your contact with the foreign station as short as possible. Keep the information simple, and try not to make it necessary to repeat things. Your contact is obviously of foreign nationality, so he's going to find it difficult understanding you in the first place; if necessary, speak slowly and phonetically, using the international alphabet.

While it's tempting to ask about the weather, his equipment, his mother and how many wives he's got at the moment, try not to go into unnecessary detail. There could be many more queuing up to make the same contact, and the opening could shut up suddenly in a few seconds!

And if you are on the other end of the thingie, ie tuning into a DX conversation already taking place, don't be tempted to muscle in to their contact; wait your turn. If too many people are trying to make immediate contact, and as an opening attracts a lot more noise than just you and your contact, you could find that by tuning to a lower frequency (after having made your initial contact) it will eliminate much of the noise.

While all this is going on, the scientists are still trying to find out what causes the wind shears to happen in the first place. Could they be caused by heavy and violent storms in some way? We gather that there has been found some link between storms and sporadic E openings, but it's not enough to go on.

One known DXer suggests that when an opening is occurring, there is an odd static-type noise from the radio. He thinks this might be the sound of distant storms somewhere else in Europe or wherever. Think about it — could the noise of these distant storms be refracted back to the earth's surface by this ionosphere? In other words, if there is a particularly violent storm in Hungary, does it mean you'll be able to skip to an area either in that country or thereabouts during, before or after that storm?

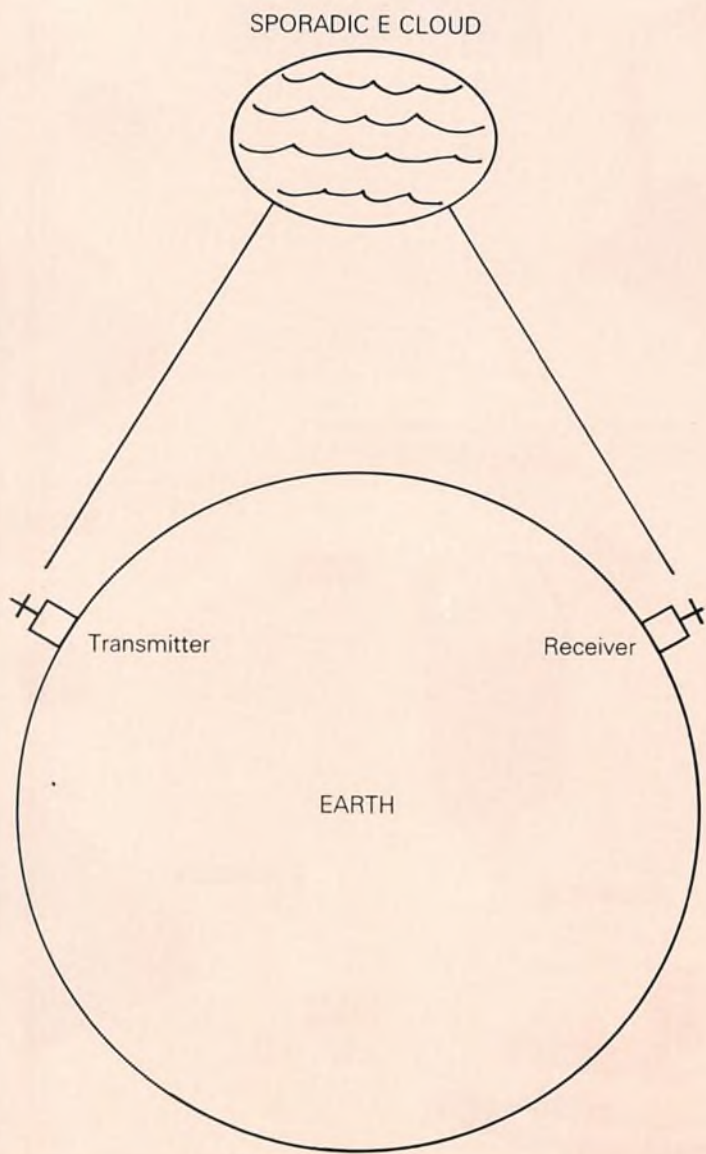
These are questions that the scientists are sorting out. Meanwhile, enjoy your DX.

## ON THE SIDE ON THE SIDE



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*Artist's impression of what happens when a sporadic E opening occurs.*

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The operator should sit at a normal working distance from the microphone, with the LIMIT control at the maximum, adjust the MODUL control so that when pronouncing the letter A the transmitter is 100% modulated or with a slight over modulation. This will be the level of modulation output suitable for the transmitter and which, in general, will not have to be varied. Using the LIMIT control the size of the strong modulation points is adjusted and letters and weak syllables are strengthened, modifying the voice and increasing its intelligibility in case of noise and interference by going nearer to the MAX. However an excessive limiting effect may be produced giving appreciable sound distortion which is undesirable.

The meter indicates the limitation on the letters and strong syllables only when these appear. The area in red or orange indicates the upper limits up to 20dB which are excessive and have to be reduced by lowering the LIMIT control. The position of the LIMIT control may be varied in order to achieve a better Fidelity/Limitation relationship to the speaker reception conditions, sound, interference, etc.

In some cases better results are obtained by combining the action of the two controls, slightly increasing the MODUL control level with regard to its normal level defined at the beginning.

If the model does not have any meters, it is used in the same way but there is no possibility of visualizing the limiting effect in the case of model MP-21 or the output level applied to the modulation in the case of model MP-20.

SADELTA

BRAVO "2"

new



The **Bravo 0** is a base mike, a pre-amplifier compressor base microphone in a de-luxe cabinet. There's a normal vox switch for amateur radio use

MIC 120

£29.95

The **Bravo 2** is a slightly upmarket version of the "zero" and comes with compression and modulation meters.

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Fine

MOD HM 20

## SPECIFICATIONS

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- Gain
- Modulation compression
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- Input impedance
- Switching circuits
- Cord
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- Current drain
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ECHO MASTER

The ECHO MASTER is the ultimate semi-angular desk microphone from SADELTA with a reverbation module or "ECHO Chamber" built in. This innovative microphone has been optimized for use with CB transceivers and P.A. applications, such as dancing rooms, discos, etc. when the use of a controlled reverbation effect is desired. The reverb effect is continuously variable in depth by a potentiometer and can be even switched off by a NORMAL ECHO switch in the rear panel of the microphone.

The level of modulation output signal is checked by a VU meter and adjusted by potentiometer.

When the echo module is built in the case the microphone cabinet having a single unit, the frequency response in reception can never be modified, assuring the best performance.

The unit is powered by an external power supply of 12 V d.c.

super

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MIC 100

£23.99



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SADELTA

LM-20

The SADELTA LM-20 larynx mike has been designed for enthusiasts of mobile stations, to give a solution to one of the biggest problems that confronts the users to operating a mobile rig as well as to all those who are just plain lazy when breaking on the air.

These device enable them to keep two hands on the steering wheel at all times avoiding eventual risks and getting caught in those countries where there are laws requiring such particular detail for drivers.

When LM-20 allows the operator to speak on radio rigs without having to key the mike with his hands, it is really an useful accessory for those who use to take notes, look up for information or whatever activity that requires the use of both hands.

Beyond these, the device operates automatically voice activating the rig by a VOX CONTROL system which is provided for a larynx + throat capsule that pick up the signal directly from the vocal cords, cancelling any external noise.

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## Spotlight on



As CB Radio in this country nears its second official birthday it is being overtaken by a strange phenomenon — respectability.

No longer is it being dismissed as a flash in the pan or an expensive toy for children and adults who refuse to grow up, but is now being accepted as a useful constructive addition to everyday life, as well as being an educational and fulfilling hobby.

With fifteen years of experience in Radio and Telecommunications, Telecomms of Portsmouth were a natural to get into the CB field early, and this they duly did, even before November 1981. Since then they have built up an enviable reputation as importers, distributors and retailers, and in the field of Mail Order they are virtually unrivalled.

The secret of their success has been an insistence on bringing quality products to the U.K. market and the fact that their entire sales team are themselves Breakers backed by a highly experienced and qualified engineering and development team.

Every new product is tried and tested by each member of the staff in turn, both home-base and mobile, and as Portsmouth has one of the heaviest populations of Breakers in the whole of the country there are thousands of opinions to sound out on the air. Only when the whole team is satisfied with an item is it given the Telecomms "seal of approval" and offered for general sale.



### ZETAGI MODEL 202 POWER AND SWR METER

*Reads Forward Power and SWR simultaneously up to 1,000 watts on a twin scale meter. This is an extremely accurate unit and covers the frequency range from 26MHz to 30MHz. Surprisingly, this meter retails at less than £30. Less surprisingly it has proved very popular with serious Breakers.*



### A.K.D. PRECISION DIRECTION FINDER (Model PDF-11M)

*This compact, hand-held unit comes complete with aerial and earphone, and with a minimum of practice it enables the user to home in directly on radio transmissions in the CB frequency range. Already the use of this unit in the Portsmouth area has persuaded a number of "wallies" to mend their ways. This unit is also supplied to British Telecom and there are no prizes for guessing what they use it for! Available at a discount price to clubs and organizations.*

Thousands of satisfied customers throughout the country already know that Telecomms are exclusive agents and distributors for Zetagi (Italy), Sadelta Microphones (Spain), Zenith and A.K.D. (U.K.) and are one of two factory appointed distributors for Modulator Antennae. Now, to cap it all, they have been appointed sole U.K. agents and distributors for Ham International (Belgium), probably the biggest CB name in the world.

Through a nationwide distribution network Telecomms supply hundreds of other CB dealers, large and small, and their own retail outlet in Portsmouth attracts not only local customers, but Breakers from all over the country. Furthermore, their Mail Order Department boasts the fastest despatch service available — same day if paying by credit card!

The company feels that there is now a marked swing in favour of quality equipment in the CB sphere — a far cry from the days when anything with two knobs was snapped up by an unsuspecting public — and are very determined to maintain the lead which they have already established in this direction.

Unlike many of the "overnight sensations" who jumped onto, and almost as quickly off the CB bandwagon, this is one organisation who have pinned their faith in the continuing strength of the market, and backed that faith with a large investment both in finance and personnel.

A friendly and knowledgeable response awaits whether you write, telephone or call in. All products are fully guaranteed — some for two years — and an efficient service department ensures speedy satisfaction at all times.

There is virtually nothing on the CB market that Telecomms cannot supply and the company can claim, with much justification, to be the No. 1 in the CB arena already. And yet they are still not content.

In the words of Managing Director Mike Devereux: "None of us will rest on our laurels until we have become to the CB world what Rolls Royce is to the car industry — undisputably the best!"



### ZENITH SPEECH PROCESSOR

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### A.K.D. VAMPLIFIER

*The only unit of its kind currently available. The Vamplifier combines a variable attenuator to cut down on "bleedover" and clean up incoming signals with a powerful pre-amplifier to boost the level of that cleaned-up signal.*



### SADELTA ECHO MASTER

*This beautiful looking piece of equipment has only been on the market a short while, but is already making people take notice. Everyone who has ever used or listened to one agrees that it sounds better than anything else on channel. The Electret Mic Capsule, combined with some sophisticated circuitry gives an unparalleled clarity and the variable echo level enables you to add extra cutting power without losing anything in that direction.*



### **SADELTA LM20 THROAT MICROPHONE**

*Inconspicuously light to wear and voice-operated, the LM20 enables drivers to keep both hands free for the all-important task of handling the car while not having to break off the conversation for anything.*

*In addition to the extensive range of CB equipment a few of which are illustrated above Telecomms carry a full range of products from Ham International, Telecomms latest acquisition for the U.K. market. The complete Ham catalogue is available from Telecomms on application (Cost £1 refundable).*



### **COMMTELL U.K. BASE STATION**

*This neat little rig plugs straight into the mains supply, or alternatively can be used off a 12 volt DC supply when mobile. It comes complete with an adaptor lead and Mag. Mount antenna.*

## ***On The Side***

***would be pleased to hear from any U.K. breakers who attended the Minden Skydivers Annual Mass Eyeball and Camping Weekend at Porta Westfallica Camping Platz.***

Please send details of your route, channel crossings, activities at the Camping Weekend, the contacts made with European breakers, any difficulties you encountered or good times to remember.

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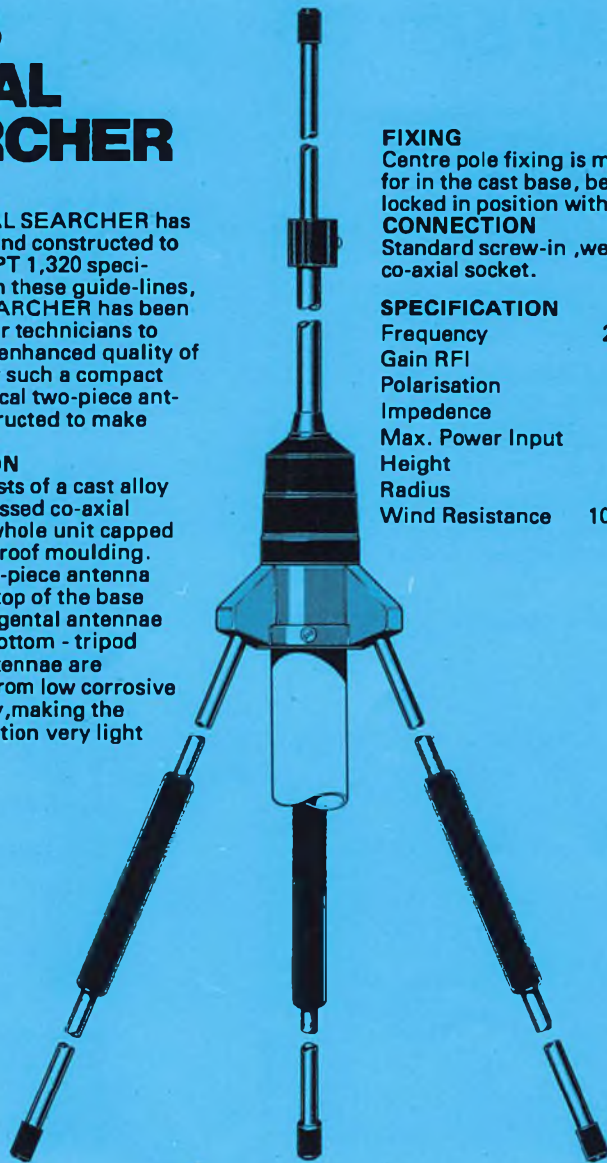

# B905 SIGNAL SEARCHER

## DESCRIPTION

the B905 SIGNAL SEARCHER has been designed and constructed to Home Office MPT 1,320 specifications. Within these guide-lines, the SIGNAL SEARCHER has been developed by our technicians to provide a much enhanced quality of transmission for such a compact aerial. The vertical two-piece antenna is so constructed to make regulation easy.

## CONSTRUCTION

The aerial consists of a cast alloy base with a recessed co-axial socket and the whole unit capped with a weatherproof moulding. The vertical two-piece antenna screws into the top of the base unit and the tangential antennae screw into the bottom - tripod fashion. The antennae are manufactured from low corrosive aluminium alloy, making the overall construction very light in weight.



## FIXING

Centre pole fixing is made provision for in the cast base, being locked in position with screws.

## CONNECTION

Standard screw-in, weatherproof co-axial socket.

## SPECIFICATION

Frequency	25,500 / 27,800
Gain RFI	2,75 dB
Polarisation	Vertical
Impedance	52 Ohm
Max. Power Input	200 Watt
Height	1.5 metre
Radius	0.8 metre
Wind Resistance	100 Km per hour



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The NEW AR 5/8 provides a reliable system for perfect reception.

## CONSTRUCTION

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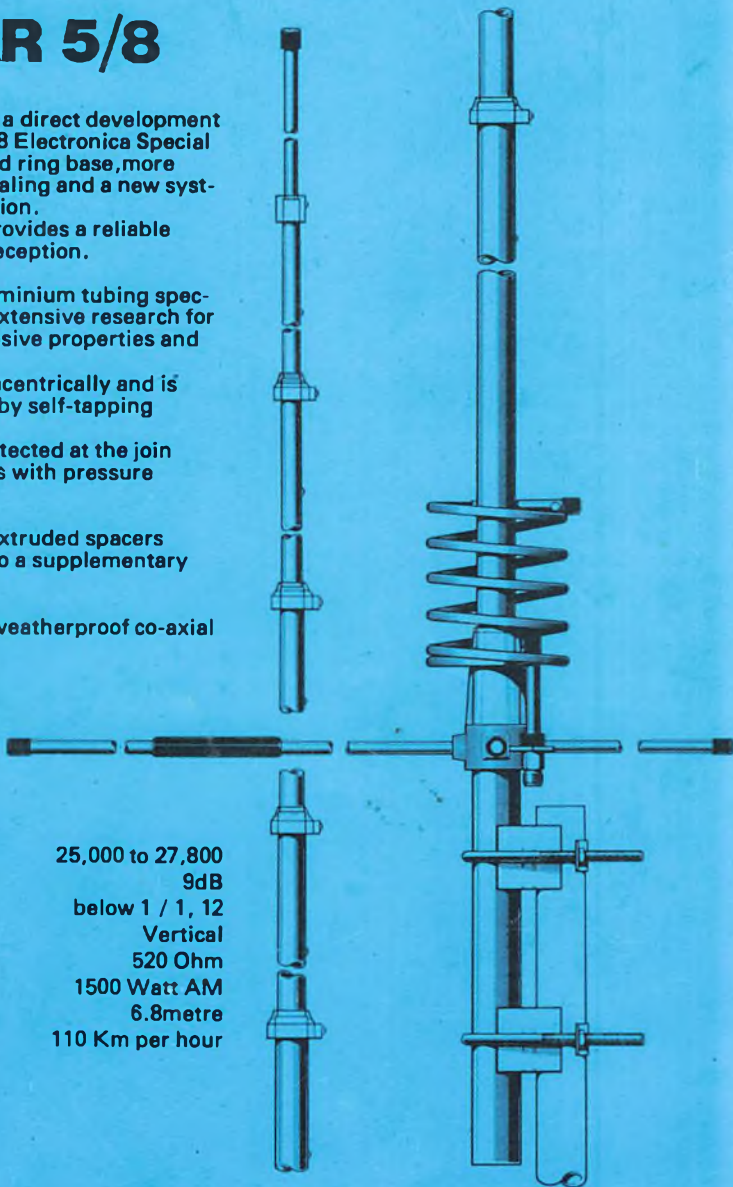
The sections are protected at the join against the elements with pressure fit moulded seals.

## FIXING

Two 'U' bolts with extruded spacers provide side fixing to a supplementary pole.

## CONNECTION

standard screw-in, weatherproof co-axial socket.



## SPECIFICATION

Frequency Range	25,000 to 27,800
Gain C.I.E.	9dB
SWR	below 1 / 1, 12
Polarisation	Vertical
Impedence	520 Ohm
Max Power Input	1500 Watt AM
Height:	6.8metre
wind Resistance	110 Km per hour



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