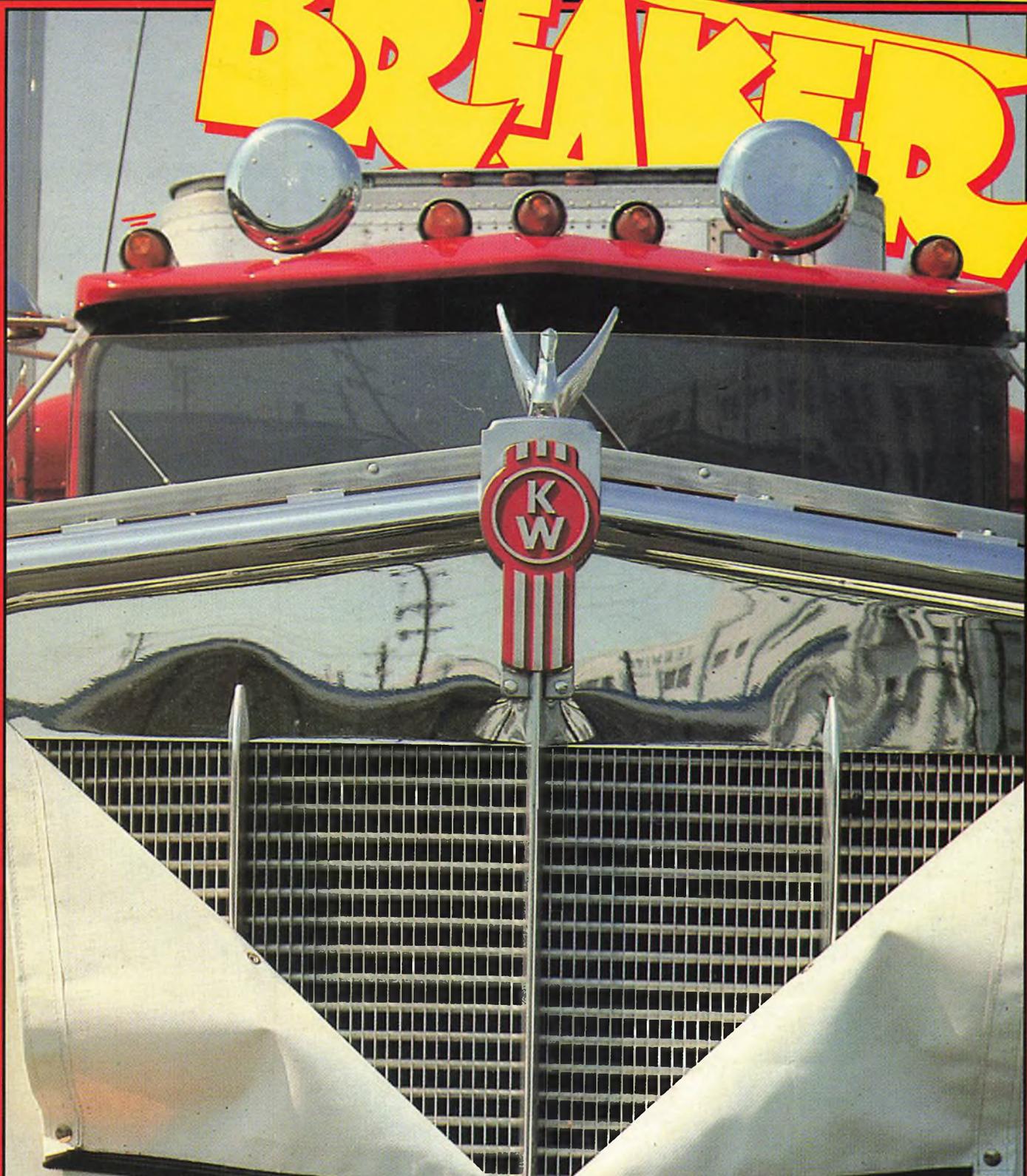


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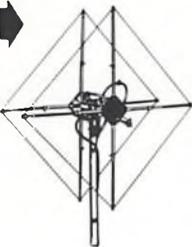
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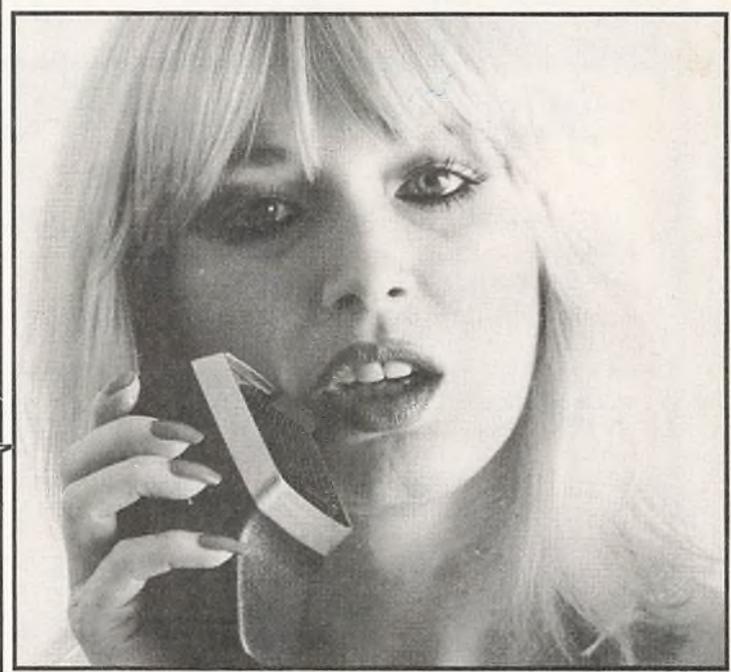
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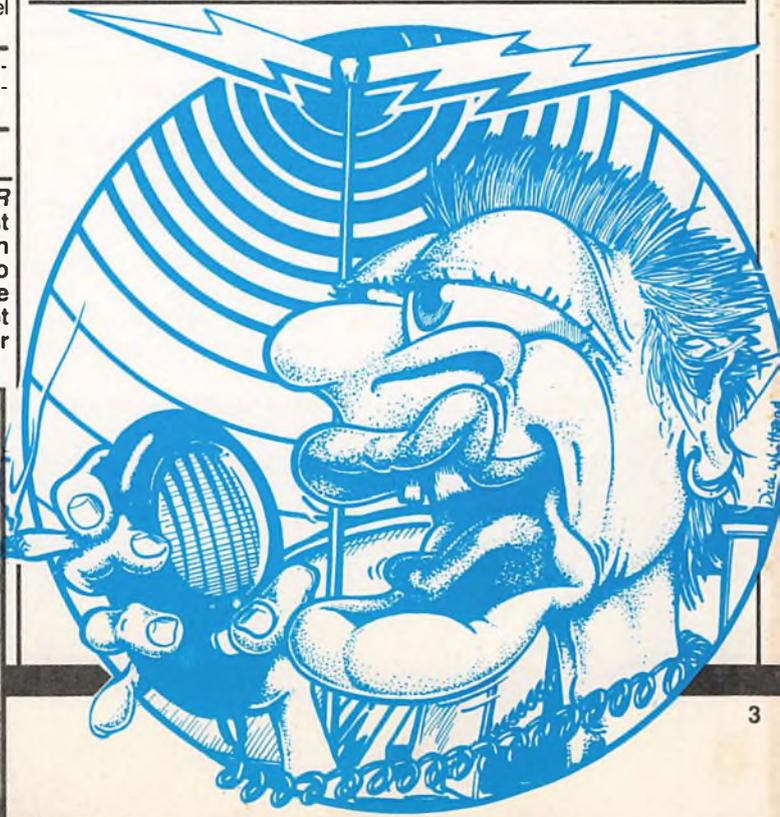
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The publishers of **BREAKER** would like to make it clear that CB radio is at present illegal in this country, whether it be to manufacture, own, install or use such equipment, and it is not our intention to encourage or approve of such practices.

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RATSWELL JAW

Channel Three

It's rather hard, at moments like this, to prevent yourself from indulging in rather pathetic mutual backslapping, which is of no value to anyone.

Breaker 1 was a sellout — which for the first issue of an experimental magazine is no mean feat. It was also the first commercially produced and marketed magazine to deal with a totally illegal subject; we broke several barriers.

Breaker 2 was easier from the legal standpoint but harder from the production side. It sold amazingly well also.

And here we are with *Breaker 3*. We've gone from an experimental one-off to a quarterly magazine and then to a bi-monthly in three issues and six months.

It's a success story which has less to do with the wonderfulness of the magazine than it does with the enthusiasm and incredible growth of the CB lobby in this country.

In two years CB has snowballed from a minority hobby to a large-scale subject for social concern and debate with little or none of the traditional marketing-speak (through advertising promulgated by financially motivated industry) which is normally associated with the rapid boom of fads, crazes or hobbies. In fact, the popularity of CB has been primarily enlarged by word of mouth — word of mouth in many cases electronically distributed across the radio spectrum, particularly those bits of the spectrum not unadjacent to 27MHz. If you ever wanted proof that CB works, you've only to look among the rapidly swelling ranks of the pirates to find confirmation in the most concrete terms imaginable.

These past two years have been riddled with uncertainty, doubt and rumour. Uncertainty about what was happening and why; doubt about the legal position — the powers vested in who by whom and why; rumour — CB legal on 27MHz in April '80; announcement about CB in September '80; CB will never be legal as long as you live, and finally Open Channel. Even that was only a proposal and we're now faced with a greater number of diverse rumours than ever before. Everybody seems to have a friend or a friend or a brother/cousin/uncle/spirit/guide who is only one step away from the seat of all power who knows exactly what is going to happen and when. Trouble is that all these assorted relatives seem to have conflicting news, and sorting out the true from the untrue, the possible from the impossible, the likely from the unlikely, has always been a daunting task.

In all the time we've been concerned with CB, first through *Custom Car* and now *Breaker*, we've tried to avoid spreading rumour and false alarm. Two years ago we were advocating a VHF CB facility in this country; we were urging the government of the day to take action before the situation got out of hand. At the time there were probably more illicit rigs in the UK than we knew about, although we put the number at between 500 and 1000. Quick action could have saved the day. There was none. The day, we believe, has long been lost. As radio purists it is a source of great sadness to us that we have missed the moment when an effective CB service could have been introduced at a VHF frequency. We now find ourselves obliged to inform the government that 27MHz is now the only workable frequency which may be ascribed to such a service, regardless of whether or not it is ideal.

We believe that the government is aware of this already. We believe that steps to authorise the introduction of 27MHz CB are already under consideration, if not actually under way.

And when that happens we'll find it impossible not to believe that we played some small part in achieving this. Together with others — some well-known, some working unseen but just as tirelessly — who have done the real work and for whose efforts it has been our pleasure and our privilege to play the part of mouthpiece.

To that end this issue of *Breaker* is dedicated. A little bit of history, a little bit of 'I told you so' and a little bit of advice to everybody on how to make the best of 27MHz. See you on the air.

Guessing

You might find, as you flip through the pages of this magazine, that there are a number of things which seem to be of a somewhat practical nature. Some things which you might find useful if you were planning on using a CB rig or setting up a base station. Say.

There's a reason for that, which is not totally unconnected with the fact that it takes three months to get a magazine like this together. Which means that we have to try and guess ahead.

Our current guess, based on all the information we can gather, leads us to believe that by the time this issue hits the streets HMG will have made an important and definitive announcement on CB. We believe that this announcement will have made CB legal in January. We further believe that the frequency in question is more than likely to be 27MHz. Possibly it might be the 41MHz Band One TV frequency which many people are currently suggesting is to CB what the cavity magnetron was to Robert Watson-Watt, but we think 27 more likely.

If we're wrong of course, you'll have to put this issue of *Breaker* in the cold store for a little longer. Sooner or later, though, it will stand you in good, er, wossname. Stead.



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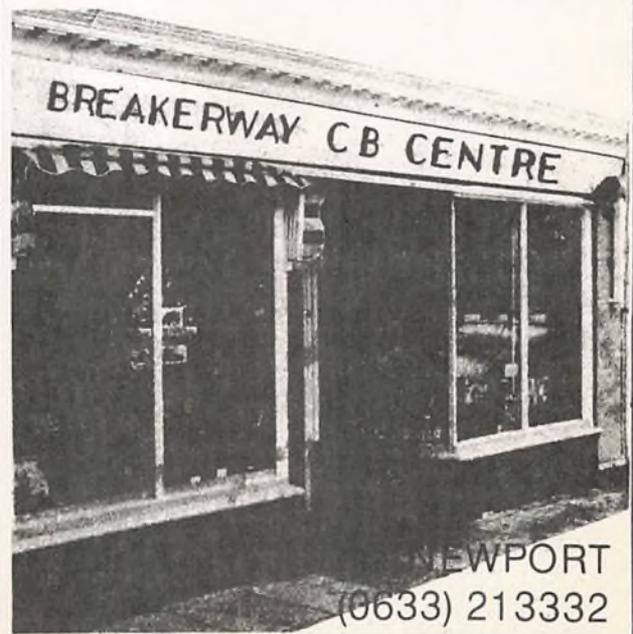
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GIVE US A BREAK

The rules

So. You want to make a point? You want to write us a letter? Easy, just scribble on a bit of paper and send it in to the address at the front of the magazine.

But remember that we won't publish letters unless you put your name and address on them. We won't, for obvious reasons, print your address, but we do need it in the first instance. Otherwise, it's the bin. Very sorry indeed, but there it is. Or, in some cases, isn't.

Bible breaker.

Dear Breaker,
At the tender age of 16, and having just eyeballed your fabulous magazine, I have decided that CB is the thing for me. Surely the advantages of a citizens' band outweigh the few disadvantages (which I admit there are). I am convinced that CB could prove itself useful in many cases, for instance, the fire service strike of a couple of years ago when CB'ers could have provided immediate assistance where the few available fire-fighting appliances could not.

Anyway, let's see CB legalised on 27MHz cos I'm having enough trouble saving up for a rig and I don't want to find it redundant in a year's time. I also intend to write to Mrs T on the subject and wish you other breakers all the best in our fight for CB radio. Two quid would be fine to go towards my rig when it's legal, so 10-4, bye bye and all that.

*Praying Mantis
Merstham, Surrey*

(Religious nut, huh?)

The great outdoors

Dear Breaker,
Although you have a valid point for the use of CB as an aid to either assist, or prevent car accidents, I feel that the point is too well laboured. Thus instead of being a powerful aid to the immediate introduction of CB, it becomes an ineffective lament. Could I therefore draw your attention to other areas of the community whereby the use of CB could have a direct bearing on saving lives, and also help to cut down financial costs of the appropriate services.

The first area of activities would be in the outdoor pursuits of rock climbing, fell walking and the like which take place in very remote areas. CB could summon help to the exact spot quickly, with the minimum of delay and there would be no need to send a lone person to get help which could take hours.

For people who have a boat or longboat and use the rivers or

canals, CB could provide entertainment and also an only method of summoning the emergency services. One of the dangers on canals is being used for target practice by youths with air rifles. Being in the country summoning or informing the police would take too long. To highlight this situation, a 70ft longboat moored between Stourport and Kidderminster caught fire at night. The owners escaped, but had to run a mile along the canal bank in their nightclothes to summon help.

I am sure there are lots of other societies which could get direct benefit from the introduction of CB, both from a safety point of view and entertainment value. So please explore all avenues and not just the motorists, when justifying the case for the introduction of a CB into this country.

*CAsh
Kidderminster*

(Yes. We are looking at these aspects, and will be dealing with them later — but it's difficult until we know exactly what HMG are going to give us.)

Delicacy

Dear Breaker,
I congratulate you on your handling of a very delicate subject.
*Ian Bowden
Bristol*
PS: When is the next issue due?

(Er, would you believe now?)

Pin ups

Dear Breaker,
I congratulate you on a very interesting magazine, but I have one complaint. Why must you cater for men only in the sexy ladies in the middle pages. I would like to see a handsome male in the next issue — please.
*Racing Beaky's wife
Cardiff*

(Hmm. Volunteers, please.)

Bobby breaker

Dear Breaker,
First, damn good magazine, pity it's not a monthly. Secondly, as a serving Police Officer, I thought you might like to hear from a pro-CB smoky.

I have been very interested in, and have been a supporter of CB for about a year now, as I feel that the advantages of such a radio system far outweigh the abuses that may come about; after all, any persons wanting to use CB as an aid to committing crimes etc would not be bothered whether it was legal or not.

I'm sure I am not the only bobby who supports CB, in fact, I know many who would operate it now if

it were legal. Many policemen, like breakers, are waiting for the magic day when Willie Whitelaw gives us the go-ahead.

Since reading *Breaker 2* I have sent off my £5 subscription for a year's membership to the REACT UK Supporters Club and I hope many readers have done likewise.

Having said my piece, all I can add is: Legalise Mr Whitelaw — 10-4!

Name and address supplied

(Those pointed hats look like a good place to mount a DV27. . .)

Air-raising

Dear Breaker,
At last I've got a copy — of *Breaker 2* — almost impossible to get the first. After reading the letters from 'fellow good buddies' and other snippets of info it occurs to me that a lot of people who condemn CB are under the impression that breakers are small dirty minded little layabouts. I only wish Maggie T would take to the airwaves and get to meet the breakers, and see that we've got a hobby, for want of a better word, that incorporates a cross-section of people from all walks of life who conduct themselves over the airwaves with self-imposed rules that even Mother Breakers wouldn't blush at.

Thanks for a mag that is about to represent millions.
*The Witchfinder
Manchester
Chuckleband
Aberdeen*

Top score

Dear Breaker,
Given the legal pitfalls that surround the path you tread I congratulate you on your first two issues. My only grouse is that you only appear quarterly — can't you come out monthly, or failing that every two months?

As directed in *Breaker 1* I wrote to my local councillor who wasn't very keen at all (one down); my local council who didn't deem the matter worthy of a reply (two down); my local MP, Mr Richard Shepherd, who has so far written to me three times and also to Timothy Raison MP on my behalf (4-2 to us). Mrs Thatcher replied saying that she was awaiting comment from the Home Office (4½-2½). Mr Jack Ashley MP was sympathetic but advised me to contact my own MP (5½-2½). Mr M Foot MP hasn't as yet replied (5½-2½). David Steel MP

said in a letter dated 29 October 1980, that he was awaiting the Green Paper, though he wasn't against CB in principle so long as it didn't interfere with existing frequencies. He also sent a copy of my letter to Clement Freud MP, Liberal Spokesman on Broadcasting (6-3 to us).

I have also joined the CBA and REACT (UK) and even bought a copy of CB — Independence, so after buying a stamp for this letter, I am broke! Much as I appreciate the benefits of a VHF CB facility I don't have much faith in the HO's ability to get breakers currently using 27MHz to change rigs and frequencies.

Keep up the good work, we'll make it one day — soon?

*Grey Beard
W Midlands*

(Hot Poop! Breaker goes bi-monthly which, for you uneducated types, means that we're out every other month — November, January, March, May etc. . .)

Help the aged

Dear Breaker,
Keep it up — your second edition is as good, if not better, than the first.

There is a side to CB which should be brought to everyone's attention, for instance the benefits for the older generation (in years only of course, not in heart). The other day I read a terrible story of an old lady in Bath who fell down, hurt herself, and could not move. She was not found for *four days*. If this lady had had a hand-held CB she could have summoned help within minutes, not days.

One of the things my CB club would like to do is collect money to buy old age pensioners a hand-held set, teach them how to use it, and notify the local REACT team that such a pensioner lives in their area.

A hand-held could be carried around in the pocket or clipped to a jacket quite easily. However I understand that 928 MHz completely cuts out hand-held sets as the wattage is so low that transmission is extremely limited in range. After all, ten miles is not necessary, but at least one or two miles is.

*Mrs Judy Read
Stockwood, Bristol*

(We are not unaware of this sort of benefit from CB. There still seems to be one group of people who have so far failed to spot it though. Mostly they come from the Westminster area of London. . .)



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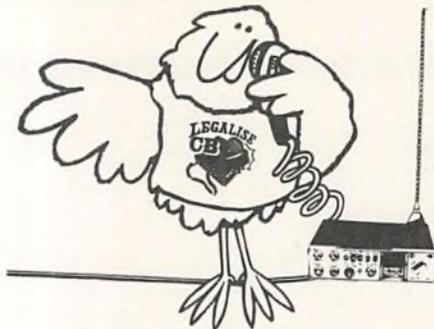
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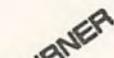
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GIVE US A BREAK

Smoky signal

Dear Breaker,
I was most impressed with issue No 1 and will be a regular reader. I feel that some of the arguments against CB are hardly valid — for instance that CB could be used to warn drivers of police speed traps. Recently I was talking to a Metropolitan Police traffic patrolman who reckons that motorists are already using very effective methods of warning each other. And anyway, he said, they are not out there to see how many drivers they can book in an hour, just to keep the traffic down to a safe speed and if CB helps then well and good.

So there it is — straight from the bear's mouth.
*Piggy A1
London*

(If you've ever driven a truck for any length of time you'll already know that CB is only a more sophisticated way of holding a conversation than we've had before.)

Too late

Dear Breaker,
Thanks for a lively magazine with plenty of interesting articles. Thanks also for the pin-up which now looks down on my work-bench; I hope this will be a regular feature.

As an electronics man I fully endorse your idea of using the 41.5MHz slot for future CB, particularly as harmonic interference lands just right where it shouldn't bother VHF radio. Unfortunately, I can only echo the words of some electronics magazines which say that already it is **TOO LATE**. 27MHz is now firmly established with somewhere between 70 000 and 250 000 operators, with more to come every week. Like mice breeding, every new breaker introduces at least two more new ones.

Every time there's a swoop, the band simply goes dead for a while and then it's business as usual!

Anyway, thanks again and 10-10 for now.
Shy talker

(We have to say that we are forced to agree. The time for sensible action by HMG has long since passed. 27 is here to stay.)

Right and wrong

Dear Breaker,
Although I enjoy your excellent magazine I must comment on some of the letters published in issue No 1.

First, it seems to me that we, the CB fraternity, cannot agree among ourselves which frequency would best serve us. If we are to get CB legalised in the

shortest possible time we must ALL unite under one banner.

Clearly we must face the fact that 27MHz is a non-starter. We all know that there are X amount of illegal sets in Britain and no doubt people with those sets will be loath to change to a new frequency. However, anyone with a 27MHz set is breaking the law.

Fact No 2: 27MHz is subject to horrendous amounts of skip, so why go for something that is sub-standard? Likewise we do not want to get stuck with anything around 900MHz, do we? So let's all unite for 232MHz. It's a clean frequency and unused.

Sorry Confederate and Oddball (issue No 1) but we will never see 27MHz legal in Britain. It seems 232MHz is the only way to go, so let's do it together.

I'd also like to urge people to write those letters. I've written to Mrs Thatcher, Mr Callaghan, Mr Steele, Mr Whitelaw, my MP Angus Maude and my local and county councils and I got favourable replies to all of them, so write, let them know how you feel.

*General Lee
Warwickshire*

(Right and wrong, General — the theory and the principle are fine, but the current government one per cent success rate against 27 pirates won't improve if another frequency is legalised as well. Are you going to make the pirates go away?)

German allies

Dear Breaker,
Congratulations on a first class magazine, the articles in which were interesting and well-balanced. I have placed an order for *Breaker* from a local bookshop and look forward to reading subsequent issues.

To my mind the question of frequency allocation in the UK is the most fundamental at the moment. As a member of the CBA I endorse James Bryant's views. However, I feel the government are being unrealistic in suggesting a frequency of 928MHz. If this is the alternative that the present illegal CB'ers are to be given then, let's face it, they're just going to ignore it! Who in his right mind would want to give up a fairly cheap piece of equipment with a reasonable range, and the odd chance of shooting skip, for a set costing five or six times as much, with an almost worthless range?

We all know that the most popular use of CB is mobile-mobile, yet the Green Paper Annex 12, which gives theoretical ranges at different frequencies omits to mention this type of operation. Is this because

it would be less than worthwhile?

It is interesting to note that the same controversy is being discussed in the German CB magazines. Although we have 12 channels on 27MHz (US Channels 4-15) here, and a further ten channels to be licensed from 1 January 1981 (so 27MHz can't be thought too bad in official circles) it is known that the W German Post Office is contemplating a CB service in the 900MHz range in the next few years. The opinion among breakers here is that there will be thousands of 'Schwarz-funkers' (pirates) who will stick with 27MHz.

So let's all get our pens and paper out and let the Home Office know our views. The cat and mouse game has gone on too long. Let's have a frequency which will command respect, and hopefully avoid the situation which arose in countries like Australia.

*Andy McClelland
Berlin*

PS: I can endorse your article about police being less than enthusiastic about pulling in illegal CB'ers. Although I left my rig in Germany when I returned to England this summer, I drove around SE England for six weeks with a gutter-mounted 'Firestik' on the car and my handle and frequency displayed on the rear window. I was not stopped once. It was interesting to see how many drivers, however, flashed their lights and held up mikes.

Sticky subject

Dear Breaker,
I am one of CB's greatest supporters, so I, like every other enthusiast in the UK bought the first *Breaker*. I was extremely disappointed to read that the next issue would not be until after Christmas. I was also disappointed to discover, despite what it said on the cover, no sticker inside my issue.

However, I think it is a good idea to give stickers because it means that people without rigs will be able to meet other CB enthusiasts without breaking the law by transmitting.
*Bubblegummer
Perthshire, Scotland*

(Hmmm. We've had a few letters like this about the sticker in Breaker 1. Seems that quite a few disappeared between print and newsagent. Sorry to have to say this, but there are no more. I haven't even got one. We'll see if we can get a reprint done in a future issue.)

Your wish....

Dear Breaker,
Please print a list of QSL clubs in your magazine which I think is fantastic. Keep up the good work.
*R Cruickshawks
File*

(Mike Newbold does his bit for QSL this month on page 38.)

Channel information

Dear Breaker,
Would it be possible to print a list in *Breaker* of which channels are used for what (Hailing, SSB, etc) around Britain, and possibly Europe, to assist newcomers to CB like myself?

*Trifficmag
Derek Young
London*

(Trouble is, we live in London. Don't get out and about too much. But if people living in other towns and cities dropped us a line....)

Model support

Dear Breaker,
A few lines from a radio-control modeller who has been listening to CB for about two years on a 27MHz monitor (don't all RC modellers) I fly power and glider aircraft, sail marbled racing yachts, and race electric cars. I have been shot down once by CB for definite, four of us heard him breaking on my monitor as the plane descended rapidly to terra firma (and very firm it was too). But I am still in favour of CB, even on 27MHz. However, I would like to say my tuppence worth.

1 CB and other interference ie fire, police, hams etc only really cause danger to aircraft (a pain in the neck to cars and sailing boats, but no danger).

2 The most common cause of interference in a discreet survey I carried out at my three clubs were: (a) Radio control 'toys' which sometimes have a very broad carrier wave and are from about £10 upwards available from Woolies, Tandys etc. (We hate the few weeks after Christmas.); (b) Spurious signals from other RC modellers; (c) Discharged batteries in the airborne receiver (wally of the week); (d) Other RC modellers switching to 'test' their gear; (e) Our local hospital paging system — once while a member of the local police was flying. Oh dear! Only three times has a model crashed in the past two years as a definite result of CB or mini cabs — it's hard to tell which; (f) Italian skip, especially at weekends.

3 The SMAE, MHTF, MAP etc

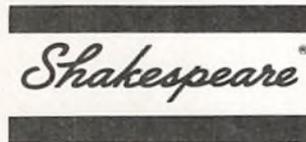
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GIVE US A BREAK

are currently having discussions with Her Majesty regarding a 'protected' channel for aircraft only on 35MHz which it is hoped will be available in early 1981.

4 I hope HM makes CB legal on 27MHz and allows all us modellers to move elsewhere; which we have been asking for for at least five years. I will gladly pay the £20-£60 conversion prices which are being quoted to protect my £200 worth of flying junk. Apart from a visit from Buzby, breakers do not suffer damage to property or bank balance by illegally using 27MHz. Being realistic, why should breakers move to 928MHz or 40MHz or wherever else just because Willie says so, especially with regard to the high prices being quoted for black boxes.

About 80-85 per cent of modellers I have spoken to agree with me about this and quite a few already belong to various CB clubs and can't wait for it to be made legal.
*RC Modeller
Essex*

(And we thought there were aircraft crashing all over because of CB and nothing else... If it helps at all, look at page 13 for a list of the colour-codes RC modellers fly on their Tx gear to indicate the frequency they're on. Then stay away or stay off channel.)

Local news

Dear Breaker,
Could you please tell me where my nearest CB club is, as no local club was mentioned in *Breaker* 1. Please help.
*Copper Lady
Glasgow*

(Full club round-up on page 46, but our information is still thin. Anyone who can help Copper Lady, let us know. Anyone who wants to get their club a plug, let us know also.)

Unfair

Dear Breaker,
I got the impression that CB on 27MHz is not entirely the best frequency to choose for future legal (we hope!) broadcasting. Maybe it's not, but I think it's a bit unfair (couldn't think of a better word) on the breakers, who are really the people who have made all the headlines in the newspapers. OK, they haven't exactly given a good impression of illegal CB'ers, but it is their money which has been used to purchase rigs, broadcast and sometimes unfortunately get prosecuted and in turn make these headlines for the public to read.

I think it's unfair (that word again) that the 27MHz users, the

people who have brought CB in GB to light, should be punished by having their frequency taken away.

Sorry to have kept on, but it's just my opinion. I know 27MHz is overcrowded already but I think it's unfair... well, you know the rest.

Look forward to the next issue.
*Yellow Beaver
Surrey*

(Benice to agree, but our lawyers advise us... Well you know the rest.)

Blame

Dear Breaker,
Just a few words about the new mag. It's fab (as per usual, comparing it to *Custom Car*) and I've just dropped a line to the PM etc in accordance with your advice.

I have had a rig and used it, but I also run a radio-controlled model. I have experienced some interference from CB but it has never been dangerous as the rig was about 100 feet away. Any further and there was no interference at all. All these other radio-modellers must be talking wossname or they must have CB'ers sitting on the grass next to them.
*Mike Mills
Bristol*

(Or something other than CB is to blame. Funny how they hardly ever think of that.)

Difference of opinion

Dear Breaker,
Like all your readers, I am for legalising CB or Open Channel in the UK, but there are too many people out there continually monitoring channels 14 and 19. These two channels are now being walked on by breakers who pay no mind and stay a ratchet jaw, making themselves a nuisance to any other breaker.

This isn't all. There is a lot of swearing and telling of silly foul jokes on the air. A lot of young breakers think it is a fun game and are spoiling it for all the good breakers by swearing so much. Why on earth do some of them sit in their cars outside their home-20 talking to another breaker half a mile up the road about sweet fanny adams etc. Misuse on 27MHz is going to ruin it for everyone. The government is right, 27 megs is wrong; there's too much interference both ways; Oddball (issue No 1) stated that most breakers are inclined to stay on 27 and break the law even if we do get Open Channel on another wavelength. Well, I'm sorry to say that the majority do not favour staying illegal and many petitions have been started to legalise OC

on any frequency and with 60 plus channels, not 40 with USB/SSB. There is no doubt about it, 27 megs is not for the UK.

Let us stay together and fight for legal OC, but not on 27 megs. Let us in the UK stay British and lead again in being just that little bit different to the rest of the world of breakers.

Red Dog

(We don't think that the question of frequency allocation has got anything to do with being British, different or ahead of the rest of the world. It's not even anything to do with ideal solutions anymore— it's practicalities which count most.)

Beware

Dear Sir,
The eagerly awaited issue of *Breaker* arrived on my doormat this morning, but I was dismayed to find in it a cheap girlie-type magazine centrefold.

While I appreciate this sort of material in its right place as much as any other red blooded male, I do not think that a serious CB magazine is the right place. It can only help to bring CB into further disrepute and generate completely the wrong image of the breaker.

The magazine is otherwise first class and I wish you more power to your elbow to keep up the good work on behalf of breakers everywhere.

Incidentally, a breaker told me last week that the bears are getting heavy in the Islington area of London and making regular busts on CB'ers. White Land Rovers are involved, usually operating in pairs, and distinguished by a box on the roof and a special antenna system for this nefarious purpose.

Usual comments apply about the cost to public funds and waste of valuable time of those concerned, but beware!
*Peter Piper
Billericay, Essex*

Pushy ladies

Dear Breaker,
I wonder if ladies have realised what a wonderful thing the legalisation of CB radio could be to them? Imagine knowing where all the moneysavers are, not having to worry about any mechanical failure, always having a friend when you need one. What with the big part women are playing in our liberated society it would be a good thing to have them campaigning. Not to mention

what a good thing all the noise they would make could do for the CB lobby. So come on ladies 'push'.

*Robert Hudson
Hull*

PS: A brilliant mag, very informative, not to mention enjoyable. Oh, by the way I have both issues of *Breaker*— surprising what reading a good custom mag and pre-ordering can do for one's power of possession.

(And at the moment it's still the best way to make sure you get a copy. And as for the ladies— read on...)

Busy beavers

Dear Breaker,
My brother and I have just bought *Breaker* which is very impressive but... one small point.

I am a beaver, the other breaker sex as it were. I know that in the USA there aren't many female truckers etc, but let me tell you that in dear old UK we females are doing our bit for CB liberation. So how about a bit of coverage for us?

Maybe a few pictures of scantily clad handsome truck drivers? Seriously folks, I know CB tends to be a little male dominated, so let's make room for the beavers who serve a greater purpose than just seat covers.
*Little Ferrett
Oxfordshire*
PS: The Pirate (my brother) says no comment; he's kind of tied up at the moment—to the kitchen table!

(Interesting. Had a few letters from lady breakers just lately. Is it worth starting a ladies page? You know what to do.)

Club scout

Dear Breaker,
I have just spent the previous 1½ hours writing the letters you suggested to the local council, government MPs etc etc after having first read the mag from cover to cover. Pretty heavy stuff, but very good.

What I want is a club near me to give everyone in my area help. The nearest that I know of is in Leeds which is virtually a closed shop. If there isn't a local set up I'll organise one. Anyone interested can have my home-20. Me and my buddies could sure do with some help.
*Red Rover (T Webster really, but what the heck)
7 Harlow Moor Drive
Harrogate
N Yorkshire*

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Gerald sez . . .

. . . that a large electronics factory in this country — no names — is busy turning out radio transceivers designed to work on 27MHz *like crazy*.

This normally sober and reliable person got really excited about it.

Question is — what can it mean?

Gerald's mate sez . . .

. . . that he's seen copies of a piece of paper which HMG is busy printing *like crazy*.

This bit of paper, it seems, is a temporary licence to operate a transmitter on 27MHz. What can it mean?

And, more to the point, is it as reliable as all the reports from people who've seen £150 Road Fund Licences the week before the budget? Every year?

We tend not to circulate rumour, as a rule, but we thought we'd circulate this one. Of all the rumours we've heard about CB, we like this one best.

Musica

There have recently been a spate of CB-related records released. We've listened to a couple. Not going to mention any names.

We will point out that there are more than a few records released every week, and only the very few actually get any airtime, either on the Beeb or commercial stations. Don't be surprised if you don't hear any of the CB songs on *Top of the Flops*.

The use of the ten-code and a few words of jargon isn't, on its own, going to make a success of a record which hasn't also got what it takes musically. It's a pity. We hate to seem to be knocking anything which may help the cause; the CBA have recommended that everybody buy the records even if they don't like them, simply as another way of making a public statement.

We sort of agree. It would be nice if a CB song was a No 1 hit record. But let's face it, even *Convoy* was a gimmick record — a fluke success story with precious little to recommend it musically. And what we've heard so far hasn't been in the same league as CW.

There's no point in championing the cause of something which is not as good as it could be simply because it has the magic letters 'CB' stamped on it; CB is not a substandard or second-rate thing, and CB people aren't either. By adopting anything which isn't up to standard in its own right you'll only convince onlookers that you yourself, and whatever it is you're connected with is second-rate also.

Now kill me.

Free radio

Bought a new car the other day. Pretty dull news really, but wandering around the unfamiliar dial on a new radio caused the rediscovery of an old friend; Radio Jackie still going strong and still sounding good.

We know there are more than a few such illicit music stations in the 90MHz area — Jackie, Thameside, Invicta, Telstar South, West London, Free London, North Kent, Alpha and Uptown. Still more are active (like the others, almost exclusively on Sundays) on Short Wave — around 6200KHz to 6300KHz and again on 7300 upwards.

Most of the stations we've heard are in the London area, obviously enough, we live there after all, but surely there must be more. . . .

Tail of two cities

Fascinating Facts Department No 1: Statutory Instrument 1968 No 61; Radiotelephonic Transmitters (Control of Manufacture and Import) does not apply in the Isle of Man. While the Wireless Telegraphy Act prohibits the use of any transmitting equipment without the relevant licence on the island in the same way as it does on the mainland, there is no restriction on the import of CB rigs.

Consequently radio shops on the Isle of Man sell them openly. People who buy them have to *pretend* to use them of course, since they don't want to break any laws.

Fascinating Facts Department No 2: If you (or me, or anyone else for that matter) took a trip to the Isle of Man on holiday or on business you won't officially be leaving the country. So when you come back to the mainland by air or sea you won't have to pass through any kind of Customs check. . . .

Fascinating Facts Department No 3: next issue of *Breaker* might be a bit late because we'll all be on holiday. Guess where we're going. . . .

Just a thought

We've heard a lot of speculation about Open Channel and other VHF frequencies being better than 27 for various reasons. Not least among these reasons has been the political wrangle over the good (or otherwise) that CB might bring to our electronics industry. If we used a frequency not already in world use we could beat the foreigners at their own game and do our own industry a whole heap of good.

This is interesting, but doesn't really hold much water. Go take a look at the radios in use in the ham market, ordinary transistors, hi-fi, televisions. How many of them

are British? Not very many. The ones which are tend to be very expensive upmarket jobs and rely for their sales on exclusivity induced by their high prices.

Fact of the matter is that the Japanese and the Americans and probably almost everybody else, can beat us when it comes to this sort of mass-production; the question of frequency is irrelevant.

Model behaviour

We all know about model control and 35MHz. Good idea and all that, but it hasn't happened yet.

Meantime radio-modellers and breakers are still very much at odds when it comes to just who is flying whose aircraft. The golden rule has to be to stay off channel when modellers are flying — they have to do it in allocated places, so it's quite easy to find out which places in your area are designated for the purpose and stay away.

Other than that modellers colour-code their frequencies and fly the relevant-colour flag on their Tx mast as a courtesy to each other. It's a simple matter to look for the colours and stay off those channels, providing you know which is which. You might find the following list helps; if you don't make any friends at least you won't make any enemies.

	Frequency	Channel
Black-brown	26-975	2
Brown	26-995	
Red-brown	27-025	6
Red	27-045	
Orange-red	27-075	10
Orange	27-095	
Yellow-orange	27-125	14
Yellow	27-145	
Green-yellow	27-175	18
Green	27-195	
Blue	27-225	
Blue-green	27-255	20

Nuisance

Gleaned from the MCBRC was the news that some breakers in the Bloxwich area got on the air using the handle of 'The Village Idiot' and gave a phone number to arrange eyeball contact.

The Desk Sergeant at Bloxwich nick turned out to be relatively unamused by this merry jape, and no wonder. . . .

Public service

Some while ago (April, actually) the MCBRC published an appeal to local breakers from a hospital at Dudley. This was the first occasion we'd heard of where illegal CB transmissions were actually proved to be interfering

with hospital paging.

Very sensibly the hospital had contacted the local club, told them of the problem and also the frequencies their pagers were using. The result was an appeal to local breakers to stay off channels 25 and 26 in the area of the hospital at least.

Seems like a very good idea. In fact it seems like the sort of cooperation which makes the world go round.

The correct course of action is, of course, to report interference and let the GPO sort it out. Since we all know they can't control the situation any longer it makes much more practical sense for the hospital to do as they did.

Despite our own and other people's efforts to make it easy to get in touch with CB clubs, we know it's still not all that easy. We'd be pleased to help if we can; publishing schedules are not all that rapid, but if you have, or know of, any hospital having trouble with paging, or even if you want to ring up and ask — let us know if and when it's happening and what the frequency involved is and we'll ask the local breakers to stay off the relevant channels.

Giveaway

It has long been the practice of Authority to quote figures with regard to the number of illicit CB rigs in this country which are significantly at variance with those quoted by other unofficial (but no less well-informed) sources. These official guesstimates have always been markedly lower than everybody else's.

Obviously they have an interest in playing down the extent of public enthusiasm for something which they have long been decrying as anti-social and undesirable.

However, the Customs and Excise Annual Report for the year 1979-80 has just been published. Buried among the fascinating statistics about drug smuggling, VAT offences and other kinds of import duties and taxes comes an entertaining little section on law enforcement, in which it is revealed that HM Customs have, in the past year, seized 2525 radiotelephonic transmitters which they state were 'mostly Citizens' Band Radio apparatus'.

Even if you give them as much as ten per cent success (and we believe that only about 14 per cent of imported goods actually receive scrutiny at the point of entry) then 25 000 sets escaped their eagle eye in the last year.

Knowing how easy it is to buy drugs — any drugs — these days, we'd be unwilling to give them better than one per cent success. Which means. . . .

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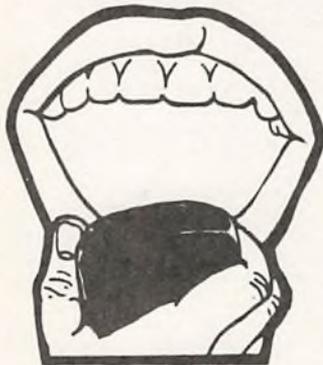
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LOWDOWN

Sideband

We've had a few letters asking for info on local calling channels and soon, and we're doing our best to compile as complete a list as possible — let us know yours.

Meantime, we've heard that sidebanders around the country seem to be slowly moving towards 16LSB as their call channel and everybody thinks it's a good idea, so if you want to go for a sideband set you'll know where to look.

Likewise we all know that AM users in London call on 14, while nearly everywhere else the truckers' channel of 19 is the place to go.

Two things crop up here. One, we heard a while back that 19 as a general rule was naughty as far as hospitals are concerned. It was only mentioned once or twice, and we're not so sure about it. We are reasonably certain that old habits etc and 19 is likely to remain the channel.

Second, 19 is the truckers' channel in the US, but everybody's over here. Where are the truckers? Do they want a private channel? What would they use it for? Would it ever replace headlights for everyday motorway use?

Modellers to move

More info hot from the horses' wosname which advocates of 27MHz CB might be interested to hear, actually concerns the radio-modellers.

After much hinting and messing about, the 35MHz frequency has at last been made available to the R/C fraternity, and official announcements on this, if not actually made by the time this magazine makes the streets, will follow shortly.

At least one major British source of R/C equipment has this information from the Home Office and is busy manufacturing to meet the new specifications. It ought to ease the situation considerably, and is a move which will be greeted by all parties with some considerable pleasure.

Question is — where is it all leading to?

Help

Yorkshire police have recently (at the end of November) publicly and privately acknowledged what we've all been saying for a long time; that CB, far from being an anti-social hindrance, can effectively assist the police in a variety of ways.

In a televised appeal, detectives engaged on the three-year-old hunt for the loathsome Yorkshire Ripper requested mobile breakers to keep their eyes open for anything

suspicious and to use their rigs to summon assistance and inform the police.

The request has naturally been greeted with a genuine desire to help and a recent test emergency call produced, so we hear, about 100 or more breakers in the city centre within minutes. Of course it's not only murder cases which could benefit from CB-borne assistance, as Sussex police have already discovered while searching for a lost baby. Maybe someone should spread the word and tell all the other police forces.

Good news

Regular (if three-times can be called regular, that is) readers of *Breaker* will already have twigged that the time-lapse between this issue and the last is somewhat less than that to which you were going to get accustomed, and also somewhat less than last time.

Breaker is now a bi-monthly publication, in response to so much demand from so many sources. That means that it will be available every other month — next issue out in March.

The increase in output will naturally mean an increase in staff and will also mean that we will have more room for everybody and everything.

So from now on we'll be able to use more of your ideas and more of your suggestions (as well as more of your letters) to fill the magazine.

So if you're a breaker, a truck driver, a sailor or whatever and you've got something to say — don't be shy. There's a whole world of people out there just waiting to hear from you. If you went out on channel you could cover about 25 miles. Use *Breaker* for your purposes and a whole new world of DX contacts opens up — anywhere between Lands End and John O'Groats, in fact. Beats the hell out of 27MHz, never mind 928.

Sorry

An awful lot of stuff in this issue is of a reasonably practical nature — how to do this that and the other. Not so much of the other, actually, mostly this and that. But nearly all of it is based on current 27MHz technology because that is the major practical and working example.

It wouldn't do for you to get the wrong idea and think that we were actually advocating 27. Quite wrong.

Most of what we've said, if not all of it, is based on 27 but could equally well apply to any other frequency if and when CB became legal.

Of course, if 27 were to be the thing of the future then this issue would be doubly helpful . . .

Scoop

Well, ish. Just thought that those of us with a slight (or even not so slight) interest in trucks might like to hear about the new Ford truck, destined to replace the D Series stalwart.

When the D first hit the roads it was something of a major step forward in the 3-7 ton range and the new model is, surprisingly, similarly innovative. Surprising, not because we don't expect Ford Trucks to make design progress (quite the reverse) but simply because we thought the D Series would be hard to follow.

Roughly similar in appearance to the D, the new model has been modernised in much the same way as the Cortina/Granada ranges have been face-lifted recently.

Apart from looking the part, the deep screen and floor-to-ceiling side windows have removed most of the blind spots which make driving in traffic so much of a problem, particularly with regard to close-packed traffic on either side of the vehicle. Other visual changes include the re-styled grille and lighting arrangements, which show up quite nicely in our artist's impression. Inside the cab all has changed a great deal.

Colour-coded and striped high-back seats seem to derive directly from the new Escort XR3 saloon car on a Bostrom frame. Dash instrumentation is a maze of technology for the microchip '80s — all touch-buttons and digital readout stuff, and jolly nice too.

Our brief check round the vehicle revealed little information on engine or chassis, but our mole did spot the rearranged rear spring layout, using two leaves

and helpers, which should give a much nicer ride, especially when the vehicle is empty or lightly laden — making an ideal parcels van, for example. The truck is scheduled for production some time next year, so we hear, and ought to do as well as the D Series for Ford sales and reputation.

Stars

Glancing around this issue of your favourite comic you'll spot loads and loads of CB accessories — antennas, splitters, speakers, mikes, the whole lot.

It actually belongs to the jolly nice man at CB Equipment Specialists (72 Queens Road, Hershaw, Walton on Thames, Surrey).

Either slip round there in person (or your car) or put Buzby to good use — 09322 47395 will do the trick.

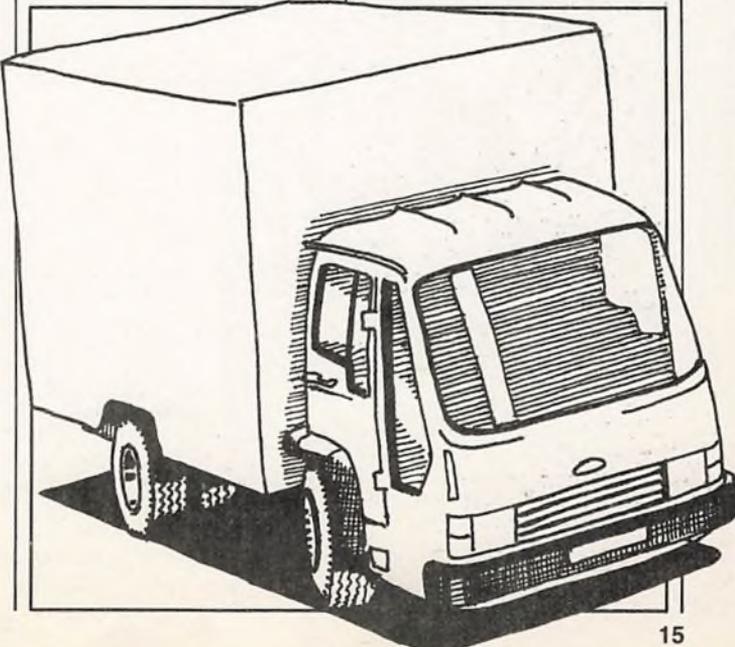
Gardening club

Well, ish, anyway. Actually it's the Gardner Drivers Club. Officially due to be launched on 1 January '81, Gardner tried a test run at the Motor Show this year in order to assess response to their proposal to form a club for drivers running on Gardner power.

The club offered membership at £7 per year, which buys a bi-monthly magazine, membership card, lapel badge, window sticker and loads of stuff like that.

It has met with so much success that it is now open to anyone holding an HGV licence, and has many goodies lined up for the future.

Anyone interested should contact the Gardner Drivers Club, 86 Hagley Road, Edgbaston, Birmingham B16 8NB.



Viv differe

It was only a smallish piece of news; *The Times* gave it a couple of inches on about page 6. We didn't see it reported in any other National newspaper — either because we didn't look hard enough, or because the item was so small — if it was there at all. Apologies to all newspapers which did include it, but you're probably beginning to get the drift — this little event was considered to be of minor significance and didn't make headlines anywhere. And yet it does, we think, have far-reaching implications in this country.

All that's happened really is that the French government have announced that they are making a form of CB legal. On the frequency of nine hundred and . . . no. Wrong. 27MHz is where. Only a measly few channels, and only a miserably low power limit, but 27MHz nevertheless.

Probably this, you think, only affects the Frogs. After all, the Germans have 27, the Dutch have 27, everybody in bloody Europe has got 27. So what?

Well listen, and we'll tell you.

First — the jokes. Let's all imagine the French trying either to get their tongues round such Anglo-Saxon gems as pregnant roller skate or even 10-4. Worse, let's try and imagine the problems all the jargon will have in the translation. Can't help feeling that 10-4 is going to lose something when it comes out *dix-quatre*. Can you imagine the problems in the summertime, when France is full up with caravan and tent-toting Brits all trying to get a break? 'Ah, *rogair-dee mon brave, avez-vous un copy on me, venez ici?* Or worse, 'Breaker *une-neuf, ici le plastique poulet; est-ce-qu'il y a un four, break?*' Oh good grief.

But still. Back to the plot.

The fact is that everybody else in Europe has got 27MHz now, especially the Italians, as we all know very well.

And as signatories to the Treaty of Rome etc, and members of the EEC, we're not doing all that well. In fact we could be in breach of our agreements by not allowing the import of goods from member countries unless we can prove that it is against our national policy. And since our very own Home Secretary has agreed that CB is a very wonderful thing, we can hardly claim that it goes against

our policies. Let's face it, the EEC manages to shove some jolly unpleasant rules down our throat, even when the whole country is agreed that we don't want to play, so it's hard to see how we'll get away with CB when everybody except Eric Gotts is dead keen to have it.

Remember then, that we have some sort of legal obligation towards CB, and the French decision leaves us in an even more untenable situation than we were before. It does affect us.

More practically it affects us in terms of hardware. Every day, in the summer especially, there are zillions of cross-channel ferries and hovercraft rushing backwards and forwards between France and England. The English Channel is the most crowded piece of water in the world. Hundreds of thousands of holidaymakers cross every year for short *sojourns sur le continent*. Almost without fail they bring back little souvenirs for themselves and their friends. No doubt about it, there are going to be literally thousands of rigs crossing the Channel next year. And that's without the vast number of intercontinental ballistic juggernauts which make the trip all year round. Some of the trailers are 40 feet long, ten feet wide and ten feet high. Your average rig, even in its box, is only going to be 12 inches square and six high; do the mathematics for yourself.

You could spend a fortune and still not be able to stop this potential flood of illegality. And let's face it, it won't be stopped. Even on pure volume there are going to be thousands of rigs which get through. The situation on 27MHz is going to be changed dramatically. Some people think it's out of hand now; just wait until next summer.

More significant still is the splendid *volte-face* which the 27MHz decision represents on the part of the French government. Until very recently they were 'researching' their proposals to allow the *grenouilles* the use of a two-way radio facility similar to CB but on . . . right, 928. They've changed their mind.

This is important for several reasons. First, it proves that governments have to give in to the will of the people sometimes, and not only in Australia.

When the Marine Offences Bill was

e la rence

under discussion in the Mother of Parliaments, one democratically elected MP, in the House to represent the will of his constituents (all of whom were, like the rest of the country, glued to Radio London or Radio Caroline), said: 'The pirates are providing what people want. To some Members of this House that is sound democracy. It is not. It is pandering to populism'.

A classic example of the attitude which has made us all feel like giving up some time or other. Thank God we haven't.

The French government reversed their decision on 928 not because they suddenly decided it was a lousy frequency, or because it gives you warts, or any other philanthropic reason. They reversed it only because they had no choice; the number of illegal sets using 27MHz being imported into France was as staggering as that which is coming into England, and in the face of a situation which was beyond control they did the only thing possible — made the illegal legal, although in modified form.

Still want to know so what? After all, out of 60-plus countries which now have a legal CB facility, only a couple have got it because they had no choice, and one of them's on the other side of the world. The nearest one to us is only across the channel, sure, and it is a fellow-member of the EEC, but we already know just how little that counts for. So, so what?

Apart from the cumulative effect of all this frantic 27MHz-ing going on all around us, you'll remember that we quoted several sources on the subject of a world standard for two-way radio on 928 in *Breaker 1*. We said that we thought it likely that in view of the way this frequency was being adopted by various countries and bodies, it was likely that the Green Paper, when it appeared, would come down in favour of 928, mostly for political reasons.

At the time we, like most people, also felt that 928 was a perfectly adequate frequency for a two-way service when run in conjunction with a full-scale CB facility, but not instead of one.

But there were several countries which, under the impetus of the CCIR reports and the WARC efforts, suggested that they might be adopting a 928

two-way service in the near future. As we pointed out in *Breaker 2*, this supplied the first country to leap into the breach with a nifty opportunity to clean up and be the world's No 1 supplier of jolly smart radio sets. This opportunity now seems to be drifting further out of reach, although it is probable that the French at least will still keep 928 for a service very similar to our own PO-run car telephone arrangement.

More than that, it changes the overall picture; one of the other salient facts we pointed out in *Breaker 1* was the fact that there is at present no world standard for CB. Although 27 is by far the most commonplace it is by no means standardised or a standard. With the CCIR and WARC still trying to thrash out the rules for such a standard it might be foolish to introduce into any country a facility which would be outdated as soon as it was established. Therefore, we said, it is unlikely that HMG will rush into a decision until they know exactly what the future might hold. Then — along came 928.

But 928, after a first flush of enthusiasm, now seems to be receding to the place it belongs, as a secondary, back-up system to the primary facility, perhaps to give extra privacy (at extra cost) to those people who find the straight-forward CB service is valuable to their business but insufficiently private or accessible for their needs.

In which case a primary two-way facility in this country, based on 928, would still seem to be an act of isolationist folly leaving us with a service all of our own.

It would appear, then, that the position with regard to frequency on a world-wide basis — which has to be a consideration — has now changed somewhat. A lot what, if you think about it. The choices are now not so clear, and the factors which 928 had to recommend it are now perhaps less recommending.

It's all a bit vague one way and another, but we've been watching the CB scene closely for a couple of years now, and we're of the opinion that things are on the move at last. The French decision to go all the way with 27 has to be considered as an event against the backdrop of many interacting forces. All things considered those forces seem to be leading us in one inevitable direction . . .

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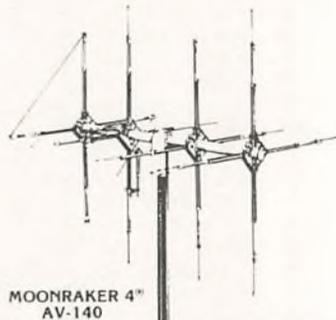
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Someone used to teach us history at school, saying that studying the past is the clue to the future. Somehow it never seemed to make all that much sense. But it was fascinating just the same — more because it was a way of seeing how we got to where we are today and why.

Even that's not so simple, because it's not always easy to see exactly where we are today — apart from anything else the situation changes all the time. But it might be informative and fun to find out how everything came together, so let's look.

To start, we want to know where we are. And then how and why.

Go outside your front door and look at the sky. It might look like just sky to you, but it's actually buzzing with little messages. You can't see them, and they won't hurt you. Some of them, like those from the emergency services, might actually be doing you some good.

The way we're crowded out with sophisticated electronics these days those messages are fast becoming a fabric of the society we live in; they're holding the place together.

A hundred years ago nobody thought that they might order theatre tickets without leaving their home, or pay for them without doing so, even without going to a bank or exchanging currency with the theatre. Now the telephone and the widespread use of computers to make everyday transactions is something which all of us, at least in the Western developed countries, take for granted. But what would the world have thought of Mr Telephone if he'd produced his new invention and said, 'I've produced a device which will enable the people of this country to order theatre tickets without leaving home'? Probably there would have been no shortage of

little tykes in government who wouldn't have taken kindly to such a device. Probably there were at the time anyway. But aren't we all glad that we didn't let the shortsighted resistance to change of a few people prevent the introduction of the phone?

Now there are many forms of long and short distance communication, which are just as magical and just as useful, which users take for granted. Not all of them have been as widely adopted as the telephone though; the logical extension (pardon us) of the telephone is personal two-way radio; the Americans and nearly everyone else call it CB.

Here in Britain we don't. We don't call it anything. The government sees it as a way of ordering your Big Mac and fries before you arrive at Ronald's house, and are resisting its introduction. Resisting so hard that it's illegal; possession and/or use of a CB can land you with a four month jail sentence and a rather large fine. Probably in the late '60s, when CB first came to these shores, the early pirates didn't know that, so they wouldn't have worried about it. Now they do. So, in the face of such opposition, why are there an estimated 250 000 people — ordinary law-abiding (as a rule) citizens — breaking those laws and risking their liberty? CB clubs exist all over the country, pressure groups exist to persuade the government that CB is a Good Thing and there are at least five nationally available magazines devoted exclusively to this illegal topic.

But if the supporters of CB are enthusiastic in its favour, its detractors are no less vociferous in their attack. Assorted groups of police and customs officials expend huge amounts of time, money and effort dashing about the country persecuting and prosecuting users of radio sets; principally at night when they should be home in bed.

All this despite the fact that the government have said that CB is a Good Thing after all, although they have not allowed it to be made legal, and seem unlikely to allow it on the frequency that everybody in the country except them want even if they do.

That's where we are today. How the hell did we get here?

Probably the first recorded users of the illegal 27MHz band were the Charlie Bravo Group who seem to have appeared in about 1965. They used the 100 milliwatt hand-held sets which, in the USA, require no licence, and worked channel 11. Later they moved up to 14 because of interference. In view of the low power they escaped detection for some years, but a number of prosecutions in the '70s forced them off the air.

They were quickly replaced in the mid-'70s by the Lima Echo Group who had got sophisticated and mobile, using the 23-channel rigs which were then available in the States. Mostly they worked 14 as well, using it as a private net.

Really it was about then that the CB boom began in the UK. Although the Lima Echo Group didn't fold up as such, the larger numbers of other illicit users who gradually caught the bug swamped them out and they sank without trace.

It was probably their use of 14 as their net channel which first led to it being established as the London calling channel — new users tuned in automatically

10-44 and all that (a complete history of airborne piracy)



since that was the only place where there was any trade on the air.

In the beginning though it was all very hit and miss, and not very many people knew what they were dealing with, or to exactly what sort of time bomb they had lit the fuse. Our own dear Oggie was an early casualty, apprehended by authority as he walked gaily past Waterloo House (home of the RRD) transmitting like fury on a small hand-held. Two hundred quid that cost, and they took him to court in Brighton, probably because they didn't want to draw any more attention to CB than they had to.

And Delta Tango, while still quite young (long before he got himself a handle . . .) nearly fell out of his pram when he was playing with a walkie talkie toy and suddenly heard a strange voice answering him. Had no idea there was anyone else out there, you see.

Exactly how CB progressed from being a toy to being a curiosity and then a subculture is a complete mystery. People always seem to find out if there's something good going on, no matter how hard you try to keep it secret.

From time to time it emerged in the letters of *Custom Car*, first as a joke (June '76) and then in an increasingly more serious fashion. In 1977 it really got hot, as we met for the first time in print with James Bryant and the CBA. No-one had even heard of CB, never mind the CBA.

Credit for bringing CB out of the closet really goes to *Time Out Magazine*, London's socially aware events roundup for aware socialists. In early '78 *Time Out* made a guess that as many as 500 Londoners had by then tuned into Lima Echo and Co on Channel 14, but updated their figure in October, allowing as many as 7 to 800. At the time it seemed like a lot. *TO* also reported that these early pirates used to congregate on high ground in several places because they could get out further. They named Ally Pally, but omitted the lumpy bits of Epping Forest and the top of Richmond Hill. Presumably the police only knew about the Pally at the time.

Generally speaking the plods were busy keeping a low profile with regard to CB, and at Ally Pally at least merely sought assurances that, while everybody might be monitoring skip from the USA, no-one was actually transmitting at all. My word no.

It was generally felt at the time that Hornsey plods had somehow acquired a rig and were listening in, as they displayed a remarkably complete and accurate knowledge of the CB scene. This suspicion was greeted with gasps of horror by all and sundry; surely it was some form of cheating, maybe even persecution.

Worse was to come.

By December '78 it was well known that far from simply listening in, the law were playing an active part, providing the pirates with agents provocateurs like the much-disliked Goldfinger and the wonderful Electric Lady. Goldfinger attracted customers by offering them unbelievably cheap rigs they could sell to their friends at a vast profit; the unwary went to their eyeball and their doom, since Goldfinger had many friends with him who nearly all wore pointed hats. Electric Lady was far nicer, offering fellow-breakers all sorts of unspecified

things; eyeballs with her were no less doom-laden, though.

It was this kind of tactic which forced the breakers into being more secretive on the air, and the present (and growing) vocabulary of jargon owes its existence in no small way to the new but increasingly important need to communicate with people without giving too much away. From the persecution came the increased use of the ten-code together with some of the nicer cryptonyms with which towns, places, pubs and major roads are now blessed.

The subculture had arrived.

With it came the night arrests.

Partly the activities of Customs officers arose from the fact that many of the original pirates really were trying to shoot skip with the US (let's face it, there were hardly any British breakers on the air) and the time differences tended to confine their activities to the witching hour and beyond. As the ranks of domestic users swelled slowly the need for skip seems to have largely evaporated; two years ago everyone was trying their hardest, but now there are too many people on channel at home to yak with that much more easily.

March '79 was something of a milestone in the history of British CB, such as it was. Via its 140 000-odd purchasers and two million-odd readers, the March issue of *Custom Car* carried the word far and wide. In a then unique and splendid bout of cooperation, *CC* joined forces with CB's oldest campaigner, James Bryant, President of the CBA. After much hassle with the GPO, who control the internal mail at the House of Commons, 600-plus copies of the banner-waving March issue were delivered to every sitting Member of the House, individually addressed.

Only 60 MPs took the trouble to reply, half of them favourably. The CBA regarded this response as encouraging. After the May election of that year they took the trouble to have the article on CB from that issue reprinted and redelivered it to all new MPs who had not been sitting when the first was delivered.

The new Conservative government had, prior to the election, said that they were in favour of the CB principle, and hopes were high. This information was a much-needed shot in the arm to many, for two main reasons.

The first was the incredible fashion in which previous governments had dismissed proposals for a CB facility. They had indicated that CB was, in their opinion, only slightly more desirable than VD, in that it was likely to turn users into rapists. Quite how this transformation was to be effected they didn't say, but the information probably accounted for the huge upsurge in the number of illicit breakers in the following few months.

They further went on to observe that they did not approve of vast armies of people in easy communication with each other. Apparently Mr Telephone needn't have bothered, because nobody in government had ever heard of the telephone. Or the letter post, come to that. They then dug themselves a grave by saying that there were no frequencies available for CB, a statement so patronising and so patently untrue that it must have doubled the number of people concerned with the introduction of CB, if not the number of actual breakers.

Which brings us to shot in the arm part two. It is a matter of record that the CBA had long been proponents of a VHF CB service for the UK. The technical arguments in favour of this were expounded at length in both *Custom Car* and *Breaker 1*, but as a summary, take our word that a VHF service would be more practical, more acceptable and easier to use than 27MHz AM. Also, the argument that we'd be the only country in the world not on 27 doesn't hold water here, because it's well known that nearly every country with 27 is looking for an alternative on VHF or UHF. It was our chance to lead the world, instead of being saddled with a facility which was already 20 years out of date.

The Australians had already capitulated in the face of flagrant and widespread illegal use of 27, and the CBA was afraid that if HMG didn't take definite steps very quickly, the same would happen over here. The new, pro-CB Conservative government seemed to the CBA to indicate that the quick action necessary to save the day might well be forthcoming. Alas, it was not to be.

The number of breakers was growing fast. From *TO*'s 'revised' estimate of 800 in October '78 we were, by March '79, talking about 10 000 or more. By the time Mrs Thatcher took office we were up to 20 000.

This was probably the period of the most intense activity by the authorities against CB. In late '78 there was a garage basement near Regent's Park which was the major source of CB rigs in the country, never mind London. By early '79 everyone had a friend of a friend who could get them. By late '79 you could buy them in nearly every pub in every major city, as well as through *Exchange and Mart*.

The night raids increased in frequency, but decreased in ferocity, as the Customs began to spread their manpower wider. Where once a task force of 20 or 30 went out on the prowl or on a concerted raid, now they went out in twos and threes. Monitoring became commonplace, DF equipment was everywhere. London police forces had CB in their traffic cars, the SPG even lent their DF-equipped vans (primarily an anti-terrorist weapon) to track down CB pirates.

Famous breakers started to go off the air. Fozzie Bear got busted three times, Mickey Mouse went down at home, losing a formidable stock of 40-channel rigs. One breaker got visited at home by Eric and about 15 friends, losing his base station and several mobile sets, but his antenna, mounted on the roof of a Post Office next door, and ground-looped to the railings outside it, escaped attention. Mean Machine got busted but was walking along the embankment at the next Chelsea Cruise sporting a 3watt hand-held with an antenna about ten feet high. Euphoria was everywhere, and the private club was now about 50 000 strong.

In June of '79 we wrote to Eric Gotts at the Home Office; at the time he was the arch-villain of the establishment, the man who, it was reported, had sworn to wipe the curse of CB off the face of the earth. Well, England, anyway. Spurning what we saw as a golden opportunity to achieve that cooperation between 27MHz pirates and hospitals, radio-modellers and so on which has made the

Irish CB experience rather nicer than our own so far, and ignoring our plea for his help in at least ensuring a degree of harmony between pirates and licenced users of the 27MHz band, Eric did not even give us the courtesy of a reply.

Since we had already revealed to the world that Mr Gotts had been in trouble with the law, and had made an unsuccessful appeal against a conviction for assault during the seizure of unlicensed transmitting equipment (being used by the still-thriving Radio Jackie), it's not surprising really. But it seemed to us at the time a great shame.

We did radio and television interviews, spread the word about CB in every walk of life, met TV film crews in silly places — mostly pubs we'd never been to before, and pretended to be someone else. More often than not it was (and still seems to be) the jargon that turned the media on. Convoy had been and gone, but to the British Press the real joke was that there were actually people who talked to each other like that all the time.

And as the Press interest grew, so did the number of breakers. At the turn of the decade informed opinion put the number of 27MHz rigs in the UK at around 100 000. More and more people were switching on to CB as a tool for their everyday life. In late '79 the London calling channel was only really working after about 8 or 9 in the evening; by early '80 you couldn't get a break after 5 and the channel was busy from sparrow-fart onwards.

The enforcement of the anti-CB laws was fast becoming a joke. In '79 police forces in London and the Home Counties were circulated with a flysheet all about CB, what it was, what laws it contravened and how to recognise it; they even supplied the individual nicks with about ten pictures to help them bust the pirates. In 1980 the plods knew all about it; half of them had rigs anyway, either in their jam sandwiches or, increasingly, in their private cars.

Somewhere, in the middle of all this, was a small voice calling. It had been calling in the wilderness for years and now, amid the throng, the intention remained but the message had altered. Instead of saying 'look out', the CBA were saying 'we told you so'.

CB had grown up. No longer a private

club, it was a quarter of a million strong. No longer a cottage industry, it was the Big Business which sages had predicted it would become. Despite the campaign to wipe it out (in gloating terms during the halcyon days of midnight raids, Customs officers had written to their house magazine, *Portcullis*, describing how ten or more of them had busted four or five pirates with the aid of heavies from the local nick, acting on instructions during a nationally-orchestrated campaign) CB was thriving.

The next step was inevitable. Respectability. MPs backed it. The GLC published a discussion document announcing they were in favour of it. All-party committees began to discuss CB in depth. From being a nasty, grubby and subversive thing, CB had metamorphosed into something new. Suddenly officialdom began to reverse. They stopped being afraid that it would be used for 'non-serious purposes' almost overnight. In the twinkling of an eye they suddenly were not at all convinced that 'the disadvantages outweighed the advantages' after all. Miraculously it appeared that there *might* be a frequency suitable for CB, despite what had previously been said, if only they could find one.

An important step had been taken when the Home Office realised that there was no future in being slagged off for their stupidity in decrying as anti-social and useless something which had already been proved to be exactly the opposite in nearly every other country in the civilised world. Instead they shrugged their shoulders and intimated that it was a nice idea, but impractical.

Hit by fairly sweeping cuts in the public sector, Customs and Excise, under whose auspices most of the CB prosecutions were being made, were unable to cope. They began, slowly, to lay off chasing CB offenders, often (and under instructions from the Top) even neglecting cases already on file. They began to concentrate their efforts against CB on preventing their arrival rather than busting them once they'd got through.

Hidden on Aer Lingus and Air India, concealed among huge mounds of mangos from the Indian sub-continent, sets still got through. Among other economies which affected the efficiency of the Customs operation was the cancellation of the 'bounty' payment to individual officers, who received a percentage of the 'take'. The more contraband you nabbed, the more money you got each week. With this incentive gone, Customs vigilance seemed to be relaxed. With the drug problem on the increase (the street price of cocaine is now lower in London than Los Angeles — a sort of Mafia 'loss leader'), the tide of rabies sweeping closer to the northern coast of France and Dutch Elm disease rampancy meaning that even consignments of timber now need a clean bill of health in writing (Phytosanitary Certificates), the work of the average Customs Officer was not exactly being cut out — it was being doubled. More cuts are in progress.

Soon HMG were forced to admit that frequency space for CB was actually available; it was now merely a question of deciding which of the newly-discovered (one presumes) areas of the spectrum was most suitable.

Major breakthroughs by the CB lobby were being made almost daily, generally cloaked in a veil of officialese which attempted to conceal the enormous amount of political humble pie which was being swallowed on all sides.

Riding high on the tide of all this success, *Breaker 1* was put together. Publishing a magazine devoted to this illegal topic was a huge effort — clearance from lawyers had to be obtained right left and centre before major distributors would touch it. Couched in the most vague and general terms, *Breaker 1* went to press about two hours before the government unleashed its blockbuster: Open Channel.

The news of these proposals arrived just too late for *Breaker 1* to comment on them effectively; there was hardly time to change the wording of the pro-CB petition to a request for a rethink before the presses started to roll.

Because the need for a rethink was immediately obvious. After so much progress in such a short space of time it seemed that the cup was about to be dashed from our lips as the wording of the Green Paper made it obvious that no-one had been listening after all; or if they had, they decided to ignore everything that they'd heard.

Which brings us to where we are today. Quite how we got here is still hard to say. The whole thing seems to be a rather ostrich-like catalogue of disaster, but sadly for HMG, it isn't going to go away.

Prosecutions for illegal 27MHz transmission still abound, although they are now mainly the prerogative of the Post Office. It is true to say that the PO are something of a toothless bulldog in this sort of area, without the wide-ranging powers which Customs men enjoy. Between themselves and the Home Office RRD they have failed to control the situation on 2 metres and the anti-repeater groups of the Amateur Band still thrive; there is little doubt that their activities against the CB pirates will be greeted by the same marked lack of success.

Whether or not this indicates capitulation on the part of HMG is hard to say. Whether or not the work of the PO in this matter is now merely a token gesture . . . who knows? Certainly, as we reported in our last issue, the police forces of the UK seem to be less and less inclined to get involved with CB in any way. One hesitates to suggest that they have given up, but there has certainly been a tactical withdrawal. We are certain that, whatever they may say, the police are no less sure of their powers now than they were two years ago. Perhaps the average breaker is more certain of *his*, but it would be hard indeed to judge the effect of a general growth of such awareness on the activities of Mr Plod.

About the only lesson which can be learned from all this is that we've come a long way in two years; surely the government must realise that the people who've fought for this long aren't about to give up now. Whatever our, or your, feelings on the subject of what the most suitable wavelength for CB might be, we all know that it isn't 928. We haven't worked this hard to be given a child's toy, even if that is the way it all began. CB has grown up, and so have we.



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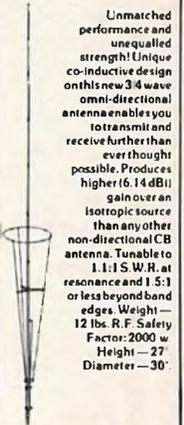
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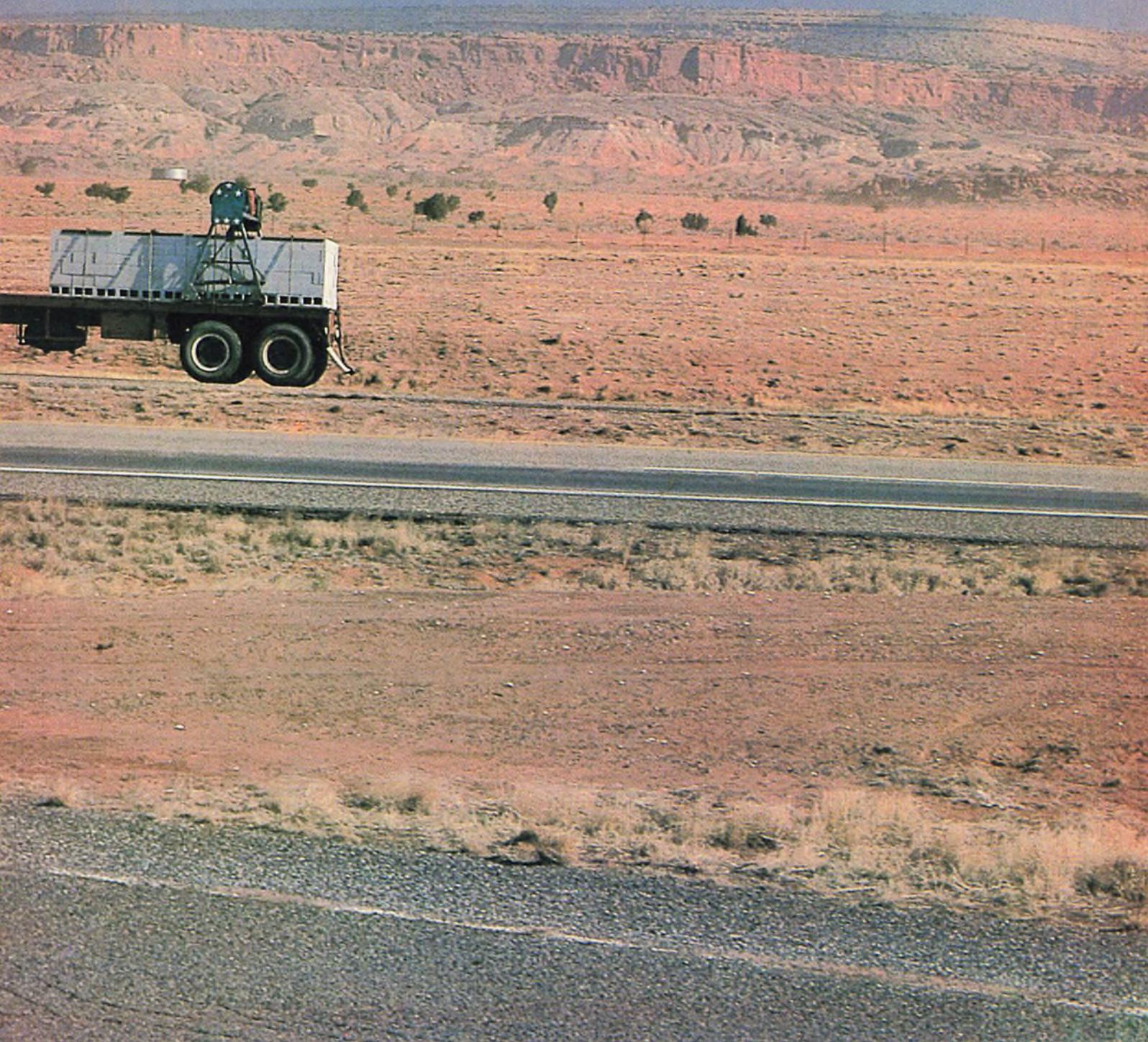
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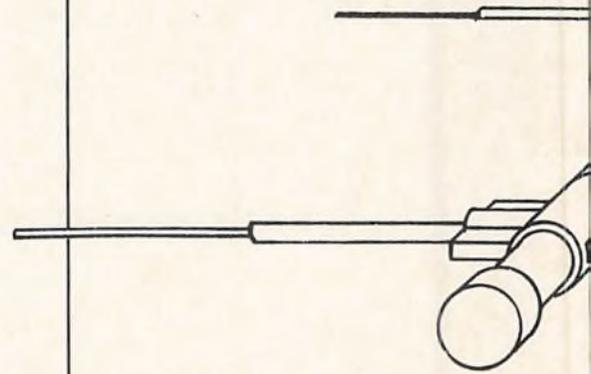


BREAKER



Home 20

(Beam us aboard...)



One way or another there seems to be a lot of junk talked about CB. Mostly it comes from people who know a little but pretend they know a lot, or are afraid to say they simply don't know.

So what, we're not here to knock the human condition. But for everybody's peace of mind (especially our own) we do like to keep it all simple. After all, CB is supposed to be the simpleton's equivalent of amateur radio. Basically every village idiot should be able to buy a rig, press buttons and talk to the world with no hassle and without having to worry about why twiddling his squelch control alters the amount of hash coming from the speaker. All he needs to know is that it *does* alter it, and he can make life easier or harder depending on which way he turns it.

It's a fairly simple philosophy, we know, but we believe it's the one most closely allied with the requirements and purpose of CB. Communication for everyone, even if they can't spell antenna.

All of which brings us to the next bit.

28 | Sooner or later, when CB is legal in one form or another, you're going to want one

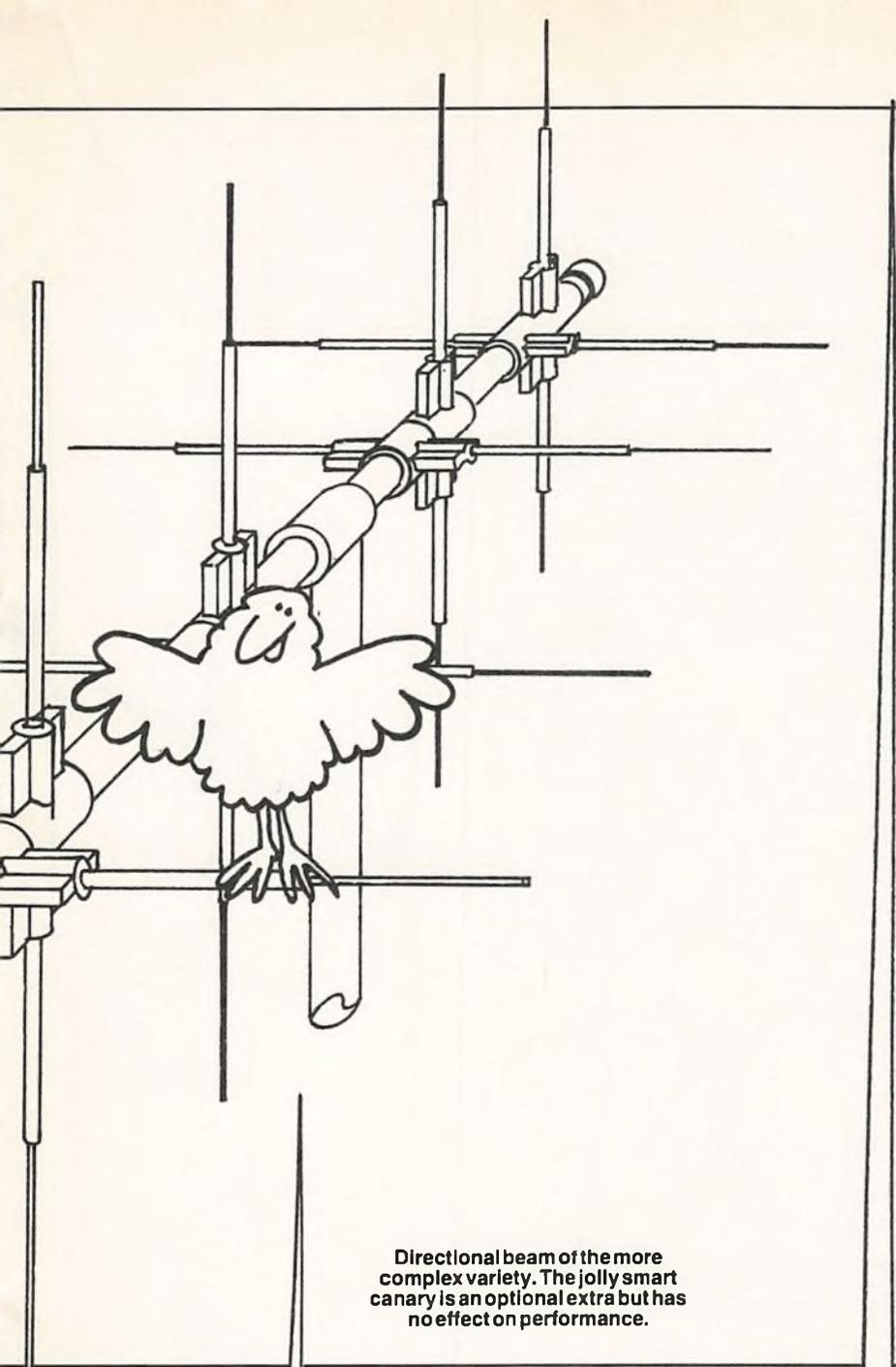
at home; they're fine in the car, sure, but what's the point of being able to order your Wimpy on the road if you can't also ring up and tell the XYL what time you'll be in for tea?

To do that you'll need a rig at home.

You could use a set intended for mobile use and run it off a mains adaptor which gives you 12volts DC. All you have to do is get your polarity right and remember to connect the black wire to the terminal which says - and the red wire to the terminal which says +. Alternatively you could use a car battery. This will need charging from time to time of course, and unless you're prepared to monitor its condition it will give variable results depending on its state of charge. Also it's heavy, smells a bit and needs vigilance lest you trip over it and short out your rig or straightforward hook it up back to front. Don't laugh; it's been done by experts, and fried transistors cost the same however stupid the mistake.

More likely you'll opt for a purpose-built base station, which will just plug straight into the wall-socket and give you no trouble from there on in. Also, because it doesn't need to be dashboard

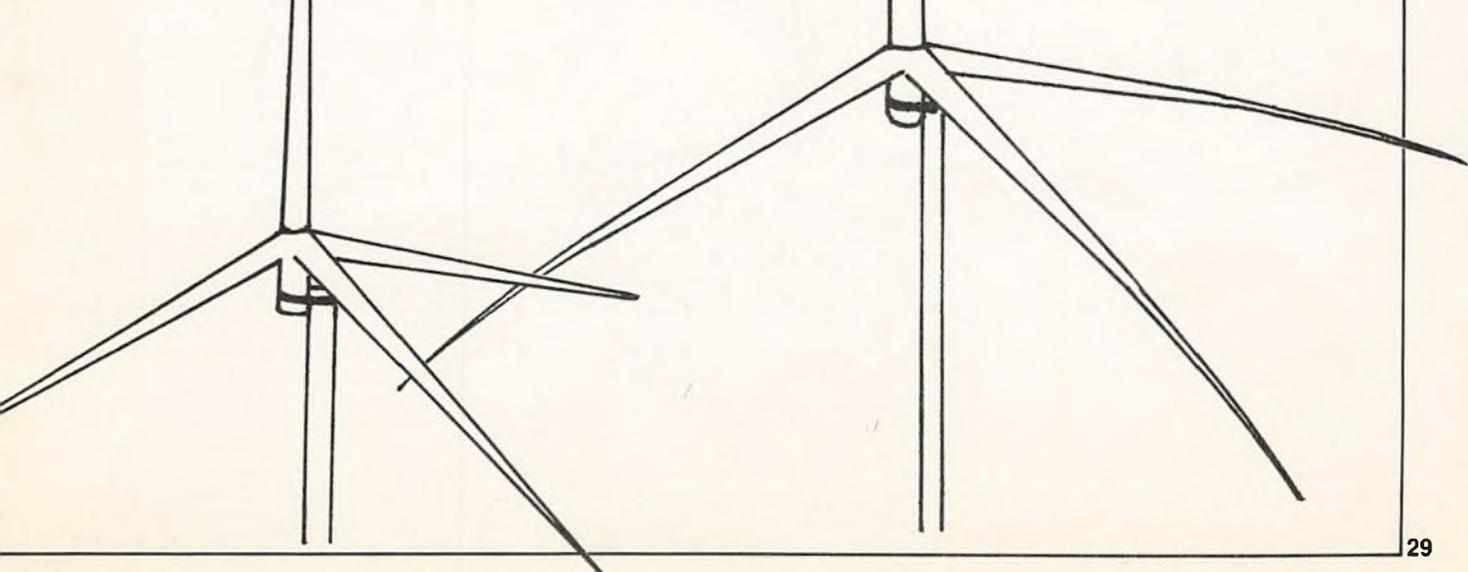
Quan
The
com
draw
than



Directional beam of the more complex variety. The jolly smart canary is an optional extra but has no effect on performance.

Quarter-wave ground-plane. Basic and possibly most common type. Although not to scale it is smaller

...



... the five-eighth wave; its performance is also poorer.

size, it'll tend to have all the extras which your mobile rig lacks. If you start using it seriously, whether for local contact, DX work or as a REACT monitor, you'll be glad you've got them.

Naturally enough it's going to cost more than a mobile. Very sorry indeed, but that's life. Remember you get what you pay for, too.

Whatever you decide on, and however much you spend, none of it will be any good without some kind of antenna. Nearly every breaker in the country can argue the relative merits of mobile antennas, but not very many people know everything there is to know about base antennas.

Don't worry. You don't have to. There'll always be a bewildering range of base antennas from different manufacturers, and they'll all make varying claims to varying degrees of splendiferousness. Most of it will, like claims for hi-fi or food mixers, simply be marketing-speak, and can safely be ignored.

The basic antenna requirement is just that; basic.

First need is height. The further up it goes and the less it gets surrounded by your chimney, next-door's chimney or the larch tree at the bottom of the garden, the better. Tall is beautiful. Just beware of local building regulations.

After that it gets more diverse, but it's still not difficult.

Base antennas are referred to in terms of their relationship to the length of the radio wave of the frequency they're running, same as the mobile kind. A quarter-wave is therefore shorter than a half-wave or five-eighths-wave. Easy. Quarter-wave is your basic antenna, and all of them are measured for performance in terms of gain. That is, how much better than a simple quarter-wave they are. Gain is measured in decibels, and a straightforward quarter-wave has a gain of nothing.

Buy an antenna which has a gain of three decibels and it'll be twice as effective as a standard quarter-wave. So whatever you're buying, make sure you check its gain first, since this is the most important thing. As a guide, the very best kinds of antenna are unlikely to provide a

realistic gain of more than 20db.

But, and sorry to confuse you, before you just check out the gain of the nearest set of ears and buy the one with the biggest, you have to consider what you want the antenna for and then choose one of the several types available; the one which suits your need best.

Divided first in half, there are two types of antenna to choose from. Directional or Omnidirectional. The directional antenna will get your signal much further, but only in one direction at a time. This is fine if you regularly work another base station, or if you have most of your contact with a major town or trunk road lying in the line in which you point your antenna. Still fine, perhaps even finer, if you have a rotator fitted to it and can point it in any direction you choose.

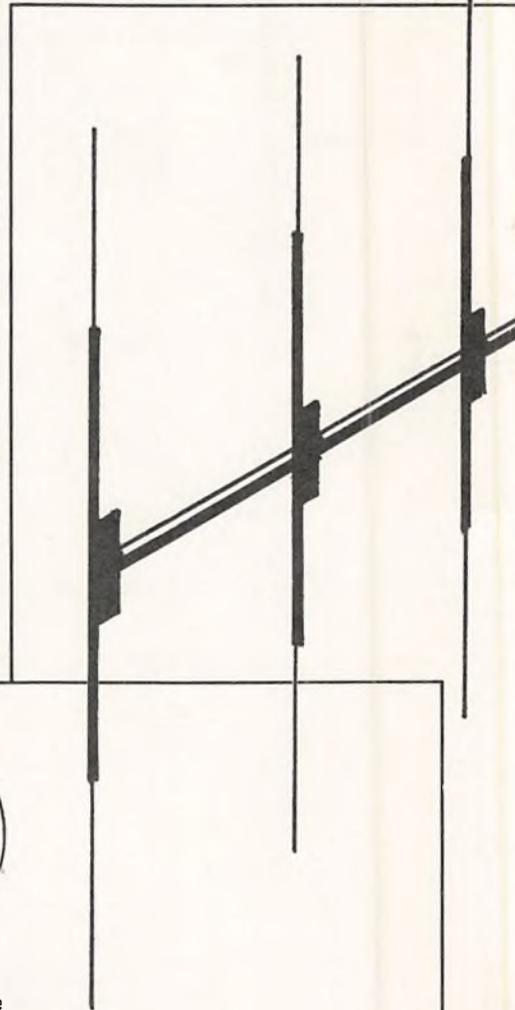
Directional antennas won't operate in one point of the compass to the exclusion of all others, but they are reasonably selective; perhaps they're best suited to serious users.

The omnidirectional is just that; it works equally well for signals at any point of the compass. Obviously it sacrifices range for blanket coverage, but for general use it's probably not a sacrifice you'll be aware of having made.

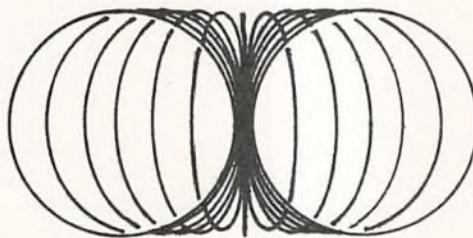
If you choose a quarter-wave vertical antenna you'll be going omnidirectional. A ground-plane antenna is a refinement, but for all practical purposes you won't notice the difference as much as if you went to a five-eighths-wave vertical. This

as elements, and their positioning affects the manner and direction in which your signal travels. As a guide, the more complex a beam is and the more elements it has the better its gain and the better it will reject interference.

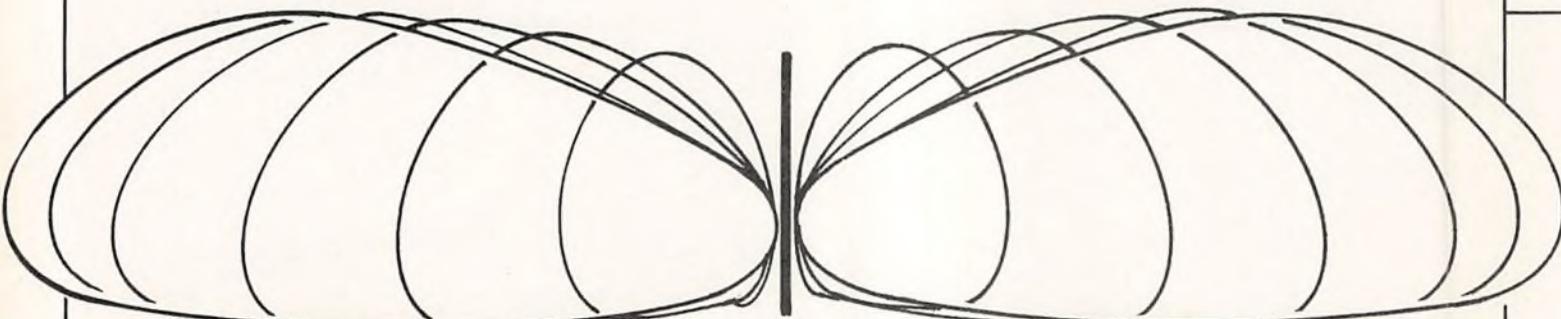
A beam will have at least three elements: a driven element, a reflector and a director. The driven element is the



Home 20



The difference in propagation pattern between the two types of antenna gives a far greater range at ground level: gain.



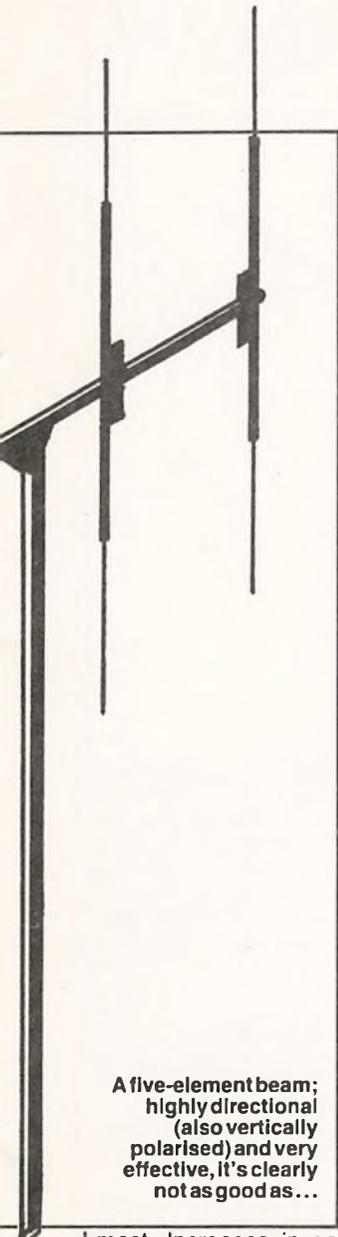
will be bigger than quarter-wave, but will focus the output of your rig closer to the ground. Instead of broadcasting upwards it will broadcast along; you might gain five, maybe ten miles over a quarter-wave.

There are other kinds of omni antennas which all work in much the same way as the simple vertical type. In the long run the best idea is to compare their gain then choose what you want.

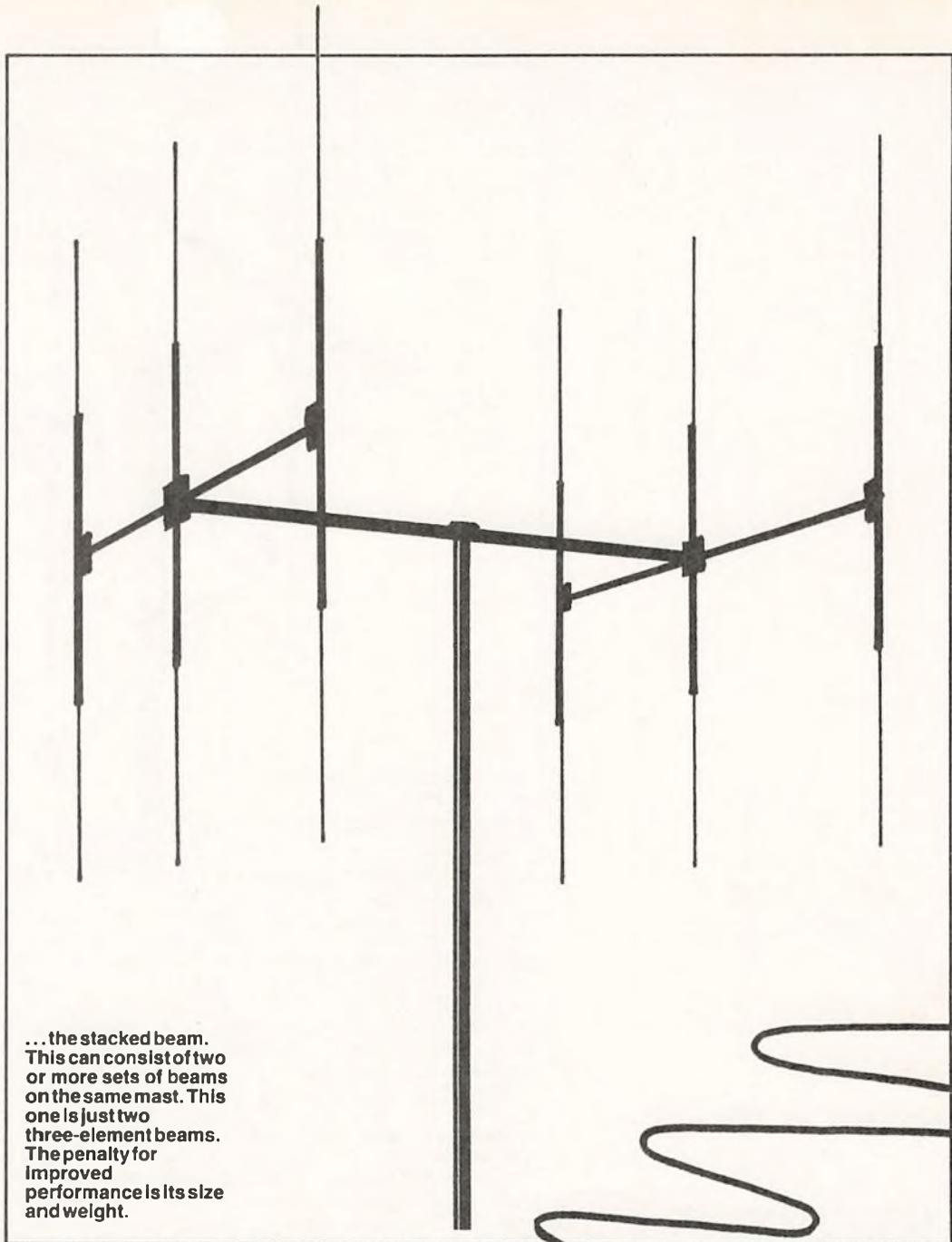
Directional antennas are also called beams; they're the complicated T-shaped jobs with loads of cross-pieces. The cross-pieces are properly referred to

one directly connected to the coax feedline from the rig which actually broadcasts the signal. A reflector is slightly bigger and behind the driven element (remember we're talking about a directional antenna) and reflects the signal in the direction the beam is pointing. A director is smaller than the driven element and positioned ahead of it to concentrate and focus the signal.

After that you can go to four or five element beams, which increases the gain as the number of elements increases, or stacked beams, which just use more than one beam on the same



A five-element beam; highly directional (also vertically polarised) and very effective, it's clearly not as good as...



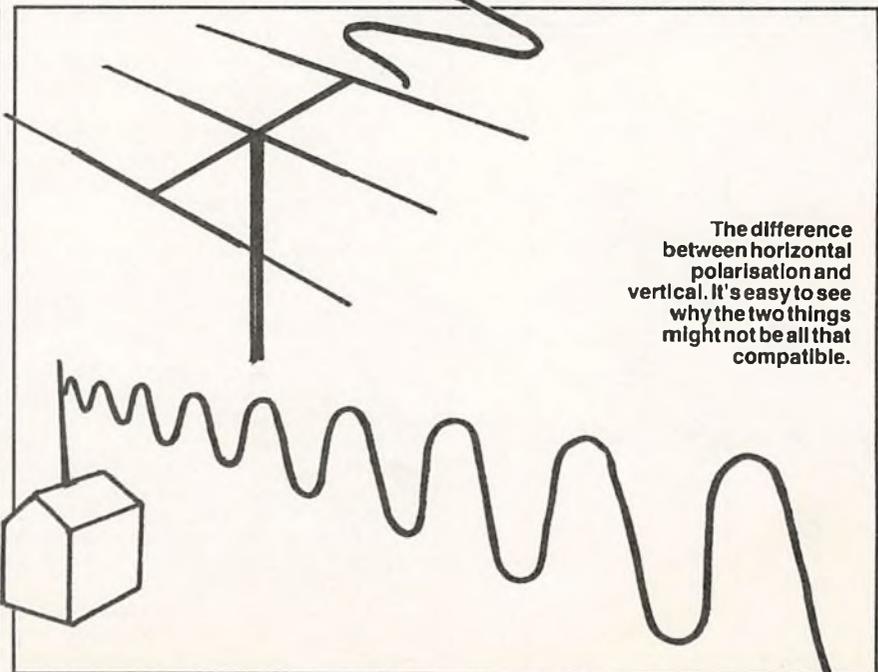
... the stacked beam. This can consist of two or more sets of beams on the same mast. This one is just two three-element beams. The penalty for improved performance is its size and weight.

mast. Increases in gain are offset by increase in weight; a stacked beam will need a stronger mast and a stronger motor to rotate it.

Beam antennas may be either horizontally or vertically polarised. You can tell which is which by looking — vertical elements or horizontal elements? A horizontally polarised beam will send out your signal by lying on its side, so to speak, meaning that instead of being vertical waves they will be flat, like a snake. All mobile CB antennas are vertically polarised, and although using a horizontally polarised beam for your base setup won't mean that you can't go base-mobile, it will limit your range and signal quality. Mostly, horizontal polarised beams are only useful between two similarly equipped base stations, as they can effectively reduce breakthrough and interference from mobiles.

Generally accepted as the most common and practical type of base antenna is the vertical beam, which works well for local and DX communication. They are generally quite small which makes them ideally suited for DIY installation.

A refinement of the beam is the quad



The difference between horizontal polarisation and vertical. It's easy to see why the two things might not be all that compatible.



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antenna. The elements are wire, held in a square around the beam by an X-shaped frame. Although they look like a cruciform antenna with the tips of the elements joined by wire, they're actually held together by a large capture area and thus are at the top end of the performance scale as far as beams are concerned. A typical three-element beam will have a gain of around 8db, but a two-element quad has 9db gain and a three-element about 11db.

When you've chosen your antenna you'll have to mount it. Make sure you make it firm. It's easiest to stick it on the roof or the side of the house. If you choose a tower though, make sure the base is well-cemented in and that you use guy wires to keep it upright. Everybody planning on using a beam antenna will already have decided to ensure the guy wires are mounted in such a way that they don't interfere with the rotation of the beam, so we won't need to mention it.

Metal guy wire will need insulators every five feet for about 25 feet, otherwise they'll start messing up the signal. As also will large metallic objects within that distance.

Running the feedline to the antenna is easy enough. Make sure you use a coax feedline though; bell wire or speaker wire won't do because it's not shielded and will radiate your signal as if it were an antenna, but not a very good one.

Keep the coax as short as possible, because it does absorb power as its length increases. After about 100 feet you could be getting into real problems and it's worth looking for a coax with a large diameter core; although more expensive it will offer less electrical resistance to the output of your rig, so you'll get better results.

So, keep the coax as short as you can, but make sure you lead it down the mast rather than away from it into a bedroom window, as it may interfere with the

antenna. If you need to make any joins in the feedline use connectors and make strong solder joints between them and the wire itself. A faulty join will give you a high SWR. After you've done that, wrap the joint in waterproof electrical tape — moisture will screw up your SWR as well.

If you have to make a joint it could be the opportunity to install an in-line lightning arrestor. Lightning, as we all know, has a habit of striking the tallest object in an area, particularly metal ones, and once it's arrived at your antenna it will waste no time chasing straight up your coax and turning your rig into a box of fried chips. If you happened to be using it at the time it'd turn you into Mr Big Fry at the same time.

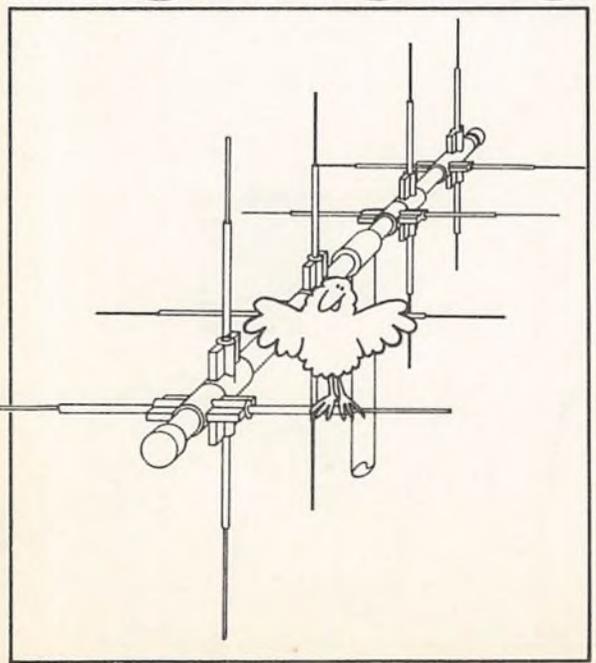
The arrestor will need to be joined to an earth rod by thick copper wire. Alternatively you could connect it to your cold water pipes.

Not much else to do really. Remember to assemble the antenna you eventually choose according to the instructions of course, because it will affect the SWR if parts of it are too long or too short. Don't check the SWR until the antenna is up on its mast

If you're using a beam the rotator you use fits on the mast itself, near the top. The control for this will often be in the shape of or include a compass dial, so you won't have to keep looking out of the window to see which way it's pointing. When you assemble the mast check the rotator and make sure it does. Rotate, that is. Turn it to North and switch it off. Then when you fix the beam to the mast, make sure it's pointing North, and it'll always coincide with what the rotator indicator says. Simple, really, but you'd be surprised . . .

There you are then. Everything you need to know about base antennas. Easy, huh? Next issue relativity, and the following issue will be how to construct a suitcase-sized 1 megaton nuclear bomb. After that it'll be time travel . . .

Home 20



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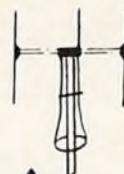
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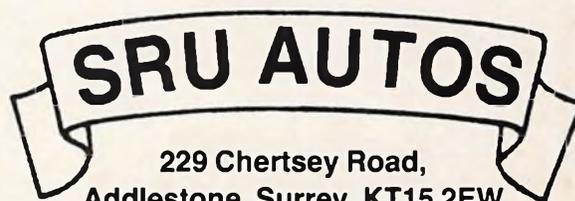
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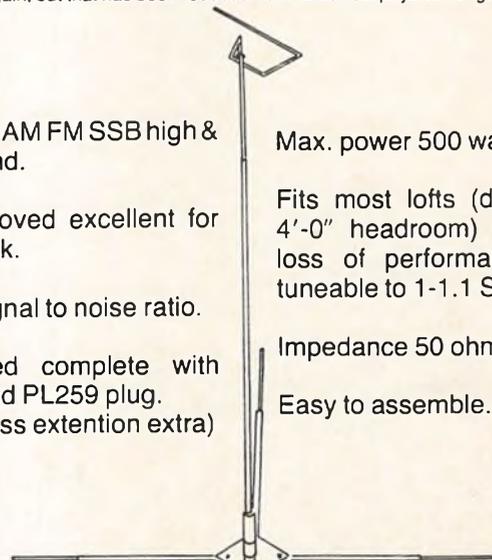
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Easy as QSL

Following our mention of QSL in *Breaker 2* a lot of interest has been aroused in this offshoot CB hobby. Perhaps a little nearer to home, in fact in my own home, a rather disastrous situation has arisen — my offspring have jumped into the QSL scene with both feet, and have now got their own QSL cards.

Andrew, who apart from radiomania is a full time student of television, has used his nickname 'Square Eyes', and Julie who is a little erratic in her behaviour, her family name of 'Peanut Brain'. So here we are three avid 100 per cent QSLers under one roof. Of course this can create problems, especially when the post arrives . . . there's a mad rush to sort out who's got what, and what belongs to whom, a little ritual which can take hours. Our golden rule is, and must be yours if you take up QSLing, that ALL mail must be answered; that's what it's all about after all.

Anyway, down to the nitty gritty. We gave you some openings into getting your QSL cards printed, but once you get them, what then? Well, you can send me one for a start, and you'll get three back, but where do you go from there?

The next step should be to join a QSL club, of which there are hundreds. Most are excellent but there are a few which aren't so good, so, to avoid disappointment accept other QSLers recommendations. As you gradually get deeper into QSLing you will see which clubs are the most popular and make your decisions from there. A good guide is generally your fellow QSLer's unit or membership number: if it's in single digits the club is either new or no good; but if the unit numbers run into thousands, as many do, then it is even bets that this is a worthwhile, well organised club, giving good value for money.

Most clubs require a membership fee in either American dollars or their own currency, which can create a problem. However your bank can advise on this, by either getting dollars for you or raising an International Money Order. If you send actual currency through the post,

register it, or wrap the notes in carbon paper so they don't show up under X-ray, otherwise you might lose it all.

As a newcomer to QSLing you can really do no better than to join the first (and currently only) English QSL club, The English International DX Club. It is run by Lima Charlie 1, alias Lez Carrol, at 225 Arnold Street, Boldon, Tyne and Wear NE35 9BA. For a £5 membership fee and ten of your own QSL cards you will receive a membership certificate, your DX unit number, ten swap QSL cards from other countries, identification card, cloth Union Jack patch, invitations to join other QSL clubs, and most important of all, your very first club rubber stamp. Now you're really going places.

British CB QSL cards are sought after throughout the world, and providing you date and sign each card, you will always get one back. Better still, if you enclose a few more to your fellow QSLer they will pass them on to friends; so you will begin receiving a variety of cards from all over the globe. I've just had one from Indonesia (have they really got CB?).

What really is surprising, apart from the peculiar places you hear from, is the sheer inventiveness and designs of the cards you receive (and if someone in your family collects foreign stamps — guess who is going to be very popular?). Sometimes a fellow QSLer will want to help with other hobbies and again this can be very interesting. Over the past few weeks I've collected coins for Canada, postcards for Alaska, badges for Austria, and now souvenir teaspoons for Australia. You'll certainly never lack friends, which is exactly what QSLing is all about — Worldwide Friendship.

I had a card the other day from a fellow CB'er in Berkshire who had skipped with a friend of mine, Tom Sowden (King Valium) in New York, and he passed my QTH over the air from the Big Apple. Behold, a new British CB contact was made, how about that for QSLing?

Next issue we'll review some of the better QSL clubs, and what you get for your money.

The Medicman

from German SWL +CB Stations

To Radlo Station

Date	MEZ GMT	MHz	RS*

AM FM SSB CW RITY

Remarks

tnx / psr QSL 73
Karen
Kurt

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758 82
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TO RADIO STATION

COSTA RICA

DATE: 16.9.80 TIME: 20-MIN CHANNEL: R S T

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Remarks: PSE 7000 QSL

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Everything seems to be happening so fast that there's little chance of a bi-monthly publication like *Breaker* really keeping pace with developments, but we'll carry on carrying on and just settle for putting you in the picture after the event.

For example, the AGM was held on 10 January of this year. Trouble is we didn't learn about it in time to tell you in the last issue, and this issue won't appear on the streets until after it's all over, but it will have to go to press before it's happened. Net result of all this is that you'll have to wait at least a month before we can fill you in on all the latest.

But that's not all that has happened. REACT have had their own good look at 928MHz and the Open Channel proposals and concluded that 928 is totally unsuitable for their purposes. The primary disqualification is obviously on the grounds of range, or rather the lack of it. Other drawbacks would be the cost of such equipment — several manufacturers have already been quoted as saying that 928 transceivers could, in volume production, cost as little as £400.

The other little snag with 928 is its disturbing tendency to give off non-ionising radiation at levels which could be damaging to human beings. The danger of this, after much investigation, seems to be slight — brain tumours are not a likely side-effect, but eye cataracts are a possibility — but any danger to human life or limb is quite contrary to the whole REACT principle anyway.

On a practical level REACT have concluded that 928 is an almost totally untried frequency and to inflict an expensive and experimental service on the public does not fall within the limits of what most people would regard as a satisfactory personal two-way radio facility.

Meantime much work is being done behind the scenes with regard to the future organisation of REACT teams and the level of cooperation and coordination they will enjoy with emergency services and other organisations who exist to help, St John's Ambulance Brigade, for example.

Sadly the list of area coordinators and the territory they are responsible for has been altered quite substantially since our last issue, so that almost everything on that list is now out of date. Best thing we can do for now is to give you a complete re-run, together with the up-to-date information.

Also lurking on this page somewhere you'll spot a clip-out form. It is, should you have failed to realise, an invitation for you to join REACT UK if you haven't already done so. We could give you a lot of old waffle about helping your neighbour, putting CB to a practical use, all that old stuff, but you probably know it all already. Question is — what are you prepared to do about it? Since its inception in the very early '60s REACT has handled over 60 million emergency calls, 15 million of them from motorists. Exactly how to measure the benefit to the public which that record represents is not a question we can answer, although we wish we could.

One thing though — it took loads and loads of ordinary people to make it work.

REACT

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Ivan Francis
28 The Coots
Stockwood
Bristol
Avon BS14 8LH

AREA 3 — South East

Godfrey Bunce
56 Parsonage Road
Cranleigh
Surrey GU6 7AJ

AREA 4 — Midlands

Paul Thomson
130 Chester Road South
Kidderminster
Worc DY10 1XE

AREA 5 — North & I of Man

Brian D Low
7 Brendjean Road
Morecambe
Lancs LA4 5SE

AREA 6 — Scotland

Ron Warbrick
10 Manse Road
Stonehouse
Lanarkshire ML9 3QP

AREA 7 — Wales

Ray Hughes
10 Hendre Close
Capel Hendre
Ammanford
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AREA 8 — N Ireland

Representation pending

AREA 9 — Greater London Area

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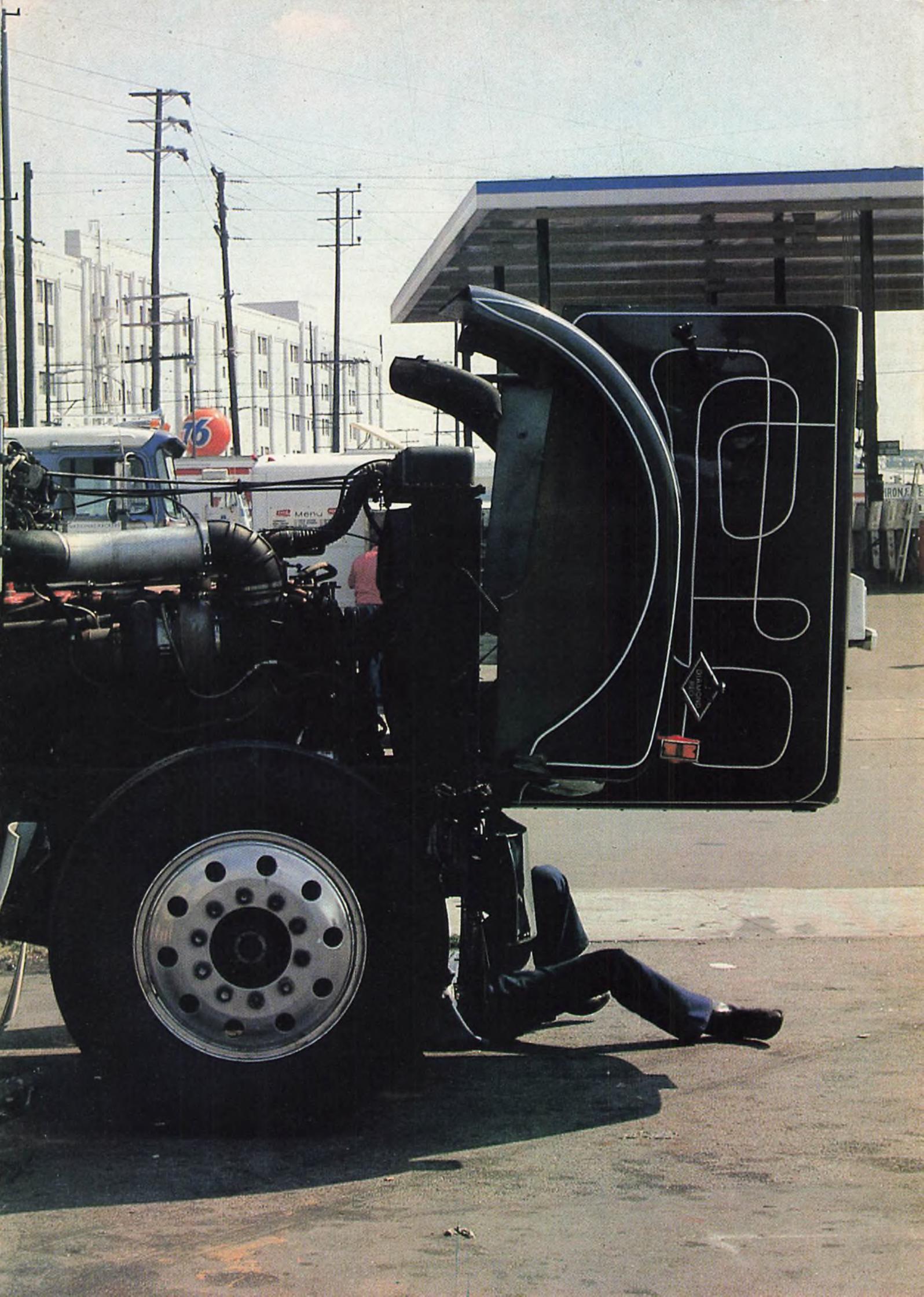
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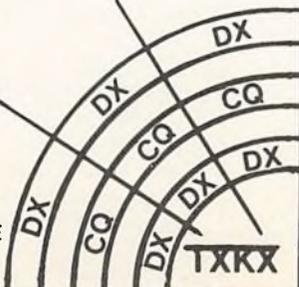
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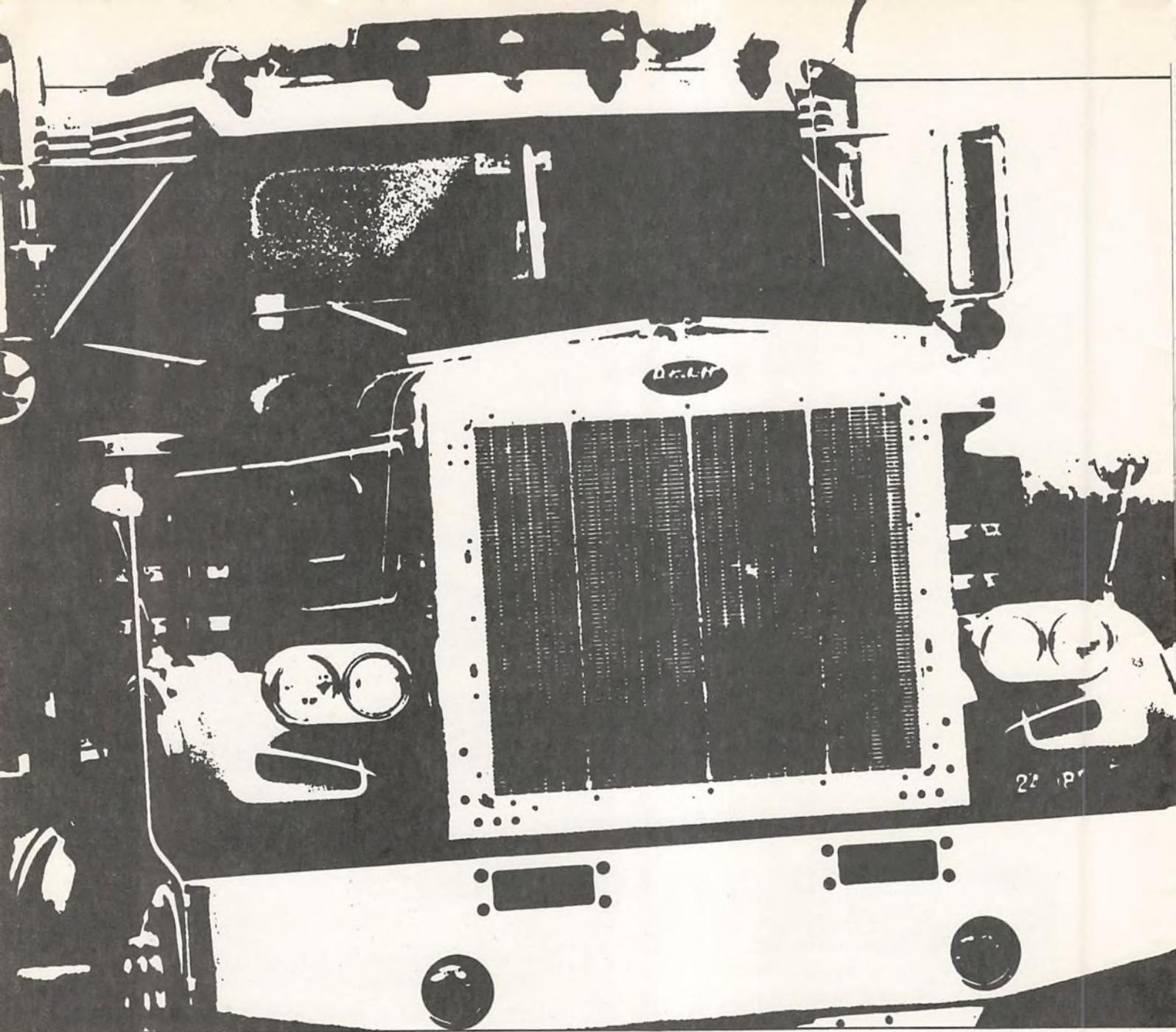
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AIRWAYS

We've had a reasonably strong response from all over the country for the club page, and we're gradually building up quite an impressive list, so we thought this issue we'd present you with a summary of the whole lot as opposed to just giving the new ones a plug.

We know there are others we haven't heard from yet and we realise that the need for, er, privacy might well have caused some of the reticence.

What we'd like to do is at least publish the fact that a club or clubs exist in certain areas, because as you'll see from a couple of letters we've published, there are a number of potential breakers missing out because they can't get in touch.

At least if they know you exist they'll be able to give you a shout or ask around, even if they can't track you down through local accessory shops.

We'd also like to try and get calling channels for AM and Sideband organised by area so that people just passing through will be able to find someone to talk to; in our feeble opinion the tradition of calling channels and so on is unlikely to change whatever frequency is in use, so if you regularly call on 19 on 27 now, you'll probably use 19 on 928 if it ever comes.

So even if you've already written to us with details of your club there's no reason why you shouldn't write again. We'd like to hear from you anyway.

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West Heath Lane
Sevenoaks

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Out of control

a guide to knobs and dials



Brand new shiny rigs. Rooms full of them. Shelves groaning under the weight. Shop windows stacked high with millions of super-powerful rigs. All legal and above board, yours for the asking, to have and to hold for ever and a day etc, until a better one comes on to the market.

Trouble is, which one of the staggering variety on offer are you going to choose? And how will you know if you're getting a deal or just getting ripped off?

To begin with you're going to be a little bit protected, because they will all have to conform to a manufacturing standard, which will include the establishment of minimum performance and quality specification for key components, so they will all have to meet certain basic requirements. Likewise their power and performance will be limited to a maximum figure, so they'll all be pretty much the same in that way.

It's rather a pity that this kind of regulation doesn't affect more types of technical equipment, because it does protect prospective purchasers from the advertiser's and manufacturer's doubletalk with which the average punter is bombarded. You won't have to sort one bunch of

extravagant claims from another, because they'll all be tied to the same specifications. Broadly speaking, that is.

About the only place manufacturers of CB equipment can attract purchasers towards their equipment and away from others is by filling the front of their sets with all kinds of dials, lights and knobs. Sooner or later the same kind of gadget-oriented snobbery which affects hi-fi will invade the CB world, if it hasn't already.

There are any number of refinements which can be added to the ordinary 'cooking' rig; some vital, some useful, some just pleasantries. Sorting out which is what and what is which will be your only real headache.

But before you get to that there are a number of simple questions you'll need to answer for yourself. First off, if you're buying a mobile rig, is to make sure you get the polarity right. Just like an ordinary car radio, these things will fry if they're plugged in back to front. Next — make sure it fits. It's no good buying up a glittering heap of ex-NASA junk from the control desk at Houston if it's too big to go in, under, on or near your dashboard.

If you're buying a base station — just get the voltage right. 12volt DC sets, or 110 AC sets will imitate the action of Guy Fawkes a whole lot more successfully than he managed it himself if you plug them in to 240 volts of AC current.



Hand-helds are easier, because they use batteries and you can't go wrong if you use the right ones and put them in the right way round. All you need to do with a portable is make sure it has as much range and as many channels as you require — this is something you'll have to decide for yourself, depending on your intended use.

There are also rigs available specially made for marine use; mostly that means they're waterproofed, or water-resistant to some degree. It's a big help if you're all at sea . . .

The cost of any of these things is going to be affected by the amount of refinement it boasts. Many functions, like fine tuning or noise suppression, can be built into the internal circuitry of a rig, but it seems that the gadget-conscious society we live in rejects all that; we like to see the gadgets up front where they can be flaunted and twiddled.

Some controls are basic and common to all sets. In a sort of order of precedence, let's check round a few.

On/Off/Volume

Dead basic this; you'll need to use it first, and it's just like the on/off/volume on your car radio/tranny/granny's hearing aid. It adjusts the volume of incoming signals only, and has no effect on the volume or strength of your transmissions.

Channel Select

Does just that. On a 40-channel rig it's numbered 1 to 40. On sets with fewer channels it might be numbered 1-23 or similar. Portable sets with three channels will either be marked 9, 14, 19 or A, B, C. The first speaks for itself, the second will depend entirely on the crystals in the set. These can be altered to suit your needs by a radio engineer.

Some 40-channel rigs have a mechanical channel selector, others use a pressbutton electronic selector with an LCD readout. Very often the electronic selector will have an extra switch or an extra setting marked E9, which will whizz your rig to channel 9 at one press of a button for emergency use.

Squelch

Odd name, squelch, but strangely apt when you get used to it. It's rather like a scratch filter on a hi-fi set, because it filters out background noise to which CB is rather prone. As you turn it you'll find that there's a definite cut-off point at which everything goes quiet. Best setting is fractionally below this point. Turn the squelch down until the noise goes away and then just creep it back a fraction. That way you won't be bothered by background hash (which can be very distracting) but any station which is close enough to give you a readable signal will come in perfectly. If you're working a station which fades out as it draws away you can open the squelch to keep it a while longer.

Noise Limiter/Noise Blanker (ANL/NB)

These cut out static and engine interference and make your listening life a bit easier. They're a refined type of squelch, if you like, and will also cut out weak transmissions.

Delta Tune/Clarifier

Just fine tuning really, which helps you zero in on stations that are slightly off frequency. Not so important on AM sets, but vital for sideband use. They can be incorporated into the internal circuits.

RF Gain

Yet another kind of squelch, specifically to cut down on the RF volume in your receiver amp. Adjust it like you would for squelch to cut down on background and distant stations. You can run with it wide open if you're looking for a break, but turn it down to stop distortion on nearby units — if you were running in convoy, say.

Distant/Local

Another variation of the same sort of thing, but with only two positions instead of being infinitely variable. On 'Local' the attenuator will stop nearby stations from overdriving your receiver. On 'Distant' it will restore your rig to its full sensitivity for normal operating.

Meters

Your rig will probably have one or two of these. The power out will show you the strength of your transmission as it leaves the rig and the signal strength meter (S-meter) will show the strength of incoming signals.

Some rigs have a PA switch which allow you to plug an external speaker into the jack provided and use your rig like a PA. This is exceptionally useful if your SWR is more than about 3:1 or for alerting the driver in front of you to the fact that Charles Darwin was wrong after all and London Zoo is full of mentally sub-normal gorillas who can drive better than that.

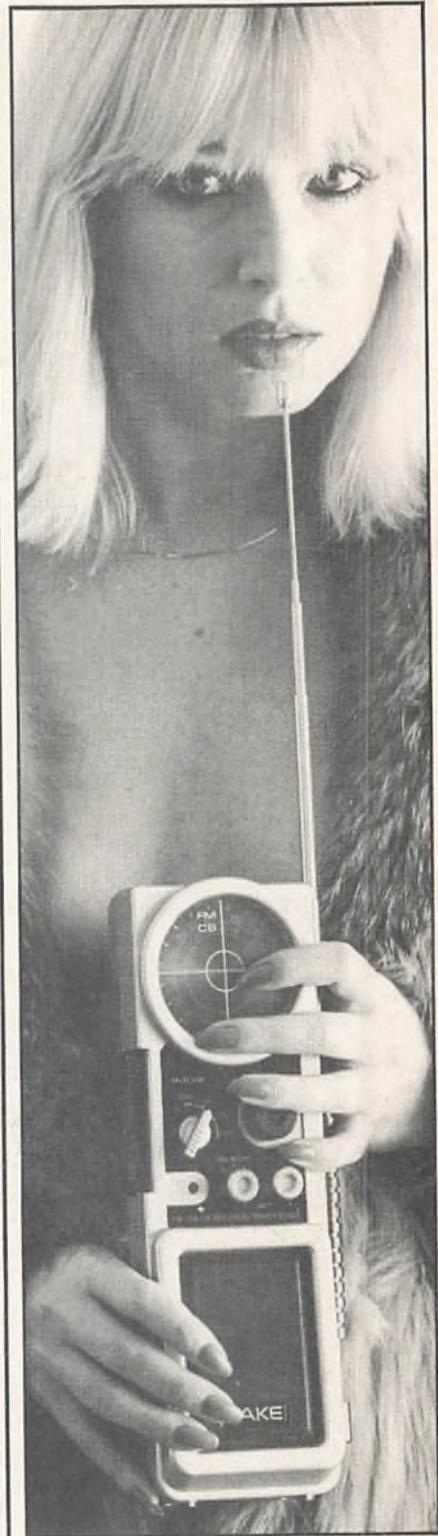
A mike gain control actually affects the way your voice gets out. Get another breaker to check it with you and tell you the setting at which your voice begins to distort. The best setting is just below that point.

All mikes have a push-to-talk bar; depress it when you want to speak and release it if you want to hear anything.

That's the very basic stuff taken care of, and with that lot you'll be able to do all you want. After that the rest of it becomes refinement, things like tone squelch (a sort of selective call system); frequency counters (just that — visual readout of your Tx frequency to three decimal places) and VFO (Delta Tune, really, and only slightly useful most of the time).

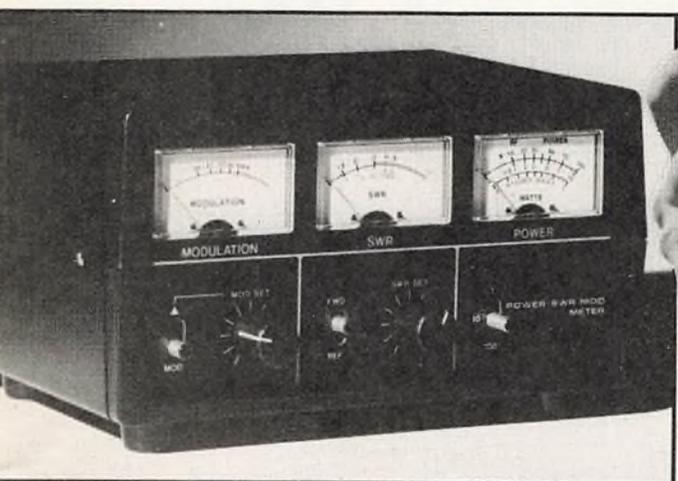
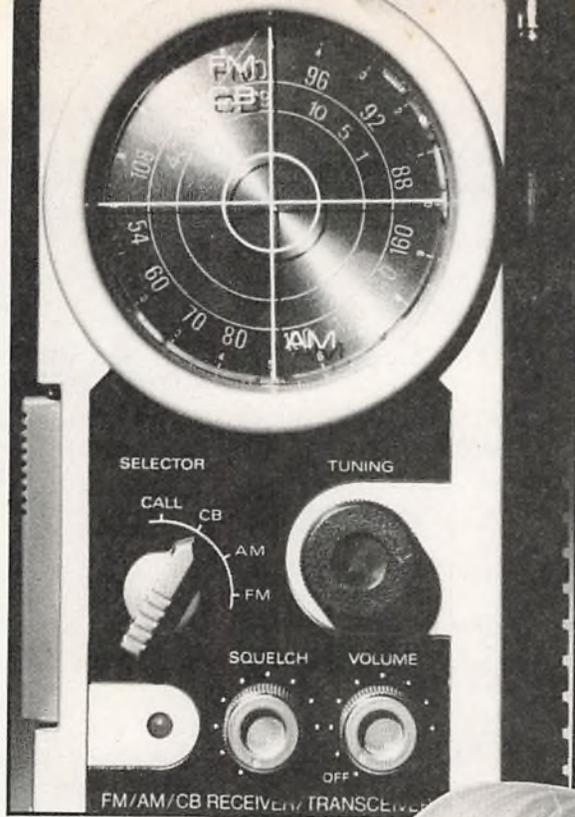
Of course as the microchip comes more and more to the forefront of our lives it affects the CB rig as much as anything else. Third-generation sets presently appearing on the market incorporate many of the same features as car stereo gear, and then some. Perhaps the most useful effect the chip has had so far is the cordless CB mike — a small radio transmitter in its own right, with a range of up to 100 yards. Many chip-less rigs have their basic controls — on/off/volume, squelch and channel select — built into the mike, and the newer ones now have that benefit also, but without the curly bit of wire attaching the mike (and its operator) to the vehicle. Rather like a cordless phone, in fact, and very nice too.

Newer rigs have selective call based on a five-digit number, which means your rig, should you so desire, can only be activated by similarly equipped breakers who know your private code. Some will monitor their own SWR, display it if you ask and switch off if they think it's too high. Others scan for busy channels, vacant channels or both, some will automatically go to channel 9 if it gets any traffic, others will go to any pre-determined channel at a selected time, like an alarm clock.



Someone, somewhere is almost certainly working on one which takes your temperature, speaks your weight and grabs you by the nuts every time you cough. No-one has yet perfected one which can make tea or mix really good whisky sours, but there's still time.

Just how much gadgetry you want depends on your taste and of course your pocket. But if you do go out and buy one that has everything, plus both sidebands, bear in mind that it'll be out of date before you've paid off the credit card company. Enthusiasts like to look on it as progress, manufacturers like to call it that, but know it's planned obsolescence really. Bank managers call it profit or loss, depending on whether you're buying or selling.



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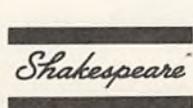
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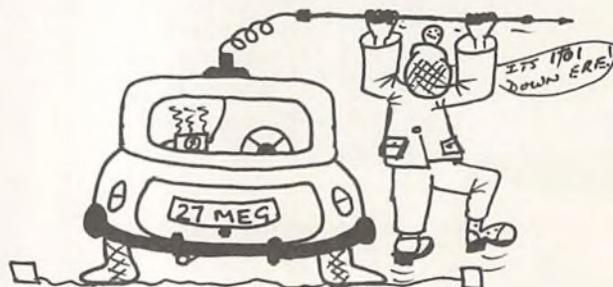
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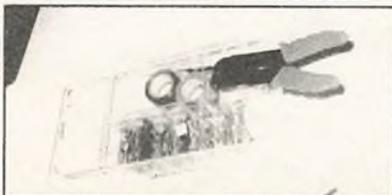
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The big wet one

Exciting old life we lead on *Breaker*, what? Last issue we were swanning about Norfolk with the AA, proving that two-way radio really is useful, even in an urban environment. This month we're staying at home by the fire and we're going to try to prove the same thing without leaving our chair. To do it we're going to examine the potential life-saving qualities of CB within the occurrence of a major disaster. Mostly theory, we'll admit, but the possibility for such a disaster as we're about to describe is marked; a very real threat exists, as most Londoners are aware. In fact our capital city is a danger area for its inhabitants, who stand a greater risk of drowning than having a jumbo fall on them out of the sky, despite the fact that Heathrow is the busiest international airport in the world.

It's perhaps not all that widely known, but London sinks a bit every year. Compounding this, the Thames rises. The new London Bridge, next to the site of the old one which was sold to America, is also scant yards from the site of the original bridge the Romans built nearly 2000 years ago. Laterally, that is. Vertically it is a long way from it, as the Roman bridge (or its site, anyway) is now permanently submerged, even at low water.

In 1236, during a storm of exceptional ferocity, the Thames burst its banks in the City. The Great Hall at Westminster was so full of water that people were rowing in it. Hundreds perished.

Everybody knows that compulsive diarist Samuel Pepys recorded both the Great Fire and the Great Plague, although not necessarily in that order. What is not so widely acknowledged is the fact that London suffered a third major disaster in 1663, when the Thames burst its banks again, during the course of a fierce storm. Once again the death toll was vast.

Many are aware of, and may even remember, the great floods of 1953; the Thames didn't actually get into the City, but the fierce storm, arriving with a high tide, overtopped sea defences all along the East Coast and part of the way up the estuary; again hundreds died.

The mechanics of the operation are simple enough. High tides are the result of the pull of the moon's gravity, and follow it along the circular surface of the earth. High tide in John O'Groats is half a day earlier than high tide at Southend. In effect there's a surge of water moving down the east coast of Britain at some

All this is normal and doesn't matter; it funnels down the North Sea and exits into the Channel quite happily.

The second factor which affects London is obviously the weather, which as all weather fans will know, is worse when barometric pressure is low. An area of low pressure at sea will cause a 'hump'—a slight, but measurable rise in sea level in the area of the low. If such a low pressure area was to move along the coast of Britain (which it does not infrequently) then sea level in the North Sea would be higher than usual.

If the low was being moved down the North Sea by a storm, then the piling up effect of wind on the hump would multiply its effect. Should it coincide with a high tide movement then we have trouble. Piled up against the coast, all this water rushes up the Thames Estuary under pressure, and high tide at London Bridge (the heart of the capital) is abnormally high.

The extent of the abnormality depends on the lowness of the low pressure at sea and the ferocity of the storm. Such a combination of factors, especially during a Spring Tide (which is higher than usual anyway) could have a disastrous effect on the City of London, as the Embankment overtopped and the London Basin, in which London is not unnaturally situated, filled up with water. Normal drainage would be unable to cope with this extra water, and if, as seems likely

during a storm, local rainfall had been heavy, then all the drains would be trying to pump water into the Thames in any case. London would fill up with water and become a lake. Unlike Venetians, Londoners are neither accustomed to having large quantities of water occupying their major thoroughfares, nor are they prepared for it.

Although the danger period for such a chain of events is obviously only during the bad weather of winter, the GLC are so concerned that they are spending millions of pounds on building a barrier across the Thames to prevent it happening. They're spending nearly as much money warning Londoners of the possibility and the correct course of action to take in case it happens before the barrier is complete.

In the way of all major building projects the barrier is of course behind schedule, and Londoners have to face at least one more winter without it. And with every winter that passes without a flood (it's been nearly 30 years, although there have been a couple of nasty moments recently) the danger becomes greater, the possibility comes closer.

If a flood struck now disaster would not be the word.

At least 50 square miles of Central London would be under water. That area would include Westminster and County Hall, robbing both London and the country at large of a central government.



250 000 homes would be flooded, making a million people at least homeless.

All public utilities — electricity, gas, telephone — would be disrupted.

Also, 35 hospitals, including Barts and St Thomas's, would be unusable, along with 15 power stations, 56 telephone exchanges, four major sewage works and 50 Underground stations contained in 46 miles of tube tunnel.

West of London itself, low-lying areas around Kingston would be prone to flooding also. Since most of the reservoirs which supply the millions of gallons of fresh water used in the Capital every day are in that part of the world the authorities could not guarantee the integrity of the water supply. Disease would be a short step away.

London still uses a gravity-fed sewage system — the point of entry is higher than the point of expulsion. Under several feet of water this would no longer be true, and apart from spreading sewage around the lake in which the City lay, the flood would force raw, untreated effluent out of baths, kitchen sinks and street drains all over London, even in areas not directly affected by the flood.

Depending on the severity of the overtopping, the drainage system might be unable to cope before the next high tide. Then, depending on the extent of the damage and whether or not the storm still survived in the North Sea, the City would be lying in the centre of a vast, storm-tossed lake, awaiting the onslaught of a fresh high tide every 12 hours.

In one 12-hour period the death and destruction would be worse than that caused through the whole duration of the Blitz. Emergency services would cease to exist, hospitals would be in the same state as everybody else and there would be no means of bringing aid to those trapped in the heart of the disaster area.

Indeed it is difficult to see how all the helicopters in the country could successfully rescue or keep supplied the inhabitants of the most crowded city in the country. The nighttime population of London — residents and shiftworkers — totals more than two million. During working hours there may be as many as 12 million, although not all will be in danger areas.

It is because there is no means of coping with a disaster of such magnitude that no plans exist. In all their warnings to the populace the GLC have never once made mention of assembly points for rescue, community centres for the distribution of food and essential supplies or given any indication of how military or other teams might be deployed to bring relief to afflicted areas.

The situation would be worse than the harrowing scenes we have recently witnessed in the earthquake-torn areas of Italy, principally because there would be no access for rescue teams until the flood subsided, and that could be 14 days or longer.

Stricken by disease, with no pure water and no means of getting any, Londoners will be left to a grisly fate.

Their only means of communication with the outside world will be via however many battery operated portable radios survive the deluge and then only for as long as the batteries will last; the advice to citizens under nuclear attack — 'keep your radio on at all times' — assumes that

power supplies will be maintained. With sufficient advance warning of a flood power will be deliberately switched off.

Even assuming fully charged batteries at the start of the fun, Londoners will still be able to receive information only — there will be no opportunity for dialogue with rescuers or distant Authority.

Because Authority will be distant, it has already made its own plans for rapid evacuation to a safe place, but the average Londoner will be largely left to his or her own devices.

CB radio is hardly likely to be the saviour of the masses in a disaster of this magnitude. Apart from anything else, its use will be restricted to the percentage of those who have it and who have the forethought and the opportunity to rescue their rig and battery from their car or who happen to have battery-powered portables in the house. Even then it will be restricted to the same limitations with regard to battery duration as any normal transistor radio — more so if it's used for transmitting as well as monitoring.

But what little experience of disaster we possess does give us reasonable grounds to believe that the existence of such a facility will make a major contribution to the preservation of life in such circumstances.

To begin with such rescue operations as are mounted will be greatly facilitated if those doing the rescuing have advance knowledge of the location of those wishing to be rescued; much time will be saved, and this cannot help but increase the number of eventual survivors.

Likewise, rescue parties will be able to assess the need of those requiring assistance and will be able to provide it in a much more sensible rotation based on requirement rather than system. The need for systematic search will still exist, of course, but immediate aid would be available to those who required it and were able to say so, rather than others who are nearer the search pattern but in good shape getting rapid help when they could perhaps have survived for days or weeks. Especially if they knew that help was available.

Apart from the obvious fact that the certain knowledge of eventual assistance would prevent people in a safe position abandoning it because they were unsure of whether or when help would be likely to manifest itself, there is the question of morale.

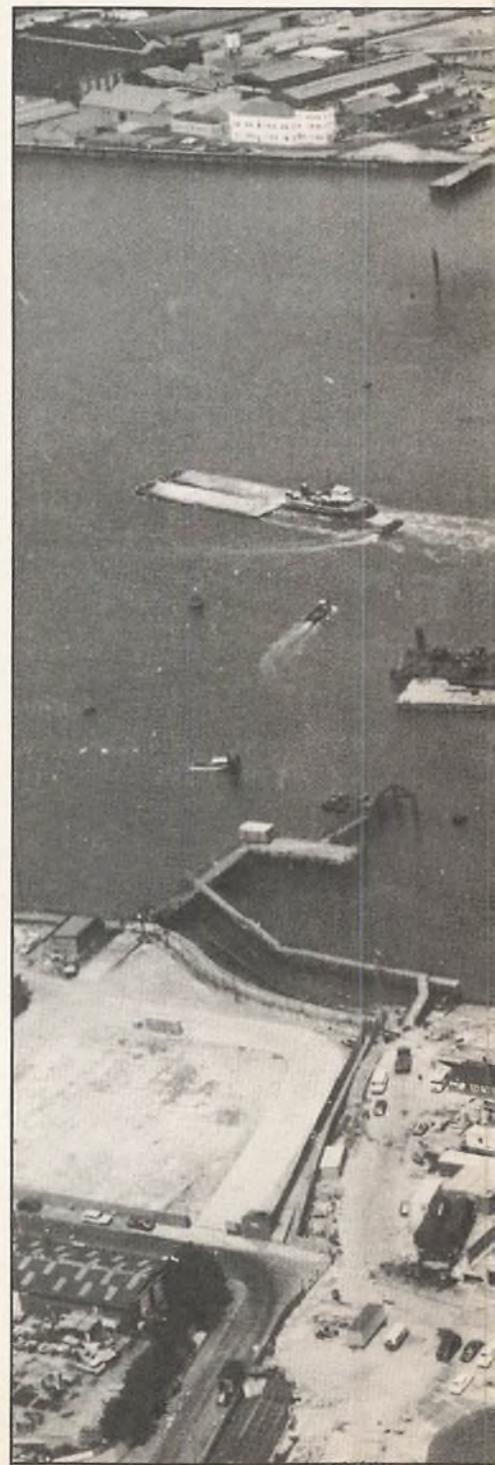
Human beings can survive in the most terrible circumstances as long as they have the will to live. The number of needless deaths could be dramatically lowered if isolated groups or individuals were kept buoyant by the knowledge that they would be rescued; without it many, particularly the old or infirm, might be tempted to lie down and die. The psychological benefits likely to accrue simply from the basic contact with another human are immeasurable and should not be ignored.

In all cases of major disaster the first people to arrive are usually medical teams. Their work is hampered always. First by their numbers — sufficient during the normal run of coughs and colds, but painfully inadequate at times like this — and secondly by the terrain: they do not always have access to the injured, and many die not because their injuries are especially serious, but because what

little medical aid there is cannot get through to them in time.

If trained medical personnel were able to communicate, on a two-way basis, with the injured or those in attendance (who, let's face it, are unlikely to be trained doctors) they could instruct the untutored in the basic necessities without the time-consuming need to search and find; the survival rate among the injured would increase dramatically. At the same time the medical teams would be able, from precise knowledge of case-history and location furnished by radio, to decide a priority for rescue. The saving, in human terms, would be enormous.

The benefits go on and on. You can all doubtless think of at least a million of your own. So no doubt, can the GLC, which is probably why their own discussion document of citizens' band radio was



published before the Green Paper.

It would perhaps be immoral of us to suggest that the GLC regard the provision of such an aid to lifesaving, in an area at least as potentially disaster-prone as any Californian conurbation perched on the San Andreas Fault, at no cost to themselves *and* with no effort on their part as being a boon.

It would perhaps be immoral of us to suggest that in view of the clear absence of any concerted plan for the relief of a flood-stricken London the evacuee GLC would regard CB radio as a veritable Godsend.

It would perhaps be inappropriate to remind you that should a full-scale nuclear war develop between West and East (in which eventuality the Pentagon believe that CB would play a major part in holding the surviving areas of the USA together) the government of this country

do not have a well-developed plan to evacuate citizens to the safety of the rural areas. Far from it. *The government* will be in the rural areas, and it doesn't want them crowded with yobs. In fact, it is widely believed that the government have a well-developed plan to *prevent* you from taking to the hills, which includes blocking major trunk roads and so on.

In fact, in the event of a major flood or nuclear war (which ever comes first), HMG would probably prefer you dead to injured and in need of assistance. Assistance which probably couldn't be provided anyway.

Grim picture, huh? But at least you can see that CB could help others to help you when you needed it most, or even help you to help yourself as well as those around you. Helping each other. That's what it's all about.

The big wet one





The CB show gets on the road

The message to the authorities is loud and clear in this demonstration on one of the cars in the demonstration.

... emphasised that the demonstration was in no way to incite people to use illegally, neither to use their illegal use. ... said he was determined to see the turn-out for the organised first of its kind in the country. The organisers of the Cornwall Road Club, who drives thousands a year, said he

had used CB for 13 months and he regarded it as an important part of his vehicle's equipment. He used it to learn about road hazards, or to warn other drivers, or to give other information about lodgings and many friends. Placards included "CB is here to stay" and "perhaps even more topically, "CB is expensive. Up to £70 for the radio and £400 for the fine". Other banners included "Give Buzby a holiday: Give us a break", "CB radio channel is the art of conversation" and "CB saves lives and fuel". "CB news from Rank-Toshiba to Rank at Redruth: Give the work in the evening many of the drivers met at a barn dance at Gwennap Pit Hauliers.

● Mrs. Susan James, who handed out leaflets during Saturday's protest on wheels.



the rescue



in hospital after a crash on her motorbike early today.

Miss Wendy Freeman received a broken wrist and head injuries when her Honda 70cc motor-cycle was in collision with a stationary Austin Maxi on the A119 Cirencester-Stroud road.

● A Willshire fire brigade was called out when weedkiller containing paraquat spilled on to the A4 road at Cornsham yesterday.

Several gallons of gramoxone, an agricultural chemical, leaked from its container on a farm tractor equipped with a spray attachment. Firemen used bags of earth to soak up the chemical.

reader BOB MORTON "If the driver hadn't got out quick, he would have been fried." Firemen from Stratton got the blaze under control in ten minutes but the Ford Escort was gutted. ● A Cirencester girl is

wavelengths



...: Fined

with the established amateur radio ham. The difference, as explained by Mr James Bryant, President of the Citizens' Band Association, is that anyone can use it.

"To become a licensed radio amateur can take anything from one to four years of study. A CB-er buys a ready-made box and uses it."

Many of the CB-ers put down the awkwardness of the Home Office to the establishment attitude of civil servants, who don't like any loosening-up of rules or a deregulation, even if they are widely ignored and encourage contempt for the law.

SPARKS FLY OVER CB RADIO

Government plan will mean £400 sets, say makers

By JOHN WARREN

CAMPAIGNERS for Citizens' Band radio were dejected last night over Government plans to provide a new "Open Channel" for their use.

This is because they are being allocated a way-narrow radio frequency of 928 mHz with a limited range. It needs sets costing around £400 each—four times as much as the present illegal CB radio sets from the U.S. and Japan.

Manufacturers who were preparing to gear up for a new British market say they are not interested in the Home Office plan as it stands.

WHITE DRAGON TUNES INTO THE WRONG WAVELENGTH

TWO Citizens' Band radio fans with the codenames "Hell's Chembel" and "White Dragon" have been given a new code sign — "Close Down."

Their radios were shunted out by magistrate Mrs Vera Secker at Breatford, West London, yesterday, as she said: "It might be fun but it is against the law."

But the Japanese could make a killing. Japan is considering moving the frequency of its CB radio to around 900 mHz which is suitable for their conditions.

Under the Government plan published in a Green Paper yesterday, the maximum range of the "Open Channel" on 928 mHz would be 10 miles in open country, but less than two miles in towns. This compares with 50 miles in the U.S., using 27 mHz.

The lower the frequency, the longer the range. Critics claim there are medical risks in using UHF transceivers.

Nuisance

But the Home Office says that a lower frequency would cause more nuisance.



TIMOTHY RAISON Under press

CB radio waves may bug

TV

Union plan to save 70 Rank jobs

by DAVID HUMPHREYS

THE major trades unions at the Rank-Toshiba Ltd. factories at Redruth and Plymouth is to try and persuade the giant Toshiba Corporation to consider making other products instead of television sets at the threatened companies.

"The company in Japan makes all sorts of products and we hope to persuade them to manufacture some of these in the West Country. Redruth would be ideal for something in the new microchip business, and this is one of the things we will suggest to them," said Mr. Roy Sanderson from the Sanderson headquarters in London yesterday.

He said the union, and the others involved at the factories, were keeping a very low profile as they knew on protocol. "We don't want to do anything that might offend

them. After all, Toshiba is such a rich company that they could up stakes in the West Country and go anywhere in the world if they were upset," he explained. The president of Toshiba, Mr. Shirochi Saba, and chairman, Mr. Kazuo Iwata, are in Britain this week, and Mr. Sanderson hopes to be able to meet them.

However, the meeting might be difficult, as the visit by the two Japanese was arranged some time ago, and was in connection with the company's plans to be

France decides to make CB radio legal

From Our Own Correspondent Paris, May 20 The French Government is to legislate Citizen Band radio, need month, and is drawing up the necessary regulations. Equipment must use 20 channels on 2 mHz with two-watt power is to be allowed.

This time, dent in the broadcasting monopoly has been allowed because of a big number of CB sets in use in recent months. The legislation is a compromise between the Government idea of all CB users to operate on a common 400 mHz channel, and the operators' demand for the powerful four-watt transmitters.

listed on the London Stock Exchange, and not with the Rank-Toshiba crisis. Although the decision to dissolve the Rank-Toshiba Ltd. partnership was a joint one, the Japanese company has an option to buy out Rank's share within 60 days. If they decline, the company will be offered for general sale.

"We are in a position to buy out the company on, although if a company of our size of Toshiba does not want to buy out Rank-Toshiba, we will support it if they do so."

He said that the Corporation in Japan had already cabled and pledged his union support if they do so. The other two unions at the factories, ASTMS and APECS, Mr. John Westlake, Rank-Toshiba Ltd. public relations officer, confirmed that the work was still going on as normal.

He pointed out that although the company had been hit by foreign competition which had caused it to stop making music sales drive in Europe for not materialised, the home market of colour television sets was quite buoyant.

"We now have more than 11 per cent of the home colour television market. The two partners decided to dissolve their partnership because it was not viable under the form it was set up in."

In the past, the Home Office has expressed worries about supervision of such a system and has claimed that

The spread of CB, prior to our airwaves are already overcrowded. But a Home Office review party has now accepted that there is frequency space available and that most administrative difficulties could be overcome.

The new system, which could go under the name General Radio, is most unlikely to use the 27 Mhz hertz frequency which at present is used illegally by thousands of CB enthusiasts in Britain.

Leading CB pressure groups say that the Home Office is likely to authorise transmission on 200 to 300 MHz UHF.

WHAT THE PAPERS SAY

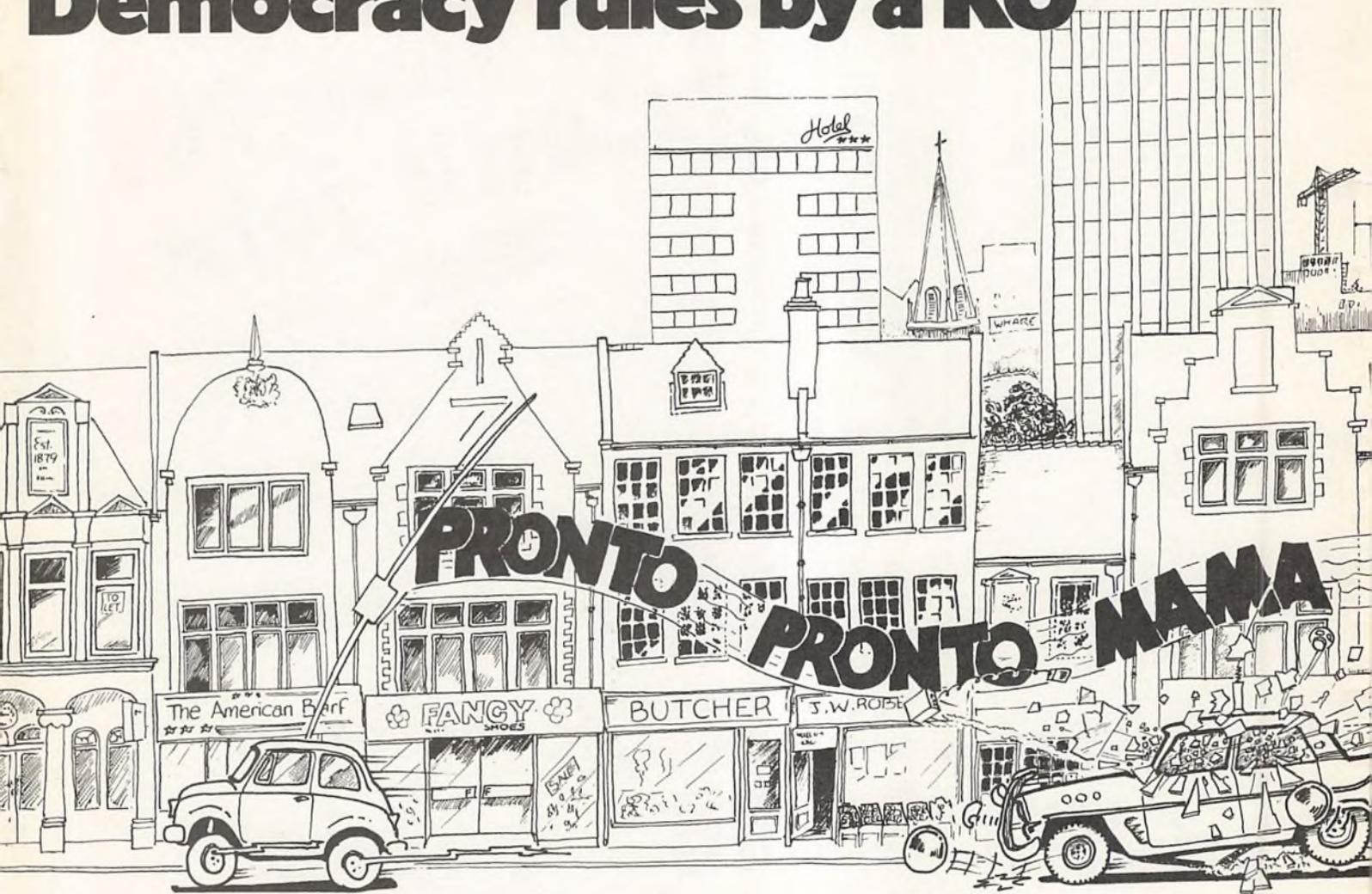
Dearer

And they will have to fork out for their equipment. Although

... by Mr Patrick Wall (C. Hallenprentice), has argued that the additional cost of administering and supervising the system could be Turn to back page, col. 2

Banding together

Democracy rules by a KO



During the long months of campaigning for CB we, in company with many others, have followed a simple enough path. It begins with the introduction of the Class D Citizens' Band in the US and follows the growth and success of their experience, watching admiringly from afar as CB spread its wings, crossed America and travelled indiscriminately, arriving everywhere except here.

On the way, of course, this electronic marvel saved money, tempers and lives almost indiscriminately. Possibly as wonderful a discovery as penicillin, CB is definitely Good News.

In pointing all this out we also established that the FCC actively encourage and promote the use of CB both at home and on the road. The American legislature, by implication, is far-sighted, wise and deeply interested in the well-being of the American populace.

At the same time we railed against the British government past and present, ridiculing them for their blindness or worse, vilifying them for withholding such an obvious boon. Illegal the CB users in this country might have been, but they were pirates in a cause they believed just; misunderstood and maligned. In fact they were champions of the common good, whose beliefs would eventually be

seen to be well-founded and sensible.

Better still, they were champions of democracy in the face of stubborn obstinacy on the part of Authority. An Authority which, it seemed to the pirates, had a misplaced faith in their own ability to know that what the people want is not always good for them and certainly not always what they eventually get.

It is a popular and emotional point of view. To what extent it is actually justified remains to be seen. We have pointed enthusiastically to Australia, and more recently France, as examples of the popular will at work, and implied that this was the true face of democracy; also that its workings would soon be evident in the UK, as the weight of public opinion, expressed largely through the growing use of illicit 27MHz transmitters, rapidly expanded.

Nearly all of the reasoning behind this case rests on the golden example of the USA. As usual, several years ahead of us, their well established CB facility represents utopia to British CB pirates. Arguments from the CBA and other campaigning bodies, along the lines that 27MHz, while it may be a splendid dream, is likely to be one which will not survive fulfilment, have been ignored. Many people went to great lengths to

explain that the 27MHz frequency is already 20 years old, obsolete, already close to useless and that it cannot fulfil the demands which will be made on it in the near future. Also, that a VHF service using FM would be far better-suited to our needs.

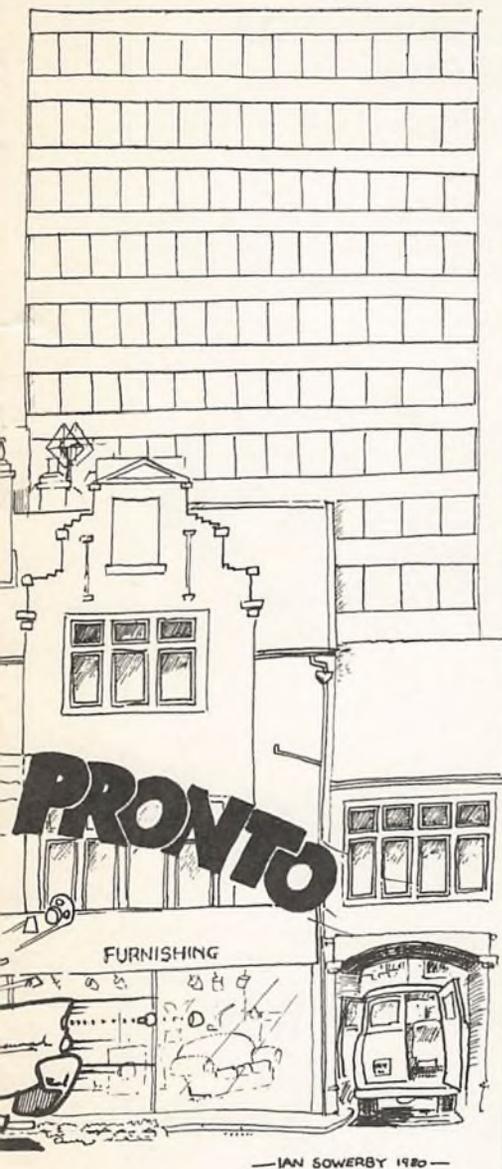
As we've said all this was largely ignored — by Authority as well as by the pirates. Authority must take responsibility for ignoring such good advice, since by standing for election it has volunteered to do so. Therefore it is Authority we must blame for the current mess on 27MHz and for the fact that we will shortly be saddled with it for ever.

The pirates are the ones who pushed for exactly this to happen, and the pirates are the ones who are greeting the situation with undisguised pleasure. At last they have got what they want, and Britain is like the rest of the world. We have realised in our little island, another fragment of the American dream.

But what if the dream were a nightmare? What if the idyll turned out to be a disaster? And what if the ideals became little more than the hysterical ranting of false logic.

Dramatic stuff, eh? But just try this for size.

Although the CB boom in the States



50, 100, 150 or even 200watt linear amp is a relatively straightforward piece of electronic hardware, which means it's cheap to buy or easy for the average handyman to cobble up with a soldering iron.

And the rewards in terms of increased range amply repay the financial or physical outlay involved. Not all that many years ago there was an Italian person swanning round London running a 350watt mobile rig which he regularly used to speak with his family in Rome, and had considerable success. It didn't quite set fire to other mobiles within a 20-mile radius, but the effect was dramatic. He paid a penalty for all this of course, because in order to get all this power out he was driving around with a 15 foot pole about two inches thick screwed to the boot of his car. Halfway up was an oil-filled loading coil about the size of a gallon oil can. Advertising is one word for it

Oh yes, DX has its attractions alright. But that's not the only problem affecting 27MHz CB which has been imported into this country along with the rest of the cult.

Right from the start of the 27MHz service the band was plagued with the American version of CB pirates — the Outbanders. This energetic and enterprising little group started off by twiddling crystals in a mild sort of way, and ended up with a secondary CB service which didn't actually conform to the rules. Channel 1 is 26.965MHz and Channel 40 is 27.405. Between 26.5 and Channel 1 and Channel 40 and 28MHz there sprang up a select network. Mostly the lower outband was used by the AM pirates and the higher by SSB fans. To begin with it was little more than a private club, rather like the Lima Echo or Charlie Bravo networks which began the CB boom over here in the late '60s.

The Outbanders stuck rigidly to their own code of conduct, even publishing a set of rules and policing themselves. They probably had a smart time for a while, talking to people they knew and having the pick of some very choice DX work. Almost in the same way as the early pirates over here, in fact. And just like the early days of 27MHz in Britain, Outbanders in the States managed to obtain their equipment through a complex variety of underground sources, more or less on a commercial basis.

But when the CB boom really took off with the 1973 fuel crisis the situation got crazy. The select, well-behaved few became a multitude very rapidly, and there may now be as many as four million Outbanders slipping in between the regular CB frequencies. By adjusting a legal VFO (Variable Frequency Oscillator — which converts from pushbutton one-stop channel tuning to infinitely variable sliding scale tuning — hence 'sliders') from receive only to a dual Tx/Rx capability, Outbanders can tune in anywhere and screw up everyone else.

This illegal activity is naturally frowned on by the FCC, and they pursue offenders vigorously, seizing equipment and administering stiff financial penalties which can, if necessary, be backed up with 12 months in the slammer. Sound familiar? It gets even closer to home.

Outbanders point out that there are now so many of them that it is beyond the government's capability to effectively shut them down. They go on to say that it

would require only a minor change in FCC rules to make them legal and that then everything would be alright.

Outbanders generally feel that they are a misjudged section of the community which is merely trying to establish its right to a particular bit of airspace. They blame the FCC for the whole problem, claiming that if a better CB facility with more channels had been created when the need arose, instead of waiting until there were thousands of people trying to cram in on the mere 40 available to them, the situation would never have got the way it is. They further cite the FCC as being irresponsible and inefficient in policing the 40 channels which do exist, claiming that little or no action was taken to clear bucket-mouth offenders off the regular frequencies.

Outbanders have long campaigned for a change in the rules which would let them operate legally, and they frequently petition Authority in all its various forms to this effect; so far there have been no results. In response to this 'stonewall' attitude, the Outbanders are quick to point out that America is recognised as a democracy and its people deserve their democratic rights to get what they want. They say they'll get it anyway and that it's futile to try and prevent them. They often cite Prohibition as an example of this.

It's all a bit like an action replay, really.

The strange thing is that most of the voices in favour of CB in this country, even those which loudly and enthusiastically endorse our own 27MHz pirates and their efforts to force the democratic process into top gear, seem to regard the Outbanders with some disfavour; an attitude which is ambivalent, to say the very least. In truth the beliefs and actions of the Outbanders are very close to the British pirates, and although their goals are different the means they employ are almost identical, even down to the justification they both give for their actions.

There is little doubt in our minds that similar Outband activity will be active in the UK within hours of CB becoming legal if it isn't already happening. This, we think, will be true whatever frequency is allocated. Napoleon called the British 'a nation of shopkeepers'. That was ages ago. We're very keen do-it-yourselfers now, and many will be unable to resist the temptation to whip the back off their CB rig and have a twiddle. When they do, we'll have Outband.

The advent of this kind of abuse will follow the introduction of the CB facility in the same inevitable way that hangovers accompany Scotch bottles. This, however, does not mean that the service should be scrapped to prevent it. After all, once the car had been invented it was only a matter of time until someone found out the pleasures of breaking the speed limit and told all his friends. Now everybody's doing it, but we're not going to ban the car, are we? The Beeb don't switch off in the middle of *Dallas* because they know there's a few people watching without licences.

Abuse of any service is unavoidable, we regret to say. Let's just hope that HMG have more luck looking after the CB network than they've so far experienced with the 2metre crooks. And they think they've got a legitimate axe to grind as well. Catching, this anarchy number, isn't it?

didn't take off until well after 27MHz had been authorised over there, the service initially came in for considerable amounts of criticism, first from the licensed radio amateurs, who saw it as encroachment on their territory by a motley crew of electronic cretins. It's taken 12 years for that attitude to alter, but traces of it still persist. Mostly the hams regard CB as a toy in terms of their hobby, despite any practical purpose it may serve in the community. Purists, see.

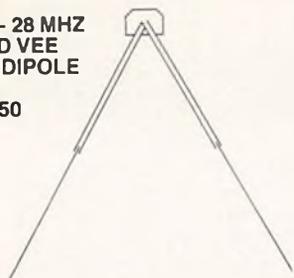
By the same token the hams are not over fond of the CB users who are into DX work, whether it be via skip or some illicit device. Because all the devices connected with DXing are illicit. Maximum output of rigs is kept very low on the 27MHz band, although it is sufficient for its design purpose — short range communication.

But there's something attractive about making contact with someone hundreds or (preferably) thousands of miles away, and it's a thrill which the hams know well.

In order to make it easier on 27MHz there has long been an industry sideline involving the production of linear amplifiers. Running boots or burners is illegal in the US, but it doesn't stop the American pirates from doing it anyway. A

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COME IN AND SEE US SOMETIME

HAVIN' ASS

Most of us use our vehicles for convenience, pleasure, showing off — things like that. Truckers use their vehicles to earn their living directly. Not so many years ago that meant a trucker's place of work was cold, noisy, smelly, uncomfortable; a miserable place to do a day's hard graft.

Acceleration was a question of gathering speed, braking was not much more than a reduction in speed, maintenance schedules were pretty casual and the hours a driver could be persuaded to work were outrageous. Altogether not the kind of business a guy would be proud to be part of.

Don't get to thinking the foreign trucker was any better off: I remember seeing French drivers taking a bunch of bennies with their fourth cognac prior to wrestling through the night with an evil handling long nose unic down badly cambered *Route Nationales* — either they were

determined to stay awake or maybe speed their path to an unnoticed oblivion.

Thank God things are a great deal better now. Trucks are better, cabs are better, employers are better (I think?) and the tempting, easy reason for this is to say it's thanks to truckers' demands. But unfortunately, with the surfeit of Class 1 drivers, a bloke cannot always demand a decent truck from his employer with any more noticeable effect than a good kick in the bum and map of the route to the nearest dole queue. There is no doubt that far too many operators hold the fear of unemployment over the heads of their drivers to get guys to run illegally long hours, overweight rigs (the drivers responsibility), ill-maintained trailers and outdated tractors.

The sad and cynical truth is that trucks are improving at the rate that operators see opportunities to cut costs and increase profits. If

a truck maker wants to introduce an improved working environment for the driver he must concurrently, for example, show a weight saving or cost saving to the owner.

Legislation has had considerable effect on the design of contemporary trucks, and ever more complex laws continue to flow from EEC transport bureaus in Brussels; as with almost all governmental legislation it's hard to see the beneficial purposes of rules and regs — obviously maximum axle loadings are important as are overall length restrictions. But a new braking regulation that will actually reduce the effectiveness of brake systems, a BFA (bumper to front axle) limit that regulates against aerodynamically more effective front ends, an outdated fifth wheel design that produces jack-knife effects under heavy braking and destructive kangaroo hill starts? It

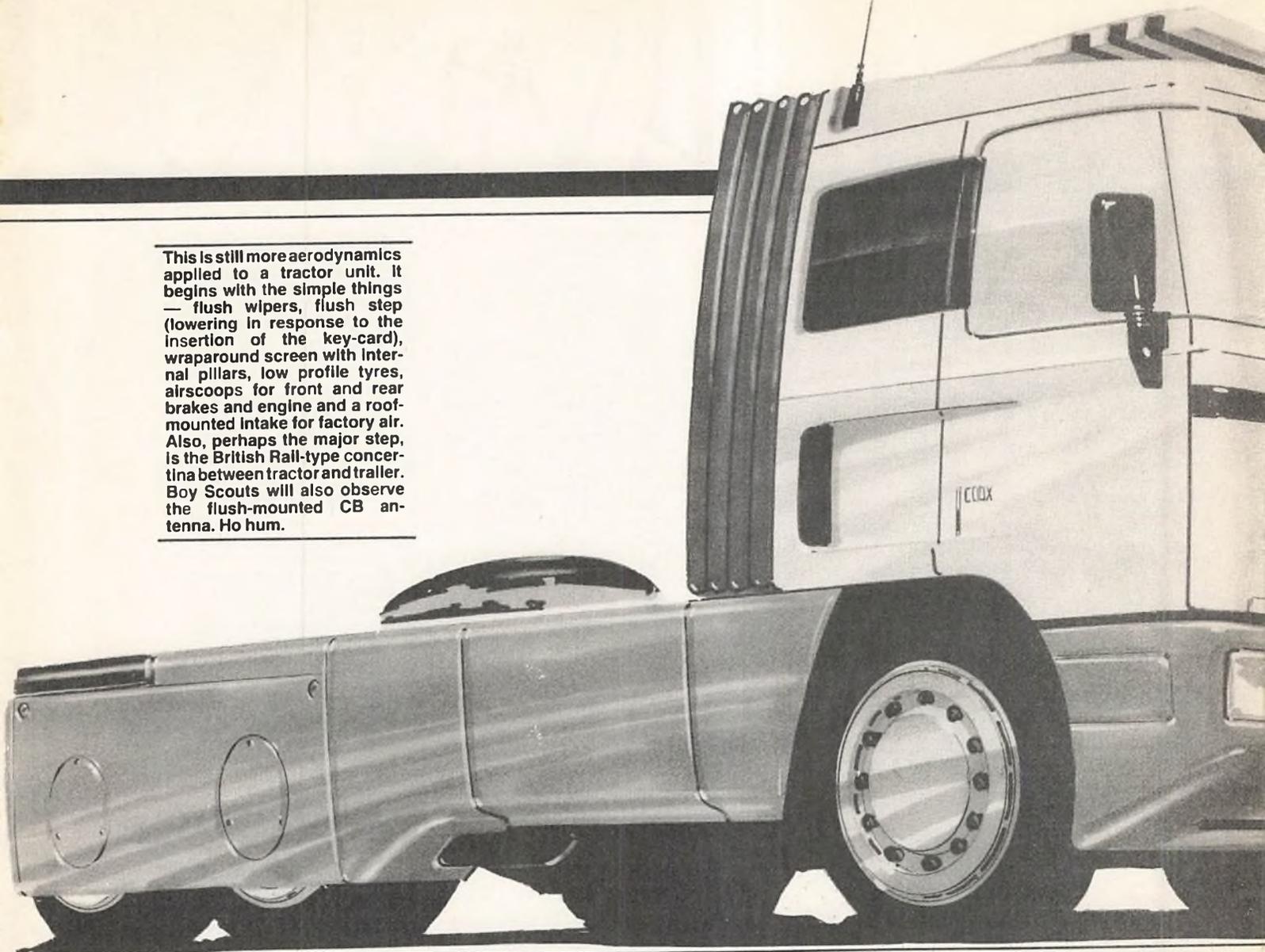
would take from five to ten years to legalise an already developed coupling that overcomes all the problems of conventional fifth wheels. The problem with rigs devised by civil servants is that they are formulated with present day technology in mind — we are legislating against innovation — neat eh?

The notorious tachograph is a good case of poor legislation: theoretically a driver should be glad to have a means of avoiding the blackmail from an employer

This is the somewhat, ah, dare we say customised, truck which the Toleman team use to haul their racing cars about in. Powered by Cummins it could do 104mph and make 11mpg, but it's not allowed to.



This is still more aerodynamics applied to a tractor unit. It begins with the simple things — flush wipers, flush step (lowering in response to the insertion of the key-card), wraparound screen with internal pillars, low profile tyres, airscoops for front and rear brakes and engine and a roof-mounted intake for factory air. Also, perhaps the major step, is the British Rail-type concertina between tractor and trailer. Boy Scouts will also observe the flush-mounted CB antenna. Ho hum.



who can see him driving 19 hours out of 24 in a vehicle that shows no workshop time on its log. In fact the rules are so cold, mechanical and inflexible that a driver feels spied upon. He cannot do overtime like in other jobs; he's often forced to sleep away from home because a traffic hold up has caused him to run out of hours (maybe just one hour from home).

Funny thing is that all big trucks built in this country are supposed to have tachos these days, but they are a 'delete option'. If an operator doesn't want it he pays the builder to leave it out.

It's almost hard to see how trucks have got as good as they have. Competition and more production capacity than customers has helped a bit as has the conscientious attitude of our manufacturers, and now of course the price of fuel.

Weight and fuel are directly related: if you build a lighter rig that needs less fuel to push it along and accelerate a bit faster, no one is particularly impressed; but if you build a lighter rig that then carries a greater load, has no loss of strength or performance and gives the same consumption, everyone is pleased. If you then make this strong, light, load-efficient truck more aerodynamic then you start to save fuel costs without losing out

elsewhere and that is also popular. Here comes the catch again — if your aerodynamics are of the plant-on sort you can find yourself adding weight; so just how do we win this game?

By painstaking and careful development by our manufacturers, by lively engineering departments and flexible management. Look what happened to Foden (Albion, Wensen, AEC, Commer, Guy, Karrier, Sentinel, Thornycroft, Unipower etc). ERF are now our only independent truck makers, is it only coincidence that every recent truck test put their rigs right at the top of their class?

I can't say exactly what they are planning for the future but judging by the green interior shown at the NEC, a driver's lot is certain to improve. Interiors are getting better than cars and interestingly it's weight saving that is helping to improve things. Old-fashioned, hand-built, carpentry-style construction, using heavy materials and old technology is being replaced with auto industry style and comfort.

Interestingly glass areas are getting smaller, unlike auto design. Reductions in noise intrusion and a desire to improve heat insulation (particularly at night in sleeper cabs) are linked with an attempt to improve

security, because a lot of thieves get in through side, corner or back windows!

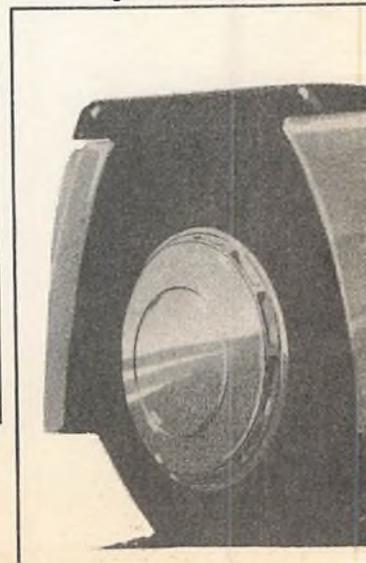
Some companies have show sleeper units mounted on top of day cabs but taller trucks have piss poor aerodynamics; it's only when towing a box trailer that height is not crucial, and only ten per cent of rigs tow box trailers!

There is a strict regulation about the distance from the steering wheel to the driver's bunk, presumably to stop truckers driving whilst in bed, so most bunks stay behind the seats and they will stay mean, narrow little things because the distance from front bumper to the back of the cab, plus trailer swing dimensions, decide your trailer length for you. Believe me this is critical, mounting a number plate on to the front bumper of some trucks puts you over length and into the arms of the law.

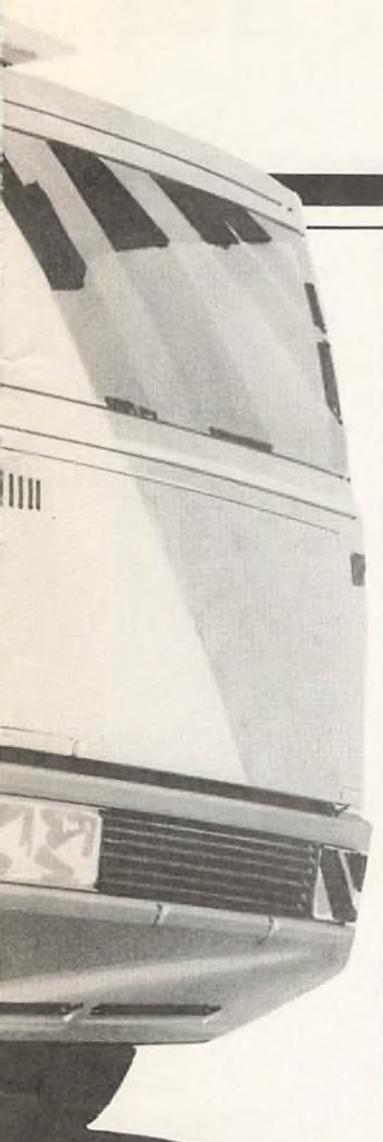
Despite all this, aerodynamics will improve, particularly through the rad and past the engine as well as under the unit. Adjustable roof spoilers will be set using data related to trailer height and cab to trailer dimensions — another job for the ubiquitous microchip no doubt. Don't expect to see all that smooth side faired in wheel bit, though; you need an awful lot of air around truck brakes; stopping upwards of 44 tons from 70mph

makes one hell of a lot of heat. Stopping a big truck often produces over 300kw (that's a lot of electric fires), and bits of dumb glassfibre keeping out the air are not welcome. Anyone who remembers that BBC film about a truck trip to Saudi Arabia may recall a Volvo hurtling downhill in Turkey with flames coming from the brakes!

Low profile tyres are coming — Pirelli have experimental ones out now. Dunlop are well ahead with some super low stickies too. Carbon fibre springs are almost ready, self-levelling suspensions, wash/wipe self-levelling head lamps, heated



HAVIN' ASS



lost. Now if a serious body, members of the CBI and all that, were to support the idea of a useful radio communication system between their trucks, the base, and other trucks, time and money could be saved. Don't forget the profit motive is probably the strongest incentive for change.

Two or three British manufacturers certainly considered showing factory-installation CB at the Birmingham show. Some designers even talked to ICE suppliers about what units they planned to market — could they

supply prototype units (minus crystals of course)? Well, yes, they could, but were not too keen to show their hand yet and maybe get a little of the wrong sort of attention in their R & D Department. Now here is a problem — if we introduce CB and do not want the market flooded with Japanese sets our manufacturers need to be left alone to develop, whatever the wavelength. British Truck Manufacturers are naturally reluctant to demonstrate foreign gear in their cabs. So no CB installations — sorry.

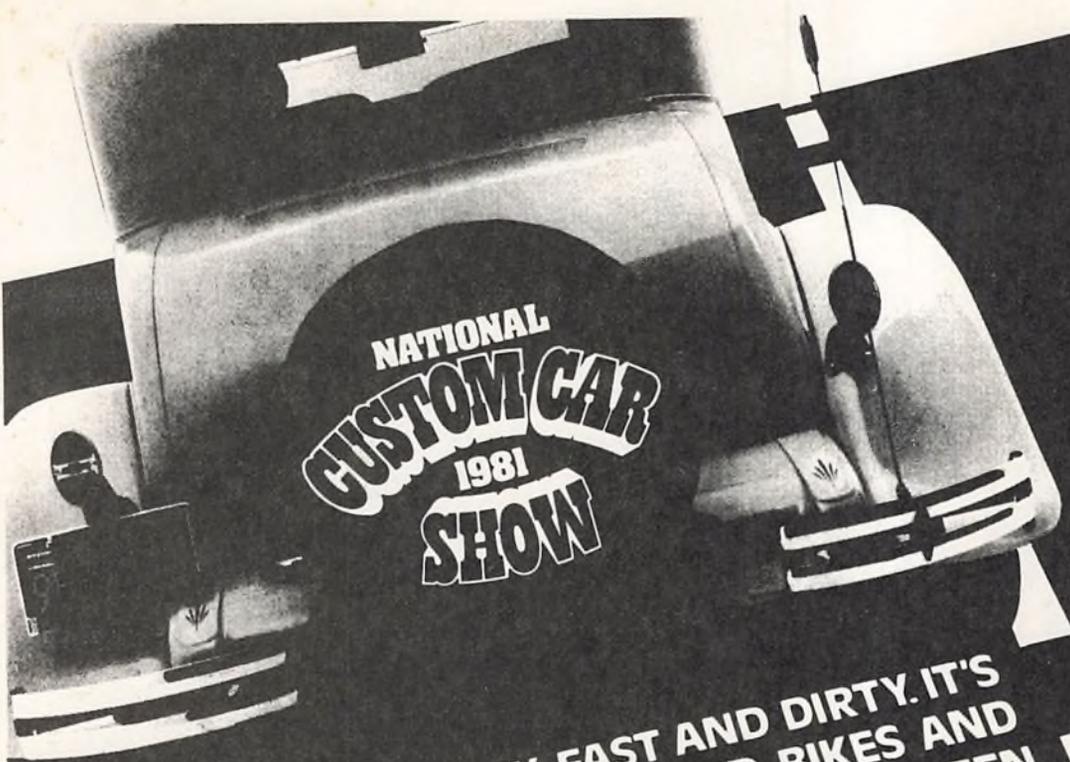
This is the sort of aerodynamic theory which might or might not make it on to the roads. The adjustable roof spoiler is controlled from inside, as are the electrically-operated mirrors. The built-in air takes its intake behind the window, the radiator slats are thermostatically controlled, the slippery hub-caps and extractor vents clean up the overall shape and the wind deflector on the screen pillar really will clean the mirrors.

wash/wipe mirrors, factory air, ally radiators, beautiful alloy wheels, in-cab heaters separate from engine heat — it's all on the way.

Funny though, there is one thing not immediately planned for, and that's CB; truck to truck radios. Here's another item that could get a big boost if the operators thought it a good idea — make it all a bit more respectable, wouldn't it?

There is no doubt that when pressure groups look like a bunch of guys with money to waste on their motors and radio gear just so they can chat to each other and swap banalities a certain 'edge' is





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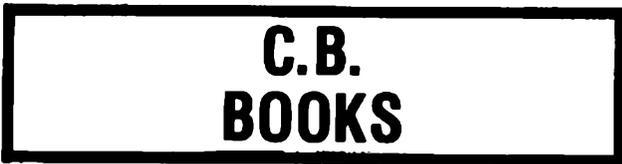
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