

# CB

# Citizens' Band

Britain's Leading Communications Magazine

99p

## CTE RELAUNCH Antennas on Test



As seen in the national press

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**DREAM  
HOLIDAY**



in our  
**GREAT  
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## 934 MHz. ACCESSORIES

SWR meters reviewed

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THUNDERPOLE STRIKES AGAIN! "Citizens' Band" magazine on the fantastic Thunderpole range:

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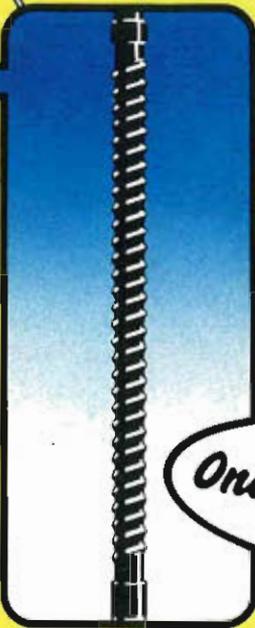
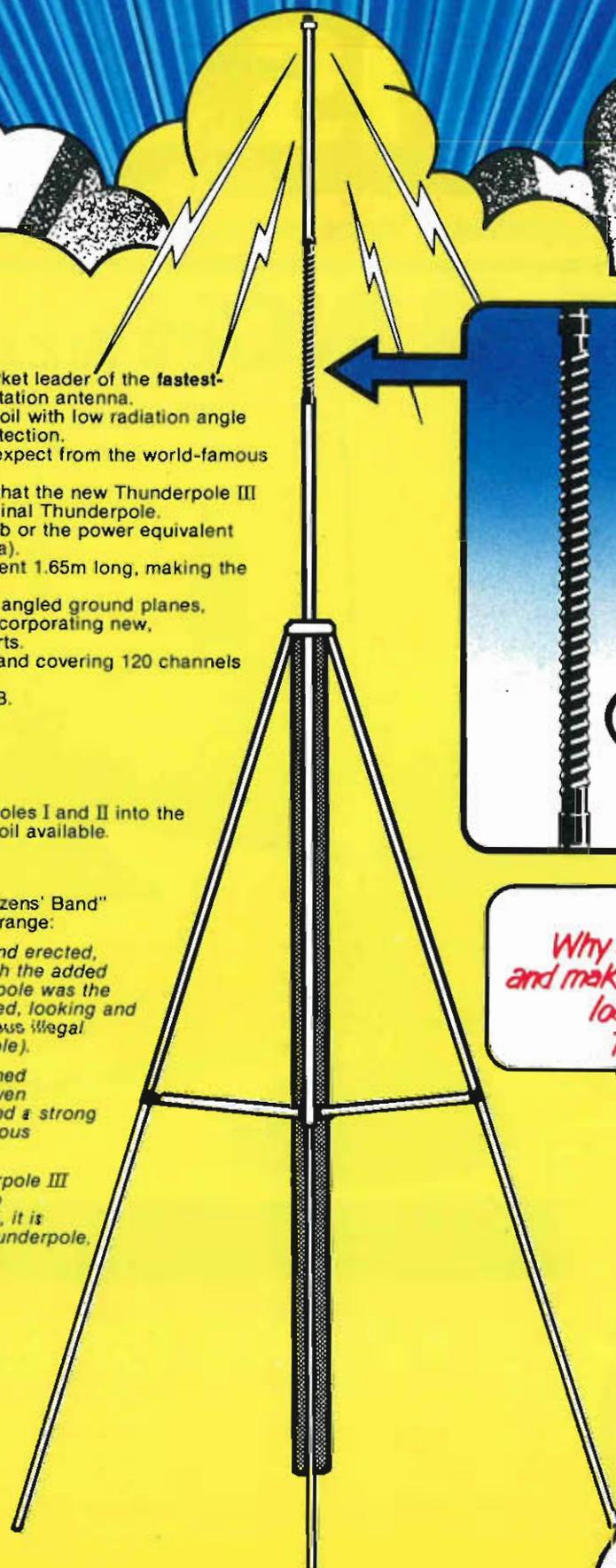
"On test the Thunderpole Mk.III performed very well and contact was maintained even when the mobile test vehicle encountered a strong signal on the next channel in our notorious 'blackspot'."

"In conclusion we consider the Thunderpole III to be a strong and well-constructed, top performance antenna and, priced at £25, it is no more expensive than the original Thunderpole, which must be good value."

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Ask for Thunderpole III™ at your local CB stockist now.

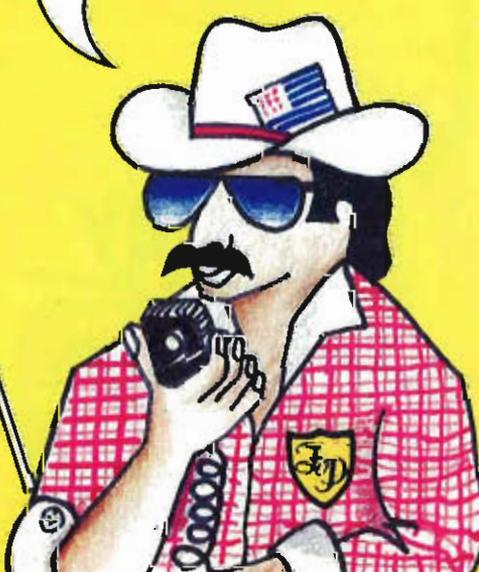
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*The III - One Step Ahead of the Rest!*

*"HI BREAKERS! Why don't you jump the skip and make the trip with the centre-loaded, helically wound THUNDERPOLE III"*



# CB Citizens' Band



Twong, page 21

### Cover this month:

Colour co-ordination even for your wrapper. CTE antennas are back with the Italian Job. Photo by Neil Proctor

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Normally published on the third Friday of the month preceding cover date.

Citizens' Band Magazine, A.S.P. Ltd., P.O. Box 35, Wolsey House, Wolsey Road, Hemel Hempstead, Herts. Telephone Hemel Hempstead 41221. Typesetting and Origination by Ebony Typesetting, Liskeard, Cornwall. Printed by Simpson Drewett and Co. Ltd., 70 Sheen Road, Richmond, Surrey. Distribution by Argus Press Sales and Distribution Ltd., 12-18 Paul Street, London EC2A 4JS.

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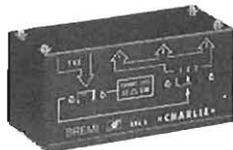
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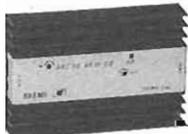
**ANTENNA MATCHER MODEL BRL 15**  
Frequency range: 25-40 MHz - RF power: 100 W max - Weight: 0.32 Kg - Dimensions: 120 x 55 x 55 mm - RF power loss: under 5%; 0.2 db RRP £8.80



**STABILIZED POWER SUPPLY MOD. BRS 27**  
Input voltage: 220 V a.c. 50 Hz - Output voltage: 13.8 V d.c. - Current: 3 A max - Stability: better than 0.1% with mains variations of 10% or load variations from 0 to 3A - Protection: electronic with current limiter - Ripple: 1 mV at 3 A load - Dimensions: 155 x 85 x 85 mm - Weight: 1.5 Kg (240 V a.c. supply available) RRP £14.26



**CB LINEAR AMPLIFIER MOD. BRL 31**  
Input voltage: 12 - 15 V d.c. - Max current: 2 - 7.8 A - Input power: 0.2-5 W RF - Output power: maximum 28 W AM - Frequency: 26 - 30 MHz - Operation: AM - FM - SSB - Input SWR: better than 1.3, externally adjustable - Dimensions: 120 x 50 x 40 mm - Weight: 0.2 Kg RRP £18.15



**CB LINEAR AMPLIFIER MOD. BRL 35**  
Input voltage: 12 - 15 V d.c. - Max current: 4-4.5 A - Input power: 0.2-5 W RF - Output power: maximum 50 W AM - Frequency: 26 - 30 MHz - Operation: AM - FM - SSB - Input SWR: better than 1.3, externally adjustable - Dimensions: 120 x 79 x 40 mm - Weight: 0.3 Kg RRP £35.75



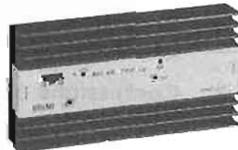
**LINEAR AMPLIFIER MOD. BRL 210**  
Output power: 100 Watts AM maximum, depending on the input power - Input power: 0.5 - 10 W AM; 1 - 20 W PEP SSB - Input voltage: 220 V 50 Hz - Frequency: 26-30 MHz - Operation: AM - SSB - FM - Output impedance: 50 OHM - Input impedance: 50 OHM - Input SWR: better than 1.3, internally adjustable - Instruments: output power indicator and modulation percentage indicator - Central stand by AM - SSB - Protection: mains with 2 A fuse, contained inside - Vacuum tube: EL509 - Dimensions: 174 x 100 x 257 mm - Weight: 4 KG - It is adjustable to use a RG 58 cable 70 cm long RRP £85.55



**DIGITAL FREQUENCY METER MOD. BR 8100**  
Direct insertion between RF source and antenna - Display: 6 digits - Power requirement: 11 - 15 V d.c. - 150 mA - Resolution: 0.1 KHz - Gate time: 1 sec - Minimum RF input power: 0.25 W - Max RF input power: 100 W - Range of frequency: 10-150 MHz - Dimensions: (LHP) 112 x 36 x 157 mm - Weight: 245 g RRP £53.85



**LINEAR AMPLIFIER MOD. BRL 500**  
Output power: 600 Watts AM maximum, depending on the input power - Input power: 0.5 - 8 W AM - Input voltage: 220 V 50 Hz - Frequency: 26-30 MHz - Operation: AM - SSB - FM - Input SWR: better than 1.3, internally adjustable - Instrument: class 1.5 mobile vol instrument - Output and SWR indicator, internally lighted - Controls: STAND-BY, AM - SSB, output power switching 150-500 W, SWR reading, instrument switch (reflected direct power, Watt) - Protection: mains with 5 A fuse - Vacuum tube set: 5 x EL518 common grid connected - Cooling: by fan - Case: made of 10/10 sheet with two front handles and two handles on the upper cover - Dimensions: 400 x 220 x 210 mm - Weight: 20 Kg (240 V a.c. supply available) RRP £328.66



**CB LINEAR AMPLIFIER MOD. BRL 40**  
Input voltage: 12 - 15 V d.c. - Max current: 1 A - Input power: 0.2-5 W RF - Output power: maximum 75 W AM - Frequency: 26 - 30 MHz - Operation: AM - FM - SSB - Input SWR: better than 1.3, externally adjustable - Dimensions: 160 x 79 x 40 mm - Weight: 0.36 Kg RRP £40.66



**SWR METER-WATTMETER MOD. BRG 22**  
Range of frequency: 3 MHz - 150 MHz SWR meter, 26 - 30 MHz Wattmeter - Input and output impedance: 50 Ohm - SWR and Watt indicating instrument, 1 cl mobile coil, 50  $\mu$ A fs - Connectors: SO 239 - Measures of the R.F. up to 1000 W in 3 ranges 0 - 10.0 - 100.0 -  $\pm 1000$  V - Weight: 1 Kg - Dimension: 212 x 118 x 63 mm RRP £32.56

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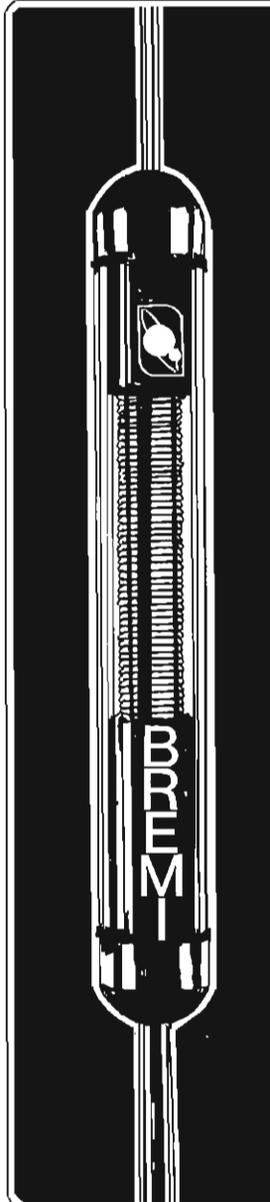
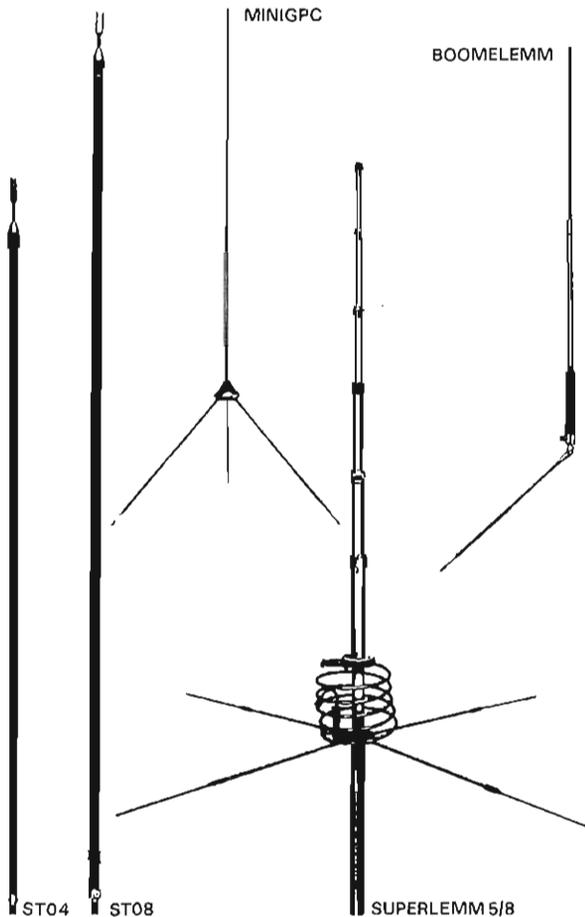
Star quality is guaranteed when you top your pole with an antenna from Bremi U.K.

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# UPDATE

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

Like all magazines, Citizens' Band receives a wide variety of letters from readers all over the country. Ranging from the amusing to the despairing, they offer an invaluable insight into our readers' likes and dislikes and often bring to light aspects of the hobby which we might otherwise have overlooked. Many of them provide ideas for feature articles and, although space only permits us to publish a mere handful they are most informative and make very interesting reading. Obviously we receive a host of technical queries and Mack the Hack's down to earth views are always good for stirring you into life but the single largest section of our monthly postbag concerns the wallies. Nobody minds a bit of humour on the band but it is pretty obvious that the overwhelming majority of breakers are sick to death of the misfits. The clowns whose intelligence extends no further than "dead keying" or mouthing a moronic stream of obscenities at those who simply wish to enjoy a chat on channel. Neither is there much sympathy for the "aces", whose use of illegal high power, inevitably fed into a massive antenna, ensures their ability to prevent anyone else in the area from holding a conversation whilst they are around.

I could paper my walls with letters asking what to do about the problem and I am struck by the large number of them which end with the comment that nobody seems to care. Well, let me tell you unequivocally that somebody does care. We do!

Citizens' Band magazine was born out of the campaign for a properly regulated CB service and is not prepared to sit by and watch a few hooligans destroy

what so many fought so hard to achieve. Like you, we have had enough of the mindless minority and an equal surfeit of officialdom's inability (or is it simply unwillingness) to make any impression upon the situation. We have heard all of the arguments about insufficient manpower and lack of finance and quite frankly we are no longer impressed. Neither do we set much faith in the view that CB should be policed by its users. It is the function of authority to uphold the law and improved enforcement would bring more genuine users to the band, with a resultant increase in licence revenue. Furthermore, there does not seem to be much point in maintaining a Radio Investigation Service which is patently inadequate to prevent even the worst excesses.

CB clubs and individual breakers have encountered little success in reporting offenders to the authorities, largely because a single, unsubstantiated report offers insufficient information upon which to act. Neither do we presently have any way of knowing just how many complaints are coming from any particular area. In Parliamentary replies DTI ministers are inviting clubs and others to report abuse direct to the DTI but, whilst we applaud the DTI's willingness to accept complaints we are concerned that such a system offers no indication of the real disruption caused by a single, persistent offender. We think we know a better way!

Citizens' Band magazine is your voice. We treat our responsibility to the real CB enthusiast seriously and so we ask you to let us know if there is a particular problem in your area. We particularly want to know about anyone who is deliberately offensive to other breakers, or

persistently jams others' transmissions. Let us collate the information and, through Parliament, forward it to the appropriate authority.

We are not interested in furthering anyone's personal vendetta, so please don't write in unless you have a genuine complaint. Preferably one which you can substantiate with times of transmission, frequency used and, wherever possible, recordings of transmissions. (Don't forget to send us a stamped addressed envelope in which to return your tape.) Please do not expect miracles. Just because you have contacted us does not mean that your problem will cease overnight. Neither are we likely to do much about a single unsupported complaint. What we can and will do is to collate the information you send us and if it becomes clear that any particular station is consistently acting against the interests of others we will make our evidence available to the authorities.

We do not intend to stop there, though. We will carefully monitor the results obtained in cases referred to the authorities and if complaints continue long after the event we shall want to know why. Members of Parliament, including Sir Patrick Wall, who worked so hard to ensure our right to a slice of the airwaves, have offered us and your support in this campaign and, if we go about it in the right way we can persuade the powers that be that, in the words of one recent correspondent, "Licence fees do not come from a benevolent society" and that we are owed at least a duty of care.

If your vicinity has a problem write and tell us about it. Give us as much factual information as you can and don't forget to tell us exactly who and where

you are. Authority is unlikely to respond to a complaint unless it is signed with your real name and a box number is not much help either. Any correspondence which passes between an M.P. and any government department is treated as strictly confidential. Let us show the brain drain brigade that their days are numbered.

Well, I have thoroughly enjoyed my three months as caretaker editor of Citizens' Band and now the time has come to hand it back to the professionals, in the person of Eamonn Percival. It has been great fun reading your letters, answering your queries and listening to your views but a part-time journalist can only fit in so much and, believe me, running a mag. like Citizens' Band calls for full-time commitment and a very large bottle of headache pills.

It is not without a tinge of sadness that I hand over to Eamonn, who will, I know, maintain the high standards set by Rick Maybury, Sue Sharp and others and I welcome him to Citizens' Band on behalf of each and every one of you. You don't get rid of me that easily, though, and you can be sure that I shall pop up from time to time. I must, of course, offer my own thanks to all who have helped to keep me relatively sane throughout these last few months. To the contributors, without whose support the job would have been impossible. To the staff at A.S.P., who were always there when they were needed but, most of all, my thanks go to our former editor, Sue, who calmly solved every little problem as it arose.

It has been great fun and I'll see you all again, soon.

**Keith Townsend**



### REACT reorganised

It has been a long time since we last heard from REACT UK, during which the REACT management seems to have undergone some major changes. Executive Director, Lesley Wyld explained that the former Managing Director,

Alastair MacKay, had resigned for personal reasons and that the organisation, which has grown considerably, was now controlled by a six member board of directors. REACT now has 193 monitoring teams throughout the country and places heavy emphasis on its role in the community. No longer content simply to monitor channel 9, its teams are equipped with VHF radio and provide communications for all manner of outdoor functions such as marathons, carnivals and sponsored walks. REACT has also been instrumental in introducing the benefits of CB to a large number of disabled and housebound folk.

From their literature it would seem that not all REACT teams are now actively engaged in CB, partly, I suspect, the result of unwelcome attention from the general assortment of parasites with whom we are all familiar. However Lesley was careful to stress the high degree of co-operation which REACT has received from various authorities throughout the country in its attempts to promote interference free emergency communications.

Anyone who would like to become a member of REACT UK, or would simply like more information, should write to the National General Office, REACT UK, P.O. Box 143, Warrington, Cheshire, WA5 3PT.

### Grey Beard's Gleanings

Hello again, and welcome to my small corner of your favourite magazine. This month I am hot on the trail of speech processors and the like equipment, following several requests from people who are naturally quietly spoken and therefore in need of some electronic assistance. If you are in a similar situation and have found a workable answer, let me know your solution. In return you will receive a reply AND one of my superb QSL cards. They are different and definitely a rarity!!!

Several issues ago, I asked you to write and tell me if your local CB shop was extra helpful to disabled/infirm CB-ers and also if it was accessible to wheelchair warriors. Well, Electron (Alpha Tango 149) has taken the time and not inconsiderable trouble to write, singing the praises of "Modulations" of Abingdon. I quote "The owner and staff are very helpful. . . nothing is too much trouble. . . If what I

want is not in stock, it is speedily obtained for me. . . I can get in to the shop very easily in my wheelchair. . ."

This is the sort of shop I want to be able to tell you about. I've awarded "Modulations" the "Five Star, Grey Beard Gong of the Month". Is your local CB shop like this one? Have you had to resort to Mail Order? What sort of treatment have you received? Tell me about it.

This week, I was fortunate to attend an impromptu "eye-ball" of Midland CB-ers. What started out to be a weekly gathering of a few CB fans suddenly snowballed into a gathering over 100 strong!!! Quite a few cans and brown bottles were observed as well!!!! I was pleased to meet so many disabled breakers in the "flesh" rather than just over the airwaves! The local Gendarmerie thought we were holding some sort of political protest or picket, but were soon satisfied that we were only out to enjoy ourselves.

If you want to enjoy yourselves too, you might try going to the Blue Circla



Greybeard now has his own QSL card.

Breakers CB Club mass eyeball on the 10th November. This is being held at the Bloxwich Baths, Field Close, Bloxwich, Walsall and is due to start at 7.30pm £1.00 admission.

Well my time's up, see you next month. Keep on writing in. I always answer your letters.

**The Grey Beard**

## Out and about

A few days ago I paid an impromptu visit to the premises of Les Wallen Manufacturing (the Modulator people) and received a fantastic welcome. I was given a full tour of what can only be described as a really impressive operation and shown a wide variety of products. What really interested me was the very high standard of test equipment in use at the factory. Les takes considerable pride in his products and has spared absolutely no expense to ensure their consistent high quality.

It seems that I picked just about the right time for my visit as a number of new products are about to come onto the market. The all new Thunderbolt centre loaded antenna is especially attractive and initial tests carried out on the sample which Les gave me have confirmed my long standing confidence in Les Wallen products. At a little under 4ft. long the Thunderbolt, which is very reminiscent of many P.M.R. aerials, is very well constructed and as I have demonstrated on a number of occasions, well able to withstand the rigours of multi-storey car parks, low bridges and the like. I found no difficulty in achieving a VSWR of better than 1.5 to 1 and although more time is needed to carry out a full range of tests on the aerial I am confident that it will live up to all my expectations.

Even more exciting is the fact that, for the first time ever, Les Wallen has branched out into the accessory market, with an SWR meter for UHF. With a range starting at 400MHz. and a retail price in the region of £55, it represents excellent value for the 934MHz. user and devotees of the higher amateur bands.

Les tells me that he has plans for a whole new range of accessories, though he is very concerned at pressure from the market to produce beam antennas for 934MHz. which far exceed the permitted specification. He has studied reports from the National Radiological Protection Board and although he has no doubts that the use of 934MHz as laid down in the specs is perfectly safe, the reports have convinced him that considerable danger exists for the user of equipment resulting in higher levels of gain. "Although this sector of the market appears most attractive" he said, "I think that the user and particularly the industry, should think very carefully before creating a potentially dangerous situation." Since my own research supports his views I am pleased to see Les setting the lead in taking such a responsible position.



My thanks go to all at Les Wallen Manufacturing for making my brief visit most enjoyable and for their invitation to return whenever I like. You can be sure I will take you up on it, Les.

K.L.T

## Bravo Sierra Prizewinners

The Bravo Sierra Club, which consists of SWLs, CBers and radio amateurs, ran a CQFM contest this summer. Rules were kept to a minimum and each operator was allowed two hours continuous air time within a 24 hour period.

Luckily for the entrants,

there was a lift on during the early part of the day and the top five entries managed a combined total of over 4000 miles. The furthest confirmed QSO was about 80 miles, with the occasional story of the one that got away.

The presentation was made by Peter Uster, G4VDO. The photo shows a group of contestants, prizewinners and Peter.



## Holiday Competition

You will notice from the brightly coloured logo on the front cover that we have a competition with a difference in this month's CB. Our usual competition features a piece of CB equipment for a prize, but this time a really great holiday is up for grabs.

'Have they come into a fortune?' you are thinking to yourself: Not exactly, but this promotion is the result of our publishing company's faith in the future of specialist magazines, which show every indication of being on the up and up, and as an indication of the

money being invested in Citizens' Band and its sister magazines.

If you read the Daily Mail or the Radio Times, you will also see Citizens' Band and other titles from the ASP stable being featured on full page advertisements. This is another first for ASP as this type of advertising is not usually used for specialist magazines, but we don't believe in hiding our light under a bushell!

Best of luck if you decide to have a go and just remember, if you win, remember where you won it from!

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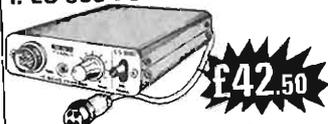
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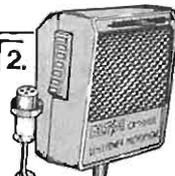


## 1. ES-880 ECHO BOX



**£42.50**

The most powerful echo unit available! Top quality Japanese unit features include LED level indicator for maximum performance, earpiece so you can check your speech quality. If you want to upgrade your 'talk power' don't miss the ultimate DX unit! Supplied ready wired (Please quote your CB make and model when ordering).



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**£23.50**

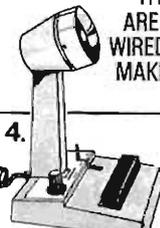
Densel boarded - similar to Sirral CB-2002 but improved design and layout - this top quality hand mike features a slider power control and internal echo control. Supplied ready wired for your CB complete with 9v battery (Please quote your CB make and model when ordering).



## 3. DM510 POWER MIKE

**£9.50**

A moderately priced hand held dynamic microphone to boost up quiet modulation featuring a rotary power control. Comes ready wired for your CB and complete with 1.5v battery. (Please quote your CB make and model when ordering).



ITEMS 1, 2, 3, 4  
 ARE SUPPLIED READY  
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 MAKE & MODEL WHEN  
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## 4. LESON TW232 DESK MIKE

**£35.50**

The famous 4200 type desk mike is ideal for both FM and SSB use and is specially designed for high modulation capability. Features include rugged die cast body, built in speech compression amplifier, variable amplifier gain control and lock on PTT facility - Supplied ready wired (Please quote your CB make and model when ordering). Supplied with 9v battery.

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Features 5 stage power switch giving 5, 10, 20, 50, 100% power output. Run in line between CB and volt power source. Takes up to 10 watts CB output. Meter indicates output power.

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This legal 40 channel mobile unit is also operational anywhere in the 26-28 MHz band with modification and can also recrystal for 10 metres! Features include 3 stage ceramic filter with adjacent channel rejection of 80db, channel free indicator, DX-local switch and attenuator. Its compact size 165x155x50mm and versatile PLL chip make this a very attractive unit at a moderate price.



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Specification as for M40FM mobile unit but this compact unit, 229x155x64mm, is mains operational, complete with its own built in transformer. It is also upgraded with a crystal filter and has excellent image and adjacent channel rejection. Its size, performance and highly tunable PLL have already made it one of our best selling units. A quality base station at an unbeatable price.

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This famous brand is EEC manufactured and will give excellent service. 25 watts output with on/off switch. Maximum 5 watts input, ensure SWR is better than 1:1.5 before installation. Not legal for use in the UK.

## 14. MAXCOM 7E

**£49.95**

A really versatile hand held 40 channel 4 watt unit, complete with its own carrying case it can work off either its own 12v power load from a car cigar lighter or from standard or rechargeable 1.5v batteries (not supplied). Its telescopic antenna detaches to fit onto its own magnetic base for mobile use. Ideal for any form of outdoor activities, emergency mobile use and can be quickly and easily swapped between vehicles.



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**RP20 PREAMPLIFIER**  
 Boosts up to 20db on incoming signals. Its small metal case 80x45x55mm make this ideal for mobile DX, features on/off through switch, requires 12v source for power. Excellent value.

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## Novice's Nightmare.

J. H. Chapman wants answers to a number of basic, but oft repeated questions.

**Q** As a newcomer to the world of CB I wonder if you can give me some answers?

The October '83 edition contained a d.i.y. item on long wire antennas (32-33 feet, to be exact). How does this match up to a maximum height of 1.65 metres and is it legal?

Another recent article, "15 miles and beyond. DXing on CB" left me puzzled as I can find no reference to the kind of equipment needed to achieve this distance. Any advice would be appreciated.

I often hear other breakers refer to loft aerials. What does one use in a bungalow with a low roof and only 5 feet clearance?

**A** The use of "long" wire antennas is more appropriate to the amateur bands, where it is desired to work a number of bands through a single antenna representing different fractions of a wavelength at each frequency being worked. Some very good results can be obtained in this way, but these antennas are notorious as creators of TVI. Their use with CB is not legal as the recently altered specification allows a maximum length of 1.65 metres.

There is no special type of CB set which will transmit further than any other. Range is dictated entirely by condition at the time, though it is generally true that since height equals power, the higher your aerial, the greater your range. Distances well in excess of fifteen miles can be achieved if you live on a high point and there is no other traffic on the channel. Since FM responds to the strongest available signal, you are unlikely to hear a distant station if the channel is being used by someone closer to you and you are most unlikely to achieve this kind of range using a loft antenna. Aerials do not like to be shielded and, although any form of ground plane antenna will work in a loft your range will be restricted. You may also have trouble in obtaining a reasonable SWR if the loft contains any large metal objects, such as water tanks. Another associated problem is that of TVI, where both the CB and television aerial are sited in the loft, as the signal from the CB antenna is likely to overload the tv antenna.

S.A.

## Pedal Power.

From Hook, in Hampshire, Stuart Gatty wants to know about the pro's and con's of CB on a bike.

**Q** As I am not yet old enough for a car, I am considering fitting CB to my

bike and would appreciate some advice on the most suitable equipment, as well as information on any special regulations for this form of mobile operation.



Stuart isn't the only one to attempt putting a rig on a pedal bike. There are associated problems though

**A** Almost any rig will work well on a bike. The only real problem is the fact that you will have to fit a strong mounting to carry the necessary 12 volt battery. Make sure that you buy a non-ground plane type antenna, such as those available for fibreglass boats. There are no special rules for operating from a bike, in fact it has been done successfully by a number of breakers. You would do well to pay particular attention to matters of safety and I recommend a remote mike with a switch on the handlebar, rather than a fist mike.

It might be worth trying a portable rig, but I suspect that the short antenna and variations in terrain would result in pretty mediocre performance.

S.A.

## SWR Struggle.

Somewhere in Cleveland, Grasshopper is just jumping with rage at seeing red.

**Q** I have a Tristar 727 multimode, developing about 12 Watts, yet even on lower power I cannot get the SWR out of the red. The aerial, a choice of three, is mounted on the top lip of the tailgate of my van. Please help, as I am beginning to lose my rag.

**A** Your mention of the fact that you have three antennas makes me

suspect that there is a short-circuit present on either the coax or the socket into which it plugs, as I seriously doubt whether all three aerials are faulty.

Check that the tailgate of the van has not crushed or cut the cable and that there are no breaks in the outer braid. Also examine the PL259, to ensure that a strand of the outer braid is not touching the conductor. If you have access to an ohm meter it will show up any break in the cable.

If the cable is not at fault you may have a loose connection at the aerial socket of your rig.

S.A.

## Mag. Snag.

Mr. D. Crane, from Derby, is having trouble with his mag. mount every time he goes into a multi-storey car park (I know the feeling well) and is considering as unusual remedy.

**Q** Not wishing to drill holes into the bodywork of my Viva, I purchased a mag mount. Ever since I have become more and more annoyed at the problems of coax becoming entangled in seat belts, etc., and the aerial hitting car park roofs and overhead obstacles, so I am considering buying a bumper mount. Since this will undoubtedly lead to a loss in performance I would like to co-phase two fibreglass whips and would like to know whether such a configuration presents any special problems?

**A** Unfortunately, Mr. Crane, it just won't work. In order that the twin antennae do not distort each other's radiation lobe they must be sited at least a half wavelength apart. Any closer is likely to result in an exceptionally high SWR and very poor performance.

There is also the problem that using co-phased aerials results in a highly directional signal. Twin aerials mounted on the rear of a vehicle would mean that nearly all the signal would go in a forward direction, leaving you with little or no effective range to either the sides or the back.

Co-phased set ups are really only suitable for the largest of trucks, where the overall width between mirrors allows sufficient space for the waveform to develop and where the requirement is for maximum signal gain in a forward direction. As an alternative may I suggest a boot lip mount, which will reduce your overall height without seriously affecting transmission range. Alternatively one of the shorter centre loaded types might help.

S.A.

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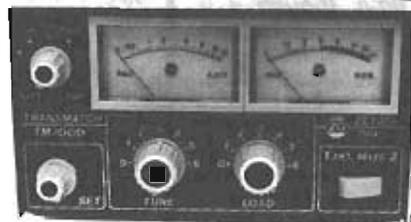
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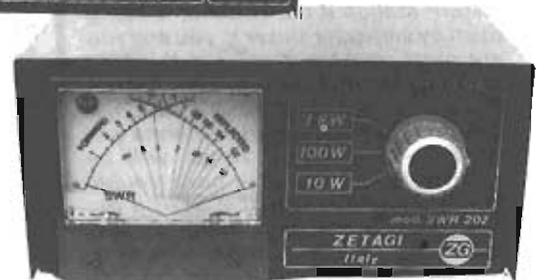


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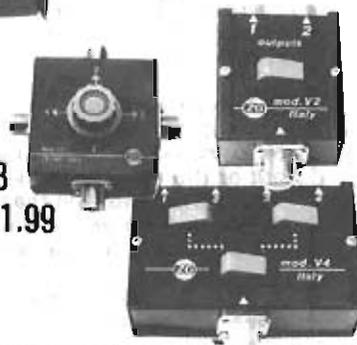


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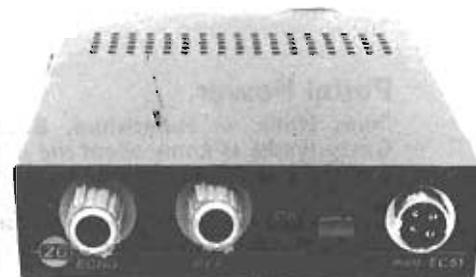
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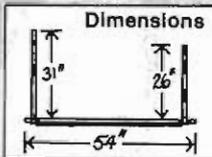


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At last, a high gain directional beam antenna which does not require lots of room to mount and which will not stick out like a sore thumb. Light, compact, easy to mount, and small enough even to mount in the loft, the Pulsar 27's unique loop design will give you a terrific 7dB of gain.

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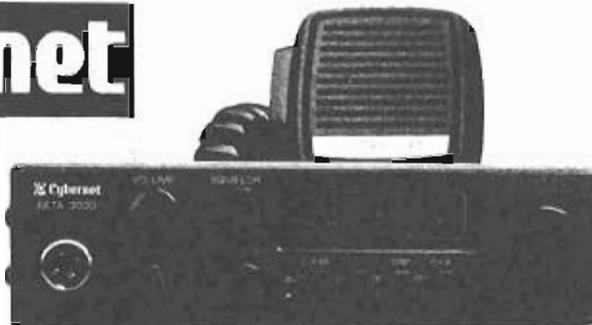
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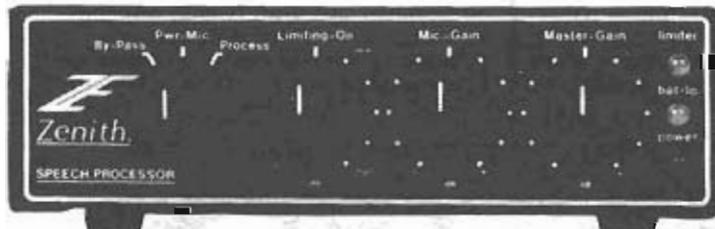


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Designed and built in the UK, the Zenith Speech Processor will boost your "talk power" out of all recognition, increase your range, and improve the clarity of your speech. The P-202 works equally well in any mode - AM, FM or SSB - and is one of the most reliable products on the CB market today. Used with your existing microphone, it can be operated as a power microphone, speech processor, or simply switched out altogether. When ordering, please state the make and model of the rig with which you wish to use it, so that we may send it ready-wired for your transceiver.

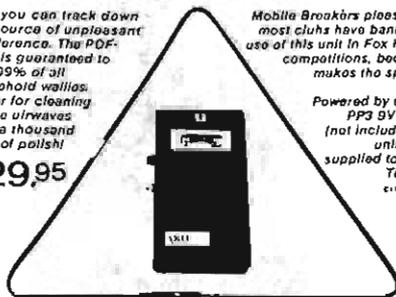
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Now you can track down the source of unpleasant interference. The PDE-11M is guaranteed to find 99% of all household wallies. Better for cleaning up the airwaves than a thousand cans of polish!

Mobile Breakers please note, most clubs have banned the use of this unit in Fox Hunting competitions, because it makes the sport too easy! Powered by a single PP3 9V battery (not included) this unit is also supplied to British Telecom.

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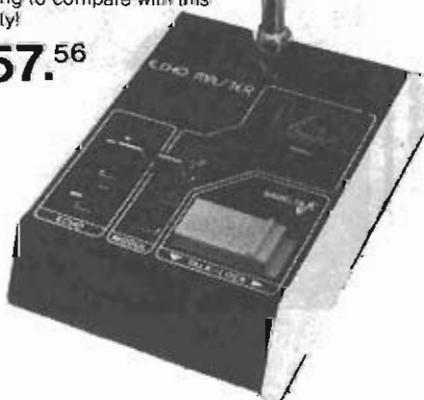
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**£57.56**



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# 93

# FORUM

**Chris Petersen gets his hands on some 934 MHz accessories and puts them on the test bench.**

**U**ntil recently, 934 MHz enthusiasts have been rather less well served with accessories when their 27MHz brethren. At last, however the situation is improving and we have received a small bundle of 934 MHz "goodies" for review.

SWR meters are not exactly ten a penny at this frequency. Until now anybody wishing to check the SWR of their antenna system has had to try and find a friendly professional with access to a Bird Throughline Wattmeter with the appropriate inserts. The two meters we have received are certainly not cheap, but, unlike the

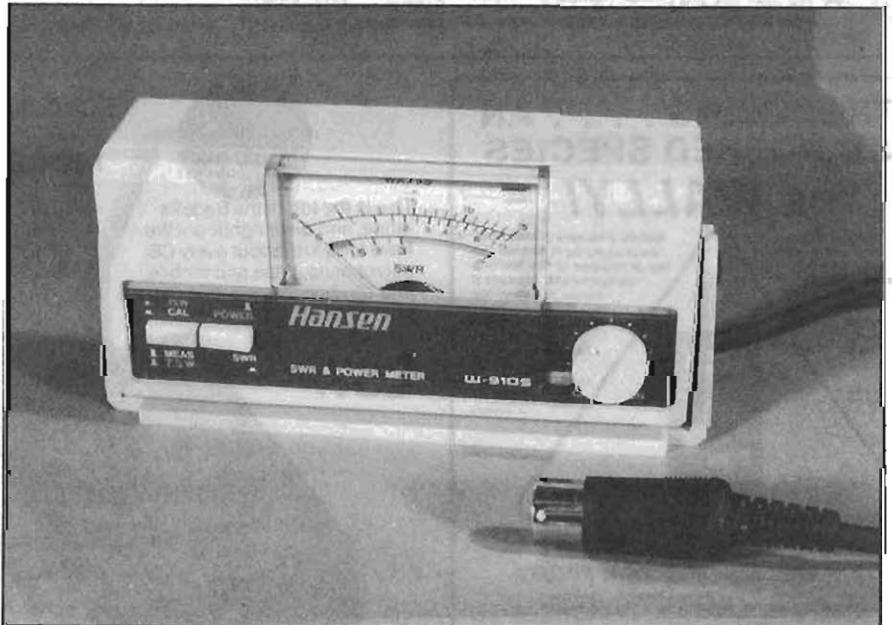
Bird, they are within the financial reach of an enthusiast.

The Hansen SWR meter is of Japanese origin and intended for the Japanese UHF band of 903 to 905 MHz. This is close enough to our 934 MHz band to enable it to operate on UK equipment.

The meter consists of two units, the main meter box itself, and the sampling line in a small metal box. The two units are connected by a length of cable with 5 pin DIN connectors in the middle. Presumably in Japan, a number of sampling lines are available to suit different frequencies.

The sampling line is a small but hefty metal box with N-type connectors at each end. In addition to the connecting lead for the meter, there is a power lead to connect to a 12 volt

The Hansen SWR meter for UHF was originally designed for the Japanese 903-905MHz band.



supply. The 12 volt supply is not essential to the operation of the meter, but provides dial illumination and also activates a small red 'on air' LED when transmitting.

The meter itself is a small plastic box with a large clear scale on the meter. In addition to SWR measurement, the meter is also capable of measuring power in two ranges, 0 to 7.5 watts, and 0 to 15 watts. SWR measurement is carried out by pressing the 'Cal' button, adjusting the meter for full scale deflection when transmitting, then switching to measure and transmitting again.

The power scales chosen are clearly intended for Japan. On the 7.5 watt scale there is a large red 5 watt mark, the legal limit in Japan, and of course the UK limit of 8 watts is just off the scale! The 15 watt range is better for us, but is still not ideal.

## Meter Accuracy

We checked the meter for accuracy by first of all running it into a straight 50 ohm resistive load and measuring the SWR. This should of course give a reading of 1:1. The actual result was 1.1:1. This is close enough for practical purposes. Next we deliberately mis-terminated the line with two 50 ohm loads in parallel. This gives a load of 25 ohms and should produce a reading of 2:1. The actual reading obtained was 2.3:1.

In the power ranges, the meter was accurate to within 0.5 of a watt on the 7.5 watt scale, but was over 1 watt adrift on the 15 watt scale. In effect, measuring a transmitter on the two scales gave different results!

We also measured the SWR of the line with the Hansen in circuit. (Some cheap 27 MHz meters are notorious for actually increasing the SWR when in circuit!). The result was very good, there being no measurable increase in SWR with the meter in circuit.

To summarise then, the Hansen SWR meter is a reasonably effective piece of test equipment. The calibration of our sample was not perfect, but was adequate. The scaling of the power ranges is not ideal for the UK band. The separate sampling line may be an advantage in some installations, and the dial is large, clear and unambiguous. It causes no measurable disturbance to the line when in circuit.

## The Nevada Range

The Nevada SWR meter is specifically designed for the UK 934MHz band. It is a single hefty metal box with N-type connectors on the rear. A 12 volt power lead is provided to allow the dial to be illuminated if desired. The meter itself is a twin needle device, the black needle indicating forward power, and the red needle reflected power. A



The Nevada SWR meter from Telecomms. It has been designed for the UK market and also measures power.

small concentric knob to the right of the meter acts as a function switch (outer) and SWR calibrate adjustment (inner).

In addition to the basic SWR function, the meter will also measure power. The scale has two ranges, 0 to 10 watts (ideal for the UK legal limits) and 0 to 50 watts(!).

Running into a 50 ohm load the meter indicated an accurate 1:1 SWR. Running into a 25 ohm load the meter indicated 1.9:1 (should be 2:1). Both these results indicate that the calibration and balance of the meter is to a commendably high standard.

On the 10 watt scale, the power reading was accurate to within 0.25 watts. Not having a 50 watt source of 934 MHz, it was not possible to check the accuracy of the 50 watt scale! However, an 8 watt input provided a satisfactory indication!

As with the Hansen, we checked to see if inserting the Nevada into a transmission line upset the SWR in that line. The SWR increased by a barely perceptible amount to about 1.05:1. This is extremely good.

Summarising, the Nevada SWR meter is accurate, well constructed and simple to use. If we have a criticism, it is that the SWR scales on the meter are rather confusing, there being two of them! However, for a standard 8 watt transmitter, it appears that the uppermost scale is the correct one.

## Pre-amplifier

The final item for this month is a masthead pre-amp for 934MHz. This is a device that boosts an incoming signal at the antenna before feeding it down the co-ax to the receiver. At UHF

a significant amount of signal can be lost in a long cable run. The Nevada Pre-amp is designed to be bolted onto the mast under the antenna and connected to it by a short piece of low loss co-ax. It is a heftily constructed piece of gear and is fitted with N-type connectors.

The pre-amp requires a 12 volt supply and this would normally be provided from the transceiver power supply. A switch and plenty of supply lead is provided. The supply lead is a single piece of wire that would normally be wrapped loosely round the co-ax going up to the antenna. The negative return is via the co-ax outer.

The pre-amp contains an RF sensing circuit that bypasses the pre amp when it detects a significant amount of RF coming up the co-ax cable, thus having no effect on the transmitted signal. It is capable of handling up to 50 watts safely. In addition, the pre-amp goes to the bypass mode if the power is removed for whatever reason. It can therefore be switched out for local copies, and brought into use for pulling in distant signals.

The performance figures claimed are quite impressive. The gain is at least 18 db (nearly 100 times) and the noise figure better than 0.8 dB (anything better than 1 dB is very good indeed!).

How it will stand up to swamping and cross-mod problems remains to be seen. However, the use of a Gallium Arsenide FET (Ga-As fet) should help here, and in any case it can be remotely switched out when not required.

Full field tests will have to wait until my UHF antenna installation is improved a bit, but I am certainly looking forward to putting it through its paces.

# AUTOSCAN 5000

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

CB  
MAGAZINE  
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5000

# TOP RIG OF THE YEAR

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#### What CB Magazine said in April...

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

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

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

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

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

#### ... and in June.

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

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

#### From the mailbag

J.W. from Sheffield

"... I must congratulate you on your Magpie. I did not think it possible to obtain anything of this standard. It has cut out bleed-over which here in Sheffield is one big problem..."

S.A.M. from Suffolk

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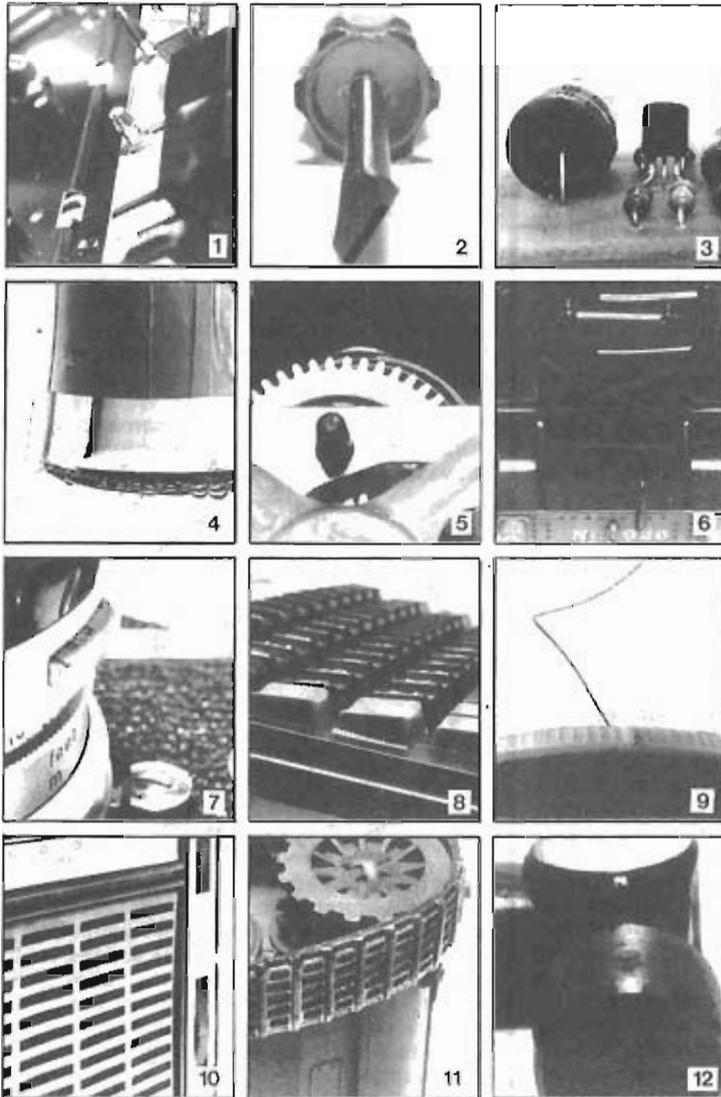
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**Fourth prize** — Minolta X700 camera with a 50mm lens and flashgun, worth £280.



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Just identify the twelve objects pictured opposite....

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09

**David Harding, "Raydah" to his friends, Chief Controller of Kent Coast Monitors, tells the story of a group who have learned how to make Channel Nine reliable and effective.**

# WHERE NINE WORKS

**F**irst of all, let us clear up a few misconceptions. What exactly is a monitor? He is an ordinary breaker who listens to channel nine. He has one function only: to receive distress calls from breakers and pass them on to the appropriate destination. He is not an official, he has no authority, and his status is that of a relay base and no more. Provided he is prepared to learn how to use common sense in a crisis, this is all that is required of him.

In these rather troubled times, when most breakers are moaning about how useless CB is, how the channels are full of nothing but wallies and how the emergency channel is a hopeless waste of time, it may provide a note of optimism for you to hear about a small monitoring group which has quietly been running channel nine in East Kent for the past two years with unbroken success.

This is Kent Coast Monitors, based at Kingsdown, just north of Dover. We cover the whole of the eastern half of Kent, using about five hundred monitors. It is split into nine areas, which we define as being a group of monitors in comfortable radio range. They each have an Area Controller who runs his patch as he thinks best. Within each area are main centres, usually the large towns, which are run by seventeen Local Controllers.

All the controllers meet once a month at Headquarters to share ideas and problems and co-ordinate policy; it also gives the chance to up-date monitor lists and collect publications. The meetings are chaired by the Chief Controller, assisted by the Deputy Controller, and there is also a Secretary and Treasurer.

## Incompatible Mixture

We have found that our success has derived from four main principles. (1) Recruiting monitors who are chosen with care (2) Running the group democratically with guide-lines rather than rigid rules (3) Keeping regular communication with all the members of the group (4) Treating everyone on channel nine, including the wallies,

with the utmost courtesy. Monitoring is a voluntary occupation and to get the best from a volunteer, he must be treated with consideration and respect.

To develop these points in order. Some organisations tend to recruit all and sundry and often finish with an incompatible mixture of wallies, dictators, and a few really good people. We are more careful; we only want those whose aim is the same as ours. That is, to serve the public when they require help. Anyone who is just



after another badge, or imagines that being a monitor gives you some sort of status over other breakers, or fancies himself playing amateur heroics, does not interest us. In fact, the best monitors we have on our books are retired or house-bound folks who want to contribute something to the community.

Once a breaker volunteers, a controller will pay him a visit so that he can assess his potential and get to know him (or her) personally. If recruited, the new monitor is given a membership card and about nine pages of instructions to enable him to cope with most types of distress calls. He will also be given log sheets. We do not insist that everything he does is logged (though some like to do this for their own satisfaction) but we do require full details of any actual emergency calls dealt with. If he wants, the monitor can buy a car sticker, a cloth anorak badge, a lapel badge, or even QSL cards.

Unlike some monitoring groups, we do not ask our members to pay a subscription. This is largely thanks to

generous donations from CB clubs locally, who show their appreciation for our work by assisting us to finance it. We are also different to some organisations who are not content with purely monitoring but who stray into other fields such as first aid, paramedics, cliff rescue and so on.

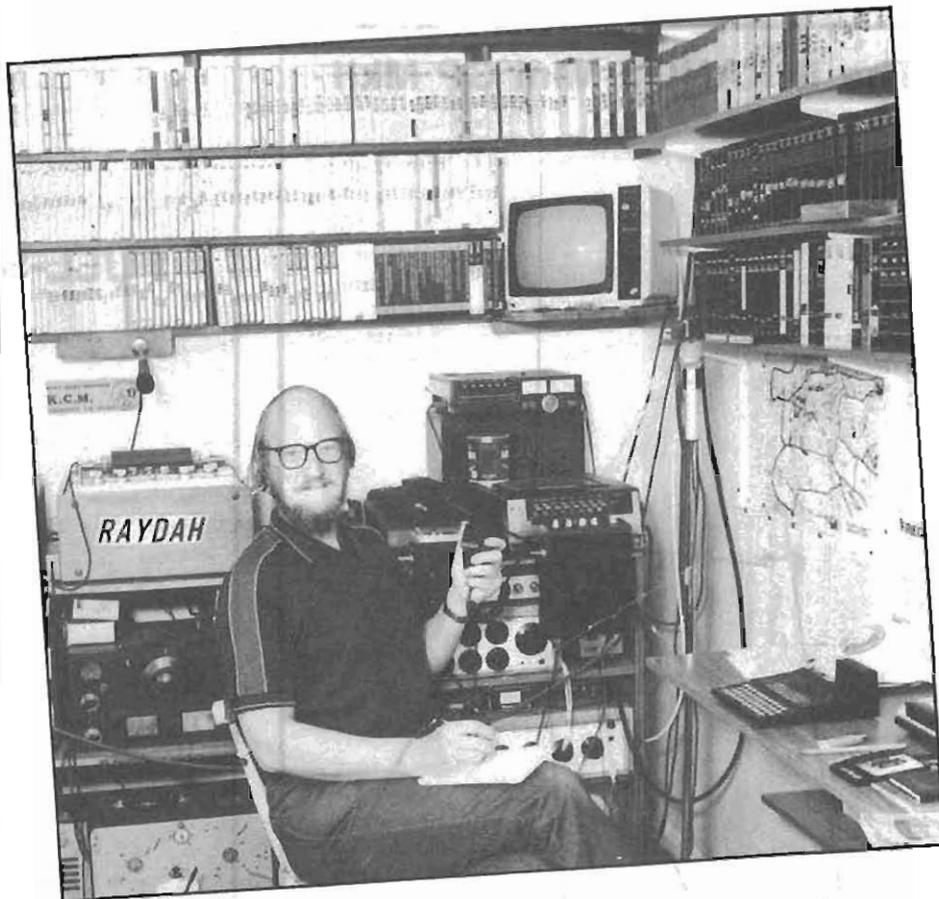
Our view is that this is a clear case for handling any problem over to the professionals. We do, however, have two breakdown garages who handle work on our behalf. We also shun the use of special uniforms, as we feel this appears to give a monitor an air of authority to which he has no right.

## No Rotas

We do not draw up rigid rotas of monitoring hours. Our members are loyal to each other and to the group, because they are all aiming in the same direction. Each individual is left to decide how much time he is able to put in, which often results in some monitors being on all day, and in some case, all night as well. We suggest that a monitor keeps his rig on 9 all the time he is at home, except when he is modulating with his friends. Mine is on now as I write, and has not been switched off for the past forty-eight hours!

Lack of communication has been a conspicuous failing in some of the larger monitoring groups. We arrange monthly eyeballs for monitors in some areas, or else monitors arrange to meet their controller at one of the CB clubs. In addition, we run a weekly news bulletin which is transmitted from five locations. It lasts about twenty minutes and up-dates monitors on forthcoming events, advises them of any decisions taken by controllers, gives local information such as road works, late chemists, stolen vehicles, gale warnings, all-night garages, etc., usually contains a short contribution from the police, ambulance, fire or coastguard services and, in some areas, concludes with a discussion amongst monitors on channel about any local problems or ideas they might want to share. We are very aware that our news puts two channels out of action for breakers—the nine and the one we are on, which is usually thirty—so we try to keep it short and, by linking the transmitters by telephone, are able to relay the news simultaneously across the county. After the news, a check is taken of all who have heard it, so we know anyone who has missed anything vital. Every few months, the monitor list is revised, and anyone who has not heard for some time is contacted personally.

One of the watchwords is "courtesy". A hysterical breaker putting out at 10-33 will be treated with kindness and sympathy; anyone missing the nine by accident will be spoken to politely; and as for wallies, they are dealt with pleasantly, and if they are plainly looking for trouble, they are ignored. They soon go away when they think they have lost their audience!



David Harding at work in the control room of Kent Coast Monitors. This group cover East Kent, using 500 monitors.

## Respect

The result is that breakers in East Kent treat channel 9 with equal respect, and for the most part of the day, it stays completely clear save for monitors signing on and off. This practice has sometimes been questioned as being really necessary, and we have come to the conclusion that it is. It gives breakers confidence to hear someone there, and it is also reassuring to a monitor in an isolated location to know he is not alone. The only exception is during the night, where we observe radio silence between midnight and 7 a.m. to allow some of us to sleep with a rig on by our bedside.

Over the whole network, we handle something like thirty or forty distress calls a week and, over the time we have been operating, have built up an excellent rapport with the emergency services. Occasionally the police or the coastguard approach us to help them, particularly in the case of mobile or marine search and on many occasions we have been able to provide the vital clue which led to a successful conclusion.

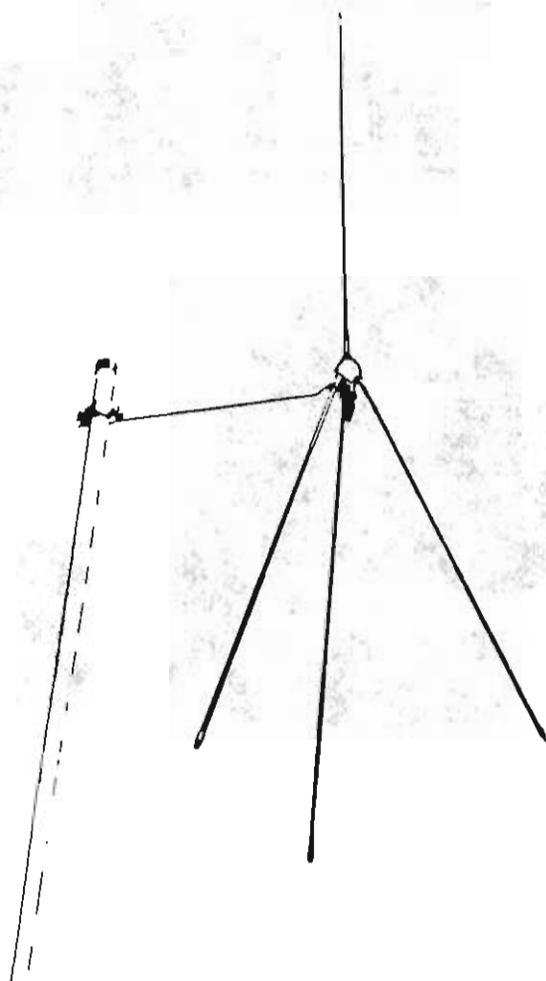
We work alongside associated groups in mutual co-operation—in particular with Folkestone Monitors, Echo-Kilo based near Tenterden,

REACT in South Essex, Mega Neuf based in Boulogne and monitoring along the French coast opposite us, and RAYNET, the ham radio emergency network.

We have often been asked for advice from monitoring groups around the country, and had offers to expand. However, although we do intend to cover the whole of Kent in time, we do not wish to spread any further. Monitoring is a local business on CB, and we consider that some of the failures on a national level have proved the point. The moment an emergency involves another county, then it is up to the police and not breakers to solve it.

To go to some of our large cities, particularly London, and hear the appalling mess on channel nine is very sad. To realise that, to a large extent the reason for it is inept handling by monitors, makes it a tragedy. One can only hope that one day the public will realise that CB is not just a trivial plaything for bored teenagers. It is probably the most significant means of public communication since the telephone and, used properly, is of incalculable value to mobiles and those who do not have a 'phone near at hand. That it works if handled properly can be proved to anyone who pays a visit to East Kent.

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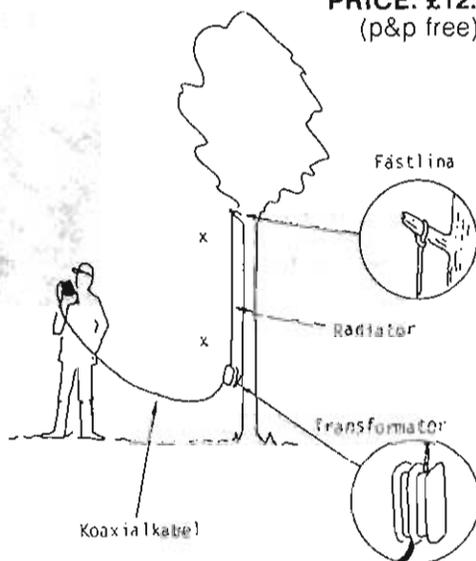
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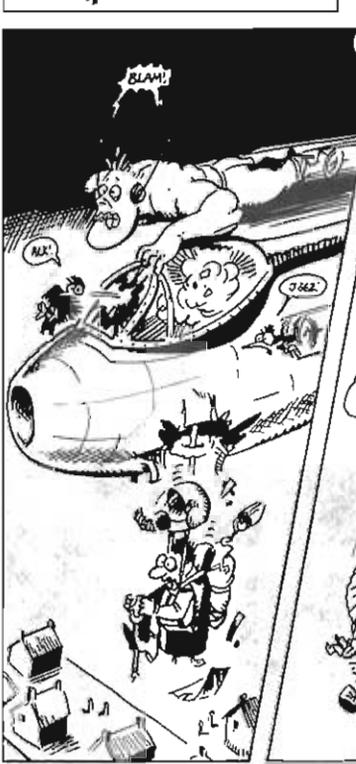


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# TWONG





# SMART A

**S.A. takes time out from answering his mail to offer more detailed explanations of some of the more common problems encountered by our readers.**

**A**lmost the hardest part of dealing with readers' queries is the fact that we are constantly trying to fit a gallon into a pint pot, with the inevitable result that someone, usually quite a few someones, do not get the answer they had hoped for. Neither does space always permit us to offer as detailed an answer as we would like. So, this month we will take a long, hard look at some of the more common questions that crop up in almost every postbag.

## Standing Wave Ratio

Many breakers seem to place far too much trust in the reading from an SWR meter in the apparent belief that a low reading represents some magical formula for efficient transmission, when in reality the readings obtained from most SWR meters should be treated with a healthy degree of scepticism. For a start there is no such thing as 'reflected' power. The true purpose of an SWR meter is to measure the electrical current being delivered to the aerial via the conductor of the coaxial feeder cable and to then compare it with the amount of current leaking onto the braid. Of course it is advisable to minimise the amount of leakage, since the braid is not intended to transmit current and high feeder losses will result in a build up of heat at the power amplifier, as it attempts to dissipate the energy which it is unable to transmit. In order to protect the p.a. transistor from the worst effects of a heavy mismatch many of the more expensive rigs are designed so that the amount of power delivered to the p.a. is reduced in the event of a really high SWR.

Leaving the SWR meter permanently in line can be the direct cause of some cases of TVI. The diodes within the meter's circuitry will rectify current each time the microphone key is depressed, with potentially disastrous results to an tv receiver close enough to feel the full effect. The mere presence of an SWR meter in the line can also affect your transmissions. It can improve them or, more commonly, degrade them. When using a meter, you are measuring the current delivered along a given length of cable. Remove the meter and its connecting lead and you have instantly changed the feeder length and consequently the SWR itself. If you require proof of these observations then try a number of different meters with the same rig and aerial or a number of different length patch leads with the same meter and I will be most surprised if the reading does not vary every time.

I have heard many a breaker claim that an SWR value of 1.0 to 1 across all forty channels, but I am afraid that such a claim only makes me most suspicious of the accuracy of his meter. Generally speaking, the thicker the radiating element of an antenna, the wider the band of frequencies across which it will resonate, but since any aerial can only truly be said to be resonant at a single frequency and since each change of channel represents a change in frequency, it

**Standing wave ratio is a source of great confusion for many breakers and often causes unnecessary worry**



# ALEX SPECIAL

automatically follows that the value of SWR must change for each of the forty channels. Ideally you should achieve the lowest reading at channel 20 and the reading should then rise slightly, as each channel change takes you nearer to the band edges.

The lower the frequency in use, the longer the aerial must be in order to resonate at that frequency. When trimming an aerial by means of an SWR meter the correct procedure is to take readings at either end of the band and at the centre. If the reading at channel 1 is significantly lower than at channel 40 then the aerial is slightly too long for the higher channels and should be shortened until the readings at each band edge are roughly the same. Conversely, if you see a higher figure at channel 1, then the aerial is too short for operation at the lower channels and requires lengthening until the next reading is obtained round about channel 20.

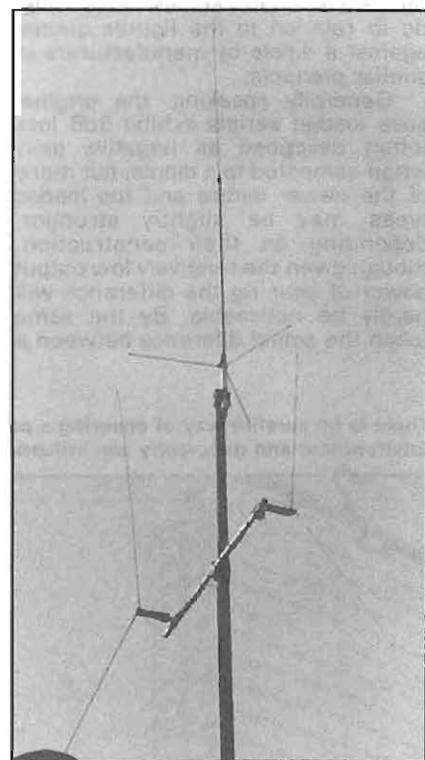
Speaking for myself, I never use an SWR meter when setting up a station, preferring instead to use a field strength meter and to tune for the maximum possible r.f. energy from the antenna. Experience has taught me that this is not always compatible with the lowest obtainable SWR. Somewhat similar to the S meter on a rig, a field strength meter is a very basic receiver. The reading shown on the dial varies according to the micro-voltage applied to its aerial. The simple technique is to place a meter a few feet from the transmitting aerial and note the reading which is obtained when the mike is keyed. Then either shorten or lengthen the aerial with each successive transmission, in an attempt to increase the deflection of the meter. Assuming that you are altering the aerial in the right direction, the deflection will increase until you reach the point of maximum efficiency. Altering the aerial beyond this point will cause the deflection of the field strength meter to drop, at which point simply return the aerial to the point at which the signal caused

the maximum meter reading in order to obtain maximum r.f. output. In order to ensure that the aerial is radiating properly in all directions it is advisable to check the field strength at more than one point round the aerial, making sure to stay the same distance from the aerial itself in each position.

## Gain

Item number two on our hit list has to be the question of antenna gain. What is gain and how do you check the gain of your aerial?

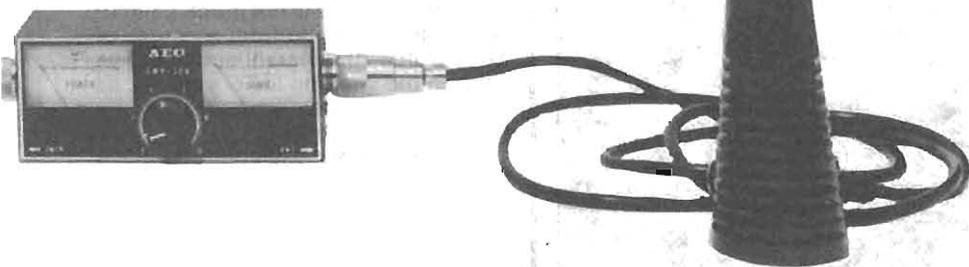
As the term suggests, gain is relative and requires a reference against which it may be measured. The usual unit of gain is the decibel (dB) and an explanation of its mathematical progression is necessary in order to understand the figures quoted by antenna manufacturers. Roughly speaking, each 3dB gain represents a doubling of the effective power being radiated. Because no radio transmitter can be 100% efficient let us assume that a rig having a nominal output of four watts and transmitting into a legal antenna has an effective radiated power of two watts. Replacing the legal antenna with one exhibiting 3dB gain over the one which it replaced would give an e.r.p. of four watts, whilst one which exhibited 6dB gain (again in relation to our original aerial), would offer an e.r.p. of 8 watts. To take the equation one stage further, a gain in relation to our legal antenna of 9dB would provide an e.r.p. of 16 watts. Here I should point out that the only point at



Quoting 'gain' for an antenna is often meaningless unless a reference point is also given

which this equation is absolutely accurate is 10dB, which represents exactly a tenfold increase in power, so that to return to our original e.r.p. figure of two watts, 10dB gain would provide an e.r.p. of 20 watts and a gain of 100dB would result in a staggering 200 watts e.r.p.

The most common reference antenna against which gain is measured is the half-wave dipole and when buying a new antenna you should check the manufacturer's description of its gain very carefully. For example, if an aerial exhibits 3dB gain over a dipole it should be described as having 3dBd. To simply describe an aerial as having 3dB gain is utterly meaningless. For all you know, it may have been measured against three feet of wet string. Many antennas, particularly those from Europe, are described as exhibiting XdBi, a description which I treat with the utmost caution, since it informs me that the aerial shows a given degree of gain relative to the e.r.p. exhibited by an isotropic radiator. Sounds flash, doesn't it? An isotropic radiator is a theoretical antenna, hanging in free space, entirely without physical support and sustained, one



presumes, entirely by willpower. Since no-one has yet explained to me exactly how to construct such an antenna and since, as far as I am aware, every aerial, including our original reference, the dipole, requires some form of support and since the close proximity of any physical object will show some effect on the characteristics of an antenna, I am inclined to view any figure stated in dBi with scepticism. Especially since they are invariably somewhat optimistic in relation to the figures quoted against a dipole by manufacturers of similar products.

Generally speaking, the original base loaded aerials exhibit 3dB loss (often described as negative gain) when compared to a dipole, but many of the newer centre and top loaded types may be slightly stronger, depending on their construction, though given the relatively low output power of your rig the difference will hardly be noticeable. By the same token the actual difference between a

half-wave and a 5/8th wave antenna is so small that the 5/8th wave may be said to exhibit zero gain.

Although reputable British antenna manufacturers are pretty meticulous in their measurements and descriptions I have seen some really wild figures claimed for antennas from less scrupulous sources and I am willing to bet that the figures printed on many a header card would not stand the close scrutiny of a Trading Standards Officer.

### **DXing and the question of range.**

Another question which seems to preoccupy many people is that of how to get the best possible range out of their station and I am afraid that there is no sure-fire formula for success. One of the main characteristics of FM is the fact that the strongest signal 'captures' the frequency, so that even if you are calling a station only two miles away, you will not be heard if he

is talking to someone only a mile away.

On a clear channel, range is largely dictated by the height of your antenna in relation to the surrounding geography and by atmospheric conditions. There are two paths associated with hf transmissions; ground and sky wave. Local copies (up to 10 or 12 miles) are obtained by means of ground wave and, since radio waves normally travel in a straight line the effective range of a ground wave signal is dictated by either the horizon or any intervening mass, such as a range of hills. Increasing the height of the antenna will improve range in most cases, simply because the antenna CAN then 'see' further, but the addition of a burner will do nothing to increase ground range, simply because no matter how much power you pour out the signal path will not bend and, once it has passed the horizon, will shoot off into space.

The range obtainable via sky wave is a totally different matter. Here you are relying on the fact that under certain atmospheric conditions your signal will be reflected by the ionosphere in exactly the same way that a mirror reflects light. At 27MHz. this type of propagation is most unreliable, since conditions in the ionosphere can vary from one moment to the next, causing severe distortions in the signal path, to the extent that you have no control over where the signal comes back to earth.

Sky wave is also subject to the activity of the sun. During periods of high sunspot activity, which occur about every eleven years, there is a far greater likelihood of 27MHz. signals being reflected to earth, but as we are currently in the middle of such an eleven year cycle and sunspot activity is very low, the likelihood of real DX are considerably diminished.

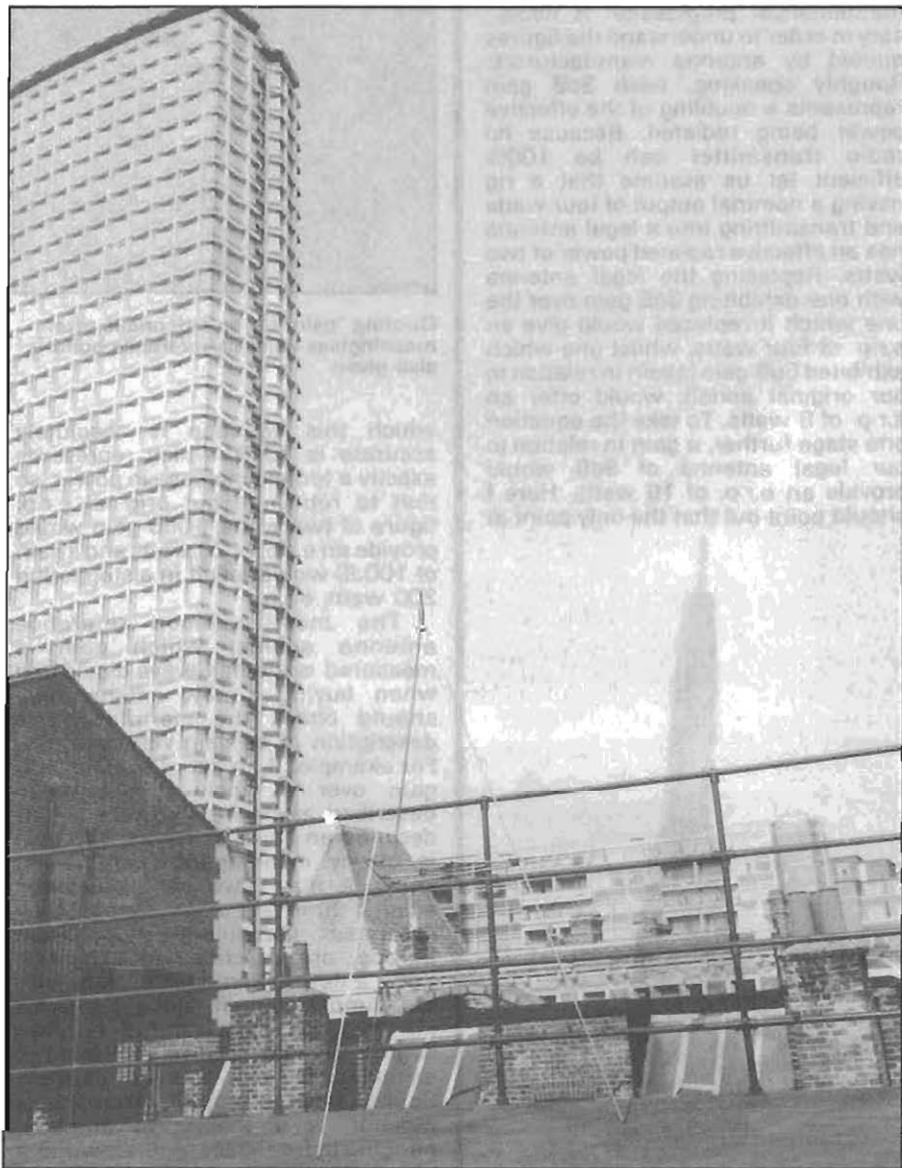
Misty conditions can sometimes give rise to some unexpected copies. Differences in the temperature of layers of air can cause a signal to become trapped in a narrow corridor or 'duct', where it will bounce back and forth until it reaches the end of the duct, at which point it will return to Earth, often very much further away than you had expected.

Power and compression mikes might add that bit of beef to your audio, making it intelligible over a slightly greater distance. What they most certainly will not do is increase the power output of your transmitter. Neither is there much advantage to be gained from rig 'tweaking'. Even a tenfold increase in power will only add about one 'S' point to your signal strength, so there is not much point in hoping for a miracle from a couple of extra watts. All you will achieve is to shorten the working life of your rig, as you place a greater **strain on** its working components.

I hope these explanations have helped to clear up a few basic misunderstandings. Keep the letters coming. We will do our best to answer as many as space permits.

S.A.

**There is no surefire way of ensuring a particular range from your CB equipment. Environment and geography can influence your signal.**



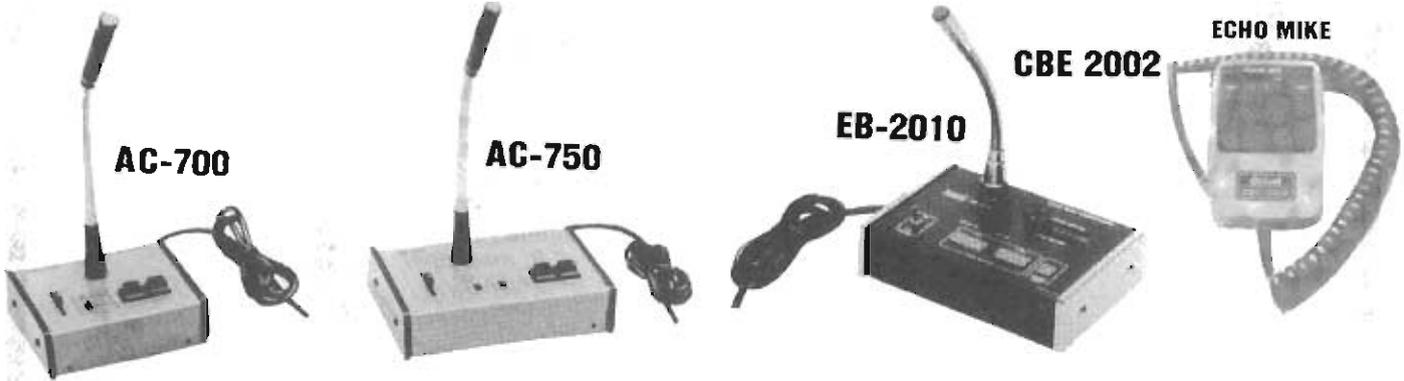


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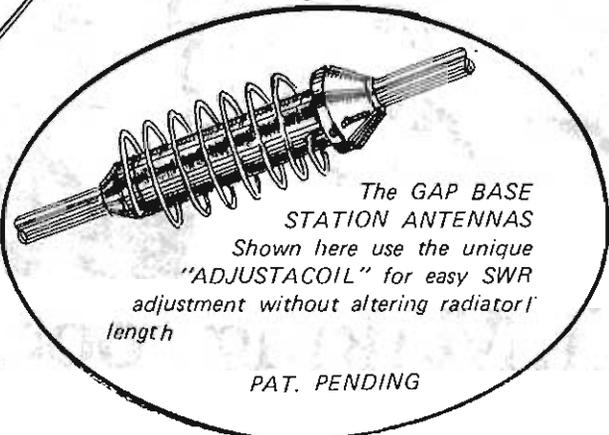
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# COMMUNICATION THE

# QSL

# WAY

**David Shepherdson, our resident QSL expert, shows the first Currie four part card and catches up with all the news.**

**T**his is getting to be a habit, having to start off with corrections of errors each time! In the August edition someone lost a zero and the Metro City Club's one thousandth member was called the hundredth! This time the proof reader's heading for the rack in the Hemel Hempstead cellars!

One of my mistakes was that I called Mark (Earlybird) of Brighton a printer. Sorry Mark, I got the wrong impression. As he was very quick to point out, Mark is a QSL artist, and has a friend in Brighton who is a printer!

News from Alan (King Crimson) of an offer to anyone who wants the use of a PO Box (for letters, not parcels) without paying £32.50. Alan has obtained a PO Box and if anyone is interested in sharing this, the cost is £1 per year plus a steady supply of SASE's. (Self Addressed Stamped Envelopes). Any monies over the £32.50 will go to charity, so it's a good cause too! If enough interest is shown, Alan will obtain special QSL cards for sale to users. For details, or to reserve your place in the box, write to Alan enclosing a SASE for reply. Alan has also made a very generous offer in that any member of the Dragonrider or Cutty Sark QSL Clubs can obtain use of the box for 50p per year (+ SASEs), again, write to Alan direct for details, please.

Wendy Campion asks me to let anyone waiting for a return QSL from her that due to a postal strike in her area earlier this year, she is behind with her post.

In my area there seems to be a growth of Ensign Cards. This week I've had some from Mark (Golden Oatie) who has a card which is up to Ensign's usual standard apart from a slight mistake with the address, some from Ethel (Snowflake) using silver foil on various cards to great effect and a beautiful set from Christina (Lucky Lady) of Leeds. Christina QSL's 100%, as do her two daughters, Measles and

Footstool. I was lucky enough to meet Christina last weekend and was made very welcome. Thanks Christina. Going further afield, but still with Ensign Cards, a set from Ken (Nuts & Bolts) and Maureen (Wire Lady) of Wales, which came with a warning! If you intend to visit a club which is a fair distance from you, may I suggest that you try to make contact somehow first, just to make sure that someone will be there. Ken and Maureen set off recently on a 200 mile trip to visit a club they had just joined which had issued an invitation to visit to find only blank looks and nobody around. They were, quite naturally, upset over their wasted journey and ask me to warn others about just setting off without checking first. Okay, back to the Ensign cards. An unusual one from Kath (Brazil Nut) of Warley, in many colours and a terrific card from Ann (Devil Woman) of Stornoway. Having met Ann at Easter I'm sure she ain't the "Wicked Witch of the North"! More on Ann later! For anyone wanting details on Ensign cards, the only info I have is a phone number on the back of them, 0530 415730.

A cry for help! from Cathy Jones (Pontoon) of Nottingham. She says thanks to all who QSLed her recently, however, not everyone has received a reply! This is because while she was on holiday during June her 'rather large' dog ate some! That'll teach you to leave it behind whilst you go gallivanting off. Cathy! So if you haven't recently a return from Cathy, please drop her another QSL so she can send you yours.

Right, a run through on some clubs, then back to the names! The Britannia QSL Club of Ticknall costs 5 to 10 personal QSL cards and a SASE for your Britannia No, 1-4-1 swop on cards, Q code, tips for DXing, frequency chart, phonetic alphabet, club labels and envelope. A club stamp is available at £4.60 (UK) and can be made showing your Brit No & name. Contact Andrew (001) for details.

The Atlantic Breakers Club of Chesire (ABC), no connection to any other ABC Club, costs £6 and 10 signed and dated QSL Cards. In return you can expect your ABC No, ID and card, certificate, club stamp, exchange cards & invites, stickers, RST, Q & phonetic codes, club cloth badge, use of the P O Box and various other items. As mentioned last month, the ABC is holding a 'Hand Coloured QSL Card Competition'. This will run until 31st Dec, 1984 and the prizes are as follows:- 1st £10, 2nd £5 and 3rd £2. All in Premium Bonds. For each card sent in there is an entry fee of 25p and all monies will be donated to the charity of the winner's choice. All cards will be forwarded to the Ghost Rider Appeal, so please make them out to G.R.A. and give this your support.

I mentioned Earlybird earlier on, well he also runs the Firebird QSL Swap Club in addition to designing QSL cards. For £3, 10 QSL cards and a SASE you will receive your FB No, ID card, certificate, exchange cards & invites, 10 club cards, sew on patch, view cards, etc. Extras include a roster, mounted rubber stamp at £5 and club cards at £5 per 100, including postage.

A couple of newer clubs are the Golf Mike Bravo and Headache Control. The GMB, which stands for "Glasgow Miles Better" costs £3 with 5 or more QSL cards. You can expect your GMB Card, certificate, badge, car sticker, snapshots of Scotland, pen, pad, keyring, QSL tips & codes, swap

cards & invites. Also XYL/M free and free membership of the sister club, the Scottish Thistle. A great package. The Headache package consists of your unit number, ID card, an excellent wall certificate, rubber stamp (which measures 3" x 1½") souvenir of Northampton, club QSL cards, envelopes, exchange cards and invites, local info, Q code etc. All this for £5, 10 or more QSL cards and a souvenir of your area. (A spoon or similar).

A letter from Charlie (Jack Russell) who asks for a mention of his local DX/QSL club. (Okay Charlie, no sooner said etc.) It's the November Yankee DX Club of Harrogate, and costs £5, for which you get your NY No, club badge, 10 club cards and 1 years use of the PO Box. Afterwards it's £2.50 a year for the box. (See the bit about King Crimson). A change of address for the United Kingdom (Int) Radio Group. Arthur (1 UK 001) has passed the running of the Club over to Brian (1 UK 1162) in Devon. Application forms and details available from Brian upon receipt of a SASE. Another change is that of the Lima Whiskey DX-QSL Club. The address stays the same, but Steve (LW 01) has handed over to Frank (LW 62). Anyone who wishes to get in touch with Steve himself can do so at his home address.

As promised, news of Ann (Devil Woman) and the RDX. Ann is the charities organiser for the RDX and she asks for as many of your used stamps as you can spare, also any

foreign coins. All these go to the RNLI which is a very worthy cause. Ann has been voted the "RDXer of the Year, 1984." Well done Ann! You deserve it! I have also been told that the RDX now claims to be the largest DX-QSL Club in Scotland, with over 1200 members (anyone who disagrees with this should contact Dougie (RDX 001). Membership of the RDX is available for 5 QSL cards and a SASE.

More names. A nice package from Bill Haigh of Leeds, a descriptive card from Graham (Rembrandt) of Jarrow, a couple of 'Earlybird' designed cards from Doug (Lynch Pin) of Brighton and from Jim (Sunray) of Hove. A superb bumper bundle from the 'Campbell Clan' of Devon, and a mixed set of cards from Al (Black Falcon) of Newcastle. A request from Norman (Mystery Man) of Melton Mowbray who wants you to QSL him, David (Silver Surfer) of Malton promises to QSL 100% back to anyone who wants to QSL him. John (Black Shadow) of Bracknell sends a card with a superb souped-up bike on. Slim Jim and Delicious Dot of Leeds send a mixed set out including a great little 'comic' one. Kenneth MacLeod of Ma, USA asks me to pass his AD on to any shortwave listeners and QSLers, as he wishes to write to other SWLers around the world. Les (Rusty Dog) Downes of Chelmsford wants a mention and by this time he will have his new cards, so drop him a line and see what it's like. Steve (Beer Barrel) of St. Helens QSL's with various cards.



## QSL Addresses:-

- |                          |  |   |   |
|--------------------------|--|---|---|
| Atlantic Breakers Club   | PO Box 4, Manchester, Lancs M9 2GN, UK                   | Dragonrider One   | 3 Tarn Villas, Cowpasture Rd, Ilkley, LS29 8RH, UK      |
| Beamtower QSL Swap Club  | Gondel 18-03, NL-8243 BX Lelystad, Holland               | When writing to any QSL Club (or services for QSLers) always try to enclose a SASE to assist with a prompt reply. |   |
| Britannia QSL Club       | Brickyard Cottage, Main St, Ticknall, Derbys, DE7 1JF    | Services for QSLers: Currie (Printers)  | 89 Derwent St, Blackhill, Consett, Co Durham, DH8 8LT   |
| Firebirds QSL Club       | PO Box 9, Brighton, East Sussex, BN2 5HA, UK             | Earlybird (Design)  | PO Box 9, Brighton, East Sussex, BN2 5HA, UK            |
| Galaxy Group             | PO Box 14, Brighouse, West Yorkshire, HD6 2SE, UK        | Addresses for QSLers: Joy Aunt Sally  | 1 St Mary's Walk, Newton Flotman, Norwich, Norfolk, UK  |
| Golf Mike Bravo          | 51 Hathaway Lane G/L, Glasgow, Scotland, G20 8NG UK      | Peter Winchester Man  | TC47, PO Box 27, Norwich, NR6 7HU, UK                   |
| Headache Control         | PO Box 105, Northampton, NN3 1YY, UK                     | Norma Ghost Rider Appeal  | 38 Third St, South Moor, Co. Durham, DH9 7HA, UK        |
| Lima Whiskey DX QSL Club | PO Box 62, Waltham Cross, Hertfordshire, EN8 7RX, UK     | Wattie LB 154   | PO Box 11, Oban, Argyll, Scotland                       |
| November Yankee DX Club  | PO Box 14, Harrogate, North Yorkshire, UK                | Al & Eve Black Falcon   | 137 Elsdon Tower, Killingworth, Newcastle upon Tyne, UK |
| Romeo Delta X-ray        | 10 Wallace St, Rutherglen, Glasgow, G73 2SA              | Alan King Crimson   | PO Box 5, Hunstanton, Norfolk, PE36 5AU, UK             |
| Tie Fighter DX Group     | 31 Strathburn Gardens, Inverurie, Aberdeenshire, AB5 9RY | Mark Golden Oatie   | Cragg Hill Farm, Cragg Hill, Horsforth, LS18 4PE, Yorks |
| United Kingdom (INT) R G | PO Box 17, Barnstaple, Devon, EX32 8DR, UK               | Ethel Snowflake   | PO Box 1 W 14, Leeds, West Yorkshire, LS16 6RD, UK      |
| Zulu Whiskey Int'        | PO Box 14, Brighouse, West Yorkshire, HD6 2SE, UK        |   |   |



including a very nice club card. Dave and Julie of Hereford want a mention, as do the following, who all QSL with an assortment of Currie Cards; Matthew Kitchin (Stingray) of Gateshead, Iain (ESW 29) of Plymouth, John (Ziggy Stardust) of Cleveland and Terry (Flying Tiger 603) of Milton Keynes. Terry has a new type of card from Des Currie, it's the first four parter that Des has done and it has turned out very well indeed. Terry does however say

he will exchange for colour only cards. Are there any budding artists reading this? If so, Des Currie would like to hear from you! Des is looking for someone who has a good artistic streak and would like to consider designing a new series of Currie Cards. If you fancy a go at this, then drop Des a line with a couple of examples of your own work with a SASE and Des has promised me that he will give you a quick reply.

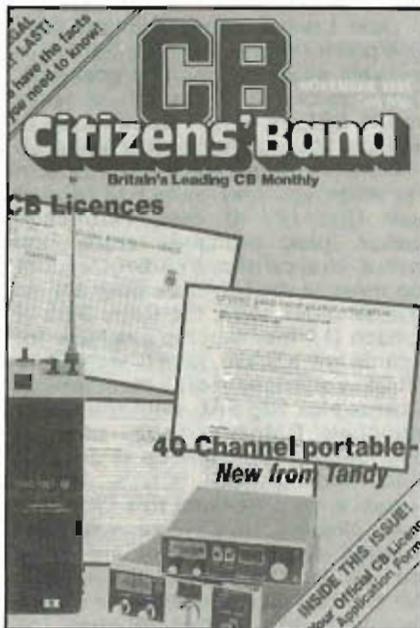
Just time to squeeze in the QSL club poll for this month. The figures in brackets show last months positions. Overseas Club of the month, as voted by UK QSLers, is the Beamtower of Holland. Membership costs £4 plus 15 or more of your personal QSL cards. In exchange you may expect to receive your Unit no, ID card, certificate, sticker, pen, exchange cards and invites, club cards and club roster. The top three in the UK this month are, in reverse order, third, the Cutty Sark of London (1), membership available for 5 cards and a SASE, joint first the Zulu Whiskey of Brighthouse (2), membership 5 cards plus 18p SAE, with the newly launched Galaxy Group, also of Brighthouse(-). Membership is £4 plus 5-10 personal QSL Cards. Nearly everyone who voted for this Club said how pleased they were with the package and I'm sure you would be too. As for the flop of the month, there's no clear winner (or loser, depending on your point of view) but one name is starting to show up regularly and I might drop that Lancashire club a line soon!

To vote, just jot down 3 UK clubs you like, one overseas and one club you wouldn't recommend to anyone, and send them to me. So that no one shouts cheat!, the Dragonriders Club to be exempt. If you'd like a mention, or run a club which might benefit from a mention, or have any comments or queries, then drop me a line. A SASE would be welcome if you want a reply.



### QSL Addresses

- |                                       |  |                                       |  |
|---------------------------------------|--|---------------------------------------|--|
| Christina <i>Lucky Lady</i>           | 2 Ashlea Gate, Leeds, West Yorkshire, LS13 2EE, UK                                 | John <i>Ziggy Stardust</i>            | PO Box 44, Stockton, Cleveland, TS18 4BS, UK                                   |
| Ken & Maureen <i>Nuts &amp; Bolts</i> | 9 Off Gerddi, Rhos, Wrexham Clywd, N. Wales, LL14 1BS                              | Norman <i>Mystery Man</i>             | MD CB 05, PO Box 5, Melton Mowbray, Leics, LE13 6LU, UK                        |
| Kath <i>Brazil Nut</i>                | PO Box 52, Oldbury, Warley, B69 2DB, UK  | John <i>Black Shadow</i>              | PO Box 61, Bracknell, Berks, RG12 1PW, UK                                      |
| Ann <i>Devil Woman</i>                | PO Box 5, Stornoway, Isle of Lewis, Scotland                                       | David <i>Silver Surler</i>            | Westfield, Rillington Fields, Scagglethorpe, Malton, N Yorkshire, YO17 8EB, UK |
| Cathy Jones <i>Pontoon</i>            | 16 Park Ave, Woodborough, Nottingham, NG14 6EB, UK                                 | Dennis <i>Slim Jim &amp; Del. Dot</i> | 52 Brookfield Gdns, Rodley, Leeds, W Yorkshire, LS13                           |
| Charlie <i>Jack Russell</i>           | 41 Ave Grove, Starbeck, Harrogate, N. Yorkshire, UK                                | Kenneth MacLeod                       | PO Box 4125, Westborough, MA 01581, USA  |
| Steve Burrows <i>LW 001</i>           | 230 St Cyprians Court, Holdbrook North, Weltham Cross, Hertsfordshire, EN8 7SH, UK | Les <i>Rusty Dog</i>                  | 164 Baddow Hall Crescent, Chelmsford, CM2 7BU, UK                              |
| Bill Haigh <i>Barnacle Bill</i>       | 28 Beacon Grove, Morley, Leeds, West Yorkshire, LS27 9HJ                           | Steve <i>Beer Barrel</i>              | PO Box 1, St Helens, Merseyside, WA11 9QG, UK                                  |
| Graham <i>Rembrandt</i>               | PO Box 1, Jarrow, Tyne & Wear, NE32 5XD, UK  | Dave & Julie <i>Bulkerman</i>         | PO Box 25, Hereford, UK  |
| Doug <i>Lynch pin</i>                 | PO Box 9, Brighton, East Sussex, BN2 5HA, UK                                       | Matthew Kitchin <i>Stingray</i>       | 12 Ashtrees Gdns, Low Fell, Gateshead, Tyne & Wear, NE9                        |
| Jim <i>Sunray</i>                     | School Bungalow, Laburnham Avenue, Hove, Sussex, UK                                | Iain <i>ESW 29</i>                    | PO Box 100, Plymouth, PL1 1AA, UK  |
| The Campbell Clan                     | 24 Elizabeth Road, Seaton, Devon, EX12 2DS, UK                                     | Terry <i>Flying Tiger 603</i>         | 32 Kercroft, 2 Mile Ash, Milton Keynes, Bucks, UK                              |
|                                       |  | Janet Perfect <i>Moscow Mule</i>      | Estate Cottage, Box Hill School, Mickleham, Nr. Dorking, Surrey, RH5 6EM, UK   |



We take a look back over the first three years of legal CB and talk to some of those who made it possible.

# THREE YEARS

When I think back over my six or seven years involvement in CB I sometimes find it hard to believe just how far we have come. Way back in the seventies we were a small group of enthusiasts fighting an outmoded law in the face of opposition from all quarters. So strong was the depth of feeling against CB in places that one M.P. even suggested that it would be dangerous to permit people to talk freely to each without official intervention. Fortunately wiser counsel than his prevailed and, after a long and often disappointing struggle the first British CB licences were issued on November 2nd 1981.

## Panic Stations

In those days it seemed that everybody wanted to be the first with a licence. A small but intrepid band of diehards even gathered in Trafalgar Square just before midnight on November 1st and a



James Bryant, Richard Town and Sir Patrick Wall, amongst others, at an early rally.

race developed to see who could get the first ever licence from the all-night Post Office, as Sunday became Monday. In the first couple of months after legalisation FM rigs were as rare as roasted snowballs, with dealers even prepared to fly the first batches in, secure in the knowledge that demand was so heavy that we were prepared to pay whatever it cost. There were those who claimed that they would stick with their old-style AM rigs despite legalisation but, in the main, breakers were tired of illegality and of looking over their shoulders every time they transmitted and the new legal service took off in a blaze of glory. Fortunes were made, some later lost, in those pioneering days. CB was no longer the prerogative of those who

were prepared to break the law and there were thousands out there, waiting for the opportunity to share the airwaves.

## The Club Scene

In some ways legalisation changed the face of CB as we had known it. The clubs which existed at that time had been formed with the dual intention of causing the law to be changed and offering the protection of the crowd to those who were already on air. Many found that legalisation had taken away their *raison d'être* and with it the bond which had resulted in memberships well into four figures and, as memberships declined, were forced to close their doors. Others, born out of the need to explore a new and technically strange hobby, were formed and it is they who carry the banner of CB today.

## Questions, Questions

Did we get it right? Would we have gone about things in the same way today? One man who has no illusions is Sir Patrick Wall, M.P. After almost three years of persuading first Parliament and then the Home Office, who at that time were responsible for all matters of radio regulation, Sir Patrick, who can truly claim the title "Father of British CB", assured me that he would do it all over again. "It was a question of strategy," he said. "The first battle was to convince people that the law was out of step with the needs of society. The next was to ensure that we were given a reasonable frequency allocation and the next to get government to call a spade a spade and accept the title "Citizens' Band", instead of some of the fancy alternatives they had proposed. Since then it has been a continuing series of minor skirmishes, as we worked firstly to bring about a set of operating rules, then to get them improved with, for instance, less severe restrictions on aerial types, a straightforward ban on the playing of music and the introduction of a minimum licensing age." A breaker himself, Sir Patrick expressed disappointment at the fact that, even after three years, there were those who were unprepared to accept the inevitability of an FM based system and that the original crusading bodies now appeared unable to exert the influence of their experience on both the breakers and the Government for the good of the service.

## Campaigners Views

We also took the opportunity to talk to some of the long-term CB campaigners and got some very interesting answers to our questions. Former Citizens Band Association

# RS AND BEYOND

President, James Bryant told us that in his opinion it had taken these three years for CB to settle down. "The craze days are finally over," he said, "and CB is only now becoming the really useful communication service we envisaged in the early days." In forming the CBA James was the first to rally public support for a legal system and said that despite initial difficulties he was, in general, well pleased with the way that legalisation had been accepted, though he was still very concerned that the unruly minority might do harm out of all proportion to their numbers unless appropriate action were taken against them without further delay.

British CB Council chairman Tony Bevington also had a word or two on the subject of abuse. "It should never have been allowed to happen in the first place," he told me. "All that was needed to ensure a clean, interference free CB service was a firm hand in the first few months after legalisation. Now I am not so sure that it can ever be wiped out. The breakers just seem to accept it and there appears to be no uniform policy to combat the problem." Tony was more optimistic about the move to a common European standard, believing that it offered the best hope for improved operating standards and conditions. One interesting suggestion from Tony was that of reciprocal licensing agreements between European countries once standardisation had been achieved.

Natcolcibar chairman, Brian Amos was less optimistic. "The original decisions were wrong," he said. "The Government was panicked into introducing a system it simply had not thought out and over which it now has no control. The only answer is a completely integrated European system, though how that is to be achieved is anybody's guess. Many European countries already enjoy greater freedom of choice than the present CEPT proposals would permit and I can not see them giving them up lightly." In considering the future of CB Brian felt considerable unease. "Unless somebody stands well back and takes a long hard look at the whole subject in a spirit of compromise CB has a very uncertain future," he said.

Given these conflicting views we asked the Government to comment. A spokesman told us that in their opinion CB did not take off on the scale predicted but has nevertheless become established as a substantial radio service, giving the general public access to two way radio for the first time. He also said that during its first three years it had fostered some excellent and very positive functions, along with its primary aim to provide a medium for general communications. The Government felt disappointed that what they consider simple rules are

regularly abused by a small minority, who seek to undermine the positive side of the hobby but are very hopeful for the future of the 934MHz. service in the light of the recent growth in interest, though they felt that it would be some time yet before the full potential of this service was realised.

When asked about moves toward European standardisation the spokesman voiced the opinion that a common service based on the CEPT proposals would be the next real change in the way CB was developed and pointed out the advantages to the user of being able to cross frontiers without the problems this can create at present. He also hinted that this might ultimately lead to an increased number of channels here in Britain.

On the subject of licence enforcement it was felt that the transfer of the Radio Investigation Service, together with recent changes in the law would combine to improve the situation and lead to a gradual increase in the effectiveness of future action. This view was echoed by unofficial sources who told us that although legalisation had not brought about a dramatic decrease in the number of interference complaints it had eased the problem by considerably easing relations between CB users and R.I.S. members.

## Where to, now?

Did we get it right? Obviously that is a very subjective question and it is a healthy sign that opinion is still divided. Only through continued debate will the CB service continue to mature. On one hand there are continuing calls for greater flexibility within the service, such as the introduction of licences for AM and SSB and on the other the conviction

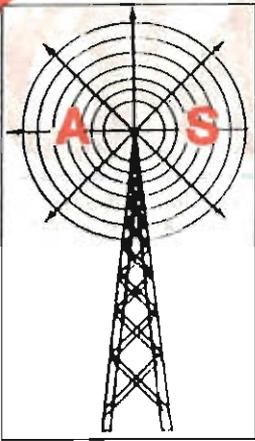
that to permit additional modes of operation within such a narrow band of frequencies would result in chaos, as each mode competed for supremacy. Generally speaking the move toward a common European system seems to be welcomed on all sides, though with varying degrees of reservation. It seems to me that before such a system can be really effective someone has to convince the Italians to play the game, otherwise we will end up with total chaos.

Enforcement must improve. We must look to a Government newly armed with the improvements of the Telecommunications Act to realise that they can not ignore such a large body of opinion for much longer without risking a serious deterioration in a number of communications media as well as the CB service. The danger is that standards throughout the spectrum will drop as serious CB enthusiasts lose patience and I believe that we are rapidly approaching the point of no return, beyond which it will be impossible to maintain a reasonable level of respect for a service which will play an increasingly important role in society. We offered the final word to one of Britain's most respected breakers, our founding editor, Rick Maybury, who will take the last word even when it is not offered. Rick told me "I have experienced a variety of emotions during my years of involvement with CB. Pride, in the way that people fought against unfair legislation. Hope, for the truly versatile communication medium which CB represents and despair, at the way that a few ignorant individuals consistently abuse the system. Let's hope that we can learn from the mistakes of the past. CB has a great future — if we want it!"

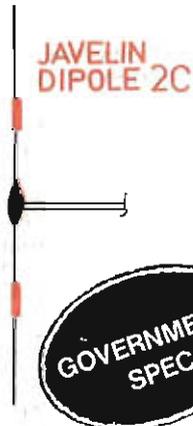
**CB**

Did we all make a mistake in not pointing out that we wanted AM as well as 27 MHz?





# THE NEW JAVELIN RANGE



**Features:**  
 Reduced length with better performance. Pole & bracket mountings. Pre SWR'd 1.3 to 1. Total length less than 11'. Power 500 watts. Spare parts available on all models. Prices on application.



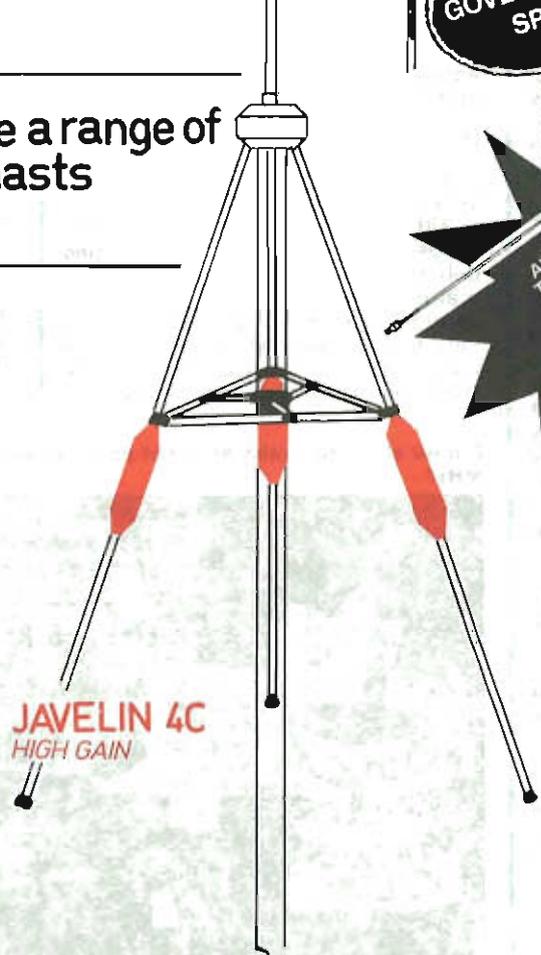
**SILVER ARROW MARK II LOADED COIL IN PLASTIC MOULD**  
 Pre-tuned home base legal antenna. Pre-tuned radiator for FM. SWR better than 1.3:1. Power handling 500W. Requires 1 1/4" dia. pole for mounting. Additional strengtheners to ground plane radials for improved stability in high winds. Main mast held not by one but three locking screws. Best and strongest legal base station aerial on the market today.



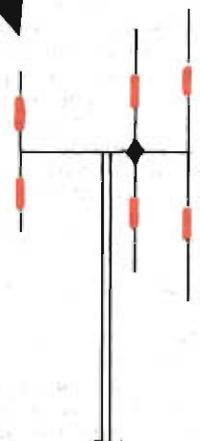
**NEW Silver Arrow Mark II.** The best legal aerial on the market today. With extra bracings for strength on the ground planes.

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**Features:**  
 Rigid construction using finest turned parts and welded tube. Inter-changeable centre loaded coils, and outer elements. Light weight, only 1 kg. Power handling 500 watts. SWR. 1.2 Nom +/- .2 to 1. Total height - 11'. Mounting - 1 1/4" Dia pole.



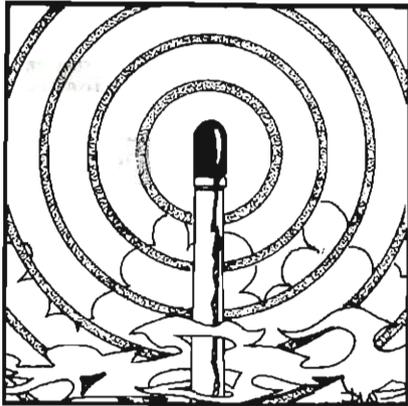
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**JAVELIN MINI BEAM**



# Antenna Review



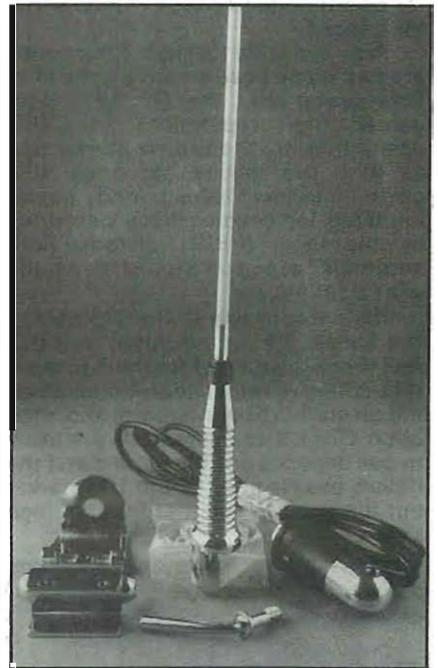
After a rather shaky introduction into the British CB market, CTE antennas are back on view in CB shops. We look at the range available and Brian Wright test two colourful base loaders.

# CTE'S BACK IN TOWN

In the land of spaghetti and large linear amplifiers, CTE are a force to be reckoned with. A CB equipment manufacturer and distributor, CTE are also involved in electronics and communications apart from CB — many of the Italian 'pirate' radio stations use CTE gear and the company are also specialists in constructional electronics kits.

Apart from their obvious popularity in Italy, CTE are also gaining strength

The bright blue marine antenna from CTE



The 'Brightone' series includes mounting brackets in a highly polished chrome

in Europe, particularly in France where CTE equipment is seen in almost all CB shops.

CTE antennas and accessories were also available in this country in the early days of legal British CB, and although the products gained a high reputation, the distributors left a little to be desired at times as they struggled with a subject they were unfamiliar with and a supply and spares problem.

Now CTE are back, under the shelter of Telecomms and a good range of antennas can now be found in CB shops and through the Telecomms mail order catalogue.

At the moment, all of the antennas are base loaded or continuously wound, and CTE have not taken advantage of the change in Government antenna specifications to introduce centre or top loaded varieties. In trying to make a range that is compatible with all European specifications, CTE have obviously settled on the most popular types that are likely to have broad appeal.

# The Italian Job

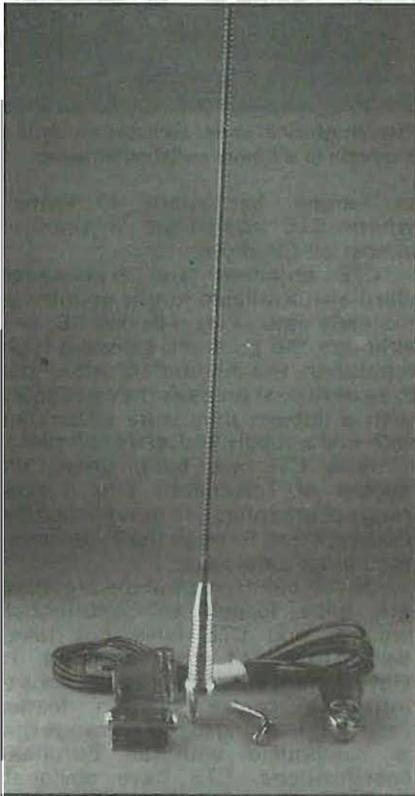
As far as mobile antennas are concerned, there are five types that are of immediate interest. Nice topical names for two of them, the Columbia and the Shuttle. The Columbia is continuously wound with a tuning tip at the top whilst the Shuttle is fibre glass and forms part of the CTE Brightone series.

Of startling colour and fulfilling a need in the British market is the Azure marine antenna. Intended for fibre glass boats, the Azure doesn't need a ground plane and could be useful for those with those two extremes in motoring, the Robin and the Scimitar! A very clear blue colour, it is easy to see why it is called Azure.

On test in this month's magazine are two base loaded antennas that are part of the Diamond series. Available in a range of base load colours with matching mag mounts, they are great for colour matching cars — how's that for image?

Also available through Telecomms are two home base antennas, the Mini Boomerang and the GP 127. Both gained high reputations in CTE's past move into the British market and as with the mobile antennas, CTE claim channel tuning and power handling far beyond those permitted by the legal British system. Both antennas are continuously wound with a tuning tip.

It's encouraging to see CTE back in the shops. It's an indication that CTE feel there is a market for them to tap in this country, rather than concentrating on our Euro counterparts and what other CTE CB equipment we are likely to see depends on Telecomms and the Italian assessment of the UK market but it's good to see that familiar logo back.



The Columbia

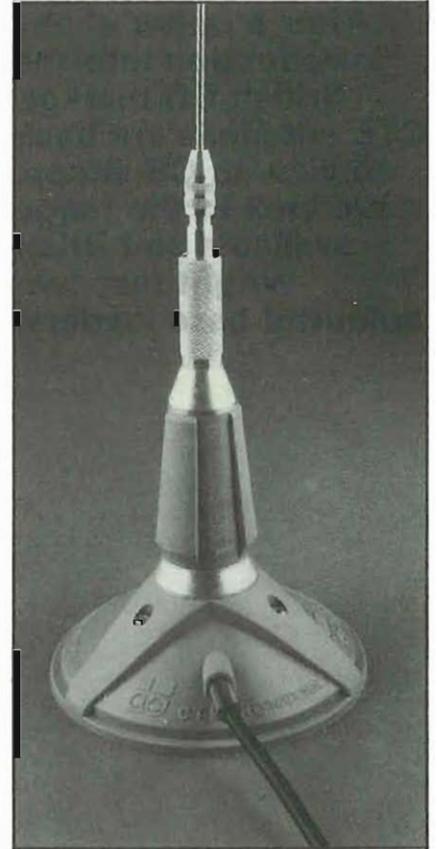
Despite the predictions of many pessimists, CB is still going strong in the UK, although of course, as more and more breakers come on channel the percentage of wallies is bound to increase. It is this increase in traffic on the airwaves coupled with the increase in the number of wallies that leads to the disenchantment of some breakers with CB. However there are thousands of pleasant breakers out there to talk to, when the wallies are off the air having their nappies changed. A good indication of the popularity of CB is the varied range of CB equipment and accessories available and the new equipment still being introduced. One of the areas which is very active in new products is antennas and this month we have tested two of a new range of antennas being supplied by Telecomms of Portsmouth. These are the CTE International 'Topaz' and 'Ruby'.

The Topaz and its smaller companion, the Ruby, look identical apart from the whip length and therefore we decided to test both of these antennas this month, although the test pattern opposite is for the larger Topaz.

We will start by describing these antennas from the top down. The 3mm diameter stainless whip on the Topaz is approximately 1.08 metres long and the 2mm diameter Ruby whip is approximately .75 metres long (we can only give the approximate length as the whip has to be adjusted for tuning as described later.) The rather unusual feature of these antennas is that the whip fits into a collet on the top of the loading coil, rather than the usual hole with a grub screw. The collet is part of an aluminium fitting protruding from the top of the plastic coil housing and allows easy adjustment of the whip, for tuning, without the need for any tool. The whip is simply moved up and down in the hole and secured in place by tightening a knurled nut by hand which squeezes the split collet sections against the whip to secure it in position.

The coil housing itself is a smart and modern plastic moulding, which tapers slightly and has four raised sections protruding along the length, providing a useful grip when screwing the antenna onto its mount. At the base of the 55mm long, 35mm diameter plastic housing is fixed an aluminium fitting which flares out acutely at its base and embodies the PL259 type mounting plug instead of the usual  $\frac{3}{8}$  UNF thread, a point worth noting as the appropriate type of mounting is required — of course. We were fortunate to be supplied with a matching magmount by Telecomms which really complemented the

antennas. The 117mm diameter magmount is designed in the same style and finish as the loading coil moulding and the flared out aluminium fitting at the base of the antennas blends the two shapes together, producing a very smooth and pleasing shape. Ample cable is supplied with the magmount complete with a PL259 plug fitted. The antenna coil housings and the magmounts can be supplied in five matching colours — blue, red, grey, black and sage green, for breakers who wish to match their car colour or who just have a preference



The Topaz and Ruby have matching magmounts for colour co-ordination

for a particular colour. The magmount is quite powerful and although obviously designed for this range of antennas would be suitable for most other antennas requiring an SO259 type fitting, including centre and top loaded units unless they are extremely top heavy.

Adjustment for tuning on both antennas is by slackening the collet described above and sliding the whip up and down. This is where we encountered a rather annoying problem. We think that as these antennas are obviously imports, they were originally made for the AM frequencies and judging by the amount that we had to remove from

the whip, they would probably tune to the 'low' AM channels. The SWR on both the Topaz and the Ruby was over 3:1 on all channels with the whip as supplied. I can't remember how many times that we removed the whips to chop a lump off of the end, but I do remember getting a little fed up and wondering why manufacturers can't either get the length within the adjustment range, or in the case of imports, for the supplier to give some indication of how much to remove as a start! I am sure many breakers are a bit nervous that they will remove too much and ruin the newly purchased antenna. However we stuck with it and finally arrived at 1.3:1 to 1.6:1 for the Ruby and a fairly steady 1.4:1 across the band for the longer Topaz.

At last we set out on test and were quite surprised at the performance of the Topaz, for although it is the longer of the two antennas it is only 1.2 metres overall and many of the previously tested base antennas with a similar performance have had a 1.5 metre whip plus coil. The signal held up quite well without fluctuating very much at long range, which is unusual for a medium length antenna when passing objects while mobile. When comparative checks were made with the shorter Ruby antenna, this too worked remarkably well for its size and contact was just possible at the outer limits of our test route. Signals with the Ruby were generally about two S points down between the S5 and S9 points on our test pattern for the Topaz and only around one S point down (S2) at the S3 point. We should point out however that we would normally consider a short antenna such as the Ruby to be roof mounted and to test roof mounted, but as we test medium to large antennas, such as the Topaz, on the boat, our comparison test was performed with the Ruby boat mounted. We would therefore expect the Ruby (or any other antenna) to perform much better on the roof.

In conclusion we would consider both of these antennas to be of a standard of construction and to have a very smart and pleasing appearance, especially if fitted to the purpose made magmount. The performance for the Topaz is above average for a base loaded antenna of any length and considering its length, is very good. The Ruby also was quite good for its size and would be a useful antenna for roof mounting. Both antennas are priced at £14.95 and, as such, are reasonably good value considering the quality of construction. It does seem that you don't get such value for money with short antennas when, basically, the whip is a little shorter. The magmount is again priced at £14.95 and seemed a little expensive, even for a smart one such as this. But it is worth having the correct magmount for these antennas as they go together so well to make a good looking unit.

A similar antenna, to the Topaz, for performance would be the 1.5 metre long, base loaded Shuttle.

Our thanks to Telecomms of Portsmouth for supplying the antennas and the magmount.

# ANTENNA REVIEW DATA PANEL

## SPECIFICATIONS

Model TOPAZ

Type BASE LOADED MOBILE

Length 1.2 metre overall

Frequency Range 26-27MHz

Max Power Handling —

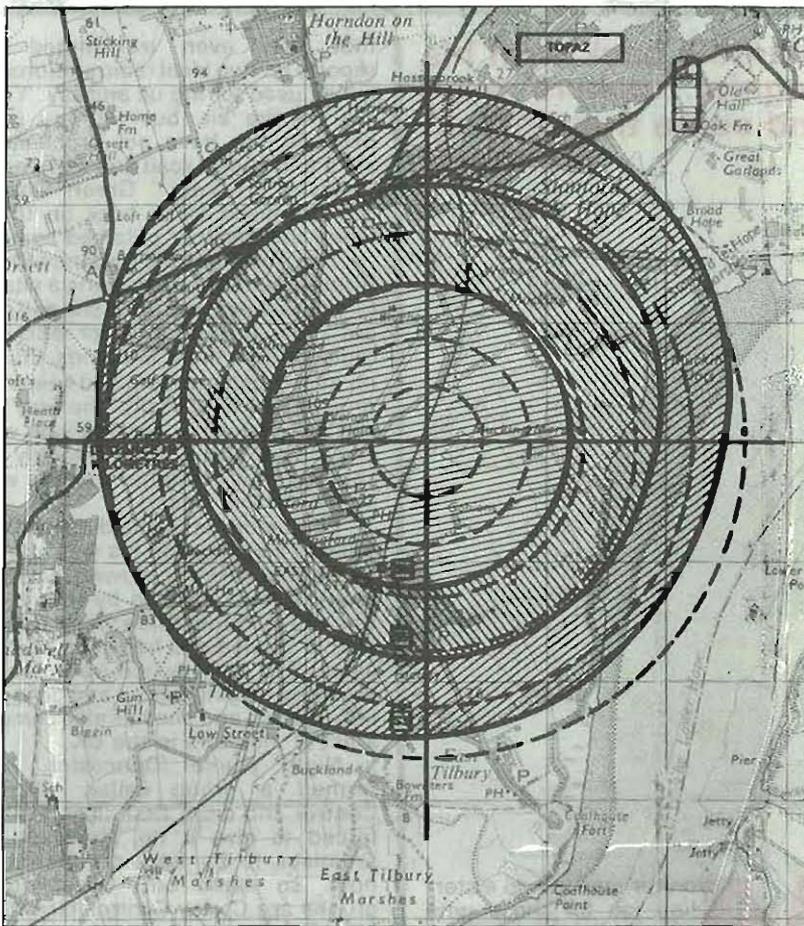
Impedance 50 ohm

Cable Supplied NONE

Mounting Details S0259 SOCKET TYPE MOUNTING REQUIRED

Supplier TELECOMMS

Typical Price £14.95



## REVIEW VERDICT

Performance XXXX  
 SWR Adjustment XXX  
 Construction XXXXX

Installation XXX  
 Instructions —  
 Value XXX

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

### The Tests

We have used our standard test procedure to assess the efficiency of this antenna. Just to bring new readers up to date this involves two tests; one static and one mobile. Our test sample is fitted to a stationary mobile and a second mobile follows a pre-arranged route that orbits the stationary test vehicle, sending and receiving signal reports at measured intervals. This is then repeated with the test antenna on the mobile test vehicle and the signals are sent and received between a stationary vehicle. A standard rig and antenna is used in all the tests. With the results obtained we are able to draw up the radiation pattern shown here. This is simplified to make the results more easily understood. The antenna is also subjected to a series of 'lab' tests to assess their durability, quality and construction, etc and finally we hand it over to a panel of Cbers for comment.



## Gizmo's back with his regular truckers' page and some thoughts on monitors.

**M**onitor stations do a sterling job for those who travel around the country with ears on. They have two ways of operating; they either stay on 19 giving out quick 10-13s or they move up or down a channel or two and modulate normally. Most monitors, and there must be hundreds, are lady breakers; some of them XYLS of truckers. Over a period of time they get to know truckers and other mobile breakers well, to the point where they can recognise voices in the back of the box as they approach.

Marigold (M6, Cheshire) puts it like this; she has become a truckers' friend, making their land-lines for them when they have their 10-33s. Green Goddess was one of the most professional of all the monitor stations and was on channel (assisted by Barley Wine) from gate 1 of the M6. Margaret (Green Goddess) runs the Hollies Transport Cafe on the A5 and Morag lives nearby. They were so good

that they even transmitted road reports on two local radio stations. The police used to ring up and say "You're not on the air, but will you go on because we have got problems on such and such a road and we need you to divert truckers." Green Goddess has promised to be back on the air when the weather gets bad again.

Tiny Tears on gate 4 on the M6 near Birmingham has been doing a vital job for the last five years and she still gives out radio road reports for BBC local radio station, West Midlands. Edina is up at six each morning and keeps it up until six thirty at night. The only time she has ceased to operate was when she was ill and TT says the only time she will quit doing her thing is when she is six foot under!

Patchwork at Hatfield started after helping a breaker on his way after the snow had already slowed down his journey from Ipswich by four hours. She realised that there was a need for such a service and has been at it ever since. The local police traffic control are often ringing her up and giving her information and she has also compiled a list of monitors in the UK.

Night Nurse (Doncaster, A1M) formed a group called Whisky Control and did a first class job until forced to give it up. However, she promises to be back on channel by now, so listen out. Other similar groups are Corley Control (Grey Lady, M6) and Orange Control (near gate 1, M6). Mark Gibson says Orange Control have produced an index of national monitoring stations which is to be given out to truckers at events where they have a stall, such as the Lorry Driver of the Year Final and Truckfest.

I have a letter from a group in Glasgow calling themselves TRIO (Truckers Radio Information Organisation) who monitor 19 in the Glasgow area and assist generally with the co-operation of the local smokies. They have a badge which is made by local handicapped schoolchildren and have fortnightly Wednesday evening meetings at the Virginian, Miller Street, Glasgow at 7.30pm. in a side room. Anybody interested in this work is cordially invited to attend, or write to Bunny at P.O. Box 57, Paisley, Glasgow.

I am a trucker and have been considerably grateful for all the 10-

13s I have received over the years and would like to say a personal thank you to all the monitors — I could not possibly mention all the handles on this page. If you are not on Patchwork's list or in Orange Control's index, please let me know, care of the magazine.

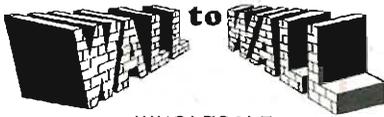
## Truckers' Club Spot

June Crowther, Superlady, a good monitor herself, and now secretary of the A1 Truckers' Club has started an appeal fund in memory of John (Hippy) Hill who was killed recently in a car crash. John was an animal lover and she thought that training a guide dog for the blind would be what John would have liked best. Donations can be made at Superlady's snack bar on the A1 near Retford or be brought to the A1 Truckers' Club meeting held at the Royal Oak, Castlegate, Newark on alternate Wednesdays. June would also like to know the name and address of the dependants of the other driver killed in the crash as she thinks that there may be a need somewhere and, so far, all the emphasis has been towards John. Could anyone contact June about this rather delicate matter?

The East Coast Truckers held their Fun Day and Camping weekend over the August Bank Holiday weekend. The weather was great and truckers and caravanners came from all over the country. The two country and western groups were excellent and, for me, the highlight was the parade of trucks around the ring. When I started truck driving, a lorry was just a lorry. Now people actually want to see trucks and the ring was packed all the way round when the trucks were on. We truckers must do our best to give our industry a brighter image and get away from the dirty, smelly, noisy image that our predecessors have made for us.

Today's youngsters are waving at us and pulling imaginary air horns as we pass by. Encourage them, tomorrow they will be Joe Public and you don't have to look far to see how much today's public hate the lorry! Customise and brighten up those big wheelers — may cost a few green stamps but it will pay dividends for truckers in public relations.

Truck 'em easy, catch you next month, byesye bye.



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**David Hughes (DH44) is one of the few people who can claim to have been using a 934Mhz. 'for years' and can offer a wealth of experience (and some amusing views) on UHF operation.**

**W**hen a friend and I first bought Reftecs in the autumn of 1982, we found that we were the only users for some distance around. We couldn't raise anybody else! 20 clear channels all to ourselves. . . Compared to 27 megs it was bliss. Better sound quality, too. Getting set up was not as easy as it might have been, though. Having bought his set and aerial a short while before me, my friend, Ray, had no one locally available to talk to, and thus no way of checking either his transmission or reception. All he knew was that he wasn't getting a copy from anyone. Perhaps there wasn't anyone about. . . perhaps he had a faulty set. . . Ho hum. We never had this problem a year earlier with 27Mhz. No shortage of breakers then!

I'd already decided to buy a 934Mhz anyway, it was a matter of when, rather than if. In view of Ray's growing doubts about his set, 'when' became a matter of 'A.S.A.P.', so I phoned around and found a dealer who actually had a set in stock. Just the one. They'd sold the two or three others they'd had. So far, so good. I confirmed that I wanted the set, would be over that day to buy it, and ascertained the total price of the set

My views at that moment are not repeatable. Not in print anyway. However, with the Building Society cheque made payable to them, and no other known source of aerials, I had no choice but to leave the cheque with them, take the set and wait for the postman to deliver the aerials. They shouldn't take too long to arrive, sir, I was informed. That's as maybe, I thought. As you may imagine, when you're waiting to try out a new C.B., a day's wait is a long time and when the aerials did arrive, I was less than amused to find that the base omnidirectional was "To follow".

### Field trials!

That left the base beam, and the mobile omni. Circumstances dictated that the car aerial should have priority, so it was duly fitted in the centre of the roof, using a hole punch. No cop-out mag mounts here. I connected the set and listened on all twenty channels. Nothing! I called Ray. No response. Maybe he wasn't on channel. Maybe he was, but his receiver was duff. Maybe my transmitter was

# CONFESSIONS

with a selection of three aerials — omnidirectional mobile, omnidirectional base, and base beam. Did they accept Access? No sir, only Visa. So far, so bad. They suggested my writing six cheques backed by a £50 cheque guarantee card. Sure thing, mack, only slightly more fun than watching grass grow. Anyway, I'm not in the habit of keeping that amount of spare money sloshing around in my no interest current account. Well now...would they take a Building Society Cheque? Do what, sir? I explained that these cheques issued by the building society and effectively drawn on your savings account, were never stopped once issued, and wouldn't bounce. Secure as cash, but safer. Um, well, we're still not sure (sir). . . would they care to phone their local Halifax and check — then 'phone me back if all was well? Yes, they would. I put the phone down and waited. The phone rang. Yes, all ok. I obtained the cheque, found the shop — no small distance away — and entered. Right, here's the set, and we have to order the aerials, sir. Beg pardon? Yes, sir. What, not in stock? No sir, not one. . .

duff...maybe the scare stories about short range on 934 megs were correct — but, good grief, we were only 1,000 yards apart!

I drove round to see Ray. We tried the sets out. No joy. We compared notes, checked connections, swapped sets, mikes, PSU's and generally did everything we could think of to get a two-way copy. Nothing! Not a whimper. Right then we both felt lower than the proverbial snake's belly. I left my set with Ray and a few days later he was able to drive over to Reftec, where both sets were checked over. Upon his return we again connected the sets and — Bingo! Two-way copy! Fine, now let's see if we can get further than ten yards. We could. We spent a very instructive evening, with Ray on Homebase and myself mobile, driving around the local roads, getting drop-outs, mobile flutter, weak copy, strong copy, and generally finding out that 934 Mhz was a most promising band for CB.

Since our base station was in a bit of a dip, surrounded by hills, the initial base to mobile range obtained was only five miles but what was interesting was the way that, driving away from Ray's base station at a distance of five miles, I would first drop out of radio range, on the crest of a hill, and then back in again. One other

thing that did amaze us was that with the mobile parked in a road full of houses, just rolling the car a matter of inches either way could mean the difference between good copy, distorted copy or no copy at all. It was all most informative, much more so than similar tests done a year earlier on 27 megs, again with Ray homebase and myself mobile.

Subsequent evenings found us working duplex (one of us talking on 27Mhz and listening on 934 Mhz. and vice-versa), operating base outdoor to base indoor aerials, then outdoor to outdoor with different types of aerials, base, omni to mobile, base beam to mobile. . . and all this with any of 20 clear 934 Mhz channels to choose from. However, Ray wasn't getting any other copies from his homebase, and what few stations I could hear mobile when away from home, I couldn't

making the only sets available, as a sideline, and then selling every one they made, there was no incentive to advertise extensively. Given also the collapse of the 27Mhz. CB market due to trade mismanagement and the resulting dumping of sets at highly discounted prices, neither was there any incentive for R.F. Technology (Reftec) to devote more production capacity to the manufacture of UHF CB's, even were that possible. Wiser counsel prevailed at Reftec than at a great many companies who've since pulled scorched fingers out of the British CB market.

## Standards

One effect of this low level of usage, with users spread so thinly around the country, is that there is a marked lack of standardisation in certain aspects of operation. So which was to be the calling channel? Channels 10, 14 & 20 all have adherents. I can see the appeal of 14. Once established as the national 934 calling channel, you have no

# OF A UHF Fanatic

always reply to, such was their distance. The band was all but empty, and likely to remain so for some time, it seemed.

With all this, it was, I suppose not surprising that after the initial evaluation of the potential of UHF CB, other interests and commitments once again commanded my attention, although I still found time to operate 934, both base and mobile. I even tidied up the co-ax inside the car, which used to droop down from the roof to the set when in use, and when not, was neatly stowed behind the passenger sun visor. This was fine until a front passenger decided to use said visor, and gravity dumped 5 metres of coiled coax in their lap, invariably to their great surprise.

As 934Mhz. broadened its appeal so did 27Mhz., although not necessarily in a manner that pleased all those who had spent such a long time campaigning for legal CB in the UK. It was becoming obvious that the two services were attracting a different standard of operating, if not of operator, for many who would have liked to operate on the higher band were prevented from so doing by financial difficulties every bit as real as actually finding a shop that stocked the gear. (Including the aerials!) As marketing went, that of 934Mhz. equipment was so low key, compared to the razzamataz of 27Mhz, that you could have been forgiven for thinking that it had been the subject of a 'D' notice. It hadn't, of course, but with the established firm of R.F. Technology

## Viable alternative

Mind you, towards the objective of establishing UHF CB, as a viable alternative CB service, it is regrettable that 934Mhz. sets weren't widely available in the two years following legalisation, for there's certainly nothing like seeing equipment in dealer's windows and having it demonstrated to encourage ownership. Even the 'prototype' look of the first sets didn't put anybody off buying them, when available. Whatever craftsmanship went into the innards of the first UHF CB, the case could have been made by anyone with a GCE in metalwork and the plastic moulding at the front was put to shame by any free gift tumbling from a cereal packet at breakfast time. But that was not the point. When you bought one of the first sets, you possibly had the only one in your county. You were, in other words, a pioneer, with all the difficulties and advantages that entailed. In those heady days it was enough to have a set and to have made even one contact with it. Looking back, we may have remarked the appearance of the set, but we never remarked upon it. It was unique, and thus beautiful in its own right.

One difference between HF and UHF CB rarely appreciated is the time difference between market penetration and market saturation. With 27Mhz. that wasn't really more than three months, despite initially high prices. With 934Mhz. we only have market penetration some three years after legislation, and market saturation, if it ever comes, is a very long way off.

confusion on either band. It's 14 on both. There again, many users of 934Mhz. would prefer nothing on the higher band to remind them of the worst excesses of 27Mhz, especially the incessant parrot-like chirpings of "Wunforfurracoppee, wunforfurracoppee" (Who's a pretty boy, then?). So, how about channel 20? The appeal of this channel is that if you can establish contact at the band edge — and usually, channel 20 more so than channel 1 — you will have no difficulty maintaining contact on any other channel, especially towards the centre of the band where the aerials are tuned. In one of our 1982 experimental tests, working base to base with one aerial indoors, reception was satisfactory on channel 10, progressively tailing off at either side, to the point where contact was lost at channel 5 and below and channel 15 and above. Admittedly this was under deliberately difficult and restricted conditions but, in the absence of reliable information, we experimented to ascertain the limits of range and those experiments — and subsequent day to day operation — show that at the limit, contact is not as reliable at the band edges as it is around the band centre. So, when you're out in the sticks with an emergency, few base stations around (with even fewer emergency monitors) and your car or hand-held in a poor position for propagation, your chances of raising help for yourself or others on the calling channel — invariably better monitored than any 'emergency channel' — is somewhat less with channel 20 than with either 14 or 10. By the way, in those experiments where we lost contact below channel 6 or above channel 14, our stations were just 1,000 yards apart...it seems to me that those who advocate channel 20 as the national calling channel probably operate 'ideal situation' base stations, with everything as perfect as it can be. I

could be wrong (and the earth be square) but I doubt it. Emergencies don't always happen in ideal situations, and the need to call for, and receive, help should always be uppermost in our minds when we make suggestions for our CB service.

You should, by now, have deduced my preference for channel 10 as the national calling channel. You may also have deduced a preference for emergency calls actually being heard, together with a conviction that a separate 'emergency calls only' channel is not necessarily the best place for them. You'd be right. I don't know about 27 megs FM in the area you live in, but around my home 20, there are two 'Wally' channels. 14 is one, 9 the other. I suppose that with so many people popping up on the 'one-four', it's statistically inevitable that wallies show up so much. With channel 9 however, it's a different reason for the same shambles. I don't need to tell you that the theory behind channel 9 is that everybody leaves it clear, so that monitors can have it on, just squelched, while they busy themselves with something else until an emergency or other call for help comes along. That way also, a weak FM emergency transmission (car, hand-held) won't be allowed out by a stronger non-urgent signal capturing the monitor's receiver. It's a perfect theory, but we don't live in a perfect world.

In the early days of 27Mhz. FM, with spare channels available even in busy areas, all was fine and channel 9 was respected. With 40 channel saturation, however, it was inevitable that people should alight on the only clear channel around, namely 9. Whether this was through ignorance or selfishness is irrelevant, although the habit of some monitors haranging defaulters only exacerbated the problem into an ongoing slanging match with others joining in. Soon, in my area anyway, if you wanted a chat, information or help, you ignored channels 14 & 19, and called 'QSK' on one or other of the local network channels. It worked, and worked well. Very friendly and easy going, some things however were not tolerated on these nets, like sloppy operating (On this channel we do it this way, OK?), bad language (you'd be frozen out, told why, then welcomed back when you grew up) and dead-keying. (Half an hour after you began, you'd be invited, over channel, to look out of your front window at all the kind people who hoped you stop PDQ, which you did...we've got an ace DF crew around here — no violence, just results.)

In an article about 934Mhz. I've mentioned these aspects of 27Mhz. operation to quell any suspicion that I regard 27 megs as a lost cause, and also to illustrate why I believe that on 934Mhz. CB, the calling channel and the emergency channel should be one and the same. This wouldn't work on 27, but it will on 934, where operating discipline is excellent. (As good as the best hams, but without the starch). Please understand that this is no new

concept, but one tried and tested for decades in the world's sealanes and elsewhere.

If you shunt calls for help off onto a dedicated (isolated?) channel, there's more chance of them being missed than if you put them on the channel that people monitor when not in conversation elsewhere. Again, what will allow this to work is the tight discipline that somehow occurs naturally on 934Mhz, with breaks between station calls, and, preferably, no idle calls of the vague "One four forra copy" /CQ CQ CQ CQ" variety. (Perhaps another channel for these?).

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## "Does it matter that call signs are not to a common standard"

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Operationally, an emergency call would generate a silence which would allow an emergency monitor to answer, when available, and other stations when not. Good ideas? Yes. Can't fail? We'll see. Since I joined the Citizens Band campaign in 1976, I've seen rather too many good ideas fail because they didn't suit some organisation or other.

### Station call signs

Whilst British CB on 27Mhz. FM inherited certain standards from the 'States (Channel 9 & handles) and the days of illegal AM operation in the UK (Channel 14), 934Mhz. users have developed their own operating procedures as they've gone along. Sometimes this has been done merely to be different from 27 megs, sometimes as a result of having seen what does and doesn't work there. Now, whilst the U.S. Government issues licenced CBers with an official call sign, (once, but no longer, changed at each licence renewal) our own Government has never taken Citizens Radio that seriously. So, in general, British operators issue themselves with handles on 27Mhz, and callsigns on 934Mhz. In the early days of UHF CB, it was very simple and more or less standardised, consisting of the two initials of your name, and the serial number of your Reftec. With only one set available — the Reftec — your self issued callsign was unique, and it didn't matter if some operators used the word 'unit' (as in 'Unit 99') instead of their initials. Pleasingly there was no false status attached to having a low number, due to the way sets were distributed. My own set, for instance, with the aerial number 44, was purchased some weeks after my friend's set, number 88.

All this worked perfectly until other sets became available, either from the same manufacturer, or another, all with their own serial number beginning with '1'. Even so, the

chances of someone else having both the same initials and set number as yourself were pretty small, but it did weaken that useful aspect of the original system whereby a friend or relative using your set, would identify themselves with their initials and your set number, with everybody knowing from whence the transmission came. With hindsight, that first callsign system was too simple to last, but if mankind never used any systems capable of improvement, it would never use any systems at all.

There are, currently, three systems being advocated, all feasible, but all with disadvantages.

- 1) County initials plus a number. Who's to allocate the number, and what happens if you move counties but wish to keep your well known callsign?)
- 2) Initials plus club number. (Which club of many, and why should you have to join a club to get a callsign?)
- 3) Postcode plus house number. (Though unique, you are, when mobile, advertising your absence from home — great for burglars, though. . .)

Meanwhile, what we have now is a mishmash of differently formulated callsigns, consisting of initials only, or numbers only, or 'Unit' numbers, or names plus numbers, or names plus initials, or a version of the original system of initials plus numbers where, if the numbers are not of your set, they are of most anything else — club number, house number, you name it, it's OK. . . But does it matter that



callsigns are not to a common standard? In one sense, no, as long as stations don't duplicate. You could therefore have calls such as N9Y, 64, C.J., BIG 500, Unit 142, or K9. Or indeed, countries, colours, towns and names, all plus numbers; for example, UK1, Blue 7, Brum 2, or Barrie 1. There's only one difficulty here — all these, from N9Y to Barrie 1, were in use four years or more ago as 27Mhz. AM handles, and their users might well consider that they have a prior claim to them as call signs. Since all British CB handles or calls are self allocated, they'd be right, and as there's no compunction to use a different form of identification on 27 & 934Mhz., your callsign can be the same on both. A radio ham uses the same call sign on all bands, but then his callsign (G3SZM, G8MGI, etc) is allocated to him by a Government

## “What are we paying our licence fee for?”

department, and never reallocated during his lifetime although it may, after his death, be reissued to a relative or an association with a close link. I suggest that we really need the same system for 934Mhz users, and quickly, before the band becomes better established and more heavily populated. What are we paying our licence fee for? (That's got you thinking, hasn't it?)

## Polarisation

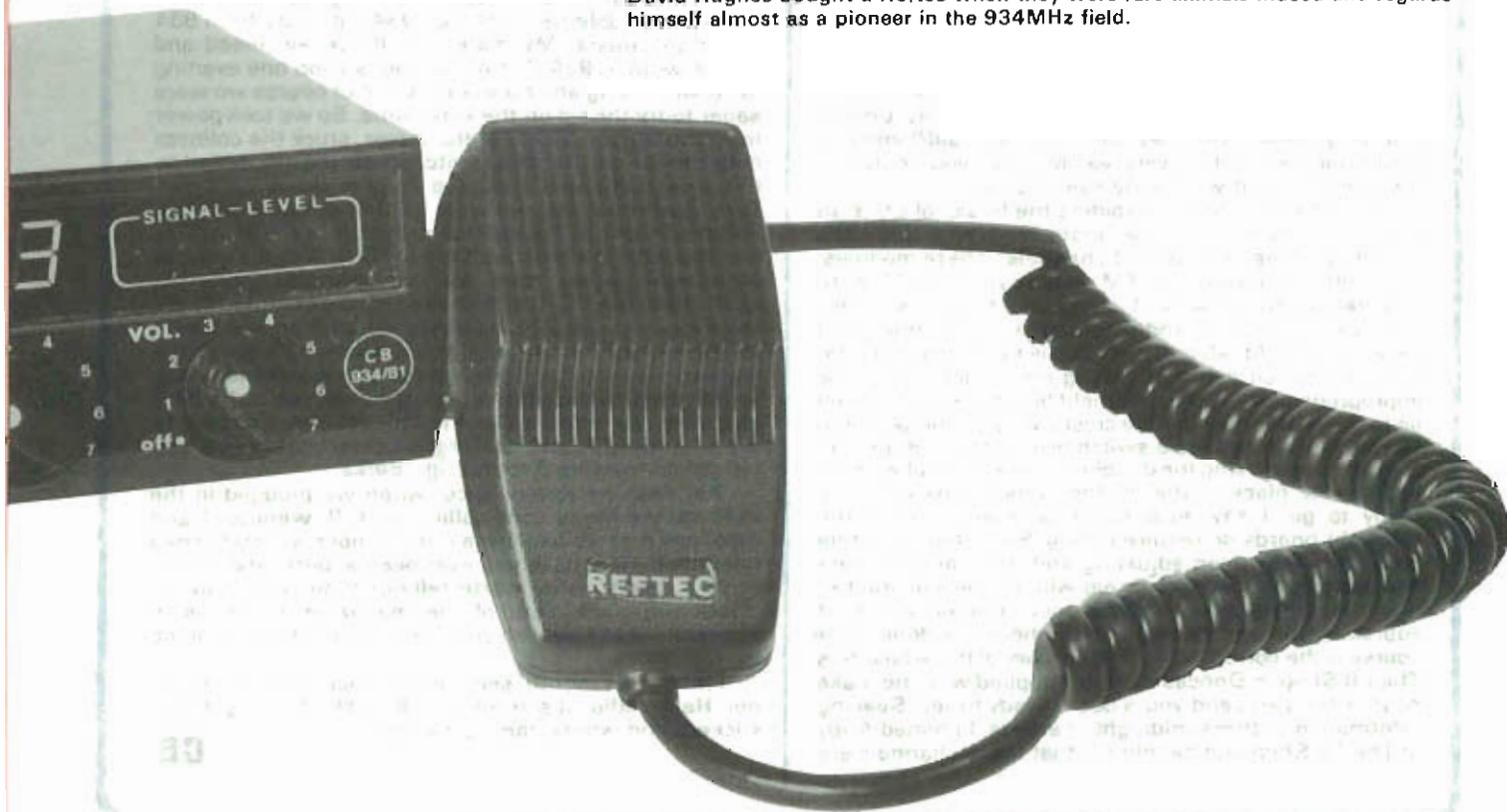
For most 934Mhz. operation, omnidirectional vertically polarised signals are used. This is convenient for base operation and near essential for mobile use. For longer distance base to base communication however, Yagi (beam) aerials are becoming more popular, since they funnel most of your signal into a narrow beam on transmit, thus increasing your range, whilst eliminating much unwanted signal and interference on receive — and at the same time making the most of the signal you do want. During the early days of 934, with vertically polarised omnidirectional aerials the norm, users of beams tended also to use vertical polarisation, although a few had horizontal beams, and yet fewer, two beams, one vertical, one horizontal, switched as required. Most people who know anything about beams know that you halve the received signal strength if your two beams are of opposite polarisation.

That's a good enough reason for keeping the two aerials on the same polarisation, and if you think it through, having both beams on horizontal also reduced the chance of another vertically polarised station in your line of fire and on the same channel from innocently breaking up your longer distance copy with their local communication. Furthermore, what many people don't realise is that most interference is vertically polarised, and that vertically polarised transmissions at UHF are more easily

lost to ground than those horizontally polarised. It's no accident that most UHF television transmissions are horizontally polarised for just those reasons. Given that 934Mhz. stations have nowhere near the ERP of TV transmitters, even using some of the illegal 934 Yagis now available, this should suggest a swing to widespread if not total use of horizontal polarisation for base to base beam aerial operation.

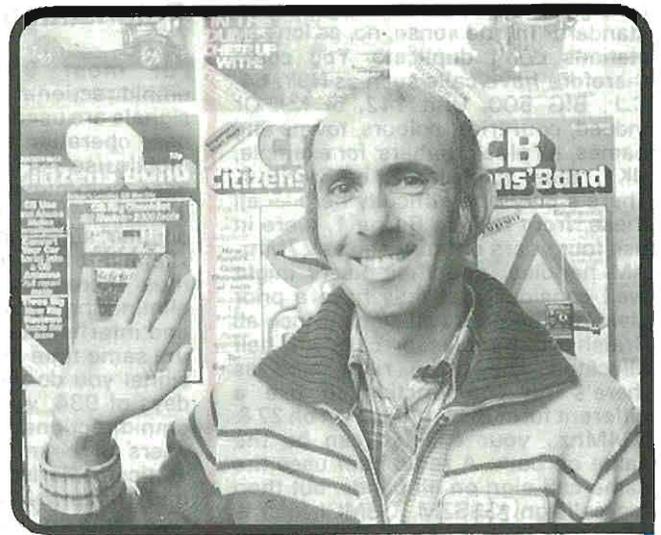
In this article, I've mentioned past experiments, aspects of current usage and recommendations for the future. It really doesn't seem like three years since legalisation of British CB, or two years since we were first able to use the 934Mhz service. Even two years on, 934 usage is not high, but I believe that the next two years will see a much greater increase in the band's popularity in this country, the more so when the service eventually goes Europe wide, as part of the CEPT Citizens Band plan. The distances reached within this country — three figures are not now unusual — mean that there will be scope, under favourable conditions for working into mainland Europe for those who so desire. Equally, for those who need reliable local two way radio (the basic *raison d'être* of CB) will continue to find 934Mhz. superior in many ways to 27Mhz. I for one will continue to operate both frequencies, but for anyone who's only used 27Mhz. and ever wondered about dipping a toe in the 934 pool, I'd say come on in — the water's fine!

David Hughes bought a Reftec when they were rare animals indeed and regards himself almost as a pioneer in the 934MHz field.



# Mack Chat

**Mack the Hack looks at the problems of finding a clear channel and does, in fact, find an answer — but it's illegal.**



**H**ow many breakers wish or dream of a clear channel where they and their local mates can for for a waffle without the interference of the 'wallys' and the continually 'QSK, who's on channel brigade'? They don't want a whole frequency band of clear channels but just one or maybe two. What lengths do some of these people go to try to achieve this? I suppose one answer would be to go 934 but many can't afford it or are not prepared to spend the £300 or so to get on this band. Another way I suppose is for them to try and track down some old AM rigs but if they manage to obtain these I'm sure they would worry about the interference that these old AM rigs would cause!

Some while ago there appeared on the market scrambler devices for 27FM. These were supposed to allow two or more stations to converse in private, away from the other users. But all they did was to drop the frequency by 5kHz. and as you would realise this was not very successful as another station that was close could wipe out the conversation. Another such 'scrambler' turned one's signal upside down by making the high notes low and the low notes high. (Work that one out). But again this was not very successful because it gave the same sort of effect as if the receiver was listening to SSB (single side band) or what is known as Donald Duckling. (how could they call a Duck Donald?) and this could not be clarified very easily — so you could not understand what was being said too easily.

The latest method of avoiding the freaks of CB is an expansion board or the more common romantic sounding name of 'midnight channels'. These modules, when fitted into your legal FM rig, give you 10 or 11 more channels below channel 1. These modules cost about £11, are simple to fit and consist of a crystal, relay, and capacitors. To fit, all one has to do is to remove a crystal from the circuit board of the rig and attach this in the appropriate place on the midnight board. Two wires then go to the position where the crystal was, supply power to the midnight board via a switch (PA or 'tone' of the rig), stick the board using the double sided tape supplied in an appropriate place in the rig and in most cases you are ready to go. I say most cases because some of the midnight boards do require tuning. Some have variable capacitors that need adjusting and the manufacturers say that this can be done by ear with the help of another rig or with the aid of a frequency counter (which of course is the correct way that it should be done). One course is the correct way). One supplier of these boards is The CB Shop in Doncaster who, supplied with the make of your rig, can send you a board ready tuned. Seeking information of these midnight channels, I phoned Andy of The CB Shop and he told me that these channels are

becoming very popular. So if you fit one of these devices now, how long will it be before they too become crowded and the wally freaks move in? To clear my conscience it is my duty to tell you that to purchase, fit and listen on these channels that these midnight boards give you is quite legal, but it will make you a criminal if you speak into the microphone over these out of band frequencies. It is illegal, but so is playing music, jamming, and using foul and abusive language on the legal channels but no one seems to care, apart from a few of the more dedicated breakers.

Have you ever done a silly or forgetful thing where you would say later 'What a berk I was'? Related to CB, such instances would be when one finds the rig not working, almost strips down the radio, to find it was the fuse that had blown in the first place or even that the power was not switched on. 'Oh what a berk'. I must confess that I have been a 'berk' from time to time and one such time I shall now relate (and I am sure happened to all of us at one time or another).

If you recall I told you some while ago about the time when I first obtained a Reftec 934 rig to try from 934 Communications. My mate C.R. (Cockney Rebel) and myself went to 934 Communications shop one evening to collect the rig and accessories and of course we were eager to try the rig on the way home. So we took power from the lighter socket of the motor, stuck the colinear mag-mount on the roof, switched on the rig, tuned to the agreed channel and gave Tony in the shop a call. Tony confirmed that we were getting out and working. Satisfied that all was well we drove off homeward. C.R. had the mike and was waffling to Tony. About a quarter of a mile up the road we suddenly lost Tony; his modulation died. C.R. and I looked at one another. 'Don't think much of this 934, no range' we both agreed. Could all the theory the we had heard about 934 be true! I stopped the motor and we decided that we would return to the shop, when on the floor we both noticed a BNC plug that was attached to a length of co-ax that lead to the antenna. C.R. and I still argue as to whose fault it was for not connecting it to the rig. 'Berks'.

Not wishing to lose face, when we plugged in the antenna we heard Tony calling us. C.R. went back and told Tony that we had had a hitch — not saying what had happened. Now have you ever been a 'berk' and do you have a 'berky' story worth telling? If so send it to me 'Mack the Hack' care of the magazine at the usual address. I won't publish your name if you don't want me to.

Finally this month, seen on the back of a car. 'No it's not Ham radio, it's friendly C.B.' Who's doing these stickers and where can I get one?

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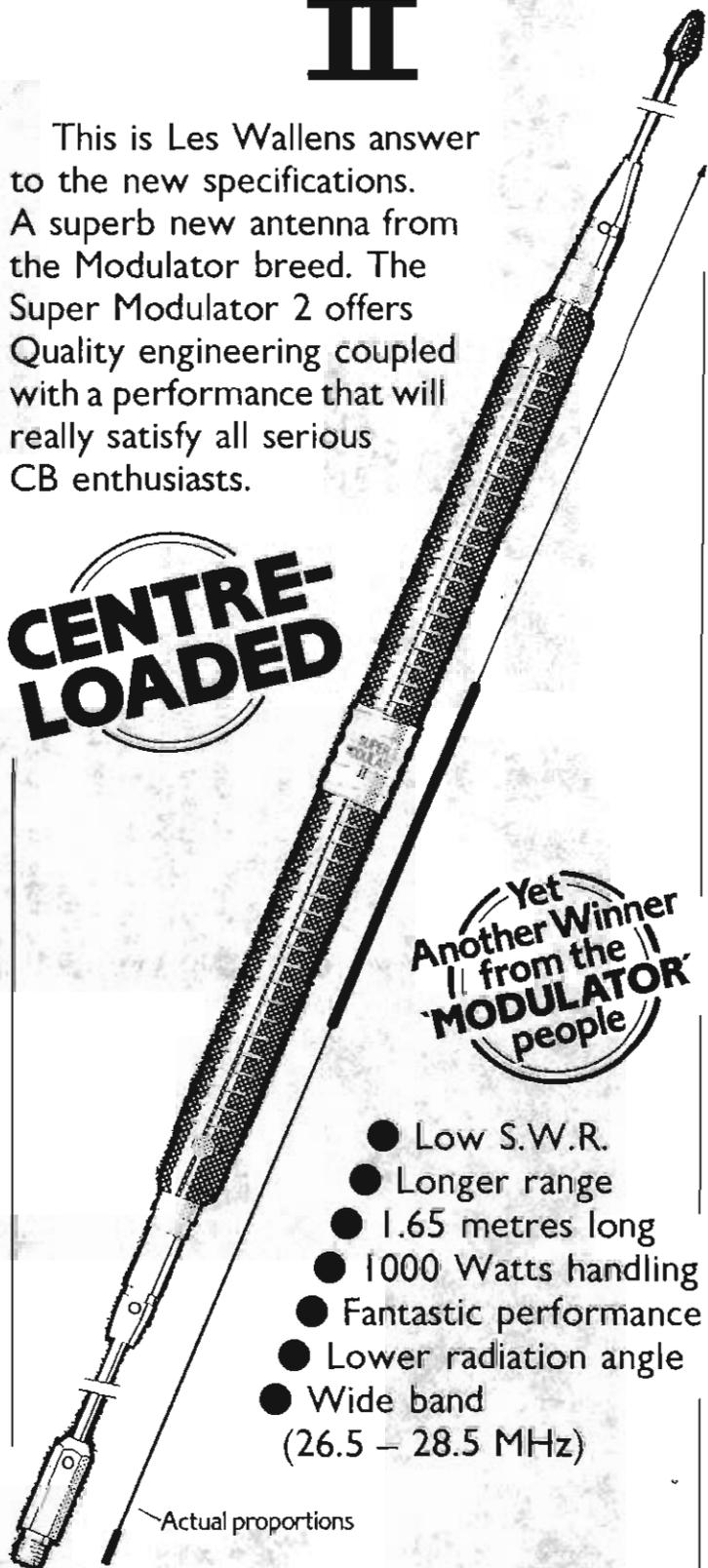
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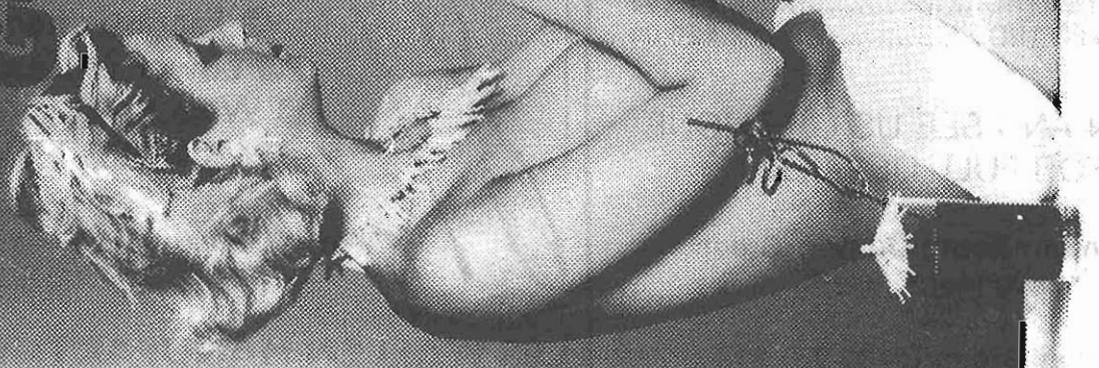
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Heavenly communications over Filly's radio as a local group use CB for a divine mission.

# LADY BREAKERS

**A** aagh! We've been invaded. No, not by little green bug-eyed aliens, but something much more sinister, albeit harmless.

At least, I think it's harmless, but it's got all the breakers around here leaping out of their cars and jumping up and down in the middle of the road shrieking 'I can't take it, I can't take it!'

I got my first inkling while I was driving home late one Thursday night. Thursday nights are pretty dead round here, at least as far as CB is concerned. There wasn't much going on and I was about to switch off altogether when I heard this voice.

It was very smooth, sort of caressing. I thought I'd turned the radio on by mistake.

"Feeling lonely?" the voice crooned. "Tired? Depressed?" I stared at the radio, scratching my head. Doesn't sound like LBC, I thought.

"Going home to an empty house?" the voice asked, sympathetically. I wished I was — I was probably going home to a house full of husband and mates. "No friends to turn to?" the voice suggested, wistfully. "Why not let me be your friend?"

Then I caught on. The voice was coming over on channel 14. I was intrigued, naturally. I wasn't even sure if the voice was male or female. I decided to respond.

"Hello there", I said cheerfully into the mike. "Who's that?"

There was a slight pause, as if a bright, not particularly depressed response was not quite what the voice had in mind.

"Pardon?" it said, cautiously.

"You're speaking to Philadelphia Judd", I said, "and at this time of night, probably no one else. Who are you?"

"Why, er Philadelphia", gushed the voice. "So I've reached out and touched a lonely soul! Philadelphia - let me bring some joy and hope into your life . . ."

Well, I'm all for joy and hope, but I don't like it stuffed down my throat. Anyway, you've guessed it. A band of religious fruitcakes had strayed into the area and were out looking for disciples.

The Friends of the Blessing of Light, they called themselves, or something like that, dedicated to revealing to sinful man - me - the Three Blessings as revealed to mankind in the Bible (light, something else and something else). I think. They would coax a

response out of some intrigued listener, tell him or her how miserable and empty his or her life was and extend a warm invitation to visit their "sanctuary".

Sanctuary was a dilapidated old house a few miles away, in which they appeared to be squatting.

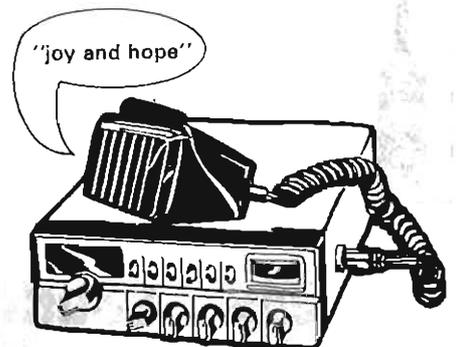
Well, I'm no hard-bitted athiest, just a hard-bitten agnostic and (I've always liked to believe) reasonably tolerant. But when I hear a name like the Friends of the Blessing of Light and someone offers me "the peace and warmth of understanding", I get, well, restless. I think of Moonies, and brainwashed young people.

But the friends aren't really like that. They're nothing more than a dreamy, well-meaning bunch of kids who probably want nothing more than to spread goodwill, as they see it. And at least they don't try and browbeat you into panicking about the extremely doubtful nature of your own personal salvation. But they've got their communications well and truly sewn up - none of this door to door stuff, they're heavily into CB.

Every time you think you've found a clear channel to hold a meaningful conversation with someone, they nose you out and their honeyed tones ooze into the conversation. Aren't we tired of sordid, earthly matters, they ask (no, we say, but you might as well try and stop a charging elephant with a pea shooter).

Any tactful attempt to tell them to get lost wins you the local equivalent of a sad, sweet smile and a sighing soliloquy on the tensions and frustrations of modern day living. And if you get heavy about it, they start chanting over the air.

Our only hope now is that they'll get fed up with our irreclaimable selves and move on to more fertile pastures. We might suggest the Outer Hebrides.





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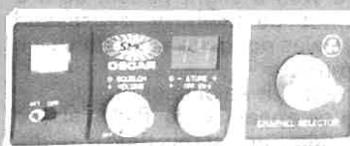
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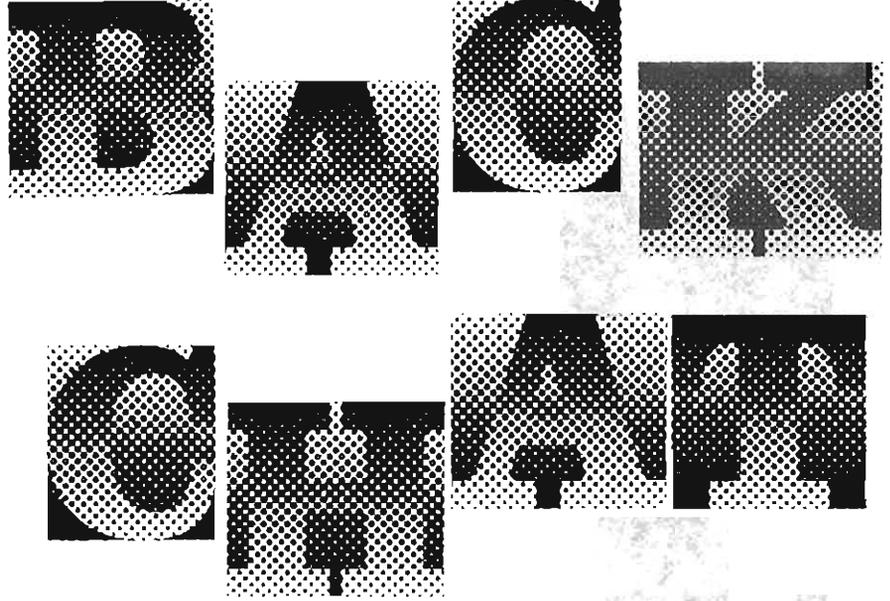


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### **Our youngest reader?**

*Tiger might be tiny but he sure isn't shy.*

Hi there! I'm Tiger, from the Sherfield on Loddon twenty and the old chap with me is Old Father Time (John). I've been told I can only go on channel when mum or dad are with me, but I don't seem to get many copies.

So far I have copied Moneypenny, Mint Sauce and Minder, but none of them seem to be able to hold a sensible modulation with me, although dad gets on well with them and many others. As you can see, I use a hand mike, but dad uses a big base mike and keeps mine unplugged. (But it tastes nice).

You can find dad on 19 before work, most mornings and 22 or 32 between

9.30 and 10.30 most evenings, when I've gone to bed, so that I miss all the fun. Mum and dad have been on CB for just over two years now and I started about six weeks ago.

Please ask any other breakers about my age (8 months) to get in touch with me and let's show the older breakers that we can enjoy CB as much as them.

Dad says that Citizens' Band is such a good magazine that I must try not to eat it.

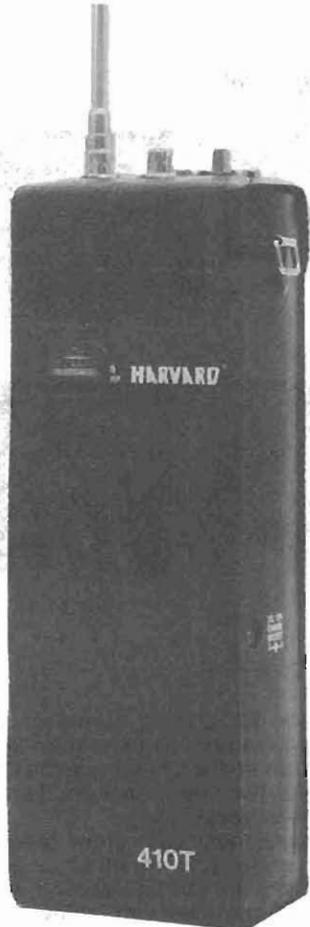
### **The loneliness of the long distance walker.**

*Jonathon Peberdy is the outdoor type and makes a plea on behalf of those with only a couple of channels to choose from.*

cont. . . .

Tiger on channel with dad helping out





I have noticed the number of letters of late from breakers concerned about the apparent lack of any sort of discipline on the airwaves.

I have owned a Harvard 410T portable rig ever since the FM frequencies were made legal and I used to use it for short range communication with members of my family and other breakers whilst out walking. Recently I have left my rig to gather dust on the shelf at home because I get so annoyed with the hassle you get on the air these days. Is there no official code of conduct backed by the law which is enforced?

We have forty channel rigs and three channel portables in the family, which we used to use when walking, on holidays and at steam rallies and the like and, even though it seems to me a good idea to have small, low powered portables, every time we try to communicate on channel 30 we are wiped out by long distance link-ups and breakers with illegal linears.

Why can't channel 30 be left along for handheld use? If there are any legal stipulations as to channel usage, especially channel 30 for handhelds, I would be pleased to hear of it and to see it in print, to show your readers the problems we short range users face.

*There is a Code of Practice, obtainable from the Post Office, Jonathon, but it is purely advisory and does not have the force of law. As any channel 9 monitor will tell you, there are no rules as to who may use any particular channel because, despite the possible benefits to such as yourself, it would be impossible to enforce such a rule. It is also an unfortunate fact that not all two*

*channel rigs use the same two channels.*

An English CB friend was kind enough to send me a copy of your July edition. Congratulations on your magazine. It is what we miss in our country.

Referring to your Sunward CB feature, things have changed somewhat in West Germany and the allocation in our country now is 12 channels AM, with power limited to one watt and 40 channels FM, with four watts power.

Regards to you and your contributors.

### Who are "They"?

*Mr. and Mrs. Johnson, of Mablethorpe, seem to have been having a few problems and are convinced that they are dealing with fictional beings.*

We are regular readers of Citizens' Band, having been breakers for three years, during which we have received more visits from the R.I.S. than most, despite the fact that our station is completely legal. In one case it was a lady's TV set which was at fault, in another a table-top aerial was faulty. It seems that they do not like masts and aerials around here and this has led to something of a witch-hunt.

We have both monitored channel 9 and belong to a number of CB clubs. We wrote to the Radio Regulatory Division some weeks ago, for a copy of the CB Information Sheets mentioned in your August edition and have not yet received a reply, which leads us to conclude that they either do not exist, or do not have time for CBers, even when they offer sensible suggestions. My first letter went to Chetwynd House, who wrote back to say that they had forwarded it to those unknown people, the Radio Regulatory Division. This was back in April and we still await a reply.

Please can you assure us that the R.R.D. really does exist?

**Photographic proof that at least the buildings and vans exist**



*If it doesn't folks, then we have been getting some very funny phone calls.*

### Thanks, folks

*Ian Wallace, of Phoenix, has a few kind words for our readers.*

Thanks for publishing my letter about fund-raising events in the August issue. The response was terrific and I would especially like to thank Firelady in Cornwall, Bunny of Neilston and Charity Ann of Salisbury, who sent me the complete works (all forty pages) on fundraising.

Now to other business. Hasn't this fine weather been a boost to those of us who use FM for skip. (Who said "no?") It is astonishing that here in the West of Scotland we got a request through the QRM for an STD landline number from a breaker in N.E. France, who wanted the number of a hospital in Sheffield.

Mike Delta 99 was worried about his sister, who was about to increase the CB population and wanted to contact her. Armed with a current code book we managed to relay the number to him.

We have since heard that a healthy wee laddie was born to Wendy on August 16th, which shows that CB has its international uses too. (Thanks for the card go to Ron, Blue Boy/WD99).

As it happens, I never managed to pick up a copy of the August edition and receiving all the replies has come as something of a surprise. Because the newsagents in this part of the world don't seem to order enough copies of Citizen's Band I am sending off an annual sub, just to be sure in future.

**Letters should be sent to  
Citizens' Band  
Wolsey House, Wolsey Road,  
Hemel Hempstead, Herts.**

# CB Citizens' Band

## READER SERVICES

### BACK NUMBERS

Due to the popularity of back numbers of this magazine, the Back Numbers department have informed us that the following back numbers only are available at the moment; September, October and November 1983 and February 1984. It is hoped over the next months to build up a stock of back numbers for the previous year's issues i.e. the eleven months preceding the magazine currently available and we will keep you informed of the situation. To order a magazine, fill out the form below (photocopies and handwritten orders are acceptable). The form and your cheque or postal order should be sent to Citizens' Band, Infonet Ltd., Times House, 179 The Marlowes, Hemel Hempstead, Herts HP1 1BB

NAME .....

ADDRESS .....

.....

.....

Back issues ..... at £1.25 each

I enclose £ .....

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

### Letters

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

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

### Writing for CB

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

### Telephoning

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

### Back Numbers and Binders

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

# CB Citizens' Band

# GET A GOOD COPY

## CITIZENS' BAND SUBSCRIPTION ORDER FORM

Cut out and SEND TO: Citizens' Band,  
INFONET LTD., TIMES HOUSE, 179 THE MARLOWES,  
HEMEL HEMPSTEAD, HERTS HP1 1BB

Please commence my personal subscription to Citizen's Band with the ..... issue  
I am enclosing my (delete as necessary) Cheque/Postal Order/International Money Order for

### SUBSCRIPTION RATES

(tick  as appropriate)  
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£15.75 for 12 issues overseas surface   
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£.....  
(made payable to A.S.P. Ltd)

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# CB WORLD

2 Market Way, Portsmouth,  
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Murphy Home Base .....	£52.95
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Consam Mobile Rig .....	£25.95
DNT Mobile Rig .....	£30.50
Sapphire (40 channel) .....	£43.50
Radiomobile CB202 .....	£58.50
Audioline One Hander .....	£59.95
Audioline 341 .....	£56.95
Maxcom 7E Handheld .....	£47.50
Harvard H410 .....	£37.50
GPA Halfwave Aerial .....	£14.50
GPA 3/4 wave aerial .....	£17.50
DV Complete .....	£6.25
Bremi Centre Loaded .....	£13.95
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Replacement Mikes .....	£5.65
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Frequency Counter 7 digits .....	£48.50
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Reverb 201 .....	£28.90

Postage Rates: up to £5 — £1.20; up to £10 — £2.50; up to £20 — £4.00; up to £100 — £6.50; over £100 — free of charge.

For price list send SAE. Our P.O. Box is available F.O.C..  
Second hand rigs bought and sold. Telephones also stocked.  
Please write or phone for further details.



Now in stock the  
**NEW CYBERNET DELTA ONE 934 mhz**

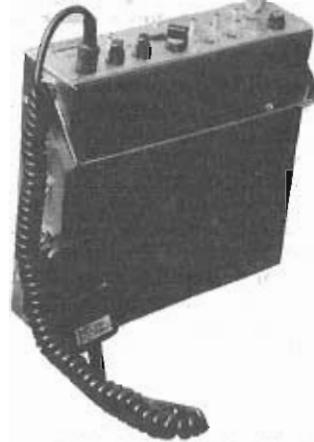
- Plus all leading 27 mhz CB's and accessories.
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Attractive & durable s/steel cabinet, selective calling can be built in, & custom mods to order.

Extras include s/s whips, mag. mounts, and hand crafted real leather case with custom carving of illustrations and handles if required.

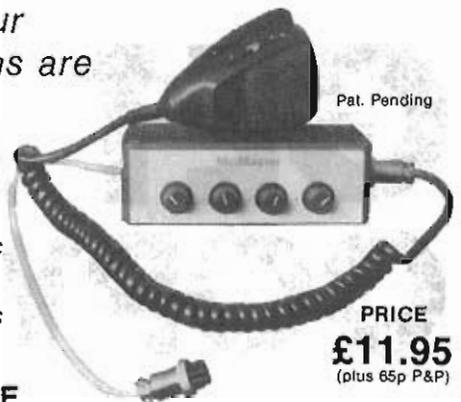
Price less than many mains only sets. See your dealer, or SAE for full details to: **Westward Electronics, The Mill House, Tuckenhay, Totnes, Devon TQ9 7EL. Tel: 080423 338/370. Trade enquiries welcome.**

# BBTRONICS

Having trouble matching a mic to a rig? Your problems are over. . .

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## MICMASTER

The new MicMaster guarantees a perfect match. Any mic to any rig for immediate use. Removes the need to spend time and money on rewiring.

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Send cheque or P/O to:  
**BBtronics, 48 Arlington Drive, LEIGH, Lancashire.**  
Money returned if not satisfied.

Please send me ..... MicMasters

NAME.....

ADDRESS.....



# CLUB NEWS

**A bumper postbag this month. The club scene is really thriving, so keep 'em coming.**

## Clyde Coast Search

I would like to inform you that, with effect from this summer, channel 9 FM will be monitored by Clyde Coast Search, serving the area from Inverkip, down the Clyde coast as far as Largs and including the islands of Bute and North Bute.

This service is in addition to the channel 9 monitoring services already in operation in the Inverclyde and Helensburgh areas, which are also operated by Clyde Coast Search.

I would be grateful if you would draw your readers' attention to this new service and would ask for the cooperation of all breakers in helping to keep channel 9 for emergency and assistance calls only.

If you would like any further information about Clyde Coast Search please write to:

Blue Top,  
CO-ORDINATOR,  
Clyde Coast Search,  
The Police House,  
Main Street,  
Inverkip,  
Renfrewshire.

## Marathon Breakers Club

The Marathon Breakers Club was formed in 1982 and now meets on alternate Wednesdays at the King's Head in Chailey, East Sussex.

We are a small, friendly group of breakers who enjoy social outings, taking part in local carnivals, as well as raising money for charity. In 1983 we held a ninety six hour modulation, logging 4030 copies and raising £1069, enabling us to purchase a micro-computer for the Chailey Heritage, which is a hospital and school for handicapped children.

This Easter we had a hundred hour modulation, logging 5519 copies and collecting £1,147. With this money we will be able to buy a further two micro-computers for the childre of Chailey Heritage.

We would welcome any new members. The annual subscription is £1.50 per person, which includes free use of the P.O. box. For further

details please write to:  
The Secretary,  
P.O. Box 24,  
Lewes,  
East Sussex.



## Charlie Oscar Tango DX Group

As Chairman of the Charlie Oscar Tango DX Group, I wonder if you would give my club a mention?

We started the club in 1980, since when our membership has grown to nearly one hundred, in and around the Didcot area. In 1982 we amalgamated with the DD27 Club and from that date we became a legal FM DX club.

We would like to see the club grow, so we are offering a special package for new members at the moment. For just £2 we give a unit number, fifty QSL cards, a rubber stamp, stickers and lots more goodies.

We feel sure that our package will interest good FM DXers and look forward to a growing membership.

Tony, (COT 141),  
Charlie Oscar Tango DX Group,  
P.O. Box 10,  
Didcot,  
Oxon, OX11.

## Bravo Lima Charlie QSL and DX Club.

We are a young club and have only been going for about six months,

with membership growing at a steady rate. We have a lot of new, fresh, ideals and hope to organise some worthwhile events in the near future.

We send out a good club package and we do not insist that members should send us their QSL cards in order to join.

We meet each Friday night at the Horseshoes, Blunham, which is on the A428, just off the northbound A1 and anyone wishing to meet us will be made very welcome.

Any breaker requiring more information about our club may obtain it by writing to the enclosed address. We shall be most pleased to help and all letters will be answered 100%. Life membership is obtainable for £5, plus five self addressed stamped envelopes. **The Ratcatcher (BLC 37)**  
**Bravo Lima Charlie QSL and DX Club**  
**P.O. Box 66,**  
**Bedford,**  
**Beds.**



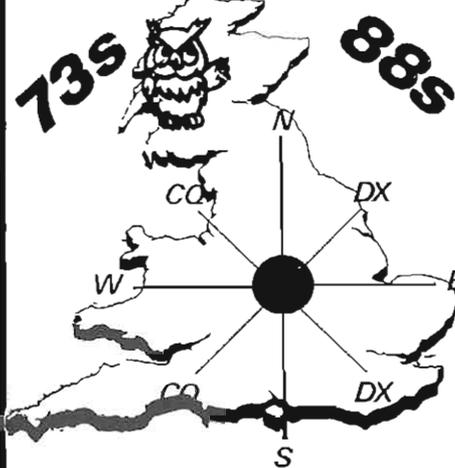
### Owls Radio DX — QSL Club

The Owls Radio Club was born on 1st November 1981 and was the brain child of just four breakers, Crusher, Leek Eater, Billy Bunter and Rover.

We are very active within the community in the Oadby and Wigston districts and we have supported many charities in the past and will continue to do so in the future, with the emphasis on deprived and mentally handicapped children.

The aims of the club are simple and straightforward. We strongly believe that CB has a major part to play within the local community and we are here to prove that it works. We would like to encourage a form of conduct on the airwaves which helps all breakers to get the most out of their equipment.

## Happy DX-ing From the O.W.L.S. RADIO DX-QSL CLUB LEICESTERSHIRE



OR No ..... CS .....  
**PO BOX 17 • Leicester • LE2 5HZ**

With determined members it has been possible to monitor marathons, parades and rallies for the police and local authorities, all monitoring being achieved through teamwork, using our own operating codes via a central control point. Our operators are sincere, dedicated members, working for folks less fortunate than themselves.

The club also has a DX membership of 86. Use of our Post Box costs just £2 for a year, or £5 for life. Club QSL cards costs £2 for fifty. For more information please write to:  
**Geoffrey James (Sky Blue/Oscar Romeo 29)**  
**P.O. Box 17,**  
**Leicester.**

### Blue Circle Breakers CB Club

Could you please give us a mention in the Club News section of the magazine? We are a recently formed club (Feb. 1984) and we are in the process of building up our membership, which will include many disabled persons. We hold social evenings at the New Stag, Field Rd., Bloxwich, on Saturday nights. Usually the third Saturday of each month, subject to room bookings.

We intend to organise excursions, theatre trips and other events, particularly with the disabled in mind, as well as organise, or join in activities designed to raise money for charities.

Our membership covers many areas of the Metropolitan Borough of Walsall. Many members indulge in DXing and club QSL cards will shortly be available and, hopefully, a P.O. Box.

**Eric Boxold, (Thyristor),**  
**85, Victoria Ave.,**  
**Bloxwich,**  
**WS3 3EH.**

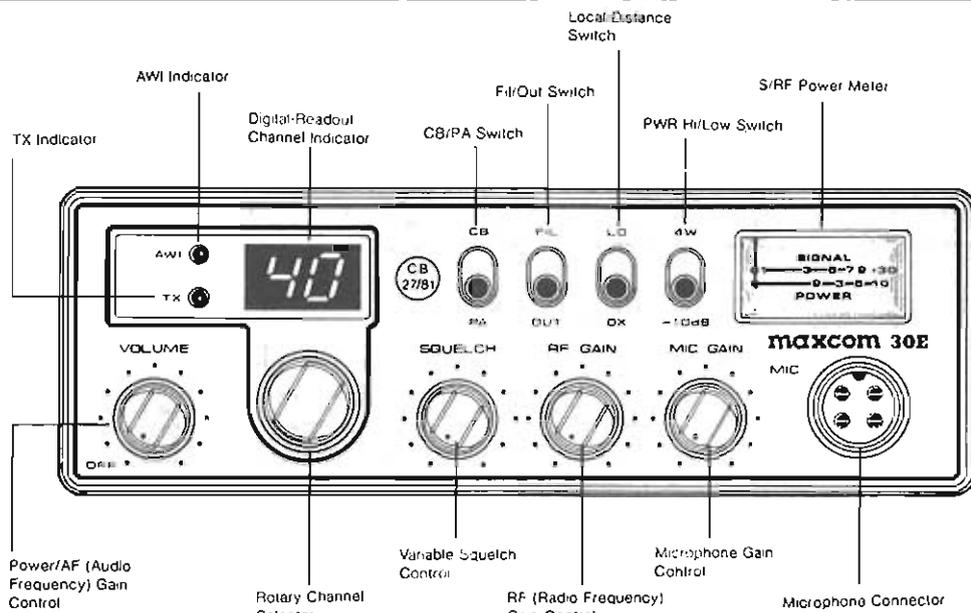
# CITIZENS' BAND CLUB DIRECTORY REGISTRATION FORM



CLUBNAME ..... ( )  
 CHAIRMAN ..... ( )  
 Secretary ..... ( )  
 PR Contact ..... ( )  
 Contact Address ..... ( )  
 ..... (Tel No. ....)  
 MEETING PLACE, DAY AND TIME ..... ( )  
 No. of members .....  
 Position in club .....  
 Fee/sub etc ..... (Committee members only please)  
 Please mark (\*) information that may be published.

# Citizens' Band

## REFERENCE SECTION



### A CB SET AND ITS CONTROLS

- VOLUME**  
Sometimes called *Audio Frequency Gain* control. Usually combined with the 'power on' switch. The volume control will only increase or decrease the loudness of the incoming signal — it won't alter the strength of it or affect the transmitted signal.
- CHANNEL SELECTION**  
For choosing the channel you transmit and receive on.
- CHANNEL INDICATOR**  
Displays, usually by LEDs, the channel you have selected. Some channel displays are of liquid crystal or fluorescent. The digits are normally bright red, green, orange or blue and visible in all but the most direct sunlight.
- SQUELCH**  
The squelch control is used for quieting background hiss or the babble of distant signals. The control is turned slowly, usually to the right, until the background noise disappears. The squelch control will then only open to let through a stronger signal than those you have quieted out. As soon as the stronger signal goes, the circuit closes. Care must be taken not to turn the squelch control up too far, as then only a very strong signal will open it.
- SIGNAL/RF METER**  
On most sets this is of the 'moving needle' type against an analogue background. Some sets do have a bar of LEDs that light up to show the strength of either the received signal or the transmission. It shows the *relative* strength, not a reading in dB or Watts. These meters cannot be 100% accurate and different rigs will give slightly different readings for signals of the same strength.
- RF GAIN**  
This controls the reception sensitivity of the set. When decreased the set is less sensitive, and when increased the set is more sensitive to weaker signals. Reducing the gain helps prevent overloading when talking to someone who is very close.  
Some sets, instead of having a suitable rotary control, have a flick two position switch marked *local* and *distance*. Full sensitivity is the distant position.
- MIC. GAIN**  
Adjusts the sensitivity of the microphone amplifier circuit and controls the audio from the microphone that is used to modulate the signal.
- CB/PA SWITCH**  
This switch turns your CB set into a low public address amplifier. When an external speaker is fitted into the socket on the back of the rig. Anything said into the microphone is amplified and broadcast through the speaker and not transmitted from the antenna.
- TOPE DR FILTER CONTROL**  
This can either be a rotary or flick switch. It controls the tonal quality of received signals in accordance with the users preference.
- POWER ANTENNA**  
Reduces the transmitter power from 4Watts to 0.4Watts. The attenuator should be used if your antenna is mounted more than 7 metres above the ground.
- RX/TX INDICATORS**  
These light emitting diodes light up to show if you are receiving (RX) or transmitting (TX).
- ANTENNA WARNING INDICATOR**  
This a warning indicator which is activated by trouble in the antenna system e.g. a bad mismatch or damage to the antenna or cable. You should stop transmitting if this lights up, and correct the problem.  
*Your set may also have the following controls . . .*
- CHANNEL 9 SWITCH**  
This is an 'over-ride' switch that will immediately select channel 9 without using the channel selector to find it. It is fitted to save time in an emergency.
- DELTA TUNE**  
This is not a common feature on British sets, where frequency and stability are closely specified. It is a fine tuning device for tuning in stations that are operating slightly off frequency.
- DIMMER**  
Works on the same principle as a domestic light dimmer, and reduces the amount of illumination on displays and dials on the CB set. A few sets have an automatic dimmer built in, which measures the lighting level through a photo-electric cell and adjusts the illumination accordingly.
- ANL/NOISE BLANKER**  
The Automatic Noise Limiter or Noise Blanker is designed to reduce interference from a car's ignition system by desensitising the receiver slightly. If the ignition circuit is already adequately suppressed it will not make any difference.
- CHANNEL BUSY/FREE INDICATOR**  
This is usually a LED that illuminates when a particular channel is in use or is free. This is gauged by the amount of 'traffic' on the channel which has to be at a certain level before the indicator is activated. Sets have either a 'free' or 'busy' indicator, not both.

# FM RIG CHECKLIST



NAME	MODEL	RETAIL PRICE	NO. OF CHANNELS	SUPPLY VOLTAGE	SQUELCH	NB SWITCH	ANL SWITCH	MIKE GAIN	RF GAIN	tone control	S/RF METER	S/RF LED R/O	HI/LO OUTPUT	PA FACILITY	EX. SPEAKER JACK
AMSTRAD	CB901	£40	40	13.8VDC	•			•	•		•	•	•	•	•
AUDIO LINE	341	£60	40	13.8VDC	•			•	•	•	•	•	•	•	•
AUDIO LINE	340	£40	40	13.8VDC	•			•	•	•	•	•	•	•	•
AUDIO LINE	342	£115	40	13.8VDC	•			•	•	•	•	•	•	•	•
COLT	295	£49.99	40	13.8VDC	•			•	•	•	•	•	•	•	•
COMMTEL	GT888	£30	40	13.8VDC	•			•	•	•	•	•	•	•	•
COMMTEL	GT888	£35	40	13.8VDC	•			•	•	•	•	•	•	•	•
COMMTRON	CB40F	£70	40	13.8VDC	•			•	•	•	•	•	•	•	•
COMMTRON	CXX	£69.95	40	13.8VDC	•			•	•	•	•	•	•	•	•
COMMUNICATORS	NI-440DX	£50	40	13.8VDC	•			•	•	•	•	•	•	•	•
CYBERNET	BETA 1000	£70	40	13.8VDC	•			•	•	•	•	•	•	•	•
CYBERNET	BETA 2000	£85	40	13.8VDC	•			•	•	•	•	•	•	•	•
CYBERNET	BETA 3000	£100	40	13.8VDC	•			•	•	•	•	•	•	•	•
DNT	M40FM SPECIAL	£100	40	13.8VDC	•			•	•	•	•	•	•	•	•
FIDELITY	CB 1000M	£70	40	13.8VDC	•			•	•	•	•	•	•	•	•
FIDELITY	CB 2000M	£90	40	13.8VDC	•			•	•	•	•	•	•	•	•
FIDELITY	20001 FM	£70	40	13.8VDC	•			•	•	•	•	•	•	•	•
GRANDSTAND	BLUEBIRD	£50	40	13.8VDC	•			•	•	•	•	•	•	•	•
GRANDSTAND	HAWK	£30	40	13.8VDC	•			•	•	•	•	•	•	•	•
GRANDSTAND	GEMINI	£60	40	13.8VDC	•	•		•	•	•	•	•	•	•	•
GRANDSTAND	LA 83 934 MHz	£400	20	13.8VDC	•			•	•	•	•	•	•	•	•
INTERCEPTOR	INTERCEPTOR	£80	40	13.8VDC	•			•	•	•	•	•	•	•	•
INTERCEPTOR	TC400	£95	40	13.8VDC	•	•		•	•	•	•	•	•	•	•
INTERCEPTOR	ONE HANDER	£100	40	13.8VDC	•			•	•	•	•	•	•	•	•
JOHNSON	JOHNSON	£50	40	13.8VDC	•			•	•	•	•	•	•	•	•
LAKE	MANXMAN 85C	£32.50	40	13.8VDC	•			•	•	•	•	•	•	•	•
LAKE	MANXMAN 95C	£37.50	40	13.8VDC	•			•	•	•	•	•	•	•	•
LOWE	TX 40	£50	40	13.8VDC	•			•	•	•	•	•	•	•	•
MAGPIE	AUTOSCAN 5000	£120	40	13.8VDC	•			•	•	•	•	•	•	•	•
MAXCOM	4E	£50	40	13.8VDC	•			•	•	•	•	•	•	•	•
MAXCOM	6E	£48	40	13.8VDC	•			•	•	•	•	•	•	•	•
MAXCOM	20E	£50	40	13.8VDC	•			•	•	•	•	•	•	•	•
MAXCOM	21E	£50	40	13.8VDC	•			•	•	•	•	•	•	•	•
MAXCOM	16E	£40	40	13.8VDC	•			•	•	•	•	•	•	•	•
MAXCOM	30E	£65	40	13.8VDC	•			•	•	•	•	•	•	•	•

This listing includes most of the rigs available for FM CB. Some rigs are still not on the market, but may be picked up second-hand or may be found in old stock at some shops. The prices quoted are recommended retail prices or typical price — they may vary considerably from shop to shop and area to area.

# MOBILES

					ADDRESS	NAME
•	•		SL	Report Feb '82	Amstrad Consumer Electronics, 1-7 German Rd., London N17	AMSTRAD
•			SL		Telecomms, 189 London Rd, North End, Portsmouth	AUDIOLINE
				Report Feb '82		AUDIOLINE
•						AUDIO LINE
			FL		K. B. & Co Ltd., 202 Cheetham 158 Rd, Manchester	COLT
			SL		Globe, 168 Brooker Road, Waltham Abbey, Essex	COMMTEL
			SL	Dimmer Switch Features		COMMTEL
•	•		FL		Roger D, 831 Mansfield Rd, Notts	COMMTRON
			FL			COMMTRON
•	•		FL	Roger Beep Feature		
			SL		Goodmans Loudspeaker Ltd., Downley Rd, Havant, Hants PO0 2NL	CYBERNET
•			FL	Report May '83		CYBERNET
•	•		FL	Report September '83		CYBERNET
			FL	Report July '82		DNT
			SL	Report December '81	Fidelity Radio Ltd., Victoria Rd, London NW10	FIDELITY
	•		FL	Report Merch '82		FIDELITY
	•			Report September '82		FIDELITY
			SL		Bee-Ware Ltd., Ripon Way, Harrogate, N. Yorks.	GRANDSTAND
•			SL			GRANDSTAND
			SL			GRANDSTAND
				Features combined with Bluebird (Included)		GRANDSTAND
•			SL		Telecomms, 198 London Rd, North End, Portsmouth	INTERCEPTOR
•			FL			INTERCEPTOR
•			FL			INTERCEPTOR
			FL	Great GT868 chassis	Star Warehouse, Chalk Farm Rd, London	JOHNSON
			FL		Roger D, 831 Mansfield Rd., Nottingham NG5 3GF	LAKE
			FR	Report April '83		LAKE
•	•		FL	Report March '83	Lowe Electronics, Matlock, Derbyshire	LOWE
•	•		FL	Report November '82	Maggie Electronics, PO Box 35, Andover, Hants SP10 2LG	MAGPIE
•			FL		AM House, 9A Old's Approach, Tolpits Ln, Watford, Herts	MAXCOM
•	•		FL			MAXCOM
•	•		FL			MAXCOM
•	•		FL			MAXCOM
•			FL			MAXCOM
•			FL	Report Jan '84		MAXCOM

# REFERENCE



NAME	MODEL	RETAIL PRICE	FEATURES													
			NO OF CHANNELS	SUPPLY VOLTAGE	SQUELCH	NB SWITCH	ANL SWITCH	MIKE GAIN	RF GAIN	STONE CONTROL	S/RF METER	S/RF LED R/O	HI/LO OUTPUT	PA FACILITY	EX. SPEAKERS	
MERCURY	10 40	N/A	40	13.8VDC	•					•		•		•	•	•
MURPHY	DS-602	£25	40	13.8VDC	•							•			•	•
MUSTANG	CB1000	£49.95	40	13.8VDC	•							•			•	•
MUSTANG	CB3000	£59.99	40	13.8VDC	•						•	•			•	•
NATO	40M	£69.95	40	13.8VDC	•			•		•	•	•			•	•
NATO	2000	£189.95	40	13.8VDC	•	•	•			•	•	•			•	•
OSCAR	OSCAR I	£85	40	13.8VDC	•										•	•
OSCAR	OSCAR II	£49	40	13.8VDC	•										•	•
REFTEC	934	£300	20	13.8VDC	•											•
ROTEL	RVC 220	£50	40	13.8VDC	•										•	•
ROTEL	RVC 230	£70	40	13.8VDC	•										•	•
ROTEL	RVC 240	£90	40	13.8VDC	•			•		•	•				•	•
SIRTEL	SEARCHER	£40	40	13.8VDC	•										•	•
TANDY	TRC2001	£80	40	13.8VDC	•										•	•
TANDY	TRC2002	£70	40	13.8VDC	•										•	•
TANDY	TRC2000	£100	40	13.8VDC	•			•		•	•				•	•
TANDY	TRC1004	£79	40	12VDC	•										•	•
TANDY	TRC2003	£130	40	13.8VDC	•											•
UNIDEN	UNIACE 100	£89.95	40	13.8VDC	•										•	•
UNIDEN	UNIACE 200	£89.95	40	13.8VDC	•			•		•	•				•	•
WAGNER	9000	£59.95	40	13.8VDC	•					•		•			•	•
WAGNER	COMPACT 40	£25	40	13.8VDC	•										•	•
WESTERN	COMPACT 40	£34.50	40	13.8VDC	•										•	•
WESTWARD	P.T.2	£159.95	40	13.8VDC 240V	•										•	•



NAME	MODEL	RETAIL PRICE	FEATURES													
			NO OF CHANNELS	SUPPLY VOLTAGE	SQUELCH	NB SWITCH	ANL SWITCH	MIKE GAIN	RF GAIN	STONE CONTROL	S/RF METER	S/RF LED R/O	HI/LO OUTPUT	PA FACILITY	EX. SPEAKERS	
AUDIOLINE	345	£139.95	40	240VAC	•				•	•	•				•	•
COMMTEL		£65	40	240/12V	•											•
DNT	B40	£T8A	40	240VAC	•										•	•
DNT	B2740	£T8A	40	240VAC	•										•	•
DNT		£T8A	40	240VAC	•										•	•
FIDELITY	CB 3000M	£125	40	240VAC	•					•	•				•	•
GRANDSTAND	BASE	£220	40	240VAC	•										•	•
HAM INT.	JUMBO	£254	40	240VAC	•			•		•	•				•	•
HAM INT.	CONCORDE II	£164	40	240VAC	•	•	•			•	•				•	•
HARVARD	H401	£149.95	40	240VAC	•			•		•	•				•	•
MIDLAND	76-200	£150	40	240VAC	•										•	•
REFTEC	BS 934	£450	20	240V	•										•	•
UNIDEN	UNIACE 300	£149.95	40	240VAC	•			•		•	•				•	•
WAGNER	BASE	£150	40	240VAC	•			•		•	•				•	•
WESTWARD	P.T.2	£169.95	40	240V/12V	•										•	•

# MOBILES

TX IND. LIGHT	RX IND. LIGHT	CH 9 SWITCH	MIKE POSITION	COMMENTS	ADDRESSES	NAME
•	•		FR	Report July '83	E.M.S. Communications, Grove St. Wantage, Oxon LX21 7AD	MERCURY
•	•		FL		Murphy Electronics, Wembly, Middx	MURPHY
•	•		FL		K.B. & Co Ltd, 202 Cheetham Hill Rd, M/cr.	MUSTANG
•	•	•	FL			MUSTANG
•			FL		Roger D. 831 Mansfield Rd, Nottingham NG5 3GF	NATO
•			SL	Report January '83		NATO
		•	FL	Cybernet 134 chassis rep. April '82	S.M.C. Runbridge St, Totton, Hants SO4 4OP	OSCAR
			FL	Report Oct '83		OSCAR
•			FL		RF Technology, Leyton Ave Ind Est, Mildenhall, Suffolk	REFTEC
•			FL	Cybernet chassis	Rotel Hi-Fi, 2-4 Erica Rd, Stacey Bushes, Milton Keynes	ROTEL
•	•	•	SL	Cybernet chassis		ROTEL
•			SL	Cybernet chassis		ROTEL
•			FL			SIRTEL
•	•		SL		Tame Way, Tower Bridge St, Walsall, Staffs	TANDY
•			SL			TANDY
•			SL			TANDY
•			SL	Report Nov '82		TANDY
•			SL	Report Sept '82	Cravenminster Ltd, Unit 8, Ind Est, Llandudno Junct, Gwynedd	UNIDEN
•	•		FL	Report Feb '83		UNIDEN
•	•		FL		Knight Communications Ltd, Unit 19, Britania Est, Leagrave Rd,	WAGNER
•	•		FL		Luton, Beds	WAGNER
•	•		SL		Western Electronics, Fairfield Est, Louth, Notts	WESTERN
			FL	Report Nov '83	Westward Electronics, The Mill House, Westward Tuckenhay, Totnes, Devon O86423 336/370	WESTWARD

# BASES

TX IND. LIGHT	RX IND. LIGHT	CH 9 SWITCH	MIKE POSITION	COMMENTS	ADDRESSES	NAME
•					Telecomms, Portsmouth and Globe, Essex	AUDIOLINE
			FR	Report December '83. Also comes with telescopic antenna		COMMTEL
•			FL	Rewiew May '82		DNT
•		•	FR	Report May '82		DNT
•		•	SR	Report May '82		DNT
•		•	FL		Fidelity Radio Ltd, Victoria Rd, London NW10	FIDELITY
•			FL		Bee Ware Ltd, Rippon Way, Harrogate, N. Yorks	GRANDSTAND
•			SL		Telecomms, 189 London Rd, North End, Portsmouth, Hants	HAM INT.
•	•	•	FL			HAM INT.
•	•		FL			HARVARD
•	•		FL			MIDLAND
•	•		FR	See company for further features	RF Technology, Leyton Ave. Ind. Est, Mildenhall, Suffolk	REFTEC
•			FL	Reviewed August '83	Cravenminster Ltd, Unit 8, Industrial Est, Llandudno Junction, Gwynedd	UNIDEN
•			FL		Knight Communications Ltd, Unit 19 Britania Est, Leagrave Rd, Luton LU3 1RJ	WAGNER
			FL	Report Nov '83	Westward Electronics, The Mill House, Tuckenhay, Totnes, Devon, Totnes, Devon O80423 336/370	WESTWARD



NAME	MODEL	RETAIL PRICE	NO. OF CHANNELS	SUPPLY VOLTAGE	SQUELCH	NB SWITCH	ANL SWITCH	MIKE GAIN	RF GAIN	STONE CONTROL	S/RF METER	S/RF LED R/O	HI/LO OUTPUT	PA FACILITY	EX. SPEAKER
DNT	HF 12/3	£47.55	3	BATTERIES	●										
HARVARD	WT44		40	BATTERIES	●								●		
KAISER	CBX40	£80	40	BATTERY	●						●		●		●
MAXCOM	7E	£49.95	40	BATTERY	●								●		
MIDLAND	75-720	£59.95	40	12VDC	●								●		
TANDY	TRC1001	£119		BATTERY	●						●		●		●
WESTWARD	PT2	£159.95	40	Int. Batt.	●						●		●	●	●

# PHONE CHECKLIST

Approved phones are marked ●

NAME	MODEL	PRICE	FREQUENCY	RANGE	RECHAR. BATT.	IN USE LAMP	INTERCOM	AUTO DIAL	EXTERNAL ANT.	SECURITY CODE	HANDS FR.
A-PHONE	TP125	£80	49MHz., 1.6-1.8MHz	230m	●	●		●			●
BT	HAWK ●	£165	47MHz., 1.7MHz.	100m		●		●		●	
FIDELITY	WANDERER ●	£170	47MHz., 1.7MHz	200m	●	●	●	●	●	●	
FREEDOMPHONE	3500	£199	49MHz., 1.7MHz	200m	●	●	●	●			
HANDY PHONE	HP 1001	£199	49MHz., 35MHz		●	●	●	●	●	●	
MAXCALL		£116	49MHz., 1.7MHz	100m	●	●	●	●			●
MAXCOM	MCP150A	£89	49MHz., 1.6-1.8MHz	800m	●	●		●			
MAXCOM	MCP 120	£70	49MHz., 1.7MHz	700ft		●		●			
MAXCOM		£99	49MHz., 1.7MHz	200m	●	●	●	●			
PACER	7800	£149	49MHz., 1.7MHz	500m	●	●	●	●			
SUPERFONE	CT600	£115	49MHz., 1.7MHz	100m	●	●	●	●			
SUPERFONE	CT650	£199	49MHz., 1.7MHz	230m	●	●	●	●		●	●
SUPERFONE	CT505	£299	49MHz., 70MHz	1Km	●	●	●	●	●	●	

# PORTABLES

TX IND. LIGHT	RX IND. LIGHT	CH 9 SWITCH	MIKE POSITION	COMMENTS	ADDRESS	NAME
					Solid State Electronics (UK), 41 Twyford Ave. Shirley.	DNT
				External antenna facility	Globe, 168 Brooker Road, Waltham Abbey, Essex	HARVARD
•					Southampton (Tel: 0703 7803 780336)	KAISER
•					A.T.M., AM House, 9A Old's Approach, Tolpits Ln, Watford Herts	MAXCOM
•					Plustronix Ltd., Hempstalls Ln, Newcastle-under-Lyme, Staffs	MIDLAND
					Tame Way, Tower Bridge St, Walsall	TANDY
•			FL	Report Nov '83	The Mill House, Tuckenhay, Totnes, Devon O80423 336/370	WESTWARD

The range of telephones and communications accessories available to the consumer is increasing rapidly. Not all equipment is approved by British Telecom — so look for the tag with the green dot if you want 'BT Approved' accessories.

# CORDLESS PHONE

STANDBY	BATT. IND.	PRIVACY BUTTON	COMMENTS	ADDRESS	NAME
•			Report Feb '84		A-PHONE
•	•		Report July '84	Local BT Sales Offices	
•		•	Report July '83 BT Approved		FIDELITY
			Report May '83	Fidelity Ltd., Victoria Rd., London NW10	FREEDOMPHONE
•		•	Report Aug '83	Thanet Electronics Ltd., Reculver Rd., Bellingham, Kent	HANDY PHONE
			Report June '83		MAXCALL
	•		Report Oct '83	(Maxon Group, AM House, 9A Old's Approach, Tolpits Ln., Watford, Herts	MAXCOM
•	•	•		Report May '84	
			Report May '83		MAXCOM
			Report May '83		PACER
		•	Report April '83	Superfone Communications, London NW2	SUPERFONE
		•	Report April '83		SUPERFONE
•			Report April '83		SUPERFONE

# ANTENNA CHECKLIST

## The Citizens' Band Antennas

**Name**  
Lists antennas by name and model number and gives you, where possible, the name and address of the manufacturer or distributor.

**Construction**  
The majority of home base antennas are made of aluminium and mobile antennas from stainless steel, but fibre glass can be

The D.T.I. specs for CB antennas are now more liberal than those originally in force, with the base loading restriction removed to permit any type of loading as long as the antenna is 1.65m in length (or less) and no more than 55mm in diameter. This revised checklist now includes the many new antennas released after this change of heart.

NAME	ADDRESSES	MODEL	CONSTRUCTION	LENGTH	MAX POWER	TYPE	LOADING	MOUNT	PRICE RANGE
AERIAL SUPPLIES	Aerial Supplies (Redditch) Ltd. 6 Widney House, Bromsgrove Road, Redditch, Worcs. (0527 62620/60107)	Silver Star	AL	1.5	100	B	B	Pole	D
		Silver Arrow	AL	1.5	500	B	B	Pole	E
		Javelin	AL	1.54	500	B	C	Pole	E
		Javelin Dipole	AL	1.54	500	B	C	Pole	C
ARMSTRONG	Stateside Trading Ltd. Audley Avenue, Newport, Shropshire	SAM 10	SS	1.06	1000	M	B	Surface	F
		SAM 20	SS	1.06	1000	M	B	Spring Surface	F
		TAK 10	SS	1.06	1000	M	B	Boot lip	F
		TAK 20	SS	1.06	1000	M	B	Spring Boot lip	F
		MAG 10	SS	1.06	1000	M	B	Mag.	G
		MAG 20	SS	1.06	1000	M	B	Spring Mag.	G
		BDY 20	SS	1.06	1000	M	B	Side	G
		PEC 20	SS	1.06	1000	M	B	Side, Fold over & Quick Disconnect	G
ARCHER	Tandy Corp. Tameway Tower, Bridge Street, Walsall, West Mids.	21-904	SS	0.5	50	M	B	3/8" thread	D
AVANTI	CB Radio Centre Ltd., 337 Kenton Road, Harrow, Middlesex	AV 241	SS	1.22		M	B	Stud	D
		AV 241T	SS	1.22		M	B	Trunk	E
		AV 241M	SS	1.22		M	B	Mag.	E
		AV 241MM	SS	1.22		M	B	Mag.	G
BANDIT	Telecomms, 189 London Road, North End, Portsmouth	B10	SS	1.42		M	B	Mag.	G
		B15	SS	0.61		M	B	Mag.	F
		B15	SS	1.22		M	B	Mag.	F
		B20	SS	1.42		M	B	Mirror	F
		B30	SS	1.42		M	B	Drill Thru	F
		B30	SS	1.22		M	B	Drill Thru	F
		B40	SS	1.42		M	B	Various	D
		B40	SS	1.22		M	B	Various	D
		B50	SS	1.42		M	B	Various	D
		B50	SS	1.22		M	B	Various	D
		B50	SS	1.22		M	B	Various	D
BREMI UK LTD.	Unit 6, Innage Park, Holly Lane Industrial Estate, Atherstone, Warks.	B27S	SS	1.62	1000	M	B	3/8" thread	C
		C27S	SS	1.38	1000	M	C	3/8" thread	C
		HB27S	AL	1.55	1000	M	T	Pole	E
CB SERVICES	97 Crab Lane, Harrogate, North Yorks.	Bullwhip Knuckleduster	SS AL	1.5 1.5		M B	B B	Various	C D
COMMTEL	Near Third Drive, Fengate, Peterborough	Rocket	SS	1.5		M	B	3/8" thread	
		Shuttle	FG	1.5		M	B	3/8" thread	
		Starlight	SS	1.5		M	B	3/8" thread	
		Shuttle Star		1.5		B	B	CW	
		Signal searcher	AL	1.5		B	B	Clamp	
		Messenger	SS	1.5		B	B	Pole	E
Signal keeper	SS	1.5		B	B	Clamp Tripod	F		
FREEMAN AND PARDOE	Tything Road, Arden Forest Ind. Est, Alcester, Warks.	Invader	AL	1.5	250	B	B	Pole	E
		Thunderpole II	AL	1.5	500	B	B	Pole	F
		Thunderpole III	A1	1.65	500	B	C	Pole	F
GAMMA AERIAL PRODUCTS	Lye, West Midlands. (0384 891132/891474)	Skybreaker	AL	1.5		B	B	Pole	D
		Avenger	AL	1.5		B	B	Bracket	C
		Lofly	AL	1.5		B	B	Bracket	D
		Skybreaker II	AL	1.85		B	C	Pole	E
		Avenger II	AL	1.65		B	C	Bracket	E
		Lofly II	AL	1.85		B	C	Bracket	E
		Firefly	SS	1.65		M	C	3/8" thread	E

## na Checklist will give you the following information:

used in some models. The list tells you what material the antenna is manufactured from.

### Length

The legal maximum length of an antenna is 1.65m, base or mobile.

### Maximum Power

This is intended as a guide

only, as the law only permits an effective radiated power of two watts. The power rating will give some indication of sturdiness. Figure refers to watts.

### Type

Indicates whether a mobile or base antenna.

### Loading

Indicates the type of

electrical loading of the antenna; top, centre, bottom or continuously wound.

### Mount

This gives some idea of the mount or type of mount appropriate for the antenna concerned. Home base antennas are usually pole

mounted, but can be house gutter mounted. Mobile antennas are either mag. mounted by a strong magnet, attached to the car gutter or boot lid edge whilst others are physically attached in the same way as a car radio antenna. Mobile antennas with 3/8" thread usually will fit a range of mounts.

KEY		
Construction	Loading	B - £5-£9.99
SS - Stainless Steel	T - Top	C - £10-£14.99
AL - Aluminium	C - Centre	D - £15-£19.99
FG - Fibreglass	B - Base	E - £20-£24.99
Type	CW - Continuously wound	F - £25-£29.99
B - Base	Price Bands	G - £30-£39.99
M - Mobile	A - £1-£4.99	H - £40 plus.

NAME	ADDRESSES	MODEL	CONSTRUCTION	LENGTH	MAX POWER	TYPE	LOADING	MOUNT	PRICE RANGE
HAM	Dials Wholesale, Unit 8, Block 2, Whitegate Indust. Est., Bathgate, West Lothian	Balcoaster DV27 OV27TW	AL	1.2	200	B	C	Bracket	C
			FG	1.39	100	M	T		B
			FG	1.19	100	M	T		B
HOT ROD	Stateside Trading Ltd, Audley Avenue, Newport,	FM UK	SS	1.27		M	B	3/8" Thread	B
LES WALLEN MANF.	Pembroke Works, Ramsgate Road, Sandwich,	Modulator LC	SS	1.85	1000	M	B	3/8" Thread	C
		M.D.X. Long	SS	2.00	1000	M	B	3/8" Thread	C
		M.D.X. 9hort	SS	1.85	1000	M	B	3/8" Thread	C
		Mini M.D.X.	SS	1.10	100	M	B	3/8" Thread	B
		Mini 27	SS	1.40	500	M	B	3/8" Thread	B
		Thunderbolt	SS	0.83	200	M	B	3/8" Thread	B
		Saturn	AL	1.00	500	B	CW	Pole/wall	D
Exper	AL	1.00	1000	B	C	Pole/wall	F		
R.W. BAOLAND LTD.	Roetan Trading Estate, Providence Street, Lye, Stourbridge, West Midlands (Lye 3160-5051)	Rebel 1	SS	1.5	500	M	B	3/8" Thread	
		Rebel II	SS	1.5	500	M	B	3/8" Thread	
		Rebel Raider	SS	1.6	500	M	C	3/8" Thread	
		Rebel Bullet	SS	0.61	50	M	B	3/8" Thread	
		Red Oevil	SS	1.62	500	M	CW	3/8" Thread	
REVCO	Telecomms 189 London Road, North End, Portsmouth,	Revco	SS	1.0	100	M	B	Various	B
\$MC	Rumbridge Street, Totton Street, Hants	Oscar CBA 11GP	SS	1.5		B	B	Mag. Foldover Base Pull up Foldover Base	F
		Oscar 11V11S11	SS	1.5		B	B		D
		Oscar 11CM	SS	1.2		M	B		C
		Oscar 11CE	SS	1.2		M	B		C
		Oscar 11NE	SS	1.5		M	B		C
		Oscar 11SE	SS	1.5		M	B		C
		Oscar 11ZE	SS	1.5		M	B		C
TAGRA	CB Radio Centre, 337 Kenton Road, Middlesex.	T40	SS	1.4	500	M	B	Various	E
VALOR	W.T.A. Electronics Ltd, 111 Cromer Road, Hellesdon, Norwich (0603 47694)	Warrior 650	SS	1.52	1500	M	C	3/8" Thread	C
		Half Breed 520	SS	1.52	1500	M	B	3/8" Thread	C
		Half Breed 510	SS	1.2	1500	M	B	3/8" Thread	C
		Half Breed 500	SS	0.9	1500	M	B	3/8" Thread	C
		Dial-a-Match 540	SS	-1.2	100	M	B	3/8" Thread	C
		Dial-A-Match 630	SS	0.6	25	M	B	3/8" Thread	C
		Rubber Duck 300		0.36	25	M	CW	3/8" Thread	C
		Pro Am PLB 27	SS	1.62	200	M	B	3/8" Thread	E
		Road Hog 338	FG	0.9	1000	M	T	3/8" Thread	D
		Road Hog 335	FG	1.2	1000	M	T	3/8" Thread	D
		Road Hog 336	FG	1.52	1000	M	T	3/8" Thread	D
		Road Hog 337	FG	1.75	1000	M	T	3/8" Thread	D
		Road Hog 831	FG	0.6	500	M	T	3/8" Thread	D
		Road Hog 83B	FG	0.9	1000	M	T	3/8" Thread	D
		Road Hog 835	FG	1.2	1000	M	T	3/8" Thread	D
		Road Hog 835	FG	1.52	1000	M	T	3/8" Thread	D
		Black Magic 333 1/2	FG	0.76	500	M	T	3/8" Thread	D
		Black Magic 333	FG	1.2	500	M	T	3/8" Thread	D
		Black Magic 332	FG	1.52	500	M	T	3/8" Thread	D
		Black Magic 333 1/2	FG	0.76	500	M	T	3/8" Thread	D
		Black Magic 833	FG	1.2	500	M	T	3/8" Thread	D
WTA	W.T.A. Electronics Ltd, 111 Cromer Road, Hellesdon, Norwich, (0803 47894)	Wot Pole 1	AL	1.5	1000	B	B	Pole	B
		Wot Pole II	AL	1.5	1000	B	B	Pole	C
		Wot Stick 1	SS	1.5	1000	M	B	3/8" Thread	A
		Wot Stick II	SS	1.5	1000	M	B	3/8" Thread	B
VAN DRDT	Knight Communications, Unit 19 Brittenia Estate, Leagrave Road.	Audio King	SS	1.5	2000	M	B	3/8" Thread	G

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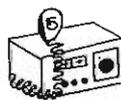
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