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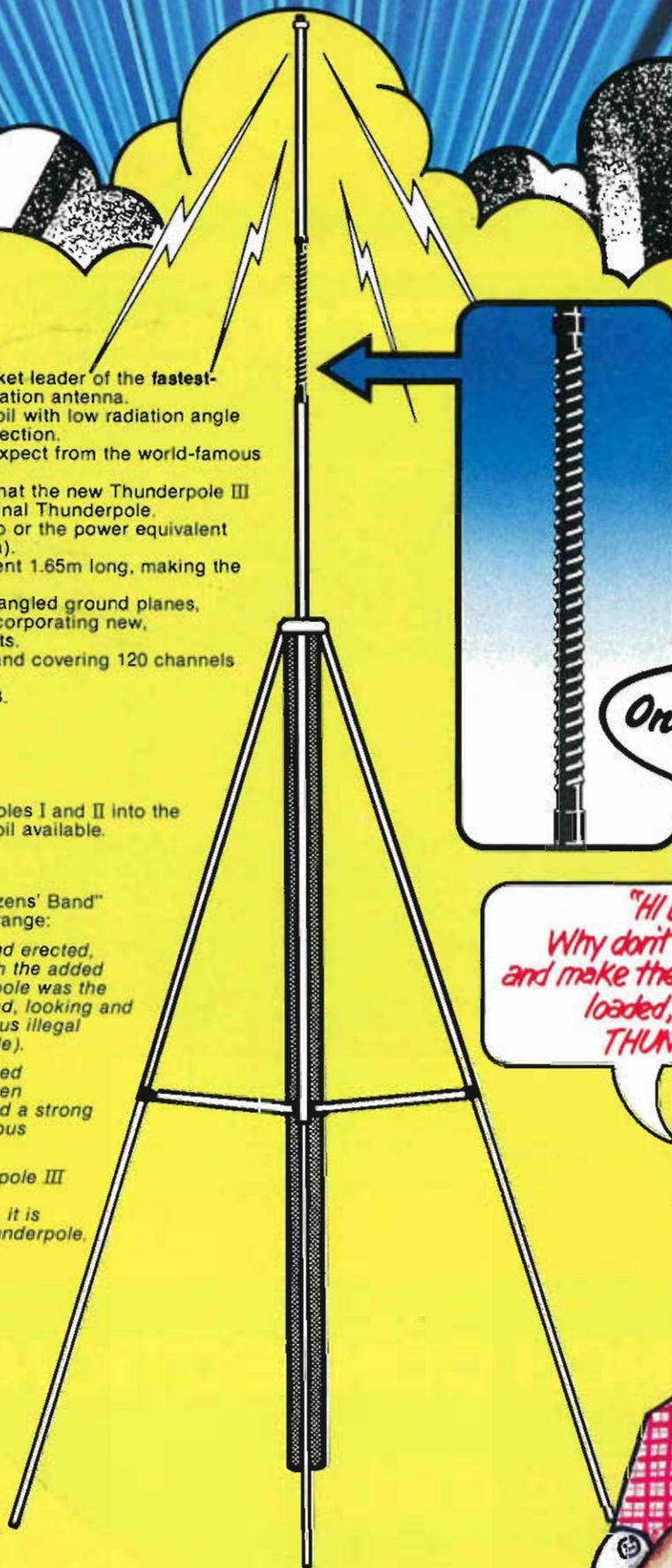
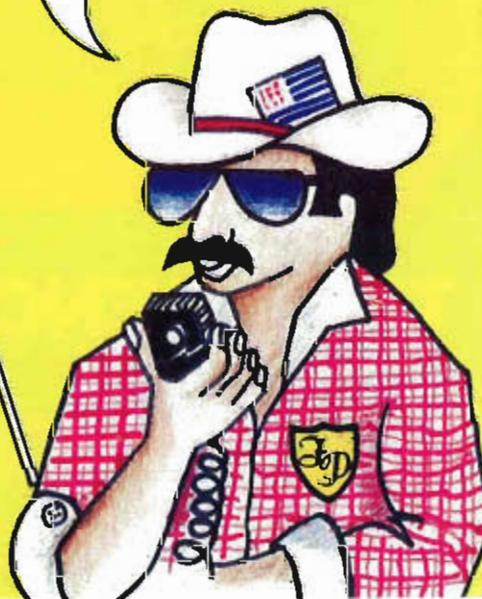
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CB Citizens' Band

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Cover this month
Looking like something out of 'Close
Encounters', the new Cybernet UHF
rig hovers on the front cover.

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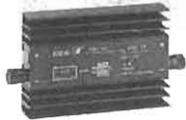
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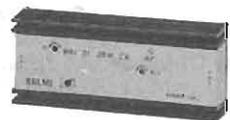
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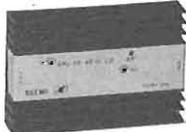
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Input voltage: 220 V a.c. 50 Hz - Output voltage: 13.8 V d.c. - Current: 3 A max - Stability: better than 0.1% with mains variations of 10% or load variations from 0 to 3A - Protection: electronic with current limiter - Ripple: 1 mV at 3 A load - Dimensions: 155 x 135 x 85 mm - Weight: 1.5 Kg. (240 V a.c. supply available) RRP £14.25



STABILIZED POWER SUPPLY MOD. BRS 35
Input voltage: 220 V a.c. 50 Hz - Output voltage: 13.8 V d.c. - Current: 0-10 A - Stability: better than 3% with mains variations of $\pm 10\%$ and load variations from 0 to 10 A - Protection: electronic with current limiter - Ripple: 1 mV with 10 A load - Weight: 4.7 Kg - Dimensions: 180 x 105 x 300 mm (240 V a.c. supply available) RRP £33.65



CB LINEAR AMPLIFIER MOD. BRL 31
Input voltage: 12 - 15 V d.c. - Max current: 2 - 2.8 A - Input power: 0.2-5 W R.F. - 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



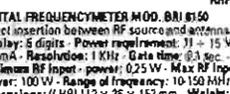
CB LINEAR AMPLIFIER MOD. BRL 36
Input voltage: 12 - 15 V d.c. - Max current: 4-4.5 A - Input power: 0.2-5 W R.F. - Output power: maximum 50 W AM - Frequency: 26 - 30 MHz - Operation: AM - FM - SSB - Input SWR: better than 1.3, externally adjustable - Dimensions: 120 x 79 x 40 mm - Weight: 0.3 Kg RRP £35.75



LINEAR AMPLIFIER MOD. BRL 710
Output power: 100 Watts AM maximum, depending on the input power - Input power: 0.5 - 70 Watt AM, 1 - 20 Watt PEP SSB - Input voltage: 220 V 50 Hz - Frequency: 26-30 MHz - Operation: AM - SSB - FM - Output Impedance: 52 OHM - Input Impedance: 52 OHM - Input SWR: better than 1.3, internally adjustable - Instruments: output power indicator and modulation percentage indicator - Control: stand-by, AM - SSB - Protection: mains with 2 A fuse contained inside - Vacuum tube: EL503 - Dimensions: 174 x 101 x 257 mm - Weight: 4 KG - It is advisable to use a RG 58 cable 70 cm long RRP £95.55



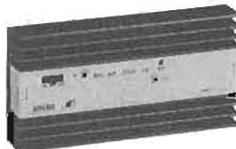
DIGITAL FREQUENCY METER MOD. BRJ 8100
Direct insertion between RF source and antenna - Display: 6 digits - Power requirement: 11 - 15 V d.c., 150 mA - Resolution: 0.1 KHz - Date time: 1 sec - Minimum RF input power: 0.25 W - Max RF input power: 100 W - Range of frequency: 10-150 MHz - Dimensions: (LHP) 112 x 36 x 152 mm - Weight: 245 g RRP £53.85



DIGITAL FREQUENCY METER MOD. BRJ 8150
Direct insertion between RF source and antenna - Display: 5 digits - Power requirement: 11 - 15 V d.c., 150 mA - Resolution: 1 KHz - Date time: 0.3 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 152 mm - Weight: 245 g RRP £58.00



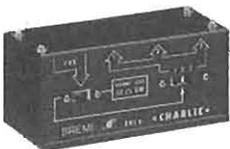
SWR METER-WATTMETER MOD. BRZ 22
Range of frequency: 3 MHz - 150 MHz SWR meter, 26 - 30 MHz Wattmeter - Input and output impedance: 52 Ohm - SWR and Watt Indicating instrument: 1 cl mobile coil, 50 μ A 1 s - Connectors: SO 239 - Measures of the R.F.: up to 1000 W in 3 ranges 0 - 10, 0 - 100, 0 - 1000 W - Weight: Kg. 1 - Dimension: 212 x 118 x 80 mm RRP £32.95



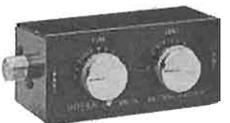
CB LINEAR AMPLIFIER MOD. BRL 40
Input voltage: 12 - 15 V d.c. - Max current: 7 A - Input power: 0.2-5 W R.F. - Output power: maximum 75 W AM - Frequency: 26 - 30 MHz - Operation: AM - FM - SSB - Input SWR: better than 1.3, externally adjustable - Dimensions: 160 x 79 x 40 mm - Weight: 0.33 Kg RRP £40.85



LINEAR AMPLIFIER MOD. BRL 500
Output power: 600 Watts AM maximum, depending on the input power - Input power: 0.5 - 5 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 coil instrument - Output and SWR indicator, internally lighted - Controls: STAND-BY, AM - SSB, output power switching 250/500 W, SWR reading, instrument switch (reflected, direct power, Watt) - Protection: mains with 5 A fuse - Vacuum tube set: 5 x EL1519 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 £328.65



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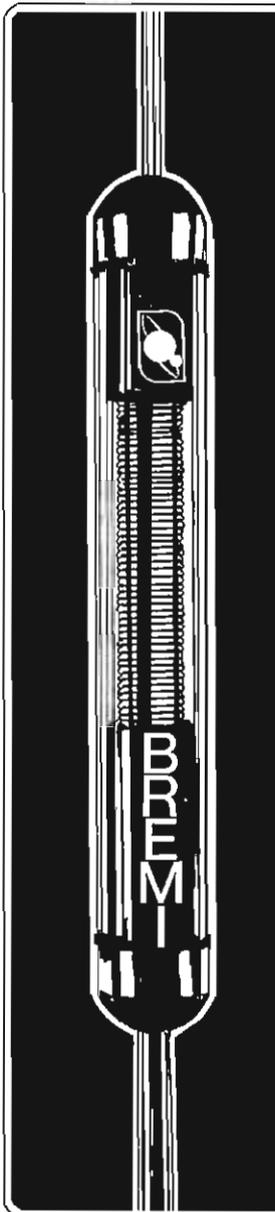
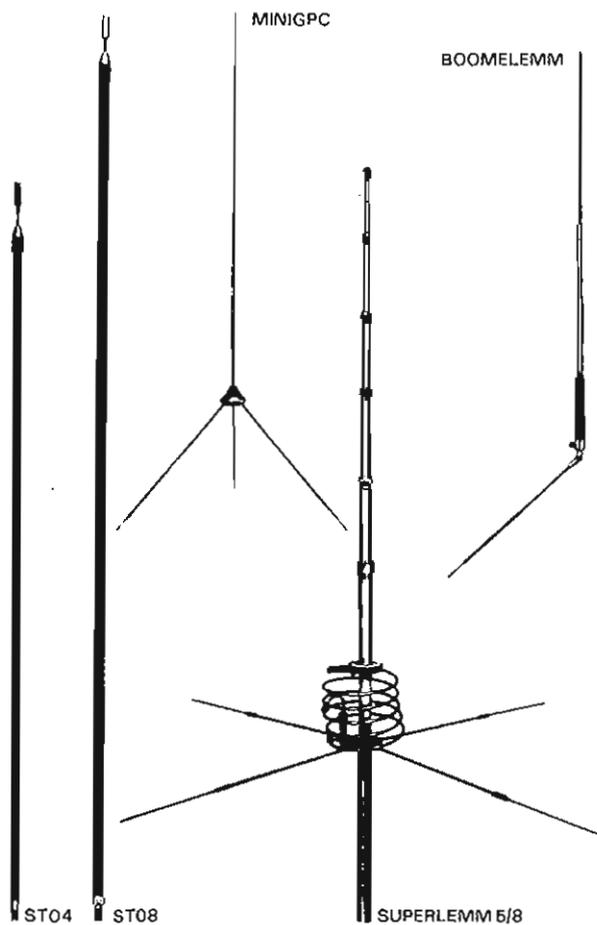
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UPDATE

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

They are at it again. The faceless ones upon whom all the wisdom of the universe has been bestowed. They, who have obviously never tried to find a clear channel in Streatham High Street, or anywhere else in Britain for that matter, are piously trying to persuade me that CB is dead. Or if not quite dead, at least in the final stages of terminal illness. It would seem that this pearl of wisdom stems from the fact that the licence renewal rate has begun to drop, though they appear singularly unconcerned as to the reason for this fact.

It is certainly a fact that fewer people are taking out CB licences, but it is not too difficult to understand the reasons. It is equally true that part of the reduction is the result of humanity's natural tendency to explore one hobby after another and, since remarkably few pastimes require a licence it is impossible to draw a direct comparison with the number of discarded cameras or the number of would-be musicians who discover that nature has

endowed them with ten thumbs.

The truth of the matter is that the dealers I have spoken to simply do not bear out the assertions of the popular press. Despite the fall in the number of licences it seems that CB remains almost as popular today as when it was legalised nearly three years ago. I say nearly because nobody in their right mind expected it to maintain the status of a craze for ever. There were countless thousands ready and eager to buy a CB licence just as soon as they became available. Many were committed enthusiasts from the bad old days of "busts", "Busbies" and endless rumours, but an even larger number were entirely new to CB and, though many have become dedicated breakers, others, having given it a try, found that it was not to their taste and promptly vacated the channels.

The net result is that we are left with a very large number of breakers. But how large? The number of licences in force cannot be regarded as an accurate

assessment. It is a sad but true fact that a good many breakers operate without benefit of a licence, whilst others, despairing of the lack of enforcement of licence conditions, refuse to renew, in the belief that they are not getting value for money. I would like a penny for every time I have heard a breaker say "Why should I buy a licence? Nobody does anything about the bucket-mouths. Nobody offers any protection from abuse. What do I get for my money?" What indeed? It seems that all ten pounds buys you these days is the right to go on the air in the hope that your particular area is free from assorted morons, fifth rate comedians and disc jockeys.

Authority's answer to these problems is wonderfully simple. "You should police the system yourselves," they say. A beautiful, if impractical idea. Knowing whence a particular form of abuse emanates is one thing, proving it quite another and even when proof is obtainable it seems we can expect little help from those with the legal power to act

Musical Interlude

CB appears to have been exercising the official mind of late, with some interesting results. Perhaps the most surprising of these has been a special dispensation to breakers in the Shetland Islands, the effect of which is to permit the playing of live music on the air. Following the recent introduction of an overall prohibition on music playing, Shetland MP., Mr. Jim Wallace, was contacted by a number of his constituents who pointed out that the islands had a strong tradition for home grown music and that because of their unique geographical conditions and considerable under-usage of the channels, CB was the

ideal medium by means of which isolated islanders might share this tradition.

In the light of these points Mr. Wallace wrote to Mr. John Butcher, MP., now Parliamentary Under Secretary of State at the D.T.I. and whom many will remember as an ardent supporter of the CB campaign during its early beginnings, asking for the rule to be relaxed so far as the Shetlands were concerned.

After some initial reluctance, Mr. Butcher granted Mr. Wallace's request in the following words. "The Department were initially reluctant to allow any local variations to the CB licence as these could be very costly to administer if they started to

proliferate. However, after further consideration we recognised that CB could play a useful part in encouraging an important element in the cultural heritage of the Shetland Islands."

In taking this decision Mr. Butcher had also considered the fact that the Shetlands were far enough away from mainland Scotland to ensure that this unique relaxation would not inconvenience mainland breakers, though he did issue the warning that if live music were to lead to complaints of lack of free channels from other users the matter would be reviewed.

By and large we are of the opinion that Mr. Butcher has displayed considerable

upon it. Neither are we thugs. Nobody wants to see our hobby degenerate into vigilantism, so it seems that for the time being the system condemns us to accept the abuse or give up our hobby.

The real problem, however, is that the spiral gets worse. We are in a "chicken and egg" situation, in which the only way that the authorities can estimate the use of CB is by looking at the number of licences they issue and the only way in which we can impress our needs upon them is by being among that number. If our recorded numbers fall then our suggestions carry less weight. Conversely the more licences that are taken out, the stronger our voice becomes. This single factor will have a profound effect on the future development of CB, not only in respect of our demands for better control, but also in terms of future frequency allocation. We need more channels and our only chance of ever being given them is to prove the real demand. After all, if you look at it from the other side of the fence, why should more space be

allocated to fewer operators?

Not all the blame, however, can be laid at the feet of the powers that be. I suspect that we have not done all that we might to attract genuine breakers to the hobby. We still slavishly follow the American example in a number of ways but, no matter how much fun it may be for a while, this is not America and the "cowboy" image which sometimes surrounds CB tends to exclude many who might otherwise make a genuine contribution to its future. Although the club scene is not what it was a few years ago there are some very good CB clubs around and they are well worth joining. They go a long way to create a community spirit among the breakers by promoting higher standards of operation on channel and better personal contact between their members. Most have at least one technically competent member to whom the less electronically minded can turn for advice and many organise events which, whilst not strictly connected

to CB, are of interest to their members. The club scene is still strong, but we can make it stronger and benefit from it in doing so.

CB is for fun, but it also has its serious side and as breakers we have a responsibility to ensure that both sides of the hobby are allowed to develop their full potential. Channel 9 monitoring has its problems but you cannot deny that it has had some notable successes, whilst to the majority of truckers channel 19 has become a way of life. Give it a try sometime. It's a pleasure to listen to them on a long journey. I'm willing to bet that most of us know at least one disabled breaker and if you have any doubts about the real benefits of CB just take the time to find out what it means to many of them, but the real value of CB lies in its potential for sheer enjoyment. Most breakers use it just for fun and that alone is enough to ensure that it will outlast those who are presently so keen to write its epitaph.

Keith Townsend

The Future of Radio

Among other things to emerge from the D.T.I. of late are a couple of Green Papers which are likely to have considerable effect on the future of radio. The first, considering the future of the old TV Bands I and III, proposes a huge increase in the amount of spectrum available to Land Mobile Radio (what price a VHF CB facility?), whilst the second suggests that a number of low powered RF devices including intruder alarms, radio microphones, anti-shoplifting tags, garage door openers and alarms for the elderly and infirm which operate within the 27MHz. band, to name only a few, should be available without the need for a licence.

The first of these discussion documents is a direct response to the recent Merriman Report of the future use of the spectrum and the second an extension of the policy under which radio controlled models were recently exempted from licensing.

You may rest assured, though, that there are no plans to dispense with the need for CB licences, as is demonstrated by the recent publication of figures showing the number of prosecutions for CB related offences during the first half of 1984. In all, 688 prosecutions resulted in conviction, of which 587 were for the use of either AM or SSB equipment, whilst a further 101 related to licence abuse of FM frequencies. A regional breakdown of these figures would have been interesting, as would some indication of the types of offence for which FM users were prosecuted. Unfortunately neither is available. Nevertheless, it is heartening to see that abuse of FM CB is, at long last, receiving some degree of official attention.

good sense in this matter. The anti-music rule was not designed to deprive Shetland folk of their heritage, but to dissuade irresponsible breakers from cluttering up the channels in areas where forty channels is barely sufficient for the purpose for which CB was intended. We have been assured by the R.R.D. that they have no plans to introduce exemptions to this rule in any other part of the U.K. and that the playing of all forms of music anywhere other than in the Shetlands, where recorded music is still prohibited, will remain an infringement of the terms of the licence. Given this assurance we wish the Shetlanders many happy hours of home made entertainment.

Breaker' 'Special Affection'

Every so often comes a moment which makes all those years of campaigning for CB really worthwhile. One such moment arrived recently, when we received a letter from Mrs. Rose Croot, of London's famous St. Bartholemew's Hospital, which recently launched an appeal to raise £750,000 in order to re-equip its childrens' cancer ward, which takes patients from all over the world.

What makes this letter so special was Mrs. Croot's statement that, following recent Press publicity, "The enthusiasm shown by CB enthusiasts was so strong that I have come to believe

that this ancient hospital has a special place in their affections."

Here at Citizens Band we are proud to receive letters like this and to be associated with those who make them possible. The job is not finished yet, though and Mrs. Croot points out that Bart's could use a lot more help from breakers. CB clubs have a long history of helping really good causes and, should they wish to help Bart's, cheques/P.O.s, payable to Bart's Childrens' Cancer Centre Appeal and mailed to The Gatehouse, St. Bartholemew's Hospital, West Smithfield, London EC1A 7BE, would be greatly appreciated.

The End of an Era?

The last few months have seen momentous changes in the way that radio is administered in this country. The much publicised Telecommunications Bill finally became the Telecommunications Act (1984) and, after months of speculation, the D.T.I. at last announced that it was to take over responsibility from British Telecom for the Radio Investigation Service.

One of the consequences of the Telecommunications Act has been to give the R.I.S. wider powers in dealing with offences under the Wireless Telegraphy Acts and, in particular, it has created a new crop of offences, as the Secretary of State's powers to prevent interference have been widened.

As we reported some months back, these new powers include the right to ban the sale, advertising and even possession of equipment in respect of which previous legislation prohibited only the manufacture and importation. It was, perhaps, inevitable that one of the first areas to which these new rules would be applied would be the unlicensed use of CB. Sure enough, the R.R.D. are currently preparing an Order which is

expected to apply these criteria to all forms of unapproved CB rigs.

The new order will probably take effect from October and is initially expected to prohibit the sale and advertising of all forms of CB radio, including AM and SSB rigs, which do not conform either to the present specification (MPT 1320), or, with European standardisation in mind, the new CEPT recommendations (TR20 - 02) for a common European system. Radios designed specifically for use on the 10 metre amateur band will not be restricted by this order, though it is likely that it will prohibit the importation of American style CB rigs which have been converted to the amateur band but which are capable of re-conversion to CB.

Eventually the order will make it an offence merely to possess illicit CB equipment, though there is likely to be a lapse of some six months before this provision comes into force.

As yet there has been little indication of the penalties which these new offences are likely to attract, but the Order goes a long way to reinforce the authorities' determination to restrict the use of CB in this country to FM only, as it would appear that dealers will not only be prevented

from selling unapproved rigs, but also from carrying out repairs on them, once the restriction on possession comes into force. Neither will we, or any other media source, be permitted to carry adverts for such equipment.

So far as we are aware, the regulations will only apply to transceivers and will not affect the legal status of either accessories or aerials, though it will remain an offence under the terms of the CB licence to use an aerial not covered by the revised specifications, issued earlier this year.

Under the terms of the new Order the manufacture and sale of 934MHz. sets will also be restricted to those conforming with the approved specification (MPT 1321).

It is clear that one of the first areas likely to be affected by the new rules is that of production and marketing of boards offering additional channels, since their insertion will contravene the prohibition on manufacture and their subsequent use and possession will also be illegal.

It is also clear that these new restrictions will make life harder for those CB enthusiasts who have retained their pre-legalisation rigs and very much easier for the authorities,

who, until now, have been faced with the task of providing very strong evidence in order to obtain convictions for CB offences. Until now it has been necessary to enlist the help of H.M. Customs and Excise in attempting to confiscate an illicit rig but all this changes with the Telecommunications Act, under the terms of which it will be permissible for an R.I.S. official to seize any radio which might be exhibited as evidence in a prosecution and then apply to a magistrate for its permanent confiscation. No longer will it be necessary to prove actual transmission in order for a prosecution to be successful, as mere possession will, for the first time, be against the law.

We must wait to find out the full effects that will follow from the new restrictions being placed, again for the first time, on retailers, but I suspect that the black market will rapidly assert itself, as legitimate dealers confine themselves to providing permitted equipment. It will be interesting to see whether the ban on sale leads to higher prices, or whether the ban on possession makes the rigs so hard to dispose of that prices hit the bottom. I am also tempted to ponder the future of 49MHz. radios and cordless telephone.

KT

Grey Beard's Gleanings

Hello there. I am very happy to see that somebody is reading this column! First of all it's sackcloth and ashes time. I must apologise to the only lady in the country to own and run a CB shop, Lyn White. In the July issue I mistakenly stated that she was a chap. A fiery missive has recently arrived, pointing out my error!!! Lyn is, of course, a chapess. All you micky takers down in Gravesend, Kent, can now

apologise and spend some money in her shop.

In previous issues I have waxed ecstatic about the Super Modulator 11. Well, since then I have tried all the mobile twigs available from Les Wallen and have to report that although some of the shorter antennae have a restricted range (from my wheel chair, at least) they all fulfil their purpose extremely well on local QSOs. The design and standard of workmanship is what one would expect from

a major British manufacturer. I would be happy to recommend any one of these antennae. One bonus with the shorter models is that I can go into shops and libraries without the plaster over the doorway being fetched down around me!

I was recently invited to attend an "eye-ball" with the Blue Circle Breakers' Club, of Walsall. I presented a rig and all the necessary goodies to a young, severely handicapped new breaker. His personal is John but I

do not know his handle yet. As I am writing this column, Thyristor, Blue Circle's secretary, has just informed me that another rig and p.s.u. are available for issue to a worthy cause. Have you a similar club operating in your area? If so, tell me about them, please.

Well, I've run out of space once again, so I'd better sign with you for now. Keep the letters rolling in, as I like to know that you want to read about in this column.

The Grey Beard

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Loud mouth?

From A.M. Edwards, of Clwyd, comes one of those really tricky problems. . .

Q I have a recurring problem with a Super Star 2000, in which the audio chip keeps blowing after only a few hours use. I would be grateful if you could shed some light on the problem.

I use the rig in conjunction with a Eurosonic PP136 6/8amp p.s.u. and an Audioline extension speaker, neither of which give any trouble when used on any other rig.

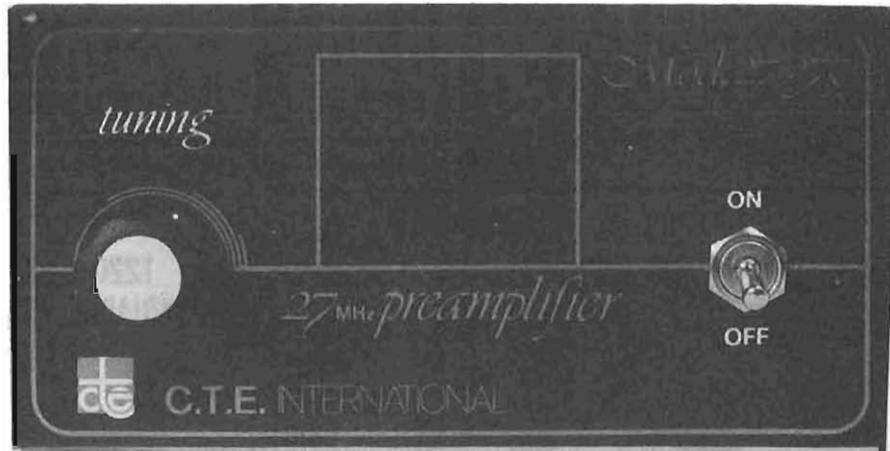
A There are a number of possible reasons for your problem. You do not say whether the chip fails during transmission or on receive but the first thing to do is to leave the rig on RX for a long time and check whether heat builds up in the area of the chip. If this is the case then the capacitor may be faulty. The obvious sign of this would be a sharp "popping" noise when you plug in the extension speaker with the rig switched on.

If no heat builds up in the receive mode then the most likely cause of the trouble lies with the modulation transformer, which may be passing excess current to the audio chip. Again the test is to monitor the build up of heat at the chip during transmission.

You are using quite a powerful p.s.u. and it might pay to ensure that it is not delivering more than the required voltage, though this would normally result in more problems than just a blown audio chip.

S.A.

The Audioline extension speaker is unlikely to be causing A. M. Edward's problem.



A pre-amplifier amplifies incoming signals and should be located near the antenna.

DX Aerial?

Down there in Suffolk, Speedwagon ruminates on the problem of DX. . .

Q What would be the best aerial for long distance breaking? Would the Modulator base antenna be any good and, if not, which aerial would you recommend?

Secondly, what is a pre-amplifier? What is its purpose and what help can it be?

A Your ability to obtain long distance copies depends on so many factors. The Modulator is an excellent antenna and, subject to conditions, will perform as well as most and better than many. A good antenna, though, is not the only requirement. Since R.R.D. specifications do not permit the use of beams and other high gain antennae, manufacturers have concentrated on producing verticals, so that really efficient DX antennae are not readily available.

You are also limited by the amount of radio traffic on the channel at any given time. One of the major characteristics of FM is its "capture" effect, in which a receiver will only take the strongest signal available to it, so preventing you from hearing weaker ones, which may originate from a greater distance.

An RF pre-amplifier works in conjunction with the receiver. For best results the pre-amp, which consists of circuitry tuned so as to pick out signals at your operating frequency, should be placed at the junction between the antenna and the coax.

Use of a pre-amp represents a very mixed blessing, for, although it will amplify the incoming signal, it offers no improvement in transmission, with the result that you may well hear stations which you are unable to work. A pre-amp will also amplify the incoming noise, so that it does nothing to improve the intelligibility of a received signal. Its third drawback is the fact that its use often leads to intermodulation, in which you find yourself listening to the signals from

more than one channel at a time. All in all, I really cannot recommend their use.

S.A.

A good idea gone wrong?

R.J. Northwood from Woking, Surrey is trying to protect his investment. . .

Q Please can you help? About seven months ago I sent off £10 to join the International CB Association, which was advertised in the Daily Star.

Some time later I received a membership card, together with a letter explaining that members would receive a newsletter, together with an advertising exchange list and other material, since when I have heard nothing more. There was no address printed on either the membership card or the letter which accompanied it.

Do you, or any of your readers know of this group? My £10 membership fee was sent to an address in Cumbria.

A Mr. Northwood's is only one of a number of requests for information about this organisation which have crossed the editor's desk recently. Despite the help of the Daily Star and some fairly extensive enquiries among other clubs I have been unable to obtain any information on the International CB Association. I am inclined to think it might be one of those things that seemed a good idea at the time, but got out of hand. Nevertheless, both Mr. Northwood and I would be grateful to any reader who can supply any information.

S.A.

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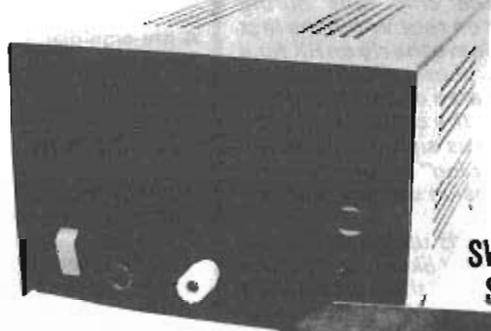
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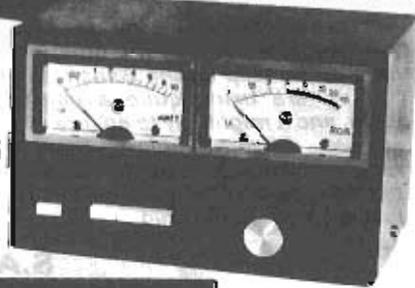


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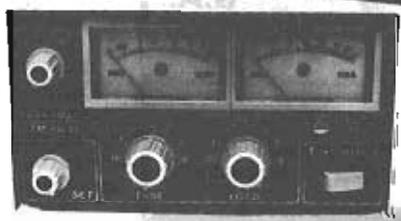


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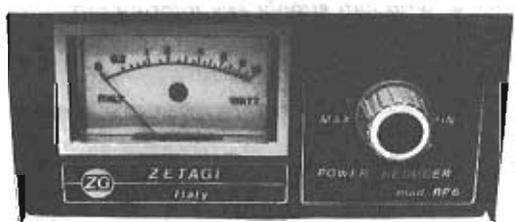
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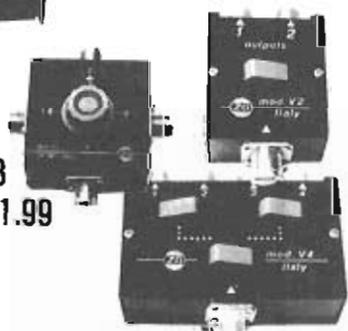


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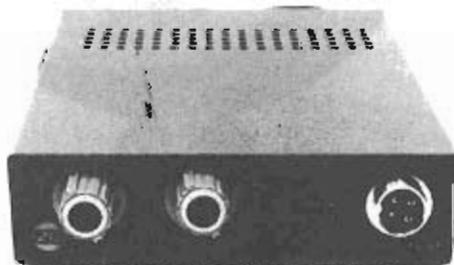


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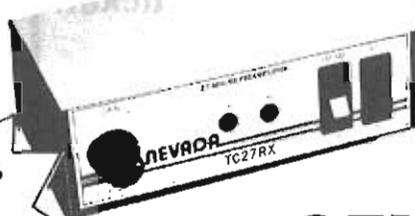


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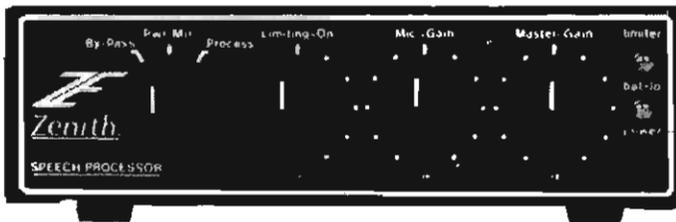


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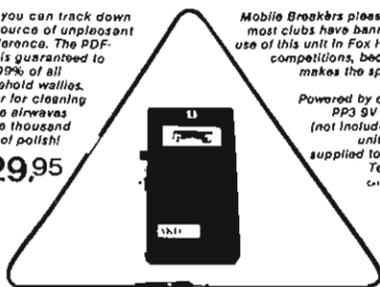
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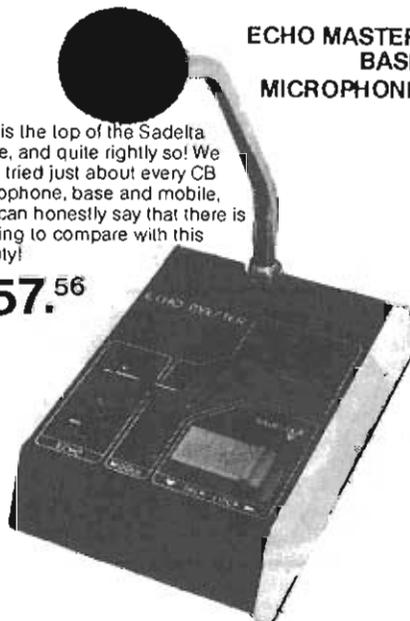
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Feature



Dave Green held a CB licence on the first day of the legal FM service but has found out that the legal service was too restrictive to satisfy his radio ambitions. He took the Radio Amateurs Examination in December 1981 and the morse test in April 1982. He now holds the call-sign G40TV. In this article he describes what amateur radio is all about and how to go about obtaining your ticket.

CB is good stuff. It gives good local communication and DX when the conditions are right. It can perform valuable (much under-rated) public service. For a lot of people that's plenty. But for others CB awakens a wider interest in radio that the (rightly) restricted legal CB service cannot fulfil. Consequently breakers must make a choice between putting up with what they've got, going down the dark and murky path of illegality with all the problems that that entails or deciding to really learn something about radio and joining the rapidly growing ranks of the amateur radio fraternity.

So what is it that an amateur licence permits that a CB licence does not? Well, firstly it is important to note that the recurring theme in amateur radio is one of 'self-training'. It is a hobby where you are constantly 'learning by doing' with so much scope that even at the end of a life time of activity in radio you would still be a long way from knowing it all.

The HF (high frequency) amateur bands are able to provide world wide



communication most days of the week, legally and without worrying about that dreaded knock on the door! The amateur licence imposes no restriction on the type of aerials that can be used and power levels up to 400 watts pep are permitted on most bands.

The class A licence holder has no less than 22 frequency bands available to him, covering the radio spectrum from low frequency to microwaves.

In the use of modes of transmission there are few restrictions on the amateur since, for speech, his licence covers FM, AM, SSB and in addition to speech, he can transmit CW (morse code), data, fast and slow scan television, radio teletype (teleprinter) and facsimile. There are amateur satellites and repeaters built, financed and used by the amateur fraternity.

It matters little where a person's radio interest lies since the scope for experimentation and discovery is only limited by a person's open imagination. The amateur still has a lot to offer to professional communicators as new fields of knowledge are developed. As an example, there are still many unanswered questions concerning the ways in which signals are propagated. The contributions which amateurs make to the development of this science are considerable.

Contests

In order to test equipment and its operators, under the most extreme conditions, a large number of radio contests are organised throughout the year with the general objective of working as many stations as possible,

GETTING



as far away as possible, within a set time limit.

As CB enthusiasts have their emergency services such as REACT, so amateurs have their own organisation, RAYNET, which undertakes the setting up of emergency communication networks. Exercises are regularly carried out with County Emergency Planning Officers, in preparation for the disasters which we all hope will never happen.

Every year there are a number of radio expeditions to rare and exotic countries which have little or no activity on radio under normal circumstances. Last year for instance there was an expedition to Heard Island, a small island, owned by Australia, in the Indian Ocean.

Many amateurs work towards some of the many radio awards that are available. Probably the most popular of these is known as DXCC. It

is issued by the American national amateur radio society for providing proof (by way of QSL cards) of having achieved two way communication with one hundred different countries.

Does it all sound too good to be true? Well it is all there for you to take advantage of. You cannot, of course, just nip into the Post Office and buy a licence, there are examinations to take and pass first but let me say categorically that ANY CB'er with average intelligence and a willingness to devote time to passing exams CAN pass. Thousands of ex-CBers have already proved it.

City and Guilds' Examination

The written Radio Amateurs Examination (RAE) is set by the City and Guilds of London Institute and

The frequency bands available to licenced radio amateurs.

MHz.	Carrier power to aerial	Peak envelope power to aerial for a.s.b.
1 810-2.0 3.50-3.80 7.0-7.10 10.10-10.150 14.0-14.350 21.0-21.450 28.0-28.70 70.025-70.5 144.0-148.0 430-432 432-440 1240-1325 2300-2450 3400-3457 5050-5680 6765-6786 5820-5850 10000-10500 24000-24500 2350-2400 5755-5765 5820-5850 10050-10450	9dBW 20dBW 18dBW 20dBW Not more than 10dBW e.r.p. 20dBW Max d.c. Input power 150W 25W mean power and 2.5 kW peak	15dBW 25dBW 22dBW 25dBW 25dBW

consists of two papers. Paper 1 lasts one hour and consists of 35 questions covering licencing conditions and interference. Paper 2 lasts 1 hour 45 minutes with 60 questions on operating practises, procedures and theory. All the questions are multi-choice—that is to say you are presented with a choice of four possible answers to each question. You have only to decide which is the right one!

Both papers are taken on the same evening with a 15 minute break between them and examinations are held three times a year at examination centres all over the country.

If a candidate passes one of the papers but fails the other, then it is only necessary to take again the paper that was failed.

Success in the RAE entitles the new amateur to apply for Amateur Radio Licence B. This authorises operation on amateur bands from 144MHz upwards; it does not permit the use of the HF bands or morse code. To operate on the HF bands where most world-wide communication takes place, and to use morse code, it is necessary to pass a British Telecom morse test in addition to the RAE. This test requires the ability to send and receive morse at a speed of 12 words per minute. This is not a daunting as it may sound. It leads to the issue of amateur licence A which gives access to all the amateur bands and modes.

To help you study for the RAE many local amateur radio clubs run courses as do some local colleges. Correspondence courses are also available.

The Department of Trade and Industry publish a very useful booklet (free of charge) called "How to become a Radio Amateur" and the Radio Society of Great Britain publish the 'bible' for RAE candidate "The Radio Amateurs Examination Manual."

So there it is. If your interest in radio extends beyond local copies with the odd bit of UX thrown in, then why not have a go? See you on the band soon.



Useful Addresses

Radio Amateur Licencing Unit
Post Office Headquarters,
Chetwynd House, Chesterfield,
Derbyshire S49 1PF

City and Guilds of London Institute
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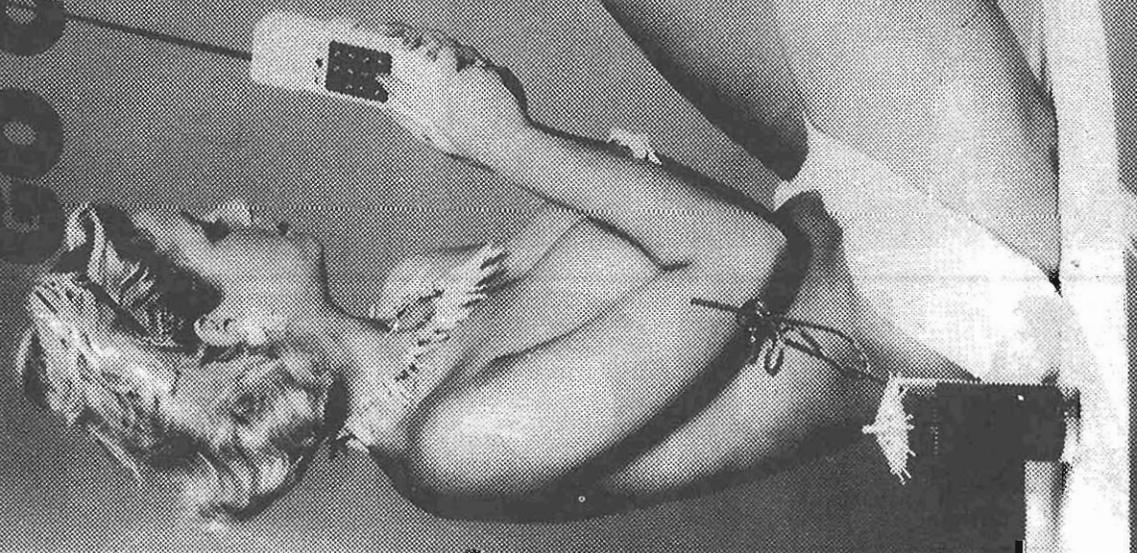
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S.O.S!
MAYDAY!
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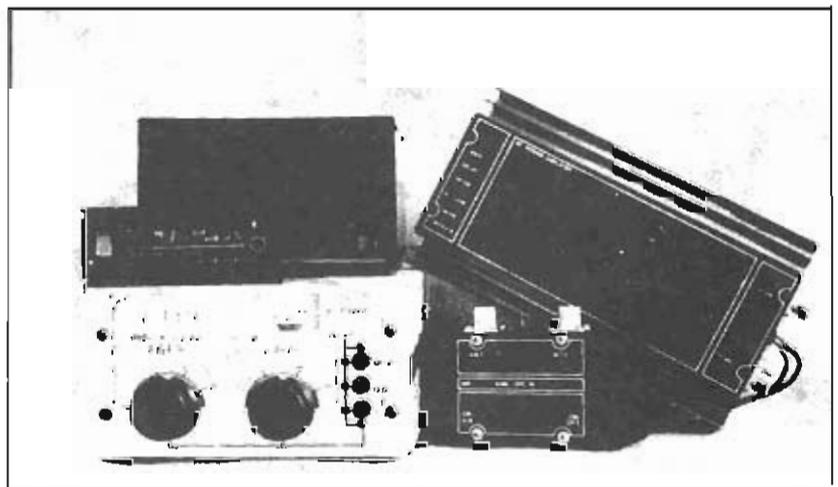
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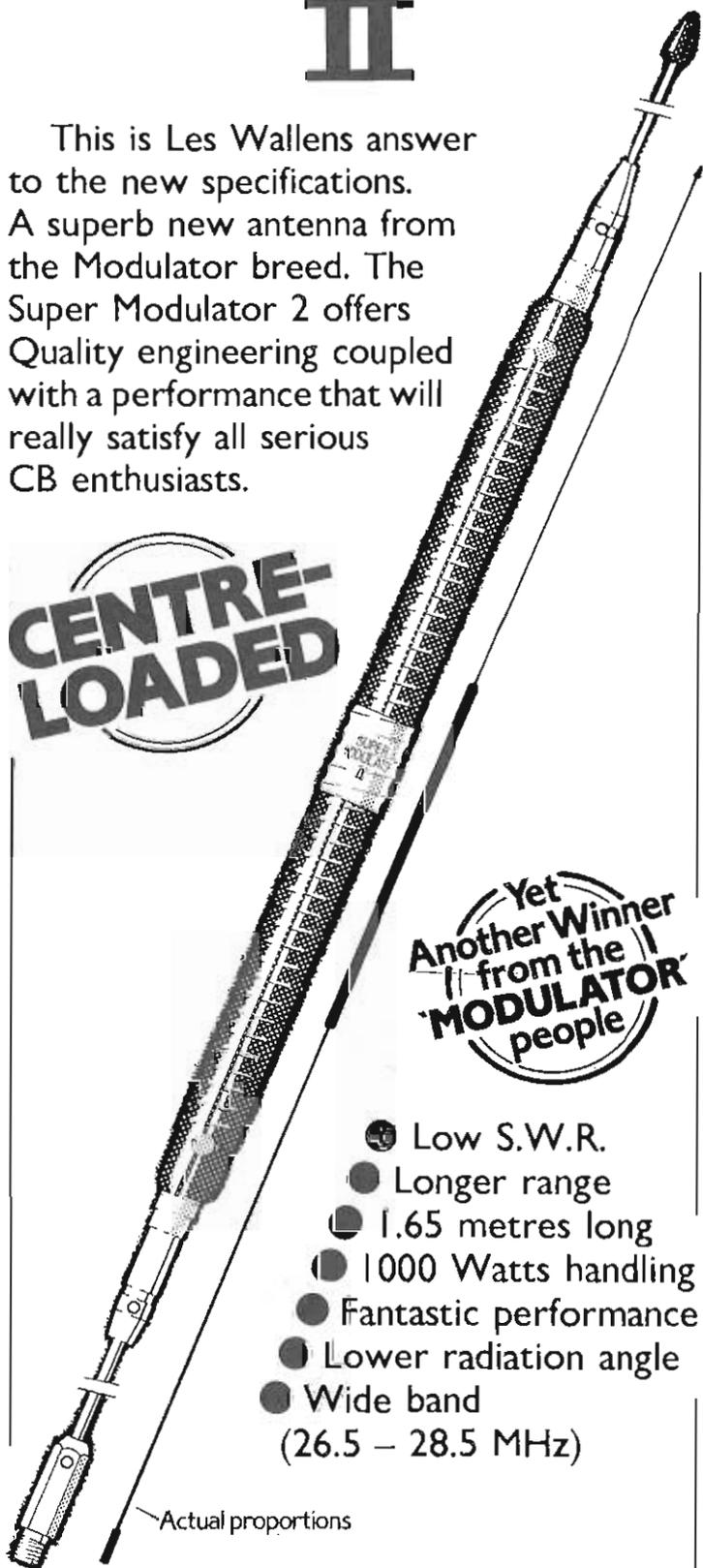
Send Cheque/PO made payable to NCC. All prices inc. VAT but carriage at the rate indicated must be added. (2) = 50p (3) = £1.50 (4) = £2.50 (5) = £4.95. Any item obtained at Discount Price just ask.

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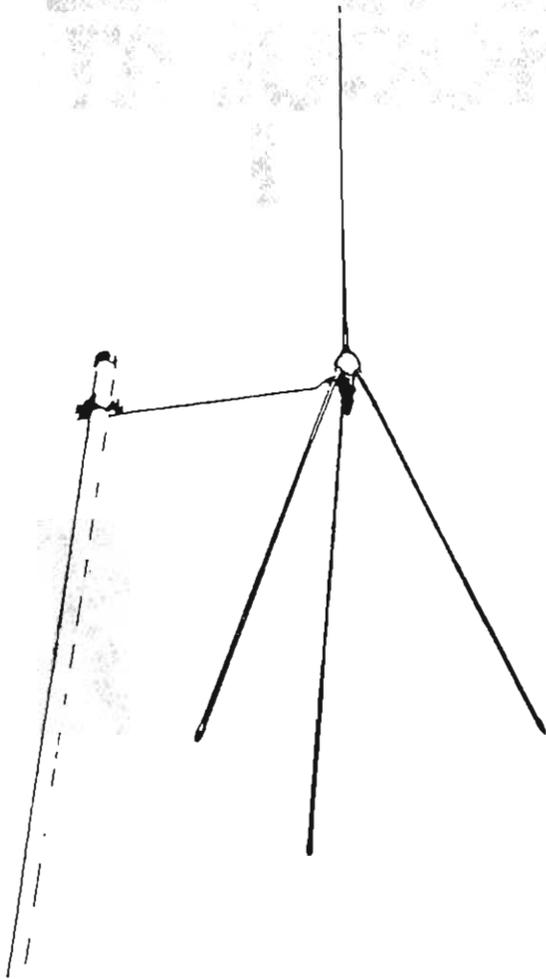
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COMMUNICATION THE QSL WAY

David Shepherdson's monthly round-up of QSL news from Rome and abroad

I'd like to start off this time with some more details on the new Galaxy Club which I just managed to squeeze in last month. The United Kingdom Radio DX Group Galaxy is based in West Yorkshire. For £4 (or \$10 (US)) and between 5 — 10 of your personal, signed and dated QSL cards each showing your return address, and these must be QSL cards, you will receive a bumper package consisting of your Galaxy number, ID card, 25 club QSL cards, a mounted club rubber stamp, ink pad, club stickers, exchange QSLs and invites, president's cards, certificate and the ever useful "extras as available". These consist of a welcome letter, 4 sheets of A4 messages, tips, info, etc and more besides. Extra club QSL cards are available for £2.50 per 100 (UK only), also the club hopes to offer T-shirts, patches, key rings and pens in the near future. If you want to join, and this club gets my recommendation, then send cash or UK postal order with your cards, or for info only, a Self Addressed Stamped Envelope. A good size is about 9" x 4½" approx.

A card here from Andy (Fuzzbeard) of Dorset, who asks for a mention and if any "Chunky Tyre Drivers" who QSL would like to get in touch with him as, if there is enough interest, he is considering launching a "Chunky Tyre QSL Club". If you, like me, are unsure just what a Chunky Tyre Driver drives, going by Andy's card, it's a tractor.

A well designed black and white card from Mark (MDT 17) of Glos. who wants to QSL you Ian (FH 760) and Mike (IPDX 17) of Dyfed want a mention and promise to QSL 100% to any swaps sent. A card and a letter from Alan Dale (King Crimson) of Norfolk arrived the other day, Alan writes to recommend Currie Printers for an excellent service with quality printed cards, reasonable costs and fantastic delivery times. Information now on a competition run by the ABC Club of Manchester. This will run until

31st December and is for Hand Coloured QSL cards, there is an entry fee of 25p per card and *all* money raised will be donated to the charity of the winner's choice. The cards will be forwarded to the Ghost Rider Appeal, so please make them out to G.R.A. The prizes are:- 1st, £10 Premium Bond, 2nd, £5 Bond and 3rd is a £2 Bond. Membership of this excellent club is available for £6 and 10 personal QSL cards.

A bit of news now on a twin UK QSL Club, the British Airways DX Group/Hampshire QSL Club. The Bravo Alpha was launched about a year ago and there are two types of membership available to each club. These are honorary and full.

Honorary membership costs £1 plus 5 QSL cards, for this you get your unit number, club info, etc. The full membership package consists of the same as above plus 20 'divisional' cards, 20 'original' cards, rubber stamp, key ring/pen and a certificate. The full pack costs £10 (each club) plus 5 QSL cards. Club cards are printed in hi-gloss, with good designs, the 'original' cards include the BA logo, and the 'divisional' cards have the national, or area flower incorporated.

An overseas club which deserves a mention is the Elk Eye Valley SB Club of Zanesville, USA. For \$2 (US) which covers postage etc, you receive your EEV number, ID card and a couple of excellent club QSL/DX cards.

A little more info on C. D. Jones, maker of Rubber Stamps for QSLing etc. Obviously I can't cover everything he does here, but a SASE to Chris will fetch details. He can supply address stamps, with or without a border, from £2.75, individual rubber stamps where your personal design can be made up into a stamp, 2" x 2" fully mounted for £9. If 3 or more of you order together, different designs of course, then knock 10% off. Larger stamps also available at reasonable costs. Chris can also do club stamps. Please contact him for details if

interested. If you joined a club with an unmounted rubber stamp, then Chris can supply a base and handle suitable for it for £1.25. Remember to state size of stamp.

A letter from Steve Silver in Wiltshire, who recommends a few Dutch and Belgian clubs. These all issue a certificate, ID card, number,

rubber stamp, mounted or unmounted and most issue a roster. In addition to these items, each club has its own extras, which I'll list along with the costs and amount of cards required.

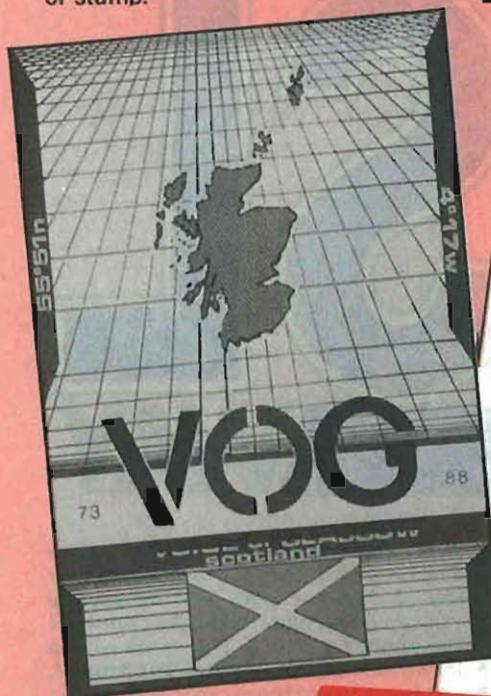
The King of Belgium. For £8 + 10 cards, you'll get a sew on patch, sticker, exchange cards and invites etc. The Int. QSL Swap Club Playing Lady of Belgium. For £6 + 20 cards, a spoon badge, cards, invites and extras will be on their way to you. Please remember, when writing to Belgium, do not use their names on the envelopes, only the addresses! In Holland, Steve recommends the Dutch QSL Club 'Rotterdam'. For \$15 (US) + 10 cards you receive a sew on patch, stickers and cards etc. The Old Dutch Fisherman. For £7 + 20 cards you should expect a map of Holland, sticker, cards and a surprise. Finally the Beamtower. For \$14 (US) + 15 cards, you can hope for a sew on patch, pen, sticker, etc. My old mate Ray Austen of down there in Kent also recommends many of these.

News of the Hi-Flyers QSL Club, of Cardiff. Gary (HF 002) has resigned from the running of the Club, so please send all applications to Tony (HF 001) at the Club address. To join this club, send 50p, 6 personal QSL cards and a large SASE. Tony says, the more postage (up to 300 grammes), the heavier the pack you'll receive. He also informs me that the 1000th member (any time now) will have their 50p returned and have a bumper pack! Club stickers are available for 50p per 100 plus a 17p stamped SASE.

A letter arrived just the other day to tell me that my young friend Luciano of Hereford is alive and well and involved in the running of the A.P.Q. QSL Group of Hereford. To join just send a large SASE and 5 + personal signed and dated QSL cards for your unit number, exchange cards etc.

Another UK Club who asks for a mention is the Kilc Mike Whiskey DX/QSL Club of Notts. Young Karl who runs this has written to let me know that the price of his club stamps have come down to £2.50 mounted and £1 unmounted. Club cards are available at £2.50 per 100. To join this club requires 5 personal QSL cards, a SASE and 50p. (Outside the UK, £1 please). In return you will receive a bumper bundle which includes 30 club seals, 5 club QSL cards, certificate, log sheets, and 'Q', '13' and 'RST' codes to name but a few items. Karl also recommends the Papa Bravo of South Wales. (No connection with any other PB Club). For 5 personal cards and a SASE you can expect to receive your PB number, ID card, exchange cards and invites, stickers and so on.

A reminder about the Ghost Rider QSL Appeal, in aid of Leukaemia Research in Tyneside. FULL details were given on page 6 of the July issue, so if you can help, please do. The auction will be held on Saturday evening, 26th January 1985 at the Miner's Hall, South Moor, Stanley, Co Durham. Everyone is welcome so, if



QSLer Addresses:-

- | | |
|--------------------------|--|
| Andy Fuzzbeard | CT20, PO Box 3, Dorchester Dorset, UK. |
| Mark MDT 17 | Paynes Cottage, Popes Hill, Newnham, Glos, GL14 1LD, UK. |
| Ian FH 760 & Mike PDX 17 | PO Box 27, Millford Haven, Dyfed, SW Wales, UK. |
| Alan Dale King Crimson | 2 Willow Road, Hunstanton, Norfolk, UK. |
| Steve Silver Hot Shot | 15 Wavell Road, Swindon, Wilts, SN2 1LD, UK. |
| Ray Austen Radio SE | 72 Courtney Road, Dunkirk, Faversham, Kent, ME13 9LH |
| Mike Camera Blue | 59 Alexandra Drive, London, SE19 1AW, UK. |
| Norma QSL Appeal | 38 Third St, South Moor, Co Durham, DH9 7HA, UK. |
| Dougie 1 VG 20 | PO Box 2, Ballieston, Glasgow, Scotland, G69 6EG, UK. |
| Bill & Rose Massey | 48 Alyn Road, Buckley, Chwyd, CH7N 2JZ, UK. |
| Dave White Eagle | 78 Blackmore Street, Derby, DE3 8AY, UK. |
| Donnie RMB 66 | PO Box 10, Dingwall, Scotland, IV15 9QZ, UK. |
| Roy Rob Roy | TM 07, PO Box 70, Ipswich, IP3 0PP, UK. |
| Mick Unwin Morris Minor | 73 Rushden Avenue, Garston, Herts, UK. |
| Chris Super Saint BAW 26 | PO Box 383, Maidenhead, Berks. SL6 4DZ, UK. |
| Diane 150-Diane | PO Box 2451, Zanesville, Ohio 43701, USA. |
| M Wolbers de KasteelHeer | PO Box 44, NL-9047 KD-Minnertsga, Holland. |
| Jay Damsy Highway Man | Seven Blackwell Pl, Elliot Lake, Ontario, Canada, P6A 1G6. |



QSL Club Addresses

A.P.Q. QSL Group
 25 Macaulay Avenue,
 Whitecross, Hereford,
 HR4 0JJ, UK.
 Atlantic Breakers Club,
 PO BOX 4, Manchester,
 Lancs, M9 2GN, UK.
 Beamtower QSL Club,
 Gondel 18-03, NL-8243 BX
 Lelystad, Holland.
 Berliner Bear AM/FM,
 PO Box 2933, D-6750
 Kaiserslautern,
 West Germany.
 Boomerang Radio DX/QSL,
 PO Box 156, Wolverhampton
 WV6 9DX, UK.
 British Airways UK,
 PO Box 101, Camberley,
 Surrey, GU15 3LA, UK.
 Dutch QSL 'Rotterdam',
 Cutty Sark QSL Club,
 47, Gurdon Road, Charlton,
 London, SE7 7RP, UK.
 Elk Eye Valley SB Club,
 PO Box 54076, NL-3008 JB
 Rotterdam, Holland.
 Galaxy DX Group,
 PO Box 2204, Zanesville,
 OH 43701, USA.
 Hi-flyer QSL Club,
 PO Box 14, Brighouse,
 West Yorkshire, HD6 2SE, UK
 428, Cowbridge Rd West, Ely,
 Cardiff, South Wales,
 CF5 5BZ, UK.
 Kilo Mike Whiskey DX QSL,
 43 Spencer St, Mansfield,
 Nottinghamshire,
 NG18 5LR, UK.

*King QSL Club,
 Old Dutch Fisherman,
 Papa Bravo QSL, Wales
 PO Box 2, B-2680 Bornem,
 Belgium.
 *Playing Lady QSL Club,
 Thames Estuary Int DX,
 Voice of Glasgow,
 Zulu Whiskey Int',
 Dragonridge One (& Club)
 PO Box 62246, NL-3002 GE
 Rotterdam, Holland.
 12 Pleasant Hill, Ferndale,
 Mid Glam, S Wales,
 CF43 4RR, UK.
 PO Box 31, B-2020
 Antwerpen 2, Belgium.
 PO Box 62, Southend, Essex,
 SS1 3UA, UK.
 PO Box 2, Ballieston,
 Glasgow, G69 6EG, UK.
 PO Box 14, Brighouse,
 West Yorkshire, HD6 2SE, UK
 3 Tarn Villas, Cowpasture
 Road, Ilkley, W Yorks.
 LS29 8RH, UK.

*When writing to any QSL Club for information etc.,
 please try to enclose a SASE, it does help.
 Other addresses
 C D Jones (Rubber Stamps), St Ivy, North Rd,
 Queensborough, Kent,
 ME11 6ET, UK.
 Curries (QSL Card Printers), 89 Derwent St, Blackhill,
 Consett, Co Durham,
 DH8 8LT, UK.
 Poma Cards, UK Rep — Dave
 186 Sommerfield Rd,
 Woodgate Valley,
 Birmingham, B32 3TA, UK.
 Again when writing for information to any of the above,
 please help by enclosing a SASE.

you can make it..... There'll also be a disco afterwards, so come along and join in the fun!

A letter from Dougie (1VG20) in Glasgow asking for a mention for the Voice of Glasgow DX Club. Membership is £6.00 for the full pack, including the rubber stamp. SASE for details only, if interested. A letter (yes another one) arrived the other day from the Thames Estuary Club of Essex. Life membership costs £6, although the forms could be clearer, I think you can expect TE number, ID card, cloth badge, rubber stamp and certificate. A few info sheets seem to be included.

A note from Tony (Cutty Sark 001) to let me know that view cards of London are available from him at 25 for £1 plus suitable SASE to Cutty Sark members. The cards are mixed, and they are not 'hot', he bought them from a stationer who was closing down! Membership of this excellent club is available for a large SASE and 5 personal cards.

For anyone interested in full colour collector cards, I and many UK clubs recommend Poma cards of Belgium. Please write for details to the UK rep, Dave Buckingham, enclosing a SASE, and not direct to Poma One point here, I was informed recently by Knut Mittlestadt, of the Berliner Bear Club that Radar QSL cards of Holland have ceased printing QSL cards. One

person has written since then to say that Radar expects to restart sometime, but I know several people who are owed money or cards since last year, and I myself sent money for a proof back in February, and, as yet, have received neither a proof nor any reply to my letters. One thing I do suggest whenever sending cash abroad. Register it! I know it costs a £1 or so extra, but it's quite a bit safer! Another warning. It seems that



another chain letter is on it's disgusting way round! May I ask you, if you receive one of these, please DO NOT pass it on! Destroy it! Just think how an elderly or infirm QSLer must feel upon receiving one of these bits of rubbish. These disgraceful things threaten that all sorts of dire things will befall you if you don't make 20 +

copies and send them out. Don't, just throw it away. Ignore the rubbish!

At last, the final item! This is where YOU say which are your favourite QSL clubs. To vote, just send me 5 names, 3 of UK clubs, 1 overseas and 1 that you wouldn't recommend to anyone. If the same name keeps appearing month after month, I'll drop the offending club a line and point it out!

Once again, last month's figures in brackets where applicable. The overseas club voted the top by you, the readers of CB, is the Berliner Bear, of Germany. To join, send either 5 cards + £8 for the BIG bundle. In reverse order the top three UK clubs are, 3) The Boomerang QSL Club, of Wolverhampton. Membership available for £6 + 10 cards, 2) Zulu Whiskey of Brighouse. Membership available for a SASE stamped to 100 gr + 5 cards. Top for this month: - The Cutty Sark of London (details up above somewhere).

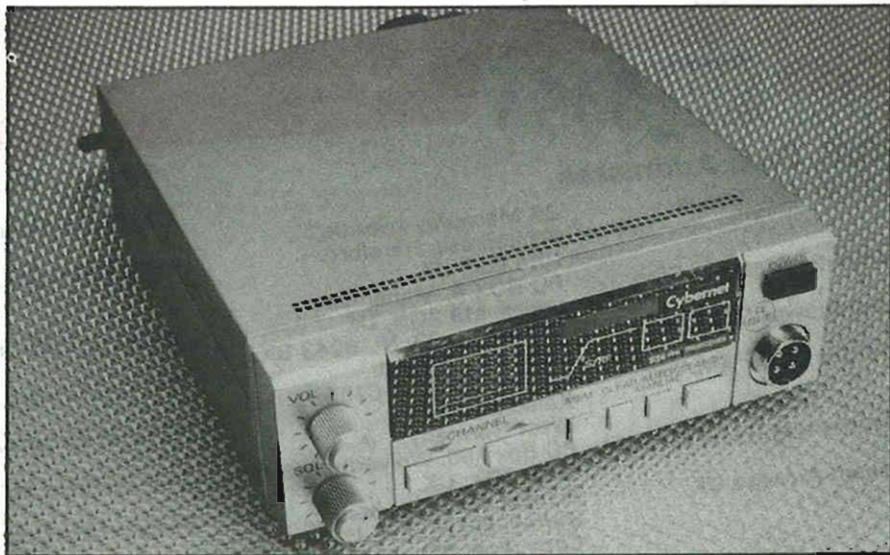
That's it once more, right out of space again, if you want a mention, or to vote or whatever, drop me a line c/o the Dragonrider Address below. As usual, the DR's to be exempt from voting so no one shouts cheat! If you'd like a reply, please do enclose return postage or an SASE, it does help. So, until the next time, I'll wish you all, all the High Numbers and go QRT.

Dragonrider One.

Rig Review



Chris Peterson gets his impatient hands on the prototype for the Cybernet UHF rig. Does it compare with its 27MHz. counterparts?



SIGN OF THE TIMES

Over the last twelve months we seem to have heard a lot about new UHF equipment, most of these rigs seem to sink without trace without anyone seeing as much as a prototype. Even when prototypes are shown, these are usually empty boxes for display purposes only. As a result we have become quite cynical when people ring up to tell us about their new super UHF rig!

It therefore came as a very pleasant surprise when those nice people from Telecomms in Portsmouth not only announced their entry into the 934MHz stakes, but actually delivered a working prototype into our sticky fingers for us to play with!

The rig is the Cybernet 934MHz mobile transceiver. Cybernet established their reputation in this country on the

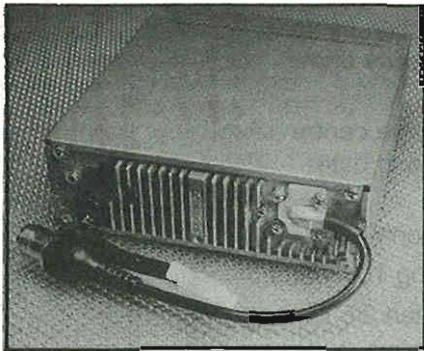
27MHz band. They produce some of the best 27MHz transceivers around, though many of them appear under "badge" names, such as York, Harrier, Binatone 5-star etc. It might therefore be expected that their UHF rig would be a cut above the average, if any UHF rig can be called "average!"

Since the rig we have been loaned is a prototype, it would be a little unfair to subject it to a rigorous technical analysis. However, we are assured that the first batch of production rigs will be in the country by the time this appears in the newsagents. We have also been promised one of this batch for a full review. In the meantime we offer this brief preview of things to come

The rig is very compact, measuring only 5 $\frac{1}{8}$ " wide, 2" high and 6 $\frac{1}{8}$ " deep. This makes it about the same width and height as a Reftec, but considerab-

ly shorter. The rear panel is heftily heat sunk. The antenna connector is an 'N' type socket on a short flying lead. Similarly the power lead is a four pin connector on a short flying lead. There is a standard 3.5mm jack-socket for the external speaker. There is also a socket marked "mute out." On the production rigs this will provide an "S" meter signal for an external S-meter such as the SSE meter.

On the front panel are standard small knobs for volume and squelch, a standard four pin locking ring type mic connector and an on-off push button for power. Channel selection is by means of two push buttons, one to count up, the other to count down.



The Cybernet 934MHz rig has a deep heat sink for dissipating heat.

There are also push buttons for memory, clear, auto/manual and search functions. Not having any instructions we weren't able to make full use of all these facilities, and in any case the production versions will function slightly differently. For example, on our prototype the search function scans through the channels till it finds a busy one, then stops. Production ones will pause for seven seconds before resuming scanning, unless stopped in the meantime.

Channel indication is by red LED display. There are also warning lights for Auto and Search modes. The signal strength metering is a led bar-graph display, not unlike the modern rev counters found in some cars. The meter also indicates relative power on transmit.

Opening up the rig revealed some lovely construction work. The main PC board makes extensive use of SMD (Surface Mounted Device) components. These are tiny rectangular resistors and capacitors with metal end caps and are soldered direct onto the copper PC tracks. There are few conventional resistors or capacitors in there at all. This is done to allow production to be fully automated, and this should lead to more reliable and consistent performance. Mind you, I wouldn't like to have to fix one!

RF power output is handled by an enclosed module. There were also a couple of other sealed tin boxes that appeared to contain filtering and other sensitive circuitry. All very neat and a

considerable contrast to the usual Japanese CB rig interior!

The scanning circuitry on our rig was still on Veroboard. Production rigs will have a proper PC board.

The interior is crowded without being cramped, but there is no space for an internal speaker. An external speaker is a necessity.

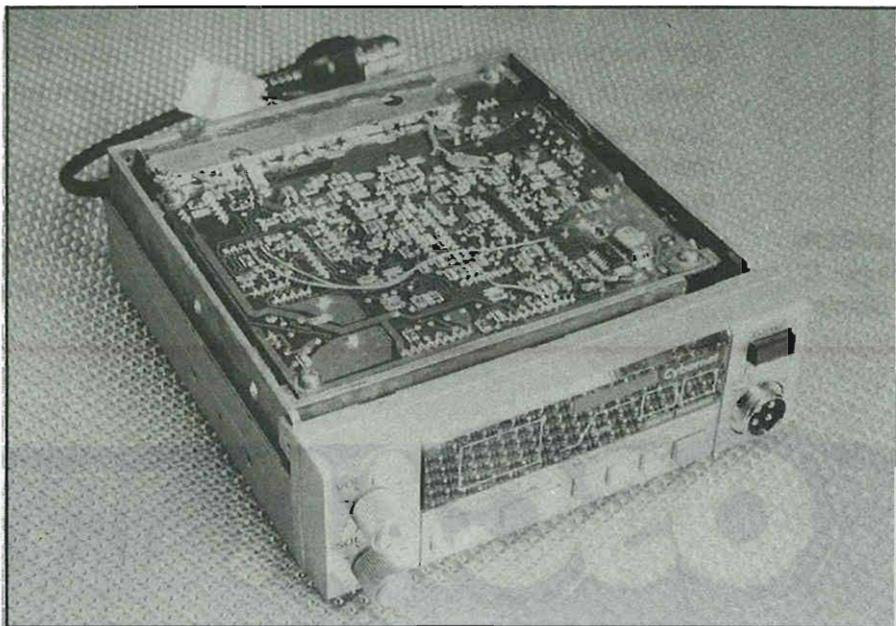
On The Air

Our previous experience with UHF CB rigs has been that installation, particularly mobile, can have a dramatic effect on performance. It came as a considerable surprise therefore to have one of our best mobile copies ever the first morning with the rig perched on the seat next to the driver! A Reftec mag mount mobile antenna was used for the mobile tests and a four element beam for home based trials.

lacking in high frequencies. It sounds as if the tone control, had there been one, was turned down a little. It was remarkably easy on the ears though. None of the harshness sometimes found in FM systems. Similarly other stations were complementary about the transmitted audio quality. One of our contacts remarked that it was extremely clear and lacking in any background noise. The power output measured about 5.2 watts on this prototype. This is a bit less than the permitted 8 watts, but entirely adequate. Moreover it remained constant on load, indicating an adequate reserve.

The receiver sensitivity was quite remarkable. We were able to copy one distant station quite clearly when it was absolutely inaudible on our Reftec sat on the bench next to it.

The signal strength meter produced sensible readings. Stations could be



The inside of the rig shows some lovely construction work with surface mounted devices component which allows for automatic production.

The channel selector does not "wrap around" at channels 1 or 20. Pressing the up button produces an acknowledging beep from the speaker and the rig moves up a channel. If the button is kept down, after a short pause it proceeds to race up through the channels till it gets to 20 when it stops. Similarly, pressing the down button moves it down towards channel 1 where it will ultimately stop. Pressing any button on the front panel legitimately produces an acknowledging beep from the speaker. No beep indicates that you are trying to do something wrong!

We didn't get a mic with our rig, but were cheerfully informed that a standard Cybernet mic would work. In fact the one used was from a Midland, but the connections were the same and we experienced no problems.

The received audio is clear and free from extraneous noise, though slightly

copied with no lights showing, but moderately distant stations lit up about half the lights.

Despite the amazing sensitivity of the receiver, there were no problems with electrical noise in the car, either received or transmitted. Indeed it seemed remarkably immune to the amazing spectrum of interference produced by one of our test vehicles! Telecomms tell us that the modifications to allow 40 channels operation when the Radio Regulatory Dept get around to it, are simple and straightforward.

You might gather from the above that we are mighty impressed with our first experience with the Cybernet 934 MHz rig. You would be right. It is a considerable improvement over anything we have yet seen on UHF, and we look forward to receiving a production model for full review in the not too distant future.



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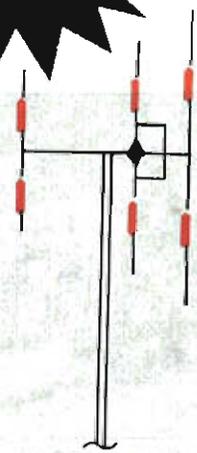
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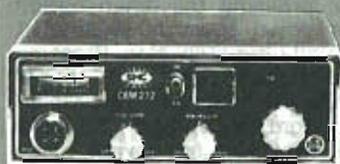
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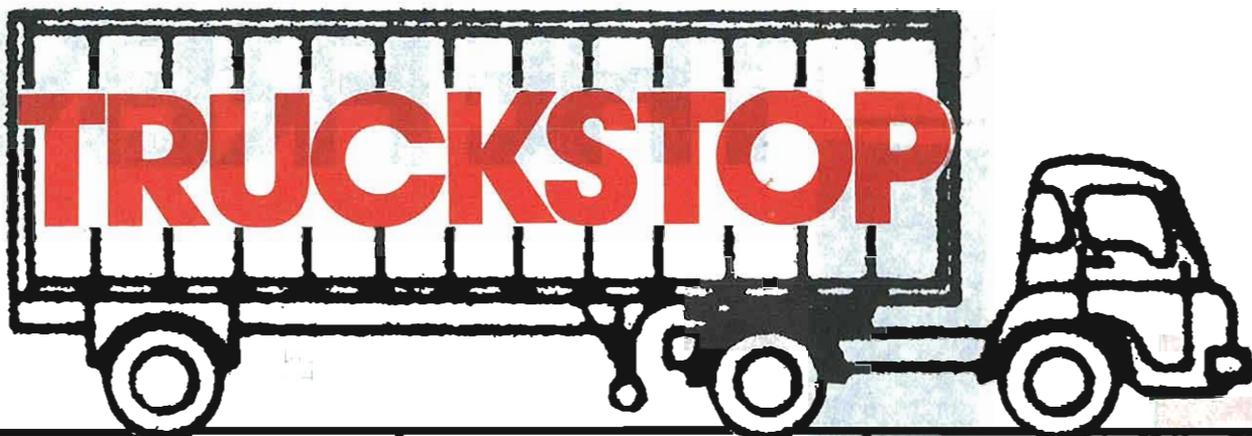
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Meet Fred, or Gismo, long time big wheeler and CBer, and the first of his regular columns for drivers (and the rest of you!)

with Fred, whom we hadn't seen for a while. We are now chasing round, trying to get home and some others are trying to get done in eight hours what we used to do in ten!

AM Days

This is where the CB really scored. We could talk to Fred without stopping and at the same time we could warn him that there was a 'Smokey' coming up his back door. The other big attraction was, of course, that it was illegal, which automatically bought togetherness amongst truckers.

The greatest advantage of being on channel was that you had an A-Z of the whole country and you no longer had to pull up and ask the way, 200 miles from home, only to discover that the person you asked came from the same street—back home! We also had home bases providing information, 10-13s, handling emergencies. These AM bases were very good and some have survived to FM days, but the best ones went down when Busby started his purge.

FM

Like most breakers, I was forced to accept FM or go down. There is no disputing that FM gets out further than barefoot AM, but FM has a bleedover—which troubled AM less. The discipline we had on 19 is gone. Now everybody from Teeny Tot to Granny is on 19, and along with mobile council homes we have bucket mouths, mike keyers, and budding disc jockeys.

Fairy Liquid Squadrons

This brings me to the Fairy Liquid Squadrons. Whilst we always had a certain number of drivers' wives, girl friends and acquaintances on 19, we never had the quantity of 'rubber gloved breakers' that we have now.

It is virtually impossible to go anywhere without a Squadron breaker shouting out on the 19 for her favourite trucker. It wouldn't be so bad if once she found him she moved up or down a channel. However 'Luscious Lips' usually, after shouting for hours, can't find her male breaker and

another Squadron member comes in to say that he passed by earlier and the conversation passes on to what the old man is having for tea, whether she has done the nappies and what not—all on 19.

Driver's fault?

This is basically the drivers' own fault, because they encourage the Fairy Liquid Squadron to talk on 19 instead of finding another channel immediately. I have an idea that most of these drivers are not from the old AM breakers, where discipline was very good, but newer breakers who came on channel after legislation.

I am sure that I speak for most truckers when I say that 19 is sacred and that our job is such that the need to keep it free for traffic reports and the like is not just selfish, but absolutely essential. There are 250 endorsable offences you can commit when you take a big wheeler out on the road and getting caught for most of them can be avoided by listening to 10-13s on channel 19. If you want copies or wind ups there are 37 other channels to choose from (not counting 9 and 14). Why not let Wandering Willie take his Luscious Lips off 19 and keep this channel free? Who knows, the 10-13 given out could save a trucker's life.

Truckers' Clubs

I would like to involve all the truckers' clubs in this page of the magazine. There are now so many of them out there, perhaps similar to my own club that started out as AM breakers club and developed into a social club, although we still refer to one another by our handles.

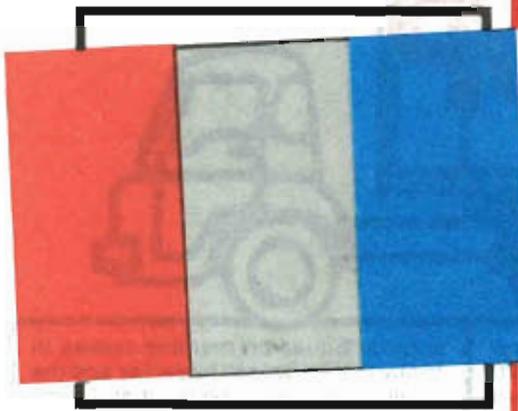
If any club is organising a function or fund-raising event, please write to me. If any club secretary is reading this, please put me on your mailing list. Mercedes Lady of Diesel City Truckers already sends me a copy of her newsletter each month. Truckers who have a particular grouse or pet subject, please feel free to write in and let it all go. Truckers aren't usually noted for hiding their views! In fact we have rather gained a reputation for letting rip, so let's be hearing from you soon.

Hello readers and especially truckers reading this page. I have been asked to write this feature by the acting editor, who was in turn recommended by 'Tiny Tears', a lady breaker who monitors 19 for truckers near Birmingham on the M6. She is probably known to thousands of truckers throughout the country.

I have been writing and publishing the club for the East Coast Truckers' Social Club since its inception and it is this that has led to this truckers' page.

A few details about myself first. I have '37 candles on my cake' and have been involved in transport since leaving school. My first task on my first day at work was filling up lorries with petrol and diesel, but I have been pushing big wheels since 1971. I have been on channel since 1981 and the 'chicken box' for me has brought back the camaraderie of the job that was lost when the tachograph, eight hours driving and other EEC scourges came in.

Gone are the days when we could more or less please ourselves, as long as the job was done. We were deprived of the time to stop for a cuppa



Guy Nicoletta, French journalist and avid breaker, tells the story of CB in France.

CB really got started in France during the Spring of 1980 and at that time only two types of transceiver were legal. Professional users were permitted to use 3 Watts on AM, with six channels, though the licence fee was very high and it was necessary to prove a genuine need before a licence would be issued, whilst enthusiasts were allowed only single channel toys with 100mW output.

By coincidence, FCC style 40 and 120 channel rigs were widely available, offering up to 12 Watts output on a variety of modes, between 26.515 and 27.855Mhz. Officially these rigs were only for export but, since one could legally own but not use the equipment, export, for many people, began at the shop door.

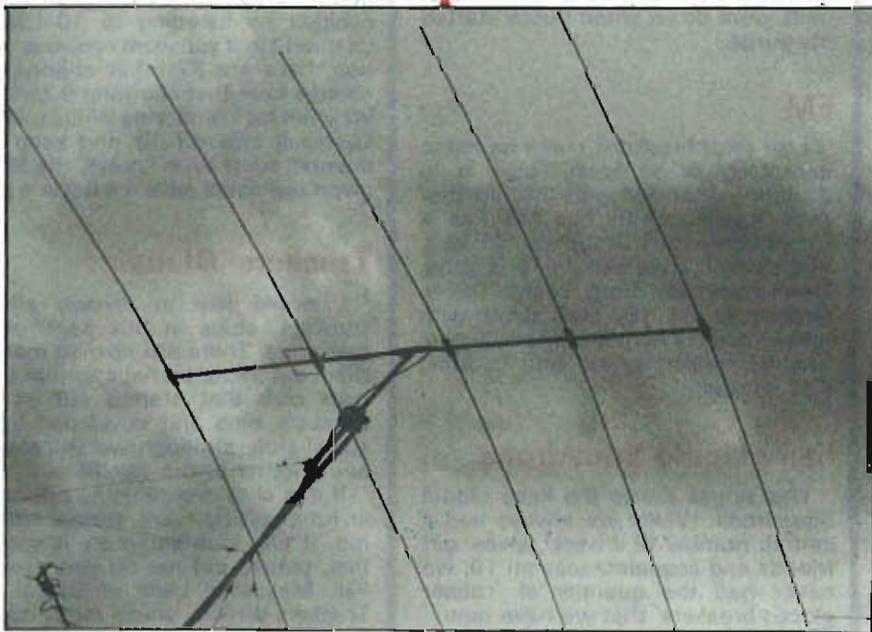
In those days there were only a few dedicated breakers but this situation was to be short lived. A forty channel, FCC style, multimode cost only about £100, a price which attracted an ever-growing number onto the air, with the result that the first mass meeting of breakers, held at Le Mans during

Coincidental with the upsurge in public interest came the first signs of CB in the press, though initially this amounted to little more than a few pages in a magazine devoted to in-car entertainment. The first true CB mags were not far behind.

The desired legal changes came about just in time for Christmas, 1980 and Specification NFC 92411 came into force on December 20th. It allowed only two watts output, on 22 channels between 26.965MHz., and the only mode permitted was FM. Its use was permitted in the home, in the car and from a boat, with the option of sel-call, though initially only omnidirectional aerials were permitted. All transmissions had to be made in plain language. The new system was not a success with the established breakers, most of whom continued to use full FCC spec, with the result that France soon had two competing standards, as new breakers bought legal rigs. The low output power and channel restrictions discouraged a good many, with the result that, after a few months, the band became considerably quieter.

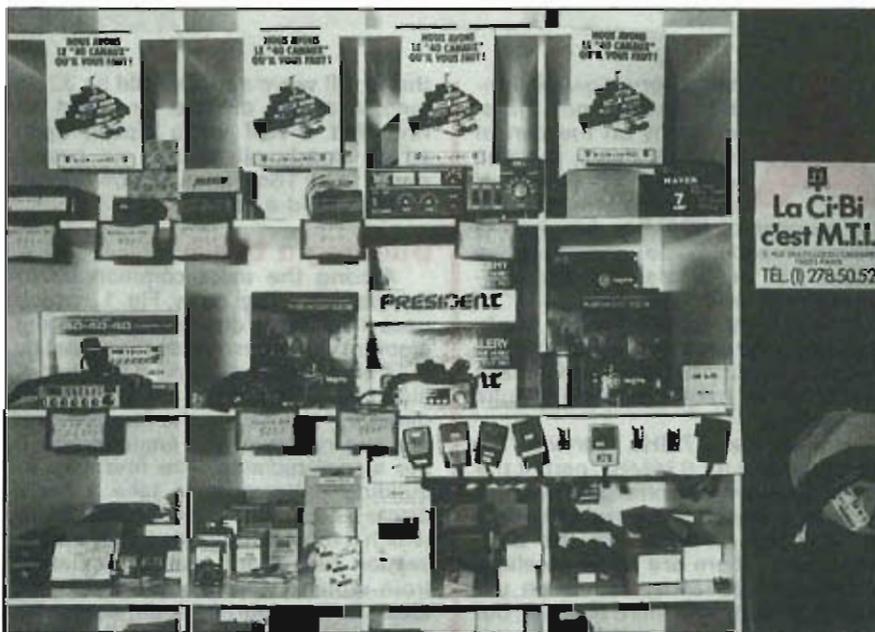
The French electoral campaign of 1981 saw M. Mitterand promise a better CB service, though he took a long time after his May election to implement his fine promises. Despite a number of demonstrations in Paris and other large towns it was not until January 1983 that the introduction of NFC 92412 gave us the much needed improvements. This new specification entitled us to use full FCC spec. rigs offering 4 watts output, FM, AM and SSB, on all forty channels. For the first time directional beams, with no more than 6dB gain, were permitted for use with base stations and, at long last, only legal rigs were to be found in the shops, though it was not long before many breakers were converting them so as to offer higher power and a good many extra channels.

As a genuine breaker I sometimes suffer twinges of conscience when I monitor the band in any large town. The channels are very busy and, sad to say, the general content of QSO is generally very poor, often even insulting and offensive. We are plagued by would-be dee-jays and, in the evenings 27MHz. becomes a focal point for an assortment of dead-beats and drop-outs. It is not like that throughout the whole of France but I was living in Paris when I first became interested in CB and, for the real enthusiast Paris is not the place to be. I shall not return if I am to continue as a breaker, or as a journalist for CB mags.



September 1980, attracted over 100,000 people, with the single aim of demonstrating to the French government the scale of demand for a change in the laws restricting the use of 27MHz.

H CONNECTION



CB in the country

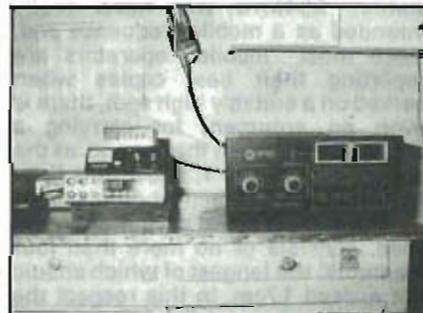
It is in the country that CB really comes into its own. The frequencies are far less crowded and are treated with far more respect. People are friendly and helpful, and take a genuine interest in each other. If you are mobile you will find help with directions, or in seeking out the best restaurant or tourist spot. Because the country breakers know each other contact is far more friendly and the true spirit of CB is far more obvious. Country breakers are careful to avoid TVI during broadcasting hours and, in general, use CB as it was intended to be used.

Throughout France the AM calling channel is 27, whilst FM uses 11. Mobile CB tends to mirror the pattern of base station operation, with the best copies obtainable in country areas. One big difference between French CB and its European counterparts is the fact that we do not use channel 9 for emergencies, though, just as elsewhere, our

truckers, who are in the majority on trunk roads and motorways, use channel 19, especially to warn each other of speed traps. CB played a big part in the truckers strike in February and many service stations monitor channel 19, which, in my country, has assumed the dual role of traffic and emergency channel.

DXing

Like other European countries, France has its own special breed of DXers, who use 27.455MHz. (channel 44) USB as their calling channel. Many of them use linear amps, ranging from 100w to 1Kw., though



they are strictly forbidden by French law. Beam aeriels, which are permitted, are commonplace. I know of one station who uses a 1Kw linear in conjunction with a five element beam but such excesses are rare. Thank goodness France is not Italy!

I have tried to present an objective view of French CB and, I hope, to give

you an honest view of popular communications in my country. I was one of those who, in Spring 1980, saw the fantastic possibilities of CB and, like many others, four years on finds me a little sadder and a little wiser. CB, with both its good and bad aspects, is now a part of daily life in France and, upon reflection, perhaps it is impossible to change the world.

French CB Technical Data

Channel	Frequency
1	26.965
2	26.975
3	26.985
4	27.005
5	27.015
6	27.025
7	27.035
8	27.055
9	27.065
10	27.075
11	27.085
12	27.105
13	27.115
14	27.125
15	27.135
16	27.155
17	27.165
18	27.175
19	27.185
20	27.205
21	27.215
22	27.225
23	27.255
24	27.235
25	27.245
26	27.265
27	27.275
28	27.285
29	27.295
30	27.305
31	27.315
32	27.325
33	27.335
34	27.345
35	27.355
36	27.365
37	27.375
38	27.385
39	27.395
40	27.405

Modes: AM, FM, SSB

Output power: 4W

Antenna: no height limits, direction

beams allowed up to 6 db gain

Call channels: AM: 27, FM: 11 Trucks:

Code use on air: International Q

Licences: issued by Post Office, valid 5

years, amount 170FF (£14)

TX retail prices: AM/FM from £50,

AM/FM/SSB from £100.





Keith Townsend examines the possibilities provided by the somewhat more complex antenna specification for use with 934MHz. CB.

BEAM M

After a very slow beginning and some initial antipathy on the part of potential users, the idea of a UHF CB service is now taking firm hold and the number of 934MHz. breakers is growing rapidly. Some very impressive copies are being claimed and substantiated and the standard of operation is consistently high, probably the result of the fact that the investment required to take advantage of the higher frequency band is quite substantial.

Unlike the 27MHz. service, the specifications for 934MHz. permit the use of aeriels which offer gain over the RF output power of the rig, offering a fair amount of scope for the d.i.y. enthusiast. There are some excellent commercial 934MHz. aeriels on the market already and more to come, but it is not necessary to spend large sums of money in order to achieve the desired performance. An efficient beam can be produced for well under a fiver, provided that care is taken to ensure that the dimensions are accurate.

934MHz is very much a line of sight frequency and radio waves at this frequency are not noted for their ability to pass through solid objects such as hills, or tall buildings, so it is important to ensure that the maximum possible amount of radiated energy travels in the direction of the station you wish to work. For this reason co-linears, though they may be reasonably effective in a mobile situation, are not recommended for use with a base station. 934MHz was never really intended as a mobile frequency and, since most "mobile" operators are reporting their best copies when parked on a suitably high spot, there is even an argument for carrying a detachable beam in the car and, as the dimensions of Fig. 1. show, this is by no means an impractical proposition.

The largest aerial permitted by the spec. consists of no more than four elements, the longest of which should not exceed 17cm. In this respect the RRD seem to have done their homework well, as a few basic calculations will show. To calculate the dimensions of an aerial at this, or any other frequency, we must turn to the tried and tested formula of dividing the frequency in MHz. into the speed at which radio waves travel. So, discarding a few noughts along the way and dividing 3,000 by 934, we see

that a full wave aerial would be 32cm long. A simple division by 2 and we find that a half wave dipole, upon which nearly all beams are based, needs to be 16cm long. So now we can start to build a beam.

Building a beam

Among the most common beam aeriels is the Yagi array, Fig. 1., which uses a half wave dipole as its radiating element and then directs the signal by means of a reflector and a number of directors. The greater the number of directors, the higher the forward gain and the narrower the angle at which the signal radiates. The first step in building a beam is to take a basic dipole and mount it on a boom, from which it must be insulated. The square section tubing and plastic insulators from which TV aeriels are made are ideal for the purpose, although the contacts may need altering. Since we are considering a four element beam we need one reflector, which is mounted on the boom behind the dipole and which, at 16.8cm, is 5% longer than the dipole. Each of the directors, to be sited ahead of the dipole, needs to be 5% shorter than the element behind it, so that the front of the aerial is somewhat shorter than the back. Equally important, the distance between each element will affect the SWR and, therefore, the performance of the aerial. A useful rule of thumb is to site each element a quarter wave, less 5% from its nearest neighbour. Our earlier calculations show a quarter wave at 934MHz to be 8cm, so that a separation of some 7.6cm should provide adequate performance.

When building aeriels of this type, it pays to bear in mind that the mathematical model taken no account of such variables as the environment in which the aerial will operate and, since terrain, height above ground and, at these frequencies, the proximity of almost any solid object, are likely to have some effect upon the aerial it is useful, wherever possible, to allow for some adjustment. Mounting the elements in such a manner as to permit some movement along the boom will add to the cost of the aerial, but might save a great deal of frustration. Where adjustable mountings are used, great care should be taken to ensure that, once adjusted, they will not work loose, as any movement will adversely affect the performance of the beam.

IEUP

Equally important is the fact that once an aerial has been cut too short it cannot be lengthened and so it is advisable to allow a fraction extra when cutting each element to length. Any excess will show up in the SWR and can easily be trimmed.

Quad Aerials

Another common form of beam aerial, the Cubical Quad (Fig. 2.) is based upon the principle that the most efficient antenna is a square. Constructed in the same way as the Yagi, it uses square elements, as opposed to single poles. This type of aerial is likely to be more difficult to construct accurately, because the need to ensure that the elements remain square throughout any slight alterations or adjustments can lead to more than one section being thrown away in the attempt to achieve resonance.

Once established, however, this type of aerial offers a number of advantages. Its forward gain is likely to be relatively high, possibly in the order of 7.5 to 8dB and, since most quads appear fairly broad band, it should be relatively easy to obtain a very acceptable SWR across the entire range of channels. The one real disadvantage which I have often found with this type of beam is the fact that they appear to suffer from a fairly poor "back to front ratio". In other words they are almost as strong off the back of the beam as off the front. They may also offer more opportunity for

interference with, for instance, television reception if sited too close to the TV antenna, since the front and close RF field can be pretty strong.

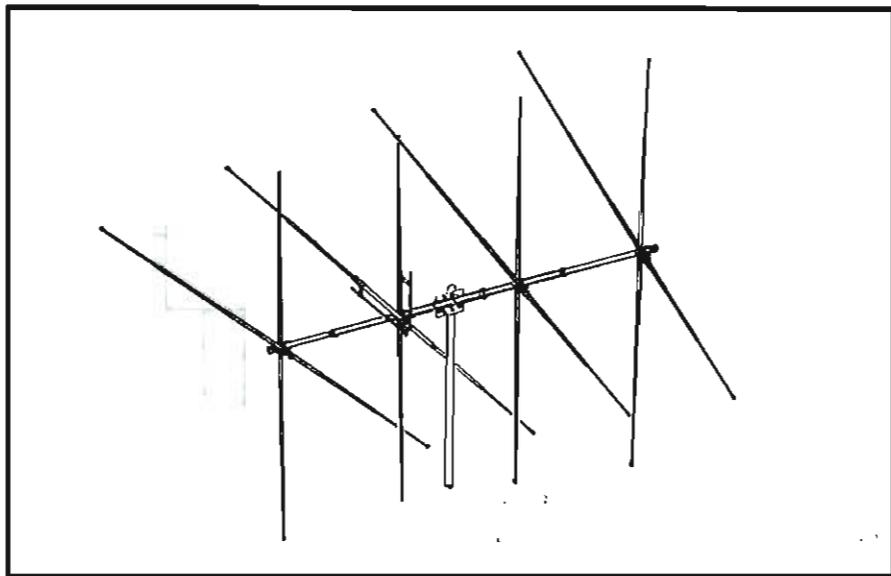
Polarisation

Since beam aerials are likely to become the norm at 934MHz, convention is soon going to have to decide whether they should be mounted for vertical or horizontal polarisation. It doesn't matter a jot

to be very expensive, I, for one, would be very grateful if the matter were resolved as soon as possible.

One way to overcome the problem is by means of a "crossed" Yagi, having two completely independent sets of elements fixed to the boom (Fig. 3). This method enables instant change-over by feeding each set of elements through a separate length of coax, though it necessitates changing the connection to the rig with each change of polarisation. The dimensions and

Fig 3. Crossed yagi (not to scale).



which is used from the point of view of station performance, but unless a common standard is adopted there are going to be a fair number of problems. Working cross polarisation reduces the strength of the received signal by about 3dB, so that if you are transmitting vertically to a station using a horizontal beam the reception at either end of the QSO will be only about half as strong as if you were both using the same form of polarisation. Since any mechanical means of changing polarisation in use are likely

spacing of elements in a crossed array are the same as for a single aerial, but remember to allow extra boom length in order to accommodate what is, in effect, two aerials on a single pole.

Siting and Mounting

The big secret when dealing with frequencies as high as 934MHz, is to make sure that the aerial is right out in the clear. Almost any object of a decent mass will absorb RF energy at these frequencies and the strength of transmitted signal can only be maintained in an open environment. Of equal importance is the need to ensure that the maximum possible signal goes in the direction of the station you wish to contact and this is where a bit more expense is involved. It is self-evident that the beam will need to be turned and that some form of rotator will be needed for this purpose. Many of the larger rotators used in conjunction with amateur stations are very costly indeed but, since 934MHz beams are fairly small creatures you would do well to invest about £40 in one of the smaller models originally built to turn TV aerials, easily obtainable in the High Street.

The rotator should be fitted to the top of a stout steel or aluminium pole, which, in turn, should be very firmly fixed, since even the slightest degree of movement, such as in a breeze, may have a marked effect on your ability to maintain a contact.

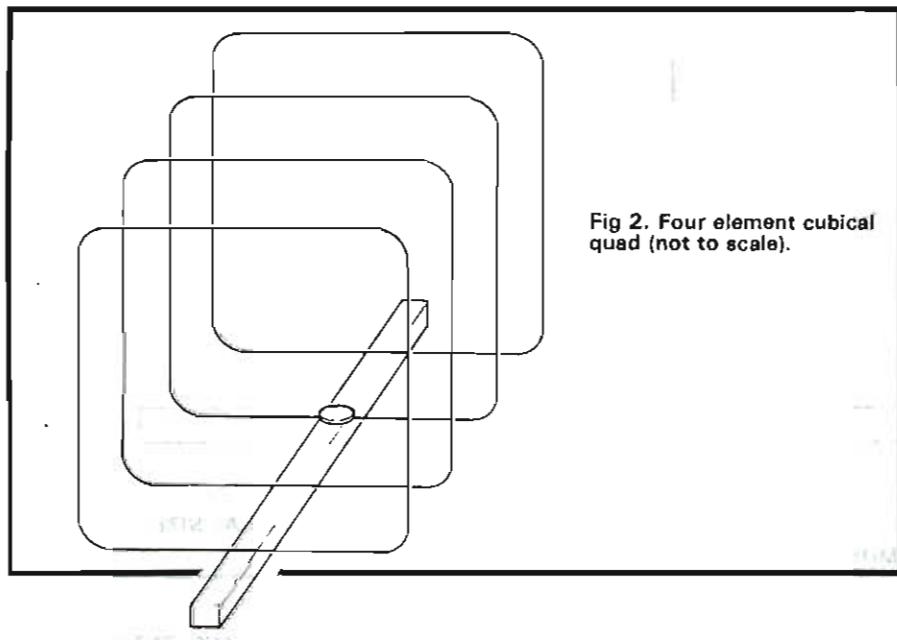


Fig 2. Four element cubical quad (not to scale).

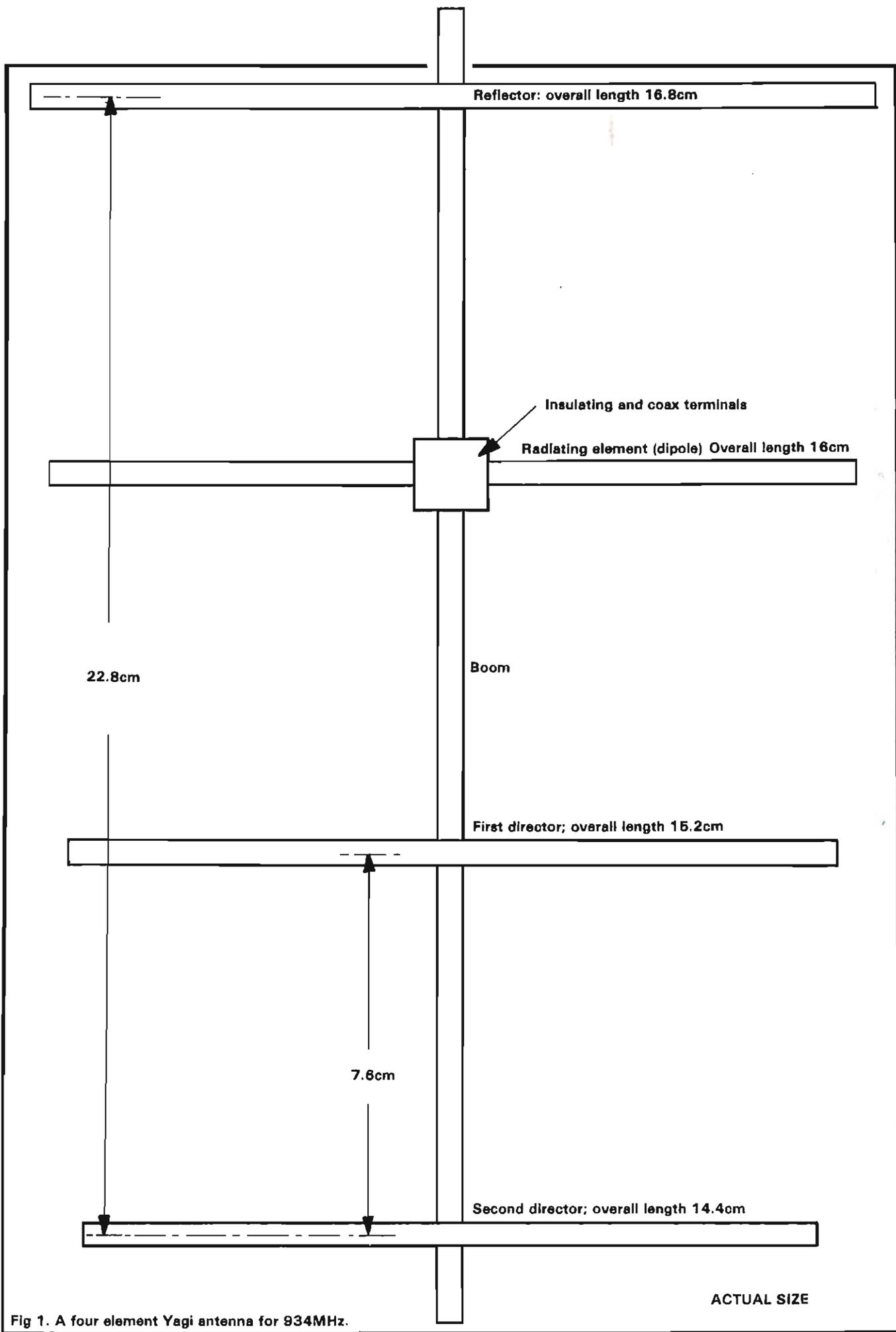


Fig 1. A four element Yagi antenna for 934MHz.

The aerial should then be mounted at least a half wavelength above the rotator, to ensure that it has no appreciable effect on the signal. Here there are a couple of factors worth taking into account. The first is to ensure that you provide enough coax between rotator and aerial to allow for the fact that in turning the coax must also move without becoming dislodged from its connections. The second takes us back to the question of polarisation. If the aerial is to be mounted vertically then a non-conductive pole, such as a broom stake, or neoprene rod should be used to fix it to the rotator, since the presence of any form of conductive material between the elements will

completely alter the resonant frequency and severely affect performance.

A Few Do's and Don'ts

The type of coax you choose for working at 934MHz. will have a very significant effect on your signal, as will the type of connectors fitted to it. Cable losses at UHF are astronomical by comparison with 27MHz. and great care should be taken to select cable offering the lowest possible loss factor. Although relatively expensive, at around £1 per metre, H100 cable has an extremely low loss factor and, considering the fairly high cost of setting up a 934MHz. station, it seems a pity to spoil the ship for a haporth of

tar. Equally important are the potential losses via connectors. PL259s simply will not suffice. Only "N type" connectors are good enough at UHF, although they are somewhat more difficult to fit. Even when using the best coax and connectors available, losses can be further minimised by keeping cable runs to the shortest possible length and by ensuring that they contain no cable joints.

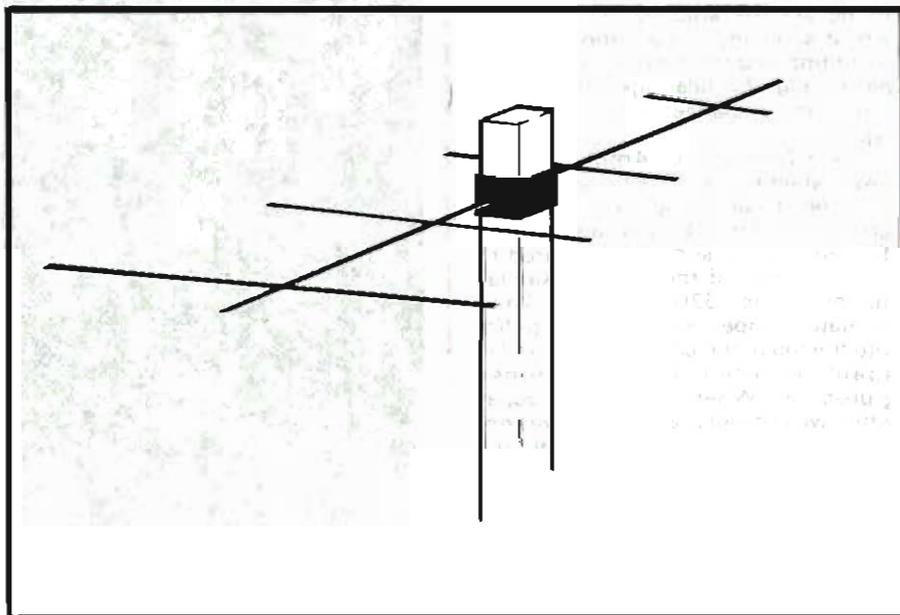
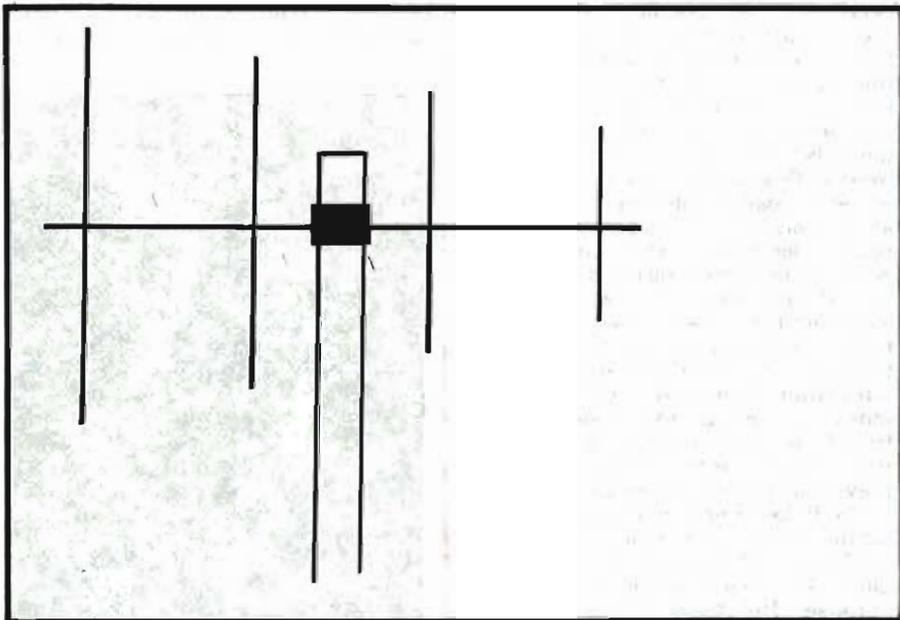
When connecting the coax to the aerial it is as well to feed from the top. This offers the double advantage of reducing the drag on the cable and making sure that rain water will not be drawn onto the braid. Stripping H100 cable to create a terminal point can be a bit tricky, since its outer sheath is very strong and its braid a bit thin. It is all too easy, when cutting away the sheath, to slice through the braid. So treat it pretty gently.

If you are of the opinion that published specifications are of academic interest only, then you may wish to consider adding further directors to your beam, or even combining two or more aeralis. Both propositions are perfectly feasible, though with slightly different results. The addition of extra elements to a single aerial will increase its gain, though the effect rapidly diminishes as the number of elements increases, whilst the width of the beam, and, therefore, its coverage area is reduced with each extra director.

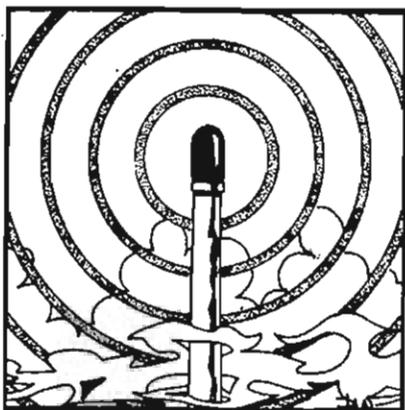
Stacking, or in the case of horizontal polarisation, baying two or more aeralis requires considerable care. Firstly a phasing harness of precise dimensions will be required. Secondly the spacing between the aeralis themselves must be accurate if the SWR is to be maintained. Stacking has one major disadvantage in that, unless the aeralis are professionally produced so as to be a balanced pair it can be very difficult to achieve perfect resonance and another in that it severely restricts the angle of coverage, to the point that it may even be impossible to hear another station unless the beam is pointed precisely at him. I, for one, do not relish the prospect of having to obtain copies by means of a compass.

There are, of course, other types of aerial suitable for UHF working and the scope for experimentation, even within the terms of the D.T.I. specification, is, to say the least, interesting. I might quibble with their maths. My own figures suggest that their optimum offers slightly more gain than their maximum 25 Watts e.r.p. suggest and, unless I miss my guess, the technically minded among us will waste no time in wringing that last available ounce of power from the system. Repeater stations, although not currently permitted, may well be a thing of the future as far as 934MHz. is concerned and the range of available accessories is rapidly growing - a sure sign that, at least, the very real potential of UHF cb is being taken seriously by both user and industry. The next couple of years may well prove very interesting indeed.

Above: Fig 4A — vertical polarisation.
Below: Fig 4B — horizontal polarisation.



Antenna Review



Brian Wright has a look at a R.W. Badland antenna, the Rebel Raider, and tries a mag. mount too.



THE REBEL

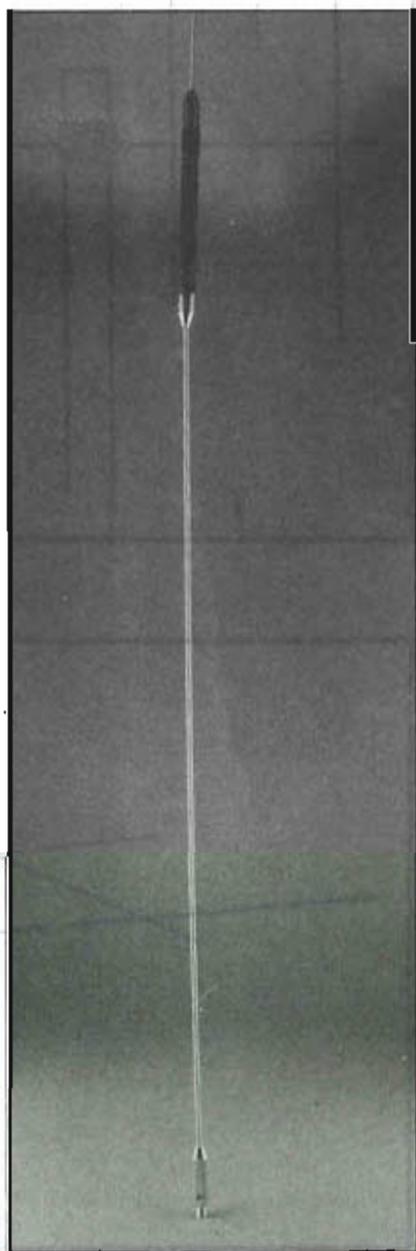
Although base loaded mobile antennas are generally more convenient and mechanically stable, centre loaded antennas are rapidly becoming very popular because of their usually higher performance. This higher performance is obtained from the lower angle of radiation from a centre loaded antenna which concentrates more of the signal towards the ground where it is needed. Despite this characteristic, not all centre loaded antennas outperform all base loaded units, as some very good base loaded designs have been produced. Another interesting point is that two similar antennas by two different manufacturers very often perform totally differently, despite the fact that they are difficult to tell apart. It was interesting therefore to test this months antenna—the Rebel Raider from R. W. Badland of Stourbridge, as this looked very similar to two previously tested antennas.

The Rebel Raider was supplied in a plastic sleeve with no instructions at all. The top whip was not fitted and an allen key was provided for this purpose. The base of the antenna consists of a chromed fitting with a $\frac{3}{8}$ UNF thread which will fit most methods of mounting including mag mounts. Two nice features of this fitting are the knurled finish to grip whilst screwing the antenna onto its mounting and the hole for inserting a bar through for final tightening (I can never find a spanner to fit hexagonal types).

The 670mm long, 4mm diameter lower stainless whip is secured in the chromed base fitting by a stainless grub screw. The 180mm long, 12mm diameter coil assembly is secured to the other end of the rod in a similar manner. The 620mm long, 2mm diameter, upper stainless whip fits into the top of the coil assembly and is again secured by a stainless grub screw. When fitting the upper whip, we noticed that the hole was not very deep, thereby allowing hardly any adjustment. We therefore slid the whip fully into the hole and tightened the grub screw.

When we came to mount the Rebel Raider we were fortunately supplied with a substantial mag. mount by R. W. Badland which made installation a

matter of minutes. We mention the mag. mount, because when using a centre loaded antenna there is a fair amount of top weight swaying about when mobile and care has to be taken in providing a good secure means of fixing. If a mag. mount is used, a large powerful unit should be used such as



YELL

this 136mm diameter unit supplied to us. This mag. mount actually lifted the rear of a Ford Granada up noticeably on its suspension when it was removed from the boot lid. We cannot stress this too strongly as an antenna swinging off a vehicle at speed could cause a serious accident and we did, in fact, once have a centre loaded antenna come off the vehicle whilst travelling round a corner at under 20 mph when using a small mag. mount.

The SWR on the Rebel Raider as supplied was 1.3:1 over most of the band, rising to 1.5:1 on the worst channel. This is very good for a mobile antenna and could justify the lack of adjustment provided and the lack of instructions, as it is fairly obvious how to assemble the top whip.

Good Performer

On test it soon became apparent that the Rebel Raider was performing extremely well. We noticed in several positions where the average antenna gives around S9, we were getting signals of around 5-10 dB over 9. Signals were good throughout the test and contact was never lost even in the bad spots—we had to go outside the limits of our test map to obtain signals down to S3. We drove the vehicle at 70 mph into a headwind without the mag. mount showing any signs of movement at all.

In conclusion, we consider the Rebel Raider to be a simple, well constructed, high performance mobile antenna. Installation was absolutely trouble free, made more pleasurable by the fact that the unit was pretuned. The mag. mount, which is normally supplied separately, is very powerful and has a smart appearance, being all black. There is over 3 metres of coax on the mag. mount but the PL259 plug must be fitted by the user. The antenna priced at £10.95 represents good value for a high performance antenna. The mag. mount sells for around £8.95.

Our thanks to R. W. Badland for supplying both the antenna and mag. mount test samples.

A similar antenna for performance that we have tested would be the Oscar 11CM.

ANTENNA REVIEW DATA PANEL

SPECIFICATIONS

Model Rebel Raider

Type Centre loaded mobile

Length 1.5 metres

Frequency Range 27-28MHz

Max Power Handling —

Impedance 50 ohms

Cable Supplied See text

Mounting Details 3/8 UNF

Supplier R.W. Badland, Stourbridge

Typical Price £10.95



REVIEW VERDICT

Performance XXXXX
SWR Adjustment XXXXX
Construction XXXX

Installation XXXX
Instructions —
Value XXXX

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 CBRs for comment.

Mack Chat

Mack insists that there is life on 934MHz. and that there is hope for users.

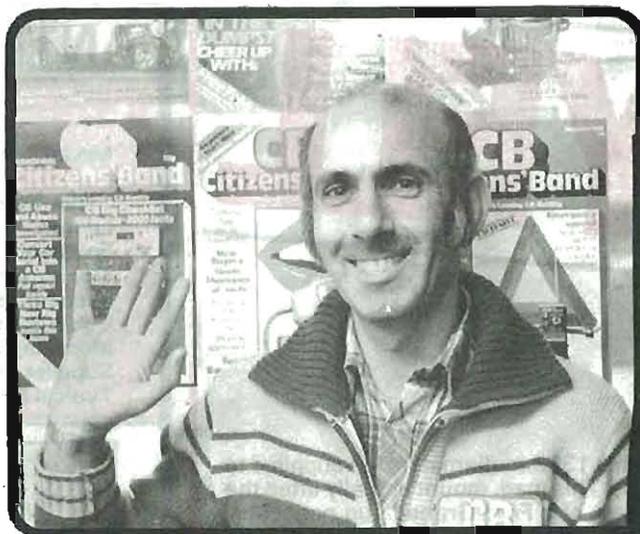
There is life on 934! At last it seems things are beginning to happening on this frequency. I'm not taking the micky when I say that I have now heard 3 channels in use at the same time when I have listened on the band. It is still quite usual to find all the channels clear on some evenings, but if you give a call on the calling channel you will early always find someone monitoring whom will return your call.

A couple of months back I wrote saying that I believed that some of the 934 accessories for sale could be a waste of money. I was right about the antennas as I have had the opportunity to try one 10 element beam and in comparison to my Les Wallen home base coliner the beam failed miserably. It seems that it transmits but does not receive. I also made comments about a 903-905 Mhz SWR meter that was supposed to work on 934 Mhz and I didn't think it would. It so happened that I was offered one of these to try; the meter was a 'Hansen' and these people don't make rubbish I can tell you. It is a nice smart unit with a remote head, it measures SWR and power and an 'on the air' illuminating LED is incorporated for when you key the mike. Following the instructions I attached the unit in my antenna cables, switched on and keyed up. Nothing; well almost nothing as the meter would not set on the forward position. On the reflected SWR position the needle went well over. 'I knew it wouldn't work' I told myself 'load of rubbish'.

I removed the device from the antenna lead and it was then that I noticed that the instructions printed on the case did not match up with the antenna TX and output terminals. Of course 'it clicked', somebody had already had the case off and had not put it back correctly, so once more I inserted the SWR unit in line the other way round and I am happy to report that it does work. One of my Les Wallen antennas I know has a SWR of 1.2 to 1 so I tried this on the meter and it was near enough in accuracy. So the meter worked but in theory it should not have. I found the reason why when I took off the cover intending to replace it the correct way round. In the circuitry of the meter I noticed two small copper tabs and it is these tabs that can be set with, of course, the proper equipment for the desired frequency that you want the meter to work on.

It seems that we could see another two new 934 rigs on the market sometime in the future, and note I said sometime. Telecoms of Portsmouth plan a 934 rig around October they say. I have seen photos and it shows lots of push buttons with scanning and other such luxuries. Although this rig is being imported no one is saying who makes it but I would put my money on Cybernet as the rig has the Cybernet look. (you're right!...Ed) The other expected 934 rig is being produced by EMS, that's the people that manufacture the Mercury 27 so their 934 rig will be another all British manufactured unit. But when will we see them?? I don't know and I shall not even try to guess.

Over the last few months a group of 934 enthusiasts



have got together and formed the 934 Mhz Club UK. For a fee of £5 or £6 for joint (husband and wife) you get membership, a bundle of club QSL cards, use of the club QSL bureau, and a periodic club journal. The aim of club is to encourage and further the use of 934 throughout the country and to represent the users of the frequency in connection with representations to the various governments concerned with radio communications, states the introductory literature. Further information can be obtained by sending a stamped, self addressed envelope to the club secretary, 934 Club UK, PO Box 424, Chelmsford, Essex, CM6 3UR.

In a survey that the club conducted it was found that the majority of 934 breakers are using channel 20 as the calling channel so it seems that 20 is the breaking channel in most areas. It has also been suggested by some people that the 934 system should be licenced separately and treated differently from the 27. For what purpose I can't imagine, all I know is that if this was to become reality it could cost maybe another £10 or so for a separate licence fee but what would the breakers get for it? The same as what we get for our present 10 quid? No way, please drop the idea before it goes any further.

Last month I told you about the intention of changing the 27Mhz. FM that we have now to the new CEPT recommendations. After writing that item it suddenly dawned on me, who would make the new rigs? Most of the manufacturers have ceased production of 27Mhz. rigs and I wonder how many would want to get involved in a new system. From what I can gather the manufacturers and importers were not very happy with the profits that they made from the legal CB system. That surprises me but did they believe that the sale of CB equipment would last for ever and in the same way as when it first became legal. They should have taken note of what had happened in other countries; because we have gone the same way.

How could it have possibly have happened, I ask myself. I refer to the story in the national papers a short while ago about the two CB fans that electrocuted themselves when the antenna they were erecting made contact with overhead power cables. From the reports I read, the CBers had used the site on previous occasions for their DXpeditions, so they must have known that the power lines existed. I also understand that the accident happened at night. I feel very sad when this sort of thing happens. In many of the American CB books that I have, there are numerous warnings about this sort of accident and even antennas have warnings stenciled on them, but not many British built antennas carry similar warnings. So you people out there, please take care whenever putting up or even taking down your antennas, never do it in the dark unless you are absolutely sure that you know what is in the immediate area. Also, your antenna could get blown down in a strong wind so look around and see where it would fall. Please take care, because we care.

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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

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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

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A poetical note from a forlorn wife as well as a question on priorities.

Back To Basics

The question of channel usage crops up again. M. Clark, Air Vent to his friends, adds his three penn'orth. . .

I would like to comment on the channel 19 argument, which has been going on for months. I was fortunate to be one of the early breakers, back in the late Seventies and was a constant 19 user for many years. Although we did not have rules in black and white then, everyone seemed to know how to use the channels properly.

Channel 19 was not a mobile channel, nor even a breaking channel but a MOTORWAY (super slab) channel. We would only use channel 19 on the motorway, to obtain road and weather reports. If you made contact with someone with whom you wished to continue conversation you would move to another channel.

The system worked well because, in those days, there was no standard breaking channel. In Luton, where I lived, the breaking channel was 16, whereas if you want five miles down the motorway you were in 14 country. Ten miles up and you would switch to 21. (What fun!)

I believe that channel 19 should continue as the motorway breaking channel and should not be used by "in town" breakers, mobile or otherwise, who are close to a motorway. Now that I live in Cornwall and we have yet to get a superslab of our own, I consider channel 19 as a standard channel, for everyone's use. In fact it is used as such by most breakers down here.

I should also add that we have a first class volunteer monitoring service, Station Delta, on channel 9, which is available for general local information, as well as for emergencies.



CB on the motorways. Should channel 19 be solely reserved for motorway breakers?

been giving the problem some thought. . .

Stop Thief!

A good many breakers have had the experience of a stolen antenna. J.W. Downing, a.k.a. Royston Ranger, has

Is it beyond the ingenuity of twig manufacturers to design some form of antenna theft alarm? The number of twigs stolen from parked vehicles must number thousands and yet, so far as I am aware, there is no cheap, effective, deterrent to combat or even,

dare we hope, catch a few of the culprits.

The options available to breakers are, as we know, mag, gutter or boot mounts, if we are to avoid drilling holes in the bodywork. Each and every one of these types is open to theft with little more than a spanner to hand. In the case of a mag mount all it takes is a knife.

My own mag mount was recently stolen, which not only left me extremely frustrated and angry but also prevented me from taking part in an important exercise on behalf of local REACT, of which I am secretary. We do, of course, have the choice of dismantling the twig each time we park but how many of us actually do? Especially during the day.

Is there no alarm similar to that used in ladies' handbags, which could be adapted for twigs? Since they are battery powered and we have a 12 volt system to hand surely it must be feasible to set up something which would emit a shrill note if the twig were disturbed?

Incidentally, keep up the good work. Your magazine is eagerly awaited each month.

A Question of Priorities

Up in Yorkshire, Tony Gilkes is in philosophical mood. . .

I have been a breaker since long before legalisation and, like thousands of others, I was initially disappointed when only FM was made legal. I bought my first legal rig only because I was heartily sick of looking over my shoulder every time I keyed the mike. Having been "busted" once, I was not keen to repeat the experience.

Despite my initial misgivings about FM, I have used it daily since my first licence was issued and I eventually came to the conclusion that it is no less effective than AM and, in some ways, even better. Audio quality is far better and I have not received a single complaint of TVI in almost three years. At first I blamed FM for any and all loss of range but soon realised that this had far more to do with the fact that the number of breakers was now far in excess of anything we had known prior to legalisation, as well as to the silly, and almost universally ignored, aerial restrictions. I have achieved some quite remarkable DX, using only FM.

So, in the light of almost three years experience, I reckon it is about time we stopped moaning and accepted the fact that the government shows no sign of allowing any change of mode. We should now concentrate on the more important job of trying to convince them that we deserve better value for our licence money, in the form of protection from bucketmouths, music players and the like. I wonder whether the new regulation barring those under fourteen was not really designed to prevent children from hearing some of what goes on?

I do not object to paying for a licence but I do object to the fact that I get nothing in return. As with any other law, it is the responsibility of the government to ensure that the rules of CB are enforced, so that we may all enjoy proper use of the channels.

Is anybody there?

A new angle on the age-old problem of unreturned QSL cards. Mike Dickerson, Midnight Tiger, of Stroud, needs your help.

Ever since becoming a CB fanatic I have prided myself on being a fairly sensible breaker and an avid collector of QSLs, which are returned same day — IF ADDRESSED. That is my problem. I have over thirty cards with no address on them, so to return the contact report is impossible, unless the senders read this and drop me a line giving their addresses.

In past issues of Citizens' Band I have read complaints of people who send post cards or pieces of paper with the confirmation of contact on. What is the problem? At least they have QSL'd. If, like myself, they are unable to afford a full-gloss card, are they supposed to forget about the contact? I spend many hours preparing my "pieces of paper", so, come on, breakers, stop complaining. At least we try.

Keep up the good work with the mag.

Mike sent us one of his "pieces of paper". It is highly decorative and very well prepared. It impressed me. Ed.

A CB Widow's Lament.

How many ladies share the view of Mrs. Clarke, from Chester?

I'm tired of sitting here alone,
Of talking to myself,
I never though, when we were wed
That I'd be left upon the shelf.
I get so lonely sitting here
But what else can I do?
I often wonder why I stay
But what else would I do?
I said I'd always love him,
For better or for worse
But the thing that's come between us
Is nothing but a curse.
How can I get it through to him?
How happy we would be
If he'd come off that blessed rig
And sit and talk to me.
I try to watch the tele
But all that I can hear
Is "roger, roger, my good bud,
Ten four on that. I'm here".
I believe I'm called the XYL.
It's like another world.
Before he got that goldarned rig
I was his wife, his girl.
He sits there like a pilot,
His 'phones upon his head.
He talks into a plastic thing,
Hears not a word I've said.



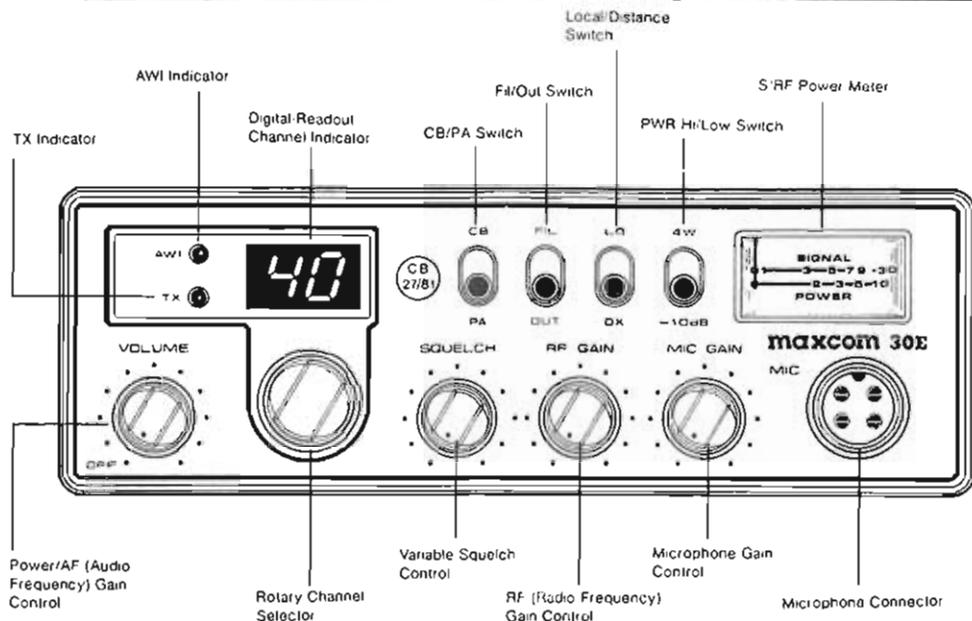
Many ladybreakers will be able to sympathise with Mrs. Clarke. How many wives have come on the air in sheer self-defence?

I'll never understand it,
All this foreign talk I hear.
He goes on for hours and hours.
Why can't I make it clear,
I married him to be with him
But how can I compete
With a little bit of plastic,
Which I know I'll never beat.
So, you see I have a rival,
A CB radio.
There's only one thing for it.
Either it or I must go.
But wait a while, I have a thought,
There's one thing left to do.
I'll get myself a CB.
I'll learn the lingo, too.
So look out all you breakers.
Make way for little me.
You're getting a new breaker.
Ten four on that. It's me.

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

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 circuit 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 OR FILTER CONTROL

This can either be a rotary or flick switch. It controls the tonal quality of received signals in accordance with the user's 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 is 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 low 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.

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 Garsan 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 Hill 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 March '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	Magpie 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	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. SPEAK
MERCURY	10 40	N/A	40	13.8VDC	•				•		•		•	•	•
MURPHY	DS-602	£26	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	£60	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	£69.95	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	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. SPEAK
AUDIOLINE	345	£139.95	40	240VAC	•			•	•	•	•		•	•	•
COMMTEL		£65	40	240/12V	•						•		•	•	•
DNT	840	£TBA	40	240VAC	•						•		•	•	•
DNT	B2740	£TBA	40	240VAC	•						•		•	•	•
DNT		£TBA	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	•			•	•		•		•	•	•
MIOLAND	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	£159.95	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			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, Britannia 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 088423 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	Review 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 Britannia Est, Leagrave Rd, Luton LU3 1RJ	WAGNER
			FL	Report Nov '83	Westward Electronics, The Mill House, Tuckenhay, Totnes, Devon, Totnes, Devon 080423 336/370	WESTWARD



NAME	MODEL	RETAIL PRICE	NO. OF CHANNELS	SUPPLY VOLTAGE	SQUELCH	NB SWITCH	ANL SWITCH	MIKE GAIN	RF GAIN	TO NE 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	£49.96	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 FREE
A-PHONE	TP125	£80	49MHz., 1.6-1.8MHz	230m	●	●		●			●
BT	HAWK ●	£166	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	£116	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 780335)	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 080423 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., Beltinge, 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	SUPERPHONE
		•	Report April '83		SUPERPHONE
•			Report April '83		SUPERPHONE

ANTENNA CHECKLIST

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 Stat	AL	1.5	100	B	B	Pole	C M M D
		Silver Arrow	AL	1.5	500	B	B	Pole	
		Javelin	AL	1.64	500	B	C	Pole	
		Javelin Dipole	AL	1.64	500	B	C	Pole	
ARMSTRONG	Stateside Trading Ltd, Audley Avenue, Newport, Shropshire	SAM 10	SS	1.06	1000	M	B	Surface	F F F F F F G G G
		SAM 20	SS	1.06	1000	M	B	Spring Surface	
		TAK 10	SS	1.06	1000	M	B	Boot lip	
		TAK 20	SS	1.06	1000	M	B	Spring Boot lip	
		MAG 10	SS	1.06	1000	M	B	Mag.	
		MAG 20	SS	1.06	1000	M	B	Spring Mag.	
		BDY 20	SS	1.06	1000	M	B	Side	
		PEC 20	SS	1.08	1000	M	B	Side, Fold over & Quick Disconnect	
		ARCHER	Tandy Corp, Tameway Tower, Bridge Street, Walsall, West Mids.	21-904	SS	0.6	50	M	
AVANTI	CB Radio Centre Ltd., 337 Kenton Road, Harrow, Middlesex	AV 241	SS	1.22		M	B	Stud	D E E G
		AV 241T	SS	1.22		M	B	Trunk	
		AV 241M	SS	1.22		M	B	Mag.	
		AV 241MM	SS	1.22		M	B	Mag.	
BANDIT	Telecomms, 189 London Road, North End, Portsmouth	B10	SS	1.42		M	B	Mag.	G F F F F F E E E D D D
		B15	SS	0.61		M	B	Mag.	
		B15	SS	1.22		M	B	Mag.	
		B20	SS	1.42		M	B	Mirror	
		B30	SS	1.42		M	B	Drill Thru	
		B30	SS	1.22		M	B	Drill Thru	
		B40	SS	1.42		M	B	Various	
		B40	SS	1.22		M	B	Various	
		B50	SS	1.42		M	B	Various	
		B50	SS	1.22		M	B	Various	
		BREMI UK LTD.	Unit 6, Innage Park, Holly Lane Industrial Estate, Atherstone, Works.	B27S C27S HB27S	SS SS AL	1.62 1.38 1.65	1000 1000 1000	M M B	
CB SERVICES	97 Crab Lane, Harrogate, North Yorks.	Bullwhip Knuckleduster	SS AL	1.6 1.5		M B	B B	Various	C D
COMMTEL	Near Third Drive, Fengate, Peterborough	Rocket	SS	1.5		M	B	3/8" thread	F F F F F E
		Shuttle	FG	1.5		M	B	3/8" thread	
		Starlight	SS	1.6		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	
Signal keeper	SS	1.5		B	B	Clamp Tripod			
FREEMAN AND PARDOE	Tything Road, Arden Forest Ind. Est, Alcester, Works.	Invader	AL	1.5	250	B	B	Pole	E F F
		Thunderpole II	AL	1.5	500	B	B	Pole	
		Thunderpole III	A1	1.65	500	B	C	Pole	
GAMMA AERIAL PRODUCTS	Lye, West Midlands, (0384 891132/891474)	Skybreaker	AL	1.5		B	B	Pole	D C C E E E
		Avonger	AL	1.5		B	B	Bracket	
		Lofty	AL	1.5		B	B	Bracket	
		Skybreaker II	AL	1.65		B	C	Pole	
		Avenger II	AL	1.65		B	C	Bracket	
		Lofty II	AL	1.65		B	C	Bracket	
Firefly	SS	1.85		M	C	3/8" thread			

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	Price Bands
SS—Stainless Steel	T—Top	B—£6-£9.99
AL—Aluminium	C—Centre	C—£10-£14.99
FG—Fibreglass	B—Base	D—£16-£19.99
Type	CW—Continuously wound	E—£20-£24.99
B—Base		F—£26-£29.99
M—Mobile		G—£30-£39.99
		H—£40 plus.

NAME	ADDRESSES	MODEL	CONSTRUCTION	LENGTH	MAX. POWER	TYPE	LOADING	MOUNT	PRICE RANGE
HAM	Dials Wholesale, Unit 6, Block 2, Whitegate Indust. Est., Bathgate, West Lothian	Balcostar DV27	AL	1.2	200	B	C	Bracket	O
		DV27	FG	1.39	100	M	T		B
		DV27TW	FG	1.19	100	M	T		B
HOT ROO	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	1.66	1000	M	B	3/8" Thread	C
		M.D.X. Long	SS	2.00	1000	M	B	3/8" Thread	C
		M.D.X. Short	SS	1.66	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	M	B	Pole/wall	F
Expair	AL	1.00	1000	M	C	Pole/wall	F		
R.W. BADLAND LTD.	Roetan Trading Estate, Providence Street, Lye, Stourbridge, West Midlands (Lye 3160/5051)	Rabel 1	SS	1.6	500	M	B	3/8" Thread	
		Rabel II	SS	1.6	500	M	B	3/8" Thread	
		Rabel Reider	SS	1.6	500	M	C	3/8" Thread	
		Rabel Bullet	SS	0.61	50	M	B	3/8" Thread	
		Red Devil	SS	1.52	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	1.6		B	B	Mag. Foldover Base Pull up Foldover Base	F
		Oscar 11V11S11	SS	1.6		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 112E	SS	1.5		M	B		C
TAGRA	CB Radio Centre, 337 Kanton Road, Middlessex.	T40	SS	1.4	500	M	B	Various	E
VALOR	W.T.A. Electronics Ltd, 111 Cromer Road, Hellesdon, Norwich (0603 47694)	Warrior 660	SS	1.62	1500	M	C	3/8" Thread	C
		Half Breed 620	SS	1.62	1500	M	B	3/8" Thread	C
		Half Breed 510	SS	1.2	1500	M	B	3/8" Thread	C
		Half Breed 600	SS	0.9	1500	M	B	3/8" Thread	C
		Dial-a-Match 640	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	SS	0.36	25	M	CW	3/8" Thread	C
		Pro Am PLB 27	SS	1.52	200	M	B	3/8" Thread	E
		Road Hog 338	FG	0.9	1000	M	T	3/8" Thread	D
		Road Hog 336	FG	1.2	1000	M	T	3/8" Thread	D
		Road Hog 336	FG	1.62	1000	M	T	3/8" Thread	D
		Road Hog 337	FG	1.76	1000	M	T	3/8" Thread	D
		Road Hog 831	FG	0.6	500	M	T	3/8" Thread	D
		Road Hog 838	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 836	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	1.62	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, (0603 47694)	Wot Pole 1	AL	1.6	1000	B	B	Pole	B
		Wot Pole II	AL	1.5	1000	B	B	Pole	C
		Wot Stick 1	SS	1.6	1000	M	B	3/8" Thread	A
		Wot Stick II	SS	1.6	1000	M	B	3/8" Thread	B
VAN ORD	Knight Communications, Unit 19 Britania Estate, Leagrave Road.	Audio King	SS	1.5	2000	M	B	3/8" Thread	G

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