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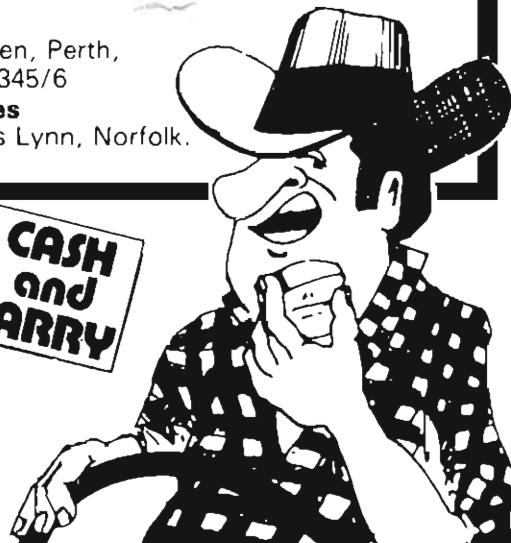
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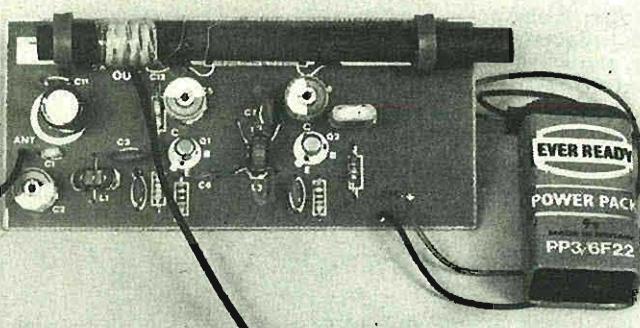
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Yer actual Genuine Legal Rigs.



Play Kits, CB converter & Splitter box are featured this month.



The Trafalgar Square Demo.

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IMPORTANT

AS A MAGAZINE WE CANNOT CONDONE THE USE OF ILLEGAL 27MHz EQUIPMENT NOR IS THIS PUBLICATION INTENDED TO ENCOURAGE THE USE OF SUCH OR ANY OTHER ILLEGAL EQUIPMENT CAPABLE OF TRANSMITTING OR RECEIVING. WE DO NOT ACCEPT RESPONSIBILITY FOR ANYTHING PUBLISHED WITHIN OUR PAGES NOR ANY DAMAGE HOWEVER CAUSED. - IRRESPONSIBLE AREN'T WE!

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THIS MONTH'S FRONT COVER

A Toyota Four Wheel Drive, sporting a go anywhere Firestik Antenna.

Photograph by :

Zodiac (Breakerway Ltd). Newport, Gwent.

Controversy Continues

The specification is officially released.

Once more our copy date and the government's official release date are well out of tune, at the time of writing, the 5th of June, the specification is not officially released.

However despite rumours of cancelled frequencies and total reversals in policy we can tell you that we know as a fact the finalised copy is out and that the changes are only minor. 27 MHz is still to be 4 watts 40 channels 27.60125 to 27.99125.

The performance specification is bound in a brown tan covered document with the identification number MPT 1320.

The fight is on

Now that the specification has been widely publicised most existing CB'ers have formed an opinion, the majority of which seems to be one of total rejection.

There have also been several approaches made to the European Parliament on the grounds that the British CB system is unfair to free European trade. The outcome of which is unlikely to have any bearing on British CB, the reason is simply one of time and enforcement. Whilst the EEC court can make a ruling it cannot immediately enforce any judgement, thus such a hearing taking perhaps a year to be heard and two years to be enforced, will have no effect.

Legal Rigs

As can be seen from our coverage this month there is little or no shortage of new legal FM equipment being prepared for our legalisation date. As well as that reported in this issue we have also heard of two solely British outfits preparing 27FM sets and a new line intended to be released by Ham International. (More details next month).

Country Music Contest

One of the most recent things to follow our ten four day is a literal upsurge of exhibitions and shows.

Well having experienced what the British CB'er requires first hand (an all day entertainment eyeball), we have decided to join forces with CB Trade Fairs in promoting a CB exhibition at the Peterborough Country Music Festival. This will not only have trade stands but daily entertainment with CB songs and music. (See page 53)



On the subject of which there is also a competition open to all our readers to write a Country CB Song, the winning number will be performed live at the

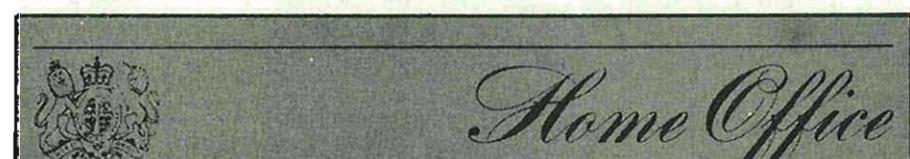
Festival (more details next month) or an S.A.E. to CB Trade Fairs, P.O. Box 117, Peterborough PE2 9DN will give you more information immediately (namely an application form.)

Play Kits

This month's is the first of many projects which you can not only see how to build but can obtain direct from us by mail order.

Now you can see why we lead whilst others follow . . .

JOH



NEWS RELEASE Citizens' Band Radio - New Legal Equipment

Legal citizens' band (C.B.) users in this country will have more channels and a higher transmitter power output than their European counterparts when the new legalised system is brought into force in the autumn. Mr. Timothy Raison, Minister of State at the Home Office, emphasised this today in a letter to Mr. Patrick Wall, M.P. He added that the first testing and development licences have now been issued to British companies ready for the manufacture of C.B. equipment in this country.

The Government has allocated 40 channels and a transmitter output of 4 watts (the same as that of the American AM system in illicit use in this country) to provide C.B. users with the performance they are expecting. "We have had very much in mind the interests of those who will use legalised C.B.", said Mr. Raison.

But he described as "quite false" the idea that there is a common standard in Europe. Although most European countries, Mr. Raison said, follow the recommendations of the European Conference of Postal and Telecommunications Administrations (C.E.P.T.), made several years ago, for only 22 channels, there are national variations as to permitted power levels. Some countries allow higher powers than the C.E.P.T. recommended half a watt transmitter power. But this is lower in all cases than the power available from American AM equipment. Furthermore France, Holland and Germany allow only FM. Much of the equipment in Europe is therefore confined solely to its own country and may not be taken into neighbouring countries. French equipment, for instance, with a higher permitted power than elsewhere in Europe, may be used only in France.

A United Kingdom service based on the C.E.P.T. recommendation would thus have failed to meet the Government's criteria for a convincing alternative to the present illegal equipment which is doing so much harm. "It would, of course", said Mr. Raison, "have been

possible to legalise a C.B. system which enabled C.B. users to take their equipment abroad had they been prepared to conform, in all respects, with the C.E.P.T. recommended specifications, and in particular with the limits of only 22 channels and a maximum of half a watt transmitter power. Such a restriction on power would, however, materially reduce the performance of the equipment, and the C.B. lobby has made it quite clear to us that they would regard such a reduction as totally unacceptable."

In the circumstances, said Mr. Raison, the frequency band allocated is irrelevant as far as Europe is concerned.

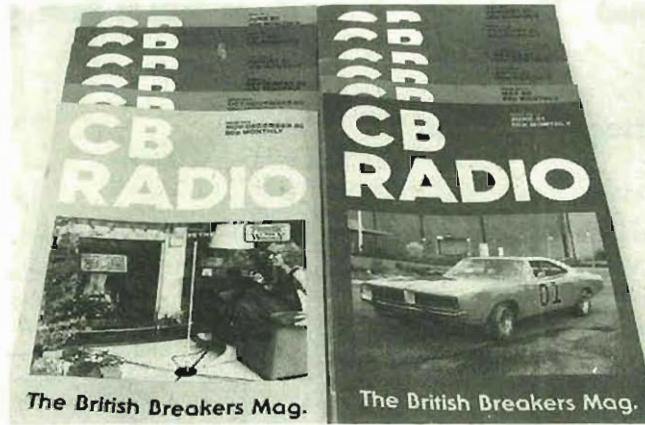
"It is, of course, a matter for much regret that a degree of commonality with Europe cannot, at present, be achieved. If, however, there is a general move in Europe towards adoption for C.B. of higher power levels and more channels, we shall certainly be most anxious to explore the possibility of harmonisation with our European partners. Indeed, now that we have established a firm framework and produced a U.K. specification for more highly powered C.B. equipment we should be well placed to play an active part in any future moves towards standardisation of such equipment. I should stress, however, that standardisation of C.B. within Europe is likely to require the most precise alignment, not only in relation to equipment specification and frequencies, but also in relation to such matters as testing and type approval of equipment."

Mr. Raison made it clear that "C.B. enthusiasts cannot demand twice the number of European channels and eight times the recommended power and still expect Europe to welcome them, whether some of their channels coincide with European ones or not. We therefore selected a sub-band which caused the minimum of inconvenience to other users of radio in the United Kingdom".

Here you can read exactly what the Home Office has to say regarding British CB (this was released only two weeks prior to publication after many queries by the press).

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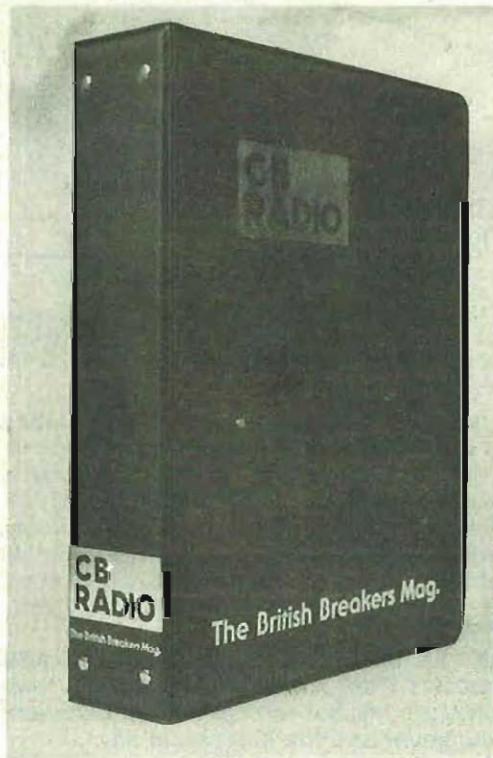


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Antennas and Transmissions on CB Frequencies

by F.C. Judd, FISTC MIOA. Assoc. IPRE. – Part 9

The use of linear amplifiers

It may not be generally known that the use of linear amplifiers popularly called 'burners' or 'boots' is causing serious interference to radio communications services well outside the CB radio band as well as to television, broadcast radio on medium and long waves and to audio systems e.g. hi-fi sets etc. Many CB'ers are using power far in excess of that likely to be allowed when CB is made legal. Quite a large majority are using linear amplifiers with power in the region of 200 watts and even up to 2000 watts! Also it is not realised that a transmitted power of even only 100 watts can completely block all the CB channels simultaneously ie., prevent others from listening on any channel and for a distance of up to half a mile or more.

Tests carried out have proved quite conclusively that many linear amplifiers at present being sold and used, are poorly designed and capable of generating harmonics at high power levels extending even into the VHF (very high frequency) bands a number of which are used by vital services such as Fire Brigades, Ambulances, Police and Marine emergency and distress channels.

High power is not necessary to work either DX or over local areas. In any case the 'DX' will no longer be possible within about another year or two at most, when the present eleven year sunspot cycle reaches minimum. From that time on it will be another two to three years at least before the 27 MHz band will begin to open up again for long distance for example to the USA and then only for short periods.

The CB channels at present being used, albeit illegally, are already becoming crowded. Once made legal the initial unit figure of users will be around 4 million! The use of power higher than that allocated will only cause excessive interference to other CB operators who are willing to abide by the terms laid down by the Home Office.

Linear Amplifiers and VSWR

The subject of VSWR or voltage standing wave ratio, was dealt with in some detail in part 5 March '81 issue but what is more important than knowing how to measure VSWR is to be aware of some of the reasons for high and/or excessively high readings. The VSWR meter indicates the amount of reflected power from the antenna as a ratio of the forward power which is power going from the transmitter along the co-axial cable to

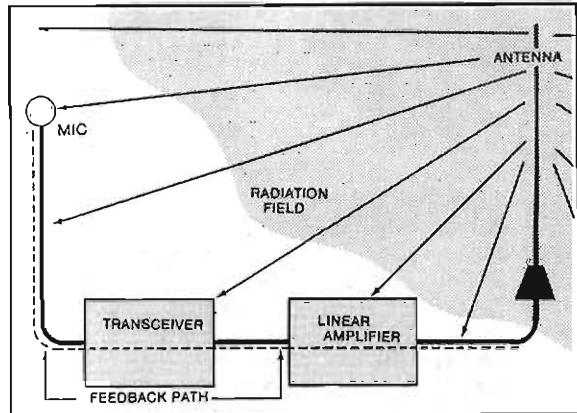


Fig.2: The radiation field in the immediate vicinity of an antenna is very intense. The radiation can be picked up by the microphone (and through connecting leads etc.) and cause instability, high VSWR and severe interference to other services e.g. TV, broadcast radio and hi-fi systems etc.

the antenna. Normally, power will only be reflected (returned from the antenna) if the antenna itself is not matched to the cable or vice versa. A new antenna should always be checked with the total length of the cable to be used with it. For accurate VSWR measurement the meter should ideally, be connected between the end of the cable and the antenna itself although connection in the cable at the transmitter end will normally suffice.

EXTERNAL LINEAR AMPLIFIERS MUST NEVER BE IN CIRCUIT FOR A VSWR CHECK that means, not just switched off, but not connected between the normal transceiver and the antenna at all.

For the benefit of those who did not read Part 5 the following common causes for unacceptable VSWR readings are as follows:-

1. Antenna impedance different to that of the feed cable or vice versa.
2. Transmitter output impedance different from that of either feed cable or antenna.
3. Antenna badly sited by being too close to other antennas or any conducting materials such as metal water pipes, other metal antenna masts, wet trees or

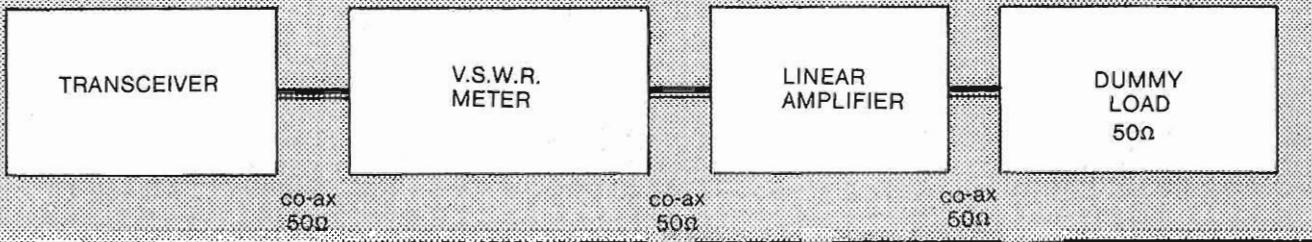


Fig.1: Checking the self VSWR of a linear amplifier

by proximity of walls, ceiling or roof, house wiring and metal water piping etc. which can cause poor performance due to high attenuation of radiated power.

5. Old, or otherwise poor quality co-axial cable may be the cause of poor performance even though a relatively low VSWR might be indicated.

Problems due to Linear Amplifiers

The following deals with what can and is now happening when linear amplifiers are used. Most of those being sold in the UK and especially models imported from abroad, are of poor design largely to keep the cost down but are quite capable of generating second and third harmonics at excessive power levels particularly when high modulation is used. **This can actually cause damage to the output stage transistors of the transmitter being used to drive a linear amplifier operating in this condition.** Any linear amplifier that has a self VSWR of more than 1.2 or 1.3 to 1, and many of them have, should not be used. This can be checked by the arrangement shown in fig: 1 with the aid of a 50 ohm dummy load and an accurate VSWR meter.

When high power is used the radiation field around the antenna is very intense and can actually be picked up by the microphone and especially so called 'power mics', or even by the microphone cable itself. Radiation from an antenna carrying high power can also be picked up a battery or mains power lead connected to the transmitter and even by co-axial cables connected between a transmitter and any linear amplifier in use. This can cause positive feedback through the transmitter and linear and set up self oscillation, often at quite high power and at frequencies outside the normal band. Evidence of this is a very high constant VSWR reading to the antenna and severe interference to TV, broadcast radio audio systems and other services using radio communication. The diagram Fig: 2 shows how radiation from an antenna can get back into the transmitter by various paths.

The following applies to all makes and types of transmitting equipment, including linear amplifiers. As already pointed out unstable and overdriven linear amplifiers will generate second and third harmonics and even harmonics at much higher frequencies. The second and third in particular may occur at quite high power but will be rejected by any antenna tuned to 27MHz and therefore returned to the transmitter as reflected power. This will give false indication of VSWR with readings often as high as 5 or 6 to 1 or higher. Linear amplifiers operating in this condition will again cause excessive interference. **Many VSWR meters, especially low cost models and even those built into transceivers are inaccurate at 27MHz, the usual error factor being on the high side.** All VSWR meters including those built into transceivers, should be checked with an accurate 50 ohm dummy load for an absolute reading of 1 to 1.

As proof of what has been mentioned with regard to

interference to other services the following test was carried out. A linear amplifier of foreign manufacture was set up under controlled conditions and driven to its maximum rated power of 100 watts by an Adams (President) transceiver. For the test, an accurately matched vertical half-wave antenna was used at a height of 12 feet above ground. The radiation field at the power used (100 watts) was sufficient to cause feedback via the microphone and the leads connecting the set to a supply battery thus causing the linear amplifier to go into an unstable condition. Although still generating its normal power at 27MHz, the harmonics set up as a result of self-oscillation extended into the UHF television band and with sufficient power being radiated to virtually wipe the pictures of a TV screen three miles away! Need more be said.

CB radio and interference to radio paging systems

A number of frequencies within the 27MHz band used by CB operators are also allocated for paging (radio) systems. Fortunately many of these systems employ digital coding which make the chances of false calling being less than 1 in 10,000. What cannot be guarded against except by transmitting with very high power, is the paging call being totally blotted out and this frequently occurs when a CB transmission takes place close to the paging frequency. Most paging systems are restricted to one watt with a few operating at 2 watts. Analogue paging which is also used will suffer a great deal more, for not only can the call be blotted out as in the case with digital systems but the receivers may also be falsely called. This generally occurs when two carriers from CB radio stations with slightly differing frequencies are transmitted at the same time in which case a heterodyne beat note is produced. If the frequency of this beat note corresponds to one of the selection tones on the paging system then false calling is created. A paging system normally requires only one tone to activate it.

Some paging systems also employ battery economisers which work by switching the receiver off for a period of time and then on again for a shorter period e.g. 960 milli-seconds off, 60 milli-seconds on. If carriers are present from CB radio transmissions the paging receiver will be switched on, thus overriding the battery economiser and reducing battery life or even running the batteries out completely.

The following CB channels can seriously effect most paging systems:- CHANNELS 2, 4, 6, 8, 10, 12, 15, 17, 19, 21, 24, 26.

Many of these paging systems are used for vital calls by hospitals and other essential services.

By the time this article is published it is hoped that a series of field trials will have been completed to determine typical maximum ranges between base stations and base station to mobile working over ground path ranges. If so the results will be included in the next article.

Legal Rigs!

No ifs, no buts, no question marks.

We decided to tell you of genuinely capable of transmitting first pre-production prototypes. Not specifically designed for the British market, but being specifically manufactured to meet the UK specifications.

To show you the difference in our reporting as a responsible magazine and the difference in potential CB marketers. We will report on two different companies intending to market legal British 27MHz FM Citizens Band transceivers. Perhaps we're not the easiest of magazines to impress, that could be because of the length of time we have been dealing with CB, or perhaps because we pride ourselves of having built a good reputation for always printing the facts. Either way we arrived at the Kensington Palace Hotel with an open mind which soon became sceptical when we spotted a Midland transceiver connected to a spectrum analyser. But I should explain ...

Licenced to Transmit

We had been invited by AMSTRAD to attend their spring trade show, launching their products for this and the coming year. Naturally our presence was justified, one of their intended products was a range of CB transceivers.

On display was an AMSTRAD CB 900. Their sales director Mr. Mould explained that the set was externally exactly as it would be launched, the casing had been especially silk screened for AMSTRAD, the interior components had been converted to transmit 27 FM. Channel one of the legal specification 27.60125 MHz was selected and the read out on the frequency counter verified that it was indeed the new British channel one. Depressing the transmit key one could see the visual display on the Spectrum Analyser proving that transmission was possible.

Next to the AMSTRAD CB 900 was a Midland, so naturally I enquired firstly exactly what their CB 900 was and why there was a Midland 100M on display. Mr. Mould was slightly cagey about the origin of their CB 900 but with a little pushing he answered freely "Well the CB 900 is actually a French 'Thompson', we have chosen the same casing and board for our production models which will be produced in Japan and will be imported as 40 channel, 4 watts 27MHz FM to suit the British specification. The Midland is on display so that you can take a closer look at the piggy back FM - 27.6 to 27.9



Demonstrating, with the aid of a spectrum analyser, that the rigs work on the legal frequencies.

conversion which has been performed to carry out licensed tests of the new frequencies".

Honesty can be rewarding, it was quite refreshing to hear AMSTRAD's approach especially after the questions we had been formed to ask Adam Imports, but more of that later.

at least six months to develop and even then reliability won't exist".

The CB 900 should retail at around £80 or £90 with the more basic rig fetching around £70.

Amstrad Conclusion

To be truthful we were reasonably impressed, the approach was honest and professional and the transceivers themselves were neat and compact. The subject had obviously been well researched and a licence to transmit had been issued in April dated to last for one year from May the 5th 1981.

In short they will be interesting and possibly very reliable sets well worth looking for.

Professional Approach

After a few more questions it soon became apparent that the subject of CB had been approached by AMSTRAD on a sensible and professional way. They had not attempted to pull the wool over our eyes although obviously if we had not asked information as to origin or operation of the display models, it would not have been offered.

AMSTRAD intend to launch their range in the new year when they feel that the development of an Integrated Circuit capable of reliable operation will be available, this should be around two or three months after legalisation. Alan Sugor, the chairman of AMSTRAD said "In my opinion I personally cannot see a reputable legal set sold this year, quite frankly the Integrated Circuit necessary will take

'Grandstand' in contrast

Last month we promised to tell you the truth about a range of rigs to be known as 'Grandstand'. Adam Imports intends to launch a Base station, 3 mobiles and two hand held units from legalisation, 'Day One'. We were invited to view their transceivers at a private exhibition in a London hotel. Naturally we had done our home work and already knew what their range

is and where it is already available.

(Once more the intended 'Grandstand' range is on the Dutch market as Astron and in the French market as Wagner. We met Bill Dewhurst from Adam Imports and asked to be enlightened on their Grandstand display).

In such a market as CB, where back stabbing and industrial espionage is feared, Bill was naturally cautious.

He informed us that their range would be produced in the far east especially for Adam Imports and that they would all conform to the new British specifications. The range was neatly displayed on a shelving system and each transceiver was neatly labelled. Asking why the equipment on display was twenty two channels and not forty, we met the first cautious answer, "We had expected the specification to have only been twenty two channels but naturally they will be released as forty channels". I then asked what the casings were from and if the rigs on show were available anywhere else? "We had them made for us, no, they're not available anywhere else".

Such answers were obviously intended to guard their own financial interests and would have easily mislead the uninformed. On the press release we have received from Adam Imports it stated that "Pre-production prototypes, licenced by the Home Office, are now in our possession". I enquired if they were in possession of a licence to transmit and if the "Grandstand" range were adapted to operate in the new British specification. Bill Dewhurst answered "We have all we need to experiment". Not satisfied I repeated my question, the reply was as guarded "I can only say we have all the paperwork underway for everything we need and no these sets are not capable of transmitting on the legal frequency but they will be".



Grandstand Rigs

Grandstand Conclusion

Having pinned Bill Dewhurst alias 'Buzzing Bee' down to honest talk and

admitting that the casings are already in use in other countries and that the actual equipment on show was in fact French with "Grandstand" stickers.

We asked about availability and the all important IC that will need developing before 27MHz FM legal transceivers will operate on the British specifications with any reliability.

Buzzing Bee assured us that the development of the IC was well underway and required only weeks not months to perfect its use. This is something we found interesting and not wholly credible. In conclusion I could not help feeling that the company was dabbling in a field of which they knew little and had no previous experience. At present Adam Imports deals in computerised TV games, space invaders and the like. There was, I am afraid to say, no inspiring confidence on their knowledge of CB especially when I noted a range of antennas offered with their new Grandstand rigs, gains of 3db on mobile antennas? I suggest they read the governments spec again, quote "With the antenna permitted for use with the equipment", 4 watts "this gives an effective radiated power of 2 watts".

I was also not impressed with their inability to produce a Home Office experimental licence, especially as they quoted its existence in their press release.

However rest assured that the equipment will be manufactured in the Far East by knowledgeable people and will thus have to perform as required in order to be imported legally by Adam Imports or anyone else.

JOH

Amstrad Rig



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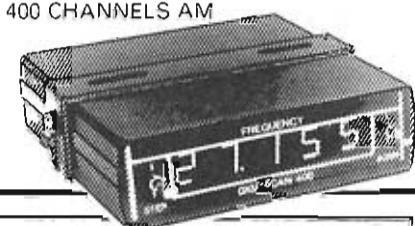
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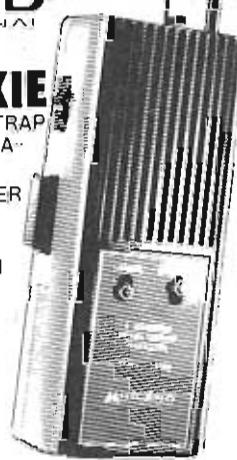
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NAME _____

ADDRESS _____

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I wish to pay by BARCLAYCARD ACCESS tick
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Dealing with Interference Problems

by E. A. Rule – Part 4.

So far in this series we have covered the general aspects of interference problems and also had a detailed look at some practical High Pass Filters. We shall now take a look at the Low Pass Filter and give a practical design suitable for home construction.

The Low Pass Filter

A low pass filter is designed to allow all frequencies below a given reference to pass with minimum loss and to reject all frequencies above the reference point. For transmitters operating in the range 2 MHz to 30 MHz, the low pass filter is normally designed to cut off above around 32 MHz and is normally expected to reach maximum rejection at frequencies above around 150 MHz or so. It may also have series traps which will enable a much better rejection at lower frequencies and a good filter design will be around 60dB (1000 times) down at all frequencies above 50MHz or so. Where a transmitter is operating on only one frequency band the filter is normally designed to cut off just above that frequency, for example, if the transmitting frequency was 14 MHz (20 metres) the filter should cut off all frequencies above say 16 MHz. However for amateur and CB frequencies the low pass filters are designed to cut off above around 32 MHz as stated before.

Although the maximum care is taken in transmitter design to reduce the harmonic content of the signal, there is ALWAYS some present and the amount will be relevant to the transmitter power output. Let us assume

that the harmonic content of our transmitter is 40 dB (power ratio of 10,000 to 1) and that our transmitter power output is ten watts. This means that the power in our harmonics is around 0.001 watts, or 1 milliwatt. This may not seem very much but now consider the signal arriving at the average TV set. Assume this to be around 500 micro volts (a fairly high signal level). This 500 micro volts is developed across the 75 ohm input impedance of the TV. OHMs law tells us that power is equal to the voltage squared divided by the resistance i.e. $P = \frac{V^2}{R}$ in our case is only 500 micro volts or 0.0005 volts, therefore V squared equals 0.00000025 volts. which divided by the input impedance of 75 ohms is equal to a power level of 0.0000000033 watts!!! IN OTHER WORDS OUR TRANSMITTER HARMONIC IS AROUND ONE MILLION TIMES STRONGER!!! Is it any wonder we have TV interference problems, even more so when a linear amplifier is used to boost the transmitter power output, BECAUSE IT WILL ALSO BOOST THE HARMONICS AS WELL

Now we can see why a Low Pass Filter in the transmitter output is a must. This type of filter will further reduce the harmonics by 60 dB or so and this represents a reduction in power of one million times, i.e. the harmonics are now reduced to around 0.000000001 watts, which means it is now one third of the level of the TV signal. However this is still enough to cause problems in fringe TV reception areas. So a High Pass Filter should be used in the TV aerial system, see part 3 which covered this in detail.

In practice the harmonics from the transmitter arriving at the TV would not normally be as strong as the calculations suggest, this is because there will be some distance between the two aerial systems and a further reduction will take place. However the example given does show why sometimes even when a good quality filter is fitted the problem still seems as bad. It is not because the filters are no good, simply that they are not reducing the harmonics etc enough relative to the signal levels involved at the site where the interference is present.

One point worth mentioning here is that if a linear amplifier is being used, its a good idea to use a filter (low pass) between the transmitter and linear amplifier to prevent any harmonics getting boosted in the first place. One can then also be used in the output of the linear amplifier before feeding its output to the aerial system. A

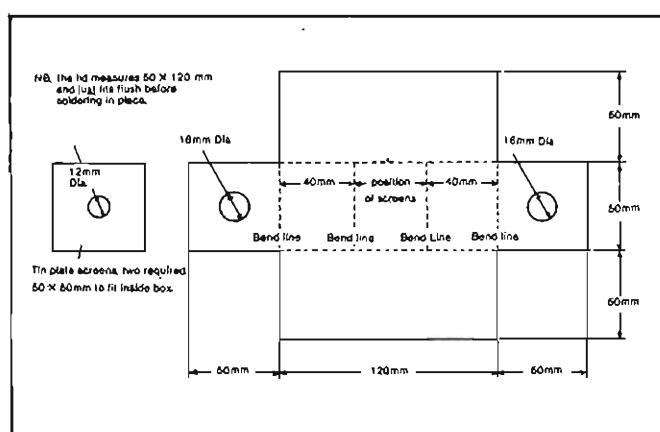


Fig 10.

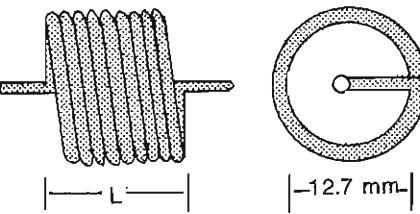
linear amplifier will generate harmonics of its own, so preventing the harmonics from the transmitter getting into it will prevent harmonics of harmonics being generated and compounding the interference problems. It will also prevent a harmonic of say 1 milliwatt being boosted to one of around 10 or even 100 milliwatts.

Practical Filter

Fig 10 gives the details of a suitable box for a Low Pass Filter, it can be made of Tin Plate which is folded as shown and the various joins soldered together. The two internal screens are also soldered in place. The lid is arranged to drop inside after the filter has been assembled and then this too should be soldered all around.

Fig 11 gives details of the coils required and these should be made exactly as shown. The other components required are the silver mica capacitors, these are 4 X 180PF and 2 X 39PF, of at least 350 volt working. The coils and capacitors are wired and mounted in place as shown in Fig 12, this layout should be followed carefully and all leads to capacitors must be as short as practical.

The two series traps may be left out if the problem is only with UHF TV but are advisable for VHF TV. They are both tuned to the second harmonic of the 27 to 30 MHz band. The filter if correctly constructed should provide around 60dB reduction in the harmonic content from the transmitter. If suitable equipment is available the traps can be adjusted exactly to frequency by altering the length of the coils by spacing the turns apart, the further apart the turns are the higher the frequency. However this adjustment can only be made to cover a



Five coils required. All wound with 18 SWG enam' wire on a 12.7 mm (1/2 inch) internal diameter. The finished coils are self supporting.

L1 }
L2 } All Seven turns close wound.
L3 }

L4 }
L5 } Both Five turns close wound.

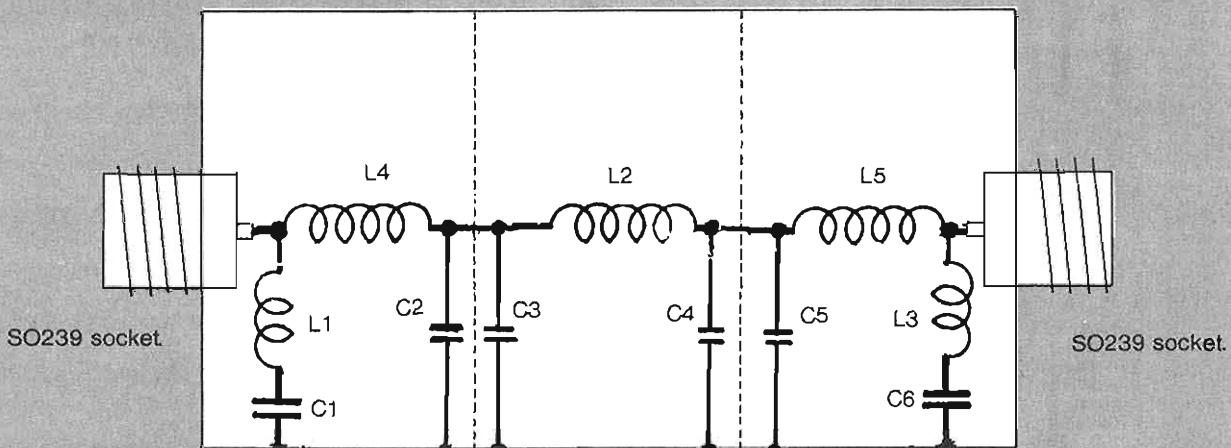
The coil ends are bent at right angles to the coil along its axis as shown. The length is cut to suit the assembly into the box

Fig 11. Coil Details

limited frequency range. The filter construction as shown should be satisfactory in most situations.

A good commercial filter would of course be better as it would have been set up to the exact frequencies required. Home made filters do work very well but it is not possible to be exactly sure of the specifications, unless access to expensive test equipment is available.

**NEXT MONTH WE SHALL BE DEALING
WITH INTERFERENCE PROBLEMS IN
HI-FI.**



C1 and C6 are 39PF silver Mica.
C2 to C5 are all 180PF Silver Mica.

All capacitors are at least 350 volt working.

L1, L2, L3 are all Seven turn.

L4 and L5 are each Five turn.

All coils are wound with 18 SWG, Enam' on 12.7 mm (1/2 inch) internal diameter. (Scrape enamel from wire at ends before soldering).

Screens are soldered along both sides and bottom edges.

The 'earthly' end of all capacitors are soldered to the case. Keep leads short. Where the coil leads go through the screens, make sure that the lead passes through the centre of the hole and is not shorting to the metal screen. The mica capacitors should support the coils satisfactorily once they are all soldered in position.

When you are satisfied that all coils and capacitors, screens etc are soldered ok, the filter can be tested. Once it has been tested the lid can be fitted over the 'open side' and soldered in position, making a sealed unit. The round 'blobs' represent soldered joins.

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- ★ The BIG JIM 27 is fully protected for all weather conditions. Being a free-space antenna it has no radials which makes it unobtrusive and reduces wind resistance.
- ★ A unique high efficiency integrated helical stub matching system ensures an accurate 50 ohm match and low VSWR. An added feature is a built-in VSWR adjuster.
- ★ Suitable for FM, AM or SSB. Max power input 80 watts peak.
- ★ SAE for further details.
- ★ Beware of imitations.

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CB HANDY MANUAL. Dictionary, 10 codes and hints on operating etc. £1.00

THE ANTENNA CONSTRUCTION HANDBOOK. Includes many designs with how to build diagrams for CB radio and amateur radio antennas. £5.60

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That's Life

We have since heard that one of our complainants has managed to acquire his SIGMA IV by continually harassing MIDLAND OPEN CHANNEL and eventually by collecting the antenna personally.

Midland Open Channel Telecom Ltd., also known as Lyndon Radio & T.V. Supplies.

Over the past few weeks we have received a number of complaints about the above named company. The complaints have all been focused on this company's inability or unwillingness to supply SIGMA IV 14 DBI OMNI Directional Base Station Antenna at their advertised retail price £39.80 inc. VAT.

This "special offer" was originally advertised in CB Radio Magazine issue 8 February 1981 and last appeared in issue 12 June 1981. At first sight this special offer was truly "SPECIAL" because the normal retail price for SIGMA IV is in excess of £55.00. Most CB wholesalers sell this item at a trade only price of around £43.00. Any reader who thought this price to be unbelievable was, in all probability, right!

Here follows the sad but true story of a certain breaker who shall for the purposes of this exposé be referred to as Mr. X.

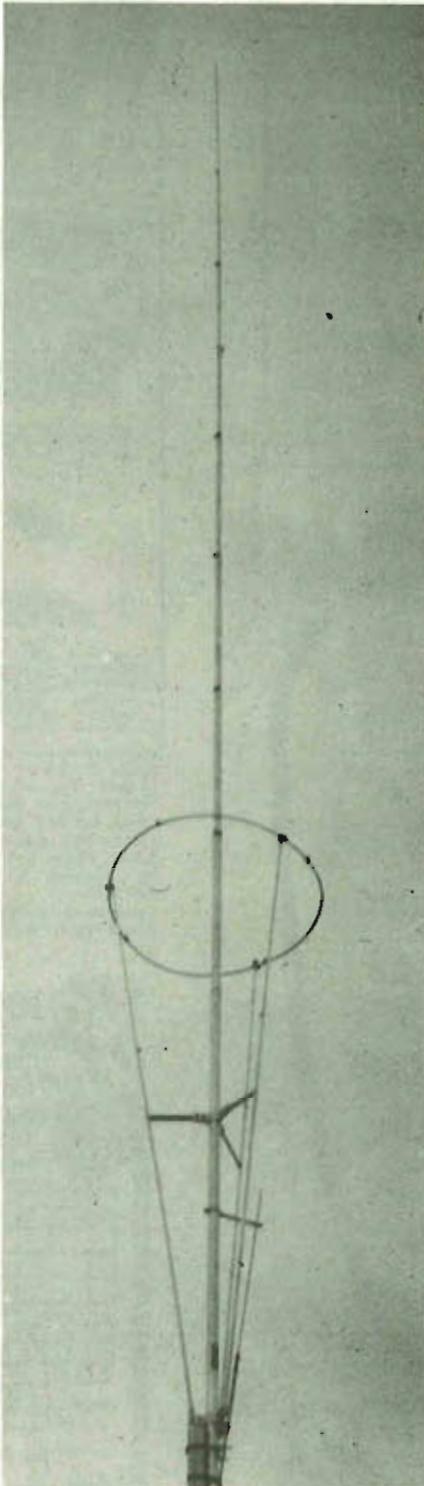
Mr. X, being a keen DX enthusiast replied to Midlands advertisement without delay. To avoid postal hold ups or British rail's inefficiency he decided to collect his SIGMA IV personally. Mr. X phoned Midland to check that they had stock of this antenna and was assured that one would be reserved in his name. He then promptly sent off his cheque for £39.80. The cheque was cashed within a few days and Mr. X waited eagerly for notification that he could collect. No confirmation had arrived on the day Mr X intended to go to Midlands and collect his antenna, so he phoned just prior to his departure to make sure that everything was in order. Imagine if you can his frustration and disappointment when he was told that Midland didn't have his or any other SIGMA IV's in stock due to a large consignment being held up at the docks.

Despite repeated telephone calls to Midland Mr X has still not received his SIGMA IV or a receipt for his money. He placed his order over 10 weeks ago.

This is just one example which we have covered to serve as a warning to any potential purchasers of SIGMA IV's from this company.

Bad Publicity

CB Radio Magazine would like to apologise to all its readers for allowing a company such as Midland to advertise in the first place. Had we seen their rather shabby looking shop, or had previous dealings with the proprietors, their ad-



vertisement would never had appeared in our magazine.

If you are amongst the many people still waiting for your SIGMA IV antenna I would suggest that you either demand the goods or your money back as soon as possible. Further may we suggest that if you are anticipating buying a SIGMA IV from Midland do not part with any money until you have the goods clasped tightly in your hand.

Needless to say we haven't exactly been sitting around scratching our heads over this situation. Carole, our secretary, recently received a similar complaint as the one outlined, so she immediately contacted Midland, who promised to send her "proof of despatch" to our reader. It never arrived! Carole then contacted the Red Star depot where this antenna was allegedly sent from; the Red Star office had no trace of ever receiving this parcel. On phoning Midland back to confront them with this Carole was verbally bombarded with abuse and insults.

When I personally went to visit Midland a few days ago to interview them about this and other disturbing matters, I was almost physically ejected from the shop.

By way of a postscript to this article, Midland Telecom were warned that this article would be published and took the attitude that publicity, however bad, can only be a good thing. I think that we can prove them wrong!

WE CARRY LARGE STOCKS OF SUPERB EQUIPMENT BOTH PERIODIC SPECIAL PRICE ON THE NEW SIGMA IV BASE STATION ANTENNA OF £39.80 RETAIL

HERE IT IS THE BASE STATION ANTENNA EVERYONE IS TALKING ABOUT.

SIGMA IV AV-174 - Unmatched performance and unequalled strength! Unique co-axial design on this new 4 wave omnidirectional antenna enables it to be mounted above a car roof or anywhere possible. Produces higher RF gain over an isotropic source than any other non-directional CB antenna. Tunable to 1.1 SWR at resonance and 1.5:1 or less beyond band edges. Weight - 12 lbs. R.F. Safety Factor 2000 w. Height - 27' Diameter - 30"

SPECIAL PRICE ON MOONRAKER BASE STATION ANTENNA.
£115 INC. VAT EACH
(ONLY 100 UNITS).
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**IN 25 YEARS...
WE'VE NEVER BEEN OUTDISTANCED.**

antenna specialists brand CB antennas . . .

- Highest quality materials and workmanship • Meets highest performance standards — VSWR 1.5:1 or better, all models • Same professional quality materials, designs and workmanship found in A/S police and professional antennas • Reference for all gain figures — $\frac{1}{4}$ wave ground plane

NEW

SUPER SCORPION M2000

Features

- Precision machine ground tapered whip has less air resistance and less pattern distortion due to whip bending. Highest quality 17-7 PH stainless steel can be bent full circle and still snap back to perfect vertical
- True static ball tip for continuous dissipation of wind static build up and less noise!
- Full 60-inch radiator surface for maximum range. VSWR 1.5:1 or better from channels 1 to 40 without tuning.
- Antenna Specialists' LEVERLOK™ quick release. Firm, positive electrical and mechanical connection. Instant disconnect, with the twist of a lever.
- Top grade silver mica transmitting capacitor for consistently lower VSWR under extremes of humidity and temperature.
- Stainless steel shock spring absorbs blows from branches and garage doors.
- Silver-plated phosphorous bronze spring contacts. The superior high frequency efficiency of pure silver. Plus spring contacts assure positive continuity for years.
- Guaranteed satisfaction with 5-year limited warranty PLUS lifetime coil burnout warranty.

Specifications

Model	M2000
Whip	Tapered 17-7 PH stainless steel. Full 60" length.
VSWR	1.5:1 or better. Channels 1 through 40.
Cable	RG-58U. 17' with in-line (1/2" dia.) miniature connector.
Connector	PL-259.
Mount	Trunk lid. no holes or roof mount (3/8" hole).
Total Height	65"

M2000

CB5000

CB/AM/FM DISGUISE ANTENNA. 5 section locking telescopic. Diplexer pre-tuned. Fine tuning only required. Power rating 50w. (The replacement for the M610).
Plus all the other popular models. MS264, M125, MR440, STARDUSTER M400, MIGHT MAGNUM M227 etc.

NEW

NEW

'SKINNY MINNIES' ASC 550 . 556

Features

- Available in 7 colours "Skinny Minnie" fibre glass whip, manufactured only by A/S to professional standards for optimum reliability, long life.
- Solid brass connections imbedded in base. Can't break or shake loose.
- True $\frac{1}{4}$ wave professional design for best possible fibre glass performance.

Specifications

Models	ASC 550 to 556.
Whip	3', 4' & 5' fibre glass. $\frac{1}{4}$ wave.
VSWR	1.5:1. all 40 channels.
Connector	PL-259.
Mount	Fits any $\frac{3}{8}$ " - 24 thread.

ORIGINAL TELEPHONE TYPE M.125

World's most copied CB antenna! Standard of the industry, designed and constructed exactly like our lo-band police antennas.

Features

- High-efficiency base load design, with waterproof loading coil and mount for maximum reliability.
- 17-7 PH stainless steel (finest grade available) taper ground for resiliency and low wind resistance. Bends full circle without taking a set.
- Static ball tip for less noise.
- Stainless steel shock spring minimizes damage from obstructions.
- Ample 17' coax cable with attached connector.
- Mounts securely and easily on any flat metal surface. Waterproof design. Requires $\frac{3}{8}$ " hole.

Specifications

Model	MR125
Whip	17-7 PH stainless steel, taper ground.
VSWR	1.5:1 or better. channels 1-40.
Cable	17' RG58U coaxial.
Connector	PL-259.
Mount	$\frac{3}{8}$ " hole mount
Total Height	47"

M-125

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 Hobby Communications, 111 West Wycombe Rd, High Wycombe, Bucks. 0494-447093
 Wintjoy Limited, 103 High Street, Shepperton, Middx. 093-2248145

DX QSL International Club Spot

The Long Island Skip Shooters QSL Swap Club of New York.

Hullo folks, it's me again, the man you love to hate - Charlie Hotel, Echo India 25, with a couple more pages of rubbish, waffle, bits and pieces with the odd bit of DX/QSL news thrown in as a face saver.

First of all, I've got to admit that I have recently passed over some false info. to you all. My apologies to everyone in general and to Andy Graham, Echo India 128 of Paisley, Renfrewshire, Scotland in particular.

In my article I stated that the N.A.C. was still awaiting its first QSLing Scotsman. I was way off the mark here because Andy Graham has in fact been a member since 23 Nov. 1980. His unit number being 1070.

Thanks for the letter Andy and the opportunity to update the records.

These last few months have been quite interesting on the British QSL scene. Quite a few "Home Grown" DX/QSL clubs are now getting their names and stamps onto QSL cards.

I've heard a lot of talk and comments about these various British Clubs and the packages they offer.

The comments range from the Good, the bad, to the totally unprintable. I think the majority of you will probably have heard the same sort of talk too. One thing I would however add is beware of false reports, talk to someone who is a member not someone who may have a vested interest!

BIG BEN DX QSL CLUB - P.O. Box 14, Godalming, Surrey GU7 1PS.

BRITISH BULLDOG INT. - 23 Russell Ave, Colwyn Bay, Clwyd LL29 7TR.

BRITISH CONCORDE INT. - CB QSL Club, 187 Walton Rd, East Molessey, Surrey KT8 0DY.

SCOTTISH DX QSL CLUB - 45 Seedhill Rd, Paisley, Renfrewshire, Scotland.

There you have it English, Welsh and Scottish. Quite a nice grouping.

Mind you, I'm not totally going to ignore British Clubs. I'll be keeping tabs on them and reporting on their progress from time to time.

Actually, this can be extended even further. Anything you want to say about the QSL'ing scene would be appreciated. Nice new cards, contacts, clubs, hints and tips etc. Lets have your letters folks and get a wee bit of a QSO going!

Does anybody read the QSL page in Breaker Magazine? This incidentally is written by my great pal "The Medicman". A month or so back he mentioned a free club - "The Lucky Seven Club". An interesting little club by the way. Well believe it or not, I've just discovered another free club. This is the "Cheese Eaters Swap Club", for membership send off a S.A.E. and five of your signed and dated QSL cards to: Galley Rat, L. Hanscome, P.O. Box 7309, Norfolk, Va, 23509 U.S.A.

Only cost here appears to be the S.A.E. and I'm not certain how to get around this one. Perhaps if someone has experience of other interesting clubs, they may care to drop me a line and I'll pass the info on.

A Postal Hint

If you're a regular QSL'er you'll be getting well known to your local friendly Post Office.

As it happens, the Post Office which I use is the same one which is used by Lima Charlie 1 and Echo India 142, so between the three of us, we put a fair bit of business his way.

One day, we asked about the cheapest method of sending out cards. Stressing the importance of them still going first class and by Air Mail. Our local P.O. man racked his brains and came up with the "Small Packet" method.

Instead of sealing your envelopes they must be left open. However they can be sealed by means of Paper Binders. These are those little two pronged tin things which you shove through papers and then open up on the other side and push back flat. To make them even more effective, a washer can be put on before they are opened out.

On the front of your envelope, in the top left hand corner, write Small Packet. You must then fill out a Customs Declaration form (No. C1). This is a small green sticky backed form. State the contents to be ie, "Printed matter, Cards, Photographs, Tapes" or whatever, declare the contents to be a Gift and mark the value. I always say N.C.V. (No commercial value) - it saves a bit of explaining. Stick this somewhere on your envelope and there you have it - A small packet. The reason

for the envelope being left open is now obvious. Customs if they wish, can now open and reseal the envelope without any bother.

I took an envelope into my local P.O. the other day. It contained: 5 QSL cards, 4 Post Cards and quite a few QSL club invites. This was going Air Mail to the USA. The weight was 60 grammes. I sent it off using the Small Packet method and it cost 51 pence. Just out of curiosity I enquired as to the cost of it going sealed Air Mail. Quite a difference. It would have been 92 pence. A canny little saving is it not?

Well that seems to be all my bits and pieces for this month. A couple of items of English International news and then I'll give you the info of the "Long Island Skip Shooters".

On the list of 100% QSL'ers which is included in the club package is Echo India 14, Glen Rudolph of South Africa. If anybody has QSL'd Glen and wondered why they've received no reply the answer is simple. He's moved to a new address. Glen wrote us a letter and advised that his new address is: 11 Coega Crescent, Bridgè Meade, Port Elizabeth 6001, Rep. South Africa.

Hoping to catch you all on the frequency during July is Glenn Janos (Echo India 19) of Minnesota. He's coming over here on a touring holiday and wrote that he is looking forward to meeting some English CB'ers. He'll either be using his Echo India number or his Skip Call sign, which is 32 America 189. Listen out for Glenn. He's a real nice fellow and well worth talking to.

One last little puzzler for you all. What is the word to describe a collector of QSL cards (Not Idiot). Something along the lines of Philatelist. I've no idea if such a descriptive noun even exists, but there's a little prize for the person who can come up with the best Idea. Let's have ideas and with any luck the winning suggestion will be printed within the next couple of issues. Remember all cards/letters to either myself or Lima Charlie 1 please.

("Cos my spies reliably inform me that "CB RADIOS" filing system is in a bad enough condition already. A sudden influx of extra mail might just conceivably finish it off for good!!)

The Long Island Skip Shooters

Right, down to business. The Long Island Skip Shooters QSL Swap Club (L.I.S.S.) is truly an International Club.

Its founder and president, Kevin Flanagan, gives his address as P.O. Box 80 Selden, New York 11784, U.S.A. where as the Vice President is: Oiva Pirjola, Ryydynkatu 64, SF - 33400, Tampere 40, Finland.

Selden, where Kevin lives, is actually a small town of about 15,000 people, situated some 60 miles east of New York City. Just far enough away to be safe!

Kevin is a keen and active DX'er. He uses Unit No. 903 as his call sign and monitors frequency 27.635 L.S.B.

He reckons that he can hear United Kingdom stations most mornings. 0900 hours N.Y. time, 1400 hours our time. Looks like the lunchtime breakers are really making the trip stateside via New York.

Kevin is something of an Authority and expert on DX/QSL clubs. At the last count he was a member of 150 clubs. I wonder how big a card you need to get all those stamps on! He personally has a collection of over 12,000 QSL cards from 50 different countries. This is the biggest collection that I have any knowledge of. Its mind boggling to say the least.

The club membership is spread over 25 countries so it's coming on quite nicely.

The Long Island Skip Shooters QSL Swap Club of New York Star Rating

	DX QSL Star Rating	Yes First Class	Fair Second Class	Third Rate	No
1	World Recognition	★			
2	Distribution	★			
3	QSL Response Time	★			
4	Club Stamp	★			
5	Club QSL Cards	★			★
7	DX Unit Number	★			
9	Wall Certificate	★			
10	I.D. Card	★			
11	Club Roster	★			
12	Club Patch/Badge	★			
13	DX Log Book	★			
14	Club Accessories	★			
15	Club Information	★			
16	Tourist Information	★			
17	Cassette Swap	★			
18	Club Postage	★			
19	Life Membership	★			
20	Discount XYL Membership	★			
	Value for Money	★	★	0	
	Overall Presentation	★			
Total Star Rating		14	1	0	3

The L.I.S.S. is not a terribly expensive club to join. Cost including Airmail is 7 U.S. Dollars. Not too bad when you consider that some clubs are asking for 15-20 dollars without even batting an eyelid.

To sum up, a good progressive club run by a nice friendly bloke who can certainly

help you find those unusual QSL locations. And one big goodie in his favour- Kevin won't rip you off.

Good DX'ing and Nice QSL'ing to you all.

Best regards,
CHARLIE HOTEL. E.1.25.

Lucky Numbers

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See us for a large range of rigs and accessories at the best prices in town.

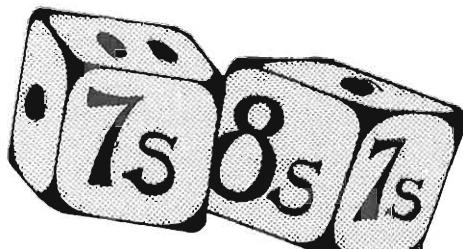
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News Review

A look at what is said about CB in the press.

The amount of press coverage for CB Radio this month is considerably less than in previous months. This lull in activity is probably due to a state of limbo that seems to exist in the CB world at the moment. Only months away from a proposed legal system and time for the clubs up and down the country to decide on their plan of action. Whether to adopt the legal system or to carry on fighting for AM and SSB and whether they are going to come together to organise their activities, and not to let the amount of charity work dwindle but to keep a constant stream of good publicity on the pages of our National and local Newspapers.

CPD

Timber Wolf the CB freak **Daily Sun**

It would appear that CB radio appeals to a fairly extensive cross section of the population. People from all walks of life are using CB as part of their daily routine, although, this article concentrates on one man only. "Timber Wolf" is a lorry driver and also a member of the Bradford Breakers club. Described by his workmates as a "Loner, drawn into the comradeship of the open road" and by his boss as, "a very good worker with a strange mental make up, this one man managed to strike terror to the hearts of every woman in the Yorkshire area". In case you haven't already guessed, the true identity of the "Timber Wolf" is Peter Sutcliffe - the Yorkshire Ripper.

Bad Break for **Bed pushers** **Scunthorpe Evening** **Telegraph**

The worst spell of spring weather in living memory was to blame for foiling plans by the 'Ironstone Breakers' to raise money for charity. The CB club had to abandon their proposed bed push around Scunthorpe, which was to be in aid of "Scunthorpe Heart Concern", because of extreme weather conditions. "We would have needed sails and oars to move the bed", said 'Lancer' following the decision to postpone the event.

Not wanting to disappoint the charity organisers a party of 20 or so members of the CB club, donned fancy dress

costumes and toured the local clubs and pubs to collect more than £315 towards the appeal.

Still unperturbed the 'Ironside Breakers' are planning to go ahead with the bed push later in this month.

Call Smokey, **bootlegging hits book** **trade** **Sunday Times**

The pirate version of the "Big Dummies Guide to CB" has aroused much interest lately, not only to the retailers who can purchase the "bootlegged" copy from devious sources for half the usual trade price of £1.50 and still re sell at £2.95, but to the press and to the publishers of the original copy "Kona Publications of



Islington, North London". The bogus publication can be identified by its poorer print quality and by the lack of any reference to "Kona Publications". The article was written by Peter Chippindale, who was responsible for L.W.T.'s London Programme on CB a couple of months back. He states that "Bootlegging in Britain has already become a big worry for the record and film industries, but although piracy of books is common in the Far East, nothing on this scale has been known here before. Deputy Secretary of the Publishers Association, Peter Phelan, said "As far as we were aware this sort of Piracy was not an evil which existed in the UK. We would get very worried if it started happening here". A spokesman for the publishers, who have offered a substantial reward by the way, said "We think that more than 100,000 copies have been printed and we are doing



Citizens Band radioenthusiasts brought a bit of colour into the lives of patients at St. Georges Hospital, Hornchurch last week, when they presented them with a 22-inch television set.

The CB fans, all members of the Riggie Social Club, Dagenham, bought the TV set from club funds.

Both staff and patients at St. Georges gave the Riggie men a big '10-4' for the

gift, which will be used in a ward for Dagenham patients.

The trio in the ornate sweatshirts are club members Terry, Keith and club chairman Alan.

"We looked around for a worthy cause", said Alan and St. Georges filled the bill. The set will be maintained by a member of Dagenham Rotary Club.

Call Smokey, bootlegging hits book trade

BOOTLEGGERS have moved into the book business in Britain and an angry publisher has offered a reward to track them down. More than 100,000 copies of a best-seller are thought to have been printed illegally.

The pirates have moved into a new boom area—Citizens Band radio—and photographed an American publication, *The Big Dummy's Guide to CB Radio*. It has been reprinted and copies are sold from the back of a van to the CB shops which are springing up all over the country to cash in on the craze. They fetch about half the trade price of £1.50 and

shops then mark up the books to the recommended price of £2.95.

Bootlegging in Britain has already become a big worry for the record and film industries. But although piracy of books is common in the Far East, nothing on this scale has been known here before.

Peter Phelan, deputy secretary of the Publishers Association, said: "As far as we were aware, this sort of piracy was not an evil which existed in the United Kingdom. We would get very worried if it started happening here."

by Peter Chippindale

Paul Mandelstein, official publisher of *The Big Dummy*, has offered a "substantial" reward. "We think more than 100,000 copies have been printed and we're doing everything we can to stop it," he said.

The official version has sold nearly a million copies in the US and 180,000 in Britain. *The Big Dummy* is the unofficial bible of the CB cult in the US, where users of the two-way short-range radio system number millions. It is a straightforward guide to the mysteries of the airwaves, the complexities of the

equipment CB fans revel in and the extraordinary coded language they have developed: "Smokeys in jam sandwiches" are white police cars with red stripes, for instance.

When the craze spread to Britain and the government was forced to announce legislation to permit it next autumn, demand for the book rocketed.

But by the turn of the year, the British distributors, Kona Publications of Islington, north London, noticed that orders were dropping unexpectedly. Investigations showed that the pirates had moved in.

everything we can to stop them".

When CB was first introduced into this country, demand for the book rocketed, but after a year, the distributors noticed that orders were dropping. Investigations showed that the pirates had moved in.

CB Knifing "is revenge"

Birmingham Evening Mail

CB radio enthusiast Phillip Edwards of Naiamo Way, Kingswinford, was stabbed in a savage attack by four men, and police investigating the incident believe that his activities on the air may have been the motive. Mr Edwards who was kicked to the ground and had his face slashed before he was stabbed is said to be comfortable in the Corbett Hospital in Stourbridge. The attackers were described as being white, between 22 and 30 years old, and well built.

The attack took place just after midnight, when Mr. Edwards a member of the Black Country Breakers, was putting his car away at his house. A fellow member from the club said that Mr. Edwards had been upsetting people by his attitude towards the club.

CB radio offers wide opportunities.

Financial Times

"When citizens band radio becomes legal later this year it will open up tremendous opportunities for the motorist, whether he uses his car for business or pleasure", we are informed by Elaine Williams, Communications Correspondent for the Financial Times. "Already there are more than 250,000 illegal users of the system who claim that CB offers many benefits", she continues. "Opponents of 27MHz say that the proposed system will still cause considerable interference even to television and denies British Industry the opportunity to take advantage of a new market expected to be in the region of £1 million to £2 million a year" and also that "A higher frequency of around 41MHz or 200 MHz would have allowed UK manufacturer to produce sets free from foreign competition. On the other hand 928 MHz sets would cost

about £500 each to make. At that price there is little point in contemplating manufacture".

Police Sergeant was punched by CB fan. *Leicester Mercury*

James Peter Seddon, of Beaumont Leys, Leicester admitted assaulting Sergeant Robert Adrian Lilley last August and was fined £150, and his wife was fined £75 for causing obstruction in the same incident. Inspector Patricia Perry, prosecuting, said that when the sergeant asked to see a CB radio, James Seddon denied that he had one, and when told that his car was going to be searched he said "You are not going to touch my car". She told the court that it was apparent that Seddon's wife had put the illegal radio in her handbag and that at her husband's request she got out of the car and ran. At this point the sergeant grabbed her arm and was promptly punched on the shoulder by Mr. Seddon who said "leave her alone". When Mrs. Seddon returned later without her handbag, this aroused suspicion and subsequently the handbag was found complete with the CB radio inside.

CB fan sold stolen radios *Berkhamstead Gazette*

CB radio fan Colin Siburn took his hobby too far when he started to steal radios and advertise them for sale over his own set. 18 year old Siburn started stealing CB sets after his own was stolen in January. The defendant pleaded guilty to several charges connected with the theft and resale of the equipment. The magistrates have decided to adjourn the case and have advised Mr. Siburn to obtain further legal advice.

Truckers in tune to ease the pain. *Daily Star*

An ambulance drivers CB brainwave saved an injured motor cyclist from an agonising trip to hospital. Graham was in extreme pain after the accident in which his back was broken and the vibrations

caused by passing juggernauts only served to make matters worse. So ambulance driver Dave War flagged down the first lorry which had a CB antenna and asked him to send out a call to ask the "Trucker" to slow down. The message had an immediate effect and the lorries reduced their speed to a crawl and many of them refused to overtake the ambulance.

"I can't thank the drivers enough for their consideration" said Dave. On the last report Graham's condition was said to be comfortable.

CB fans told: No masts in this town

COUNCILLORS yesterday decided to take on Citizen Band Radio fans and radio hams by stopping them building transmitter aerials in their gardens.

Members of Darlington's development control sub-committee turned down two applications for radio masts, one 24ft. and the other 40ft. They were the first such applications made in Darlington.

Planning officer Laury Muller said he had received several letters from neighbours of CB "good buddy" Peter Lewis, of Stamer Crescent. They feared a mast would interfere with TV reception, be of unsightly nature and a possible danger in high winds.

Councillor Alan Gill said: "I've been approached by several of the residents, I think we've got to make a firm policy decision now."

"While interference in television reception is not our province, I'm sure it's reasonable to oppose these masts on the grounds of unsightliness and possible danger."

The committee also refused permission for a mast to be built in Mr. Colin Hird's garden. The Councillor, Councillor J. G. Skinner said: "If the applicants wish to appeal that is up to them. We have to take a lead in opposing these applications."



Coun. Skinner:
"We must lead."

CB

Insurance

An Insurance to cover theft or official confiscation!

Whether the government likes it or not CB is rapidly becoming the most organised illegal activity ever...

CB is becoming respectable, last month we covered a Rig Registration service that was actually liaising with the police to recover stolen (illegally imported) transceivers.

Now an insurance brokers in Huddersfield has managed to hammer out and finalise a proposal form for CB, covering not only loss by theft but also confiscation by an official body. The brokers concerned should be congratulated on their efforts, for the policy they offer is totally legal and above board.

Underwritten at Lloyds

The all risks cover is effected with Lloyds of London for the actual physical loss or damage and is subject to a £10 excess. The cover is for Home or Mobile operation and the premium rate is at 12% of the value of the equipment to be insured.

Once the policy is activated coverage of equipment is for three main categories:

- 1) Equipment mounted in a vehicle or
- 2) Whilst in the assured's private dwelling, or
- 3) Whilst in the assured's business premises, up to a limit of £2,500 for any one individual.

The main exclusions on the policy are:

1) Claims occurring in respect of equipment installed in open vehicles or vehicles whose upper body is of plastic, canvas or similar materials.

2) Claims occurring whilst the vehicle containing insured item is left unattended unless such vehicle is locked and the windows are closed.

3) Claims of which the insured item is damaged resulting of wear, tear, gradual deterioration, mechanical or electrical derangement or breakdown.

4) Damage arising out of the installation or repairs of the insured items.

5) The first £10 of each and every claim is not to apply where Underwriters admit total loss by fire/theft.

6) Storm tempest damage to aerials on premises.

7) Damage to aerials mounted on vehicles.

8) Loss of or damage to cassettes or tapes.

The last item may leave you slightly bewildered so we should explain that the policy is actually for CB & Stereo Radio Systems thus providing the radio stereo is specified it would also be covered.

UPDATE
 As we go to press we have just heard
 that a new CB specialist insurance com-
 pany has been set up after ten months
 research.
 To wet your appetite we understand
 that the premiums are from just over £3 per
 annum for rigs up to £500 and that cover
 will make provision for "Confiscation
 Risks" including attendant Court Costs!
 More next month...
 JOH

Official Confiscation

Perhaps the most important part and indeed adventurous is the coverage of the equipments total value, less the £10 excess in the event of seizure or confiscation by an official body.

It is without doubt that this particular coverage will play a major part in preventing the authorities from stamping out illegal operation.

Already most clubs have bust funds that will pay the fine of a CB criminal now with this insurance the financial loss can be greatly reduced.

The coverage is arranged quite legally through a Swiss re-insurance company via a captive company based in the Isle of Man. The fee is £7 for mobile and £5 for base station cover.

Should an Insured person have his

equipment confiscated either by the Home Office, The Post Office, The Police or the Customs and Excise, or indeed any other official body empowered to seize such equipment. Then the insured value of the confiscated equipment can be claimed, providing that a valid receipt of confiscation or seizure can be produced.

Conclusion

Having seen the proposal form and made some enquiries for background information, the insurance offered by "David Allen Insurance Brokers" seems to be not only simple to apply for but reasonable value, especially considering how volatile the CB scene is and indeed may become.

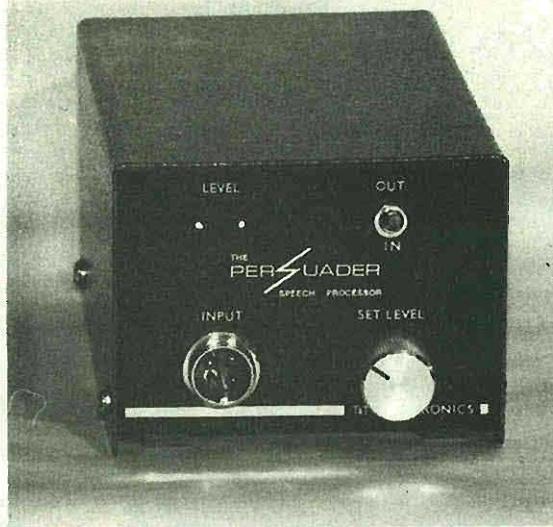
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24, Queen Street, Huddersfield, West Yorkshire HD1 2SP Tel. No. 0484 - 47027/8		
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<small>PREMIUM - 12% on the value of each rig - plus (if required) £7.00 (mobile) £5.00 (home) for confiscation risks.</small>		
<small>MAIN EXCLUSIONS</small>		
<small>(a) SOFT TOP MOTOR VEHICLES</small>		
<small>(b) MECHANICAL AND ELECTRICAL DERANGEMENT</small>		
<small>(c) EXCLUDING LOSSES OCCURRING WHilst VEHICLE CONTAINING INSURED'S PROPERTY IS LEFT UNATTENDED UNLESS SUCH VEHICLE IS LOCKED AND WINDOWS ARE CLOSED</small>		
<small>(d) EXCLUDING DAMAGE ARISING DURING INSTALLATION AND REPAIR</small>		
<small>(e) £10.00 EXCESS EACH AND EVERY LOSS</small>		
<small>If you require this insurance please complete below and send to the above address with cheque for the correct amount.</small>		
<small>(Tear off)</small>		
PROPOSAL FOR CB INSURANCE		
Name	Date of Birth	Occupation
Address	Club Membership	No.
<small>Have you had any claims that would give rise to claim under this insurance now proposed - YES/NO</small>		
DETAILS OF EQUIPMENT		
Make	Model	Serial No.
<small>Type (Base/Mobile)</small>		
PREMIUM CALCULATION		
1. Value £	£ 12% = £	Plus confiscation (if required) £7/£5 TOTAL £
2. Value £	£ 12% = £	Plus confiscation (if required) £7/£5 TOTAL £
3. Value £	£ 12% = £	Plus confiscation (if required) £7/£5 TOTAL £
<small>Signed</small>		
<small>Date</small>		
<small>NOTE - The information contained in this proposal will be treated in the strictest of confidence between the Brokers and Lloyd's of London ONLY.</small>		
<small>CHEQUE ENCLOSED £</small>		

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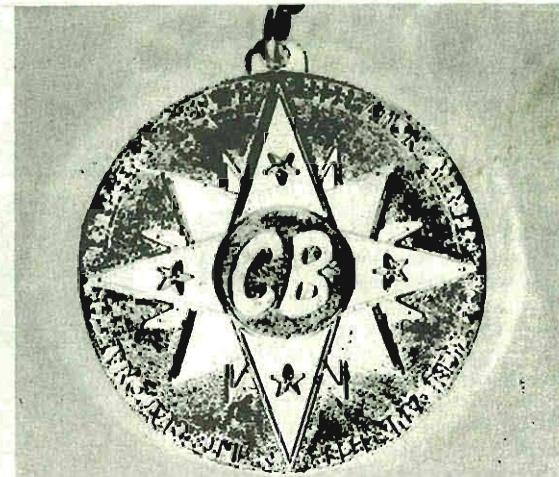
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2. You are a member of the E.S.F. QSL-Card-Exchange-Center at headquarters! Just send with the cards your personal number and include a stamped addressed envelope.*
3. You are entitled to all sorts of technical information and advice, we tell You all about it!*
4. Insurance is arranged for Your mobile antenna, if someone rips it off, just tell us. (The first 12 month after registration free!)
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*It does not cost You anything extra!
Turn to page 73 to see the big size picture of Your E.S.F. membership medallion

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Official address

Clubs handle and channel

Chairman/secretary

Date of the event

(Your name and address will be kept totally confidential)

UPDATE

The Birmingham demo had over
6,000 people turn up.
More News Next Month.

The Trafalgar Square Demo

The U.K.C.B.F. defy a ban on demonstrations in London.

Hyde Park Corner, Sunday 10th May, just after mid-day and a small crowd are gathering beneath a large blue banner with the letters U.K.C.B.F. The initials stand for the United Kingdom Citizens Band Federation, an organisation whose aim is to unite the multitudes of CB clubs and associations throughout the British Isles to fight for a common cause. The legalisation of CB Radio on 27 MHz AM/FM/SSB, the system already being used by close on one million breakers in the UK. The fact that there was a ban on marching demonstrations in London, originally due to National Front activity, until further notice, was of little consequence to the organisers who cleared the obstacle by claiming that the meeting was to be a rally for which the ban was not applicable, this however restricted them to displaying only one banner and remaining at Hyde Park corner.

A fact that they were quite clearly prepared to ignore, and in due course there were quite a few banners on display for a little while before the police took objection and asked for the banners to be lowered, which they were until backs were turned at which point they were promptly raised again.

An unofficial march to Trafalgar Square

The initial plan for the demonstration was to defy the Home Secretary's ban on marches and head towards Trafalgar Square, where a P.A. system had already been set up, and hold a mass meeting. The police co-ordinator responsible for keeping the demonstrators under control, 'flatly refused to allow this to happen but after a little persuasion from U.K.C.B.F. president Steve Perry, consented to allowing small parties to make their way to the square at short intervals. Even this did not stop some of the breakers from trying to display their banners which resulted in two young ladies being arrested for causing an obstruction. They were later released on bail.

Finally all of the demonstrations reached the square, where a handful of CB celebrities were waiting to have their say. Club 27 leader 'Microdot' was acting master



The Rally at the foot of Nelson's Column (Inset Richard Town).

of ceremonies, who immediately handed over to Councillor Richard Towns chairman of the National Committee for the Legalisation of CB who said that he and his members on the committee had 'tried their best to introduce a suitable CB system in this country and on the whole CB'ers should be jolly lucky that they were given any system at all. Very apologetic as he was this was no consolation for being fobbed off with a proposed system that does not meet the necessary requirements.

Richard Town is taken down a pet

The next speaker to take the stand was Andy Donovan. Disco One President and founder of the UBA who made it very clear that the 'pitiful excuses' were not under any circumstances to be accepted, and that "What this country wants is 27 MHz AM, 27 MHz FM and 27 MHz side-band and indeed all modes of operation

on 27MHz". This statement was received by a rapturous cheer from the 500 or so breakers present, indication that this was the general feeling. Mr. Donovan also made it perfectly clear that it was UBA's policy to fight to the end for this cause, and that "If needs be we could have a convoy of 10,000 trucks in London at the drop of a hat", this took the edge off the speech a little as most realise that even if such a convoy was put together there is absolutely no way that it would even reach the suburbs, let alone central London.

There was obviously no following this speech and what the remaining speakers had to say was of little importance, with the exception of the news that "Bambi" and "Sweet Dreamer" were to be released from captivity very short. If it were not for the rather disappointing turn out I'm sure that this could have ranked amongst some of the better demonstrations we have seen yet.

CPD

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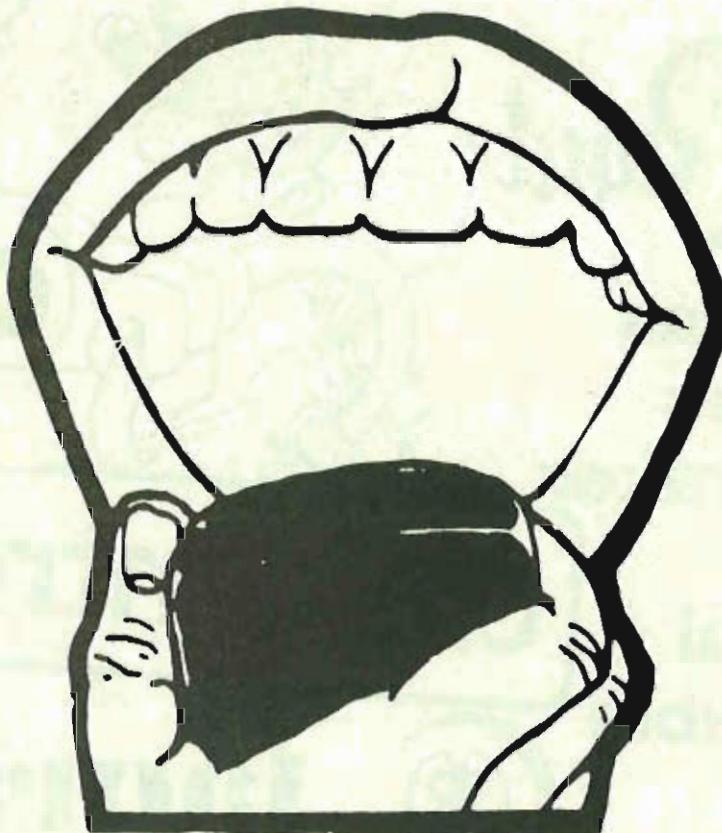
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Readers Write

Dear Sirs,
I do not like your rear cover of May 81.
JOHN GOULD

Dear selfish breaker bullies please give one good reason why modellers who have paid licence fees and hundreds of pounds for their equipment should forfeit it all for your pleasure, your article page 20 "We have gone to 35MHz". Since when? Who pays for the alterations to my equipment? Read RCME and get some idea about the time and money we spend on our hobby, then please stop forcing your weight of numbers onto 'our channel' by right of years and licence fees. Illegal users certainly haven't got our sympathy, you try being allocated a different channel and then have to pay for your sets to be altered.

Over and out return to Ch 16 Saumari.

I am sure most CB'ers can appreciate your problem, but you must also consider that it is not a totally two sided argument. Have you written to the Home Office and complained as strongly, ie. why did they issue licences on 27 when they should have foreseen interference from CB. Or why didn't they standardise 35 MHz from the outset?

If things do get worse for you we will happily appeal for a CB club in your area to try and negotiate an amnesty for your flying. It has worked for some modellers.

ED

Dear Editor,
I've been reading all the CB mags and I must say that 'CB Radio' is way ahead of the rest. One of the others seems to be a cross between Hot Rod and Fiesta with CB radio thrown in, plus centre-spreads of U.S. heavy trucks just to confuse the issue. 'CB Radio' deals with just that - CB radio - even down to technical articles. Keep up the good work.

The 'Rutland Registered Lady Breaker' (April '81 issue) has a point - since we've borrowed XYL from the hams, why not use YL for girl-friend? It certainly sounds more... hygienic? And definitely more acceptable. Let's show a little more respect, eh, fellers?

Whilst on the subject of ham radio jargon, I would like to point out that way back in the dim and distant past, there was quite a kerfuffle in the ham radio world about the use of an 's' after 73 and 88. Without the 's' on, 73 means 'best wishes' and 88 means 'love and kisses'. Stick an 's' on, and we have 'best wisheses' and 'loves kisseses' - barmy, innit? Eventually it was all ironed out and the offending 's' was dropped. Now it seems we have to start all over again... help!

I may be in a rather unusual position as a potential user of CB radio - I am an ex-ham (first licenced in 1939), an ex-radio modeller and an ex-TV service engineer. I've experienced heavy interference in all three modes long before CB radio began to be used in the UK, but as usual, the new arrival (CB) gets the blame for it all.

It's nothing new, fellers!

When it becomes legal I'll fit a rig in the car. That's when I'll add to the present confusion with jargon originating from USA CB, ham radio and 1939/45 RAF/US AF slang - even with some plain English at times. What? You suggest I QSY to 934

MHz, use Single Sideband Suppressed Carrier and talk to myself? Shame on you!

Some of the above will have given away my enormous age (well, I don't want it).

What handle should I use - Methuselah? 73, 10-4.

C.E. TEESDALE, Lincoln

While modulating outside home with a CB we gave a 10-6 because of an approaching vehicle. We stopped modulating as a couple of smokies cruised past looking at us suspiciously (the 10-36 was 12-45). We decided to take the rig out of operation, switched on the stereo and proceeded to talk. The smokies then returned and stopped adjacent to us and got out. They asked the usual questions, then requested the car to be opened up. Powerless to stop them, they found the rig in its unattached state. They called through for confirmation on what to do and whether or not they should confiscate the appliance, the reply was "Negatory". However they did take the owners name which will be passed on to the Customs and Excise. They handed the rig back and we had a fair old rocket with them.

They said the opinion of a great number of smokies was that CB is a good idea, especially when it is made legal. I can only assume that this act of leniency shows how sensibly the Police Force are reacting to the situation.

Finally the quest for legislation of 27 MHz AM must go on and the CB network should all join together under a common umbrella to promote and enhance the views of all its followers. We hope as well that this letter serves as a warning to other CB users that even though we were lucky with this incident, we should still tread warily of the law as it still stands.

1-10 Breaker Break till we do it again!
ANONYMOUS
(20th legion Wall City Breakers)

It would appear you were indeed lucky as many other areas have actually been experiencing a crack down.

ED

Dear Sir,

I have been on channel now for about 6 months and one thing is becoming very clear to me. C.B. radio is fast growing into one of the most disorganised liaisons of the eighties. I am of course referring to the use of breaking channels.

I am a travelling man by trade and regularly use the motorways up and down the country. Usually I use my CB for chats with truckers and other travellers. I also use it for what it is best for, eg. obtaining traffic reports and information about accidents and breakdowns. I have always been under the impression that channel 19 has been for this purpose and that 19 should remain clear for people that are mobile, mainly motorway traffic. This is sadly no longer the case and it is fast getting worse.

On a recent trip down the North I had to travel the complete length of the M1. I can only describe what I heard as total chaos. The one nine channel was completely useless as breakers from all over the place

were calling up friends, wives, truckers, and just plain 19 copy calls. If you did manage to get an answer you hardly had time to pick a new channel before someone walked all over you. The situation got so bad between slab traffic and local breakers, that arguments were breaking out.

If an accident had happened that day I dread to think what the result could have been. I know this sounds like the old moaning story but it is meant to be constructive criticism.

It is about time that we had some overall body to control, CB magazines like yours and the UBA must start the ball rolling - and fast.

May I offer some suggestions:-
1) The UBA must assert itself as the governing body for CB or Open Channel Radio.
2) All local CB clubs must affiliate to the UBA.

3) The UBA must get together with local clubs to allocate local breaking channels.
4) Local breaking channels should be restricted to 12-14-16-22-24. This would allow 5 channels known to all and with one clear channel between each to allow for bleed and splatter.
5) Channel 19 should be left for motorway traffic and other mobiles, including emergency calls.

In this way no matter where you are in this country you only need scan five channels to catch a local breaker. And if you have any trouble someone is bound to be on 19 or any of the others.

If we can show the government that not only are most CB users sensible but are prepared to organize themselves and make sure that the silly element is sorted out and controlled it must help our AM cause.

I apologize for the length of my letter but I feel very strongly about this and feel I must say something.

GRAHAM CROW (ANGEL)

The problem is not one that can be resolved overnight as it requires everyone's co-operation. Many will feel that 19 is for truckers only, equally as many will agree with you and reserve it for motorway traffic. The only way we can help is to print a questionnaire, whatever the result is can be put forward as the suggested channels.

ED

Dear Ed,

As a member of the Soar Valley Breakers, myself and other members will not give up our 27AM rigs as easily as the media appear to think and write we will. I am surprised at CB magazines including yours, giving the impression that they generally support the governments proposed legal frequencies, 27 FM and 928 UHF.

I refer to the quote by Timothy Raison MP, when he says Australia had to legalise 27 AM due to the excessive pressure from the illegal users at the time. We say that the figures quoted at approx. 250,000 must truthfully be 2 million and thus the same arguments and pressure applied to achieve legal victory in Australia must now apply in the UK.

We in the Soar Valley Breakers suspect the real reason for the proposed new legal frequencies are the same as the other changes

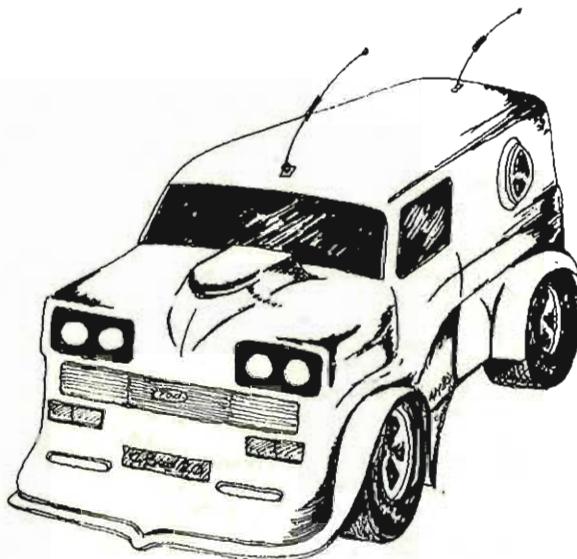
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Readers Write

in our lifestyle over the past few years. That is because of the Common Market bureaucrats bringing us into line with the other EEC countries. Applying this reason it proves that the government did not take account of the arguments of the breakers when they are supposed to have liaised with breakers clubs.

Anyway the battle is not yet over and won't be for a long time yet.

Keep the great Mag coming and keep up the standard.

D. WILTSHIRE (BRASSNECK)
S. WILTSHIRE (CINDERELLA)

I'm sitting here thinking, there's no better way,

Than getting up early and starting the day. With the first cigarette and a nice cup of tea, I know it sounds silly but then it's just me. I crawl through the morning and get it just right,

Afternoon tea, then into the night.

With breakers around me, modulating with ease,

I don't feel so left out, I'm easy to please. And when the time comes to turn out the light,

To fall into bed for the rest of the night, Happy I've spoken to so many sunbeams. Getting my head down and all pleasant dreams.

We'll get together and we'll spread the word,

That 27 AM is the best that we've heard. So, thank you all breakers, for the gift we all share,

Knowing there's someone out there who will care.

Y NOT ALDERSHOT (B.A.B.)

Dear Sir,

Thursday 26th February 1981 was truly a momentous day in the history of CB radio, when the government finally announced its intention to legalise what is likely to become one of the most significant social-cultural developments of this century!

Was there dancing in the streets? No! Were those who had been applying the pressure for this important development rejoicing, jubilant in Victory? Not a bit of it.

Why should this be? Could it be because the current illegal CB movement with its silly clubs, imported rigs and (God Help Us) imported banal language, has had the rug pulled out from under it by the decision not to use 27 MHz AM?

Breakers now have egg on their faces. Pressure by them on the IMPORTANT ISSUE (ie the introduction of legal CB radio to the UK) has finally paid off and on this issue, they have got their way. They are now unfortunately in the embarrassing position of still having illegal rigs, although I suspect this will not worry too many, not having worried too much about it so far. Consequently AM rigs will no doubt continue, and this may have some worrying implications:-

1) The existing CB sub-cultural may be reluctant to accept newcomers with no experience of 'The good days' of AM, which rather defeats the whole idea of CBI
2) Those who have done the (Right) thing by waiting for legalisation may become a 'race apart' on the FM band, and the poor devils who go for the UHF band may find themselves completely ostracised.

If any kind of class structure develops, or if CB degenerates toward some kind of outlaws versus the rest battle, then UK breakers will have nothing whatsoever to congratulate themselves for! Citizens Band is for EVERYONE not just the schmuks who couldn't wait to jump on the bandwagon. Their illegal action so far has ruined any chance there might have been of establishing CB on 27 AM whilst their demands have certainly been strengthened by the fact that there are so many illegal users, and whilst this may not have been used directly in any argument it may have prompted much closer scrutiny of the technical demerits of AM than may otherwise have been the case. The fact remains that for CB'ers to ask for any amnesty is sheer hypocrisy. They simply don't deserve it. So they might as well hang up their AM rigs with their cowboy outfits, and help get the true BRITISH CB radio system into operation.

"Catch you in the flip-flop good buddy" My God! What absolute trash language. We're a bloody long way from Arkansas here lads, or haven't you studied geography.

I am yours faithfully (wincing with embarrassment). Disillusioned Prospective CB'er.

My 207-Yorkshire.
My Handle? MOZART

Dear Ed,

Well the big day draws nearer, and now that the government have recognised our need for CB radio on 27 MHz the question is no longer 'CB or not CB' but 'AM or FM'.

What is FM CB going to be like? Just what does the government's specification mean? Will their alternative FM work? I think that the government have been very slow in releasing their specifications on FM CB Radio!

All over 'Chinatown' the present outlaws of the airways are testing the FM band to assess its suitability compared to AM, so that they can judge just what the government's specifications mean, then we will be able to tell them whether we want it or not. I hear that if the government's idea of CB does not compare with AM CB - as already established in the UK - then the 'outlaw' problem will snowball. If this is the case, and we have 'outlaws operating alongside legal CB'ers then poor old 'Buzby' is in for a terrible time. Since the CB outlaws will be much harder to track down. After all they will be using nearly the same equipment as the 'Legal CB'ers', and who but a highly trained radio investigation officer will be able to tell the difference?

If the government really intended to legalise CB Radio in the UK then they should have got it right the first time. I hope that the general public and non users of CB will take the lead of our present illegal CB users. I believe that since we have actually used CB in the UK and done so much to speed its legalisation that we are more qualified to comment on UK CB and that it would be a mistake to ignore our opinions 'outlaws' or not!

Take care 'cos we care, breaker break bye bye.

THE RUBBER BULLET

Dear Sir,

As a group of radio amateurs who are keen to see a legal CB service introduced in

this country, we would like to present a case for the new government proposed serviced on 27MHz FM. We realise that a lot of breakers have laid out their green stamps from AM equipment but, in the light of all the rubbish that has been talked about in recent months (by everyone) about AM and FM, we put forward the following facts about FM:

1) In spite of what you may read in the papers, a straight FM rig is no more expensive than a straight AM rig - FM rigs are being made by the Japanese and are already available - Look in the Tandy catalogue if you don't believe it!

2) FM does not cause as much TV or Hi-Fi interference as AM.

3) It is ideally suited to use in cars since it is much less affected by ignition interference.

4) The volume out of the speaker in a rig is constant for all signal strengths - when a breaker 100 yards down the road transmits you won't get your ears blown off!

5) The most important point - the FM "Capture effect" - means that when two or more breakers are transmitting on the same channel only the loudest one will be heard. This means there will be no more of the nasty whistles and squeaks which we hear at the moment on channel 14, also no more wall to wall spaghetti eaters! Also, people who think that the USA is a CB paradise - just like certain TV programmes make out - would do well to go there and listen for themselves.

Some of us have done and in towns, especially the bigger ones, the range of CB is very short, sometimes less than 1 mile, because of the thousands of breakers all transmitting creating a high noise level. It is certain this would happen here in Britain because of our high density of population so let's have FM and the advantages of (5) above.

As a footnote: we all find radio communication good fun (even when its legal!) and we wouldn't want to deny it to anyone. We all use 145 MHz FM and our rigs put out less than 1 watt but this can out range CB rigs with 100 watt burners. When you consider the present level of noise and interference on 27 MHz and think that CB is still illegal - what would happen if AM was legalised? Let us learn from the Americans mistakes and accept FM.

Yours faithfully,
G. WITHERS G4JVL, N. GENT G4HQU
A. BLACKWELL G8ZVN, S. REAP G84JM
M. PARKET GW8PXI, M. BROOKS G41WB
T. MATON G4GHU, P. HUTCHISON G8KAV

Congratulations to 'Yellow Peril' for going into the devils lair and coming out again, also to the good buddies who were there supporting her. While we've got good ladies and buddies who are prepared to stand their ground Hotel Oscar will never beat us.

If your arrest was made public by the media as quick as they do with the bad news you would have had a bit more support, 4 sure 4 sure. Keep making the trip good. Lady I would do the same, all the good numbers, 10-10 we gone, bye bye.

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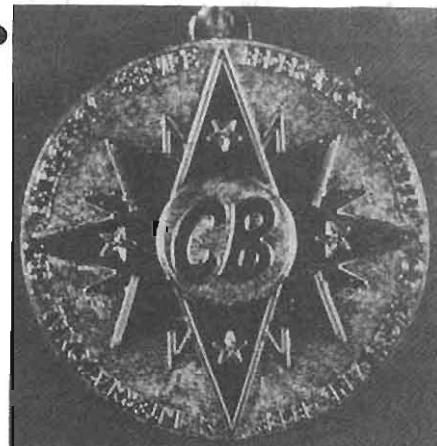


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The Law and You

Practical Advice on a home base visit!

Over the last year we have covered a considerable amount of information pertaining to Citizens Bands Radio and its illegal use. However whilst we have related the situation as it stands, the fact remains that few illegal CB's actually know how to act, what to check and what not to do when confronted with an official.

Hence many operators of illegal equipment have been charged and convicted of obstruction in instances where they could actually have succeeded in defeating the authorities. On such occasions the old cliche, of a little knowledge being worse than none at all probably applies.

As we have said before, knowledge of ones rights can be useful, if it is correct and applied properly. For this reason we have decided to change our coverage of the subject from relating the actual wording or interpretation there of, to the way in which you should apply the knowledge. This combined with what we have already printed in past issues on the Law will hopefully prevent unnecessary obstruction charges. Along with restraining the authorities in question, who as we have seen on many occasions in the past can often be somewhat over zealous!

Authorities? On your doorstep

Obviously the first practical advice we must offer you is not to install, connect or use a CB if you don't wish to break the law. Secondly a word of warning if you do, and find visitors on your doorstep. DON'T LET THEM IN! Without first checking that they are authorised to enter. Perhaps a useful hint would be to ensure the use of a door chain, thus one can verify their credentials without instantly allowing access.

Unfortunately there are many undesirables prepared to pose as officials in order to confiscate and re-sell equipment.

The important thing however is that if the visitors are genuine and possess a search warrant then you must assist them in every reasonable way, providing of course that either:-

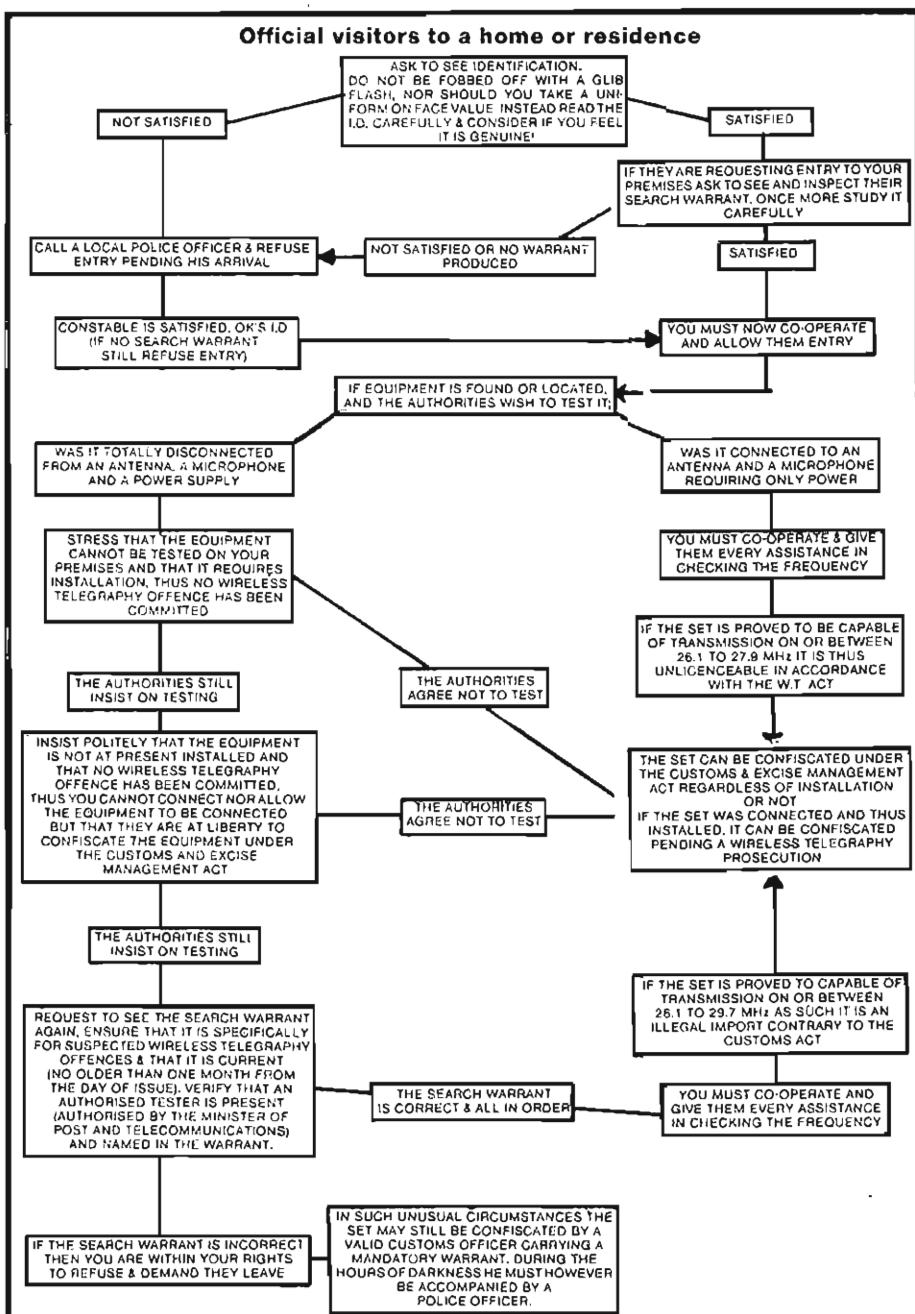
1) The search warrant is current (no older than one month from the day of issue) it is made out for suspected Wireless Telegraphy offences and must have the official presenting it named as well as your specific premises.

2) A Customs officer does not require a specific warrant as he will carry a mandatory search authorisation, however he

must be accompanied by a police officer during the hours of darkness.

When attempting to verify identification use your common sense and do not aggravate a situation unnecessarily, obstruction is an easy charge to incite. One

point worth thinking about in primary identification of supposed officials as their method of transport. Even the most enterprising conmen rarely arrive in a marked police vehicle and carry two-way police radios!



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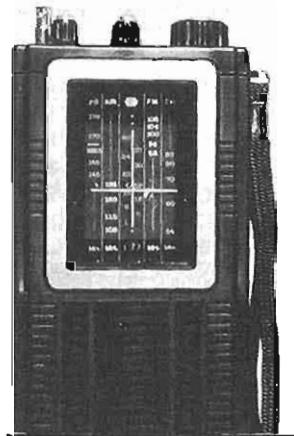
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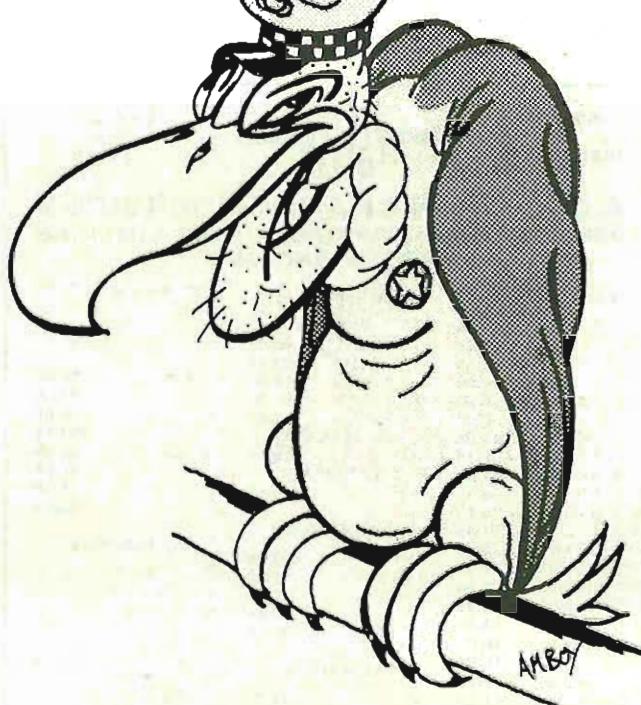
The following account of a recent bust was sent into us by Terry Ridgway (Crawler Lane). We are publishing this article just to serve as a warning to those of you who think you have to be on channel for ages before "they" catch up with you. Terry had been using his rig for just 15 days before he got nicked. Taking into consideration his fine and the cost of his equipment, it cost him £24 per day of his breaking life. At £1 an hour (including nights) he would now be far better off had he stuck to playing tiddley winks. I'll let Terry recount the rest of the gruesome details to you in his own words . . .

PCC

A Whole New World of CB

... My first rig was a G.E. straight 40 channel which I used as a base and mobile unit. I soon discovered that the 40 channel had become very busy at night so I also bought a Colt 444 (120 channel). The G.E. cost me £70, the Colt £95, and by the time I had got 3 antennas, an S.W.R. meter and a power supply I had spent nearly £200.

A whole new world was before me, a hobby I could use at home, in my car, and at work. I am a lorry driver earning average money which means I had to wait for my half yearly bonus before I could go on channel. The Colt became my home base which left the G.E. for mobile use.



On my way back home recently I was pulled in by a police motorcycle who informed me that my signals had been monitored by a Post Office detector van. As coincidence would have it I noticed I had been stopped exactly opposite the HM Customs & Excise Offices, Customs House Quay in Upper Thames Street.

The police officer demanded access to my cab so that he could look for the rig (and no doubt confiscate it at the same time). I asked to see his search warrant, to which he replied he didn't need one but not to worry the G.P.O. were on their way and they would carry out the search.

My Rig or My Lorry

When the Post Office eventually arrived their representative told me that he was going to confiscate my rig, once again I held my ground and told him that he didn't have the authority. The post office official summoned the help of 2 customs and excise officers from across the road who on arrival, gave me the option of either handing over my CB or having my lorry impounded. They made it clear that it would cost me in the region of £2000 to get the lorry back! Faced with this option and the fact that my company didn't know I was using my CB in their lorry, I had no alternative but to hand over my rig. They also confiscated my microphone, much to my annoyance.

I was taken to Customs House Quay where I was questioned about how long I had been on the air, which at the time had been 2 weeks, and as to whether or not I had any other CB equipment elsewhere. I told the Customs officials that I didn't have any other equipment, which was unnecessary because they searched my house and my car anyway and found my base station, plus another rig that I was looking after for a friend.

Withdrawal Symptoms

Back at the Customs and Excise office, I was charged with prohibited importation of a Citizens Band Radio under section 170 of the Customs and Excise management act of 1979, taken to the local police station to be granted bail, and to fix a date for my court appearance. My feet didn't touch the ground, I appeared in court at 10am the following morning at Mansion House, fined £50 for the rig in my lorry and £50 for each rig at home (£150) with all the equipment confiscated I had said goodbye to £350 in the course of just a few hours.

I am now suffering from severe withdrawal symptoms from CB and I suppose all I can do is wait until the Autumn when CB will be legal.

Terry's receipt for his expensive hobby.

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Come Back the Breaker

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Buzby's Excuse

A Nottingham Breaker has had a reply to a Q.S.L. card opened by the G.P.O. Buzby's excuse is that there was a lack of information on the address. So now 'Gemini' has packed up his rig and moved it, and is expecting a visit from Buzby with a search warrant.

Technically he cannot be 'busted' but it makes one wonder how many other Q.S.L. cards the G.P.O. have intercepted, with all the information they need on them, i.e. name, address, transmission times, etc. etc.

Thanks Wonderwoman

Dear Ed, would you through your magazine, express the very dear thanks of myself, my brother-in-law (Mr. P. Garbutt), his wife, my father-in-law and his wife of Shipley, W.Yorks, whose 8 year old son recently wandered out of a cub bring-and-buy sale along with his two pals, this caused a full-scale police search in the evening. My sister-in-law rang to tell us the news that our nephew was missing, the anguish shared by our family, I can't describe. However this ended in joy as all the youngsters were found safe and sound, tired, cold and hungry, by the local scoutmaster in Baildon, 5 miles away.

Thanks 1) Wonderwoman you're our heroine, your action after my phone call was fantastic. 5 mins after my call (G.P.O.) a breaker rang my mother-in-law to offer help of many friends (CB'ers) as it came the boy had just been found, what courage in the face of Buzby H.Q. pursuance. 2) The breaker who received Wonderwoman's call (GPO) and rang my mother-in-law with his offers of help, many many thanks from all our family.

I myself don't own a rig but will as soon as legal, once again many many thanks.

DAVE ROEBUCK

"Bridge that Gap"

Hi therel

All good buddies and lady breakers - The bridge Town is putting on what is hoped to be one of the biggest eyeballs seen up to now on July 19th 1981.

All the clubs in the area are attending and we would like to extend a welcome to all you out of town breakers. We are going to go across the bridge in convoy - from agreed marshalling areas (these will be advised to your club nearer the time of the meet) and back again and

then have a big eyeball afterwards. We hope you will join us to try and put C.B. really on the map and protest at the way existing CBers are being treated.

Please advise me as soon as possible how many of your good buddies/ladies are likely to attend so that arrangements can be made at this end. Refreshments, stalls and toilet facilities will be available and we are contacting the T.V. and press media to stay over after the Queen's visit to open the bridge on the 17th July to cover the eyeball.

We are keeping open a special breaking channel on the 19th July and are arranging marshalls up to 15 miles either side of Bridge Town to help you arrive safely and in good time. Please bring as many members as possible - all us CBers have to stick together!

This is the Sandbagger going down on the side and giving all you good buddies/ladies the high numbers so breaker break 'till we do it again.

STEVE TRAIN
Organising Secretary
Bridge That Gap Committee
172 Welwyn Park Avenue
Hull, North Humberside.

Thanks to the Midlands Breakers

On behalf of the parents of Philip and Andrew Sawyer, I would like to say a big thank you to everybody involved in the hunt for these missing children. They disappeared on Saturday afternoon (25th April 1981) while car cleaning and were eventually found Tuesday morning 6am touring the streets of Solihull, by a passing motorist who notified the police. I know many people used a lot of petrol, lost a lot of sleep, got freezing cold, ruined clothing, stayed away from work and more while trying to find these lads.

A big thank you to the base station that remained open all through the nights and days and although I don't wish to single anyone out I think a mention for 'The Chauffeur' who remained as cool as an ice cream on the base station is due, and also 'Green Goddess' who did a terrific job at her cafe with the truckers, who passed the message through the country via the slab.

The parents cannot say enough to thank everybody who was involved and did not realise how far some breakers came to help.

And last but not least a thank you to the police who were very helpful in relaying

possible sightings for us to check out (off the record) Cheers Lads.

Thanks a million again.

HAPPY HARRY (Andy Shears)

Thank You "Brooke Bonds"

A big thank you to "Brooke Bonds" from the Chapel en le frith 20. I was a wee bit lost on Saturday night 2nd May but your Ace directions landed me slap bang right on the doorstep at "The Beehive" in Combs.

Also a big thank you to all the Mike Charlie Operators for a super weekend.

GREEN FINGERS (MC 146) and
PLAYMATE (MC 147), Sunderland



CB Detector Van

Would you please reproduce in your magazine this picture of my van and inform all illegal breakers that is not a CB DF Van but just a private customised van belonging to me.

The bubble on the back is an astrodome from a World War II bomber and does not hide D.F. equipment.

I have been told that the van has almost been rolled and/or set alight 3 or 4 times. I do agree that it could give breakers a bit of a scare but the van was customised long before CB became popular.

10-10 till we do it again.

Keeping the shiny side up and the dirty side down hopefully.

HAWKEYE (Kent)



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Come Back The Breaker

Trade Show

A CB Mass Eyeball Trade Show is being held at The Pavilion Ballroom, Matlock Bath, Derbyshire on Sunday 26th July 1981, at 10am-5pm. Admission 50p at the door. Trade enquiries ring Bob Price on Matlock 2560.

Long Eaton and District Emergency Radio (L.E.A.D.E.R.)

Commencing the 1st of June there will be a 24 hour monitoring service in operation in our locality. This will be situated on channel 9 and will be run very strictly with regard to emergency procedure and also relaying information to the authorities where necessary. There will be three shifts in operation: 0600 - 1800 hours (manned by four or five housebound base station operators including my good friend Fagin who is disabled), 1800 - 2359 and 2359 - 0600 hours. Armed with maps, local information, a telephone and level head, it is hoped that the service will be successful in handling any type of emergency, requests for information etc. The service will be known as L.E.A.D.E.R., which stands for Long Eaton and District Emergency Radio.

Anybody interested in the Castle Club UK (Int) Radio group or maybe volunteering one night's services once every three or four weeks to the L.E.A.D.E.R. Group should please contact Pete Beilby on Long Eaton 63980 and any information will be gladly passed on.

PETE BEILBY, LIGHTHOUSE KEEPER
(1 UK 111) President LEBC
(Castle Breakers)

Rodeo — Skegness Stadium Marsh Lane, Orby

A rodeo is to take place at the above venue on 9th August 1981. This event is also intending to cater for CB enthusiasts. Hereward Breakers are taking all their members along and are holding an open invitation to any other clubs which are interested, to hold a mass 'eyeball' at this function. The stadium is also a stockcar track.

Information received from different parts of the country suggests that this looks like being one of the biggest ever rodeos staged in this country. We are hoping to attract something like 10,000 people to this event, television coverage is being negotiated at this moment. It is anticipated that over two hundred thousand pounds worth of CB accessories and in-car entertainment will be on sale, as well as the rodeo show itself.

For further information on the CB Eyeball please contact the treasurer of the Hereward Breakers Club: Mike Lowther, 20, Hanthorpe Road, Morton, Bourne, Lincs.

Scottish Eyeball '81

A committee of Sherwood Forest Breakers has been formed to organise a 'National Eyeball'. Although named Scottish Eyeball '81 a number of English clubs have been invited to the event, their support will be more than welcome on the day.

Not only is this a major show of strength in support of 27 MHz AM but also an opportunity for all CB'ers to make an impression on Britain and the government by donating all proceeds raised from this event to the Year of the Disabled, plus a few local charities who have helped with the organisation. The event will take place at Knockhill Race Track (Big K) nr. Dunfermline, on the 4th July, commencing 12 noon. The Directors of the Big K have graciously granted us this specific weekend to coincide with a Motor Racing Event (Cars) on Sunday 5th July. Any or all breakers are welcome to stop overnight, as facilities have been made available for camping, caravans, and parking. Entertainment for the weekend consists of:

SATURDAY 12 Noon, Beginning of Convoy arrivals, marshals will be in attendance at all times.

Available on Site: Side stalls, car accessory, CB accessories etc. Fun stalls, kiddies supervised fun area, mini bikes etc. Best dressed car parade round the track, which will be followed by a talk in support of 27 MHz AM. Press and T.V. has been invited. Local M.P.'s have been invited to air their views. Followed afterwards by a Baby Breakers Disco till 10 Bells and adult disco till 1 Bells, both free admission. Also on site the all important nose bags and barley pop tent.

Now the sore point, the price of admission is a whole 50p per adult and 25p per child. These charges are solely to cover the use of the Big K. The directors have in return agreed to donate a sizeable amount to the charities mentioned.

SUNDAY - Don't forget the Car racing event at the Big K admission £1.50 per adult, £1.00 per child.

Calling all Good Buddies

We are opening a new Eyeball, at Carriages Leisure Centre in Droylsden (20's code The Builders in Towel City). The aim of this meeting is a central Eyeball for breakers XYL's, Seatcovers and last but not least Beavers from all round, to ratchet with all the Good Buddies you have copied on the airwaves, in the pleasant surroundings of Carriages, with all the amenities at hand if required, which include 5 bars, 2 restaurants, Snack Bar and Dancing with the latest disco sound and lighting.

Brown bottles will be at Brown Bottle Shop prices on Eyeball nights and a grand raffle will be held.

So we hope to see you there on the night.

Until then its 10-10 breaker break we gone.

Due to licencing regulations strictly over 18's only.

Admission 50p inclusive of free special breaker car sticker.

Granite City CB Club

The Granite City CB Club Aberdeen, plan on trying to instigate a breaking or call-up channel change from the present channel 19 AM to the new breaking channel of 14 AM.

We propose to make this change effective at one minute past midnight on the 25th May 1981.

Channel 19 AM in our area will thereafter be known as the Hi-Way channel and we hope for it to be used only for travelling type information and also by truckers.

Your full co-operation with this exercise will hopefully mean a clean and well organised new breaking channel.

Thank you again for your help in this matter. See you all on channel 14.

RON HENTGES (WORLD TRAVELLER)
Chairman, Granite City CB Club

Australian Breaker

Dear Ed, I would like to put a breaker in from down under, Australia. I received one of your mags from my brother in the U.K. and found it very interesting. My club covers the whole of Australia. We can get a DX from Alice Springs which is 2,967 Kilometres from here, not a bad copy. I would very much like to hear our friends in the UK and have the chance of making the trip and having a talk with them. I would also like to make the contact by mail to one club who is not very far from my home when I was living in the UK. So if my P.O. Box number and call sign, Pioneer 132, could be passed on, I would be much obliged. The club is the Silly Breakers. Remembering that we are 9 hrs. different in our times I will be putting out a few DX calls between 3-5am our time on 12 Australian 27.155 to see if I can make the trip to some of the clubs over there, or you might find me on 18 Australian 27.225. This is the channel that the club uses all the time. Any breakers would always be welcome on our club Q.S.O.

Well I think that I have waffled on too much so I will give you all the good numbers, 73's, beers and cheers and respectable 88's to the YL'S. Hoping to hear some of you on the air soon.

CHRIS (PIONEER 132)
P.O. BOX 234, SYDNEY 2049
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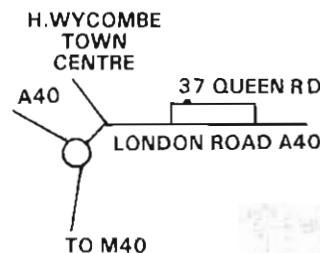
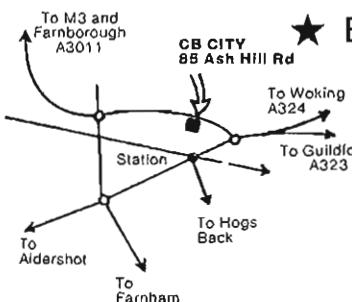
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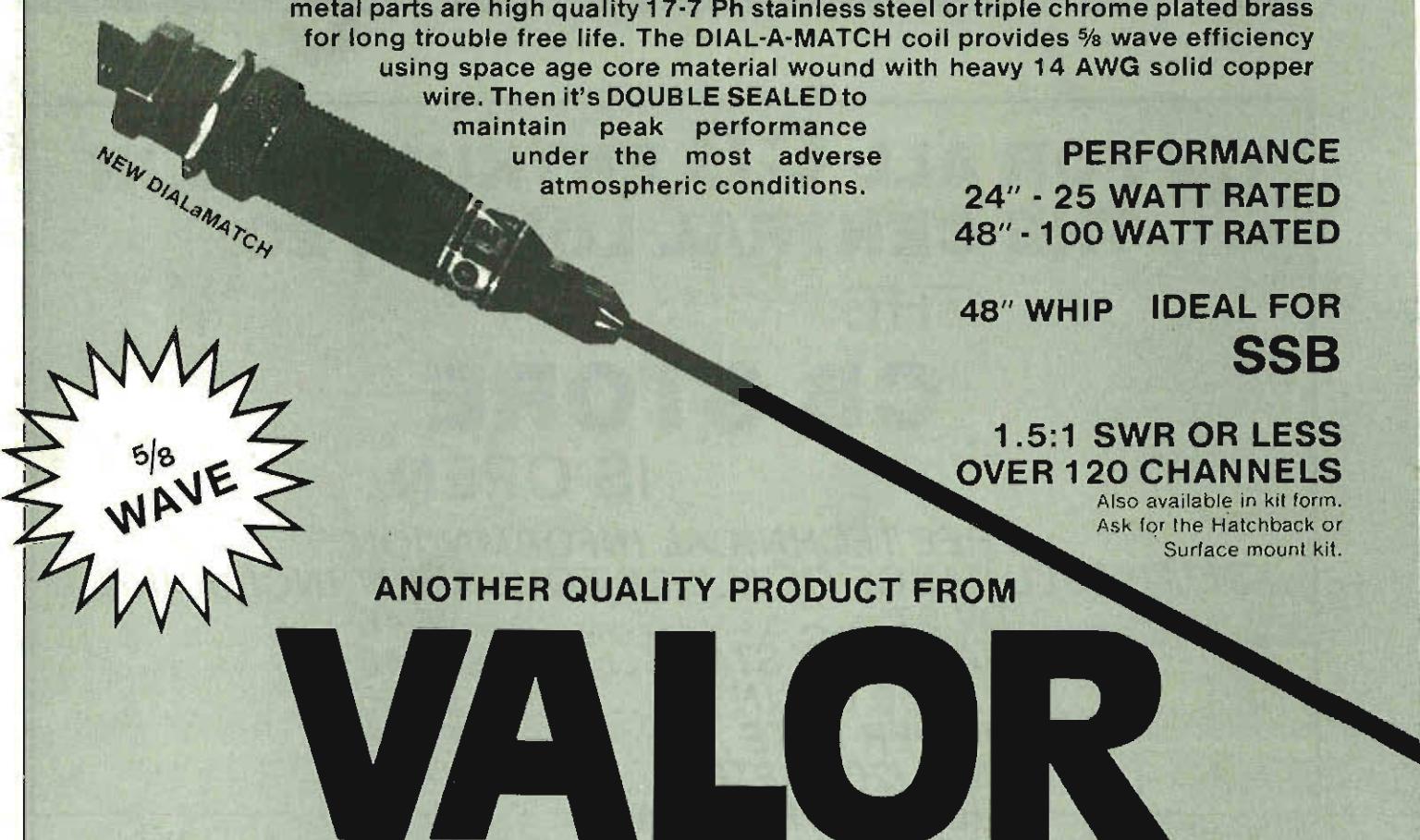
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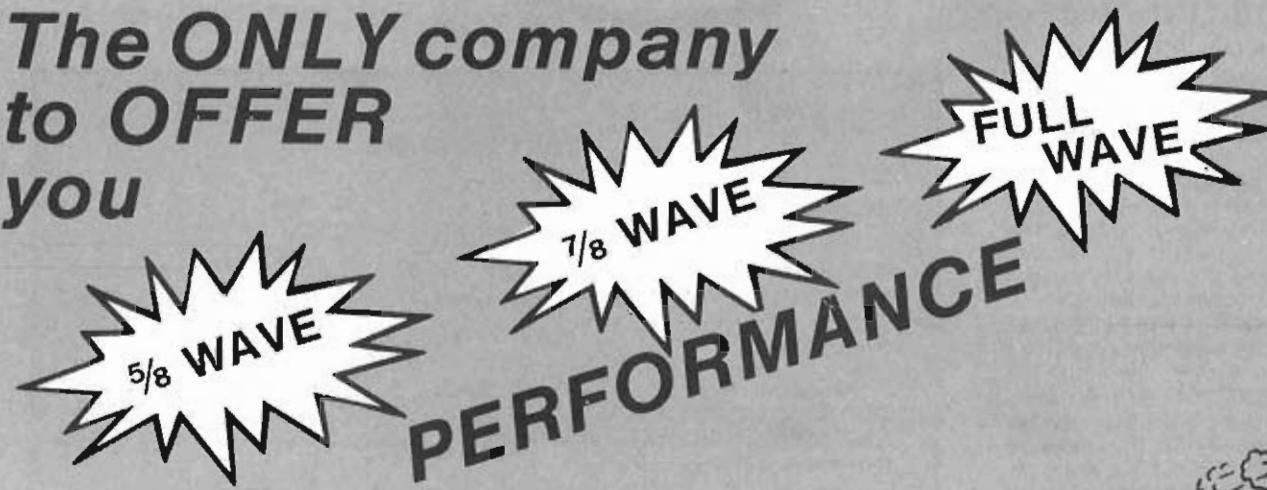
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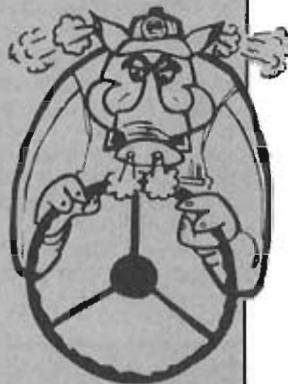
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Rig Test



Cobra 66 GTL (Dynascan Corp.)

The Cobra 66 GTL is a 40-channel AM two-piece mobile 12-13.8 VDC transceiver featuring "remote" operation of the main electronics. In place of the usual PTT microphone there is a "control head" that includes a speaker/microphone, and all operating controls. The operating controls are built into the sides of the microphone. On one side are: the PTT (press-to-talk switch); an up/down CHANNEL SELECTOR; and an INSTANT CHANNEL 9 on/off (selector) switch. (The CHANNEL 9 selector overrides the CHANNEL SELECTOR and instantly switches both the transmitter and receiver to channel 9.) On the opposite side of the control head are semi recessed controls for: OFF/ON VOLUME; SQUELCH; ANL on/off; and an RF GAIN switch. The front of the control head has an LED channel indicator and a TX/RX indicator that glows red when transmitting and green when receiving.

The control head connects to the main electronics cabinet through plug-in connectors. The cabinet measures 7.8"D x 5.5"H x 1.6"H. It is supplied with a

Test Results

Receiver:

Input sensitivity for 10-dB S+B/B	0.04 uV
Worse-case adjacent channel rejection	59 dB
AGC range for 80 dB input range	13 dB

Transmitter:

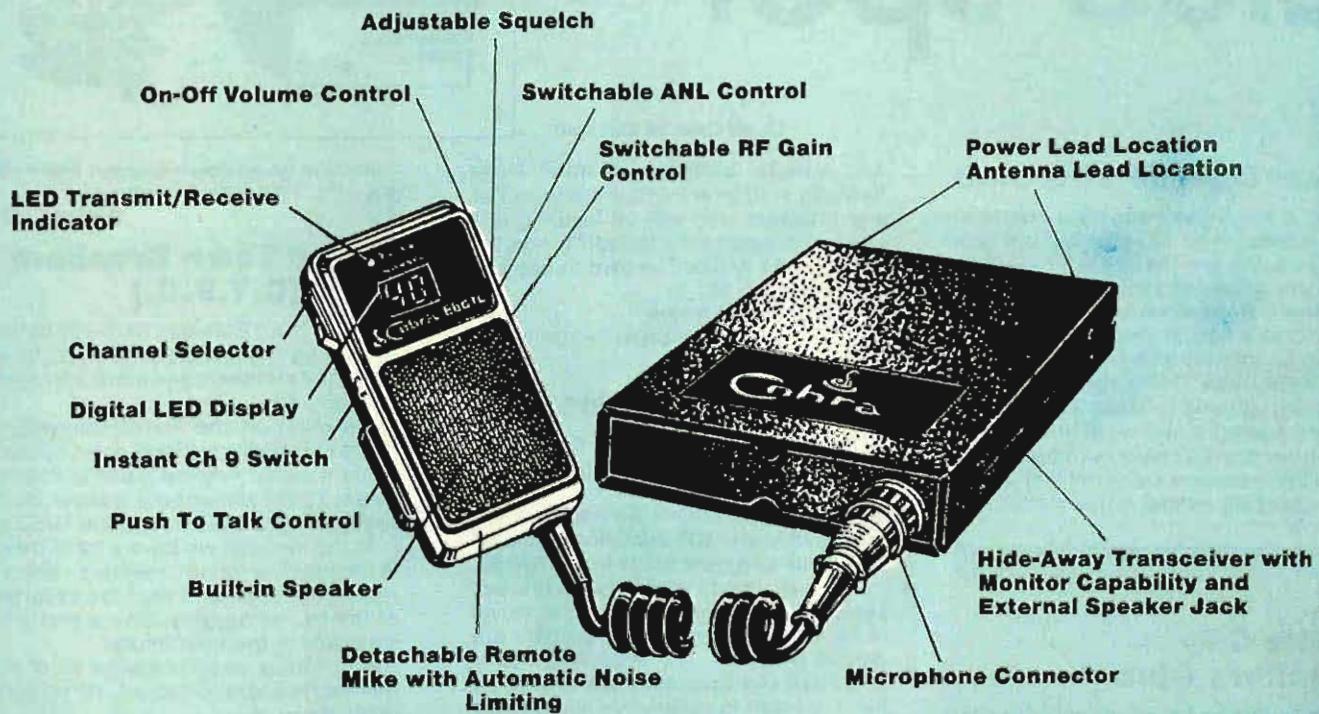
AF RF output/50 ohms	3.9 watts
Modulation capable of 85%	Yes
Relative sensitivity for 85% modulation	-31 dB
Modulation limited to 100%	Yes

(Note: Test results from signals synthesized to be the equivalent of those common to actual CB operations).

detachable U-bracket that is used to mount the cabinet under the dashboard if desired, or the cabinet can be con-

cealed under the seat or in the boot. In addition to the UHF antenna jack, a remote speaker jack, and the DC power





MANUFACTURERS SPECIFICATIONS

GENERAL

FCC: All transmitter and receiver specifications required by the FCC have been met or exceeded.

Dimensions: 1 5/8" (H) x 5 1/2" (W) x 7 13/16" (D).

Weight: 3.5 lbs.

Power Source: 13.8 VDC Nominal (positive or negative ground).

Frequency Range: 26.965 MHz to 27.405 MHz.

Semiconductors: 21 transistors, 1 FET, 27 diodes, 6 integrated circuits.

Microphone: Plug-in type, dynamic.

Antenna Connector: UHF, SO 239.

TRANSMITTER

Power Output: 4 watts, legal maximum.

Current Drain: AM full mode, 1.5A (maximum)

Modulation Frequency: 300 to 3000 Hz.

Output Protection: Output transistors protected against up to 20:1 mismatch.

Mike Cord Length: 3 ft.

RECEIVER

Sensitivity: Typical 0.5 microvolt for 10 db (S + N) / 1N.

Selectivity: 6 dB at 10 KHz.

IF Frequencies: Double conversion, 1st: 10.695 MHz; 2nd: 455 KHz.

AGC: Less than 10 dB change in audio output for inputs from 10 to 50,000 microvolts.

Adjacent Channel Rejection: 60 dB

Audio Output Power: 4 watts.

Image Rejection: 70 dB, typical.

Current Drain: Squelched, 275 MA; full audio output, 0.92 (nominal)

Power Output: 4 watts into external speaker.

connector, the cabinet also has an ACCESSORY OUTPUT jack for control of an optional accessory that enables the CB signals to be monitored through the vehicle's entertainment radio speaker(s). When a CB call is received the accessory automatically quietens the radio so only the CB is heard through the radio speaker(s). The radio's output is restored when the CB channel goes quiet.

Care must be taken when installing the remote cabinet to be certain it is secured to a metal earth. If the cabinet is insulated from the vehicle's body or frame — perhaps it is on the floor mat under the seat — a separate "ground" (earth) must be connected between the transceiver and the body. The unit is supplied with a 10' power cord that permits virtually any mounting location. The remote cabinet, however, must not be mounted under the hood — in the engine compartment — nor should it be positioned in the direct air flow of the vehicle's heater.

For extra-long separation between the control head and the remote cabinet optional 6' and 18' extension cables are provided by the manufacturer, though they might not be stocked by the distributor.

Herb Friedman N. Y.

NEXT MONTH
The Rig Review
will be on a
very popular
American named
REALISTIC

Club Spot

Oscar Charlie SSB Club

Just a small line begging a corner in your magazine to make known our new SSB club. We are the OSCAR CHARLIE Club and we are starting to get a grip on the South Beds area. We were formed two months ago in order to give local DX'ers an identity and save them being lost in the Delta Tango clan.

We are working to make a good club, despite having a bad typist (me), and a plug from you will help our copies and show the members we're not just sitting back counting all that luvley money.

Yours

OC004 MONGOOSE ONE
Treasurer & PR

Bottle City Breakers Club

I am writing on behalf of the Bottle City Breakers Club. We have 200+ members with more joining every week. We also have a Junior Club which has been formed.

Each month we have a newsletter to let members know what has been happening over the past month.

During February, the committee organised a treasure hunt which was attended by 64 members on 16 skateboards, even though it was raining. It was a good turn out with everyone finishing the course bar one who ran out of petrol a metre from the end.

We have regular meetings, once a week, and would welcome any new members wishing to join. If anyone wishes to join, they may contact any breaker of this club.

On April 10th we had a night in which breakers brought Easter eggs as admission, in aid of local childrens homes. On Easter Sunday, we arranged a convoy to take out the eggs personally to the homes. There was a few eggs over, so we took them to the childrens ward at the local blood bank. So I'll say 10-10 till we do it again.

Breaker-break we gone.

The Handbreak Club (Peterborough)

We have been going since September 1980 and have to date 111 members. Some of our activities include eyeballs, rabbit hunts and we are planning some Bar-B-Ques in the summer.

I am the chairman and any correspondence should go to David Bull, 134, Cromwell Road, Peterborough, Cambs. DAVID BULL (Chairman)

Surf-City Breakers

We are the Surf City Breakers which has been formed for about twelve months

and steadily growing, we meet every fortnight at different 20's in the area. For any breakers who will be heading this way in the summer for the surf 'n' sun, we break on 14 and will be glad to see and hear from you all.

All the high numbers.

THE COMMISSIONER (Cornwall)

Kettering Breakers Club

OK, we own up! Yes, we have been here all the time. Kettering Breakers Club was formed on 21.5.80, with a membership of approx. 30 breakers. We now have nearly 400 operating members in the club and ages range from 16 to 60.

The club meets regularly on the last Monday of every month at the Royal Hotel Kettering and new members are always welcome. The eyeball is mainly social but the committee are always on hand to listen to complaints and discuss any problems that are brought to their notice.

We provide free food at each monthly meeting and have on sale the club magazine 'Hash' which contains details of forthcoming events, cartoons, puzzles and numerous articles on CB. Also an assortment of patches and badges are usually on sale.

The club organises plenty of social events including a monthly disco at the local nightclub, car rallies, club runs to custom shows and of course we are organising coaches to take clan members to 10-4 Day in London.

We break channel in the kilo town on 14, if you're passing drop down anytime for a copy.

10-10 catch you again.

PINSTRIPES (Chairman K.B.C.)

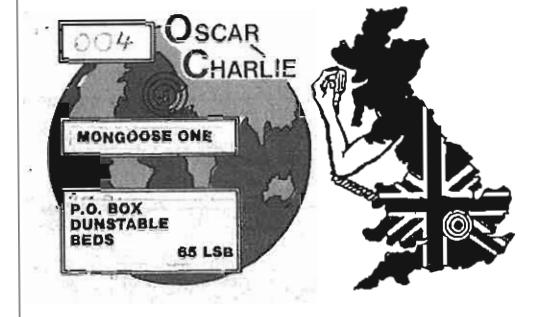
Hasting Breakers

Hi Good Buddies. We're a fast growing club of about 130 members. We meet at the Carlise, (situated on Hastings sea-front) the meetings are every second Sunday and they start about 8.00pm. We are always pleased to see visiting breakers, and new members to the club.

We are a club that has the support of our local MP, and we get plenty of coverage in our local paper. We also have our own solicitor.

We first formed the club around October since then we have had a Breaker's 'Party' on New Years Eve, this went well, we hope to have another very soon. On 1st February we had our first CB foxhunt, this also went well, but we were a little disappointed at the amount of Breakers that turned up, we would have liked to have seen more there, we are in the process of organising the second of these now.

Well now you know we exist do try and make the trip to one of our meetings.



Well I'm going down now so I'll give you the 88's. 10-10 Breaker Break.

DAISY DUKE

Corby Town Breakers Club (C.T.B.C.)

Corby Town Breakers Club was formed at the beginning of December. So far we have 316 members and more are joining us every day.

We meet on the first Wednesday of every month, but we have open eyeballs twice a week. Anyone passing through (Steel Town) just put out a shout on 19 and you'll get one of our good buddies.

At the moment we have a lot of things in the pipeline for our breakers - disco's, rallies, film show and all of the usual sort of things, we hope to have a pretty full schedule in the near future.

Well I must dash breakers all of the golden numbers to you all. 10-10 we're down we're gone.

WHITE KNIGHT C.T.C.C.

The Ponderossa Breaker Club

The Ponderosa Breaker club was formed on the 20.1.81. At the moment we have 70 members including Junior members. We will be limiting membership to 100 members. The club meets every Tuesday at 7.30 p.m. at the Burnside Cafe Harthill to discuss the latest news on the CB front.

10-10 Bye Bye.

LITTLE FRED (Secretary)

Burns Breakers Club

The B.B.C. was formed only a short while ago and we have already more than 100 breakers. Anyone passing through, the hospital paging system is on channel 2, so please keep clear. Don't go below 5.

Breaker Break.

CHASER (Chairman) KITTEN (Secretary)
ANDY PANDY (Vice-Chairman)
TERMITE (Treasurer)

North London Breakers Association

North London Breakers Association, affiliated to the U.B.A. The club has been running for about six months and has now over seven hundred members.

The club meets every Wednesday evening at the Sparrow Hawk (Pub), Glorgall Road, Edgware.

At these meetings approximately two hundred members assemble, to socialise, hear club and general news, buy raffle tickets and generally enjoy themselves.

We hope to see many more members in the near future.

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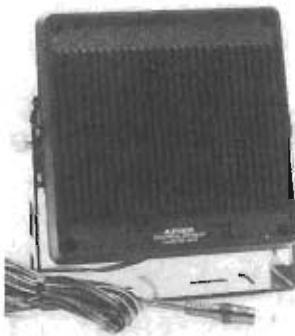
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Club Spot

Concrete City Breakers

Geordie Breakers are alive and strong! Hi, just thought I'd write a few lines to introduce all the good buddies and breakers up here in Newcastle upon Tyne.

Concrete City Breakers are situated a few miles north-east of Newcastle city centre and meet every other Wednesday night at the "Station Hotel" Killingworth.

Our membership is approaching 160 and at the moment we're working for a local charity.

So far nearly £300 has been raised and by the time this is in print the figure will be £500. Everyone's welcome to club meets and social nights, outings, etc.

Spiretown Breakers

The story of "Spiretown Breakers" is like most other CB clubs, one of continuing success. From a modest start, some 14 or so weeks ago, we have had to alter our 'eyeball' no less than three times (due to overcrowding) and our membership now stands at over 300.

During this period several successful social events have been held including disco's, fancy dress parties and visits to CB fairs and 'eyeballs' at Trowell and Lincoln. Members have also enthusiastically supported the pro-CB rallies in

various parts of the country. Future events scheduled include a mass eyeball with our 'good buddies' in Steel City (Sheffield) and a joint 'breakers' disco at Doncaster. Our very own 'Miss CB' contest is now being run, and a lot of very pretty 'beavers' have entered!

Our work for local charities continues, and recently saw the presentation to the local childrens home, of a music centre, and cassette recorders, purchased by funds raised by Spiretown Breakers and further efforts are underway, to add to the charity fund. We even have one young lady who is unfortunately paralysed from the neck down, and our technical wizards have adapted a page turning machine, used by the mouth to operate her home based rig! She now reaches parts that other therapy cannot reach! Our chairman 'Dusty Bin' and his hard working committee, have fixed our very own CB Fair and eyeball at the Shoulder of Mutton, Hardstoft Near Chesterfield,

The committee incidentally would be pleased to hear from other breakers clubs in the area, with a view to meeting for an interchange of ideas, suggestions, policies etc. and we extend a warm welcome to unattached breakers in the Spiretown area, to join us, at our regular weekly meeting at the Hollingwood Hotel, on the A619 out of Spiretown.

Amalgamated Breakers Club

Amalgamated Breakers Club, all enquiries to: Mrs. Brenda Gruneklee, 78, Bedford Road, Birkdale, Southport, Lancashire. The A.B.C. members meet on Thursday once a fortnight.

We are a CB supporters club and we take great interest in the social side, disco nights etc. We have plans to hold a Breakers 'It's a Knockout' competition, with such events as Crisp eating, tug of war, arm wrestling, etc.

Stay Lucky.

MAD DOG (A.B.C.)

Didcot and District 27 Club

We started up towards the end of last year and our membership is already nearing 300. We hold an eyeball on the first Sunday of every month, which includes a good raffle, disco and plenty to drink. Visitors are very welcome from other clubs, if they would like to drop in on us, just put out for a copy on 19 in the Didcot 20 and someone will put them right. We start around 8pm. Please bring your own club card.

All the high numbers, breaker break.

LADYBIRD & DUCHESS

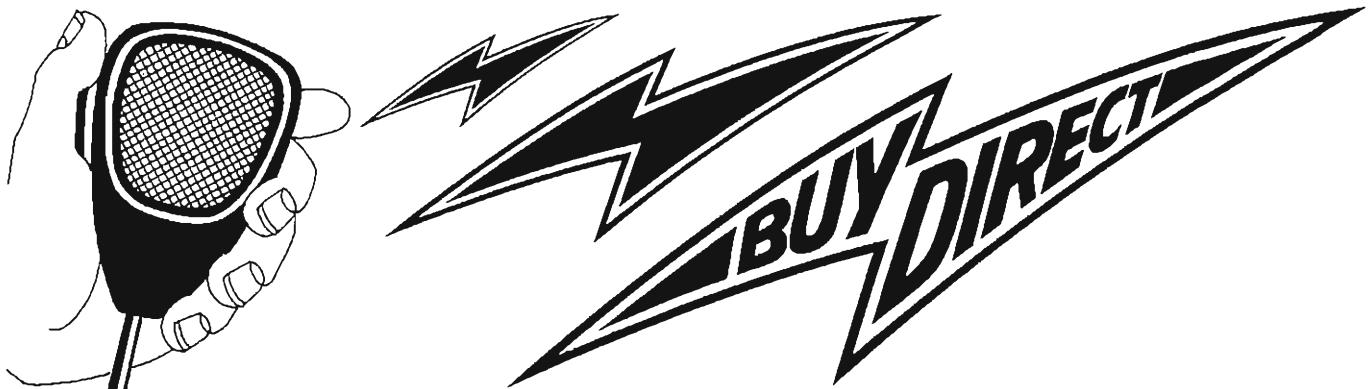
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Connexions

Round Up

Pick out the policemen!

Members of Gwent Breaker Club gave up their spare time to act as marshals for a charity sponsored walk with a difference. The people doing the walking were members of Gwent Constabulary, who were full of praise for the local breakers. A motorcycle patrolman acting as unofficial spokesman said "these boys were fantastic. They've been so much help". CB was of valuable help during the event as the position of each walker was known at all times and the timing of the preparation of refreshments could be judged exactly.

Gwent Breakers were invited to the presentation ceremony of the cheque which will be used to purchase an electric wheelchair for a little local girl who has Spina Bifida.

Citizens Band Information Centre

Bill Ridgeway began the CBIC in July of last year and is completely independent of any other CB organisation. Although it has operated mainly as an information service to clubs its services are available to anyone interested in CB, and if Bill does not have the information to hand he will search it out.

CBIC has collated a national register

Round Up



Pick out the policemen! Members

of Citizens Bands organisations in the United Kingdom which includes contacts for several hundred clubs and national CB organisations.

The centre is non profit making and its services are free. However Bill is greatly appreciative of any donation to help with the upkeep of his service. If you would like some advice or would like to add your club to the register contact Bill Ridgeway, Citizens Band Information Centre, 7 Sandringham Crescent, Harrow, Middlesex. HA2 9BW. Tel: 01-422 7570.

Practical help from React

Douglas Muir, South East Area Co-ordinator for REACT UK has written to us informing us of a First Aid scheme that will be sponsored by REACT.

Although REACT members offer valuable assistance at the scene and behind the scenes of accidents they can only offer to contact emergency services and help organise the area of the accident. More practical assistance might often be required and this can sometimes consist of knowing when to leave injured people until more qualified help arrives. With this in mind the mobile emergency aid unit was born.

The MEAU will consist of qualified First Aiders who are registered with REACT. They will be on hand either to help if directly involved at the scene of an accident or to be called out in the case of a severe emergency. Monitor Base Stations will also have a list of these members so they can be directed to incidents near at hand.

As with anything connected with REACT the MEAU will be stringently run to make sure that members are well qualified and competent to act in an emergency. Officers should already hold a valid First Aid Certificate. They certainly need all the support they can get for this admirable project, so if you are interested contact: D.J. Muir, S.E. Area Co-ordinator, REACT UK, 190 Blythway, Welwyn Garden City, Herts. AL7 1DU.

Whilst on the subject of REACT, their latest press release indicates the huge amount of work that has been going on to get ready for "Legislation" Day. To help plan for this the government has granted REACT a special experimental licence to test 27 MHz FM equipment. They are not publishing any opinions or results yet of their findings either favourable or otherwise. Still they plan to have a monitoring system, up and running within 48 hours of legalisation so they must be confident!

Sad Obituary

We have the sad duty to report to you the untimely death of Ivan Francis, aged 58, Emergency Services Advisory Director of REACT U.K.

Ivan, who was disabled and lived alone, died during the weekend of 30th May/1st June. Death was due to natural causes and Ivan had been suffering from a number of illnesses for quite some time. Ivans work, of helping to establish REACT UK has been described as total involvement. Before starting work on REACT UK, Ivan had worked as an emergency monitor in Canada for a number of years and this experience, combined with his never ending enthusiasm, served to put REACT UK on the strong footing it now enjoys.

Mr. Victor Bull, press officer for REACT assured us that without Ivans inspiration and plain hard work, REACT UK would not be ready to start monitoring CB frequencies when legislation finally comes

Round Up

Half a Bearded Wonder

Also on a charitable note the Colnebrook Breakers Association have raised £300 towards a foetal heart monitoring unit for the Royal Canadian Red Cross Hospital at Taplow. The money was raised by raffles, club events and a brave local breaker who shaved off half his beard and wandered around for a week extracting money from fellow breakers who commented on his appearance!

C.B.A. had the added benefit of handing over the money to three nurses from the hospital who attended a presentation at the club.



35 Years On!

"Some relaxation in the Post Master Generals attitude towards the use of radio for communication purposes is foreshadowed by the reply to a recent enquiry at the G.P.O. regarding the use of walkie-talkie sets to control crowds at sports meetings. It is understood the Post Master General will issue a licence for radio communication between two points in exceptional circumstances and is considering extending the facility to other users.

An official of the G.P.O. states that very high frequencies "above 25MC/S" will be allocated for any such service".

You have probably caught on by the title and references to the Post Master General that this isn't a recent clipping. How about 35 years old? 35 years to extend the facility to other users . . . above 25MC/S (also known as MHz). It's fast moving times we live in . . .

Thanks to Wireless World, July 1946, for the clipping.

through in the Autumn. Although Ivan would never accept operating REACT on any illegal frequency he always acknowledged the fact that without the illegal breakers, there would never be legal CB in the United Kingdom.

Now REACT will go on, due mainly to Ivans work, and is ready to start monitoring stations in every part of the country. They will be monitoring on channel 9, 7 days a week, 24 hours a day for all emergencies.

We wish them every success and would like to express our condolences at their great loss.

Round Up

1st National Jamboree

Friday afternoon the 8th May saw your Intrepid CB Radio Magazine reporters and respective spouses en route for Oggie Land (otherwise known as Perranporth, Cornwall).

The enterprising Twenty-one Club of Newquay had arranged the 1st National Jamboree at Perran Sands Holiday Camp with the co-operation of the owners Ladbrokes. They had organised a busy weekend of events and entertainments including games, championships, discos, cabaret, treasure hunt and trade fair. The chalets were let for the weekend at a very competitive rate and attendance peaked at over a thousand for some events.

The weekend kicked off with a welcome party and disco on Friday evening with a raffle for a rig included in the evenings entertainment.

Breakers were obviously happy to be away for the weekend and had settled themselves in - so much so that breakers could be seen on chalet roofs putting up base antennas. Long after the disco had finished faint cries of 'eyeball-eyeball' could be heard far into the night.

Saturday started off with a treasure hunt, moved on to an indoor games tournament, lunchtime disco and anyone with any energy left went to a film discussion meeting given by REACT in the afternoon. After a brief rest it started all over again with a Caribbean Carnival with cabaret and dancing.

Sunday morning started a bit more sedately with a Trade Fair and the finals of the Indoor game tournaments. From here the lunchtime extravaganza started which led into the presentation of prizes and "farewell breakers".

The whole weekend was extremely well organised and very enjoyable. The Twenty One Club are hoping to do a repeat next year and their success will surely go before them and ensure an even greater success.



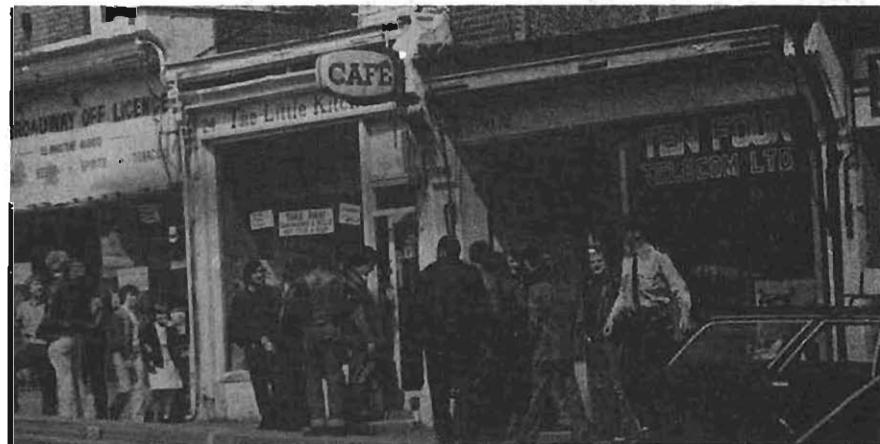
Round Up

Close encounters of the Customs Kind

Dawn on Saturday the 2nd of May saw six burly Customs Officers force entry into the Ten-Four Telecom CB shop in Maidstone.

The raid followed information the police and the GPO had extracted from a local breaker, they evidently managed to convince the CB'er to reveal the source of his transceiver, which led the customs to Ten Four Telecom Ltd.

The raid was skilfully carried out and whilst three officers were interviewing



A few of our supporting dub members here to offer moral support. (Yours truly is second left of the smokey).

A lesson for the Hams?

Boy Wonder from Forth Valley Breakers Club sent us a reprint from a well known Amateur Radio magazine. He suggests Timothy Raison should take note - we'll go along with that!

"Dear Sir

When things are dead on 28 MHz I often tune down that odd one meg to 27MHz and my mind boggles.

Why does the small chance in frequency bring forth such enthusiasm and organisation? I am sure that at anyone time in the UK there are more "good buddies" using that bit of the spectrum than all the amateurs on 160-10 metres put together.

Perhaps we would get more fun from amateur radio if we dropped the next licence renewal fee demand down the nearest drain! Or is it simply that the 27MHz operators are the new breed of radio amateurs and we, the "come day, go day operate on Sundays" types should take our Tony Hancock image and quietly tip toe away. We could of course, actually use that "dead" 28MHz band".

Well, are breakers enthusiastic and organised? Most of the news in this feature prove that they are, and that their reputation as unconsiderate law-breakers is undeserved. Letchworth and District Breakers Club are a good case in point.

Worried that there had been so many complaints locally, they sent letters to the local papers asking anyone who was suffering from this problem to contact

Round Up

Mr Luck the other three took down the registration numbers and details of vehicles parked in the vicinity suspected of having transceivers fitted.

In all seven transceivers were seized along with books and paper work from Mr Luck's home, the officers evidently left the shop sooner than planned as crowds of CB'ers began to gather in protest! Another factor that was plainly made clear to me was that the customs objected to my presence as a reporter, they demanded that I expose the film, naturally I refused.

Wombat area reporter, Kent.

them on a special phone number giving full details. They were very pleased with the response and were able to cure all interference complaints that were 100% CB caused. Only three cases were unsolvable as CB was not causing the problem but they were able to identify the source to help the victims find a solution.

So perhaps the Tony Hancocks of the amateur world could learn a lesson from their illegal counterparts.

Holland Gets 40 Channels FM

The Dutch Secretary of State, Mr. Nelle Smit-Kroes has just announced that Holland is to get a new CB deal. Instead of their existing 22 channels 27MHz FM at an output of 0.5 watt, Dutch breakers will have a 40 channel facility on 27MHz FM with a 2 watt output. This new argument should be finalised and in operation by October or November of this year.

Mr. Smit-Kroes has also proposed a new 80 channel Citizens Band on 928-930MHz with a 25 watts output. Details of this new wavelength have still to be finalised.

MORE ROUNDUP.....
NEXT MONTH

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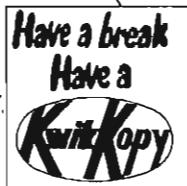
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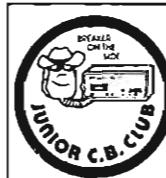
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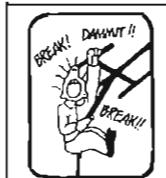
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AM on the Continent

A practical test of 27 AM on holiday

With the holiday season now upon us, those who haven't discovered vodka and booked an exotic holiday in a far away place may just consider crossing a small stretch of water known as the channel in their own quest for the sun. British motorists have recently taken more and more to the continental driving holiday and now with the upsurge of Citizens Band Raido, many of those continental travellers will be CB'ers.

For the ardent enthusiast intending to drive through Europe there are many problems inherent with taking a transceiver abroad. Not least of which is the possible loss of the equipment at the Customs on re-entry into Britain. Then apart from the obvious language barrier, the question of the AM FM mode arises. Our British bureaucracy would have its citizens believe that FM is the only system in use throughout Europe.

In order to experience AM use first-hand on the continent we took a Hy Gain II basic 40 channel American 27 AM transceiver on our travels . . .

Bonjour Francais

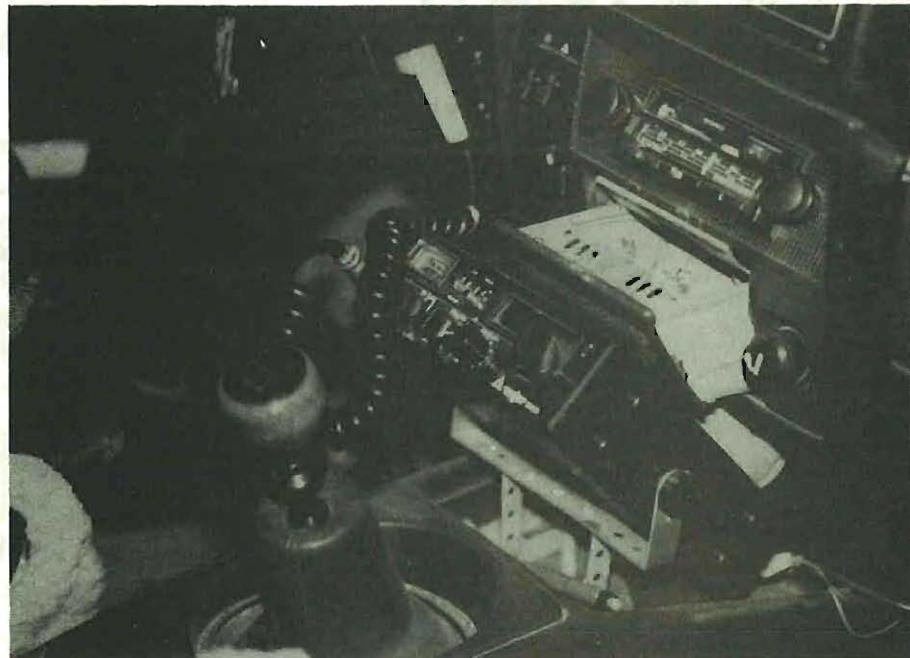
Arriving at a customs post, even outward bound, with a four foot jet black Firestik can be a bit like waving a red flag at a bull. So our driver waited until we had cleared the post, and sat in the queue on that short stretch of no-mans land between the customs and the ferry. Technically we had left England and although still within her jurisdiction our driver decided to make the most of the sense of security now instilled by our imminent departure.

Once out of the ferry and on French soil the rig was turned on and everyone remarked on the crowded airwaves, especially as it was now well after one in the morning. Even before we cleared 'Duane' we had picked up a French breaker and although we had started the conversation in French it soon became apparent that he was used to DX'ing and wanted to use his English.

This we found was quite normal and it was not long before we felt guilty that our French was nowhere near as good as their English. It is also worth noting that mobile operators use the Q code not the ten code.

Munchen

The first really practical test for CB came when we had managed to lose



ourselves in the middle of Munich. Now we don't claim to be linguists and for the purpose of this experiment we didn't intend to break into fluent German even if Phil our driver was Austrian. So in what must have been diabolical German we went out on one four "Est darein Englais sprechen mit canal?" Perfect English came back informing us that there was and then proceeded to put us on the right road.

We also discovered that the breaking channels for Germany are one five and zero nine respectively.

Skiing in Austria

Purely to give our trip a bit of realism we had actually chosen to go on a genuine one week holiday skiing at Zell am Ziller. Well okay! I will admit it, the truth is that we were going on the one weeks holiday anyhow and the rig was because I and the driver are into CB. The other two passengers were both anti CB. In fact one of them, who will remain nameless, has good reason to be, he works for HMG.

Either way Phil and I actually took quite a bit of stick from our two anti CB'ers. I am sure many of you can imagine the comments when we produced two walkie talkies and trekked off through



the snow in different directions to try them out.

Actually despite our readiness to save the day with the walkies, their only practical use turned out to be locating which bar the other two were at when we were split up. This was slightly useful although I think not quite as much fun as a drink in each wrong bar, until stoned out of ones mind the correct bar is located.

The return trip

Having left Zell am Ziller in the morning we were now travelling in daylight and had more time to notice our surroundings and in particular use of the CB.

Phil showed off his German and chatted to a few local CB'ers, evidently Austrian transceivers have to be registered to an owner with the local police.

In the area we visited, CB's use was not extensive and the main operators were the four companies whose reps often contacted arriving coaches or their hotel from ski slopes.

Leaving Austria we entered Germany and took stock of the abundance of black helically wound DX 27 type antennas. Germany as you may know has legal CB on 27 FM, 22 channels with only half a watt output. Thus one could easily understand the need for such large antennas



A Belgium CB'er repairs our vehicle in the fog

which were invariably mounted on the roof. Also a pure FM system by rights should be unable to communicate on our AM set.

However we soon proved that the FM reception on our set was practically nil and we struck up a conversation with a passing VW Golf. The driver's English was once again excellent and he informed us that although this set was a legal FM he was picking us up quite alright. Perhaps this proves that some of the older American equipment such as Hy Gain II is not truly 100% AM.

As night fell we were approaching the last leg of our journey and the Belgium border.

The real pea souper

Flanders field once besieged by two opposing armies in World War One, was now under assault from a silent cloud of thick fog. With visibility at only three or four yards our speed was now reduced to a mere crawl. It was whilst negotiating a junction that we noted the fog being added to by our vehicle's engine. Stopping, we opened the bonnet and released clouds of steam into the night, the water pump belt had broken and the vehicle, a Renault 17 had overheated.

Imagine if you will, one disabled car

with four tired occupants all stuck in a cold pea souper of a fog. Captain Mannerling would have been proud of the don't panic, don't panic cry that arose. Phil began to unpack the boot and extract the spare belt and a flash light and we all breathed a sigh of relief.

Unfortunately the relief was somewhat premature as we discovered the lack of tools, and it suddenly dawned on us that we had the spare part but no means of fitting it. Many of you would now expect us to reach for the mike and have help winging its way to us, not so, for instead we flagged down a passing vehicle and in pigeon French asked for a spanner. The two young ladies were reluctant to get out of their Volkswagen and unable to offer any assistance. However they did write down the details of our vehicle and promised to contact the nearest garage, informing them of our AA five star coverage.

Four pairs of eyes stared through the fog as the VWS engine noise faded. One or two complimentary remarks were made about the driver and her passenger then silence fell, all that we could hear was the distant rumbling of a train.

I was aware of the CB fitted under the dash board but was reluctant to prove how worthless it was. Now the barracking started from our two anti CB'ers and amid remarks of 'useless toys' and 'call

Max's Escort - the fog hides an array of antennas

yourself a breaker'. I picked up the microphone, it was now around two fifteen in the morning and I doubted if anyone would hear let alone answer. I began to ask if there was an English speaking station listening.

Belgium to the rescue

After my third plea for assistance I damn near dropped the mike with disbelief as an English speaking station acknowledged me. The station identified himself as Max and requested my location. Without going into vast detailed conversations the outcome was that Max and his companions were very heavily into DX'ing, we had come across channel with our emergency call whilst they were returning from a party. Max had answered us, dropped his friend off to change and pick up a tool box and then made for our location.

Within half an hour Max and his lady wife had arrived and his friend coach driver was repairing our vehicle. Max was truly a dedicated CB'er, his vehicle bristled with antennas and he was running two American rigs. I asked about the legal CB and he said "we are allowed AM but only low power, nobody uses it, all it has done is take the pressure off the one who uses American equipment".

The fog was still just as thick when our vehicle was ready and working so Max, having refused any reward for his assistance led us to the correct turning that would lead us straight to Calais.

Conclusion

Regardless of what one hears of FM and its use abroad, AM operation is rife and it can assist the holiday maker. The British government is not alone in trying to stop AM use, throughout Europe, American AM equipment is in abundant use.

Finally, should you possess an illegal 27 transceiver and be considering use abroad it should be noted that it would still be illegal. Furthermore, when re-entering Britain the equipment could be seized by our Customs. However if one could convince them that no prior knowledge of such an offence existed, you may persuade the Customs to allow re-export to the country you have just left. This was a regular occurrence but more recently has been disallowed by the C & E.

From our practical test one thing is apparent that illegal AM use is not just a British problem, perhaps there should be a European UBA?

JOH



By using a CB, ski races can be timed accurately (Zell am Ziller, Austria).

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SAT 3

Evening 29th August, 7.30 p.m. Compere: Brian Savin (BRMB Radio). **POACHER**, Ken Harris & The Pleyleys, The Duffy Brothers, Hickory Lake, Terry Edwards & Jerry West, Jenny Speller, A.G. & Kate (Holland), Helen West & Sweet Country, 'Sarah'.

SUN 4

Afternoon 30th August, 2.00 p.m. Compere: Wally Whyton (B.B.C. Radio). **RAY LYNHAM & THE HILLBILLIES** (Ireland), Kenny Johnson & Northwind, Ricky Velence, Jon Derek's Country Fever, Slim Pickins, Tony Goodacre, Delta Dawn Country Band, Sean & Hayley.

SUN 5

Evening 30th August, 7.30 p.m. Compere: Wally Whyton (B.B.C. Radio). **LONNIE DONEGAN**, Jimmy Payne (U.S.A.), The Muskats, Roger Humphries Band, Brian Golbey, Santa Fe, Johnny Joyce & Paul Brett, Snuffy Garrett, Cascade.

MON 6

Afternoon 31st August, 2.00 p.m. Compares: Dougie King & Terry McKenna (Hereford Radio). **TRUCKSTOP** (Germany), Claire Courtney (U.S.A.), Telephone Bill & The Smooth Operators, Shag Connors & The Carrott Crunchers, City Limits, Carey Duncan & Front Page, Sters & Bars, Rye Whiskey Road Band, Yvonne & Norman Champion.

MON 7

Evening 31st August, 7.00 p.m. Compares: Terry McKenna & Dougie King (Hereford Radio). **PHILOMENA BEGLEY** (Ireland), Dallas Harmes (Canada), Frank Yonco & The Everglades, Brian Maxine & The Ring Rats, Billy Finnegan & Stage Coach, Keith Menifold, Tony Best & The Lazy Acre Road Show, J. R. Taylor.

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PERFORMANCE	Date	Perf. No.	ADULTS		CHILDREN (under 14)		TOTAL
			No. Tickets	Price	No. Tickets	Price	
FRIDAY	Evening	28th	1	4.50		2.00	
SATURDAY	Afternoon	29th	2	3.50		1.00	
	Evening		3	4.50		2.00	
	Day	2 & 3		7.00		3.00	
SUNDAY	Afternoon	30th	4	3.50		1.00	
	Evening		6	4.50		2.00	
	Day	4 & 5		7.00		3.00	
MONDAY	Afternoon	31st	6	3.50		1.00	
	Evening		7	4.50		2.00	
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Naturally the kits are subject to normal British guarantee conditions, that is to say that we will replace free of charge any part or item that was faulty or suffered from defect at the time of supply.

JOH

(KT 419) CB to Medium Wave Converter

The KT 419 is for listening to 27 MHz CB using a medium wave radio.

Supply Voltage = 9 v d.c., PP3 battery or equivalent

Receive frequency = 27 MHz

Converted frequency = 500 - 1600 KHz

How it works

The 27 MHz signals picked up by the antenna, which can be the simple piece of wire provided, or for better results a larger ground-plane type are selected by the resonant circuit C2-L1. These signals arriving at the base of transistor Q1 are amplified and mixed with the 28MHz signal generated by the oscillator, QZ and transistor Q2. The end product is shown in the table.

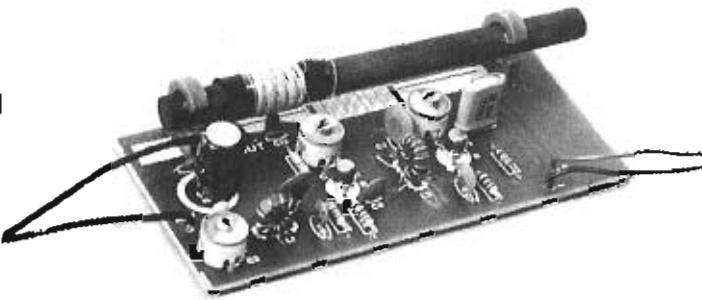
28 MHz - 26.965 MHz (Channel 1) = 1035 KHz
28 MHz - 27.405 MHz (Channel 40) = 595 KHz

These CB converted to medium wave signals are radiated from L4 to be picked up by a medium wave receiver placed nearby.

Putting it together

Assemble in the following order on the white pre-printed side of the p.c. board.

- 1) Mount and solder all the resistors R1 to R5
- 2) Mount and solder the variable capacitors C2, C5, C8
- 3) Mount and solder the capacitors C1, C3, C4, C6, C7, C9, C11, C12.
- 4) Mount and solder the electrolytic capacitor C10 observing the polarity marked on the case.



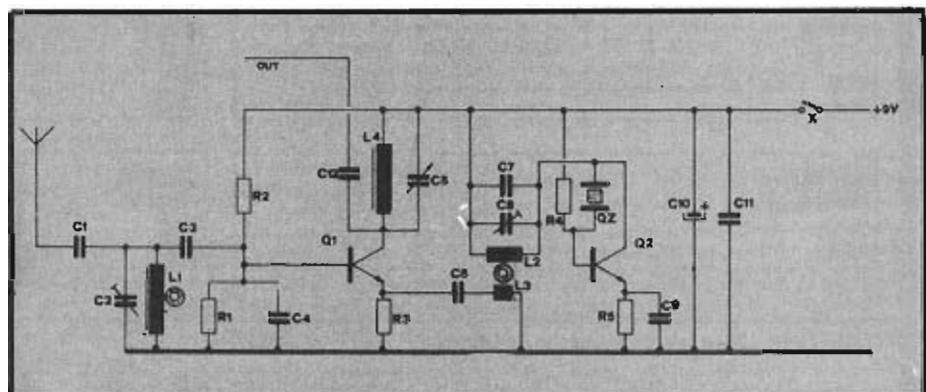
PLAY KITS
U. K. EXCLUSIVE

List of components

Quantity	Abbreviation	Description
1	C1	3.9 p.f. capacitor
3	C2, C5, C8	10 p.f. - 80 p.f. variable capacitor
2	C3, C7	56 p.f. capacitor
1	C4	120 p.f. capacitor
2	C6, C9	10 n.f. capacitor
1	C10	100 u.f. electrolytic capacitor
2	C11, C12	1 n.f. capacitor
1	R1	10 Kohm resistor
1	R2	39 Kohm resistor
2	R3, R5	1 Kohm resistor
1	R4	220 Kohm resistor
2	Q1, Q2	2N 708 or equivalent transistor
1	QZ	28 MHz quartz crystal
2	L1, L2, L3	Ferrite rings
1	L4	Coil on plastic former
1		Ferrite rod
50 cm.		Enamelled copper wire
1		Printed circuit board
1		Battery clip
2		Supports for ferrite rod
1		Antenna wire
1		Length of solder



The Package



- 5) Mount and solder the transistor Q1, Q2 taking care not to transpose the terminals.
- 6) Mount and solder the quartz crystal QZ.
- 7) On one of the ferrite rings wind ten turns of the enamelled copper wire for L1. Space out the windings evenly clean the enamel off the ends to be soldered and mount and solder to p.c. board.
- 8) On the other ferrite ring wind 10 turns of enamelled copper wire for L2. On the same ring wind 2 turns enamelled copper wire for L3. See figure 2 for details. Clean off the ends to be soldered and mount and solder to the p.c. board.
- 9) Insert the ferrite rod through L4 and attach the plastic supports. Push the plastic pegs through the p.c. board and fix by melting the ends over with a soldering iron. Clean the ends of L4 and solder (leave a little slack so as the coil can be adjusted along the ferrite rod for the best position)
- 10) Insert and solder the antenna.
- 11) Insert and solder the bridge wire between the points marked 'X' on the p.c. board. If preferred, an on-off switch, not supplied with the kit, may be inserted instead.
- 12) Insert and solder the wires from the battery clip, Red = +, Black = -.

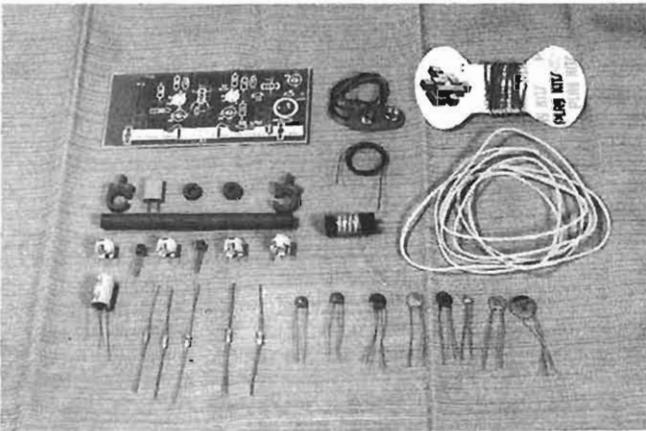
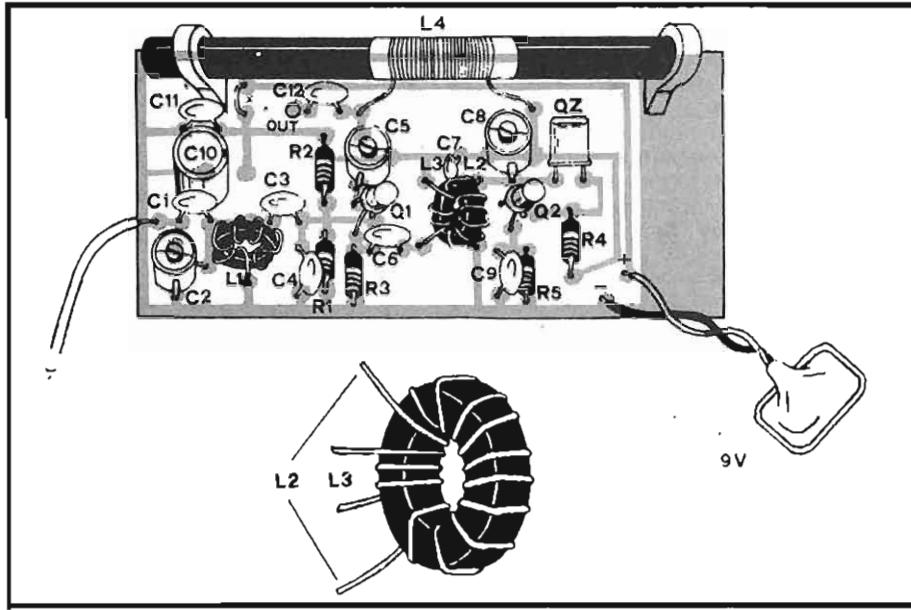
The kit is now fully assembled but before connecting a 9V battery check everything for correct component polarity, solder shorts across p.c. board and mis-placed components etc.

Setting Up

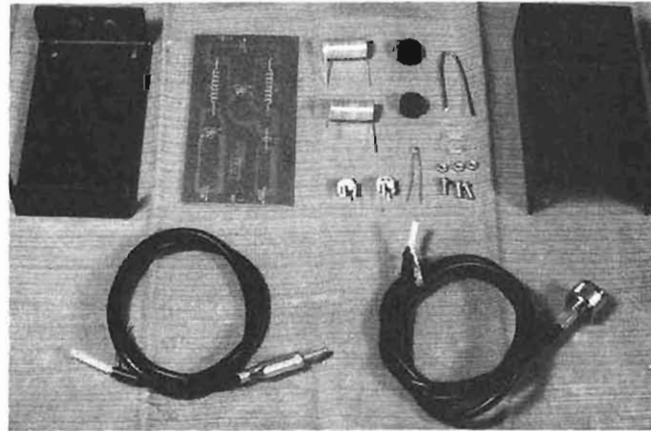
Having connected a 9V battery to the battery clip bring the assembled kit near a medium wave radio. If the radio has an internal ferrite rod antenna some experimentation is needed to find the best position for pick-up. If the radio has no internal antenna (such as a car radio) a better connection can be made by taking a wire from the p.c. board hole marked OUT to the antenna socket of the radio.

All that remains to be done is to adjust the position of L4 on the ferrite rod and peak up C8, C2 and C5 for the highest audio output.

When everything is set up for the best output secure L4 to the ferrite rod with a blob of molten wax.



Components for Kit 419



Components for Kit 421

Mixer/Converter RTX/Car Radio KT 421

Description of the circuit

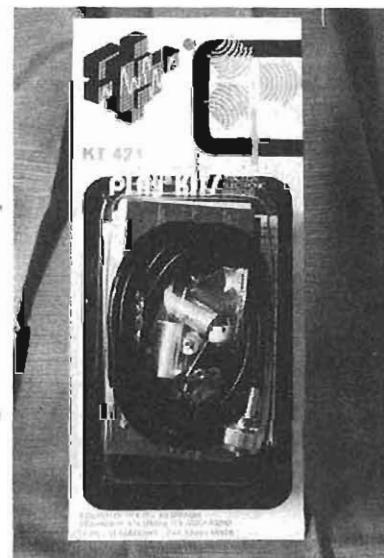
A mixer/converter makes it possible to use only one CB antenna (whether you are receiving on your AM Car radio or transmitting CB). The kit consists of two circuits resonant at 27 MHz. The coil of silver plated wire L1 is parallel with the ceramic variable capacitor C1 making up the parallel resonant circuit. The circuit reversed with the coil L2 and the variable capacitor C3 gives the other resonant circuit. With these two circuits it is possible to use only one antenna. The 27 MHz signal comes from the transceiver (RTX) through the circuit L2 and C3 and arrives at the antenna socket (ANT), but is blocked from the AM/FM receiver by the resonant circuit L1 and C1. If the transmitted frequency is not harmonically related to the car radio no interference will result. The capacitor C2 serves to help tune the car radio.

P.S. Certain loaded antennas are not suitable to serve the AM/FM band and this mixer will therefore not solve your problems.

Putting it together

- Solder the coils L1 and L2 to the

List of components	
Quantity	Description
1	PL 259
1	BO 239
1	reducer UG/175
1	printed circuit MX2
1	ceramic capacitor
2	variable capacitors 10/60 pF
2	coils of enamelled silver wire 1mm cm RG/58 cable
90	fm of car radio cable
2	solder tags
2	rubber grommets
3	3 x 8 nuts and bolts
4	self tapping screws 4 x 1/4"
1	metal case CS 212
1	thin insulating card, solder, wire for connecting etc.
KT421	Electrical layout Drawing (A)



Package

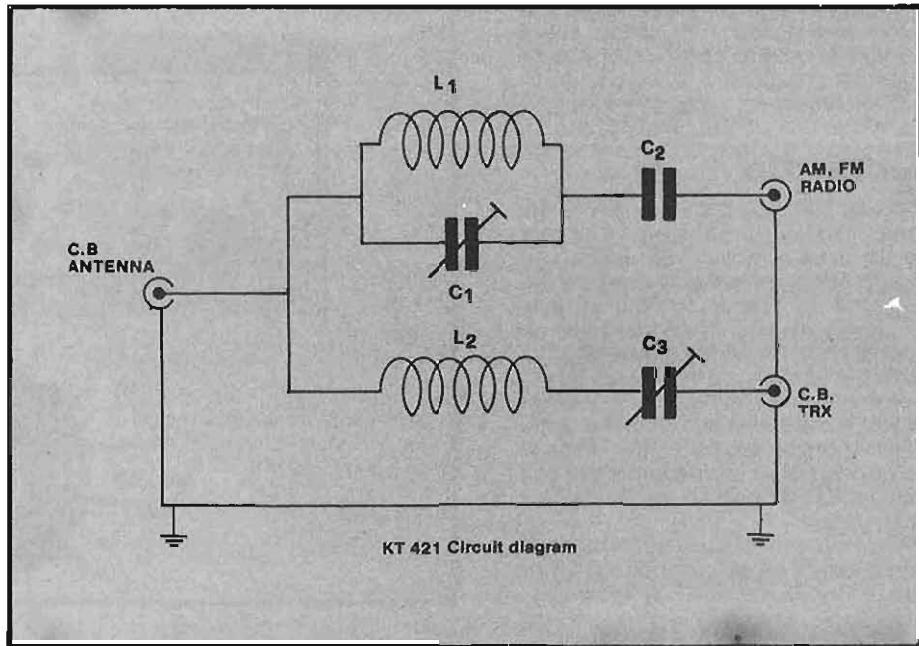
- printed circuit. Stretch the coils a little to fit, but keeping them straight. (See drawing)
- The legs must stick out slightly from the printed circuit board. If they are long, fold them over and solder in such a way so that you have a smooth finish. Try not to pierce the thin card underneath or it will ruin the insulation

- Fit the variable capacitors C1 and C3, the capacitor C2 and the three pieces of enamelled silver wire on the points B,C,D, and E to the printed circuit board.
- Fit the solder tags at point H with nuts and bolts provided.

- Thread the two grommets over the two antenna leads and thread through the appropriate holes of the metal case. (A tiny amount of fairy liquid is a good lubricant if they are very tight).
- Place the thin rectangular card at the bottom of the metal case and solder the cable leading to the RTX, then put the silver wire through to the inside core of the car radio cable. Twist the thin wire from the car radio cable around and solder.
- Press the printed circuit board on the base of the metal case and solder the wire on point H with the 2 cable screens to the solder tags. (See drawing).
- Fit the SO/239 socket and the solder tags simultaneously through the appropriate hole using the right nuts and bolts. Then solder to the points F and G.
- The printed circuit of the mixer is fitted at the bottom of the box with a rigid connecting wire between the SO 239 socket and the printed circuit and between the side of the box and the printed circuit.

Setting Up

To set up you need the following materials:
A 27 MHz transceiver (not legally avail-



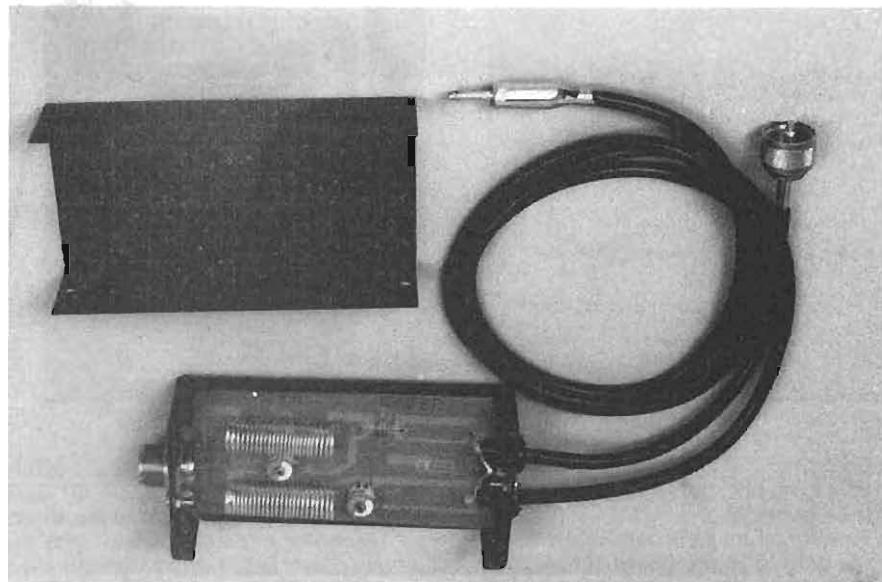
able in this country), a CB antenna with connecting wire, an S.W.R. meter, and a car radio.

- Connect the cable coming out of the antenna with the antenna socket on

the S.W.R. meter and using a patch lead connect it to the mixer/ converter SO239 socket.

- Connect the PL 259 cable coming out of the mixer/converter to the transceiver and the other cable to the car radio socket.
- Switch on the car radio, tune it in to medium wave and tune it to about 900 KHz and set the volume at about half.
- Transmit and turn the variable capacitor with a plastic screwdriver so that you get the minimum S.W.R.
- Turn the variable capacitor C1 until there is no more hiss from the car radio speaker.
- Repeat points 4 and 5 two or three times using the variable capacitors C3 and C1 to get the minimum S.W.R.
- Finally close the lid of the box with the four self tapping screws.

Fig 4 Perspective view of Interior.



The KT 421 Completed Kit.

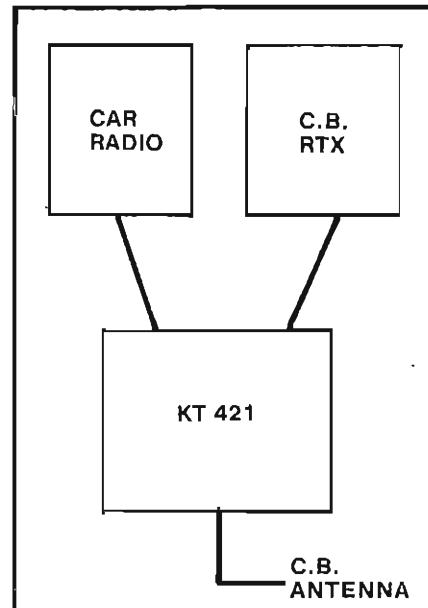


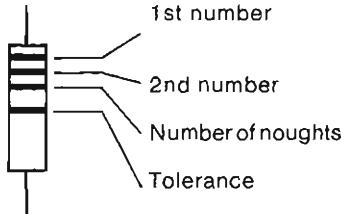
Fig 5 Schematic Diagram.

Tips for the beginner

Resistor colour codes:

Black = 0
Brown = 1
Red = 2
Orange = 3
Yellow = 4
Green = 5
Blue = 6
Violet = 7
Grey = 8
White = 9
Tolerance:
Gold = 5%
Silver = 10%

This table will give the value in ohms.
e.g.:



Orange = 3

White = 9
Orange = 000
Gold = 5%

= 3900 = 39 Kohms

The small value capacitors are identified in p.f. by the first two numbers. The third number is the number of noughts e.g.:

121 = 12 with one 0 = 120 p.f.

103 = 10 with three 0 = 10,000 p.f.
= 10 n.f.

Coded components

Component/Markings as supplied in kit
C1 = 3.9 p.f. capacitor 39
C2, C5, C8 = 10 p.f. -60p.f. 10/60
variable capacitors
C3, C7 56 p.f. capacitors 56
C4 120 p.f. capacitor 121
C6, C4 10 n.f. capacitors 103
C10 100 u.f. capacitor 100 u.f. 25
C11, C12 1 n.f. capacitor 10Z
R1 10K ohm resistor - Brown, Black,
Orange, Gold
R2 39K ohm - Orange, White, Orange,
Gold
R3, R5 1K ohm Resistor - Brown, Black,
Red, Gold
R4220K ohm Resistor - Red, Red, Yellow,
Gold

Carefully unpack the kit and check the contents against the components list. Before beginning construction lay out and identify all the coded components. My own method is to push the wire ends through a sheet of paper and the component number e.g. R1, R2, C1, C2 etc. and value underneath.

The components should be fitted as close the p.c. board as practical. Long wire legs are untidy and in some circuits they will pick up unwanted signals.

When soldering transistors, diodes and quartz crystals only apply the minimum amount of heat necessary for a good joint, too much for too long will burn them out.

Insert and solder only one component at a time. If you push it through the holes in the p.c. board and bend the legs over slightly, this will hold it in position while you apply the solder and iron. Nip the excess wire ends off each component soldered in before starting on the next.

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and KT 421 (Splitter) Play Kits at £5.75 each + 40p P & P.

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A Paper Pirate

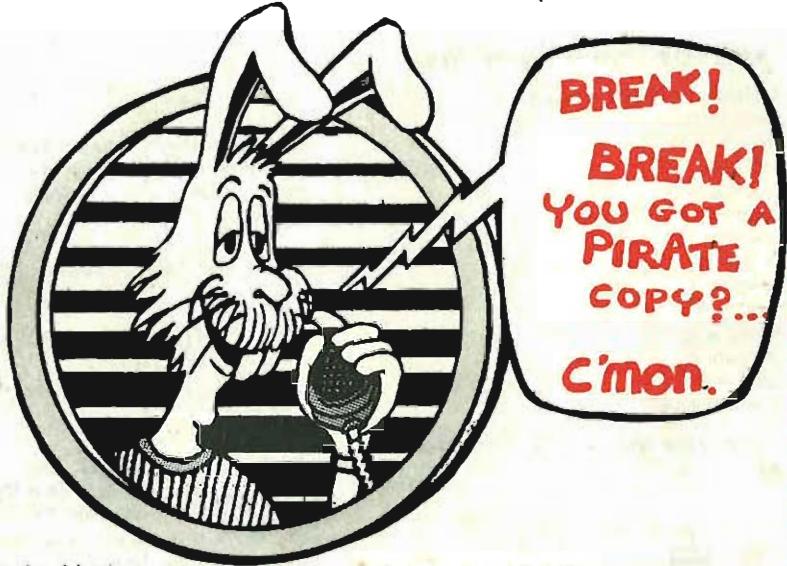
A Big Dummy's Pirate Guide to CB

Illegality of a subject with a high public interest and hence a vast profit potential, causes a black market not only to exist but to expand. One recent expansion of the black market arrived on our doorstep a few weeks back, in the form of what appears at first sight to be a normal copy of 'The Big Dummy's Guide to CB Radio'. For those of our readers not yet familiar with CB we should explain that the Dummy's Guide is an American publication which has travelled exceptionally well. Professional book producers have, when shown a copy of the guide expressed that it possesses an almost perfect balance between technical and comical explanations of what is potentially

a complicated subject.

A Pirate Version

On closer inspection of the two copies we began to notice differences. One was bound in a thinner form and printed on lighter paper, turning over we noticed that the rear cover of the thinner version carried no ISBN number, in fact it soon became apparent that the whole rear cover had been totally re-drawn. Scanning through we realised that it was in fact a pirate version, the obvious tell tale sign was the distinct loss of quality in the pirate's photographs.

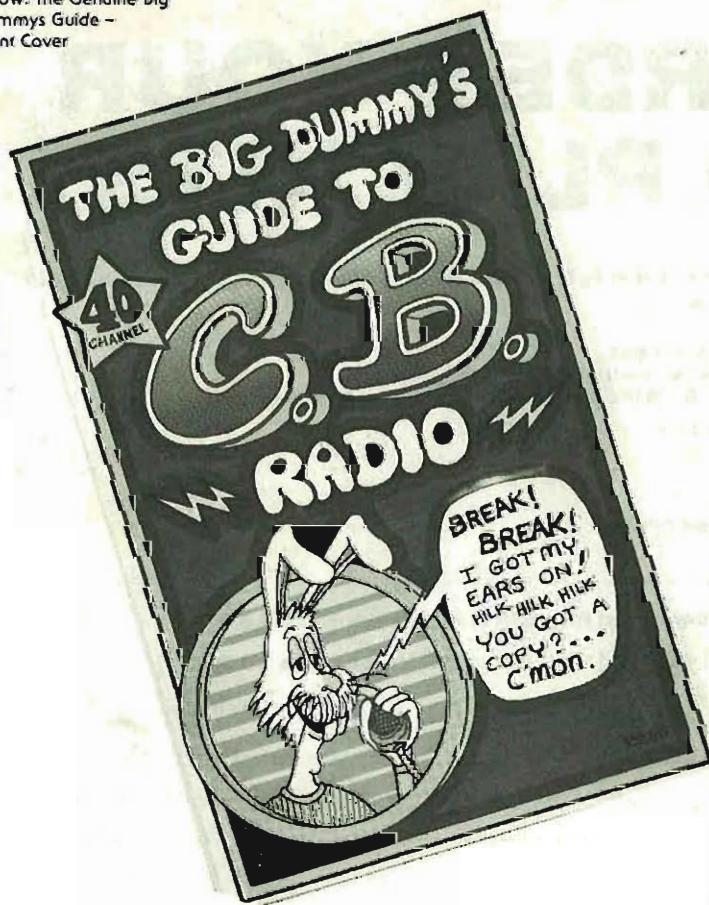


Ready Made Distribution

Since Citizens Band equipment began to appear in Britain there has always been a pirate or black market element. The prime reason being simply that importation and or manufacture of the transceiver itself is illegal. Importing or retailing accessories is within the law, but the demand for accessories is obviously closely related to the supply of the illegal transceivers, thus there is a high incentive for some dealers to supply naughty black boxes.

Demand for things CB is exceptionally

Below: The Genuine Big Dummy's Guide - Front Cover



Back cover of the original



high and the underground dealer that supplies rigs in all shapes, sizes and prices invariably has no problem in selling his stock. There is for this pirate version of the Big Dummy's Guide a ready made distribution in existence, with an ask no questions attitude. Looked at in this light, one can realise the potential harm this pirate version can do to the importers of the original legal Guide. Kona Publications have been supplying to the British CB Trade the genuine Big Dummy's

Genuine Copy

Front Cover

£2.95 printed cover price.

Close register process colours, no white spaces or separated colours around lettering or drawings.

Star containing 40 channel is clean and thin black lines.

Rear Cover

ISBN Book identification number in left bottom corner.

Thin black lines around Mercy Sakes Good Buddies! Sun is a smooth circle with fine yellow (sunburst) lines.

'SKIP LAND TRANSIT' the truck on the rear has mauve lettering above the cab and there is at least a quarter of an inch space at either end of the truck before the blue border.

Actual Book

The paper is thick and reasonably stout, 85gsm hence the book is bulkier.

Photographs are clean and light.

The heavy printing is black but not a heavy black.

The newer version has the British price as well as a one page preface entitled "27 megs for a copy on all GB Breakers".

Pirate Copy

Front Cover

\$3.95 (hand written) printed price.

Close register spot colours, however white spaces are visible around initials CB and close to rabbit.

Star containing 40 channels has heavy black lining.

Rear Cover

No ISBN Book Identification number.

Heavy black lines around Mercy Sakes Good Buddies! Smaller in circular yellow sun with less and wider spaced (sunburst) lines giving the effect from a distance of being whiter.

The lettering above the cab is pink and the grass is a different green. The truck is larger and has no space either side of it before the blue border because the (pirate) truck is a larger re-draw and the large antenna almost touches the quote from the San Francisco Examiner.

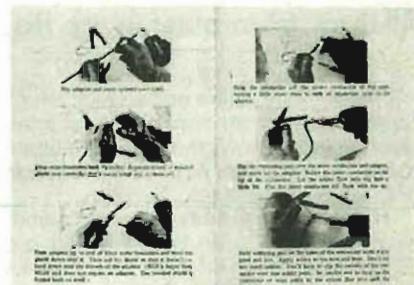
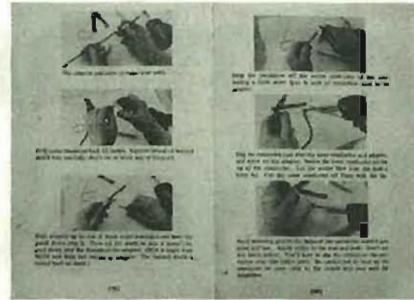
Actual Book

The paper is thinner and smoother grain, 70gsm hence the book is noticeably thinner.

Photographs having been shot from the genuine Guide have lost some detail and are noticeably darker (almost photo-stat-like).

The text printing is a bold black ink.

There is no British up date preface page (on the copy we received).



Copies of pages from the original version (top) and the pirate version below.

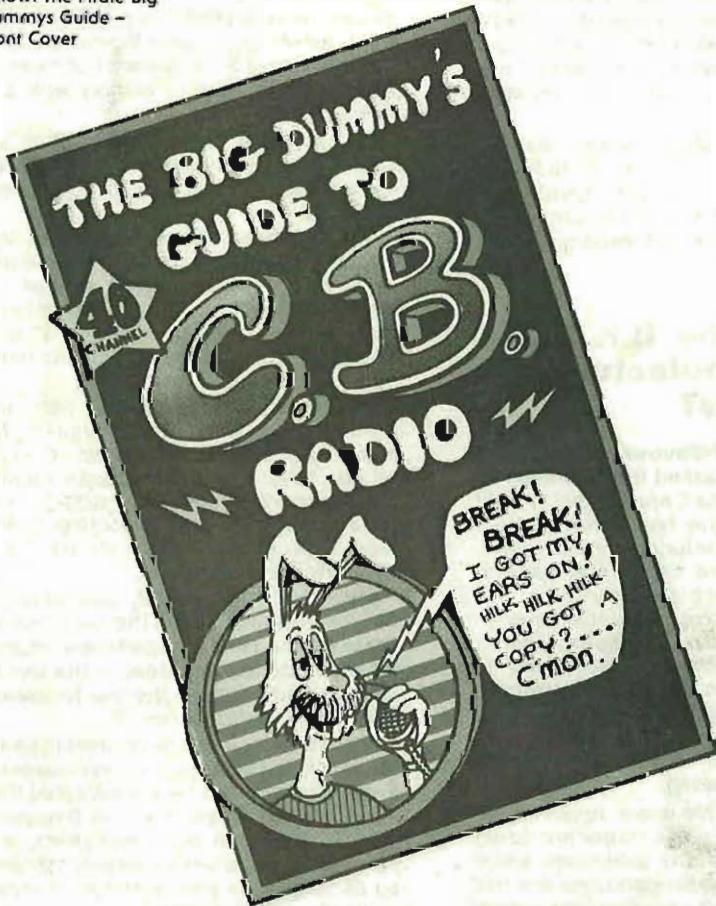
serious offence, in this case the pirate version of the Guide is in breach of International copyright as well as the charges that could be brought by Kona against the pirates for forgery, fraud and loss of earnings. (Not to mention the tax man).

Guide for almost a year now. The trade price is £1.85 with a retail price of £2.95, the pirate version sells for just over £2.00 and has a trade price of £1.10, wholesale wise we heard that quantities of the Bootlegged Guide could be obtained for less than 70 pence!

Quite simply the production cost of this pirate version is very low, they have no freight charges from USA to UK, no royalties to authors and presumably the printer or producer sells direct thus there is no publishers' and distributors' fees.

Bootlegging or Piracy of copyright is a

Below: The Pirate Big Dummys Guide – Front Cover



Back cover of the Pirate version



The Book Publishing Co.

Via Kona they asked us to say that they are aware and have been for some time that a pirate exists. It is in breach of the 1965 copyrights act (which basically states it is an infringement of copyright to publish, print, sell or retail copyright material without prior permission) and that they will be pursuing the matter in a serious attempt to stop production and expose the pirate printers.

The latest information is that injunctions have been issued preventing several CB shops from retailing the pirate copy and the book publishing company of America have hired a team of private detectives to track down the culprits.

Parliamentary Review



All is far from quiet in the House

Although legislation and specifications have now been announced, our elected representatives at Westminster still appear to be far from unanimous on the subject of Citizens Band Radio.

Mr. Moate is still doing a good, if somewhat belated, job on behalf of the pro 27MHz AM lobby whilst Mr. D.E. Thomas is apparently a keen radio controlled pilot. If you thought the debate was dead and forgotten, you were wrong. If however, you think it will make any difference to the legislation or amnesty for 27MHz AM you could also be mistaken.

PCC

1. 27 MHz AM?

Mr. Moate, Conservative MP for Faversham, asked the Secretary of State for the Home Department what is his latest estimate of the number of 27 MHz AM transmitters in the United Kingdom.

Mr. Timothy Raison, Minister of State Home Office: It is not possible to estimate the number of 27 MHz AM citizens' band sets in this country, but information recently provided by the Post Office radio interference service indicates that illicit use has increased significantly. Estimates must necessarily be imprecise but we would now put the number of illicit users at about 160,000.

Mr. Moate: Does my hon. Friend accept that there are enormous discrepancies between the figures available to him and those used by radio enthusiasts, which range from 250,000 to 1 million sets? Many of us believe that there is as much chance of the radio enthusiasts being right as of the Home Office being right. If the radio enthusiasts are right, is there not a danger that the Minister will now introduce new regulations and rules which will not be enforceable and which will be widely flouted? Will he give further consideration to the idea of legalising AM transmitters?

Mr. Raison: Estimates are difficult to make. Ours have been raised substantially. The estimates of enthusiasts are liable to some exaggeration, but I recognise that many AM sets are in use now. However, I remind my hon. Friend that the sets in use are causing much interference to people who have legitimate entitlements to television, radio, hi-fi and emergency services. We cannot permit a service which causes such interference. The alternative which we are offering should prove completely acceptable.

Dr. Summerskill, Labour MP for Hall-

fax: Will the hon. Gentleman bear it in mind that last year only 457 people were convicted for importing, using or installing sets, yet that compares with his estimated number of 160,000 using illegal sets? How will his new specifications be any more legally enforceable than the old ones?

Mr. Raison: I do not deny that there is an enforcement problem, but a thoroughly acceptable service on FM will now be available, which should help us to overcome that problem. If necessary, however, we may have to bring in new legislative measures to cope with that.

Mr. Norman Atkinson, Labour MP for Haringay: How does the Minister reconcile what he has said with the answers given to me by the Minister of State, the hon. and learned Member for Royal Tunbridge Wells (Mr. Mayhew)? The Minister has now told the House that interference is taking place and that there may be a need for legislation to prevent it. Interference is denying people good radio reception in certain parts of London, yet the hon. and learned Gentleman has assured the House that there is no such interference?

Mr. Raison: My hon. and learned Friend's remarks went wider than the specific problem of citizens band interference. That is a serious problem which we recognise and which we believe must be defeated.

2. Does the U.K. have the manufacturing capacity?

Mr. Campbell-Savours, Labour MP for Workington asked the Secretary of State for the Home Department (1) what representations he has received from domestic manufacturing industry concerning integrated circuit and general chip manufacturing capacity within the United Kingdom for use under specifications for citizens band radio equipment; (2) if he is issuing any guidelines to domestic manufacturing industry regarding integrated circuit and general chip requirements for citizens band radio equipment based on the specifications which he is preparing.

Mr. Raison: We have received no representations on this matter nor do we propose to issue any guidelines since radio regulatory considerations are not involved. The draft specifications which

we have issued for citizens band radio cover only the frequency and performance characteristics necessary to limit interference to other radio services and are not related to the design of the equipment.

Mr. Campbell-Savours asked the Secretary of State for the Home Department whether, in conversations he has had with British radio and electronic equipment manufacturers, he has been assured that a manufacturing capacity for citizens band radio equipment is to be established in the United Kingdom.

Mr. Raison: Considerable interest has been shown in establishing a manufacturing capacity in this country for citizens band radio equipment. We have now issued licences for the testing and development of such equipment to a number of companies.

Mr. Campbell-Savours asked the Secretary of State for the Home Department whether, at the same time as he issues the specifications required for 27 MHz, he will give some indication as to the likely cost of conversion of existing AM/FM equipment to comply with any new specifications.

Mr. Raison: I regret that such an estimate is impossible to make because of the wide range of types of equipment available.

Mr. Campbell-Savours asked the Secretary of State for the Home Department what representations he has received from citizens band radio enthusiasts regarding the specifications he is intending to introduce for citizens band radio equipment.

Mr. Raison: Many citizens band enthusiasts have written to me pressing for a legalised 27MHz AM service. Certain others have expressed dissatisfaction with the precise sub-band - 27.605-27.995 MHz - which we are allocating to the legal FM service. Still others have supported our decisions.

Mr. Colin Shepherd, Conservative MP for Hereford, asked the Secretary of State for the Home Department what is his estimate of the extent of the use of citizens band radio in the first two years following its introduction.

Mr. Raison: There is no reliable basis on which to form such an assessment. Previous estimates have suggested that there may be a few hundred thousand sets in operation after two years, but licensing arrangements are being planned so as to give an ample margin if those estimates are exceeded.

3. Will import restrictions be enforced?

Mr. Campbell-Savours asked the Secretary of State for Trade whether he has made any assessment of likely levels of import penetration of overseas manufactured products following the announcement of specifications for citizens band radio equipment; and what means are available to limit such penetration; (2) if he will take steps to limit any sudden substantial increase in the imports of citizens band radio equipment which may arise following the announcements of specifications for such equipment.

Mr. Biffen, Conservative MP for Oswestry: No realistic forecast of import levels is possible at this stage. Under international law – notably Community legislation and the General Agreement on Tariffs and Trade – safeguard action to limit imports from non-Community sources is possible in cases where imports of a product increase rapidly to such an extent that they cause or threaten to cause serious injury to the domestic industry. If such a situation were to arise in connection with citizens band radio equipment the Government would consider the case on its merits.

4. Interference of radio controlled models on FM

Mr. D.E. Thomas, MP for Merthyr,

asked the Secretary of State for the Home Department (1) what is his assessment of the effect of his decision to allocate 27 MHz FM for citizens band radio on operators of radio-controlled models; and if he will make a statement; (2) what consultations his Department held with organisations representing radio controlled model users before his announcement to allocate 27 MHz FM for citizens band radio; (3) whether he is satisfied that under his proposals for citizens band radio, there will be no conflict between citizens band users and model users.

Mr. Raison: The responses to the discussion document which we published on this issue reflected a number of interests including those of radio-controlled model users. Only after all these had been carefully considered was it decided to allot part of the 27 MHz band to citizens band radio. However the authorised service will be located in the sub-band between 27.6 – 28 MHz which places it above that part of the band used by radio control modellers. This will avoid conflict between modellers and operators of the new service.

Mr. D. Thomas asked the Secretary of state for the Home Department (1) how many model control licences were granted in (a) Great Britain and (b) Wales in each year since 1974; (2) if he is satisfied with the inspection procedure for model control licence holders.

Mr. Raison: We can give only the annual number of such licences which

were issued in the United Kingdom. These are as follows:

1974	7,403
1975	9,612
1976	10,331
1977	11,127
1978	13,488
1979	23,685
1980	27,184

The use of model control equipment was exempted from licensing with effect from 1 January 1981 by means of the Wireless Telegraphy (Exemption) Regulations 1980. The regulations provide that the use of such equipment is subject to its being made available for inspection by any person authorised for the purpose by the Secretary of State. This provision is a sensible safeguard against the use of model control equipment in a way which does not conform with the terms of the exemption regulations.

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Speak Out

Martin Wright predicts a future European, EEC 120 channel AM CB system.

Speak out is a spot for you our readers to have your say. Because CB is still a highly emotive subject we must stress that as a Magazine the views expressed are not our own. We do not necessarily agree nor disagree. We will simply print your views unbiasedly regardless of whether they are for or against Citizens Band Communications or any of its facets.

JOH

Dear Sirs,

Having spent much time in writing letters to all and sundry regards CB and in particular the future of 120 channel 27MHz AM, I am now quite convinced that Mr Whitelaw will be forced to accept AM CB not as a result of domestic pressure, though this is not to be discounted for it has had the desired result, but in an apparently unrecognised quarter. I refer to the European Parliament that should at the time of writing be well on the way to proposing an acceptable Euro-Standard for CB. For several months now a committee has been researching the provisions and practices in all the member states, ie, what each domestic government says CB is (or not) and just what the public use. The Europe (EEC) it is estimated there are between 20 and 25 million users of prohibited AM equipment of one sort or another (27MHz, 41MHz and 49MHz). Based on what is made in Japan etc and what is legitimately used in countries throughout the world. The discrepancy showed some 50 million sets! Allowing for excusable bases like users in the USA not bothering to take out licences (about 20% of users) and similar "error" there was still a 30 million units discrepancy - allowing for customs seizures worldwide that still left top side of 25 million 'lost' sets - a quick trip round Europe scanning the 120 channels gave more than an idea as to where those sets were!

Confronting active circles in our government with the activities of this Euro Parliamentary Committee drew an interesting array of evasive answers, and at no time has any reference been made in public regards this committee.

One has to wonder why we have to wait until Autumn for a Euro compatible FM specification when a simple paperwork exercise can be (based on the French, Dutch, Belgian and West German specifications) drawn up in a matter of hours let alone weeks or months?

I have no evidence at all as to what this Euro Spec will be but there is little doubt that it will be AM, 120 channels from 26.515 MHz to 27.855 MHz, based just on what is public practice. What must be a real dilemma to those proposing a spec must be the acceptable (by the enforceable) power limit to achieve a balance between channel reusability, minimal interference potential (to other users outside CB) and avoiding as much as possible the temptation for users to resort to "burners". General public expectations for range show a minimum of about 7 kilometres totally regardless of circumstances. The F.C.C. 4 watts carrier just won't meet this, 10 to 15 watts will, but can play havoc with reusability and raises the potential for 'break-in' on other equipment. However 10 watts is one hell of a lot less likely to wreak chaos than an abundance of 50+ watt burners. It is therefore probable that some form of controllable power level will be required either infinitely variable from 0 to 10 or 15 watts or in prescribed steps like 1, 5, 10 or 15 watts. Fixed power sets would no doubt be included to embrace F.C.C. compliance either 4 or 5 watts. (No spec is likely to exclude the bulk of existing illegal rigs in Europe as this was the serious

intent of FM. The FM only spec with 2 watts maximum would long have been established with the Dutch etc last year.) Since most governments of member states have consistently refused to permit any CB facility to satisfy public expectations (and consequently found themselves in the embarrassing situation of having an illegal but uncontrollable explosion of CB with AM equipment, some form of political scapegoat is needed to save face!

The Euro Parliament is about to provide this let out for the national politicians. Being so new on the political scene the Euro Parliament just has not established an anti CB stance. Also it is seeking widespread public recognition as being an effective body. CB is just the cause to champion and AM CB in particular. By authorising a generous AM facility it appears to override the national government most of whom will wriggle and protest loudly yet capitulate very quickly being more than thankful for being relieved of what is a very hot political potato! An interesting point to ponder is why in the last few months has there been an up surge in the number and scope of well known makes of sets offering AM/FM 120 channel when no country in the world allows this (yet?) The Japanese aren't going to invest in something with no market potential or do they know more than is being admitted? No one has ever said to me that either a UK or EEC CB spec does not exist - all have said that nothing has been 'published' yet!

I was recently studying the spec sheet from one such set which reads like a very neat little piece of equipment. It also includes a circuit diagram that reveals built in low pass filter circuits, hardly fitting the widespread view of low quality mass produced dumping of over production.

As for the SSB DX'ing fraternity its future is rather less predictable. However the Euro Parliament again is unlikely to refuse the concept of free communication within the EEC though to do so cannot avoid such equipment being capable of reaching the USA, Canada and even Australia. It may be that 'Ham' operators will be recognised for their original circumstances - licenced to construct their own equipment and as such protected, with a more simplified licensing for CB DX'ing more as a control over equipment installation to reduce airwave congestion and piracy of frequency bands. The eleven meter band may well become part of the CB allocation. The whole area is very grey and depends on interpretation of definitions and acceptance of standards for public freedom regarding communication capability. However the growing acceptance of the Euro TV satellite situation where we will have access to almost worldwide TV indicates that there will be a marked relaxation in the attitudes to DX'ing!

All this has to be brought together, all the mass of information and comments gleaned over the last year need evaluating, not a simple task, especially as there is so much 'smoke' being put out especially from Whitehall.

Yours sincerely
MARTIN E.J. WRIGHT

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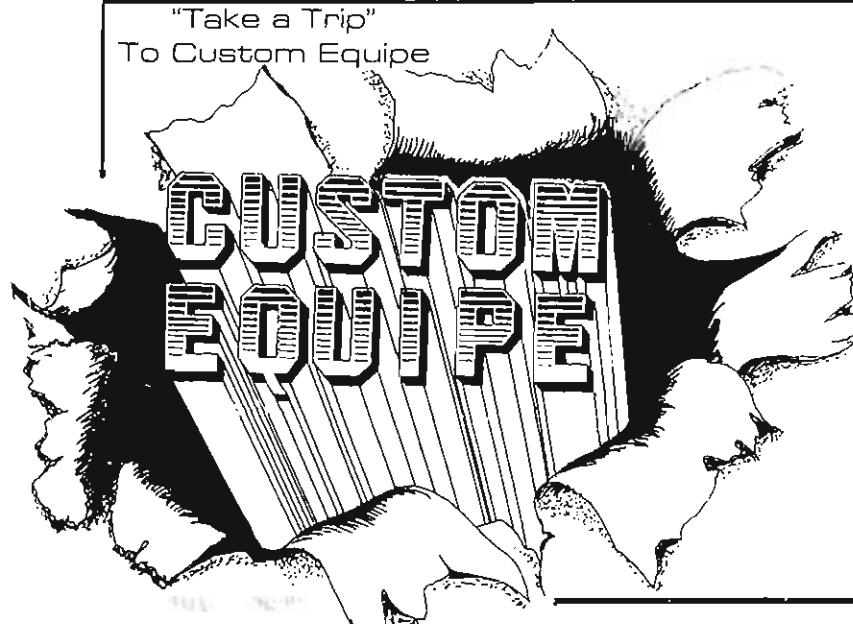
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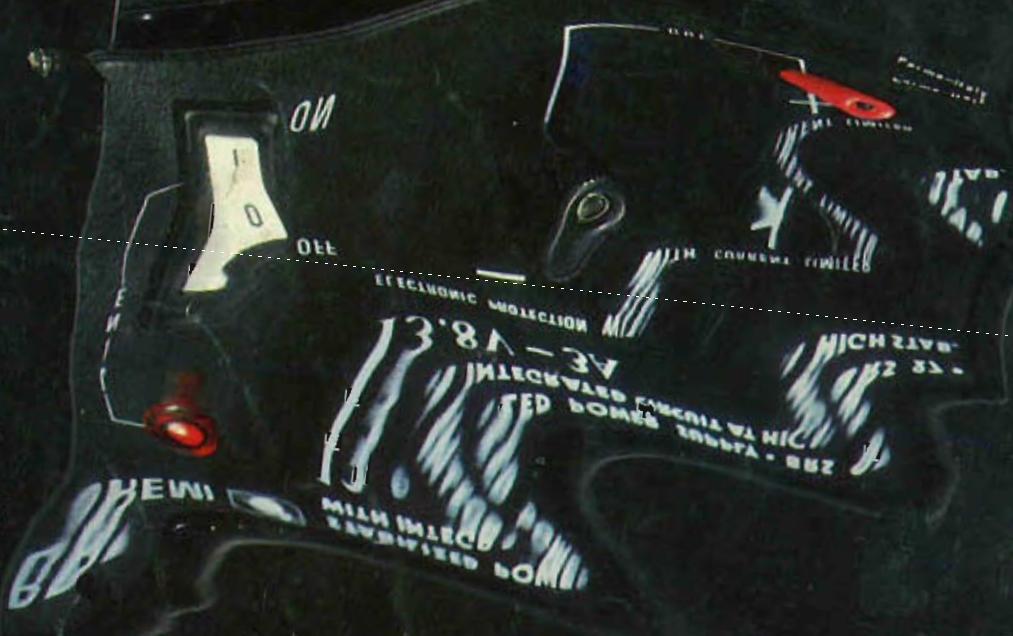
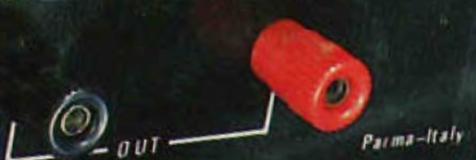
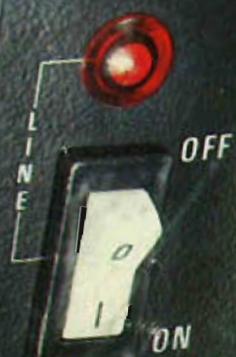
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