AIRWAVE

»325«

WIRRAL AND DISTRICT AMATEUR RADIO CLUB

G4MGR —·— G8WDC

CLUB EVENTS - MARCH TO JULY, 1982

Mar	10	Wood & Douglas Radidkits by Fred Starkey.
Mar	24	Amateur Radio in Norway. Norman Aslaksen G4KHO/LA6DAA.
Apr	14	Yaesu & other radio equipment demonstration by Amateur Radio Exchange. (St. Helens) Ltd.
Apr	28	Direction Finding Techniques & Practicalities. By Phil O'Ryan G8WWF and Eric Turner G4IRQ.
May	12	Japanese Morse. Norman Kendrick G3CSG.
May	19	D.F. Hunt Practice Run.
May	26	Radio in the A.T.C. Bob Williams G8XEX.
Jun	9	Icom & other radio equipment demonstration by Gordon Adams G3LEQ, Thanet Electronics' Northern Agent.
Jun	23	Test your Rig Night. Pro. test gear from various sources.
Jun	30	The Eileen Medley D.F. Hunt.
Jul	14	Trio & other radio equipment demonstration by Lowe Electronics Ltd., Matlock.

THIS IS THE LAST MEETING BEFORE THE HOLIDAYS!

Jul	21	Provisional date for our annual Barbecue. Watch for details in June "Airwave".
Jul	28	Winner's Revenge D.F. Hunt.

CONTESTS AND OTHER EVENTS

Mar	6/7	144 & 432 Contest. CLUB ENTRY.
Apr	4	Sunday. N.A.R.S.A. Rally, Belle Vue. Club has a stand.
Apr to May	30 to 3	Wirral Amateur Radio Society Expedition to North Wales (Crooked Horn Pub). Our club members have been asked to join in if they wish. See letter, this issue.
May	17	Radio Amateurs' Examination.
May	22/23	144 Mllz Trophy. Contest. CLUB ENTRY.
Jun	5/6	National Field Day. Contest. HF & CW.
Jul	3/4	V.H.F. National Field Day. CLUB ENTRY.

OTHER DATES FOR YOUR DIARY

Mar	21	White Rose RS Rally, Leeds.
May	23	The Northern Mobile Rally, Harrogate.
Jun	13	Elvaston Castle Mobile Rally, Nr. Derby.
Jun	20	Denby Dale & D ARS. Mobile Rally, Nr. Huddersfield.

The dates for Leicester and Castle Donnington Rallies and the Region 1 Contest, are not known yet. Watch for details.

REMEMBER :-

British Summer Time begins 0100 GMT Sunday, March 28th.

WIRRAL AND DISTRICT AMATEUR RADIO CLUB

Committee as from 13th January 1982:-

CHAIRMAN	John Fogg	G8 UZZ
SECRETARY	Gerry Scott	G8 TRY
TREASURER	Peter Reardon	G8 WQQ

Ordinary Members :-

Neil McClaren		(Publicity Manager)
Peter Denton	G6 CGF	(NARSA Representative)
Steve Eyre	G6 DXG	(Social Secretary)
Vacancy		(Contest Manager)

Club meetings are held at 8 p.m. on the second and fourth Wednesdays in each month. Visitors are welcome.

Club meetings are held in the Dining Room, 1st floor, West Kirby Concourse Sports Centre.

D & W 's

March	3	Wirral Hundred, Oxton.
	17	Hotel Victoria, Heswall.
	31	Green Lodge.
April	7	Seven Stars, Thornton Hough.
	21	Primrose, Liscard.
May	5	Railway, Meols.
	19	Greenland Fisheries, Neston.
June	2	Greave Dunning, Greasby.
	16	Queens Arms, Oxton.
July	7	Lighthouse, Wallasey Village.

"D & W's" stands for "Drinking & Waffling" - our name for an informal gathering of members and friends over a few pints at a pre-arranged local hostelry.

For further details, contact any committee member, or:

The Secretary,
Gerry Scott, 45 Stringhey Road, Wallasey, Merseyside, L44 1EF.
Tel: 051-630-1393 (home) or 051-229-3561 (work)

AIRWAVES - is the quarterly newsletter of this club and is published at the end of February, May, August and November.

Articles for inclusion, including members' ads, are always welcome but these should arrive at least three weeks before publication. The committee reserves the right to withhold any item from publication.
The views expressed in any article in the newsletter are not necessarily those of the committee.

NOT QUITE THE EDITORIAL

Having got this year's AGM out of the way, the new committee have set themselves a hard task and got on with it. This year has seen the biggest change in the committee that the club has had, with only John remaining as Chairman.

With five new faces on the top table and one vacancy (for Contest Manager) and none of us having done this before, we are full of new ideas and are well on the way to putting them into practice, but it's not been easy. Between the AGM on the 13th January and the junk sale on the 10th February, we spent a total of over 42 man hours in committee meetings, plus a lot more time on a personal basis. This may seem a lot, but what we have done is set the groundwork for the rest of the year.

One of the first things that you will have noticed is the re-designed newsletter. We hope to have brought it 'up-market' a little by giving it a title and a card cover, at very little extra expense. It should reside on your bookshelf quite happily, alongside 'CQ-TV' or 'AMSAT News'. The actual content, though, is still dependent upon what the members want to put in. We would rather have too much to go in than too little. In later issues we want more tips, constructional items, technical topics, so start thinking now for the next "Airwave" and let us have your ideas to make this mag what you want it to be.

This year's club event calendar includes all radio related topics as you can see on the previous page, and we've more lined up for the second half of this year. We've got representatives from the three main equipment suppliers showing us their goods at reasonable intervals, to give a balanced review of current equipment.

Norman Kendrick, G3 CSG, is coming again, by popular request, to give us his very amusing talk on Japanese morse. A lot of our newer members will not have seen this before and all of the older ones will want to see it again.

In plenty of time for the Eileen Medley Trophy D.F. Hunt, we have Phil G8 MNF and Eric G4 IRG, coming to give us a talk about "Fox Hunting" on both its serious side and its social role in club life. It includes the practical construction of aerials and the techniques for their use. They will also give an insight into their electronic "Fox Box".

Later in the year, on two consecutive club nights, Gordon Adams, G3 LEQ, will be coming to give his talk on all aspects of radio propagation throughout the RF spectrum entitled "Sun, Earth and Radio". We have had this in the past at a very well attended club meeting, but Gordon has so much information on this topic that to do justice to him and his subject, two nights are required.

On November 24th we plan to have our social evening again with the usual presentations.

We have planned two DF Hunts this year, as usual. The Eileen Medley on June 30th and the Winner's Revenge DF Hunt on July 28th. Sunset on these dates is 2144BST and 2115BST respectively. Both are Wednesdays. If there is enough interest, we may hold a friendly D.F. practice run earlier in the year - how about May 19th? If you want one, let us know. Another possibility is to have a Sunday afternoon mobile Treasure Hunt, with or without radios, for those not yet licenced. Once again, if you're interested, let us know.

On the remainder of club nights this year, we have interesting radio topics planned and no films (hurray). Some of these have yet to be confirmed, so no details yet to avoid disappointment.

This year, we are going to enter five contests (see club events); in the past, the club has done well in contests, with Graham Stamp (G8 NNS) as Contest Manager, aided by Malcolm McIntosh (GW4 IEQ). This year Graham has had to stand down and so we have a vacancy for a Contest Manager. In the meantime, our Chairman, John, is doing the honours until somebody can be appointed. Would you like to do it? Meanwhile, plans are being made for the 144/432 contest on March 6th and 7th. All members are invited to come to the club station, especially if they can help, or want to learn what goes on, to be ready for the next one. Not only do we need operators (especially volunteers during the night) but people to keep the log and checklog, as well as make refreshments, keep tents down, turn the aerials, check the guys, run the generators and everything else that goes with running the station. Assistance is also required in completing the contest application forms and checking and scoring afterwards.

Have you any equipment that you could lend to the club? We are insured, but we could do with offers of gear for use on 4M, 70CM and 1296 MHz or above, or transverters for these frequencies and linears to go on the end to run the legal limit.

To ensure that all the equipment gets to the site and gets brought back in one go, we may hire a transit or similar van for the weekend. As it all costs money and not all the members are interested in contests, we would welcome any donations and from time to time we will run a raffle to aid contest funds: this then lessens the strain on club funds.

Whilst we are on the subject of club funds, have you renewed your subscription yet? They became due immediately after the A.G.M. Please remember that a fourth class of membership, 'country membership' was added at the AGM, to allow those living away from the area to continue to be members and have "Airwave" posted to them. This costs £ 3. 50. per year. The committee would be pleased to receive applications from those interested.

At the time of writing this, the results of the December R.A.E. had just come out and the committee and members would like to congratulate those who have been successful. After they have got their new callsigns it will be time to produce another club members' address list. Please ensure that the club Secretary has up to date details of new or changed callsigns, addresses, works QTH and phone numbers etc. Also, if you have joined or left the RSGB. The Secretary has application forms, if required.

The committee hopes to make this the club's best year so far.

MEANWHILE, DOWN AT THE MOUSEHOLE.....

There can be very few of us who live locally who do not know that something is going on down at the Tunnel entrances. That 'something' is, in fact, the modernisation of the toll collecting system.

The fact that we have to pay a toll at all is a totally different issue that I won't go into here, except to say that the Government's view is that the user pays for the exceptional benefits brought about by the use of these "Estural Crossings".

Although the collection of tolls for the Mersey Tunnels is the most cost-effective in the country, the Mersey Tunnel Joint Committee (as it used to be called) sought new ways of reducing the collecting costs. The net result was the introduction of mechanical, unmanned, toll booths on an experimental basis, about 10 years ago. These did not live up to expectations and were much modified to improve their reliability and to gain experience with this type of system, which was new to this country. These units have now reached the end of their useful life, and are to be replaced this year.

The requirements of the replacement system included improved cash counting and handling facilities, lower out-of-service time, greater mechanical stability, facilities for being completely automatic, semi-automatic, or completely manual; the ability to accept more than just coins and the ability to accept mixed category traffic. Recently, Merseyside County Council Tunnels and Highways Committee embarked on an ambitious plan to replace the entire existing system with one giving those facilities listed above. This is now in an advanced stage of completion. Incidentally, none of the money spent on improving or maintaining the Tunnels comes out of our rates or from Central Government. It is entirely derived from toll takings, specially set aside in a renewals and replacement fund.

The new system is computer based with a micro-processor in each booth, linked to a larger computer housed in the adjacent administration building. The cash collected is electrically and mechanically checked before being accepted, and then it goes into a special chamber where it is temporarily stored, just in case you and the machine didn't get on and the cash tendered is disputed. After you pass out past the barrier, the cash is then dropped through a hole in the floor of the booth onto a conveyor belt running in a service tunnel beneath the booths.

The end of the conveyor belt is housed in a special strongroom in the administration building, where the cash is automatically bagged after being counted, ready for security collection. This saves the out-of-service time of a booth when the collector did this by hand. It is also safer for the collectors not having to cross lanes of traffic whilst carrying heavy bags of coins.

Incidentally, the barrier at the end of the booth is now going to be hydraulically operated instead of electrically, so that you won't get a big dent in your car if you stall beneath it.

The actual electronics will be on plug-in units so that a technician can swap a faulty card or unit in a short space of time, and also to allow for easy modification of the facilities, or for more facilities to be easily added at a later date.

Each of the booths will be more clearly marked to show which are operational, and what facilities each offers. Provision is being made for them to accept a pre-paid magnetic card to pay your toll. These cards will be available in certain values and may be used with mixed classes of vehicle. The machine will automatically devalue the card by the appropriate amount and display the remaining value. Inevitably, the booths with the fastest throughput will be those where the correct cash is tendered, or a special magnetic card is used.

The new system should come into use towards the end of March, and leaflets on how to use it will be available from the collectors, a few weeks prior to its phased opening. Again, it will be the first of its kind and another first for Merseyside. This new system is Government backed, and has aroused international interest. The Company designing and making the equipment expects to sell similar systems abroad, especially in Europe.

This is just the newest facet of a highly complex operation that most of us don't even see, and that most of us take for granted.

It is well worth a visit to the workings of the Tunnels.
Watch for details.

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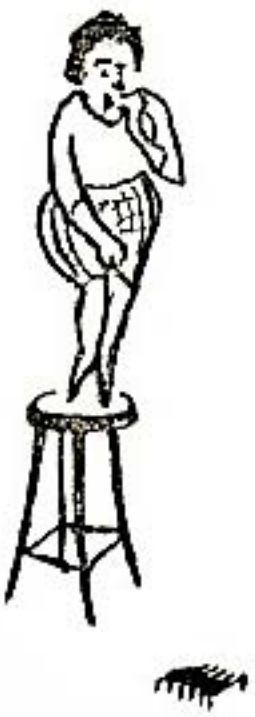
DID YOU KNOW.....?

A Japanese camera manufacturer is selling his new electronics marvels with a little slip of paper, telling the owner that they must only use one of the firms (expensive) dedicated flash-guns with the camera, as it "operates with a low voltage current".

Apparently, their service department don't know what a low-voltage current is either.



CER

HESWALL HOBBIES & LEISURE ACTIVITIES EXHIBITION

The above named exhibition takes place yearly in June and to my mind is an excellent "shop window" for a group to at least show that it exists. There must be other like "do's".

I did a stand for the Air Cadets for two years but staffing problems meant we had to give it up.

With a large club membership it should be possible for retired persons looking for employment and students to man a stand and both display and demonstrate what Amateur Radio is all about.

(A section could be devoted to RAYNET).

BOB - G8 XEX.

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BRISTOL RE's v LEYLAND TIGERS

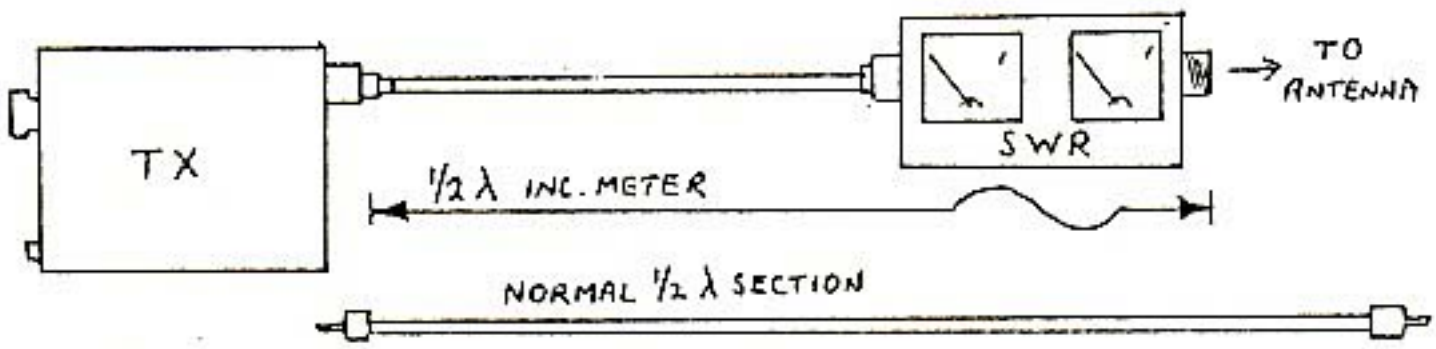
or, 'Is the Q Bus really dead?"

No, it's not about football, or the work of a dyslexic typist but, in fact, the names of three different buses, old and new.

In case you didn't know, there are several of our members interested in buses, coaches and trams. If you are interested, too, why not give G8 XEX or G8 TRY a shout to find out what's going on?

S.W.R. METERS

When an S.W.R. meter is placed in the output of a transmitter it has some effect on the overall system. To reduce the effect when you have removed the meter, it is suggested that the total coax from transmitter o/p to S.W.R. meter output = ½ wave (less the velocity factor of the cable)



Beware the length of cable in the meter will be longer than the box.

From a practical point of view, it means having different lengths for each V.H.F. band used. The length can't really be too critical at 2 metres.

BOB - G8 XEX

2-METRE ANTENNA GAIN DEMYSTIFIED

Sometimes you hear the popular coil-flex antenna, or "Rubber Duck", referred to as a "Rubber Dummy-Load". There's good reason for that moniker.

Disappointed with the range of my rubber-duck equipped hand-held, questions were put to those who know. Answer: "There are few radiators which are as inefficient as the rubber duck".

Power loss and gain are expressed in decibels (dB). Mathematically, dB is modified exponentially, not linearly; that is, a gain of twice the power is not 2 dB, but is expressed as 3 dB. A four-times power increase is expressed as a gain of 6 dB, and a ten time increase, 10 dB. dB may be used to express gain, when the power factor is multiplied, e.g. an increase of 20 times the power is equal to 13 dB (where P x 2 = 3 dB and P x 10 = 10 dB; 10 + 3 = 13). A dipole is used as a reference standard and has a gain of 0 dB.

The antenna with the least 'gain' is the lowly rubber duck; 8 to 11 dB below the dipole and 6 dB below the fictional isotropic radiator. Even the quarter-wave whip has a "gain" of 6 to 7 dB over the duck. Other factors being equal, one could expect the whip to increase range by a factor of four to six times! To squeeze out 3 dB more than a quarter-wave whip at the expense of convenience, try a five-eighths-wave whip on your HT!

Another problem: angle of radiation. A quarter-wave whip, whether auto or HT mounted, radiates vertically-polarized rf equally in all directions. This works well in mountainous country where the antenna angle is constantly varying, or on an HT when you don't wish to pay attention to the angle of the rig. The gain of 3 dB from a five-eighths-wave whip is at a narrower radiation angle, at the expense of the middle and higher angles. This makes the antenna a good choice for flat country, or for fixed-station use, but not so when used mobile in rolling countryside. I haven't heard of commercial five-eighths-wave antennas for HT's. The base coil would make it bulky, along with the added length, since a five-eighths-wave radiator without the base coil will exhibit lots of capacitive-reactance at the feedpoint. But you could try a homebrew version....

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IF YOU HADN'T NOTICED.....

Practical Electronics is doing a series on building a black and white TV camera, with both video and UHF line outputs.

A TRANSVERTER FOR THE 70CM BAND

A 2 metre to 70cm transverter was described in ELEKTOR in the June and October 1981 issues, as designed by P. de Winter PEØPJW, and a suitable 10w linear amplifier in the February 1982 edition, designed by J. Oudelaar, PAØJOU.

The system described is suitable for being driven by a 2 metre multimode with about 10w output. Elaborate mixing and filtering is done on the board, which uses striplines, to ensure that a clean output is produced, although this is only about 50mw at 70cms. The design incorporates what is virtually a dummy-load for your 10w transmitter to fire into and actually uses only a small part of the 2m input itself. The receiver section gives about 20 dB gain to the 70cm signal and attenuates image frequencies, especially those at 2m, by more than 60 dB. It features a BFT66 transistor in the 70cm front end to give low noise.

As far as I can tell, there is no provision for a 1.6 MHz shift to suit 70cm repeaters, and therefore your multi-mode would have to have this programmed in to use these, and of course you would be limited to a 2 MHz wide section of the 70cm band, unless you can make your rig cover more than 144-146.

The use of a 57.6 MHz crystal in the unit gives you the 432-434 MHz part of the band for 144-146 input. There appears to be no facility for switching this crystal to give coverage in other parts of the 70cm band.

The linear amplifier described in February's issue is a fairly straightforward device. It is designed for 50 mW RF input for 10W RF out. It is linear, as it is set for class AB operation. One unusual feature of the design is a thermally coupled temperature sensing stabiliser circuit, to protect the P.A. transistor. Component valves are given for either 12V or 28V supplies. There is no on-board RF switching on the linear or the transverter.

The transverter PCB is £12. 50. and the linear amplifier PCB is £2. 50. Constructors would be advised to wait a short while to see if any of the radio journals or magazines come up with any better ideas, and may like to consider the use of an RF amplifier module, available from several advertisers in Rad Com etc.

GERRY G8 TRY.

DID YOU KNOW..... ?

One large electronics firm is currently advertising a noise-cancelling microphone for use on all its legal FM CB rigs. According to the advert, the mic. behaves as normal until the pre-amp is switched on, when, according to them: "the audio amp ensures 100% modulation".

Could this be some kind of FM to AM add on accessory?

CONGRATULATIONS..... to PETER HILTON - G8 GYO

Promotion has taken Peter from our midst, to reside in St. Albans, Herts. We take this opportunity to thank Peter for his past contributions to the Wirral Amateur Radio Club, and to wish both Peter and his wife, Moira, every success for the future.

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W A R N I N G !

Hand-helds using rechargeable nicad batteries can explode if a conducive object shorts the charging contacts on the case. This can occur when hand-helds are carried in pockets. Here, pens, coins, or even pencil lead can short the charging contacts.

Hand-helds which have exposed charging contacts are more likely to be shorted than units which have the contacts inside the case or a plug-in accommodation.

When using a hand-held with a rechargeable pack, exercise care to ensure that loose metallic objects are kept clear of the charging contacts. A piece of vinyl tape over exposed contacts will reduce the possibility of shorting the battery. This especially goes for extra packs you may carry during public service events.

A shorted 12V nicad pack can generate a tremendous amount of heat in a very short period of time. Give this some thought and don't risk equipmebt or personal safety through carelessness.

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THE BEEB'S NEW CLOCK

Did you know that the BBC2 clock is now being produced electronically, and that the BBC1 clock is expected to follow suit in the near future?

The new digital design system has done away with the old cameras, slide scanners and mechanical clocks, it is cheaper to run and takes up far less space. It is also more reliable and has better resolution than the old system.

The picture seen by the viewer consists of the clock face with the BBC logo indicating the channel. The network logo for BBC2 is generated using run-length encoding where the data is stored in a PROM. Colour changes are limited by the size and speed of the data memory. The use of a buffer memory permits at least 64 changes on each line.

THINK ABOUT IT: No.2

Your antenna feeder, usually co-axial line, has a fixed characteristic impedance. A non-resonant transmission line is one terminated by a resistive load whose ohmic value is equal to this fixed characteristic impedance.

In this situation all of the energy put into the transmission line is dissipated by the terminating load. This load may be a resistor, or it may be an antenna whose radiation resistance equals the characteristic impedance of the line at the frequancy of the exciting source. If we ignore any line losses, a non-resonant transmission line will have the same value of voltage and current at all points along that line.

Any transmission line thus terminated is said to be matched.

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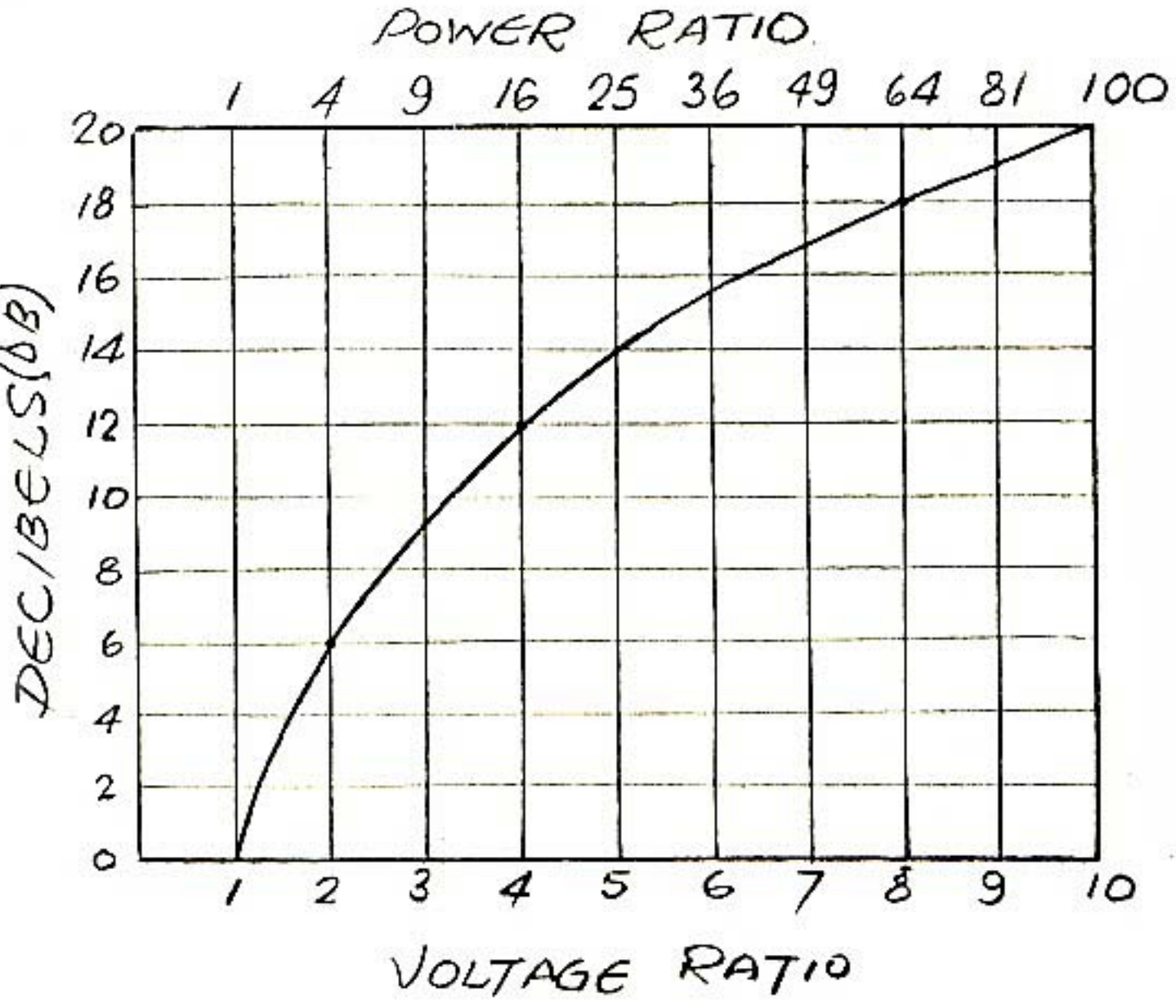
Now that we have your attention..... so many of you have interesting jobs and backgrounds - won't you consider sharing your experiences, in writing, with the rest of the members?

Don't forget that if you don't send us the stories, we will have to make some up!

This year, the BBC celebrates 50 years of broadcasting to the world; the Empire Service was opened in December 1932. Before that, however, Gerald Marcuse, G2NM, had been licenced by the Post Office to transmit broadcasts to the Empire. With a view to a possible radio programme, George Zitterstein, G8ITS, is interested in tracing anyone who knew or worked G2NM and would be grateful if they would contact him QTHR or on 01 638 5452.



THINK ABOUT IT: No.1

Simple decibel chart for voltage and power is shown above. Any antenna with a power gain of 6 decibels will have a power gain of 4 and will thus make a 10 watt transmitter sound like a 40 watt rig etc.

Remember that antenna power gain works just as well on reception as on transmission. The moral is that a good antenna with a high gain is usually cheaper than a big linear amplifier and will do you a lot more good. Nevertheless, I know you won't be happy until you have got both.

HANDLING MOS DEVICES.

With the continuing introduction of new technologies in various types of domestic equipment, it is extremely important that even greater care must now be exercised in the handling of complete modules, and especially any MOS (Metal Oxide Silicon) devices. MOS components can be particularly vulnerable to damage from static electricity, and this article contains a number of practical hints on the effective protection against such electrostatic charges and discharges. No attempt will be made to deal with the principles of stacic electricity in great detail.

The fact that insulating objects become charged during motion is encountered daily, the charge capacity depending to a large extent on the surface state of the object and the relative air humidity. The charge developed by walking over a synthetic carpet is an example from everyday life, and it has been calculated that voltages of between 2kV to 30kV can be expected.

To give some idea of the problems involved, the following factors play a contributory role in this form of static electricity -

(a) Relative atmospheric humidity
(b) Dielectric constant of carpet material
(c) Insulation capacity of floor
(d) Walking speed
(e) Contact pressure
(f) Capacitance of human body (can vary between 100 & 200pF)

It should not be assumed that only MOS devices are susceptible to static,since in fact all semiconductors and networks used in thick or thin-film techniques may be damaged by this stress, and even the peripheral circuits do not always guarantee the required protection.

However, particular risks do occur in MOS devices where the active parts consist of many high-resistance F.E.T's.In this technique, a very thin oxide layer forms an insulation between the F.E.T.gate, and its source and drain electrodes. Under normal circumstances, a negative gate voltage is required to allow current to pass between source and drain underneath the gate oxide, but in conditions where static exists, the layer can be punctured by the presence of too high a potential across the oxide layer, thereby causing damage to the device.

PROTECTION:

All MOS integrated circuits incorporate some form of built-in gate protection (capture diodes), but since any static discharge is generally faster than the response time of any practical protective circuit, it is still necessary to take precautions during storage and handling operations.

To afford maximum protection during transit, use is often made of a graphite-impregnated foam material, which has a typical resistance of between 10-10k ohms. The integrated circuit device is pushed into the material such that all the connector pins are joined together, consequently reducing any possible effects of static charge between pins to a minimum.

A second method to protect a complete panel module involves the use of conductive polyethylene bags which have a surfact resistance characteristic of 30-70k ohms/cm^2. These bags should be used in the return of defective modules for repair, to prevent damage to other devices on the panel during transit.

Even if no immediate damage through careless handling is evident, the life and reliability of a device may be drastically reduced by static, thus making a potential failure even after the equipment has been working for some time.

NEWS FROM...

RAYNET
RADIO AMATEURS EMERGENCY NETWORK
VOLUNTARY EMERGENCY RADIO

23rd February, 1982

By the time that you read this the Wirral Raynet Group will have held its Annual General Meeting on the evening of Tuesday 9th March and hopefully approve its constitution, set a small membership fee (to cover postage, etc) and selected its Controller, Secretary and Treasurer for 1982.

I still have a few Raynet Manuals left which I will be only to delighted to give to any new person joining the group. Application forms and further particulars about what Raynet is, where and when the next meeting will be, can be got by dropping a line to me, Ian Brooks (G8PMW) at 28 Paignton Road, Wallase L45 6TT.

Events for 1982 will be a North West Metropolitan Counties Raynet Stand at Belle Vue, and possibly providing radio links for the first aid services during the Pope's visit. If not here on Merseyside, definitely in Manchester. I am sure the new group committee will continue the work of publicising the services we can provide.

Congratulations to the 32 students who passed the December Radio Amateurs Examination at North Wirral College of Technology and the best of luck to the 52 (definitely the final number since I have now posted the entries) for May.

PRACTICAL PRECAUTIONS TO BE TAKEN.

1. MOS devices should always be stored in their original packing until required for assembly.

2. Faulty devices/modules should only be transported in special anti-static bags and the original packing.

3. Never handle an integrated circuit by its pins - always hold the casing.

4. Whenever possible, personnel handling MOS devices should wear anti-static clothing such as cotton, and NOT wool, silk or synthetic fibres.

5. MOS devices should not be inserted or removed from a panel with the power switched on. They should be the last components to be soldered intoa panel whilst carrying out any repairs, and it is strongly recommended that conductive tape and/or clips be placed on the terminals during this operation.

6. Ensure that any test equipment, soldering irons, etc., are either earthed or at the same potential as the module.

7. When working on a panel away from the receiver, place it on a piece of conductive foam before carry ing out repairs or checks.

8. Before handling panels and/or MOS devices, check to see if you are in a CHARGED STATE.

SIMPLE TEST FOR STATIC CHARGE.

Suspend a length of cotton from a suitably hooked piece of wire bent to act as a stand. If the cotton thread is ATTRACTED when the hand is held near the cotton, this is an indication that a static charge exists.

REMOVE BODY STATIC BY PLACING BOTH HANDS FIRMLY ON A TRUE EARTH POINT.

Check for body charge again using the cotton thread, and repeat earthing operation until no static exists.

COMMITTEE MEMBERS CORRESPONDENCE

RADIO SOCIETY OF GREAT BRITAIN

Patron: HRH The Prince Philip, Duke of Edinburgh, KG Member Society: International Amateur Radio Union Founded 1913, Incorporated 1926.

TO: SECRETARIES OF ALL AFFILIATED SOCIETIES

FROM: THE CHAIRMAN, HF CONTESTS COMMITTEE

DATE: 18 NOVEMBER 1981

Dear OMs,

In checking the two most popular hf club events, AFS and NFD, we are constantly aware of the difficulty that many clubs experience in raising sufficient cw operators to make a worthwhile entry. I should like to draw your attention to various minor contests that are organised with precisely this in mind and suggest that you may like to publicise these within your club, possibly encouraging some internal club rivalry!

Cumulative Activity Periods (full rules - December RadCom)

These are for the real beginner. Eight short two-hour periods on top-band and eighty metres spread across four weeks. Entrants can select their two best periods to count towards their score. In addition entries can be credited to an overall club score thus adding a little inter-club rivalry. These periods take place during January.

ROPOCO (full rules - March and July RadCom)

These events take place during April and August. ROPOCO stands for ROtating POst COdes. The contest is as different as it is fun. In each successive contact, instead of the usual serial number, you send the postcode that you received in the previous contact. With the varying length and format of codes, this is really good cw practice. Again, these are of short duration - two hours.

Of course, there are many other cw events which provide additional practice and full details of these appear in RadCom. Naturally, towards the top of the scale there is intense competition, but at these levels, as much as further down the tabulations, contests cater for one of the most important of our licence requirements - self-training in operating techniques. But perhaps even more important is that they are extremely satisfying and great fun! Please do not hesitate to get in contact with any member of the Committee, who will be pleased to provide you with further information and advice.

Best wishes,

D.J. Andrews

D.J. Andrews, G3MXJ
Chairman, HF Contests Committee

RSGB Headquarters: 35 Doughty Street, London WC1N 2AE. Telephone: 01-837 8688 Telex: 25280

Wirral Amateur Radio Society

(Affiliated to the Radio Society of Great Britain)

H. G. LEE
HON. SECRETARY
30 MANOR DRIVE
UPTON, WIRRAL
MERSEYSIDE L49 6JF
TEL: 051 677 1518

Please address your reply to:

26th November, 1981.

Dear Ian,

Will you please convey to your Chairman and members our sincere appreciation of your very kind hospitality last night. It was an excellent function, organised superbly and very much enjoyed by our members.

Yours sincerely,

Gordon
G3UJX

Ian Brooks, Esq.,
28, Paignton Road,
WALLASEY.
L45 6TT

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

EXPEDITION TO NORTH WALES,(CROOKED HORN PUB)

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

DATE.

THE EXPEDITION WILL TAKE PLACE ON THE WEEKEND OF FRIDAY 30TH,APRIL TO MONDAY THE 3ED,MAY 1982.

LOCATION,

THE SITE IS APPROX 2 MILES FROM HOLLYWELL AT A LOCAL PUB CALED THE "CROOKED HORN"

DIRECTIONS,

FROM QUEENSFERRY FOLLOW SIGNS ON THE A55 TO HOLLYWELL, ON REACHING HOLLYWELL THERE WILL BE A PART OF THE ROAD THAT WILL NARROW AT A CROSSROADS WITH TRAFFIC LIGHTS. A LARGE SIGN WILL SHOW HOLLYWELL TO THE RIGHT. WE TURN LEFT (DOUBLING BACK ON OURSELVES) UP TO THE TOP OF THE HILL. AT THE CROSSROADS WE TURN LEFT AND THE SITE IS APPROX 2 MILES DOWN THE ROAD ON THE LEFT. WHEN YOU REACH THE PUB THE SITE IS TO THE RIGHT OF THE MAIN BUILDING AND ACCESS IS VIA THE GATE AT THE SIDE INTO THE FIELD.

THE EXPEDITION IS MAINLY INTENDED TO TEST AND CHECK THE FIELD EQUIPMENT INCLUDING ANY NEW ADDITIONS . IF ANYONE WOULD LIKE TO TRY A NEW AERIAL OR RIG, THEN THEY ARE WELCOME TO BRING IT ALONG.

CATERING.

FOOD ETC, CAN BE PROVIDED FOR ANYONE WHO WANTS IT,PLEASE CONTACT ME BEFORE SO I CAN WORK OUT FOOD REQUIRED. THE PUB CAN ALSO DO FOOD AS REQUIRED IF YOU WISH TO PAY PUB PRICES. SLEEPING TENTS WILL BE AVAILABLE FOR ANYONE WHO WISHES TO STAY

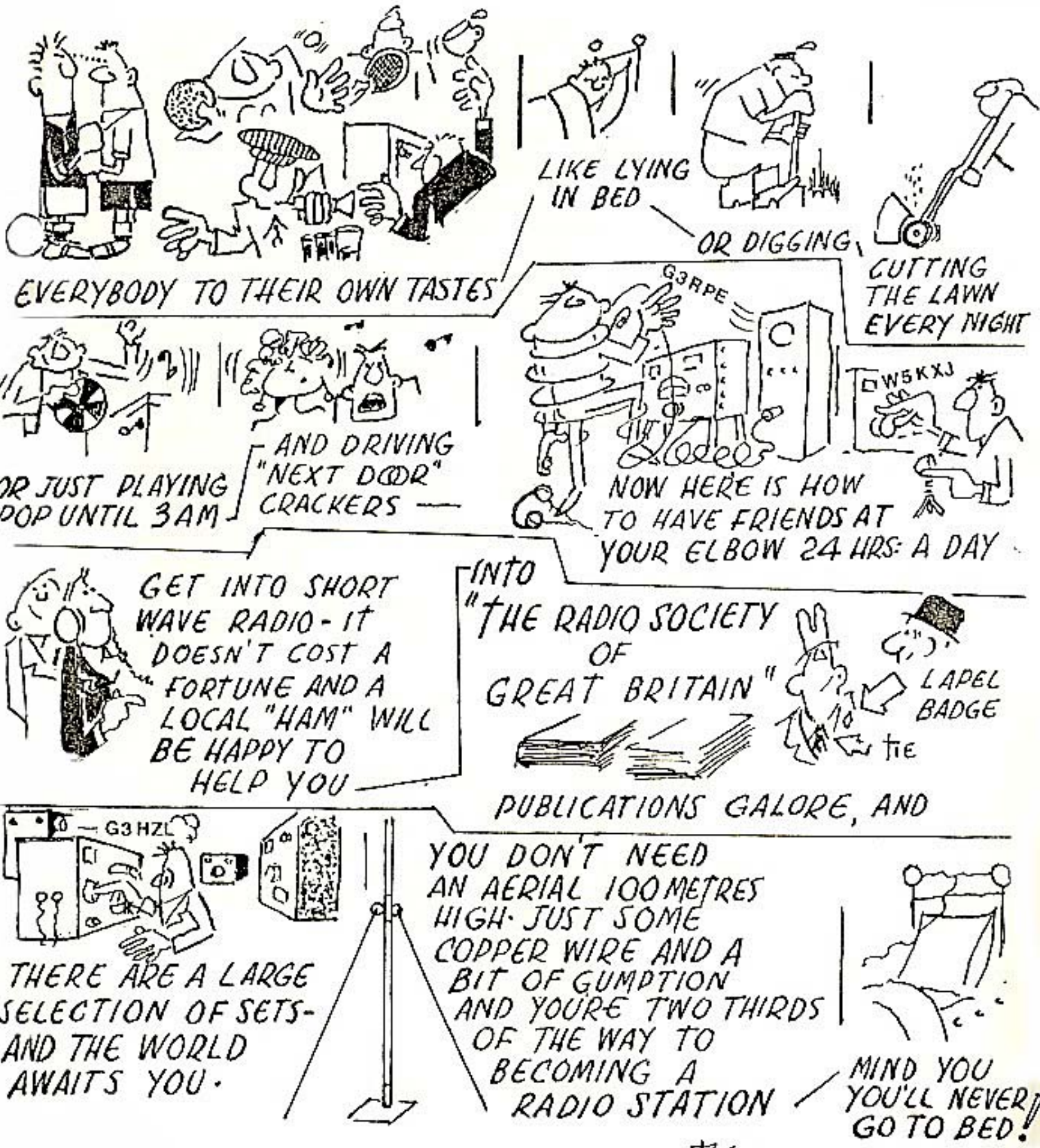
WE WILL BE STARTING FROM THE CLUB STORE (AT THE REAR OF THE PENSBY HOTEL) AT 6.30PM ON FRIDAY NIGHT ARRIVING ON SITE AT APPROX 7.30PM WHERE WE WILL MAKE CAMP FOR THE NIGHT. STAYING SATURDAY,SUNDAY AND RETURNING MONDAY AT APPROX6 PM TO THE CLUB STORE TO UNLOAD EQUIPMENT ETC,

ANYONE WHO IS INTERESTED IN GOING FOR PART OR WHOLE OF THE WEEKEND PLEASE CONTACT ME AT ANY CLUB MEETING OR AT THE ADDRESS. AND REMEMBER THE EXPEDITION IS NOT A CONTEST SO YOU CAN DO ANYTHING YOU WISH ON THE BANDS WITHOUT THE FEAR OF LOOSING POINTS.

I HOPE TO SEE YOU ALL THERE EVEN IF ONLY FOR PART OF THE WEEKEND.

ALAN SMITH, G4EFP.
72, CHURCH ROAD,
BEBINGTON.
TEL...645.3826, AFTER 6 PLEASE.

We reproduce the following without comment, except that for some of us the last statement is painfully true.....



62627878 HEATE G

25280 RSGBHQ G

THE NEW SCHEDULE TO THE AMATEUR LICENCE

FROM THE RADIO SOCIETY OF GREAT BRITAIN

THE SOCIETY HAD A MEETING WITH THE HOME OFFICE ON 25 FEBRUARY REGARDING THE NEW SCHEDULE TO THE AMATEUR LICENCES PUBLISHED ON 12 FEBRUARY 1982. THE HOME OFFICE ACCEPT THAT THERE ARE A NUMBER OF ERRORS IN THE SCHEDULE AS PUBLISHED IN THE LONDON BELFAST AND EDINBURGH GAZETTES, AND THEY INTEND TO PUBLISH A REVISED SCHEDULE AS SOON AS POSSIBLE. HERE IS A SUMMARY OF THE MAIN POINTS WHICH EMERGED FROM THE MEETING.

1. ON FRIDAY 26 FEBRUARY, THE LONDON, BELFAST AND EDINBURGH GAZETTES WILL CONTAIN A STATEMENT CORRECTING THE POSITION WITH REGARD TO CLASS B LINECCEES - THEY MAY NOT OPERATE BELOW 144 MHZ. THE LINE IN THE SCHEDULE IMPLYING DECREASED POWER LEVEL ON 80 METRES IS INCORRECT, AND THE LEVELS OF 9 AND 15 DBW APPLY ONLY TO THE 160 METRE BAND.

2. THE POWER LEVEL ON 70 CM SHOULD BE 26 DBW, WHICH IS EQUIVALENT TO THE 400W OF THE OLD SCHEDULE. J3E - SUPPRESSED CARRIER SINGLE SIDEBAND - WAS OMITTED ON THIS BAND AND WILL BE REINSTATED. EMISSIONS IN THE 430-440 MHZ BAND WERE EXPRESSED IN A MISLEADING WAY, AND THE SITUATION IS THAT ALL MODES APPLY TO THE ENTIRE BAND. THE SATELLITE SERVICE ON 70 CM WAS EXPRESSED INCORRECTLY, AND SHOULD READ 435-438 MHZ.

3. FOOTNOTES 17 AND 18 ARE UNDER IMMEDIATE REVIEW. THE SOCIETY IS UNHAPPY ABOUT THE CONCEPT OF EIRP LIMITATION ABOVE 1 GHZ, AND THE HOME OFFICE ARE URGENTLY CONSIDERING WHETHER TO RETURN TO THE OLD SYSTEM OF POWER MEASUREMENT ON BANDS ABOVE 1 GHZ AS AN INTERIM MEASURE FOR THE REVISED SCHEDULE TO BE PUBLISHED SOON.

4. DESIGNATIONS FOR PHASE MODULATION WERE OMITTED AND WILL BE REINSTATED.

THESE AND OTHER CORRECTIONS WILL APPEAR IN A REVISED SCHEDULE, TO BE PUBLISHED IN A FEW WEEKS. WE ARE MEETING THE HOME OFFICE AGAIN ON MONDAY AFTERNOON TO DISCUSS THE BROADENING OF THE CLASSES OF EMISSION WRITTEN INTO THE NEW SCHEDULE, AND A FURTHER MEETING WILL TAKE PLACE ON FRIDAY TO DISCUSS A REVISED FORM OF THE ENTIRE SCHEDULE DOCUMENT. AT THE MEETING THIS THURSDAY, THE RSGB SUBMITTED ITS OWN VERSION OF THE SCHEDULE, WHICH IT WOULD LIKE TO SEE ADOPTED. THIS WILL BE DISCUSSED IN THE NEAR FUTURE.

ALL IN ALL, A GOOD RESULT SO FAR.

SIGNED

J H NELSON, G4FRX
ASSISTANT TO THE GENERAL MANAGER

25280 RSGBHQ G

MEMBERS' ADS.

* DASH MOUNT PYE CAMBRIDGE

AM and FM switched, plus tone burst, crystals for 145.0, 145.2, MHz. S20, S22, R6. Two new output valves. ..... £ 35. 00.

Contact Robert Parry, G8 KJZ - 051-677-8654.

****

* ATARI VCS TELEVISION GAME

with 8 game cartridges, extra paddle controllers, keyboard controllers. Complete, or will split. ..... Offers

Contact Andrew Patterson, G6 AGP - 051-648-2867.

****

* YAESU FT 202R

1½ watt, 6 channel, hand-held, for 2 metres FM. Crystalled for S20, S21, S22, S13, R5, R6. Includes nicads and base charger. ..... £100. 00. O.N.O.

Contact Graham Stamp G8 MNS - 051-639-7698.

****

* TRIO 7010

2 metre SSB/CW 10 watts V.G.C. ..... £ 80. 00.

Contact via Peter Denton G6 CGF - 051-630-1467.

****

* STARPHONE

70cm SF1 portable with case. Fitted Xtals 433.2 Charger module and two batteries (50%). ..... £ 25. 00.

Contact Gordon Nicholas G8MNM - 051-336-7143.

****

ANSWERS

New Brighton; Moreton; Raby; Irby; Caldy; Newton; Upton; Neston; Wallasey; Tranmere; Cayton; Frankby; West Kirby; Storeton; Rhyl; Meols; New Ferry; Wirral; Ness; Hooton; Stanney; Stone; Arno; York.

(Answers below)

N	E	W	F	E	R	R	Y	O	R	K	W
W	E	S	T	K	I	R	B	Y	X	H	I
S	H	O	O	T	O	N	K	O	L	T	R
S	T	O	R	E	T	O	N	L	Y	H	R
E	P	E	R	E	M	N	A	R	T	M	A
N	U	P	T	O	N	S	R	E	W	O	L
O	O	S	L	O	E	M	F	Y	B	R	I
T	L	N	T	Y	D	L	A	C	A	E	S
S	T	W	R	B	Y	E	N	A	T	S	N
E	E	E	R	U	A	G	A	Y	T	O	N
N	E	W	B	R	I	G	H	T	O	N	E

FIND THE PLACE NAMES