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Editorial

This issue sees several new items. One is "Club News" which is an attempt to keep everybody up to date with club activities. Pen Portraits is self explanatory and we hope to feature one of our members in each issue. The third new item is "What's in the Journals" which abstracts some of the items which may be of interest to us.

We hope to produce the next issue early in March in readiness for the A.G.M.

Our grateful thanks to our contributors for their efforts.

The only job left for me is to wish you all a very Happy Christmas and lots of DX in the New Year. See you at the Dinner,

Arthur Porter, G2CDX
 37, Metcalfe Road,
 Cambridge,

CLUB NEWS

First, comments on a number of recent items.

---o---o--

Everything seemed destined to go wrong with the attempt to take part in the M.C.C. contest. It started with the collapse of the pole and ended right there!!

---o---o--

In contrast the Amateur Television demonstration on November 20th, really hit the jackpot. Very good pictures were received from G3NOX/T and we all enjoyed the programme put on by Jeremy and his helpers. "We were able to work cross band on two metres and so ask questions during the show. When we were clear with Jeremy we went outside, turned the aerial and Bill G6PGF/T was waiting for us. The antenna was more screened in this direction but nevertheless good pictures were received but with a slightly higher noise level.

Our thanks, once more for all those who made this evening such an outstanding success.

Details of the transistor pre-amp used are on pages 10 & 11 .

--o o--

About fifteen of us paid a visit to the British Relay Wireless station in Green End Road. Imagine our surprise to be told that the system is based on a carrier frequency of 3.75 Mcs, but apparently no real trouble even from the high powered boys on 80. Hi.

The staff took endless trouble to answer our questions and to make the evening a real success. Not forgetting the lady who provided us with coffee and biscuits.

--o - o--

The "Introduction to Amateur Radio" has been postponed. It will be put on in the coming year.

Regular visitors to the H/Q will have seen that we have obtained an Eddystone 750 which appears to be in good condition, At the moment the performance cannot be judged because of the lack of a suitable aerial. The erection of the aerial was arranged to take place in preparation for the M.C.C. contest on November 21/22nd, but one of the guy wires broke and the pole collapsed just missing Stan. It was then too late to replace the guys and re-erect the pole. Heavier material for the guys has been bought and we will organise an aerial erecting party as soon as possible. In the meantime we hope to lash up a temporary long wire.

Plans are also afoot to re-equip the station and volunteers will be wanted for various projects, (details later).

The club has acquired a signal generator type CT53 for the use of members. This tunes from 8.9 "to 300 Mcs* with a gap from 15*5 to 20 Mcs. It therefore covers the following amateur bands, 14, 21, 28, 70 and 144. We have also been extremely fortunate in being able to buy one of the petrol electric generators that we occasionally used to borrow. This has now removed one of our field day problems.

Talking of field days did you see that we managed to come 36th in N.F.D, and this, in spite of all the troubles that we had. If all the club members really made an effort there is little doubt that we could really top the lists. Yfay not start thinking now what you could do to help!!! Operating to tea-making!!! All equally important.

What about taking part in V.H.F. National Field Day this coming year and why not a portable D.X.pedition to some rare county. Joint Top-band and V.H.F.??'

It has been suggested that we have a calling time and frequency on two. 21.00 to 21.15 GMT on about 145.1 Mcs on Tuesday evenings. Don't forget to look for G3PTB.

By the time this edition of the Cambeam reaches you it will be almost 1965 and the start of a new Club year. May we remind you that subscriptions are due on January 1st.

For the benefit of new and prospective members the subscriptions are always renewable on the first of January but the amount of the first subscription is based quarterly. That is: - January £1, April 15/-, July 10/-, October 5/-«

Repeat - New Members only:

The clubroom is open most Friday evenings from about 7-00 p.m. (Not Good Friday, Christmas etc, or when there is another Club function, such as the Dinner.)

The committee try to arrange for speakers from away and other specially arranged meetings to take place on the first Friday of the month where possible.

We have been pleased to see that the attendance at the "informal" or "activity" evenings has been averaging around twelve and if anything gradually increasing.

Club Library

Some time ago we started a library for the benefit of club members. The Club regularly gets its copy of the R.S.G-.B. Bulletin and from time to time we have had gifts of American magazines. It is our policy to extend the library by purchase of books whenever we can afford it. One such recent addition is a copy of the Radio Data Reference Book.

Copies of recent books and magazines will always be appreciated.

Letters_to the Editor

Dear Sir,

Thank you for sending me a copy of the Cambeam. May I offer you my congratulations on its production. Unfortunately It only seems to cater for the V.H.F. and Television types. What about the rest of us? Do we no longer exist?

When are we going to get something for the S.W.L., the top band phone nets, the top band C¥ DX boys, for those on S.S.B. on 80, for the DX merchant on 40, and last but not least those of us who spend what little time we have on 20, 15 and even 10 when it is open?

I am sure something is being done. But what is it?

73 's -----

No there wasn't a signature. Perhaps he didn't intend to sign it or perhaps he just forgot.

The Editor doesn't like anonymous letters but we feel that at least one reader took Stan's invitation for criticism at its face value. So come along chaps if this is what you want,, some of you had better get your pens to work and help me out on this*

I also had a signed letter from G2CNT with a number of suggestions that can be followed up*

The Editor would like also to take this opportunity to thank G3IAG for the loan of magazines from other clubs.

From the Commercial World

Mullard have a valve on their lists with a slope of 120mA/V. The QV08/200. The anode current is 3 Amps at 90 Volts H.T.

If you are interested in "one-up-manship" why not buy a General Radio Go's Frequency Synthesiser in 1Mcs. - QRX OM while I QSY 178.3 cycles. The price only \$ 5000 in the States.

EVENTS DIARY 1965

Friday, Jan. 8th. Informal
 Friday, Jan.15th. G3NQX/T.
 Friday, Jan.22nd. Annual Dinner. University Arms Hotel.
 Tickets 25/-.
 Weekend Jan.23/24th. Affiliated Societies Contest,
 Friday, Jan.29th. Activity Evening. Tape Recording.
 Weekend, Jan.30/31st. 144Mcs Contest (C.W.).
 Friday, Feb. 5th. Junk Sale.
 Friday, Feb. 12th. Informal
 Weekend; Feb.13/14th. ARRL DX Contest (Phone).
 Sunday, Feb.14th. First 70McS. Contest.
 Friday, Feb. 19th. Demonstration of Eddystone
 Rxs.
 Weekend, Feb. 20/21st. BERU Contest.
 Friday, Feb. 26th. Informal
 Weekend, Feb.27/28th, ARRL DX Contest (CW)
 Friday, Mar. 5th. Arthur Milne G2MI.
 Weekend, Mar. 6/7th, Second 144 Mcs Contest (Open)
 Friday, Mar.12th, Converter Discussion,
 Weekend, Mar.13th/14th. ARRL International DX
 Contest.
 Friday, Mar.19th. Annual General Meeting.
 Weekend. Mar.20/21st. First 1.8 Mcs. Contest.
 Friday, Mar.26th. Activity Evening.

STOP PRESS

Members will learn with regret of the death of T.A. St. Johnston
 G6UT known to everyone as 'Uncle Tom'. His passing is indeed a
 loss to Amateur Radio.

THE ANNUAL DINNER

This year the dinner is being held on January 22nd, in the University Arms Hotel, Cambridge. The guest of honour will be Eric Yeomanson G3IIR who is President of the R.S.G.B.

Numbers are unfortunately limited and tickets at 25/- per head are already going quite fast. So don't delay. Get in touch with Bernard G3IIT if you want to be there.

JUNK SALE

We are having our first sale of the year on Friday, February 5th. We have been criticised in the past for using the expression 'Junk', but common usage is in our favour, for you all know what we mean - and we don't mean rubbish. Please bring along useful items that you no longer have a use for and be prepared to buy some yourself.

For newcomers. The prices asked and obtained are usually low. The club deducts a small percentage for handling.

If you want or have for disposal larger equipment, such as receivers or transmitters, why not try an advert in the Cambeam? It may catch the eye of the one person you did not ask.

Arthur Milne G2MI

Every one of us associates the name of Arthur Milne G2MI with the Q.SL Bureau. He is and has been for many years on the Council of the R.S.S.B. and has served the society in many ways. He has chosen "Q.SL Bureau and Other Hatters" as the title of his talk.

Annual General Meeting

This has been fixed for March 19th.
Details in next issue.

Handy Hints 3.Low Cost Open Pair Feeders

In our last issue John gave details for making spreaders from short lengths of coax* Another type of cheap spreader can be made using the outer cases of discarded ball point pens. The ink container (now empty) is removed from the outer case by giving a sharp pull on the metal tip. This leaves you with a plastic tube about 5 inches long and about 5/16 inch in diameter.

Holes are now drilled in each end 5/8" from the tips. The drill size is chosen so that the wire is a fairly good fit. The next job is to cut a saw slot from the tip until it meets the hole.

The wire can now be sprung into the holes and fixed by softening the plastic with a hot soldering iron.

If you don't like splitting the ends, the wire can of course be threaded through.

You probably don't use sufficient pens your-self, but a word to your friends, neighbours and relatives will soon get you enough.

P.S. to the wealthy. You can use new pens!!

Handy Hints 4.Fuses

If, when constructing equipment you have forgotten to buy the fuses and holders and want to get on, don't forget that pilot lamps and holders can be pressed into service. They have a number of advantages. They are small and neat and can usually be replaced if necessary by removing the dial lights.

G3TEJ.

WHAT'S IN THE CURRENT JOURNALS

Under this heading, we will try and give brief abstract of some of the articles which have some link with amateur radio. The idea of this item comes from QUA the magazine of the Southern Hampshire group.

Transistor R.F.; Power Amplifiers. M.V, Bond

Wireless World Dec. **1964**, 594.

Discusses R.F. Amplifiers using Silicon Planar transistors at frequencies up to 100Mcs. Several circuits with values.

Short Wave Magazine Dec. '64 has the design and construction of a 30 watt TX for 'phone or CW using all Transistors, There is also the design of a communications RX based on the "Electroniques" QP 1 66 front end* It is a double superhet using 1,6Mcs and 85Kcs IF¹ s and has a product detector, Q multiplier, noise limiter and 100 Kcs calibrator,

RSGB Bulletin. Dec. '64.

The main constructional article this month is on the G3IAS transistorised electronic keyer. There is also a wobulator for communication receiver alignment. It is designed to cope with I.F frequencies of 50 Kcs to 2 Mcs.

All these magazines report on the R.S.&.B. International Radio Communications Exhibition.

The Editor would appreciate items for inclusion in the feature from those of you that have access to foreign radio journals and the rarer British ones. If they are difficult to obtain, it would help if you could give some idea from whom they could be borrowed.

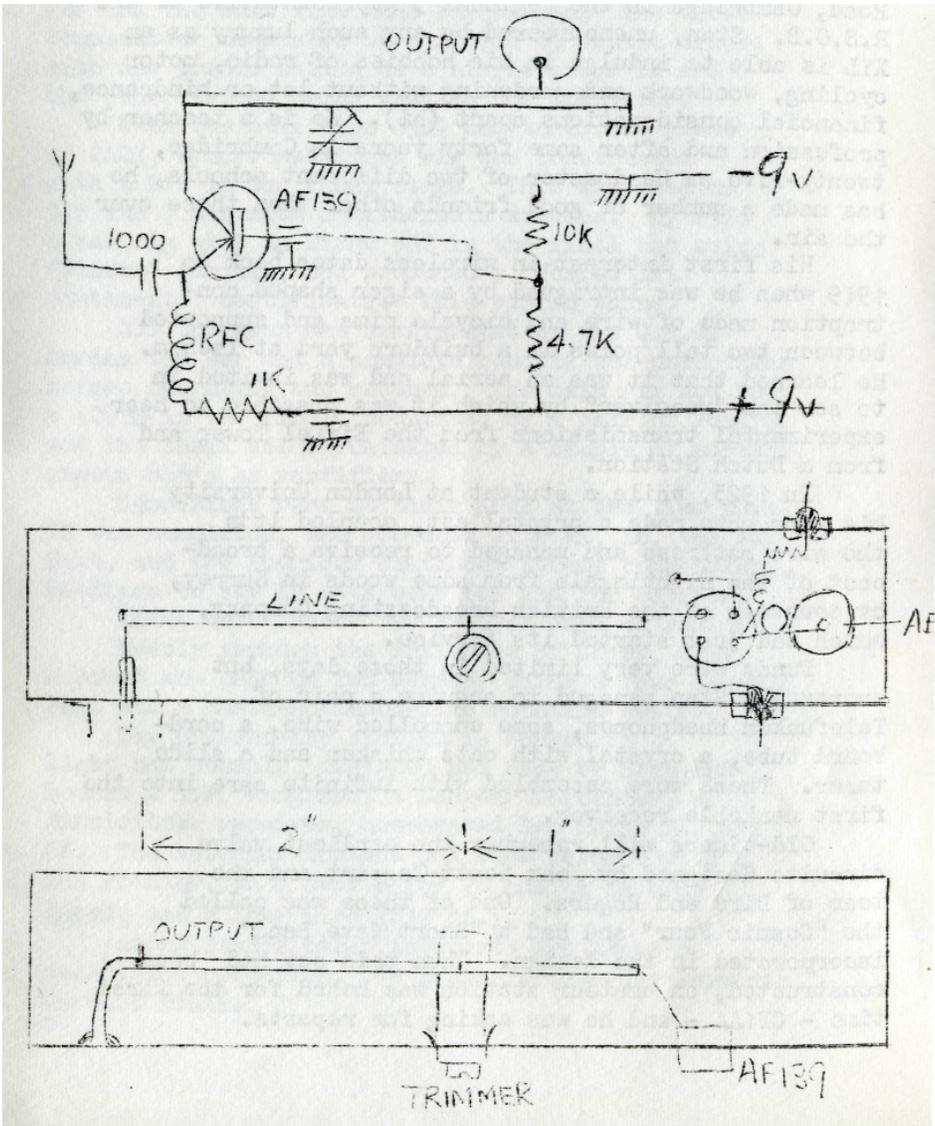
Transistor Pre-amp for 70 cms.

The performance of the converter described in the previous issue can be improved, particularly as regards noise level, if it is preceded by this pre-amp, The antenna is fed into the emitter via C1 (1000pF), The D.C. return being through the RFC L which is 5 turns of 22 SWG enam. 1/8 inch in diameter, self supporting and the 1I resistor. The base is earthed to RF by the feedthrough C2 500pF, and is biased by the potential divider 10K and 4.7K across the power supply. The collector circuit is a line of 12 SWG- copper wire 3-1/2 inches long. It is earthed at the far end by being soldered to the chassis, the output is tapped down 1/2" from earth and the tuning is by means of an Erie type 535 miniature trimmer. This is 2" from the output tapping. The chassis is in the form of a trough about 5" long end 1" wide and deep. The circuit and sketches are on page 11 . The miniature trimmer (0.5 - 3.0pF) is obtainable from "Henry's". The Transistor is an AF139

These pre-amps are already in use at a number of local stations. It should be possible to get a look at one if you intend to build.

Will someone have a go at modifying it for Two metres?

For the benefit of those brought up on thermionic valves, the circuit is similar to the grounded grid configuration. (Without the bother of the heater supply.)



Fen Portraits, No. 1. G5BQ

Our first pen portrait is that of our President, Stan Granfield G53Q, Stan who lives at 4-7, Warren Road, Cambridge is the Regional 5 Representative of the R.S.G.B. Stan, unencumbered by any such luxury as an XYL is able to indulge in his hobbies of radio, motor cycling, woodwork and gardening without let or hindrance, financial considerations apart (hi). He is a teacher by profession and after some forty years in Cambridge, twenty-five as Headmaster of two different schools, he has made a number of good friends other than those over the air.

His first interest in wireless dates back to 1919 when he was intrigued by a 6igcr shaped contraption made of wire and bicycle rims and supported between two tall poles in a builders yard at Iseham, He learned that it was an aerial and was invited in to see the "receiver", by which it was possible to hear experimental transmissions from the Eiffel Tower and from a Dutch Station.

In 1 32\$} while a student at London University his room mate made a crystal set, coupled it to the wire mattress and managed to receive a broadcast of the nightingale from some woods in Surrey, by courtesy of the British Broadcasting Company, which had just started its service.

Funds were very limited in those days,, but eventually Stan managed to acquire a pair of Telefunken headphones, some enamelled wire, a cardboard tube, a crystal with cats whisker and a slide tuner. These were assembled with infinite care into the first workable receiver.

Old-timers will remember the earliest valve circuits designed by John Scott-Taggart and the team of Bird and Rogers. One of these was called the "Cosmic Four" and had a "Short Wave Band" incorporated in the design. When this set had been constructed, an amateur station was heard for the first time - CT1AA - and he was asking for reports.

A letter was sent off to Lisbon and some time later the first QSL card arrived.

In course of time an AA licence was applied for and the call sign 2AQX was issued. The first transmitter consisted of a single 53 double triode with one triode acting as a single stage TX and the other triode being used as the modulator.

When the call sign G5BQ had taken the place of 2AQX, a more ambitious rig was constructed with a 210 in the final stage. This was used on 3.5 and 7 Mcs with considerable success. By 1937 a new rig with an Eimac 35T in the final and using "Windom" aerials, had produced a "Worked all Continents" certificate. This was on phone»

All the gear was confiscated by the G.P.O. during the War and a complete rebuilt was undertaken before operating was resumed. The main rig now had a 100TH in the final, modulated by a pair of 203A's, and the shack was illuminated by a couple of mercury vapour 866's as rectifiers.

Conditions were at their peak at the time this TX was completed, and contacts with VK, ZL, the Par East, and the American Continent became commonplace, Needless to say TV sets were few and far between.

These were indeed the halcyon days of radio.

Mainly through the influence of Gerry, G2XV, a start was made on Two Metres, using a four element Yagi and a Heath-Robinson-like rotating system.

The present-day station is housed in a light oak console, designed and made by Stan and houses a K.W. Vanguard, a Labgear Topbander, a Minnimitter receiver, homebrewed Two Metre TX, and EX. The antennas include a J Beam cover 6 with a CDS rotator, an 8 over 8 for 70 cms, a JCff trap dipole and a long wire (132 ft.),

Among Stan's other interests are Amateur television reception. We await further developments in this field*

"160" In Brief

As a rule "160" is called the boys' band where the green G3+3 cuts his first teeth, meets the locals in the Sunday morning nets, learns a bit of operating sense, then moves on to the obscurity of the HF bands. The S.W.L. will scan 160 when the DX bands are tucked up in bed. Perhaps he will dig out a bit of DX among the many queer noises on this band.

Not many amateurs can operate successfully on 160 due to the aerial height and length problem. "Any old piece of wet string" will do to work the locals but to really get out you need either a quarter wave or better still a half wave antenna. The big DX types have a really lofty vertical or a balloon borne monster to put then at the top of the operating tables. But remember this, whatever the aerial, the three little words Standing Wave Ratio must be looked into. Ten watts of input power is a poor show anyway and about six watts of RF are available to push "up the spout". The lower the S.W.R. the more work these watts will do and the lower the TVI.

These factors will make many people think that the population of 160 must be pretty low and it is. Take contests for instance. There are four or five a year, MCC organised by the "Mag", the GQ world wide DX contests, and the two R.S.G.B. contests (where were the Cambs. entries? In the latter?) Most of these contests are short so the scoring rate must be high, A contact every two minutes is a fair average and the operator needs good ears (and a stout heart) to deal with the noise level.

Moreover, contests are not everyone's cup of tea, A subject, nearer to most operators hearts is that of DX 160 has it's own types of DX, not only the long distance stuff but also the rare English counties type. During the summer months a handful of keen types pad- some
/gear

gear, a tent or two and a "genny" into their car find somewhere to please both themselves and the XYL and off they go. Result, another rare county on the air, pursued by county hungry G's. G3JEQ is a good example of this type of work and to my mind deserves a medal for his efforts.

European DX can be worked all the year round and the number of countries increases yearly. A short list includes OK, DL, HB9, OE, YU, LA, OZ, PAO, and HA, Some are only licensed for the winter season, which increases their rarity. The longer distance DX is only for the sleepy-eyed type in his pyjamas, sitting in the shack between 03.00 and 06.00. He will find such gems as W, VE, HH, KP4, VS6, ZL and even VPS. Moreover, the 20 metre man will look down his nose at you for getting up early (the XYL will have you certified) as he can work all these countries at noontime, but the 160 sound and thrill is much different. Work your first top-band W and the thrill will last you half a lifetime.

This then is a brief tribute to 160. It's a noisy band, plagued with static, fish phone. Loran, beacons and the Hy-Pix but it is still underestimated. Try it once in a while and be surprised. At least you will be sure of working something all round the clock.

John Cutler G3KBC,

Since John sent this in he has worked VO 1 FB (frequency 1807 Kcs) and 9L1TL in Sierra Leone. Nice work John,

Will someone who works the DX bands send me a review of some of the other bands?

The gales are really raging while this is being written. How many antennas are down and how many wished that they had rented the guys and halyards? Ye wonder.

PILES BETTER BARGAINS

Authorised dealer for the following firms:-

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