T. & R. Bulletin

Incorporating

The Journal of the Inc. Radio Society of Great Britain

(BRITISH EMPIRE RADIO UNION)

Vol. 4. No. 5. November, 1928 (Copyright) Price 1/6

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See "The Wireless World," Nov. 7th issue, page 640.

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The following can be obtained from Headquarters on application :—

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A.R.R.L. Handbook, by HANDY	4/-
Citizens' Radio Amateur Call Book	4/-
International Washington Convention Books ...	3/-
Enamelled Coat Badges of Emblem	2/6
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T&R BULLETIN.

The only British Wireless Journal Published by Amateur Radio Experimenters

All correspondence and matter for publication to be addressed to the Hon. Secretary, 53, Victoria St., London, S.W.1. Tel.: Victoria 4412.

NOVEMBER, 1928. Vol. 4. No. 5.

SOCIETY NOTES

Some of our members have made a complaint with regard to the title usually appearing upon this page. They state that the customary information to be found under such a heading relates to the happenings in Society such as the proposed visits of well-known personages to the South of France, or the rumoured engagements of Lady So-and-So's daughter. When I first started my pen on the page, I carefully avoided the word "Editorial," which necessarily limits the subject, and felt that the page should properly be devoted to general information with regard to the events taking place in the Society. I therefore selected Society Notes without any thought of its other possible meanings. Neither can I conceive any other suitable heading, so Society Notes it will have to remain. Will my complaining readers please substitute any more suitable title they may care to invent for themselves.

* * *

In justice to myself I must make a reference to the Convention group photograph. To all those who took such trouble to arrange their position and assume their most learned expressions, it was, indeed, mortifying to find the photo finally turned out to be a landscape of the Institution Porch, apparently taken at midnight, with some unrecognisable individuals grouped in front. The fault was with the block-maker, who should have cut away the surrounding stonework and made the figures as large as possible. It was, in fact, thought quite unnecessary to give any such instructions, presuming that the block manufacturer would have carried this into effect. Unfortunately, he did not appear to possess the required intelligence in the matter, and the fault was only discovered when it was too late to rectify it. Those who saw the excellent reproduction in the *Wireless World* in the issue of October 24 will appreciate how the photograph should have appeared.

* * *

By far the most important event to record is the establishment of two-way amateur communication with America upon 10 metres. Sunday, October 21, will be a remembered date in the history of the R.S.G.B. There appears to have been an absolute rush to get there first. To 6LL appears to belong the honour, when he established contact at 2.15 in the afternoon. 2OD was a very close second, when he got through at 6.15 p.m. and worked two stations and retained QSO until 11 p.m. Hard upon this news came word from GW17C in Ireland that he had got across about the same time. Naturally, each thought that their contact was the first and hastened to register the feat as such with the writer. Well, at present, the Society will extend its congratulations to all three stations upon the accomplishments of such a signal event, which makes another page of R.S.G.B. history. F.B., OM, to all of you.

* * *

Now that 10 metres (I beg your pardon) 30,000 K.C. has been proved satisfactory for transatlantic work, I suppose it will become the popular wavelength, and it will be interesting to watch its development and see who will be the first to get to New Zealand and the Far East. We shall have

to establish a roll of Fame at Headquarters, upon which the names of these famous members may be inscribed. Meanwhile, it has been decided, by the kind consent of Dr. Watley Talbot, the donor of the Wortley Talbot cup, that this shall be held by 6LL in 1929 in recognition of his achievement.

* * *

Metres or Kilocycles? This vexed question is again to the fore, and at a recent meeting of the Society it was decided to sound the opinions of the members upon the subject. To those scientifically inclined, it is much more rational to speak in terms of frequency. To actually convert frequency into wave-length in metres is imposing unnecessary work upon ourselves, and appears to have originated with Dr. Hertz himself. As he carried out his historic investigations upon the shorter wave-bands, he evidently found it more convenient to speak of a wave-length of a few metres than in millions of cycles. However, the vogue for speaking in metres is very deeply rooted, and it will not be so easy to make the change to kilocycles. Further, the change will bring about a complete reversal of our natural thought. We have always spoken hitherto of going down to the very short wave-lengths, now must speak of going up to the high frequencies for the same action. Of course, the matter is of super importance now with the ultra short waves being developed, when the progression down in frequency is relatively out of all proportion to our conception in metres. In fact, the measurement of wave-length in metres, is practically speaking in a logarithmic sense of the actual article, a point we shall all appreciate when we realise the even scale of the frequency method. However, as I can see myself drifting into the higher mathematics, I had better conclude this paragraph and get on to something else, leaving it to my readers to give their views upon the subject.

* * *

In this issue we are publishing a letter from the Postmaster-General which we received in answer to a letter for enlightenment regarding the new licensing conditions. The letter speaks for itself, and will enable those who were somewhat mystified by the wording of the conditions regarding wavemeters.

* * *

For the information of members who were not clear as to the location of the City Electric Restaurant, it is situated in Ludgate Hill, on the right-hand side going up from Ludgate Circus, and is clearly marked "City Electric Restaurant," although, from a first glance, it appears to be a showroom.

* * *

Our Assistant Secretary, Mr. Wellstead, wishes to thank all those who contributed to the very generous appreciation of his services during the Exhibition.

* * *

Members sending remittances by post to Headquarters in respect of subscriptions or other payments are requested to notify us should they not receive any acknowledgment within a reasonable time, say, three or four days. We make this announcement because an instance occurred recently of a member complaining that a postal order had been lost in the post, and he had only given this intimation after a lapse of some time. Obviously, it is much more difficult to take the matter up with the Postal authorities in such circumstances, whereas immediate notification renders the matter easy to attend to.

New Licensing Conditions.

As many of our members still appear to be in doubt with reference to the exact meaning of the conditions with regard to wavemeters, we are publishing below a reply we have received from the authorities in answer to a letter we wrote them upon the question.

GENERAL POST OFFICE,
September 17, 1928.

SIR,—With reference to your letter of the 10th instant concerning the requirements with regard to arrangements for frequency measuring and tuning at experimental sending stations when the provisions of the International Radiotelegraph Convention at Washington are brought into force, I am directed by the Postmaster-General to inform you that, in view of the higher degree of accuracy which will be called for, absorption and heterodyne wavemeters generally will not be regarded as satisfactory.

A sending station will be regarded as satisfactorily equipped if frequency measuring apparatus embodying a piezo-electric crystal resonator or resonators is provided, the frequency and harmonics of which fall within the bands specified in the relative licence, and provided that the calibration has been accurately determined against some recognised standard.

The use of a transmitter controlled by an accurate crystal would be regarded as completely satisfactory, but it is not desired to make such an arrangement compulsory. Where, however, it is adopted, separate frequency measuring apparatus embodying a crystal is not considered essential.

In a few cases where holders of experimental sending licences have access to a standard multivibrator, this would be regarded as completely satisfactory.

I am, Sir,
Your obedient Servant,
(signed) W. E. WESTON,
for the Secretary.

The Secretary,
Radio Society of Great Britain.

Important Notice.

We have great pleasure in announcing that Mr. T. L. Eckersley, of the Research Department of Marconi's Wireless Telegraph Co., Ltd., has kindly consented to act as Honorary Technical Adviser to the Contact Bureau on subjects connected with the propagation of short waves, on which, as members are doubtless aware, Mr. Eckersley is one of the foremost authorities at the present time. We should point out that this agreement is, of course, subject to Mr. Eckersley's professional obligations in the matter of confidential commercial research.

We hope to publish an article by Mr. Eckersley in the near future dealing with the present state of knowledge of short wave propagation, and indicating lines of research which may usefully be undertaken by amateurs.

It is hoped that a special group or groups will be formed in the Contact Bureau to deal with some of this work.

Measuring H.F. Resistance with a Tape Measure.

By F. Charman (6CJ).

Of course, I don't mean that literally, because tape measures are not calibrated in ohms, but what I really mean is that the methods of measurement to be outlined are nearly as easy as the measurement of one's chest expansion, or size in hats, for example, or any of these little measurements one has to insert annually in the pocket-book.

The great idea is something like this :—Suppose we have a valve oscillator, as in Fig. 1, and we couple to it a tuned circuit consisting of a variable condenser C_2 and a coil L_2 with which is associated a high frequency resistance R_2. Now if we twiddle the knob of the condenser C_2 it is probable that we shall pass through resonance with the oscillator, particularly if $L_2 C_2$ is capable of tuning to the frequency of the oscillator.

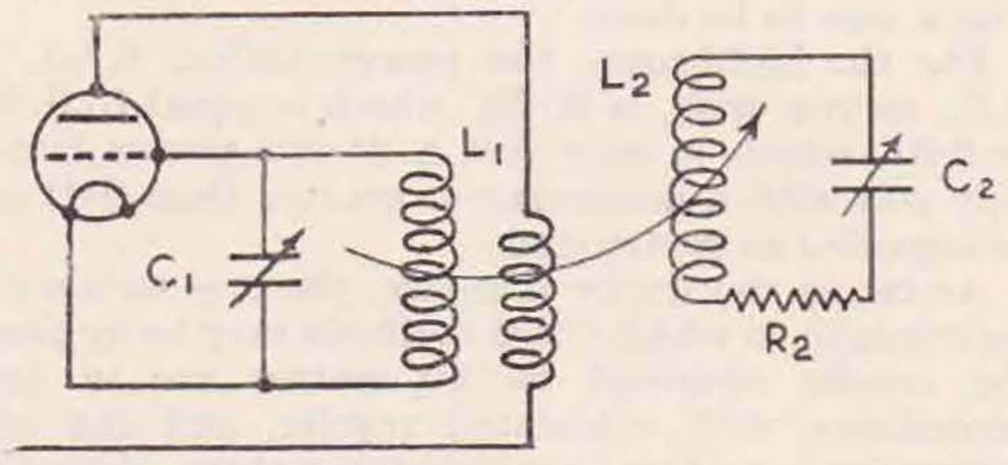


Fig. 1

Now as C_2 passes through the resonance point, one of two things will happen. Either the wavemeter will jump out of oscillation, in which case L_2 is coupled too tightly to L_1, or else, when the coupling is looser, some extraordinary, but quite invisible effects will take place.

Let us consider coupled circuits for a moment. (If you have read previous stuff by 6CJ you will notice he has a weakness for doing so.) Fig. 2 will do for a picture ; it is only Fig. 1 re-drawn without trimmings. $L_2C_2R_2$ is a tuneable circuit coupled to a source which is supplying juice at a given frequency. Now when $L_2C_2R_2$ is tuned, the current induced in it will change, and consequently the back-pressure induced in L_1 will change also. * Another way of expressing this is to say that $L_2C_2R_2$ will reflect into L_1 an impedance which may be considered as some resistance plus some reactance. This impedance will be a definite fraction of that of $L_2C_2R_2$, and will consequently vary with the tuning of the latter.

Now suppose L_1 is the main coil of a valve oscillator. (To perform this mental feat, it will be necessary to revert to Fig. 1.) The frequency generated depends mainly for its subsistence upon the reactance of L_1, and one might expect if we throw in some reactance from L_2C_2 (part of the impedance reflected back) that the frequency will change. This actually is the case, and, moreover, since the reactance of L_2C_2 passes from positive through zero to negative as C_2 passes through the resonance point, one would expect the frequency to do a trick in this neighbourhood. The actual trick is the tying of a knot in itself, as shown in Fig. 3, where frequency of the oscillator is plotted against values of C_2. (The figures are arbitrary and are just to show that the curve is not to scale—see "Bull," November, 1926, p. 11, and January, 1927, p. 20.)

It will be noticed that as the capacity increases, the frequency of the oscillator increases slowly to a maximum, after which it drops rapidly to a minimum, and then climbs gently towards its normal value. Now Fig. 4 represents the same curve with fresh garnishings ; the line 00 represents the frequency which the oscillator would generate if left to its own devices. C_1 C_2 and C represent the capacities at which the greatest changes occur, and the capacity of complete resonance respectively. It can be shown, but not here, that if we call the difference between C_1 and C_2 by the name δC, then, provided that the coupling between the source and the closed circuit ($L_2C_2R_2$, Fig. 1) is not too great, the resistance R_2 is given by (hold tight, pse),

$$R_2 = \frac{1}{2\omega} \cdot \frac{\delta C}{C_2} \quad \text{.....(1)}$$

Where ω is 2π x frequency, as usually accepted in the best circles, and π is the usual 3·142, as distinct from the sort that mother used to make.

Here, then, is the nucleus of a quick method of measuring H.F. resistance. All we have to do is to be able to measure two capacities, and once one gets used to measuring in this manner one can produce coil resistances out of one's hat with extreme rapidity and comparative ease. The details are something like this :—

We have an oscillator of the plain reversed feedback type not oscillating too strongly, and preferably without gridleak, hereinafter called the source. This is set to the frequency at which the test coil is to be measured. We now erect a wireless receiver at the other end of the bench, by means of which, with the aid of earcans we can listen to the changes of the source. This receiver should be tuned to give a heterodyne beat with a *harmonic* of the source. (If tuned to the fundamental, it is liable to drag the source.) The test circuit is erected some distance from the source, and is earthed to prevent hand capacity effects.

The condenser system of the test circuit needs a little arrangement, because the difference δC to be

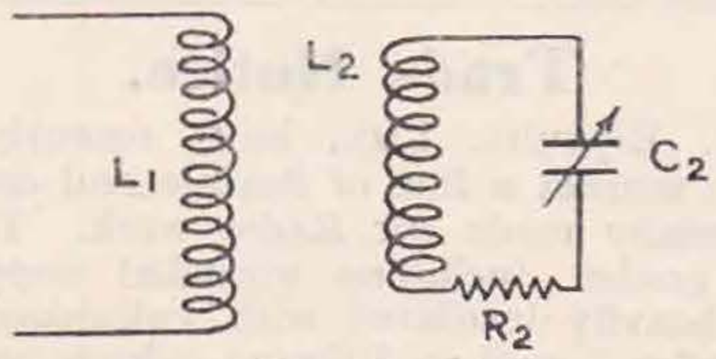


Fig. 2

* See the "Bull," April, 1927, page 7.

measured is only a few m.m.f. The best idea is to use a small straight-line-capacity condenser, of about 20-30 m.m.f. capacity range in parallel with a larger tuning condenser. These condensers are calibrated and should be of good quality, as otherwise the coils will be blamed for ohms which should really be attributed to the condensers! For example, the writer once reduced the resistance of his condenser by half an ohm by simply making an improved connection to a metal box which was around the condenser!!

The coil under test is tuned with the main variable condenser until the peculiar frequency change, or "wiggle" is spotted. This will be very plain to the ear, the peaks C_1 and C_2 being most prominent, and easily readable on the "vernier" condenser. *

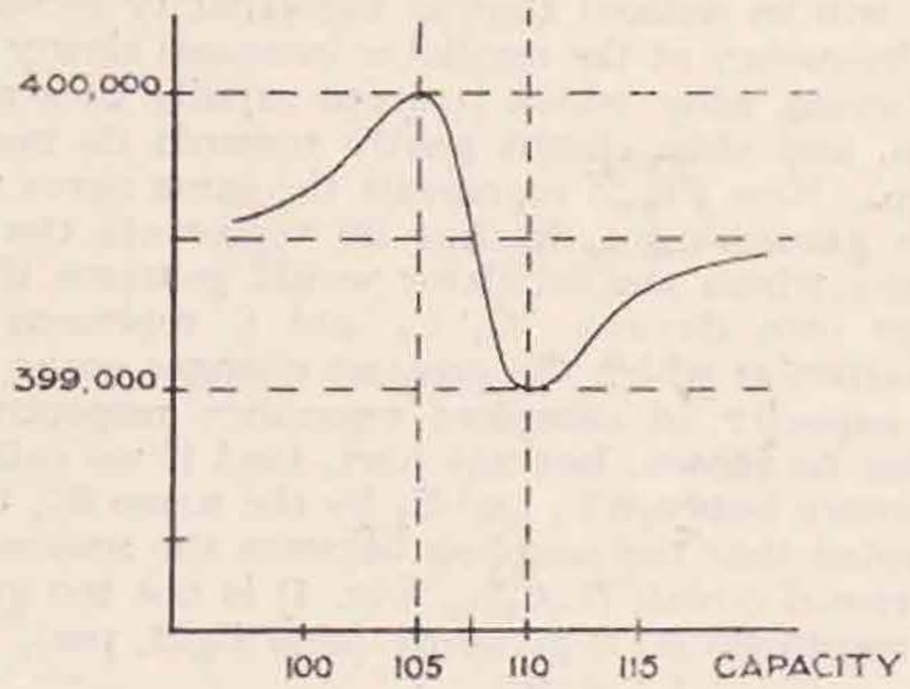


FIG. 3

From the readings of the condensers we can get δC off the "vernier" and C off the big 'un, and these, when stuck into *formula* (1) should give the required answer. The test coil should always be coupled as loosely as possible, and also it is to be remembered that—

(*a*) C, which occurs midway between C_1 and C_2 includes the capacity reading of the "vernier" as well as all such stray capacities as the self-capacity of the coil, which one can call 10 m.m.f. for a respectable solenoid and 20-30 m.m.f. for a common or garden slab.

(*b*) Capacities must be in farads, which means that if C and δC are in m.m.f., then

$$R_2 = \frac{10^9}{4\pi f} \cdot \frac{\delta C}{C^2} \quad \ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Where f is translated into kilocycles, or for those enthusiasts who prefer metres to kilocycles—

$$R_2 = \frac{10^4 \lambda}{12\pi} \cdot \frac{\delta C}{C^2} \quad \ldots\ldots\ldots\ldots\ldots\ldots (3)$$

Where λ is in metres of wavelength, and C's are m.m.f.'s.

Then, again, if one prefers power-factors to mere ohms, the following can be used :—

$$P.F. = \frac{\delta C}{2C} \quad \ldots\ldots\ldots\ldots\ldots\ldots (4)$$

which is much easier if we haven't got a slide rule, besides being a more highbrow sort of answer. In this case, the equation works as it stands, in m.m.f's.

Now for an example. The coil was tested on a wave-length of 377 metres, C was 300 m.m.f. (or ·0003 m.f.), and δC was 6 m.m.f. Now $f = 300 \times 10^6 \div 377$, and $2f\pi$ comes to 5×10^6 (that's why we measured at the peculiar wavelength of 377 metres) and

$$R_2 = \frac{1}{2 \times 5 \times 10^6} \times \frac{6 \times 10^{12}}{300 \times 300} \quad \ldots\ldots\ldots\ldots\ldots\ldots (5)$$

The 10^{12} (which arrived because a m.m.f. is $1 \div 10^{12}$ Farad and we have C^2 at the bottom and only C at the top), nearly all cancels out with the tens at the bottom, leaving

$$R = 60/9 \text{ or } 6{\cdot}67 \text{ ohms} \quad \ldots\ldots\ldots\ldots\ldots\ldots (6)$$

which was to be done.

For the highbrows, the power factor, $R/\omega L$. or P.F., as you wish, is $\delta C/2C$ which is equal to 6/600 or 0·01, which is only just a decent power factor. Any coil with a power factor greater than 0·01 can be regarded as pretty dud.

As far as the writer is aware, there is no limit of wavelength to which these methods may be applied; the results obtained on 20 metres are in good accordance with calculated results, and the only difficulties are of an experimental nature. Actually, the short wave measurements become more easy as the wavelength decreases, as one can get a good pull on the source, with very small couplings on the short waves.

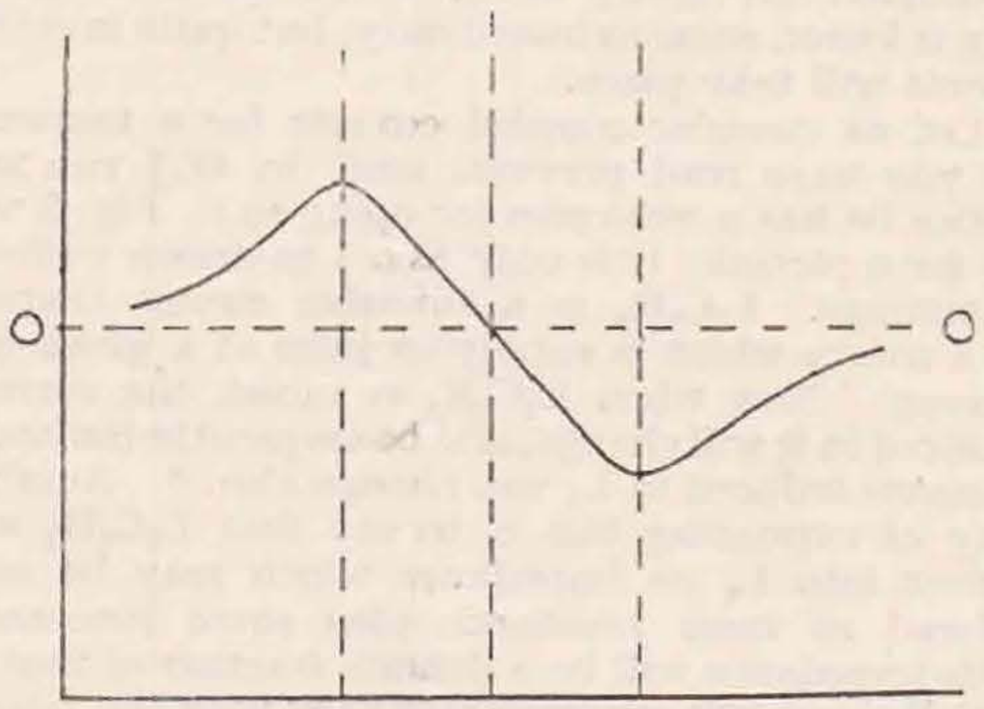


FIG. 4

* This term is used in respect for general practice, and the writer does not need to be reminded that the term "vernier" is misapplied.

Trade Notice.

Messrs. Ripaults, Ltd., have recently placed upon the market a line of flexible and connection wire specially made for Radio work. There are various grades, including stranded copper conductors heavily insulated with vulcanised rubber and "Raflex" cord in different colours and carrying capacities. To facilitate handling these are sold mounted upon stout attractive spools.

Standard Frequency Transmissions.

Calibration signals will be transmitted from G5YK on November 25, as follows:—

14·00 G.M.T.	7,050 K.C.
14·05 ,,	7,250 K.C.

A similar schedule will be transmitted on December 9, commencing at 10·00 G.M.T. The call is R.S.G.B., DE G5YK, followed by the frequency used and a one minute dash.

QRH?

By E. Megaw (G6MU).

The "Radiotelegraph Regulations, Washington, 1927," tell us that this abbreviation is in future to mean "What is your exact wavelength in metres?" or alternatively, "What is your exact frequency in kilocycles?" Further perusal of the Regulations leaves no doubt as to which alternative is to be preferred, and in Article 4 we are told that "waves will be designated in the first place by their frequency in kilocycles per second." This has been the standard practice with commercial and broadcasting stations for some time past, and it is clear that we amateurs must follow suit if we are to keep up with the times. The object of this short article is to point out once again a few of the advantages of talking in terms of frequency rather than in terms of wavelength, and to make a few suggestions which it is hoped will be helpful to those who find that the change over requires rather an effort.

Let us consider the well-worn simile of the man dropping stones into a calm pond. We will assume that a single complete wave is started on the surface of the water each time a stone strikes the surface. Now suppose the man has an accurate watch and drops the stones at regular intervals of time, say once a second, then the frequency of the waves set up on the surface of the pond is evidently a fixed quantity which we can state perfectly accurately provided the man's watch is accurate. In this case we have one wave produced per second, that is to say, the frequency is one cycle per second. In other words, any point on the surface of the pond goes through one complete cycle of bobbing up and down per second.

As the waves travel outwards they naturally grow smaller, but their speed remains the same, provided that the water remains the same throughout the pond. Suppose this speed happened to be 10 metres per second, then as one wave is produced every second the length of each wave must be 10 metres. If two waves were produced every second (*i.e.*, a frequency of two cycles per second) the wavelength would only be half as much, that is, five metres. If "X" waves were produced every second (*i.e.*, a frequency of "X" cycles per second) the wavelength would be 10 divided by "X" metres. So we have the simple formula, Wavelength = Velocity divided by Frequency, which is fortunately equally true for electro-magnetic waves. If the pond were filled with, say, treacle, we should expect the waves to travel more slowly, and from the formula we see that the wavelength would be smaller. If, on the other hand, the pond were filled with a medium through which the waves could travel more easily than through water the velocity would be greater, and so the wavelength would be greater. So we arrive at the fundamental fact, which is true for all wave motion, that the wavelength depends not only on the frequency which we can usually measure accurately, but also on the nature of the medium through which the waves are passing which determines the speed. In the case of electro-magnetic waves we know that this speed is somewhere about 300,000,000 metres per second, but we cannot state it with absolute accuracy on account of the varying mediums through which the waves travel, and the wavelength at the receiver may actually be slightly different from the wavelength at the transmitter. Thus we see that the first and most important reason for talking and thinking in terms of frequency rather than wavelength is that frequency is a quantity which we can measure as accurately as we can measure time (excluding experimental errors), while, so far as radio waves are concerned, wavelength is an indefinite quantity which we can only derive from our measurements of frequency by making certain approximate assumptions.

The writer feels that he need hardly apologise for the rather childish simplicity of the above remarks, as they are intended for those who "don't see why they should bother with frequency" rather than for those who already know all about it and who probably think in terms of frequency as it is.

As the frequencies used in radio work are relatively large, it is convenient to use 1,000 cycles (one kilocycle, abbreviated "kc.") as the unit of frequency instead of the single cycle. Thus for the frequency on which most of the shipping traffic takes place it is easier to write 500 kc. than 500,000 cycles, though both mean exactly the same thing. The kilocycle is the official unit of frequency for radio work and should normally be used, but for very high radio frequencies it is sometimes easier to talk in "megacycles," *i.e.*, millions of cycles ("mc."). For instance, the amateur band on which so much attention is focussed at present can conveniently be referred to as the 28 mc. band, which is, of course, the same as 28,000 kc.

Some practical reasons for working in terms of frequency are:—

(1) For the accuracies which it will be necessary to maintain under the new conditions it is much easier to talk in whole numbers of kc. than in decimals of a metre when the decimals run to several figures.

(2) Our new bands are allotted primarily in terms of frequency, and the wavelengths are only stated approximately.

(3) A kilocycle is always the same thing in any frequency band, while a metre means something quite different on, say, the higher frequency amateur bands to what it means on the broadcasting band. A better way of putting this might be to say that a change of from 40 metres to 41 metres means a much greater change of frequency than from 400 metres to 401 metres.

It is sometimes helpful to remember that one kilocycle—1,000 cycles—is a frequency which we can easily recognise by ear. In fact the recently deceased B.B.C. tuning note (the original one, not the affair that sounded like an aeroplane engine

on test) was nothing more nor less than a one kilocycle oscillation.

The ear is sensitive to vibrations up to about 10,000 cycles or 10 kc. That is why it is necessary to leave about 10 kc. between broadcasting stations if there is to be no audible heterodyning.

If we tune a C.W. station to zero beat (*i.e.*, tune exactly to the frequency of the station) and the frequency of the station is increased or decreased so that the note in the telephones increases until it is just too high to be heard, we know that the transmitter frequency has changed by roughly 10 kc., no matter what frequency the transmitter is working on.

For those who find some difficulty in working in terms of frequency, the writer would suggest that it is better to forget wavelengths altogether and to start afresh by thinking of our operating bands as frequency bands rather than to try to remember that "so many metres equal so many kilocycles."

Our bands are :—

1,740 kc. to 1,970 kc. for short distance working and telephony in particular. Conditions in this band are similar to those in the higher frequency broadcasting bands.

3,530 kc. to 3,960 kc., particularly suitable for "domestic" (as opposed to "international") use, and also useful for long distance work at night. Unfortunately, British amateurs will not be allowed to use this band unless they can produce evidence of special qualifications for experimental work, although the band offers no special opportunities for experiment.

7,050 kc. to 7,250 kc., suitable for long distance work at night and for short and medium distances during daylight. This band should be kept as far as possible for international work at night, but as the previous band is closed to the majority of British amateurs, it is likely that the congestion which at present exists in this band will continue under the new conditions.

14,060 kc. to 14,340 kc., mainly suitable for long distance work during daylight, but varies considerably with the time of year, and is usually subject to more fading than the previous band. It is particularly useful for long distance work with very low power when conditions are favourable.

28,100 kc. to 29,900 kc., a new amateur band also open to experimental stations, and one which is attracting much attention at present. So far, communication over distances greater than 20 or 30 miles has only been occasionally possible, but the first communication between the British Isles and the U.S.A. on this band has been recently achieved.

56,150 kc. to 59,850 kc.—Frequencies of this order are still entirely in the experimental stage, and although they can be produced easily enough, they have not so far been employed for communication except over very short distances, and it may be that they cannot be used for long distance communication at all.

It has been suggested that these bands should be referred to as the 1,750 kc., 3,500 kc., 7,000 kc., 14,000 kc., 28,000 kc. and 56,000 k.c. bands respectively, or the numbers may be divided by 1,000 and called megacycles. The sooner this suggestion is universally adopted the better.

It has been suggested that the exclusive use of frequency instead of wavelength makes the design of aerials more difficult. Actually, however, there is no difficulty as the length in feet of an aerial to resonate at a given frequency can be found by dividing the number 490 by the frequency in megacycles. This gives the same order of accuracy as dividing the wavelength by 2.

Finally, the writer would suggest that all calibration of meters, receivers, etc., should be in frequency, either in kilocycles or megacycles. One of the best aids to "thinking in frequency" is to use a receiver which is calibrated, even if only approximately, in terms of frequency.

Exhibition Photographs.

The following station photographs are at headquarters. If the owners require same returned will they please write to the assistant secretary, enclosing stamps ?

G5MU	G6BD
G6FT	G2BFA
G2BUW	G2BGS
G2ARV	G2HH
G6IA	G5FU
G2AO	G2AOL

G5IA Battersea Amateurs' Group.

Photographs unclaimed will be exhibited at headquarters where a collection is being formed.

Wanted.

The Committee will be very pleased to hear from any member within the London Area who will be willing to take shorthand notes at all meetings and lectures.

Membership Certificate.

Council have decided to change the design of the present membership certificate and invite members to submit designs.

The proposed certificate shall be 10½ in. by 9 in., and shall embody the R.S.G.B. emblem. The present wording will be adopted.

Designs should be submitted to the Hon. Secretary, 53, Victoria Street, S.W.1, not later than December 31, 1928.

The accepted design will be used immediately Council have examined the entries, and the winner will be granted a year's free subscription to the Society.

Nineteenth Annual Exhibition

The Nineteenth Annual Exhibition of Electrical, Optical and other Physical Apparatus is to be held by the Physical Society and the Optical Society on January 8, 9 and 10, 1929, at the Imperial College of Science and Technology, South Kensington.

The Power Supply at G5HS.

By M. F. Samuels.

The H.T. Supply.

This is obtained by a method often described but seldom used. A 1 h.p. motor is run from the 240-volt D.C. mains and A.C. at about 160 volts and 60 cycles is taken from slip rings connected to a pair of opposite segments of the motor commutator. This A.C. is then transformed up to 2,000 volts. On the projecting shaft of the motor is bolted a large fibre cylinder having on its surface a commutator of two segments, each of which is connected to a slip ring. The high tension A.C. is fed to a pair of copper gauze brushes, fixed at opposite ends of a diameter of a large fibre disc, and making contact with the commutator; and pulsating D.C. is taken from a pair of carbon brushes making contact with the slip rings. This R.A.C. is then smoothed by means of chokes and a bank of oil-filled condensers. The note can be further improved by putting the output in series with the D.C. mains, and of course the H.T. voltage is thereby increased.

This system appears complicated, but has given satisfactory service over a long period.

Advantages of the System.

(1) It was far cheaper than a motor generator.

(2) The 120-cycle note is quite characteristic and is admired in all continents. Although the total smoothing capacity is only 2 mfds., the note is always reported as "very good R.A.C." or "motor generator D.C."

(3) The voltage drop across the rectifier is lower than that across electrolytic rectifiers or diodes.

(4) Since the commutator is rotating on the converter shaft, when once adjusted its action is always in phase with the A.C., and there can be no reversal of polarity as is the case with synchronous rectifiers running off A.C. mains.

Disadvantages of the System and Their Remedy.

(1) The most serious disadvantage is one common to all synchronous rectifiers, viz., that any moderate variation in load necessitates an adjustment in the position of the brushes for maximum efficiency. This makes keying quite a problem as the load has to be kept continuously constant.

(2) It is essential to have a large quantity of inductance in circuit between the rectifier and the smoothing condensers to prevent the latter from discharging when the rectifier voltage is falling. However, any large variation in load results in the condensers "backfiring" across the rectifier. When once started this is hard to stop and puts a severe strain on the converter. Consequently a 1 amp. fuse is included in the low voltage A.C. circuit, and this blows as soon as "backfiring" starts. Also nine neon lamps in series are shunted across the rectifier output to absorb excess voltages; and they serve to give visual warning when the H.T. is on.

(3) The position of the brushes for minimum sparking is not exactly that for maximum efficiency, and the tendency for "backfiring" is greater for the latter. When the transmitter has been adjusted the brush holder is rotated to a position near maximum efficiency where the sparking is only slight. Excessive wear of the copper gauze brushes is stopped by the application of oil which does not appear to affect the insulation.

(4) The electrical efficiency is rather poor, but increases with increasing output. With an input of 500 watts to the converter a high voltage output of 200 watts is obtained.

(5) The noise in the receiver due to the rotary converter and sparking rectifier a few feet away is simply terrific, and when transmitting I am forced to disconnect the phones.

(6) Second-hand motors are apt to be noisy, and in order to absorb vibration the converter is supported on four "Sorbo" rubber balls on a wooden board supported on a bicycle inner tube folded and inflated. In the event of a puncture it is necessary to QRT owing to QRM from people who are trying to sleep below!

The L.T. Supply.

All filament current is taken direct from the D.C. mains, in the case of the QRP set via a carbon filament lamp and with a controlling rheostat in parallel with the valve filaments which are connected in series. The 6 amps. required by the filament of the 250-watter are taken via a couple of ex-Government stoves, and the filament current is varied by plugging in various lamps in parallel with the stoves. Of course this system would be out of the question for a station in continuous operation, but in my case it saves buying large capacity accumulators and another rotary converter, while on cold mornings the heat given out by the stoves is very welcome. During heat waves however, a bathing costume is the only possible uniform for the operator! Another advantage of the system is that as over 85 per cent. of the 2 kilowatts taken from the mains goes to heating the room the transmitter may be tactfully described as a "stove" and the "juice" obtained at the "heating" rate! This was suggested by the electricity inspector—fine fellow!

My Visit to Erin.

By Capt. H. J. Hampson (G6JV).

The writer is, of course, aware that he is not the first "G" to visit Ireland, nor, indeed, does he desire to create the impression that he supposes readers will find anything unusual or even particularly interesting in the bare statement that he spent his holiday there this year.

All the same, there is this "Ham Radio" business, and *that* is just where the interest does lie, and is in fact the excuse offered for writing to the Bulletin about it—that *and* the S.O.S. from our worthy Editor for copy, and yet more copy.

So much, then, for the preamble, and now for the text.

Headquarters were made at Kingstown (or Dunlaoghaire if you prefer—but don't pronounce as spelled or you will have to guess again!), and there is nothing of interest to report until the first week-end came round.

The afternoon of Saturday, July 14, found the writer entrained for Belfast on a particularly beautiful day, which did full justice to the natural beauty of the country in general, and in particular to the wonderful green which must be seen to be believed.

Arrived at Belfast, Frank Neill was at once recognised from a recollection of the miniature "movie" film shown by 5KU and 5AD at the 1927 Convention. A charming run of some fifteen miles in an Essex saloon, piloted by 5NJ's brother, brought us to Whitehead. A real GI tea was followed by introduction to the new shack, and 5NJ is to be congratulated upon the possession of accommodation which is at once convenient and commodious.

As luck would have it the new transmitting valve had not arrived, so that a D.E.T.I., whose normal function is that of modulator, had to be hooked up as oscillator in order to carry out some tests relative to the aerial system described by the writer in the March Bulletin, and which 5NJ is using with gratifying results.

The following morning Mr. Neill, sen., very kindly offered to show the features of the countryside, and the car was again pressed into service. The route chosen lay from Whitehead *via* Magheramourne to Larne and along the famous coast road to Glenarm Bay, thence by way of the mountains, with their peat swamps and splendid wildness, all unspoiled by the devastating hand of the bungalow merchant. The mountain road was left at Glenoe, with its charming waterfalls and picturesque wee church, then *via* Carrickfergus Hill—of motor trials fame—to Whitehead again. A little more rag-chew; a few more meals; a little country ramble in the cool of evening; some more time in the shack, and an hour or two in bed, and the time had come, all too soon, to say good-bye.

A couple of days later a sked was made with GW11B and a meeting duly arranged at the Automobile Club in Dawson Street, Dublin. Thursday evening found the writer at Fortgranite Baltinglass—and *what* a dream of delight to those whose choice lies rather with the fields and trees than with cinemas and tubes!

Fortgranite, with its sheep and oxen, feathered friends and badgers, is "real country with knobs on."

And then Col. Dennis and his workshops, power-driven lathes and milling machines, Quartz crystal slitting machine and grinding apparatus, and just about everything that any good "Ham" ever dreamed about when lost in speculation of the "Ham's Heaven"—and just by the way—if any of you fellows fancies his workmanship, if you think you know how to make a thing and finish it off, come along to Baltinglass and you will realise in some measure the admiration of the Queen of Sheba when that lady had experienced the wonders of the court of King Solomon. Just as there was "no more spirit in her," so the writer raises his hat to a master craftsman in the person of Col. M. J. C. Dennis, C.B.

Col. Dennis demonstrated his Quartz slitting machine and cut a small piece about $\frac{1}{4}$ in. by $\frac{1}{8}$ in. in something less than 3 minutes.

When slitting a crystal he merely sets the machine in action and leaves the motor running, while engaging himself in some other job, returning to find the cut completed. This is really better than the back of a hack-saw blade!

11B showed the writer his method of testing Quartz spectacle lenses in order to determine whether these have been cut in such a way that the finished crystal might be expected to oscillate, thus saving failure after the tedious work of grinding. The latter process was also demonstrated, and finished plates beautifully polished and mounted were examined, each being complete with its N.P.L. calibration certificate.

In short, Col. Dennis is an expert at crystal grinding, and the gang is warned never to argue a matter of QRH with him because he can produce Quartz plates for every wave band, each calibrated by N.P.L.!

Some interesting aerial tests were made, the radiating system being quickly adapted to that favoured by the writer, and 11B is at present carrying out tests with this system upon the various wave bands.

Space forbids more than passing mention of 11B's "Museum" of home constructed apparatus dating back to the days of the Branley coherer, of a superbly made early type microphone amplifier, and of a hundred interesting relics, all milestones in the progress of the art.

Returning to Dublin a call was made upon 14B, and the latter directed the writer to the Brothers O'Dwyer, of 18B.

By the kindness of Mrs. O'Dwyer a "gathering of the Hams" took place at 18B two evenings later.

Present were: The Brothers O'Dwyer, 18B; J. B. and R. D. Scott, of 17C; R. Sadlier, 13D; G. A. Horander, 16C.

Needless to say, a fine "Rag-chew" resulted, and the writer was struck by the unconcerned way in which the GW's discussed regular contacts with the Antipodes on powers well below 10 watts, and it would seem that our Irish confreres have

nothing to learn, and even something to impart, in the matter of QRP.

Of course the evening passed all too quickly, and it was only by dint of some almost unseemly haste in taking leave of the gang, and by good footwork that the last tram was boarded and an eight mile tramp avoided.

If it may be permitted to conclude upon a personal note, may I express my very best thanks to all those who, by their kind hospitality and friendly welcome, contributed so largely to the pleasure of my holiday this year, and if there really is any truer Freemasonry than Radio and any better "Friendship-Bureau" than the T. & R., here is one who would be glad to know about it.

Amateur Radio Co-operation in Aerial Flight

By M. S. KILLEN (EP2AA).

The following account of how the W.U. Radio Club co-operated with Captain Courtney while he was attempting his Atlantic flight may interest readers of the "BULL.," who have worked with EP3MK or EP2AA. The plane, G—CAJI, arrived at Horta on June 27, 1928, after an adventurous trip from Lisbon, during which the W.T. generator shed half of its propeller. On bringing the generator ashore, we also found the commutator used for converting the pure D.C. into interrupted pulses suitable for I.C.W., had become badly pitted, necessitating re-grinding. The Western Union and Commercial Co. mechanics spent a week on this job and made the generator look like new, but, unfortunately, on test the new propeller was found to be out of balance. EP2AB remembered that a spare generator propeller had been left at Horta in readiness for another Atlantic aspirant who never turned up, so Captain Courtney got permission to try this one out. It fitted perfectly, so, after checking up the other gear, the plane was ready to leave as far as the radio installation was concerned. On July 6, Captain Courtney informed us that he would be taking off either of the following two mornings. We immediately arranged with Mr. Gilmour (the radio man of the expedition) to exchange signals for the first half hour of the flight, to enable bearings to be taken and to test out the plane's set. It was agreed that the best thing to be done was to rig up a spark set on board a motor launch and follow the plane as long as possible. The next day was, therefore, spent in fitting out a thirty-foot motor launch and, with 2AB's help, we rigged up an old 10-watt, 100-metre Army set. We altered this to work on 600 metres, and also managed to squeeze over 20 watts from it. The night before the start was spent on the launch listening to find out what ships were likely to be within CAJI's range. For reception we were using a Burndept 1-V-2 receiver, completely screened to reduce magneto induction from the motor-launch engine. On Saturday night, July 7, good weather reports were received, so Captain Courtney decided to leave the following morning. Accordingly, July 8, at 2 a.m., saw most of the W.U.R.C. and 2AB in the launch, eating sandwiches and mopping up beer whilst waiting for the chief performers to arrive. At 4 a.m. they wandered down to the pier looking as if they were going for a stroll, instead of a 1,400 mile air trip. Just as dawn was breaking the plane taxied out of the harbour, and on the second attempt to rise, made a perfect take-off. Within eight minutes of rising we were in touch with Mr. Gilmour, but at first his note was very wobbly. As soon as his generator settled down the note improved, both in strength and tone, and carried well through the heavy X's then experienced. He reported us coming in O.K. and took his first bearings from us. About 100 miles out the plane lost us completely, but as we had done what we had set out to do, we felt quite satisfied. At this time it was close on 6 a.m., and we were a good way from Horta, so we decided to return and get our permanent set working. By the time this was done the plane was over 250 miles away, and everything was well on board. We were still receiving him R7 and copied all this traffic easily, although Sanmiguelmarconi was having his work cut out to do so. About 400 miles out from Fayal the 'plane ran into bad weather, and ships on the route reporting bad conditions all along, Captain Courtney decided to return to Horta. On the return journey the radio was closed so as to save it as much as possible for the next attempt. While waiting here for good weather the gear was given another overhaul and tested several times. We also altered our 45-metre set to work on 600 metres, with a view to keeping in touch with the plane as long as possible next time. Unfortunately, our Evershed generator shaft broke. This put us out of action definitely, and when the 'plane left on its last trip all we could do was to follow its progress by listening to the reports and messages Mr. Gilmour broadcast from time to time. Five hours out these ceased, so we concluded the plane had gone out of range as signals were then about R2. Next morning great was our surprise to hear the S.S. *Celtic* dealing the S.O.S. sent out by the plane. reporting damage by fire, and the approximate position at that time. Later we heard the *Minnewaska* had picked up the aviators and that all were safe. During a conversation with Captain Courtney, he told me he was quite in the dark about the possibilities of short-wave radio, and that he thought it was useless for aviation work. When it was explained how advantageous it would have been to keep in touch with terra firma throughout his flight, how little power was necessary, and how light a short-wave outfit would be, he became so keen that he wanted us to rig up an auxiliary transmitter for 45-metre work. Had he remained longer at Horta we would have done this, but as it was, there was no time. On his next Atlantic attempt he intends carrying a short-wave set to supplement his 600-metre one, so amateurs on both sides of the Herring Pond will have a chance to QSO him during his flight, and, perhaps, be able to give valuable information *re* weather conditions, etc. I may say that Mr. Gilmour was our guest on several occasions, and he proved himself to be such an excellent entertainer that we were very loth to part with him. Throughout the flight he handled the Marconi AD6 set very efficiently, and no one but a thoroughly smart man could have handled his traffic the way he did. Amateurs and professional radio men alike throughout the Empire ought to be proud of the way he and his companions upheld the traditions of British pluck and resourcefulness.

The Month's Work on 28,000 k.c

This month the "Laurels" go to G6LL, who made the first contact on 28,000 k.c. between England and North America on October 21 at 14.30 G.M.T., when he worked W2JN for 1¾ hours, being reported R6. W2JN was being received R6, and both stations were suffering slightly from QSS, though in spite of that they carried on sending at 15 single. That speaks volumes. G6LL used 50 watts input to the power amplifier of a crystal controlled transmitter, the same set as some of us had the opportunity of seeing at the R.S.G.B. Stand at Olympia. A D.E.T.1 valve was used as the P.A., power supply being obtained from an M.L. rotary converter. His aerial consisted of a half-wave vertical wire, zeppelin fed, the maximum height being about 40 ft., not more. The receiver is the conventional Det. and One. G6LL has also been heard a number of times by London stations, T9 and reliable.

After G6LL had finished with W2JN, GW17C hooked up with U.S.A. and worked W2JN for an hour, being reported R3, then R5, and only used 10 watts to the ultra-audion set described in the C.B. notes in the October BULLETIN, with an extra regeneration control fixed which, he says, greatly improves efficiency. He used an L.S.5 valve and 300 volts. The aerial is a ½-wave vertical Zeppelin, suspended from the 23-metre aerial, and very tight coupling is used. The receiver is a 2-valve Reinartz, and on this he has obtained quite a good lot of log W-stations during the last few weeks, including a W-5 strength R3. His local work has been restricted to one QSO with 13D, half a mile away, but inaudible at 15C, 14 miles away.

G2OD worked W1AQD from 18.00 to 19.40 G.M.T. on the same day, his signals being reported R6 to R3, consistent and easy to read; he then worked W1BJD. Since then G2OD has worked W1AQD twice on schedule with satisfactory results. The transmitter used is a Colpitts oscillator stabilised from a 3500 K.C. crystal, and frequency doublers. The aerial is a full wave horizontal, Zeppelin fed.

G2KF has been heard over there, but we have no definite information about a contact. G6DH, about using only 1 watt, has been heard by W2JN. This is FB.

The next great event took place on October 28, when G2FN (ex A12KT) worked W6UF and was reported R4, using only 8 watts to an L.S.5D. valve in a T.G.-T.P. set. His aerial was also a vertical half-wave Zeppelin. On the previous Monday, October 22, he had raised W2JN with the same apparatus. G2FN's receiver is believed to be a screened 2-valve set.

Many other stations have been heard over here, and other G-stations may have worked across, but we have not heard of the results at the time of going to press. The best time appears to be 14.00 to 19.00 G.M.T. Sundays, and the strength they are received varies from R0 to R8. Judging by the local work which we know G6LL has done, it would appear that 28,000 k.c. might be very useful for local work up to 20 miles, and the aerial can very often be dispensed with for this, which may allow work through B.C. By the time these notes appear in print there will probably be a lot more stations on this frequency each Sunday, just as as soon the news gets round. The following W-stations have been received in this country: 1AQD, 2NM, 2JN, 2XG, 2BDA, 2AYR, 4CL, 8XK, 6UF, 1RC (?), 5AYT (?).

It is intended to publish similar 28,000 k.c. notes each month, giving all the latest work done of a QSO type, the experimental work being ably dealt with by C.B. If, therefore, any members have done anything interesting for these notes, we will do our best to get them in at the earliest opportunity if they are sent to 5YK, 6LL or, if they are very late, direct to H.Q.

London Meeting.

The opening informal meeting of the season took place at the City Electric Restaurant, Ludgate Hill, London, on Friday, October 26, when Mr. L. H. Thomas (G6QB) discussed "Wavemeters."

The lecturer demonstrated a new heterodyne type he had constructed, and explained several features of design which he considered were likely to be missed by the average constructor.

Attention was drawn to the dial, which was of a large open scale—to the straightness of the wiring—and to the fact that the whole wavemeter should be enclosed in a screened box. A filament voltmeter he considered to be a refinement, but is, nevertheless, very useful if this can be fitted. Contributions to the ensuing discussion were made by Messrs. Ward, Henderlich, Clark, Thomas, Hogg and Megaw; Mr. Ward suggested that in order to spread out the readings a very small tuning condenser be used.

In the wavemeter described Mr. L. H. Thomas had dispensed with a reaction winding, but Mr. G. W. Thomas urged that in general it is more suitable to use a reaction winding—this preferably spaced in between the turns of the grid winding.

Mr. Megaw emphasised the desirability of screening, and suggested that an effort be made to disuse the term "wavelength in metres" and substitute "frequency in kilocycles."

An opinion was desired by the Chairman (Mr. Bevan Swift) and on a motion by Mr. Megaw, it was decided to recommend to the Committee that in future all references be made in terms of frequency and that in general kilocycles be the accepted expression of such frequency.

Review.

We have received a copy of the "Q. T. C.," the official organ of the South African Radio Relay League. We must congratulate our South African brothers upon the excellence of their journal and its interesting contents. It shows that the League is a real live gang, and intend to keep the world informed of their doings. We wish them the best of luck, and will always read their journal with much interest. The Hon. Editor, R. S. Perry (A9Z) asks us to announce that any FO calls heard in Great Britain should be notified to him at P.O. Box 49, Durban, his new QRA, and sends his greetings to all British Hams.

District Representative Election, 1929.

In accordance with the rules of the T. & R. Committee, the following names have been forwarded as nominations for the posts of District Representatives.

District.	
No. 1	J. C. Harrison (G5XY).
No. 2	S. R. Wright (G2DR).
No. 3	No nomination.
No. 4	E. R. Martin (G6MN).
	A. Davidson (G5QT).
No. 5	D. P. Baker (G2OQ).
No. 6	No nomination.
No. 7	H. C. Page (G6PA).
No. 8	C. W. Titherington (G5MU).
No. 9	G. Courtenay Price (G2OP).
No. 10	J. Clarricoats (G6CL).
No. 11	No nomination.
No. 12	No nomination.
No. 13	C. Joyce (G6JV).
	H. Wilkins (G6WN).
No. 14	J. Wyllie (G5YG).
No. 15	H. Andrews (G5AS).
No. 16	C. Morton (GI5MO).

In the case of the districts from which no nominations have been received, the Committee will nominate members to act as District Representatives.

In the case of the 4th and 13th Districts, where two nominations have been received, members within these areas are requested to fill in the ballot form below, and forward same to Headquarters not later than December 1, 1928. New District Representatives take office from January 1, 1929. Attention is drawn to the Rule which permits District Representatives to appoint a London member to act as his deputy at Committee meetings. New District Representatives are asked to make these appointments immediately in order that they may be represented at the first meeting of the 1929 Committee.

BALLOT FORM.

District Representative Election, 1929.

I desire to record a vote in favour of Mr.....

as Representative for the.....District.

Signed.....

Call Sign.....

Note.—Captain Hampson and Mr. F. R. Neill were nominated for the 6th and 16th Districts respectively, but both gentlemen have declined office.

Council Elections, 1929.

In accordance with the following extract from the Articles of Association, the undermentioned gentlemen have been nominated for Council for 1929.

48. Not later than the 24th day of November in each year the Council shall send to each Corporate Member entitled to vote a list of duly qualified persons whom they nominate for the offices of President, acting Vice-President, Hon. Secretary, Hon. Treasurer, and other elected Members of Council in December next following. This list must include at least four names of persons not serving on the existing Council.

49. After the issue of the Council's list, and not later than the fourth day of December next following, any ten Corporate Members (but not more than ten) may nominate any other duly qualified person by delivering their nomination in writing to the Secretary, together with the written consent of such person to accept office if elected, but each such nominator shall be debarred from nominating any other person for the same election.

33. The affairs of the Society shall be managed by a Council consisting of the President, the immediate Past-President, the first Past-President, the acting Vice-President, the Hon. Secretary, the Hon. Treasurer and eight elected Corporate Members.

Should any ten members wish to nominate any other person to serve on the Council, such nomination should reach the Hon. Secretary by December 4, in accordance with Article 49. Following that date a ballot form will be sent to all members.

President : Mr. G. Marcuse.
Acting Vice-President : Mr. H. Bevan Swift
Hon. Secretary : Mr. G. F. Gregory.
Hon. Treasurer : Mr. E. J. Simmonds

Council : Mr. K. Alford, Mr. R. Hambling, Capt. K. Hartridge, Mr. E. D. Ostermeyer — Retiring members eligible for re-election.

Mr. J. Clarricoats (6CL)
Mr. A. Hinderlich (2QY)
Mr. E. Megaw (6MU)
Mr. A. E. Watts (6UN)
Mr. G. W. Thomas (5YK)
— Nominated by 1928 Council.

Mr. D. P. Baker (2OQ)
Mr. J. D. Matthews (6LL)
Mr. R. L. Royle (2WJ)
— Nominated by 1928 T. & R. Committee.

T. P. Allen (Gi6YW) wins the Rotab Cup for 1929.

The Committee, at its October meeting, unanimously voted in favour of T. P. Allen becoming holder of the Marcuse trophy—known as the Rotab Cup. Mr. Allen has for many months devoted much of his time to the work of "Contact Bureau," and to his foresight and organisation a deal of the recent successes on 28,000 K.C. can be attributed, for through the medium of his very excellent letter budgets much of interest has been correlated and distributed amongst those working on the problems to be found existing on this frequency.

We congratulate Mr. Allen on his honour, and look forward to meeting him in London on December 21, when the trophy will be awarded.

Forthcoming Events

NOVEMBER 23, at City Electric Restaurant, 33, Ludgate Hill, E.C., commence at 6.30 p.m., refreshments obtainable. Discussion opened by Mr. Dedman, G2NH, on 30,000 k.c. work.

DECEMBER 21, at the Institute of Electrical Engineers, commence at 6.15 p.m., tea at 5.30. Annual General Meeting, followed by a Lecture or Discussion.

Important Announcement.

It has been decided by the Committee not to publish an annual with list of call signs for 1929. Instead of this, the Society has made arrangements by which the well-known American publication, the *Citizens' Radio Call Book*, shall be regarded as the official list of the Society. In the negotiations concluded, it has been arranged that the QRA section of the Society shall assist in the compilations of the lists, especially as regards the G calls. In return for this special terms have been obtained for members who wish to purchase the book. As most readers are aware, the *Citizens' Call Book* is published four times a year, viz., in December, March, June and September. To members of the Society it will be sold for the price of 4s., post free. As, however, the Society is unable to return copies unsold, it is only possible to accept orders for the publication in advance. The Society is purchasing a limited number of copies of the December issue, but the first official number under the new arrangement will be the March issue. Will all members wishing for copies of the December number please remit their orders immediately to Headquarters. Proper order forms for the March issue will be included in the January issue of the BULLETIN.

In place of an annual, the Society has decided to publish next year a full list of all members of the Society and a list of the new rules for formation of the Committee and its Sections approved at the last Convention.

Contact Bureau Notes.

By 6YW.

This month is the first anniversary of the formation of CB, and a few words might not be out of place just to remind readers what this organisation really is and how to become a member.

CB exists to facilitate genuine experimenters in that it acts as a sort of unemployment exchange for co-operation. It can find you co-operators willing to assist in a very varied selection of subjects, or it can refer experimenters to you when they want co-operation. In this way, there is a place for everyone in CB work; not only the transmitter but the AA and BRS men.

The Group Scheme has been brought forward a good deal recently in these columns, and it will be sufficient to remind you that if you are interested in one side of the subject it is possible that a group can be found to work on that subject and so concentrate and co-operate for the members' mutual benefit.

I have tried to make these notes as interesting as possible, but I can give you only the information which is supplied to me by various experimenters, and if I do not get little snips from them the column could not exist—and "them" means you. I want to thank all who have supplied me with material for these notes in the past.

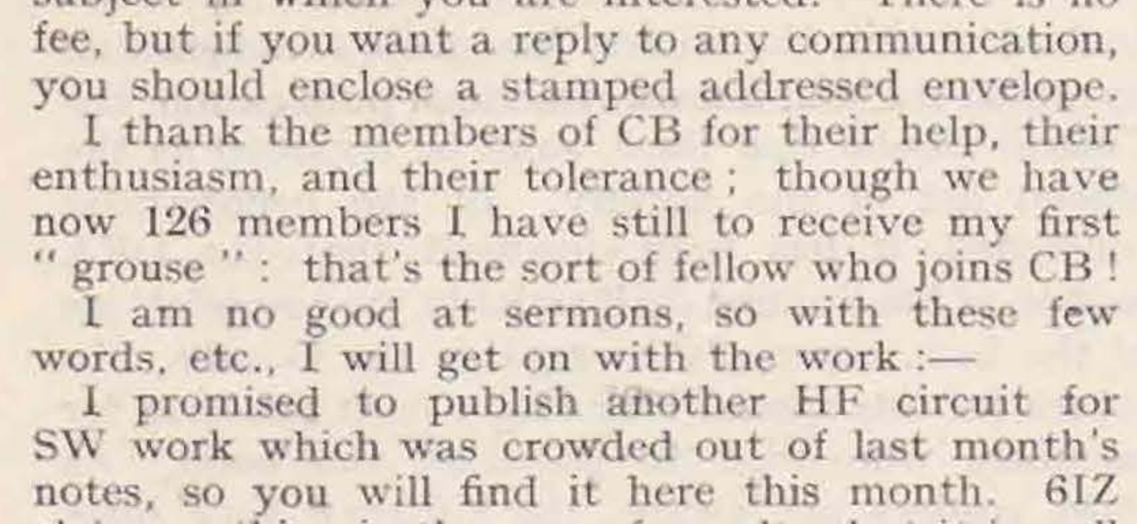
I understand that CB is being recognised as a definite section, and it behoves all of us to make this instrument as useful to ourselves and to the fraternity as it undoubtedly could be. If you don't want help, you could perhaps give it, and the way to do that is to write to CB with your full name and address, call sign, and the name of the subject in which you are interested. There is no fee, but if you want a reply to any communication, you should enclose a stamped addressed envelope.

I thank the members of CB for their help, their enthusiasm, and their tolerance; though we have now 126 members I have still to receive my first "grouse": that's the sort of fellow who joins CB!

I am no good at sermons, so with these few words, etc., I will get on with the work:—

I promised to publish another HF circuit for SW work which was crowded out of last month's notes, so you will find it here this month. 6IZ claims nothing in the way of novelty, but it is well for us to see just what is giving good results.

Another sketch shows 5MQ's method for making a very low C condenser for the ultra-short waves, and recommends it as being noiseless in operation.

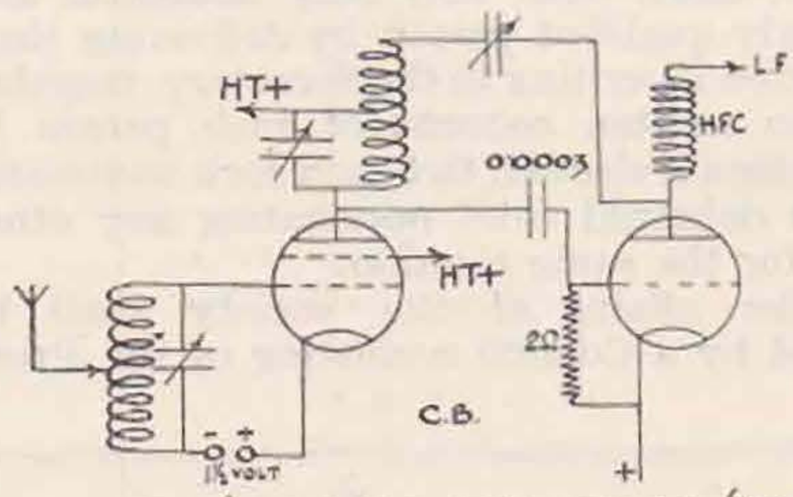


KEYING UNIT AT G.2BWB.

The inductance is connected across the two fixed plates, and though the construction is not entirely new, it reminds us that such can be made from the junk box and be as suitable as anything else that we could obtain.

6MN reminds the quartz lens brigade that the use of a small piece of pitch makes the job of holding the crystal much easier. In the same connection, 17C gives me a tip to pass on to those who have spent time and cash in buying glass lenses; when quartz in the form of a lens is spun like a coin, it gives a ring like a shilling or other genuine coin. Glass, optical or otherwise, gives a dull tone. It is, of course, well known that quartz will scratch glass in the same manner as a diamond.

When 6YW was on the quartz lens prowl t'other day, he asked if quartz really was not now used for spectacles, a statement he has often heard recently. This was denied, and he was told that for all glasses for hot, sandy countries quartz is used, as glass would be more easily scratched when polishing where particles of sand might be present. That is by the way.



H.F. S/W CIRCUIT USED BY GC-6IZ.

Recently a member of CB asked me if it would be possible to print the best times on the various bands for communication with DX countries. This might be of assistance to members, so I have asked 2AUH to form a group to study this matter, and when things get going properly I hope to give each month the optimum times for the following month. It is obvious that conditions will limit the usefulness of such a scheme, but members will have to realise this and not expect OA contacts just when CB says there ought to be some!

Still threshold howl stories coming in, but no group; but the material may assist some distracted one. 6BB uses a PM3 as a detector and a PM4 as amplifier, and tried scrapping good transformer with some success as far as TH went, but with a loss of strength and quality. Finally he found that the adjustment of the detector voltage was the important thing. He reduced the voltage below 4 volts until he was just above the point where the set went into oscillation with a "plonk." This cured TH, gave a quieter background and increased signal strength. 6BB also found that a dud G.B. battery was a certain source of TH.

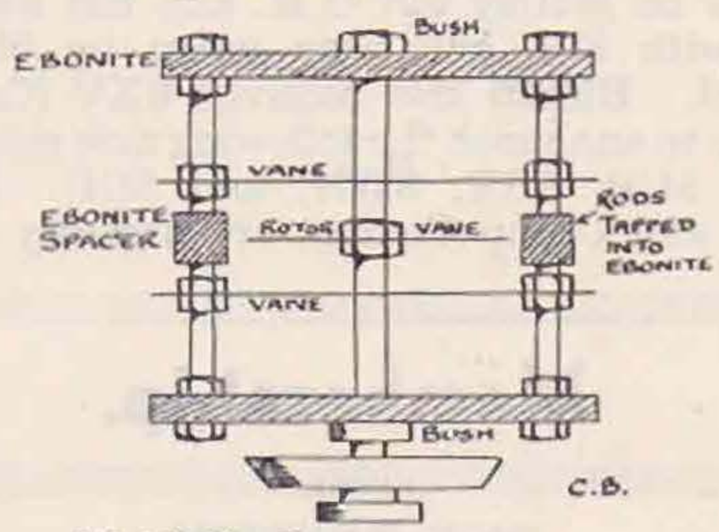
5GU says that 1 megohm across the L.F. transformer secondary entirely cures TH, even down to 8 metres.

5BR also comments on TH. He says a potentiometer return for GL and working well on negative end cures TH.

I must thank 6MU for bequeathing a "Nautical Almanac and Astronomical Ephemeris" to CB, and the first thing I notice on the cover is the

announcement: "In both the abridged and complete Nautical Almanacs the times styled G.M.T. are *now* reckoned from midnight, as in civil usage; but up to and including the year 1924 these times were reckoned from noon, in accordance with the then usual custom of astronomers." Will QST please note? That and a map were the only things I could read in this undoubtedly useful publication!

NU9GV (now W9GV) is anxious to QSO British stations; his card which accompanied this request is the best looking one I have seen.



NOISELESS 5-10 MTR CONDENSER AFTER 5MQ

Have you a chirpy signal? 5WD tells me that he has stopped eating eggs to avoid such a thing! Sorry, OM's, that just slipped in!

6XP describes his new C.C. set: DE5, with 150 volts H.T. for oscillator, 45-metre frequency-doubler, is a DEH612 with 300 volts and 20 volts GB, and 22.5 metre frequency-doubler a DE5B with 12 volts GB and 300 volts H.T. The final P.A. is another DE5 with 500 volts H.T. The whole is built on a frame 6 ft. long, 18 ins. wide, and 2 ft. 6 ins. high, with the H.T. supply below and each stage screened. Jacks are used in each plate CCT for inserting a milliammeter. With this, perfect control is obtained on both waves, and QSY takes only three minutes.

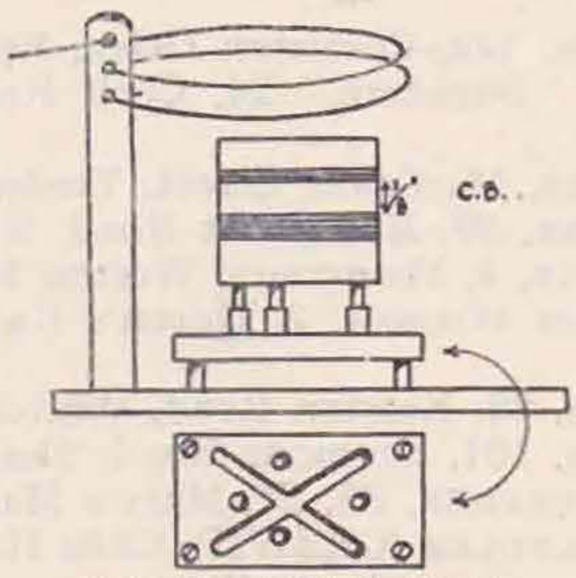
I am very happy to be able to announce that one of the group members has succeeded in receiving the 6th U.S.A. district on the ten-metre band. As far as I know this is a record for British 10 metre reception, and here are the details:—

Received at 5VL, Cornwall, on 3 valves; 27/9/28, from 1730 till 2000 G.M.T.

"To all amateurs hearing this eleven-metre test please QRK by QSL to 6XV, Palo Alta, Cal., U.S.A."

NOTE.—A.C. strength at 1730 R4 up to 1900—then R2 up to 1920—R4 from 1920 till 1945, and then sudden drop to R1 and fade right out.

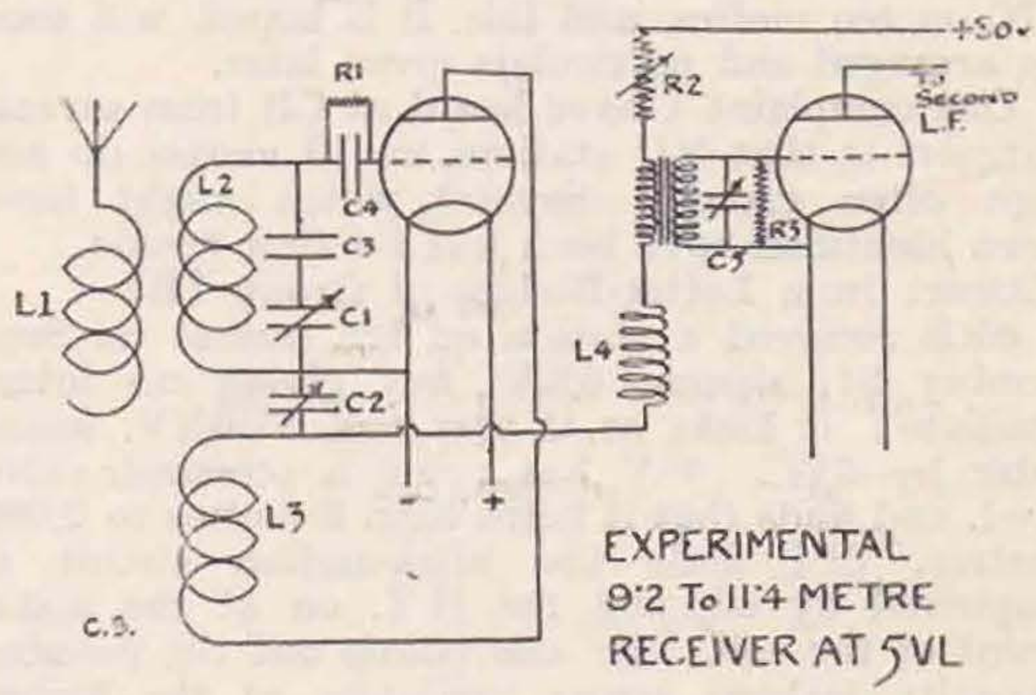
The wave as announced above was wrong as he



COIL HOLDER AT 5VL.

was immediately below the harmonic of WIK. This reception was repeated on 28/9/28, when he was a good R6, and during this second transmission he acknowledged the receipt of a cable from 5VL. On the 29th he was readable 10 feet from the loud speaker on 3 valves. 5VL says his (6XV's) wave is now 10.77 metres. I think this is an excellent bit of work, and 5VL is to be congratulated on it. I knew you would want to see the circuit that can do this sort of thing, so I asked 5VL to send it along, and here it is. C1=.000125 (GR geared), C2=.00025, C3=.0001 fxd., C4=.0001, C5=semi-variable Formo-denser, R1=3 megohms, R2=50,000 ohms, R3=.25 megohm. H.F. choke=2" close wound No. 36 SSC on $\frac{5}{8}$" former; detector=DEV with holder cut away similarly to that for coils. P and G pins are removed from holder, leaving only filament pins for support, and short flexible leads go direct from grid condenser and reaction coil to G and P terminals on valve. Resistance R2 avoids tuning alteration on reaction—a nuisance on 10 metres.

L1=2 turns through ebonite rod, spaced $\frac{1}{8}$", No. 16 wire and $2\frac{1}{4}$" dia. The coil holder (or former) is a tube-base; L2=3 turns No. 24 D.C.C.; and L3=5 turns No. 36 S.S.C. The former is $1\frac{1}{4}$" dia. and the two windings are separated by $\frac{1}{8}$". The rest should be clear from the sketch.



EXPERIMENTAL 9·2 TO 11·4 METRE RECEIVER AT 5VL

Following this news of the success of a G station in receiving NU6XV, I heard that OZ3AR has been QSO NU6XV and OA4BB on 9 metres; also OZ1AN has been QSO OA4CP on 11 metres. Probably an announcement giving times and details will have appeared in QST before this is in print. Note that OZ3AR is on 9 metres each day at 1930 G.M.T.

BRS98 reports the following reception:—

Sunday, September 30, 1928. On ten metres.

1300 G.M.T.: G6TP playing gramophone records at R7.

1330 G.M.T.: WIK's harmonic on 10.7 metres at R3.

1520 G.M.T.: NU2BDA working NU2JN at R7.

1530 G.M.T.: NU2JN calling EF8PRO at R7 to R8.

1535 G.M.T.: NU2NM calling NU2JN at R4.

A second report from 6DH absolutely checks the above, as 6DH also received 2JN at the times stated.

The first Letter-Budget of Group 1D has come in, and it is a real treat. 17C has turned out a most businesslike journal, and this group is worth watching. 17C calls 10 metres by its first name!

Extract from 1D Budget :—

G2BWB uses an ultra-audion TX on an A.A. He has evolved a novel method of keying which gives no spacer, chirp or sparks. It is recommended for QRP stations. The circuit is given in sketch, and consists of an old R.C.C. unit. He, like 5VL, uses a resistance to control reaction ; it is a Bradley-ohm 5,000-20,000 ohm and is quiet.

G2AAK uses Mesney TX, and finds that it oscillates easily.

GW17C has a Reinartz R.X., with transformer coupled amplifier. Power valves (PM2 or DE5) oscillate easier than any other and give stronger signals on all wave-lengths. Condensers across transformer (.0003-.003) cause slight decrease in QRK, but improve oscillation, reduce hand capacity, blindspots and threshold howl. His RX will not oscillate without this condenser. H.F. chokes in phone leads outside set (80 turns of 36 S.S.C. on 6″ test-tube, 1″ dia., turns spaced 1-16″) reduce threshold howl and capacity effects.

Several NU stations have been heard at 17C on 10 metres, but the recent days which were good for 6DH and BRS98 proved dud at 17C.

He wishes to know of any receptions of NU stations at 2000 G.M.T. on September 29.

17C finds that a 10-metre aerial mounted vertically gives stronger signals than the usual 40-metre aerial. OZ2GO has asked for sked with 17C on ten metres, and this, it is hoped, will soon be arranged and particulars given later.

One complaint I have heard at CB from several listeners is that NU stations on 10 metres do not sign often enough. Several which might have been identified have been lost for that reason.

Extract from Letter-Budget of Group 1B :—

6RB received a station on ten metres on Sepsember 21, signing 6XV, but giving no intermediate ; it looks as if this was NU6XV, heard later by 5VL. 5SY has made a screened valve l-v-l, and finds that it helps from 9 metres to 2,000 metres. 6PI finds the ultra-audion circuit is improved by clipping the H.T. on at the nodal point of the coil. He also points out the possible capacity leakage across insulators at the higher frequencies. 6LL is on 10.2125 metres with the C.C. set. The photographs of it show what a lot of trouble he has taken to get a good-looking set.

This group is arranging a 10-metre party which will be over by the time these notes appear, but perhaps next month I shall have some results to announce.

2AUH, who is running Group 4A on the best times for reception of various places, tells me that 2AJC is having trouble with a receiver of o-v-1 (Hartley), which won't oscillate below 19 metres, and he wants suggestions.

Group 4A is holding tests on reception of S. American signals from November 18 till November 24, and will welcome reports with particulars of reception from any member.

Extract from Letter-Budget of Group 1A :—

Members of this group have been successful in receiving signals from quite a number of American 10-metre stations, and I notice that 2NH has also received signals from NU6XV. OA6SA worked OA3BQ on 10 metres for two hours with low power ; distance about 1,500 miles.

There is quite a lot of evidence to show that 10 metres is good when 20 metres is also good, and this has been noticed by the American amateurs as well. A suitable valve for 10 metres seems to be the trouble with many people at present ; perhaps one of the big firms will produce a valve which will be a reasonable price and so be within the reach of us QRP people. 6DH is hearing Yanks on 10 metres, and made some observations which point to the fact that clouds over the receiving aerial cause a decrease of signal strength, as mentioned in a recent copy of QST. BRS98 is receiving 6TP quite well at a distance of 6 miles. 6TP's best DX up till now has been 30 miles. 2FN seems to be getting out O.K. and has had several QSO's with 6LL and been heard by 6PA, 5MA and 2NH. BRS26 also received 6XV (California).

I have to announce the following new members :— BRS25, 5UB, 5BR, 6WN, and 5GU. More are needed, and Group Centres are urgently required.

Membership.

NEW MEMBERS.

A. J. Brown, 16, Macdonald Road, E.17.
Captain D. A. F. Needham, 82, Cambridge Terrace, W.2.
A. Woods, Calverton, Notts.
A. E. Groom, 13, William Street, Luton.
G. W. Melland, Min-y-Don Hall, Old Colwyn, Wales.
F. W. Davis, The Lodge, Kelsey Lane, Beckenham.
C. J. Rockall, 12, River Road, Littlehampton.
Godfrey Sparks, "Dilkhush," Rustington Sea House, Sussex.
L. A. Vaughan (2UH), 15, Yana Road, Cleethorpes, Lincs.
J. W. Wroth (2WT), 21, Henningham Road, Tottenham.
F. H. Webber (5YR), 14, Bridge Street, Tiverton.
A. E. W. Hunt, 55, Markenfield Road, Guildford.
A. R. Pepin, Marlborough College, Wilts.
S. Fallows (6FW), 5, Scargreen Avenue, West Derby, Liverpool.
N. J. Antoine, c/o Millers Ltd., Tarkwa Gold Coast.
P. Lambert, Redroof, Churt, Farnham, Surrey.
W. H. Winchcombe (6ZH), 160, County Road, Swindon.
S. P. Hitchcock, Flat 5, 6, Cranworth Gardens, Brixton.
F. W. Lovell, 22, Burlington Avenue, Kew Gardens, Surrey.
G. Foster, 12, Springfield Road, Moseley, Birmingham.
C. De Lichtbuer (EB4BE), 30, Avenue d'Amerique, Antwerp.
S. A. French, 112, Comiston Drive, Edinburgh.
S. S. Bird, "Sunidare," 24, Cecil Road, Enfield Town.
J. C. Charles, 15, Castle Street, Tredegar.
H. H. Archer, 39, Edencourt Road, S.W.16.
W. H. George, 4, Westcourt, Weston Park, N.8.
C. G. Gordon Wilson, 7, Queen's Gate Gardens, S.W.7.
J. Reynolds, 26, Kelston Road, Whitchurch.
W. J. Roper, 101, Seymour Road, Shanghai.
E. J. Rosenberger, 35, St. Mary's Mansion, W.2.
A. W. H. Chandler (OA3WH), Cliffs House, Beach Road, Beaumaris, Australia.

S. L. HILL, (2AHV), "Barfield," Fielden Park, Manchester.
L. WELSH, 58, King Street, Cowdenbeath, Fifeshire.
G. R. C. SMITH, 31, Gainsborough Road, North Finchley, N.12.
A. HARROWER, 9, St. Paul's Square, Paisley.
J. GALLOCHER (5YQ), 84, Seedhill Road, Paisley.
H. K. BOURNE, 11, Elgin Park, Redland, Bristol.
J. D. PINCHBECK (Associate), P.O., Wadsworth, Hebden Bridge, Yorks.
H. G. SMITH, 12, Westbury Road, Brentwood, Essex.
W. H. SLOUGH, 46, Station Road, Finchley, N.3.
S. S. J. PARR, 18, Harris Street, Camberwell, S.E.
P. GILFORD, Barclays Bank, 111, St. Martin's Lane, W.C.2.
G. W. LORD, Tolteca H.G.O., Mexico.
G. H. WHEATLEY (6WH), 66, Freelands Road, Bromley, Kent.
J. W. ALEXANDER (2ANH), Teg Fryn Lower Cwmtwrch, Swansea.
C. C. MCCALLUM, Muncaster, Ravinglass, Cumberland.
T. G. WHITE, 11, Argyle Road, Westcliff-on-Sea, Essex.

B.R.S. NUMBERS ISSUED.

196.—A. J. BROWN, 16, Macdonald Road, E.17.
197.—C. C. MCCALLUM, Muncaster, Ravenglass, Cumberland.
198.—F. W. LOVELL, 22, Burlington Avenue, Kew Gardens, Surrey.
199.—S. P. HITCHCOCK, Flat 5, 6, Cranworth Gardens, Brixton.
200.—P. LAMBERT, Redroof, Churt, Farnham, Surrey.
201.—A. E. W. HUNT, 55, Markenfield Road, Guildford.
202.—C. J. ROCKALL, 12, River Road, Littlehampton.
203.—G. W. MELLAND, Min-y-Don, Hall, Old Colwyn, Wales.
204.—A. E. GROOM, 13, William Street, Luton.
205.—A. WOODS, Calverton, Notts.
206.—CAPTAIN D. A. F. NEEDHAM, 82, Cambridge Terrace, W.2.
207.—H. H. ARCHER, 39, Edencourt Road, S.W.16.
208.—C. G. GORDON WILSON, 7, Queen's Gate Gardens, S.W.17.
209.—L. WELSH, 58, King Street, Cowdenbeath, Fife.
210.—G. R. C. SMITH, 31, Gainsborough Road, North Finchley, N.12.
211.—A. HARROWER, 9, St. Paul's Square, Paisley.
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214.—H. G. SMITH, 12, Westbury Road, Brentwood, Essex.
215.—S. S. J. PARR, 18, Harris Street, Camberwell, S.E.
216.—G. FOSTER, 12, Springfield Road, Moseley, Birmingham.
217.—T. G. WHITE, 11, Argyle Road, Westcliff-on-Sea, Essex.

B.R.S. NUMBERS RELINQUISHED.

189.—J. ARMSTRONG (now 2AWH), 109, Rupert Street, Bolton.
132.—G. E. JONES (6XB), Tregarth, Redruth, Cornwall.
129.—W. J. SHARVATT (now 2AFD), 15, Woodwarde Road, East Dulwich.
148.—G. KING (now 2AKG), 6, Taff Street, Caepartywyll, Merthyr, Wales.
171.—J. DOUGLAS (now 2AUX), 47, Coquet Street, Jarrow.
106.—T. H. MCCALL, 131, Camberwell Road, S.E.5.

RESIGNATIONS.

F. C. STIMPSON, 77, Forest Drive, West.1.
A. G. WATKINS, "Hainault," Laburnum Grove, Maidenhead.
M. G. SCROGGIE, 19, St. Mildred's Road, S.E.12.
J. H. RIDER, Sleepy Hollow, Woldingham, Surrey.
H. A. RAMSDEN, 15, Albert Avenue, Urmston, Manchester.
J. H. MCCALL, 131, Camberwell Road, S.E.5.
J. B. KAYE, Connaught House, Aldwych, W.C.2.
J. KEIR, 89, Fernleigh Road, N.21.
W. ISON, "Avonview," Harnham, Salisbury.
L. J. H. ARMSTRONG, 111, Kenilworth Avenue, S.W.19.
H. G. GILLISPIE, Royal Societies Club, S.W.1.
SIR G. FORBES, The Athenæum, Pall Mall, S.W.
MISS J. DICKS, 53, Upper Brook Street, W.1.
C. DOWSON, 16, Wharncliffe Gardens, N.W.8.
H. COOPER, 22, Holland Park, W.11.
J. W. CLOUGH, 142, Revidge Road, Blackburn.
A. C. BURNINGHAM, "Redruth," Horley, Surrey.
W. H. BROWN, School House, Mill Hill, N.W.7.
H. ANNISON, 50, Pembury Road, Tonbridge.
CAPTAIN M. A. AINSLIE, Cocking, Midhurst, Sussex.
F. E. D. ACKLAND, Wallwood, Banstead, Surrey.

Notes and News from the British Isles.

London Area.

Area Representative: J. CLARRICOATS (G6CL).

For those who may have wondered why it has become necessary to rearrange our areas the following may be of interest.

In the September BULLETIN in these notes I suggested that in order to evoke interest we in London should hold gatherings once a fortnight at various stations. A week after this notice appeared I asked eight North and South London members if they intended to come to the first gathering on October 11 at my own station. Not one of these fellows had seen my notice!

Surely then there is something wrong with our present scheme. The *only* remedy seems to appoint a number of fellows who will keep in personal touch with a group of, say, a dozen others and see that they are advised on any matters of general interest. The new area scheme may provide this means and it is hoped that new Area representatives will not hesitate to appoint County Sub-representatives to help them with their job of keeping in touch.

Before these notes appear our Seventh London Area Hamfest will have been held. A further event of this type will take place early in the New Year, when we hope all those who missed the Seventh will be with us.

It is hoped that with the new Area arrangement, by which London has four separate representatives, these functions will become more regular events.

Suggestions for improvements are ever welcome.

Now for reports. West London have rallied well and as one of our members put it, "they can count on publicity now!"

Northern Division.

(By G6CL).

2AX has ascended to the 160 band and has had very interesting reports. He has rebuilt his 20 metre set and will be QRV on this band for some while.

5UM is also still on 160 and has recently fitted C.C.

5QF has excelled. He has gone down to 10 metres using the same old Pertinax H.T., and has so far been QSO 6LL and 2FN—the latter appears to be the present British DX QSO on this wave. He was using 2 watts and is ready for schedules with anyone interested. Aerial arrangements are being investigated.

6UN after a visit from 5KL has begun to do the things he should have done and undo those he should not have done! He has testing with QRP on the 41 metre band.

6DP has been heard regularly but no reports come from his pen! Say, Don Pip, what's happened to you and the Tottenham fellows? 5TT, 5VY, 6NR, 6TV have not reported for months. Are you all QRT?

6OT sent us the best Convention photograph and hopes to soon be heard again. He has just achieved academical distinction. Congrats, old man.

5HJ has been on 45—ER, EU and ES being best QSO's using 8 watts maximum. He is testing aerials. (Have you joined C.B. OM?—6CL.)

6PP has now been QSO all Europe, that is, all Europe radioally! Lithuania was the last country to complete his collection. Incidentally it would be interesting to learn how many British stations have been QSO all countries in Europe in which amateurs exist. We often see "DX—all Europe" on cards but have doubts upon the accuracy of this statement. Crystal control is now in ues at 6PP and good reports have been received from FM, EU and ES.

6CL has been on 45 and 23 at odd times—very successful work was done with 650 milliwatts! A new battery of Pertinax is now in use and 4 W's and 1 FM have been worked on 23.

6XH is now in London and has been experimenting with low power. His best efforts were 8 miles with 3 volts H.T. on 45 and 10 miles using the oscillations set up with 25 volts on his receiver on the 180 band.

Southern Division.

(By 6PG).

2CX has done some 23 metre work but rebuilding for new conditions is going strong. He has been listening on 10 metres and hopes to start up on this wave soon. A visit was received from NU9MH.

BRS25 reports that he did practically nil during the summer, but during September he logged many AF, AQ, FK, FO, NP, NU, OA, OZ, SB, and VE stations on 20 metre band. He has recently joined CB for 10 metre research and is rigging up special 10 metre RX.

5BQ has done some work on 20 metres getting R8 from N.Y., being best QSO. He is now using a full wave aerial fed in the middle and this seems more satisfactory than the old half-wave end fed affair.

6BB says he had a great time at Convention and got many new ideas. He has tried a "High C" plate circuit on 45 metres and although note is cleared up, efficiency seems to suffer. At present skip tests are in progress on 23 metres, where most NU and OA and OZ have been worked, thus qualifying for W.A.C. Reports on 23 metres are badly wanted, especially under 500 miles.

6WY found 23 metres patchy but managed R6 in Tasmania and R5 in New Zealand. Experiments on key thump are being carried out.

6HP has worked FK4MS on sked, OA7CH (R4), OA5WH (R5), FOA3Z (R4), FK1LM twice (R5), OZ3AR four times (R4) and numerous W's (1, 2, 3 and 8). He has been comparing Split Hartley with T.P.T.G. and prefers former on 23 and latter on 45. No change in TX except altering size of coils and coupling and uncoupling them!

6PG is still plying pick and shovel for the new underground aerial and is also rebuilding for the new regulations.

6XP now has C.C. going on 23 and 40 metres. He QSO'ed NU2BCC on 21.1 metres, with 5 watts—R2 vy fb CC, but has done little on 45 metres.

2AI is testing the possibilities of a DE6 valve. 2 volts .5 amp, in a T.P.T.G. V.F. Hertz aerial with 600 volts D.C. Results are very promising up to date, reports show R7 in local Europe and EI1FE has been raised, his report being very satisfactory. DX reports are wanted giving QSB, etc. QRH 42.1 metres.

Eastern Division.

(By G6LB).

6LB has been experimenting with crystals, but with little success. He grinds all the "clicks" out of them in about 20 minutes. He is delving into the mysteries of 10 metres and has got a licence for the new bands and 50 watts. With luck he may be on the air by Christmas.

6UT is busy getting to know the ins and outs of his new receiver and has little to report beyond reception reports from the Antipodes, and a few Americans. Asia is still his stumbling block for W.A.C.

6LL is very busy on 10 metres now he is licensed for that band, and is using crystal control. He is testing a vertical Zepp. fed half-wave Hertz and has worked several times across various parts of London, but results are not entirely satisfactory.

He heard four Americans on 10 metres on Sunday, October 14. Apart from this he has tried some 40 metre C.C. 'phone with very good results. There are no other reports from the Division but the A/M visited 2NU recently and saw much of interest.

2NU says his 150 metre 'phone still gets as far as Texas, U.S.A., on quite a moderate input!! How's that for the new bands?

2PX, 5AR and 2KT are still keeping the ether warm on 150 metres, testing pick-ups chiefly.

The two latter stations still keep up the Sunday afternoon "sked" with 5QV, of Clacton.

The East London crowd are going to make a strong effort to make the 150 band a going concern this winter. Those amateurs who have never used that band don't know the fun of working 500 miles on 'phone, using 3 watts. Now then, 6TX, 6LL, 6UT and the other old timers, of the pre-45 days, what about joining 2KT and his select company?

Rumour tells us that 5PD has turned B.C.L. and is using more power on the plates of the amplifiers than most people use on their transmitters.

Western Division.

(By G6CL).

6WN receives congratulations. The Brothers Wilkins having now worked all continents, OZ, 3AW completing their sequence. They have rebuilt their receiver, using V.B. coils.

6VP has been working everywhere it would seem. On 10 watts (14340 band) NU, NC, SA, SB, OA and OZ. (Judging by the number of Yanks I hear call 6VP I imagine his 10 watts must be *very* efficient—C6CL.)

6CO has at last got his TP/TG working satisfactorily and when using 3 watts was QSO ET3 and EW.

2ARV reports as follows:—"Conditions at 2ARV-FB RX-FB, TX-FB, 10 metre RX perking FB-YL vy fb!" (All very interesting to you, old man, but not particularly interesting to us. Why not tell me something about your 10 metre "perkings?" There are a number of us interested in making RX FB on this wave.)

5WF is busy lecturing. He has built a new 10 and 5 metre transmitter and is calibrating crystals for standard oscillator.

BRS72 has been listening to G20D, 2KF, 2NH, 2FN, and GKS, also W2XT on 10 metres. He has had a card from SO1AA who says he will be looking for Britishers at the end of November on 33 metres.

Hertfordshire.

6DG reports from Malvern College where he has been operating 2MV. He has had very good results using a Balanced Colpitt's with 4 watts input and in 10 days was QSO 15 European countries. (How times change!—6CL.)

Northern Area.

Area Representative: S. R. Wright (2GDR).

The new regulations seem to be causing a heap of trouble, but we shall have to settle down to them just as we have settled down to heaps of other changes in past years. Given a little time, I think everything will clear itself up out of what appears to be an impenetrable fog.

Yorkshire.

(By 2DR).

BRS164.—Best DX was OA on 30 metres. AG and FO were also heard, while a few G's on 42 metres were noted.

6OO is awaiting his new permit, and is all ready for the word to go. He also reports hearing a few G's on the new waveband. This station will put out C.C. as usual.

5LT is busy selecting his quartz crystals and grinding 'em up for the new waves. A few 1 watt contacts have been made with EF, G, and EB. This station is collaborating with G5MU.

6DR, who apologises for being late with his report, will be interested to hear that his was the first I received! After much trying, this station has worked OA. Good man.

Sigs. were reported R3 by OA, 3LP, on 23 m. SB, 3 VE's and 15 NU's were also worked. Now on 41.82 and 20.91 metres.

BRS162 reports a few NU's and AG, also XNU and 7EFF. A schedule has been kept with 6FY on 90 m., but where are the 180 band who were busy some time ago?

Lancashire.

(By 5XY).

I regret to say that no reports have been received for this Sub-Area, and from what 5XY says, it appears as dead as the proverbial doornail. Is this true, Lancashire?

6UQ, writing direct, chides me for calling him 6UG. Sorry, OM; it was either my typewriter or the printer's glasses! He is awaiting a new QRA with A.C. mains, but the builder thereof seems unaware that the DX season is here.

2AJC reports little work done in the transmitting department, but has received 2ME, Sydney, several mornings running at R7. Shack expected here and should be on the air again now.

BRS189 sends his first report. Welcome, OM. He is willing to arrange schedules with anyone on 20 m., or above on 'phone or C.W. Transmitters please note.

Cheshire.

(By 6TW).

2SO is still off the ether and, although making slow progress, is swearing to be with us shortly. All the best, OM.

BRS98 is doing well on 10 metres, having logged eight stations and thereby claims a record. September 30 yielded the following bag on 10 m.: W1K (R3), NU's, 2BDA (R7), 2JN (R7-8), 2NM (R4), and G6TP (R7).

BRS152 seems to have had a busy month, too. FL, NY, SB, SE, NQ, NJ, FP, NP, SP, OZ, also expeditions NITB and NX1XL. All U.S.A. districts are reported and XNU7EFF, a ship at Havre.

5BR worked NU on 23m., and has also done a little work on 45 and 90 m. C.C., but a shorted grid bias resulted in a cracked crystal.

BRS186 sends in his first report and is duly welcomed to the fold. Wants a schedule for 40 m. band 'phone.

2MF.—New aerials have been tried for 23 and 45 bands, also keying by absorption to eliminate chirp and click. Would like help here. (What about joining the Contact Bureau, OM?) NU's have been worked on 23 m. and a report received from OA when the input was 9 watts. Reports from Moscow and Canary Islands on 45 m. also. (This is where the chirp comes from, OM!!) Visits by 6RW, 5MQ, 2QV, 2II, and 6QR.

6TW is receiving some excellent reports on his 45 m. 'phone from British and Continental stations. Preparations are well in hand for the new wavebands.

Northumberland, Durham, Cumberland and Westmorland.

(By 2AIZ).

6GC has done a little Continental 45m. work. Here is a 10 m. station which will shortly be on the air. He listens on 10 m. daily.

6QT is busy grinding crystals and making a new wavemeter. Hopes to be on 20 and 40 m. soon with C.C. Has had no reports on his 10 m. transmissions. Will someone send some ?

BRS171 had got his A.A. licence but no call sign up to date. He is experimenting with 6QT with Daniel cells as H.T. and finds them good, so far.

6FG, 6HF, 6YV and 2AIZ visited 6QT for the monthly meeting and spent a useful evening together. I only wish other Sub-Areas would follow this excellent example.

Notts., Derby and Lincs.

(By 6MN).

5BD has got his generator going again after a five months' lapse. Two NU's were worked on 23 m.

2BOW has nothing to report.

5QT has been off the air for some time for business reasons.

BRS103 reports conditions better, 2XAD coming in well. Wants to know where 3LO has been to for three weeks.

6MN has had sundry Continental QSO's, but has been busy with B.C.L. sets and a new wavemeter.

6UO has nothing to report except a schedule with EK4FN every Sunday morning.

2HD and 6LN have nothing to report.

Southern Area

Area Representative: (G2LZ).

5UY has been busy on C.C. with " Grannies' specs " ; the T.P.T.G. circuit has been changed to C.C., and the crystal was unground and found control easier on waves other than the required 45. A comparison between half-wave Hertz and a 70 ft. aerial yielded no difference.

6NZ has had only a few QSO's this month, trying out new aerial and earth for transmission, also on quartz control from " specs."

6FT has closed down prior to his departure for U.S.A. His QRA will be :—R. Frost, 1260, Madison Avenue, Paterson, New Jersey, U.S.A. He will have RX going and will be glad of G skeds. with QRP stations.

2HJ had only seven QSO's, then QRT for rebuilding.

BRS144, of Burnham-on-Crouch, sends his first report. Has been comparing Hartley and Reinartz circuits, and finds Reinartz the best under 20 metres, and Hartley above. Can take skeds. any time.

BRS42 sends a very good list of stations heard, all on a B.C.L. receiver. Just finished a course at Radio College.

2BUW visited G2CX and G6UT while in London at the Convention. Nothing of considerable interest has been done here during October. Am busy building a new T.P.T.G. in readiness for full ticket ! Still writing to P.M.G. about same.

I am collecting photographs of amateur stations and will welcome any. A snap of this station will ALWAYS be sent in return. I hope next September will come along quickly for Convention ! Am still willing to stand-by and report on any signals. Will any amateur who may want regular reports please write to me ? As I am now collecting Surrey reports will ALL fellows please let me have same by the 14th of the month, as they have to be prepared and sent along to G2LZ. That's all this time.

2AGC is experimenting with C.C. and swatting code.

South-Western Area.

Area Representative : Capt. G. Courtenay Price (62OP).

During the very brief interval I have been at my station since July I have heard nothing of very special interest. Recently everybody seems to be getting ready for the winter programme : this includes, of course, work on wave-meters and crystal control for the new bands. Please send in the results of your experiments as they may be of great value to others in the Area, not to mention the Contact Bureau. Reports are few and far between. I shall expect a full quota next month.

6UG is busy preparing for the new bands and conditions. Not yet going.

2YX.—Same as 6UG.

6RB new QRA, 9, King's Drive, Bishop's Road, Bristol. During month several good QSO's with NU—R6 on 40 watts. Also doing reception work on 10 metres.

6ZR during October reports visits from 5PH, 6XN and GI6MU. Nineteen countries and two continents worked on 2 watts. Now starting on 150 metres and hopes others will use this band for local work instead of causing unnecessary QRM on the 40 metre band.

6XB, the new call of 2ACG. Hopes to be on the air very soon with a C.C. outfit with P.A.

Mid-Britain (West).

Area Representative : D. P. Baker (2OQ).

This month has been a very busy time for all of us ; in the first place there was the Convention, which was voted a huge success by all who were present ; then the new licences have caused most of us to re-build at least part of our apparatus, and many crystals have been ground.

The new area scheme will, in my opinion, be a great improvement, although, of course, there is bound to be some slight upset during the change over. Owners of stations have in most cases been too busy for much DX, but we have one or two outstanding exceptions.

Staffordshire.

(By 5UW).

6SO reports DX conditions indifferent during the past month. He has been testing with A.C. filaments, has rebuilt transmitter for new wavebands, and is busy grinding crystals.

6UZ sends in a long report in which he states how pleased he is with his multy Levy aerial system. Has done some fone work on 20 metres, and received a report on his fone on that band from FOA4L.

5UW has done very little on the ether this month, but several crystals have been ground, with varying success. Has received a report from OP1CM, which is very flattering. Transmitter is being rebuilt and will be in operation within a week or two. 5UW visited HQ for the Convention, and would like to say how very thoroughly he enjoyed every detail of the Convention.

2OQ is now busy rebuilding and has started on his receiver, having had rather a rude awakening as to the stability of same after installing a crystal oscillator.

WOLVERHAMPTON AND DISTRICT RADIO TRANSMITTERS' SOCIETY.

Warwickshire.

(By 6CC).

2AK has not been on the air at all. The reports received are pirate !

2YX has his new licence, including Transoceanic : he is rebuilding and hopes to do something serious after the Christmas rush.

2ZW has received his new licence and corrected the aerial for 42 metres. He has worked K's and F's. Also a lot of crystal checking has been done.

5ML is doing constructional work on crystal transmitter with 80 metres, crystal and frequency doubling down to 10 metres. A vertical zeppelin antenna has been erected for 10 and 20 metre work.

QSO's on 20 metres with FO1SR, OZ3AR, OA and NC. Reports of strong sigs from NU.

5NH has built another M.O.P.A. transmitter, but a crystal one is planned with frequency doubling. Grinding has already commenced, bringing the need for first aid.

6CC has been on the air this month and has worked a few Europeans. Experiments with Hertz aerials continue.

6CI has erected a new voltage fed aerial ; results so far are very promising. Only QSO this month was with XNE8FD in Mid-Atlantic.

6XJ is working on 10 watts, using M.O.P.A. Best DX was with Newfoundland ; reports R6 T8. European stations report much weaker sigs, anything from R3.

Mr. G. Brown, late of 6YD, is applying for his own permit. He is at present building a screened-grid-pentode receiver.

Station visits : 5NH to 2ZW ; 5UW to 6CC.

A meeting was held at 5LK on Wednesday, October 24, and a record attendance was obtained. The meeting, which was quite a conventionette in itself, was attended by 2OQ, 2ZW, 2NV, 5ML, 5LK, 5UW, 5NH, 6AT, 6CI, 6HT, 6PB, 6YD, 6XJ, 6CC. A very enjoyable evening was spent. 2CP was well represented at the Convention, as eight of its members visited London for that occasion.

Scottish Area.

Representative : J. Wyllie (G5YG).

The Third Annual Convention has come and gone, and from all accounts, was a pronounced success. I regret a complete absence of Scottish members, apart from our London representative, Dr. Morrison.

Business prevented my personal attendance, as no doubt it did that of various others, but I do hope that next year's Convention will see a larger number of Scottish members present.

So far as I can make out, there has been a perfect orgy of " rebuilding " among the Scottish stations, so much so, in fact, that, judging by reports, few of them have found any time for actual transmitting. On this account I am not going to find fault with you for poor or even non-existent reports this month. Rather do I welcome the indications of activity in this direction as an evidence of an awakened sense of responsibility of your obligations under the new conditions.

I have had a letter from BRS6 (Mr. Cross, late No. 3 District Manager), who is now located in Kedah, F.M.S. He has not found time for radio as yet. but hopes to make a start with a transmitter early next year.

I had the pleasure of visits from the following in September :— GI6WG, 6WL, 2AY, 5XQ, 2WL, 2MA, and 6WZ. This last call-sign is that now allotted to 2BQK, Jack Wilkie, of Aberdeen.

I am pleased to note a considerable number of new members from No. 4 District of late, and hope the influx will continue.

No reports have been received this month from Nos. 2 and 3 Districts.

No. 1 District.

(By 2WL).

2MA is busy with power supply troubles, and has had quite a lot of problems set him by his chemical rectifiers. He is now trying out a self-rectified circuit.

2WL being of "the trade" is "up to the neck" with winter business, and has meantime no leisure for transmitting.

5YG has practically completed his crystal-controlled transmitter, and expects to get a start made with actual transmission some time in October.

5YQ has joined the R.S.G.B. and hopes to get his transmitter started once more after some years of silence.

5XQ has also made a start with the reconstruction of his station.

6NX has been quartz-grinding, but is not yet in a position to start up on crystal control, as he has just been advised of an immediate change of his H.T. supply from D.C. to 25 cycle A.C. with its accompanying problems.

6WL is also preparing for crystal control, and has had quite a lot of fun grinding "specs."

6WZ, who is temporarily located in Glasgow, is also of the wireless trade meantime, and consequently has very little leisure at present.

No. 4 District.

(By 5JB).

5JB is busy changing his QRA at present. He hopes to be able to erect a good aerial, but as yet has nothing to report.

6QF's transmission is meantime confined to "G" stations. Is running a schedule with BRS179, and is experimenting with various forms of aerial coupling. He is desirous of receiving reports from BRS and AA stations.

6UU has been running some foreign "skeds" on 'phone. He is very busy with moving coil loud speakers as well as "speaking pictures," in which latter he is very interested.

Northern Ireland.

Area Representative: C. Morton (G15MO).

6MU has now gone to London and I wish to put on record our appreciation of his very capable services and good work whilst area manager here. On behalf of all the GI's I wish him every success and the very best of good luck in his new sphere of activities.

Conditions during the month do not appear to have been good for DX, except for occasional short spells, and very little transmitting has been done. Most of the stations are at present being rebuilt in accordance with 1929 requirements.

2CN reports a very enjoyable time at the Convention. General work on 45 metres, and has been QSO'ed, reported R8 with one watt input.

5HN has been QSO EF, EB, EK, EN, input 8 to 9 watts. He reports unfavourable conditions lately. A new CC transmitter is contemplated here.

5WD has only been QSO local stations. He is now one of the "spectacle lens brigade," and is very busy grinding and polishing.

6WG is endeavouring to get going on C.C. Only a few Europeans have been worked.

6TB has not had time recently for transmitting, but some reconstruction work is being done.

6YW is our most active station. He has been QSO NU 1 2, and 3 on 23 metres. On 45 metres he has been QSO the Newfoundland ship "Georgina Mary," XNE8FD, while she was 1,000 miles west of Land's End. 6YW is the second G contact with this ship, 14B having been the first. He was also QSO the "Murman" coast. All on 6 watts input.

5MO has nothing to report, having been away from home for the past four months. The present chemical rectifier is about to be scrapped and a new valve rectifier installed.

Notes and News from British Dominions.

Irish Free State.

Representative: Col. Dennis (GW11B).

GW's appear to be waking up a bit, but I have only received one direct report, the others having been forwarded to me by 17C. The amalgamation of the W.S.I. and I.R.T.S. is contemplated as we are too few over here to be able to effectively support two separate societies. We are sorry to hear that 11C has been reluctantly compelled to give up wireless for the present as he cannot find time for it in addition to his other work. We hope to see you back again before long, OM.

14B has worked European DX including many EU's. He wil shortly be CC.

16B, using a hand generator, is getting out fairly well, but I have no details.

18B has worked NU 1, 2 and 8 districts and NC1 on 23 m. Also OA5CM in the evening. He has received R5 reports from OA and OZ2GO. He is shortly going down to 10 m.

14C is QRW work and, rumour has it, something else! and will not be on the air for some time.

15C has been having difficulty with the feeders of his Zepp. aerial. He has been experimenting successfully with "lens" crystals both across grid coil and in the Goyder circuit.

16C is working CC on 45 m.

17C has been busy on 10 m. on which wave he has heard several NU stations as well as crowds of commercial harmonics. He is taking over a Group under the C.B. on this wavelength. He is also working CC on 45 m. and expects soon to be CC on 23 m. also. His only DX is NU 1 and 2 districts on 23 m. and a report from OZ2GO who wants him to fix up a sked. on 10 m. Hi.

18C has been away for a great part of the month but has worked EU, AG and others on 45 m.

13D has joined 17C's 10 m. group and has worked him on several occasions over about half a mile. He has done good 'phone work on 45 m. but at present says that he has no liking for DX. "Wait and see," OM.

11B paid a delightful visit to 5NJ recently and was given a great time there. It was the first "big noise" station that he had seen. He has nothing of interest to report in the way of DX, his best being EU. He has been mainly occupied in preparations for CC on the new bands and has succeeded in taking his old 44.8 m. crystal down to 41.6 m. He is still CC on 45.4 m. using another crystal.

Notes and News from Europe.

Holland.

Short-wave news from amateurs still is a rather difficult thing to be collected in this country as all experimenters are still unlicensed. But there is a little hope that we will obtain our licences in the form of a splendid Christmas gift. Meanwhile many stations are rebuilding and are busy to get their outfit accommodated to 1929 and Washington conditions. We heard that some are testing "quartz," others are testing transmitters *à la* QST 1929, using copper-pipe coils and high C/L valves. Especially the latter-mentioned "hams" are scoring big results with their rebuilt sets, often they get T8 reports. A new licensed station has come on the air, this is the station of the Utrecht district club of the N.V.V.R. Call-sign is PB10 and wavelengths used are 42 m. and 21 m. The first picture-transmitter is working at Amsterdam, call-sign PB4. The only licensed station using crystal-control is PB6, at the Hague; the speech and music is well worth listening to. Ten-meters-test have got a rest. The DX-getter in this new part of the game being NOVN, greatest distance covered 15 miles using an input of 80 watts. EN0CX told that he was very surprised to learn from the "Bull" that he has got 20 reports on his 10 metres tests. This is a grave misprinting as the word "twenty" should be read as "negative." Some little error!

Germany.

By E. Reiffen.

The first half of October brought no decrease in QRN over the previous month, and the cause for this is evidently the comparatively warm weather. Whereas DX work on 30 metres was fairly difficult, once again 20 metres showed us that it is much more suitable for DX on account of the absence of QRN. In Germany, however, it has been proved that conditions on 20 metres are subject to considerable variations, while the 30 metre band is of a steadier character. The great majority of stations on 20 are W's, very few SU, SB or SC stations coming through, but on 30 metres one comes across nearly all the SB, OA and OZ hams. German amateurs have recently had the pleasure of working many OZ stations, which come through very well on 31 metres between 06.00 and 09.00 M.E.T. EK4YO has worked over 30 OZ's with about 70 watts input. 4CB, after erecting a new aerial and using 35 watts, QSO, OZ2AJ and 4KU made his first OZ contact, with 2BP, using 45 watts. All German DX hounds are now on either 20 or 30 metres. As the 40 metre band is badly congested and QRM'd by QRO fone stations, it is used mostly for inter-European work only. 4YAE and 4SAR are very QRW just now, but we hope to hear them at the key again shortly.

QSL Section.

G2QY New QSL Manager for Great Britain.

At the informal meeting held in London on October 26, Mr. Frank King (G5AD), owing to pressure of business, tendered his resignation as Q.S.L. manager.

Mr. Bevan Swift, in accepting his resignation on behalf of the Committee, thanked Mr. King for his past services, and pointed out that his successor would have the benefit of the system of distribution which had been perfected by him.

Mr. Clarricoats explained that a new manager could be elected, but his term of office would end on December 31, 1928. On the motion by Mr. Matthews (G6LL) supported by Mr. Thomas (G5YK), Mr. Henderlich (G2QY) was nominated to serve as new QSL Manager.

On Mr. Henderlich accepting the office he was elected with acclamation.

New Q.S.L. Bureau: Mr. A. Henderlich, G2QY, 15, Lyncroft Gardens, London, N.W.6. Telephone No.: Hampstead 4460.

Changes of Q.R.A.

V. W. Coveney (5UL), 16, Rochester Gardens, Ilford.

F. L. Stollery (5QV), "Sunnymead," Harold Road, Clacton.

H. C. Page (6PA), Newgardens Farm, Teynham Kent.

Stray.

V. Singusaar-Hobe, 4 Estonia, Pernau, asks to be put in touch with any Amateur interested in Egyptian Excavations.

Calls Heard.

Calls heard by H. Hall, Napier Street, St. Arnaud, Victoria.

2NH	D.C.	R6 (Two most consistent
5MS	R.A.C.	R6 (stations.
2LZ	Wobbly D.C.	R7
5YX	D.C.	R3-4
5BZ	R.A.C.	R4
5WK	D.C.	R5
5QV	D.C.	R4-5
5MQ	R.A.C.	R5
6VP	——	R4
6YV	——	R3
2XV	——	R6

6HP, 5YK, 6WY, 6PI, no particulars.

QSL Cards for Holland.

The N.V.I.R. (Dutch Section of the I.A.R.U.) has decided to change the address of its QSL Bureau, and we shall be obliged if you will be good enough to give this change the widest possible publicity. We thank you.

By special agreement with the Post Office the address of our QSL Service is fixed as follows:—

BOUWMAN, VOORSCHOTEN (Holland).

This address is sufficient as it stands and any addition (e.g. QSL Service, N.V.I.R., or I.A.R.U.) will only cause delay and difficulties, So, cut it out.

There is no need to send cards for Holland under cover!

QRA Section.

Manager: M. W. Pilpel (G6PP), 54, Purley Avenue, London, N.W.2.

This month QRA Supplement No. 2 appears, and I think you will find it a useful addition to the Annual. It will be the last one of its kind, because at a recent meeting of the Committee, it was decided to join hands with our cousins across the "pond" in the production of a call-book, and arrangements have been made whereby we amalgamate with the Radio Amateur Call Book, Inc., of Chicago. This may seem rather a big step to have taken, but I am sure it will be a popular one. We must admit that the sales of our Annual were affected by the American publication, and we saw ourselves faced with the situation of being unable to publish an Annual in 1929. The only thing we could do was to look out for someone to help us in this matter, and when a member suggested amalgamation with the American company, we saw a solution to our problem. The Radio Amateurs' Call Book will be published every quarter, March, June, September, and December, and the price per copy to members, if ordered through headquarters, will be 4s., which is considerably less than it can be purchased for elsewhere. I am going to do my very best to make and keep the lists of QRA's in the book right up to date, and I think there will be little doubt but that it will be the finest and most complete call book in the world. Will all members who want copies of this publication please send their orders to headquarters at once, as we are only ordering a limited quantity, and we don't want to disappoint anyone if we can help it.

I have had several cases brought to my notice recently of members wanting information about QRA's looking for my telephone number in the Directory, but without result. The reason for this is that the number is not in the book under my name, but here it is: Hampstead 2590. I am always willing to answer queries by 'phone, but please don't ring up unless you have really gone through all the lists in your possession, and are still unable to find the address of the station you want. In that event, I might be able to help, so QSUF.

QRA's wanted.—I should welcome definite information concerning any of the following stations: G2NC, G5BM, G2AQ, G6QN, GSMD.

Correspondence

To the Editor of T. & R. Bulletin.

Dear Sirs,—We feel that amateurs in various parts of the country may be interested in knowing that Philips of P.C.J.J. fame have installed a transmitter solely for communication with amateurs in various parts of the world.

At the present moment this transmitter is operating on a wavelength of 41.3 metres, using the call-sign PBF5.

QSO has already been had with numerous amateurs, and whilst we have no definite information upon the point, we believe that PBF5 is standing by from 20.00 to 24.00 nightly.

Reports upon their transmissions would be welcomed by the station, which should be addressed to Messrs. N. V. Phillips Radio, Eindhoven, Holland. Yours faithfully,

For Phillips Lamps, Ltd.
—— (Radio Department).

To the Editor of T. & R. Bulletin.

Sir,—The undersigned wish to thank the London hams for their kindness during the Convention. Without exception we were welcomed with that typical ham spirit which makes the Convention something to be looked forward to, and the past one to be remembered. It gives us a stimulant to greater efforts, and we return to our homes in the provinces with reports to those who were unable to be present, of the talks, arguments, and theories, etc., which have been heard at the meeting of the "hams," and telling them of the good feeling that prevailed all round.

We further wish to thank "Ernie" of G2NH who "housed" us, and of the hospitality shown while we stayed with him. We shall indeed be for ever in his debt for the kindness shown at his home. (Signed) G. E. Jones (G6XB)
L. Jones (G5JO).
J. R. Brown (G6QT).

To the Editor of T. & R. Bulletin.

Dear OM,—Please insert the following:—FO Stations are desirous of more QSO's with EG. Will EG's QRX on Tuesdays and Sundays from November 15 onwards on the 20-21 metre band for OM FOA7L, calling test from 18.00 G.M.T. onwards?

May I take this opportunity of thanking the S.A.R.R.L. gang most heartily for the welcome and kindness shown me whilst in FO. E. T. Somerset (BRS125).

To the Editor of THE T. & R. BULLETIN.

DEAR MR. EDITOR,—Please note my QRA has recently been changed to Minsmere, West End, Leiston, Suffolk. 6AH is not yet going, but will be as soon as the mast is put up, and any reports will be welcome. Tests will be carried out on sunrise and sunset fading and WX conditions.

I should be glad if you would draw the attention of "BULL." readers to my new QRA.

73's OM and all the best.—Yours,

ALFRED HINE (G6AH).

To the Editor of THE T. & R. BULLETIN.

DEAR SIR,—Now that the measurement of radio waves is no longer officially made in metres, but in kilocycles, I would suggest that in future we should adopt the kilocycle as our unit instead of the metre. I know everyone has become accustomed to thinking in metres, and the change will be difficult, still it is bound to come sooner or later, and we must not allow it to be said that amateur radio is behind the times.

Therefore, I would suggest that in future kilocycles should be substituted for metres in the BULLETIN. After all, we all read the BULLETIN, and if we only find frequency there, we shall have to start thinking frequency, and so soon become used to it.—Yours truly,

H. CECIL PAGE (G6PA).

To the Editor, T. & R. BULLETIN.

DEAR O.M.—A letter received recently from W6QL-6AG asks me to let British hams know that he will be glad of schedules between 7 and 10 p.m. P.S.T. on the twenty metre band with any G hams not yet QSO the U.S. 6th. He reports hearing 5MS, 2LZ, 2NH, 6BQ and 5BY, having worked 5MS.

While writing I would like to draw attention to the I.A.R.U. notes in QST. It is some time now since you mentioned that I was making up this monthly report, but even so I have not had a single unsolicited report, and unless I write a shoal of cards, or go on the air and work all the G hams I hear, I have nothing to report on. And as I am far too busy to operate these days the notes are rapidly dwindling. What on earth is the matter with the gang? Don't they want the world to know what they are doing, or do they, as earnest seekers after knowledge, feel that a report on mere DX is *infra dig.*? I cannot believe it is either of these reasons, to judge by the conversation at the Convention.

So for goodness sake, gentlemen, let me have a card, by the 30th of each month, telling me what DX you have done and anything that may be of interest to the rest of the ham world. Write at the same time as you do to your Area Manager if you like, only please DO it and make it a regular habit.

Very 73 and luck to the "Bull."

K. E. BRIAN JAY (G2HJ).

To the Editor of T. & R. BULLETIN.

DEAR SIRS,—Please note that my call-sign 6BY has been changed to G6TZ, and I should be pleased if you would publish this in the BULLETIN. Transmissions using crystal control accurate to point 1 per cent. will shortly take place on the following waves: 42.4, 21.2, 10.6, 5.3.—Yours truly,

R. BOTTOMLEY (G6TZ).

To the Editor of T. & R. BULLETIN.

DEAR SIR,—Please note that the call signal G2BCM formerly owned by me is now replaced by G6AX. I am licensed to work the 160-metre band and am trying an indoor aerial for TX on low power. Any report from anywhere answered.—Yours faithfully,

A. L. CLOSE.

To the Editor of T. & R. BULLETIN.

DEAR SIR,—I have to-day received a card from W4AHY in reply to one of my reports, and he asks me to tell other BRS'S to report his signals should they hear him. His QRA is: Willis Hudgins, 104, Oakwood Avenue, Huntsville, Alabama, U.S.A.

Will you please let the "boys" know about this through the BULLETIN columns. J. B. MORTON (BRS126).

To the Editor of T. & R. BULLETIN.

DEAR OM,—May I bring to your notice the decease of Radio FE1ES; this being due to my return to EG on September 30 73's ESDX. W. E. CORBETT (Sergt.)

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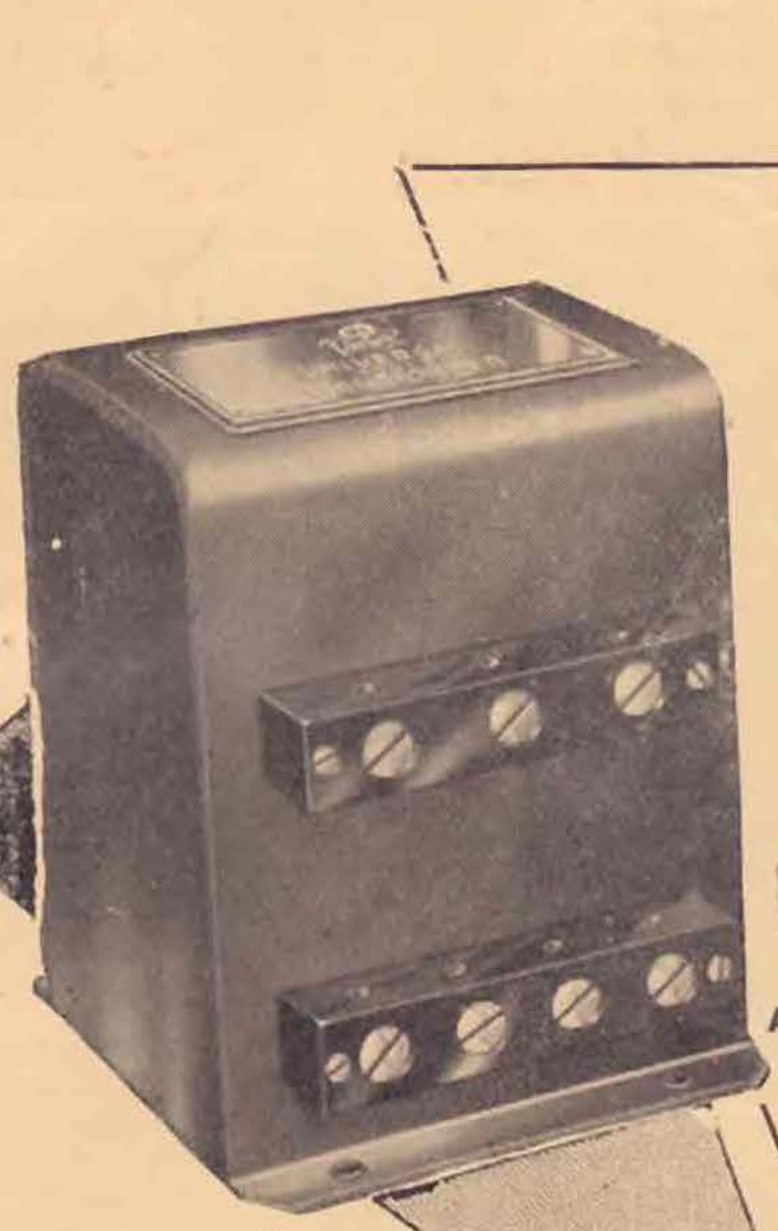

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