

N.Z. Short-wave Club

The Secretary Writes

OWING to being out of town NZ1W Mr. Donnelly resigned from the committee, and NZ12W being now Auckland representative, Messrs. R. Lockerbee, NZ39W, and R. Spence, NZ38W, were appointed to fill the vacancies. As both are energetic workers they will be a great help. Mr. G. Reeves, of 78 Randwick Crescent, Moera, is acting as Lower Hutt representative.

The offer of ZL1BC, Mr. Mickelborough, to act as official club station, is gratefully received. Members are writing in already expressing thanks to IBC and 2AW for keeping them posted with announcements.

Will members please note in filling out report cards that their own call goes in the line marked "Station." The station to whom the card is sent may be filled in in the triangular space above the badge. Remarks may be continued on the back of an accompanying letter, the more complete a report is the better, details such as items heard, with the time (NZMT), duration of fades, together with any peculiarity observed could well be included.

For convenience many transmitters are sending members' cards into me; these will go out with the monthly letter. As it is usual for stations to have a "clearing up" day, members will know that a little time will elapse before their card is sent owing to the reports having to be tabulated, verified, etc.

The suggestion of stickers for envelopes is being considered, inquiries are being made re the cost of envelopes with the badge thereon. The list of stations being sent to members is just out of the printer's hands, and any additional data coming to hand will be sent out each month.

As many members write in saying they mislaid their copies of the "Record" I would suggest they try the idea of the loose cover, which keeps them ready for reference at all times. Any information disseminated per medium of the radio Press is for the benefit of short wavers. There are hundreds who, through no fault of their own, cannot join up with us yet, but will do so later, and it is our desire to help prospective members, because, later on, most shortwavers will be members. I notice NZ84W will be the next number to go locally. Address inquiries to A. B. McDonagh, secretary. N.Z. Short Wave Club, 274 Cuba Street, Wellington.

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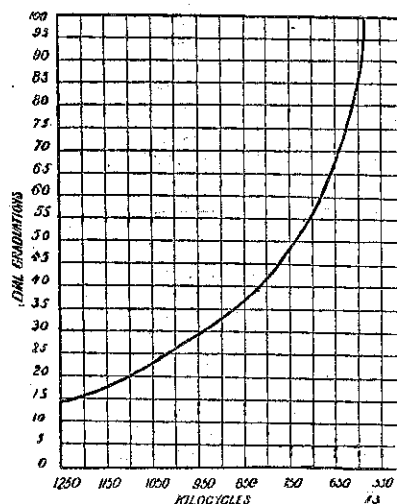
76 Kent Terrace, Wellington.
Tel. 23-448.

Wavelength Calibration

Every Set its own Wavemeter

(An address by F. W. Sellens to Short-wave Club.)

AFTER the owner of a short-wave receiving set has mastered the art of tuning and has heard several of the most powerful stations, he is naturally anxious to know where to tune in for the others that he knows are on the air, but has but very little idea which coil to use or where to find them. Or again a station is heard, but the call-sign is not heard clearly enough to get it in full, and the operator is left wondering who it is. If he had a means of arriv-



A TYPICAL CALIBRATION CHART.

The vertical divisions should be divided into units instead of 5's, as shown. The stations are fixed by horizontal and vertical lines.

ing at the wavelength of the stranger the mystery would most likely be solved.

The most satisfactory means of obtaining this information is by a correctly calibrated wavemeter, but the average short-wave listener cannot afford an instrument of this description, or would rather spend the money in improvements to his receiver.

A wavemeter in its simplest form amounts to no more than a tuned circuit which has been calibrated in wavelengths, so that the wavelength to every different setting of the tuning condenser is known.

With such an instrument available. If a station is tuned in on the receiver one has only to tune the wavemeter to it, note the setting of the wavemeter dial, and read off the wavelength of the station being received. Inversely, if one wants to hear, say, G5SW, which transmits on 25.53 metres, he has only to set the wavemeter to this and tune the set to the wavemeter. It is then also tuned to the required station.

For those who like experimenting, and in consequence frequently alter, improve and rebuild their receivers, a wavemeter is almost a necessity. Those, however, who use their sets primarily as a source of entertainment and are satisfied to leave them unaltered for long periods, can take advantage of the fact that the essentials of a wavemeter are incorporated

in every set, and can make their set act as its own wavemeter.

To proceed with the construction of the calibration charts, one will be needed for each coil, it will be necessary to procure several sheets of squared or graph paper. The best for the purpose is ruled in tenths of an inch, each tenth line being ruled with a heavier line, thus facilitating the reading of the finished chart.

The sheets should be marked off along the foot in degrees, corresponding with the condenser dial scale, which may read from 0 to 100 or 0 to 180, and along the left-hand vertical edge a scale of wavelengths, each chart according to the range in wavelengths of the coil which will have to be found by trial.

Having the blank charts ready, we may now tune in the various stations of which the wavelength is known. Each is tuned to obtain the fullest volume, keeping reaction just short of oscillation. As each station is tuned in a note should be made of the dial reading and the coil used. However, it would take quite a long time in the ordinary course of events to tune in enough stations sufficiently separated to be able to produce a reliable chart. Another means is open to those who live near enough to a broadcast station to be able to tune in its harmonics. In Wellington we have an excellent station in 2YA for this purpose.

The first thing to do is to work out the harmonics of the broadcast station 2YA works on 720 kilocycles, the harmonics being multiples of this, that is 1440, 2160, 2880 and so on. It is a simple matter to convert kilocycles to metres; it is done by dividing kilocycles into 300,000. Seven hundred and twenty kilocycles (2YA frequency), therefore, is 416.66 metres.

Working out the harmonics down to as low as your smallest coil will tune; a list of 2YA's harmonics down to 10.16 metres is published herewith.

THE next operation is to tune in each harmonic, starting with the largest coil and working down to the smallest, making a note of each dial setting, with the coil used. It is necessary to take as much care in tuning in the harmonics as one would a shortwave station. A good way to get stronger signals on the higher harmonics—lower wavelengths—is to tune in a crystal set to 2YA and then

use the phones on the shortwave set. You will be better able to decide the exact dial reading this way.

After having prepared a list of harmonics of 2YA for each coil, and as many shortwave stations of known wavelength as possible, we can then start on our calibration charts.

The approximate range of each call will be known by this time, so we will be able to mark off the vertical left-hand edge in wavelengths for the first coil, the highest at the top, leaving ten squares for fractions of a metre, and then the next wavelength (i.e., a wavelength in even metre on every tenth line which, on the square paper recommended, is an extra heavy line), and so on to the bottom of the chart. We then make a dot at the junction of the dial reading at the foot of the chart, and the wavelength marked on the edge for each station and harmonic, and then draw a curve through these dots, this will give you a calibration of this coil.

The same procedure is followed for each coil. It is advisable to draw the lines lightly at first, and log as many stations as possible before finally inking in the curves, as quite likely an odd station will not be quite at its allotted wavelength, but I have found short-wave stations to be fairly reliable in this respect, more so than some broadcast stations.

Listeners in Wellington can depend on the harmonics of 2YA. I have made a number of charts at different times on account of so much experimenting with various coils, using their harmonics as a basis, and find they fit in perfectly with the wavelengths of crystal-controlled shortwave stations, giving a good reliable calibration chart.

With a carefully-drawn curve for each coil, you will be able to determine the wavelength, to within a very small fraction, of any station heard, by noting where the dial reading intersects the curve, and glance to the left, where you will have the wavelength in metres and tenths. On the other hand, if it is desired to tune in a station of known wavelength, this is located on the chart, and the vertical line intersecting the curve will give you the dial reading.

Advertising in Italian Programmes

RADIO advertising is slowly creeping into Italian broadcast programmes, states an English contemporary. Amateurs all over the country are gravely perturbed by the possibility of this abuse of the microphone, and strong petitions are being addressed to the authorities, pleading for care in the introduction of any propaganda in the transmissions.

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