should occupy the position "A" in your sketch.

KIWI (Dunedin): Do you know who are the agents for the "Supertone" receiving set?

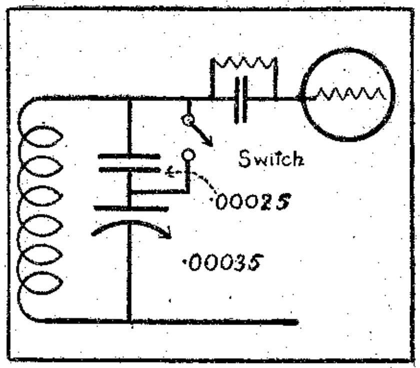
A.: Sorry we do not. Perhaps some reader seeing this may be able to advise our correspondent of the address of the agents.

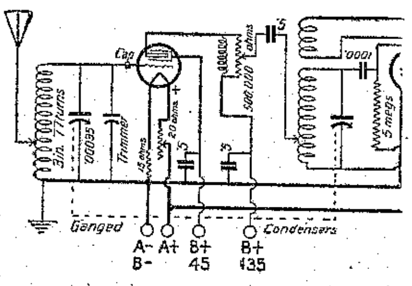
G.T.H. (Christchurch): I wish to use the Philips equivalent of the 245 in the L.W. What alterations must be made?

A.: You need not make any alterations; the valves are so much alike that efficiency will not be impaired if it is just substituted.

JUMBO (Otago): What fixed condensers must I place in series with my .00015 tuning condenser to bring it to the following capacity: .0001, .00035, and .0005?

A.: By using a series capacity you will reduce the total capacity. Therefore the only capacity you can get by seriesing is the .0001 and for this you require a .001 condenser. If you want to bring your condenser up to the other





By connecting condensers in series, as in the upper illustration, the total capacity is less than that of the smallest. By paralleling them as in the lower diagram the total capacities equal the sum.

two you must use in parallel a .0002 or a .00035 as the case may be, but by using a condenser in parallel you are reducing the minimum capacity and lessening the tuning range of your set.

2. I have two shortwave coils which work well on the top wavelength but which give me Morse only on the lower end.

A.: Probably your set is oscillating continuously when on the lower wavelengths and you must reduce the tickler turns until it will just oscillate on the upper wavelength. If this is not the case you will need a little more practice in tuning in broadcast stations, though on the lower wavelengths there is more Morse than telephony.

SEARCHER (Kaikohe): I have had a difficulty with the s.g. stage of the Diff. Four. Oscillation is difficult to control.

A.: Use a .001 coupling condenser instead of a .0001 as specified, when the set was first described. This will probably overcome your trouble. The condenser, by the way, is the one between the s.g. stage and the detector.

L.D. (Christchurch): I am building the s.g. short-wave set in the 1931 "Guide," but I intend to use .0005 variable condensers. What size coils should I make to match them?

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A.: It is not practicable to use .0005 condensers in short-wave sets. Use those specified if you want worth-while results.

MILLYCYCLE (Pokeno): Will zinc do for shielding an ordinary set?

No; it must be copper or aluminium.

2. Would 30 gauge d.s.c. wire be too heavy for the primary. If not, what alterations must I make in the number of turns?

A.: You can use 32 without any departure from the specification.

3. Will the incorporation of a 30 henry output choke improve distance-getting ability?

A.: No; it will only save your speaker.

A.W.E. (Christchurch): What voltages do you suggest on the "B" side of the "Radiogram" power supply?

A.: "B+ maximum" at least 135. "B+ audio," either the same as "B+ maximum," or 45 volts less. "B+ detector," 22½ to 45, "B+ screen" half the voltage on the plate.

2. Concerning the 1½ former the list of components specify 7 inches and the directions for making up the coils call for a one-inch piece. Which is correct?

A.: Only one short piece is required, say 1in.

3. Will .3 bypass condensers do instead of .25?—Yes.

P.A. (Wellington): What are the capacities of two condensers, one with 11 plates and another of 24?

A.: Probably .00025 and .0005.

2. How many plates in a .00015 and .00025 condensers?

A.: Seven and eleven respectively.

3. Where could I obtain some information about condensers?

A.: The 1931 "Radio Guide."

TRICKLE CHARGER (Khandallah): I have an Osram DE5 valve. What type is it?

A.: A general purpose 6v. valve.

2. When are you bringing out an all-electric version of the Outspan Five?

A.: In the 1931 'Guide" we gave an electric version of a somewhat similar set using one less stage. Before long, however, we will add another stage for the "Radio Record." This will equal the Outspan Five only it will use push-pull.

3. I have a Ferranti OP1 and a Pilot 394 output transformer. Which is the most suitable for the L.W.?

A.: As both are of the same ratio both are equally suitable.

PUKEKO (Hineura): My house is situated on a knob, and I am forced to run the aerial parallel and very close to a power line. I can lengthen it without sacrificing much height only by having the lead-in off the centre of the aerial. Would this improve matters?

A.: If the distance from the centre of the proposed aerial to one end is greater than the distance from the existing lead-in to the mast, then it will be an improvement, otherwise not. If you are near a power line there is little to be gained by increasing the length. Where possible increase the height and shorten.

2. Could you recommend a handy text-book to assist in the location of trouble that might develop in a set such as mine?

A.: Yes, the 1931 "Guide" will help you, but you would find "The Service Manual" (Radio News) gives more detail as far as a.c. sets are concerned.

PARALLE (Nelson): Would a 50 ohm. potentiometer be suitable for centre tapping the filament wires of two Osram P625 valves in push-pull?—Yes.

2. Which would be the correct resistance for biasing two P625's?

A.: 500 ohms seeing they are in push-pull, and double the current will be passing.

3. What value potentiometer do I require for shunting across the filament leads of the detector stage?—200 or 400 ohms.

MEGOSTAT (Wellington): Can an eliminator designed for 200-220 volt mains be worked safely on 230 volts mains?

A.: Providing your lines are not subject to great fluctuation, yes.

2. How do amateurs find out their percentage of modulation?

A.: By the use of meters.

3. Would a 100 ohms potentiometer use any current across a 6-volt accumulator? —60 mils.

(Note.—We restrict the number of questions that any one person may ask without payment of a fee to three.)

H.J.P. (Blenheim): I am using two midget condensers in conjunction with my tuning condensers to spread the amateur Morse, but I cannot get near the main tuning control for hand capacity. Would adjusting them by bakelite rods and shifting them to the back of the panel help me?

A.: Yes. Receive the station on the main dial, and vary the midget condenser from minimum to maximum. If the station disappears move the main dial one point and tune in again with the midget, and so on, as the midget tunes the wave between the two points on the main dial only. When not in use the midget condensers are left at minimum capacity.

2. In your recent data for short-wave coils you give three coils. Are these for the detector and are they put on in this order from the top?

A.: Yes, primary on the bottom and tickler on the top. The s.g. coils are of the same dimensions.

3. My set will not oscillate with the r.f. choke between the detector coil and the first transformer. Do I need more reaction turns on the coil?