815: Approx. Studio programme. Record: Overture New Symphony Or-

chestra "In Memorium" (Sullivan). ss—Mr. T. D. Williams, "True is All Iago Says" (Hiawatha). 8.18: Bass-(Coleridge-Taylor).

826: Harp-Mr. H. G. Glaysher, "Deux Morceaux" (Alfred Kastner).

8.32: Soprano—Miss Addie Campbell (a) "Only the River Running By"

(Hopkins); (b) "Solveig's Song" (Greig).

8.37: Orchestral—Salon Orchestra (Conductor, Mr. Francis Bate). Carmen Suite: (a) "Prelude"; (b) "Arugonaise"; (c) "Intermezzo"; (d) "Les Dragons D'Alcara"; (e) "Les Toreadors". (Bizet. arr. Roberts).

S.49: Tenor-Mr. Ernest Rogers (a) "Serenade" (Schubert); (b) "All Hail

Thou Dwelling" (Faust), (Gounod).

8.56: Violin solos—Record: Y. Bratza (a) "Serenade Basque" (Dunhill); (b) "Serenade Espagnole" (Chaminade-Kreisler).
9.2: Record—Glasgow Orpheus Choir. "Great God of Love" (Pearsall).

9.5 : Weather report and station notices.
9.7 : Piano—Miss Bessie Pollard, with Salon Orchestra. "Concerto in G.

9.7: Piano—Miss Desse Lower,
Minor" (Saint Saens).
9.12: Bass—Mr. T. D. Williams (a) "Rage! Thou Angry Storm" (Benedict),
"I Hoard Your Voice" (Forester); (c) "The Wanderer's Song" (Harrison).

9.32: Harp—Mr. H. G. Glaysher, "Sur le rive de le mer" (Upon the Scashore), (Aburthur).

9.38 Soprano-Miss Addie Campbell, Shadow Song "Ombra Leggiera" (Dinorah), (Meyerbeer).

9.45: Record—'Cello solo: G. Cassado "Apres un Reve" (Faure).
9.49: Tenor: Mr. Ernest Rogers (a) "Song of All the Ages" (Squire); (b)
"To the Moon" (Voergi).

9.55; Record-Glasgow Orpheus Choir. "Dim Lit Woods" (Brahms).

9.58: Orchestral—Salon Orchestra: Three Arabian Dances (Montague Ring); (a) "Caravan"; (b) "By the Fountain"; (c) "The Bedomin.

10.8 : God Save the King.

4XA. DUNEDIN (650 KILOCYCLES)—SUNDAY JANUARY 3, 1932.

3.0 : Chimes. Selected recordings.

4.30: Close down.

5.30: Children's Song Service, conducted by Big Brother Bill.

6.15: Instrumental recordings.

6.30: Relay of evening service from Knox Presbyterian Church. Preacher: The Rev. Mr. D. C. Herron.

7.45: Selected recordings.

8.15: Relay of concert programme from 3YA,

10.0 : God Save the King.

2YB, NEW PLYMOUTH (1230 KILOCYCLES) -SUNDAY, JAN. 3, 1932.

7.20 to 8.15: Church relay. 8.15 to 10: Studio Concert.

Presto Local Receiver

(Continued f om page 17.) clamp by the gap, which is 1-16in, each side. This choke will drop only 14 volts when passing 40 m.a.

The winding consists of 7000 turns of 32 s.w.g. enamelled wire, tapped at the 3500th turn for connection to a 1mfd, smoothing condenser of 400 volts tap to the choke and 2 mfd, condenser

The choke is preceded by a 2mfd condenser and followed by 4 mfds... both 400 volts working.

Insulate the choke well round the core, and before tapping half-way, cover the whole winding with tape, to prevent any subsequent turns contacting early ones; insulate the tapping, and continue winding, the wire being simply "run in" without paper strips. and not in layers.

It should be mentioned here that the "gap" given in choke specifications is for the maximum current to be passed, and to this condition the given inductance also applies. As the amount of current passed is reduced, so the inductance rises, and if the current is much below the maximum, the gap may be slightly reduced, thus further increasing the inductance. the maximum current-40 mills.

behind the transformer, and the only and soldered on.

precaution as to its position is that the central core must be at right-angles to that of the transformer, which means that the axis of the spool must be vertical. The choke need not be fastened in position, and if all leads are of rubber flex and sufficiently long the choke may be withdrawn at any time for examination, if the 280 is first withdrawn from its socket.

A lead comes from the 280 centreworking. The quantity of wire is 11th, below. At the output end a lead runs down to the 4 mfd, condenser, and up above to the resistor chain 4-meg. Insulate all joints so that there is no chance of a "short" in the shieldme.

The Change-over Switch.

FOUR variable condensers of the bakelite or mica dielectric type, .0005 mfd. capacity, are placed upon the panel. When receiving one local station, the top pair of condensers will be used for tuning if the switch is in the top position, and when switch is down, the two lower condensers are brought into action

The main part of the switch is a piece of ebonite tube (rod could be used) 5-8 or lin. diameter. The actual diameter used was 5-8in., and it was found that a 3-8in. brass tube would iust fit inside. Two pieces 1 in. long In this were sawn off the brass tube and solcase the choke will be carrying nearly dered in position on the brass uprights to act as bearings. Failing the brass There is ample space for the choke tube, brass sheet could be coiled round If ebonite rod is

LIST OF PARTS

FOR "PRESTO" LOCAL RECEIVER

Dielectric Variable Condensers, .0005, with knobs. Dielectric

Smoothing Condensers, 400 working: othing Congensors, 200 1101112. 4mfd., 2mfd., 1mfd., one each. 1288 Condensers: Three 2mf By-pass Condensers: Three inid., two mica .008; three 1mfd. 800 test.

istors: R.F. screen 30,000 and 70,000; 15,000, 20,000, 450 wire wound. Compo.: Two 4meg., Resistors: one 2meg., one 1meg.

Reaction Condenser, dielectric, variable, .0002.

Standard Voltage Divider, 15,000 ohms.

Two R.F. Chokes, b/c.

Valve Sockets: Two 5-prong, two 4prong.

Jack (4 points) and Plug (if re-

quired). Coil Formers, 2in. diam., two pieces 3in. each.

Two Balancers, 20 ohms.
Output Transformer, 30 m.a. primary.
Stalloy, 1in., 4 doz. 3ft. leugths. Clamps and Bolts for cores.
13lb. 32 enam. for Choke.
2lb. 28 enam.; 13lb. 36 enam., and 18

and 20 d.c.c. or enam. for Trans-

former. Switch: 6in. ebonite tube, 3 or 5, 18

Aluminium, 16 or 18 gauge.

Nuts, screws, adhesive tape, mica
strip, solder, wiring-up flex, flex
and plug for A.C. connection,
res. wire, stain, wood, etc.

brass upright.

Two pieces of lin. ebenite are reis attached a strip of 24 brass

For those who have not so far attempted to tap holes for screws it

10 Top

7%16

used, drill each end 1-Sin. and solder a will be necessary to explain how this 1-Sin, bolt through a 1-8 hole in the simple process is carried out. A 1-Sin. tap is purchased, costing not more than The correct drill to use with quired, 1 by 3in., cut as squarely as this is 3-32in. Any hole to be tapped These are attached to the is first drilled with the drill menbrass uprights with the lower side 3-8 tioned, then the tap is put into the in above the base. To each lin side drill chuck and placed in the hole, is attached a strip of 24 brass as turning just as for a drill. The only shown, fastened by two 1-8in, bolts in precautions to be observed are that turning must not be continued after the end of the tap reaches the bottom of the drilled hole, or the thread will be stripped. In hard metals the tap may be worked backwards and forwards to facilitate cutting the thread. Taps are more brittle than drills, so a little more care is required to pre vent side-strain.

> Four strips of 24-gauge hard brass 2in. long and 3-16in, wide will be required. These are soldered to the strips attached to the lin. by lin. ebonite, as shown in the diagrams. One of these springs is attached by a wire to the slator of one of the tuning condensers.

On the ebonite tubing, four roundheaded brass screws are placed, two to engage each pair of springs. position of the two screws is at 90 degrees around the tubing, so that one is contacting a spring when the other has lost contact with its corresponding spring. Half-an-inch toward the centre a hole is tapped to take another screw. upon which two nuts hold a soldertag to which the grid connection is made. Clean up a piece of 24-gauge wire and with it connect up the lastnamed serew with the two contact screws by soldering, or by nuts on the latter. The wires must run out sideways from the contacts.

The switch handle is a strip of ebonite 2in. long, tapered from 5-8in. to lin., and attached to the ebonite tube by two brass brackets. A hole is also drilled and tapped in the end of the handle to take a screw through the ebonite tube.

The front of the ebonite tube is 11in. from the panel.

A diagram suggests an alternative type of switch that some constructors may prefer, although it occupies no less space than the one already shown. (To be concluded next week.)

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