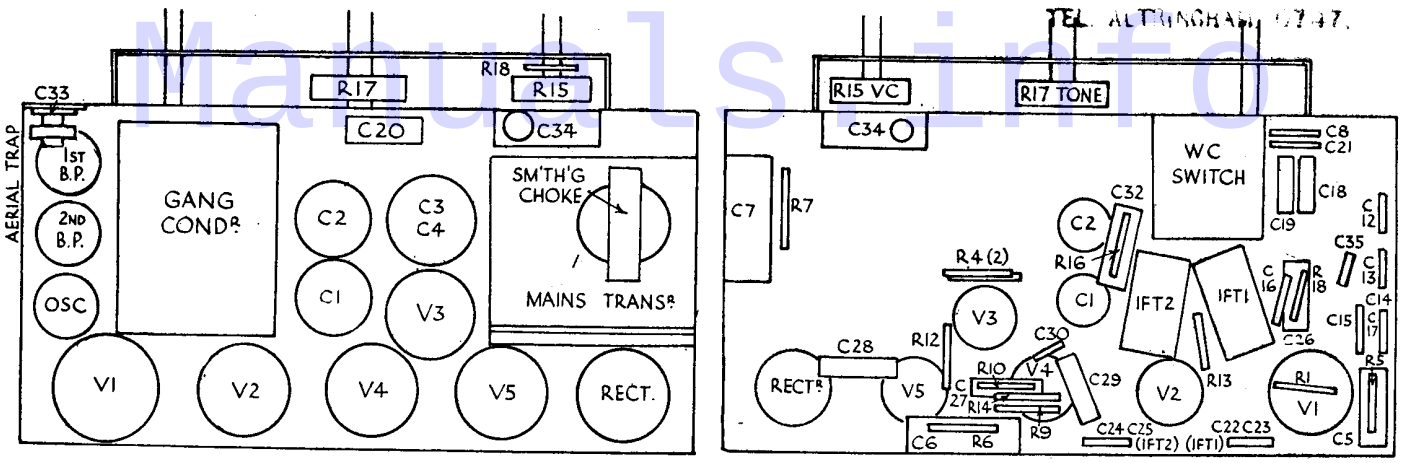


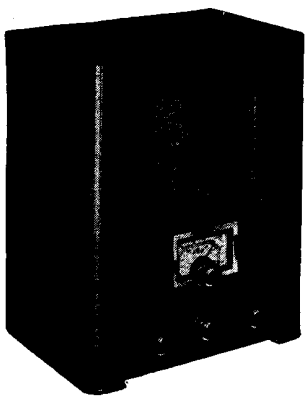
The components in the 584A are all special Philips productions and lend themselves to compact construction. Care should be taken not to displace the bare wires.

pin on the driving band in the hole in the drum.

Slide chassis into position and replace the earthing contact plate under the left-hand rear corner, so that it touches the screen in the bottom of the cabinet.

Replace holding screws and knobs and, after resoldering the earthing lead (and others, if these have been disconnected), slip the driving band over the pulleys. The tension spring allows adequate freedom for this operation.

G.E.C. BATTERY S.G.3



The S.G.3 just introduced by G.E.C. for the coming season.

Circuit.—The H.F. valve, VS 24 met. (V1), is preceded by a tuned secondary aerial transformer. the volume control being a potentiometer across the aerial coil which also acts as a control of bias. The following coupling is a tuned secondary H.F. transformer with reaction.

The detector valve, VP21 met. (V2), operates as a leaky-grid detector and has reaction applied to the H.F. transformer by means of a differential condenser. Coupling to the next valve is by auto-coupled transformer.

The output valve, PT2 (V3), has a grid stabilising resistance and is tone compensated by a condenser between anode and chassis. The speaker is a permanent-magnet moving-coil type.

Switching is in both the L.T.– and the main H.T. + leads. The H.T.– lead is fused with a 3.5 volt, .15 amp flashlamp bulb.

Quick Tests.—These are best carried out by making the routine valve tests (see table).

Special Notes.—The battery is type No. BB120.

H.T. +, red, is the 120 v. tapping, and H.T.+, blue, is the 60 v. tapping.

Bias is obtained by means of the resistances R5 and R6 in the common negative lead.

Removing Chassis.—Pull off the knobs and remove three screws from underneath. For quick tests the cleat holding the speaker leads should be undone or, if it is necessary to remove the chassis entirely, the plugs should be removed and the earthing lead unsoldered.

(*Continued on next page.*)

VALVE READINGS

V.	Type.	Electrode.	Volts.	M.A.
1	VS24 met (4)	.. anode ..	110	1.5
		screen ..	60	
2	VP21 met (7)	.. anode ..	44	2
		aux.grid.	60	
3	PT2 (5)	.. anode ..	106.5	4
		aux.grid	120	

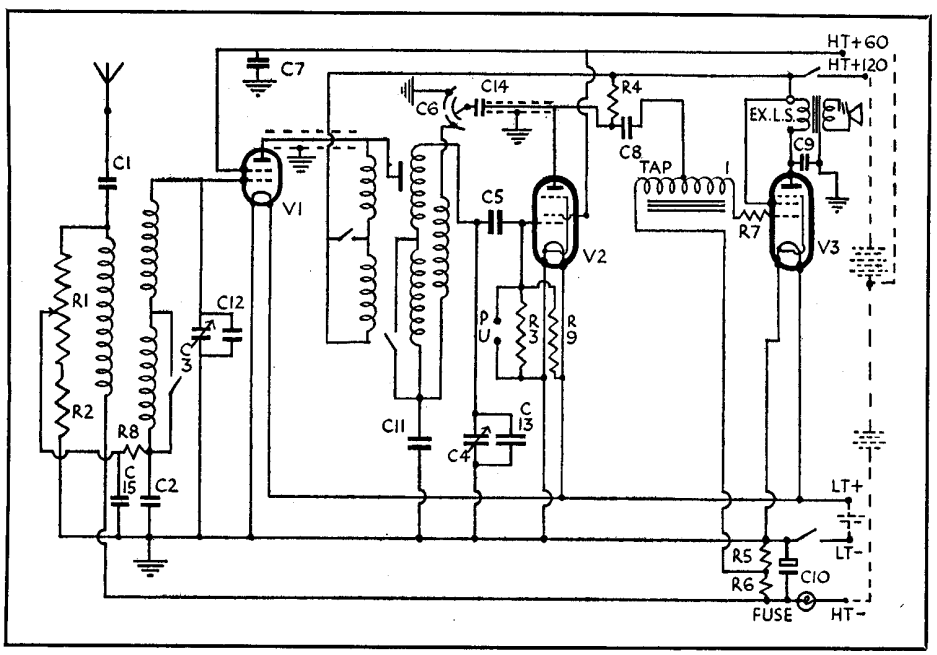
The average set current is 9 m.a.

RESISTANCES

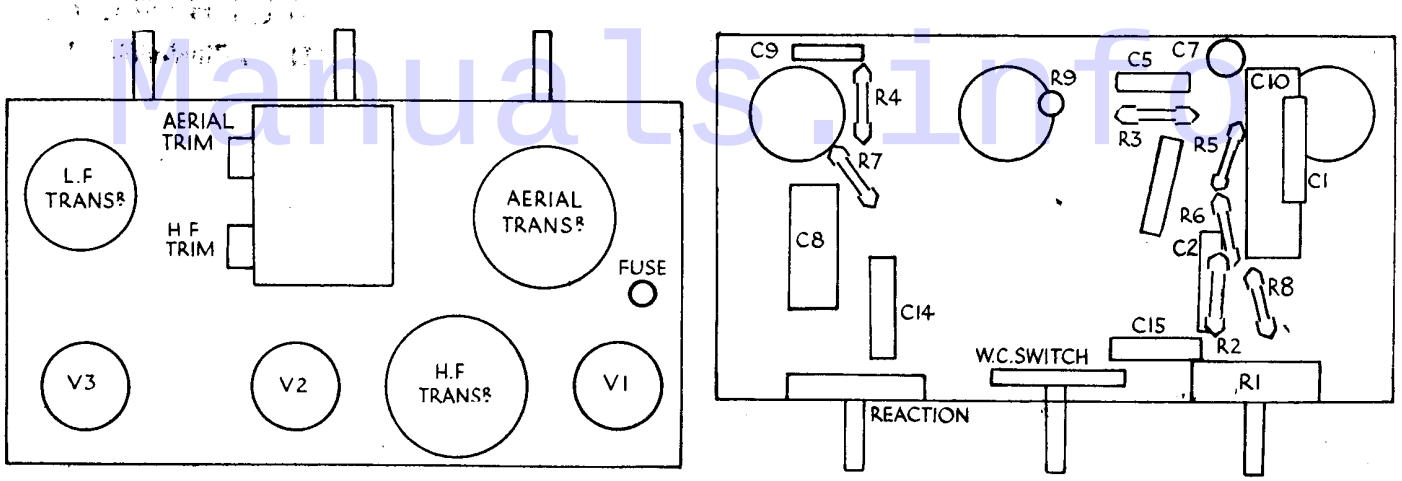
R.	Purpose.	Ohms.
1	Volume control ptr.	50,000
2	In series with R1 (min. bias) ..	2,200
3	V2 grid leak	2 meg.
4	V2 anode coupling	33,000
5	Part of bias ptr.	350
6	Part of bias ptr.	500
7	V3 grid stabiliser	99,000
8	Decoupling V1 grid	33,000
9	Bias ptr. of V2.	2 meg.

CONDENSERS

C.	Purpose.	Mfd.
1	Series aerial	.003
2	Decoupling V1 grid	.005
5	V2 grid reservoir	.0001
6	Reaction	.0005
7	V1 screen by-pass	.25
8	L.F. feed to L.F. transformer ..	.1
9	V3 anode compensating ..	.002
10	Across bias ptr.	50 (20 v.)
11	Aligning H.F. transr. secondary	.005
14	H.T. blocking in reaction circuit	.005
15	Decoupling aerial coil	.005



The S.G.3 utilises a straight and orthodox circuit which includes refinements such as a differential reaction control.



The construction of the chassis of the General Electric Co.'s S.G.3 is perfectly straightforward. A new wiring colour code is employed, of which details are given under "General Notes."

(*Continued from previous page.*)

General Notes.—A new colour code is used for the wiring in this receiver:—

White, high potential connections to the aerial circuit; green, control grid connections and high potential ends of signal circuits; blue, screen grid connections; orange, connections to the anodes of valves; black, connections to earth, frame, or low potential ends of signal circuits; slate, connections to H.T.−, where H.T.− is not connected to earth; red, connections to H.T. +; green-white, grid circuit decoupling and the addition of white to the above colours indicates a decoupling connection for the respective circuit.

The filament circuit is wired in black-red and black-white respectively, the former being the L.T.+ connections.

The condenser C10 across the bias potentiometer is a 50 mfd. 20 v. working electrolytic and the positive end is connected to chassis. The anchorage for the negative end is actually on the aerial transformer.

Replacing Chassis.—Lay chassis inside cabinet, replace knobs and holding screws.

BUSH RADIO'S S.A.C.5 FIVE-VALVE SUPERHET

Circuit.—The combined first-detector-oscillator, F.C.4 met. (V1) is preceded by a band-pass aerial tuner. Bias is obtained by cathode resistance and A.V.C., and oscillator tuning is in the grid circuit. Coupling to the next valve is by band-pass I.F. transformer (frequency 123 kc.).

The I.F. valve, VP4 met. (V2), has a grid stabilising resistance and is also biased by A.V.C. and cathode resistance, the latter being tapped to form a positive bias potentiometer to maintain current flow through the Westector, which is used as a half-wave second detector.

Both the D.C. and L.F. outputs from the Westector are utilised, the D.C. being fed through decoupling resistances to provide A.V.C., and the L.F. through a resistance capacity filter to the grid of the L.F. valve. The diode load is R 11.

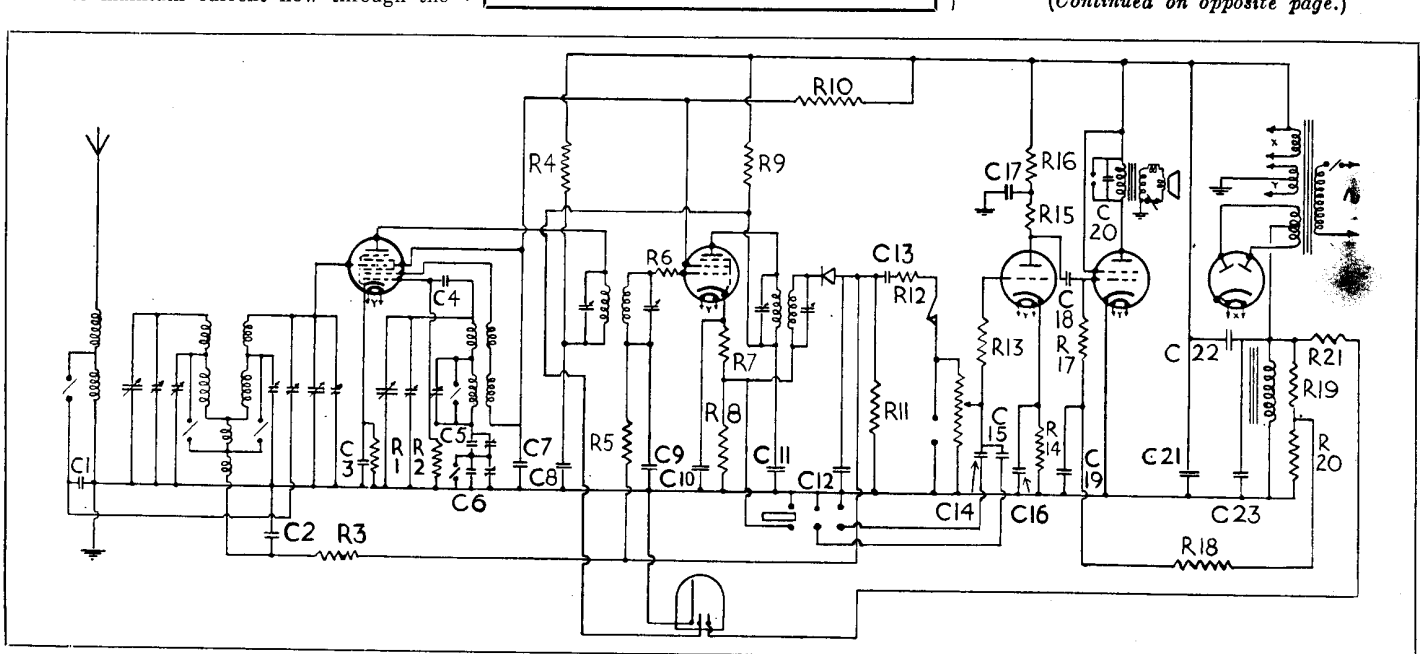
The L.F. valve, 354 V or 904 V met. (V3), has a grid stabilising resistance, and the grid leak is the potentiometer volume control. The

(*Continued on opposite page.*)

VALVE READINGS

No signal on M.W.

Valve	Type.	Electrode	Volts	Ma.
1	F.C.4 met (7)	anode ..	226	1.8
		aux. grid	75	
		osc. anode	75	
2	V.P.4 met (5) ..	anode ..	115	3.5
		aux. grid	75	
3	354v. met (5) ..	anode ..	150	3
4	Pen. 4V.A. (7) ..	anode ..	235	30
		aux. grid	250	5



Following frequency changing and I.F. stages, the Bush S.A.C.5 has a Westector used for both A.V.C. and signal purposes. Next follows an L.F. amplifier resistance coupled to the output pentode.