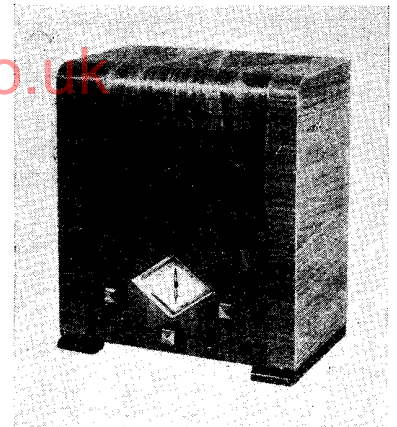


# BURGOYNE 2 P-COMET AND 2-PEN-3



The 2P-Comet receiver marketed by Burgoyne Wireless (1930), Ltd. The same chassis in another cabinet is known as the 2-Pen-3.

**Circuit.**—The H.F. valve, S.P.2 met. (V1) follows a tuned secondary aerial transformer and is coupled to the next valve by parallel-fed H.F. auto transformer.

A P.M.1HL met. (V2), the detector, is a semi power-grid type with the grid return taken to L.T.+. Reaction is applied to the grid coil and the L.F. coupling is by auto connected L.F. transformer.

The output valve, P.M.22 (V3) has a grid stabilising resistance and is tone compensated by a condenser across the primary of the output transformer.

**Special Notes.**—The battery is a combined H.T. and G.B. Drydex, type S.48.

Voltages are: H.T.+1, 84 volts; H.T.+2, 120 volts. G.B.-1, 1.5 volts; G.B.-2, 9 volts.

The fuse is in the negative H.T. lead only. Battery switching is in the negative L.T. lead.

**Quick Tests.**—These consist of taking valve readings and noting the pops in the speaker. Test also the detector and output valves by touching the P.U. socket nearer the detector valve.

**Removing Chassis.** — Remove knobs (grub screw) and condenser one-hole fixing nut. Remove shelf above batteries and lift the latter out.

Release the back of the compartment and remove one screw at each of the rear corners of the chassis. Lift chassis out by pivoting it round backwards to clear the supports.

**General Notes.**—The wiring in some parts of this set is slightly misleading. The centre (ordinarily the cathode) pin of V2 is used as an anchorage for the H.T.+2 lead and the lead is soldered to the top of the socket. The grid leak of V2 (R1) is actually mounted between the P.U. socket and the positive L.T. socket of V3.

In some models a condenser CX of .0001 mfd. may be connected between the trans-

former end of R3 and the negative filament socket of V3.

The switch contacts are easily cleaned. They are: Three remote from chassis, aerial coil; middle three, L.T. negative; and three next chassis, the H.F. intervalve coil. Only one pair of the wave-band switches is used.

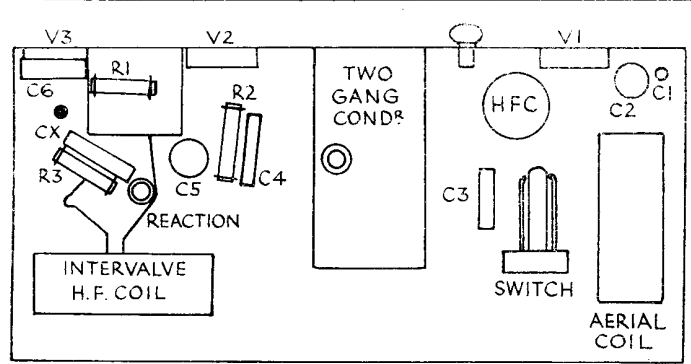
**Replacing Chassis.**—Insert chassis as it was withdrawn and replace the holding screws, fixing nut and knobs.

Replace the back of the battery compartment.

COMPONENT VALUES		
C.	Purpose.	Mfd.
1	Aerial series condenser ..	.0003
2	V1 aux.-grid by-pass ..	.1
3	H.F. feed to V2 grid coil ..	.0001
4	V2 grid reservoir ..	.0001
5	L.F. feed to auto transformer ..	.1
6	Tone compensating V3 anode ..	.005
CX	H.F. by-pass across L.F. transformer.*	.0001
* Not shown in circuit diagram.		
R.		Ohms.
1	V2 grid leak ..	1 meg.
2	V2 anode L.F. coupling ..	250,000
3	H.F. stopper. V3 grid ..	25,000

VALVE READINGS				
(No Signal, No Reaction.)				
V.	Type.	Electrode.	Volts.	M.A.
1	SP2 met. (7)	anode ..	120	3
		aux.-grid ..	84	
2	PM1HL (5)	anode ..	64*	2
		anode ..	120	3.3
		aux.-grid ..	84	1.

\* High value of anode resistance.



Only the valves are mounted on the top of the chassis of the Burgoyne receivers, and so only this under-chassis layout need be given.

## COSSOR 535 MAINS SUPERHET (Cont.)

speaker, and the small condenser coupling the aerial to the first band pass coil is inside the coil can.

The condensers C7, C13 and C14 are mounted underneath the resistance panel.

The mains transformer, rectifying valve and mains adjustment are conveniently assembled as one unit.

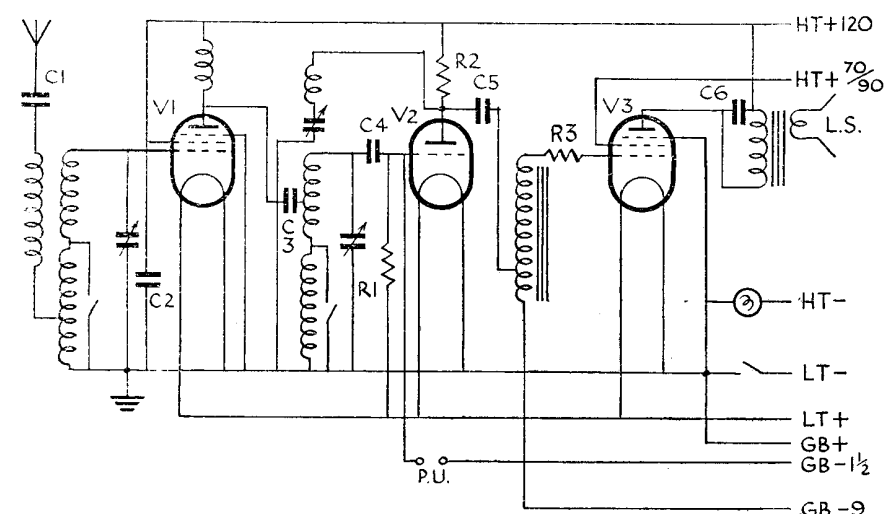
**The Switch.**—To facilitate the cleaning of the switch the cam shaft can be removed complete. Press the inner end of the leaf spring (at the front end of the shaft) away from the stop and ease the spring outwards to free it. The whole assembly can then be removed.

In replacing turn the contact makers away from the chassis and ease the two front contacts outwards sufficiently to let the shaft slide into position.

Place the plain end of the spring under the outside stop and, using a bradawl through the hole near the other end, slip that underneath the corresponding stop. Remove the bradawl and make sure that the pin underneath the stop has engaged in the hole.

**Replacing Chassis.**—Lay chassis inside cabinet, clip the L.S. lead, replace holding screws and knobs.

Replace screws on dial frame.



This absolutely straightforward H.F. pentode, detector and output pentode circuit is utilised in the Burgoyne 2P-Comet and 2-Pen-3 receivers.