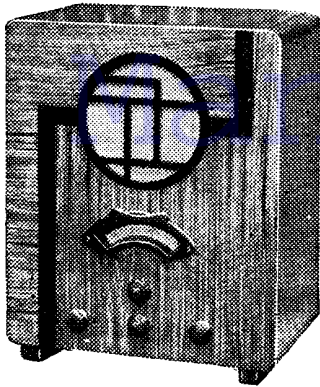


# AERODYNE BLACKBIRD BATTERY FOUR



The Blackbird, a class B battery set, is a product of Aerodyne Radio, Ltd.

### VALVE READINGS

V.C. Max.

Valve.	Type.	Electrode.	Volts.	Ma.
1	VP2 met (7)	anode .. aux grid ..	110 110	2.2
2	PM1HL (5)	anode ..	80*	1.1
3	PM2A (5)	anode ..	130	4.5
4	PM2B (7)	each anode	130	1.7

\* High value of anode resistances.

### RESISTANCES

R.	Purpose.	Ohms.
1	Decoupling V1 grid ..	20,000
2	G.B. ptr. V.C. ..	8,000
3	Decoupling V1 anode ..	6,000
4	V2 grid leak ..	1 meg.
5	V2 anode L.F. coupling ..	30,000
6	V2 anode decoupling ..	10,000

### CONDENSERS

C.	Purpose.	Mfd.
4	Aerial coupling to V.C. ..	.1
5	Band-pass coupling (twisted wire).	—
6	Band-pass coupling ..	.05
8	Decoupling V1 anode ..	.1
9	Reaction (var.) ..	.0005
10	V2 grid ..	.0001
11	H.F. filter in V2 anode ..	.0005
12	H.F. filter in V2 anode ..	.0005
13	Filter feed to transformer ..	.05
14	V2 anode decoupling ..	1
15	Tone compensating V4 ..	.001
16	Tone compensating V4 ..	.001
17	Tone compensating V4 ..	.005
18	Across H.T. ..	8 el.

**Circuit.**—The H.F. valve, VP2 met. (V1), is preceded by a band-pass aerial tuner. Volume is controlled by a bias potentiometer across the G.B. battery, and this also damps the aerial.

The following coupling is a tuned anode H.F. coil.

A PM1HL (V2) operates as a leaky grid detector with reaction, and is followed by a parallel-fed transformer.

The driver valve, PM2A (V.3), is coupled to the output stage by a conventional driver transformer.

The class B valve, PM2B (V4), operates with zero bias and is tone compensated by a condenser between the anodes and one between each anode and earth.

**Special Notes.**—The combined H.T. and G.B. battery is a Hellesen 130-v. + 9-v. G.B. unit.

H.T.—, white, 130 v.; H.T.—, brown; L.T.—, black; L.T.—, buff; G.B.—1, 4.5 v.,

blue; G.B.—2, 9 v., green. Switching disconnects both L.T.— and G.B.—2 leads.

**Quick Tests.**—Test L.F. section by pick-up and test the valves.

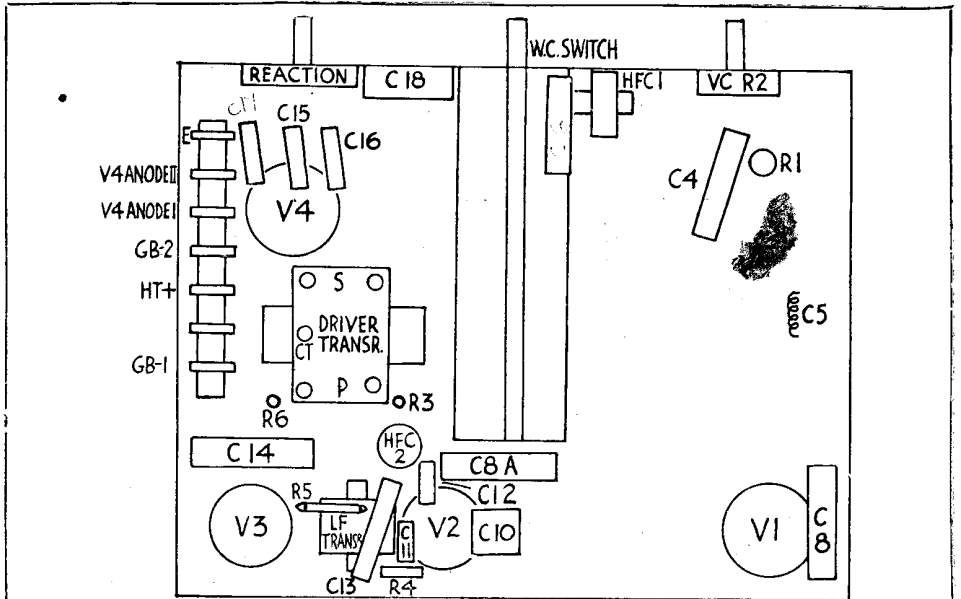
**Removing Chassis.**—Pull off the knobs, remove two screws from battery platform, remove four screws underneath cabinet and lift chassis out.

**General Notes.**—An additional .1 mfd. condenser, C8A, may be found in some models. This is actually in parallel with C8.

The anchorages for the leads are given in the layout diagram. Note that the centre tapping on the secondary of the driver transformer is earthed through the casing.

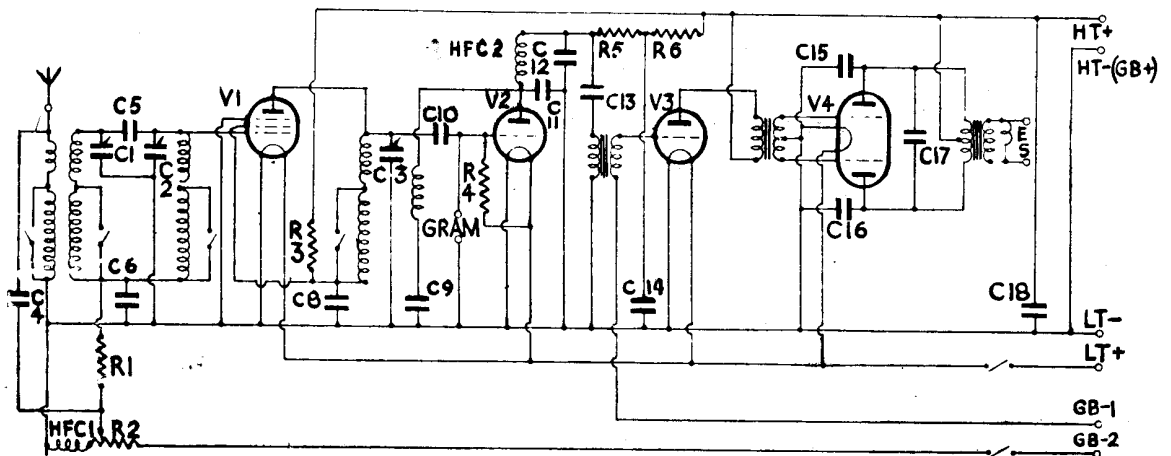
The grid leak R4 is actually mounted between the pick-up terminal and the positive socket of V3.

**Replacing Chassis.**—Lay chassis on rubber supports, replace battery shelf, four screws underneath and knobs.



How the components are disposed below the Aerodyne chassis. C5 is a condenser formed by twisted wires.

H.F. pentode, detector, driver and class B valves are used in the Blackbird. There are three tuned circuits.



*VP, 110v. 2.2ma  
4 pole rotary as specified.*