

An "aeroplane" type tuning dial is a distinguishing feature of the Burgoyne "Fury" receiver.

### BURGOYNE A.C.-D.C. FURY (Cont.)

RESISTANCES		
R.	Purpose.	Ohms.
1	V1 cathode bias	400
2	Top part of V1 aux. grid ptr.	10,000
3	V2 grid leak	.5 meg.
4	Voltage dropping to V2 aux. grid	1 meg.
5	V2 anode L.F. coupling	.1
6	V2 anode decoupling	10,000
7	V3 grid stabiliser	50,000
8	V3 grid leak	.25 meg.
9	V3 cathode bias	100
10	Lower part of V1 aux. grid	30,000
11	Volume control	5,000
—	Speaker field	2,150

CONDENSERS		
C.	Purpose.	Mfd.
3	Earth isolating	.1
5	V1 aux. grid by-pass	.1
6	V1 cathode by-pass	.1
9	V2 aux. grid by-pass	.1
10	V2 grid reservoir	.0001
11	V2 anode H.F. by-pass	.0005
12	L.F. coupling	.01
13	Decoupling V2 anode	.1
14	Tone compensating, V3 grid	.001
15	V3 cathode by-pass	50* el.
16	Tone compensating, V3 anode	.005
17	H.T. smoothing	12* el.
18	H.T. smoothing	8* el.
19	Across rectifier	.01
20	Series with pick-up	.1

\* In one block.

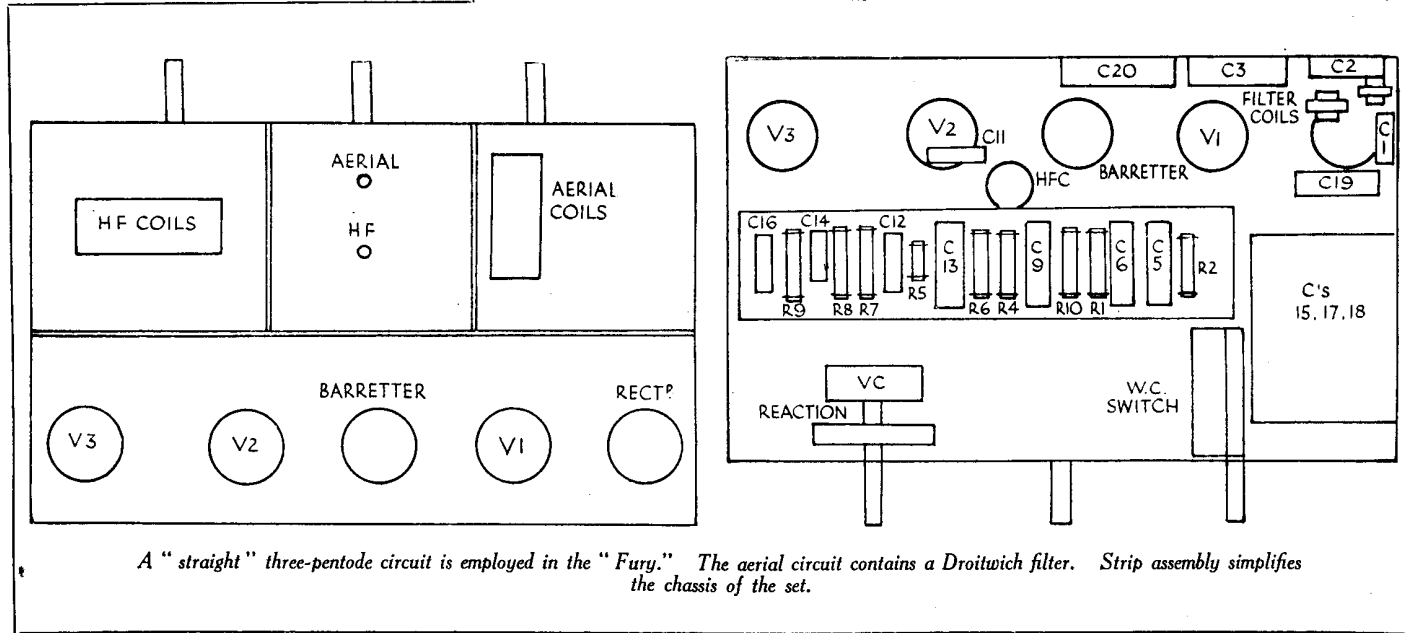
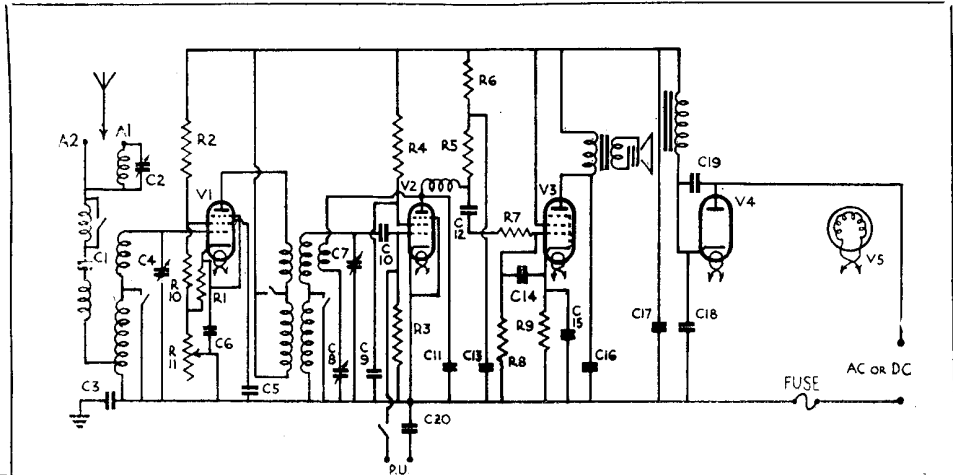
**General Notes.**—The block condenser is a special type containing 8, 12 (350 volt peak), and a 50 mfd. (12 volt peak) electrolytic condensers.

The leads are: 12 mfd., red; 8 mfd., yellow; 50 mfd., green. The negative (black) is common to all three.

The layout and connections are particularly simple, and tracing the components is facilitated by the resistance condenser panel.

**Replacing Chassis.**—Lay the chassis inside the cabinet, replace the three screws on the rear flange and screw the nut on to the switch.

After replacing the knobs cover the grub screws with the plastic insulating compound.



A "straight" three-pentode circuit is employed in the "Fury." The aerial circuit contains a Droitwich filter. Strip assembly simplifies the chassis of the set.

## HALCYON 6701 SUPERHET

**Circuit.**—The first detector, MS4B plain (V1), is used with a separate oscillator, MH4 plain (V2), and is preceded by a band-pass aerial coupling.

Bias is obtained from a cathode resistance common to V1 and V2. The coupling to the first I.F. valve is by band-pass I.F. transformer (frequency 110 kc.).

The first I.F. valve, VMS4 met. (V3), is biased by cathode resistance and A.V.C., and is followed by a second band-pass I.F. transformer. The tuning meter is connected in the anode circuit of this valve only.

The second I.F. valve is another VMS4 met.

(V4), and is followed by a third I.F. transformer.

The second detector and L.F. valve, MHD4 met. (V5), is used for L.F. purposes and A.V.C., the two diode anodes being fed through condensers from the secondary of the I.F. transformer.

In the coupling to the triode section, R14 and R15 are H.F. stoppers, R16 the load, and C13 the coupling condenser.

The following coupling is by resistance-capacity filter with anode decoupling of V5 by L.F. choke.

The output valve, MPT4 Cat. (V6), is tone-

compensated by a condenser across the primary of the output transformer, and another condenser can be connected in parallel by means of a switch at the back of the chassis.

Mains equipment consists of: Transformer; full-wave (MU12) indirectly heated rectifier; the speaker field, which is in the positive H.T. lead; and electrolytic condensers.

**Special Notes.**—The pilot lamps are 4 v. .3 amp types.

The receiver is assembled as two chassis, one containing the power pack and the other the set. These are connected by a cable and

### HALCYON MODEL 6701 (Cont.)

plug, but as two of the speaker leads are connected to each chassis, both chassis have to be removed together.

**Quick Tests.**—Between the terminals on the speaker transformer and chassis:—

- Top (1) blue lead, H.T. unsmoothed, 355 volts.
- (2) yellow lead H.T. smoothed, 215 volts.
- (3) blank.
- (4) green lead and black lead, V6 anode, 200 volts.
- (5) orange lead.

**Removing Chassis.**—Unsolder the speaker leads in the above order. Mark them when in doubt as to the colour.

Remove the knobs and the bush on the volume control spindle. Release the earthing spade terminal from the speaker bolt.

Undo the eight screws underneath the cabinet and lift the two chassis out together.

**General Notes.**—The two condensers feeding the diode anodes are a special screened type, and if a replacement is re-

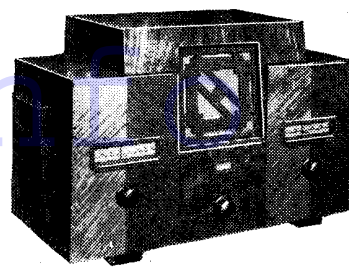
quired, the same type should be obtained from the manufacturers.

In retracking the receiver the visual tuning meter may be used as a means of ganging on a weak input from an oscillator.

The connections on the connecting plug between the chassis are:—

- Heater pins, set heaters,
  - Grid pin, decoupled H.T. to V5,
  - Anode pin, H.T. smoothed,
  - Cathode pin, earth.
- Mains Transformer connections (see diagram):—

- R, R, rectifier heater,
- A, A, rectifier anodes,
- M, mains connecting tag and to switch,
- F, return lead from fuse,
- S, switch connection to primary,
- H, H, set heaters,
- E, chassis.



The 6701 six-valve haley rectifier receiver produced by Halcyon Radio, Ltd.

**Replacing Chassis.**—Lay both chassis inside the cabinet, reconnect the speaker leads, replace the eight holding screws, and, after screwing the bush on the V.C. spindle, replace the knobs.

### VALVE READINGS

No signal.

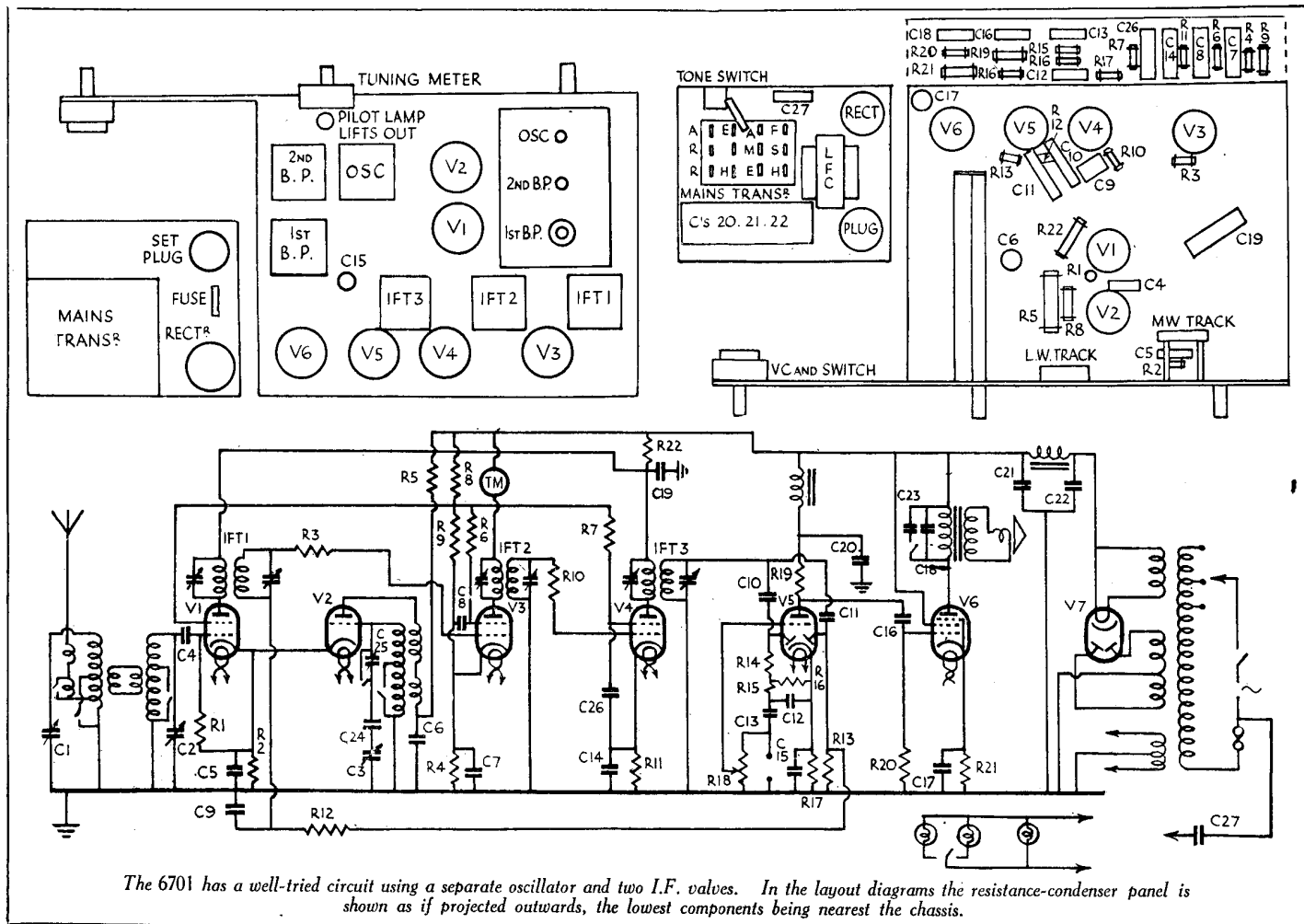
Valve	Type.	Electrode.	Volts.	M.A.
1	MS4B (5)	anode	200	4.5
		screen	100	—
2	MH4 (5)	anode	100	—
3	VMS4 (5)	anode	200	7.5
		screen	85	—
4	VMS4 (5)	anode	200	9
		screen	85	—
5	MH4D (7)	anode	125	—
6	MPT4 (5)	anode	200	32
		aux. grid	215	6.5

### RESISTANCES

R.	Purpose.	Ohms.
1	V1 grid leak	2 meg.
2	V1, V2 cathode bias	500
3	V3 stabiliser	.5
4	V3 cathode bias	300
5	V2 anode decoupling	16,000
6	Decoupling V3 screen	5,500
7	Decoupling V4 screen	5,500
8	Upper part of screen ptr.	45,000
9	Lower part of screen ptr.	22,000
10	V4 grid stabiliser	.26 meg.
11	V4 cathode bias	500
12	Decoupling V3 grid	1 meg.
13	A.V.C. diode load	2 meg.
14	H.F. stopper	.25 meg.
15	H.F. stopper	.26 meg.
16	Diode load	.25 meg.
17	V5 cathode bias	600
18	Volume control	.25 meg.
19	V5 anode L.F. coupling	33,000
20	V6 grid leak	110,000
21	V6 cathode bias	330
22	Decoupling H.T. to V1 and V4	2,200

### CONDENSERS

C.	Purpose.	Mfd.
4	V1 grid	.0001
5	V1 cathode by-pass	.0005
6	Decoupling V2 anode	1 el.
7	V2 cathode by-pass	.1
8	V3 screen by-pass	.01
9	V3 grid decoupling	.1
10	I.F. feed to diode	.0001
11	I.F. feed to A.V.C. diode	.0001
12	H.F. by-pass	.0005
13	L.F. coupling to V5 grid	.01
14	V4 cathode by-pass	.1
15	V5 cathode by-pass	50 el.
16	V5, V6, L.F. coupling	.01
17	V6 cathode by-pass	45 el.
18	Tone compensating V6	.005
19	Decoupling V1 and V4 anodes	.25
20*	Decoupling V5 anode	8 el.
21*	H.T. smoothing	4 el.
22*	H.T. smoothing	4 el.
26	V4 screen by-pass	.1
27	Mains aerial	.0001



The 6701 has a well-tried circuit using a separate oscillator and two I.F. valves. In the layout diagrams the resistance-condenser panel is shown as if projected outwards, the lowest components being nearest the chassis.