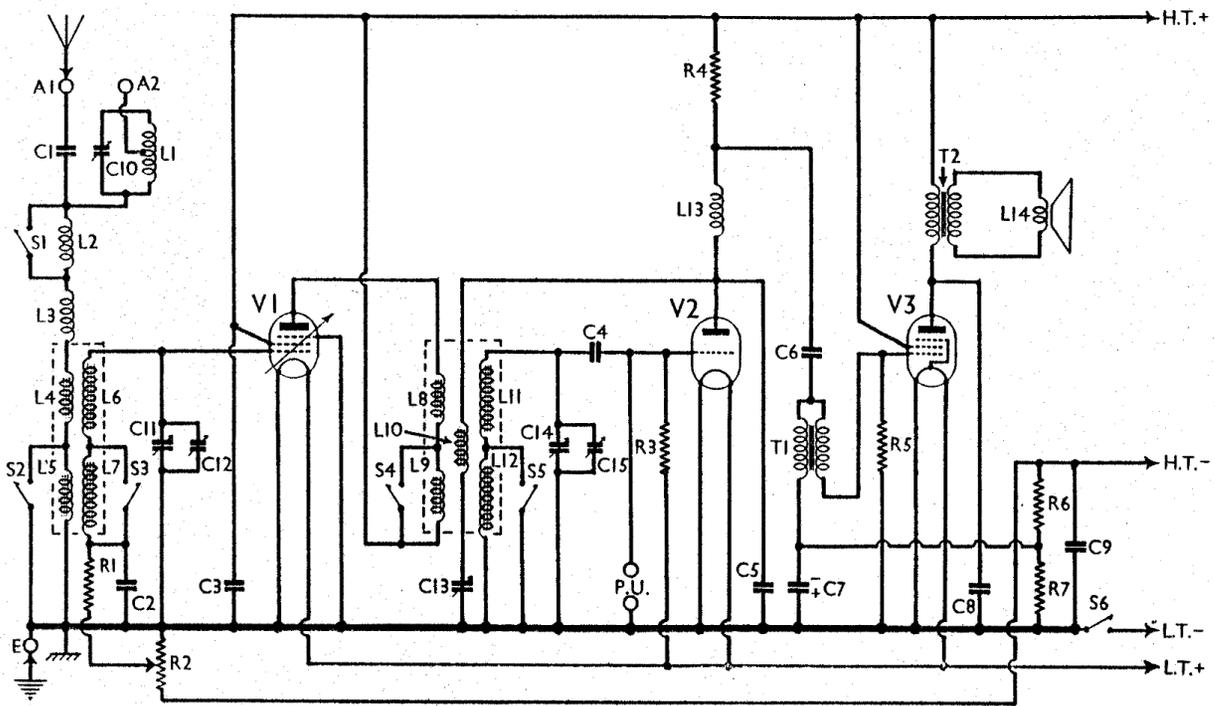


BURGOYNE - BATTERY FURY



Circuit diagram of the Burgoyne "Battery Fury" 3-valve battery receiver. Note the Draitwich retractor L1, C10. All the tuning coils are iron-cored. Automatic grid bias is incorporated, thus simplifying the battery connections.

COMPONENTS AND VALUES

RESISTANCES		Values (ohms)
R1	V1 C.G. decoupling	500,000
R2	V1 gain control	5,000
R3	V2 grid leak	2,000,000
R4	V2 anode load	30,000
R5	V3 C.G. circuit shunt	250,000
R6	Automatic G.B. resistances {	150
R7		400*

* May be 700 O.

CONDENSERS		Values (µF)
C1	Aerial series condenser	0.0002
C2	V1 C.G. decoupling	0.1
C3	H.T. supply by-pass	0.1
C4	V2 C.G. condenser	0.0003
C5	V2 anode H.F. by-pass	0.0002
C6	L.F. coupling to T1	0.1
C7*	V3 G.B. circuit by-pass	20.0
C8	Tone corrector	0.005
C9	V1 G.B. circuit by-pass	0.1
C10†	Droitwich retractor tuning	0.0001
C11†	Aerial circuit tuning	0.0005
C12†	Aerial circuit trimmer	—
C13†	Reaction control	0.0005
C14†	H.F. transformer tuning	0.0005
C15‡	H.F. transformer trimmer	—

* Electrolytic. † Variable. ‡ Pre-set.

VALVE ANALYSIS

Voltage and current figures listed in the table below were obtained from a representative chassis operating with an H.T. battery reading 120 V. The gain control R2 was at maximum (reaction condenser plates slightly in mesh) and there was no signal input. All voltage readings were taken on the 1,200 V scale of an Avometer, chassis being negative.

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
HP 211 ..	112	2.5	115	1.0
LD 210 ..	60	1.6	—	—
PP 222 ..	110	5.8	115	1.2

GENERAL NOTES

Switches.—S1-S5 are the waveband switches, and S6 the L.T. switch. They are all ganged together in a single unit beneath the chassis, and are indicated in our under-chassis view. The table below gives the switch positions for the various control settings.

Switch	Off	M.W.	L.W.
S1	O	C	O
S2	O	C	O
S3	O	C	O
S4	O	C	O
S5	O	C	O
S6	O	C	C

OTHER COMPONENTS		Approx. Values (ohms)
L1	Droitwich retractor coil, total ..	32.0
L2	Aerial choke coil (L.W.)	24.0
L3	Aerial choke coil	8.7
L4	Aerial coupling coils ..	0.6
L5		4.7
L6	Aerial tuning coils ..	2.5
L7		10.5
L8	H.F. transformer primary	1.2
L9		4.6
L10	Reaction coil	2.1
L11	H.F. transformer secondary	2.0
L12		10.0
L13	V2 anode H.F. choke	200.0
L14	Speaker speech coil	2.4
T1	Intervalve trans. {	Pri. .. 1800.0
		Sec. .. 4000.0
T2	Speaker input trans {	Pri. .. 700.0
		Sec. .. 0.3
S1-S5	Waveband switches	—
S6	L.T. circuit switch	—

Coils.—L1 and L2 are in an unshielded unit beneath the chassis, L2 being nearer to the chassis. L1 in our receiver is centre tapped. L3 is also unshielded and beneath the chassis, as is also choke L13. L4-L7 and L8-L12 are in two shielded units on the chassis deck.