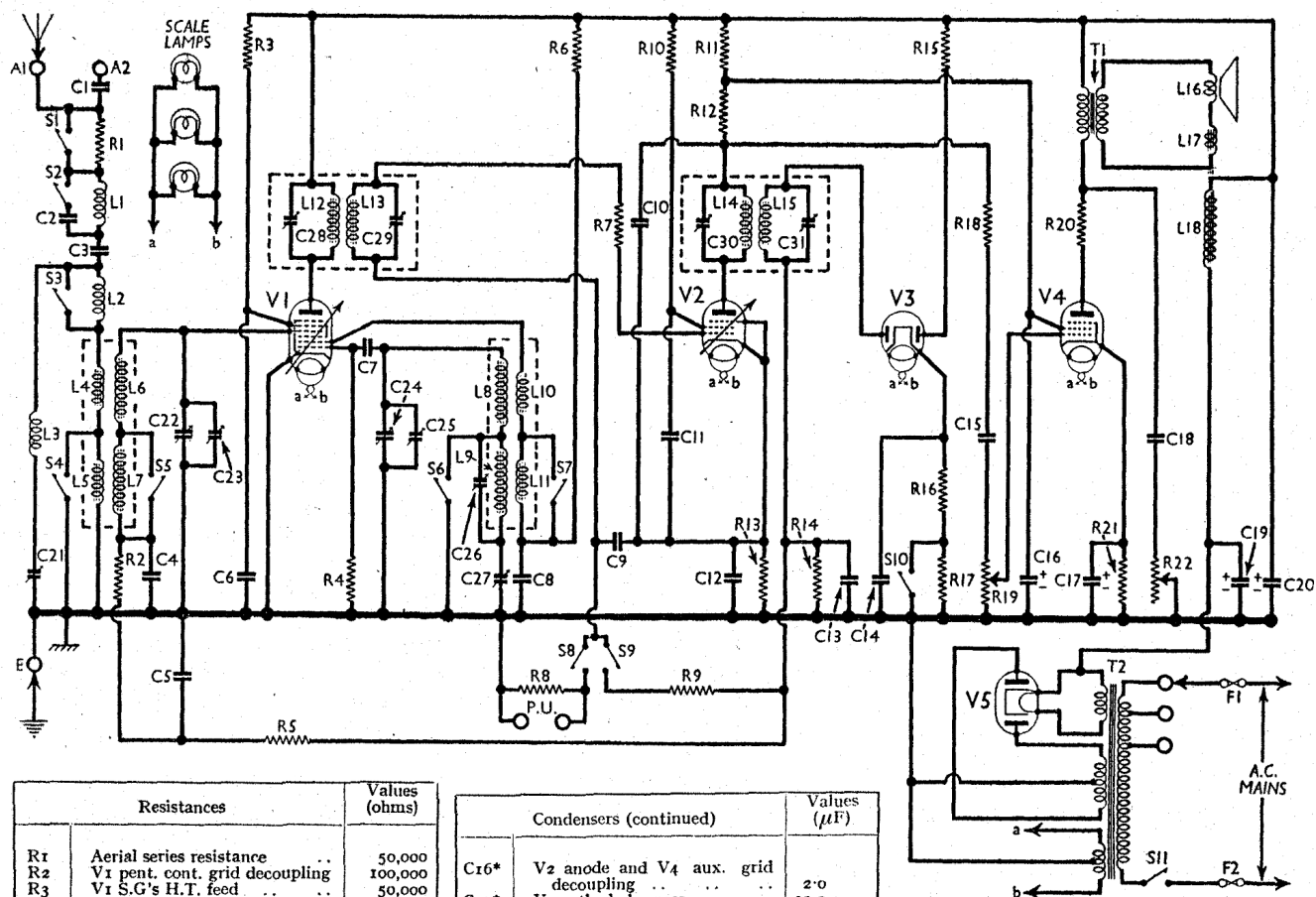


BURGOYNE - DRAGON



Resistances	Values (ohms)
R1	Aerial series resistance .. 50,000
R2	V1 pent. cont. grid decoupling .. 100,000
R3	V1 S.G.'s H.T. feed .. 50,000
R4	V1 osc. grid resistance .. 50,000*
R5	V1 A.V.C. line decoupling .. 500,000
R6	V1 osc. anode decoupling .. 50,000
R7	V2 cont. grid circuit stabiliser .. 500
R8	Gram. pick-up shunt .. 750,000
R9	V2 cont. grid decoupling .. 100,000
R10	V2 S.G. H.T. feed .. 100,000†
R11	V2 anode decoupling .. 5,000
R12	V2 anode resistance .. 30,000
R13	V2 fixed G.B. resistance .. 200
R14	V3 signal and A.V.C. diode load .. 500,000
R15	V3 diode H.T. feed .. 5,000,000
R16	A.V.C. delay voltage resist- .. 20,000‡
R17	ances .. 20,000
R18	I.F. stopper .. 100,000
R19	Manual volume control .. 500,000
R20	V4 anode circuit stabiliser .. 100
R21	V4 G.B. resistance .. 160§
R22	Part of tone control filter .. 10,000

* May be 250,000 Ω. † May be 250,000 Ω.
‡ May be omitted in some chassis. § May be 140 Ω.

Condensers	Values (μF)
C1	Aerial series condenser .. 0.00005
C2	Part of image rejector .. 0.00005
C3	Aerial series condenser .. 0.00001
C4	V1 pent. cont. grid decoupling .. 0.1
C5	V1 A.V.C. line decoupling .. 0.1
C6	V1 S.G.'s by-pass .. 0.1
C7	V1 osc. grid condenser .. 0.00001
C8	V1 osc. anode decoupling .. 0.1
C9	V2 cont. grid decoupling .. 0.001
C10	V2 anode I.F. by-pass .. 0.0005
C11	V2 S.G. by-pass .. 0.1
C12	V2 cathode by-pass .. 0.1
C13	I.F. by-pass .. 0.001
C14	V3 cathode by-pass .. 0.1
C15	L.F. coupling to V4 .. 0.01

VALVE ANALYSIS

Valve	Anode Volts	Anode Current (mA)	Screen Volts	Screen Current (mA)
V1 FC4*	280	4.4	110	3.4
V2 VP4B	95	4.3	100	1.6
V3 2D4A	—	—	—	—
V4 Pen4VB	260	33.0	235	3.7
V5 R3	335†	—	—	—

* Osc. anode (G2) 125 V, 2.9 mA.
† Each anode, A.C.

Condensers (continued)	Values (μF)
C16*	V2 anode and V4 aux. grid decoupling .. 2.0
C17*	V4 cathode by-pass .. 25.0
C18	Part of tone control filter .. 0.025
C19*	8.0
C20*	H.T. smoothing .. 12.0
C21	I.F. filter tuning .. 0.0001
C22	Aerial circuit tuning .. 0.0005
C23	Aerial circuit trimmer .. —
C24	Oscillator tuning .. —
C25	Oscillator main trimmer .. —
C26	Oscillator L.W. trimmer .. 0.00007
C27	Oscillator L.W. tracker .. 0.00055
C28	1st I.F. trans. pri. tuning .. —
C29	1st I.F. trans. sec. tuning .. —
C30	2nd I.F. trans. pri. tuning .. —
C31	2nd I.F. trans. sec. tuning .. —

* Electrolytic. † Variable. ‡ Pre-set.

Other Components	Values (ohms)
L1	Aerial loading coil (M.W.) .. 8.75
L2	Anti-break through choke (L.W.) .. 23.0
L3	I.F. filter coil .. 30.0
L4	Aerial coupling coils .. 0.8
L5	5.8
L6	Aerial tuning coils .. 2.0
L7	10.7
L8	Oscillator grid coils .. 1.0
L9	2.8
L10	Oscillator anode reaction coils .. 21.5
L11	65.0
L12	1st I.F. trans. { Pri. .. 5.2
L13	{ Sec. .. 5.2
L14	2nd I.F. trans. { Pri. .. 7.0
L15	{ Sec. .. 5.0
L16	Speaker speech coil .. 2.5
L17	Hum neutralising coil .. 0.1
L18	Speaker field coil .. 2,000.0
T1	Speaker input trans. { Pri. .. 500.0
	{ Sec. .. 0.4
T2	Mains trans. { Pri. total .. 28.5
	{ Heater sec. .. 0.05
	{ Rect. heat. sec. .. 0.1
	{ H.T. sec. .. 620.0
S1, S10	Local-distant switches .. —
S2-S7	Waveband switches .. —
S8, S9	Radio-gram switches .. —
S11	Mains switch .. —
F1, F2	Mains circuit fuses .. —

Chassis Divergencies.—Apart from the alternative valves quoted in "Circuit Description," R4 and R10 may be 250,000 Ω, and R16 may be omitted where V3 is a DD4. R21 may be 140 Ω.

Fuses F1, F2.—These are included in the special "Goltone" connecting plug. The rated values were not marked on our samples, but 1A, as quoted in our table, would be suitable.

GENERAL NOTES

Switches.—The waveband switches, S2-S7, and the radiogram switches S8, S9 are all ganged in one unit, and are indicated in the under-chassis view. Note that one switch in the unit is not used. The table below gives the switch positions for the various settings of the control, O indicating open, and C, closed.

Switch	M.W.	L.W.	Gram.
S2	O	C	O
S3	C	O	O
S4	C	O	O
S5	C	O	O
S6	C	O	C
S7	C	O	C
S8	O	O	C
S9	C	C	O

CIRCUIT ALIGNMENT

IF Stages.—Connect signal generator leads via a 0.0001 μF capacitor to control grid (top cap) of V1 and chassis, and connect a 250,000 Ω resistor between these two points, leaving the original cap connector off. Feed in a 473 kc/s (634.25 m.) signal, and C28, C29, C30, C31 for maximum output.

Replace the original connections, transfer signal generator leads to A and E sockets, switch set to LW, turn gang to minimum, and adjust C21 for minimum output with a strong 473 kc/s signal.

MW.—Switch set to MW, tune to 200 m. on scale, feed in a 200 m (1,500 kc/s) signal, and adjust C25, then C23, for maximum output.

LW.—Switch set to LW, turn to 1,700 m on scale, feed in a 1,700 m (176.5 kc/s) signal, and adjust C26 (nut) and C27 (screw) for maximum output. Tune to 1,200 m on scale, feed in a 1,200 m (250 kc/s) signal, and adjust C26 only for maximum output. Return to 1,700 m and readjust C27, then to 1,200 m and readjust C26, and so on in turn until no improvement results.