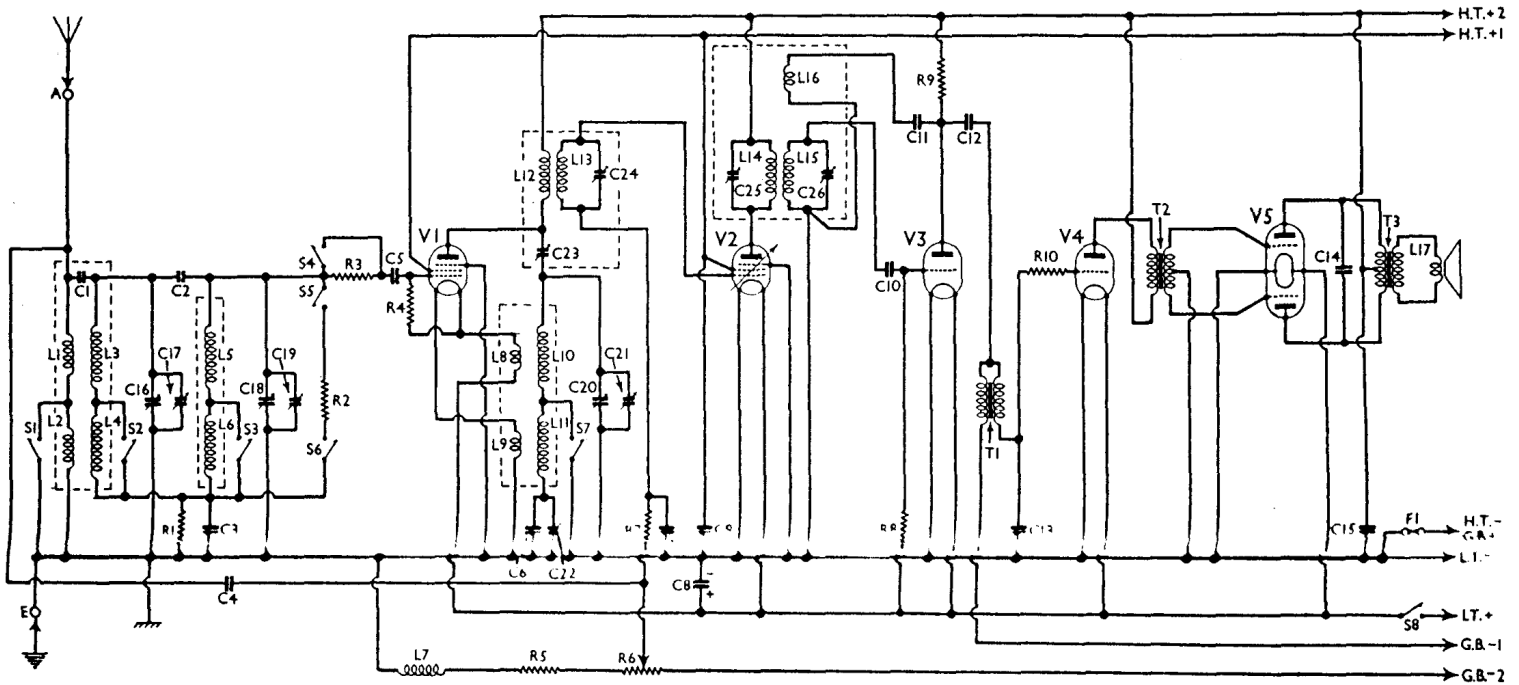


BURGOYNE - BSH



Circuit diagram of the Burgoyne BSH receiver. Note the I.F. reaction coil, L16. C1 and C2 are both very small condensers.

COMPONENTS AND VALUES

Condensers	Values (μF)
C1 Capacitative aerial coupling ..	Very low
C2 Band-pass top coupling ..	Very low
C3 Band-pass coupling ..	0.025
C4 Part of volume control circuit ..	0.1
C5 V1 C.G. condenser ..	0.0001
C6 Oscillator L.W. tracker ..	0.0005
C7 V2 C.G. decoupling ..	0.1
C8* Filament circuit by-pass ..	20.0
C9 V2 S.G. by-pass ..	0.1
C10 V3 grid condenser ..	0.00015
C11 Fixed reaction condenser ..	0.001
C12 L.F. coupling to T1 ..	0.1
C13 V4 grid I.F. by-pass ..	0.0005
C14 Tone corrector ..	0.005
C15 H.T. supply reservoir ..	2.0
C16† Band-pass primary tuning ..	—
C17† Band-pass primary trimmer ..	—
C18† Band-pass secondary tuning ..	—
C19† Band-pass secondary trimmer ..	—
C20† Oscillator tuning ..	—
C21† Oscillator trimmer ..	—
C22† Oscillator L.W. tracker ..	—
C23† 1st I.F. trans. pri. tuning ..	—
C24† 1st I.F. trans. sec. tuning ..	—
C25† 2nd I.F. trans. pri. tuning ..	—
C26† 2nd I.F. trans. sec. tuning ..	—

* Electrolytic. † Variable. ‡ Pre set.

VALVE ANALYSIS

Valve voltages and currents given in the table below are those measured in the receiver when it was operating from a new H.T. battery reading 130 V. The H.T.+1 lead was inserted in the 84 V tapping, and the G.B.-1 lead in the 3 V tapping on the G.B. battery.

The volume control was at maximum and the receiver was tuned to the lowest wavelength on the medium band, but there was no signal input.

Voltages were measured on the 1,200 V scale of an Avometer, with chassis as negative.

Resistances	Values (ohms)
R1 B.P. coupling condenser shunt ..	25,000
R2 Parts of local-distant switch- ing circuit ..	1,000
R3 V1 C.G. resistance ..	40,000
R4 Part of volume control circuit ..	1,000,000
R5 Volume control ..	10,000
R6 V2 C.G. decoupling ..	50,000
R7 V3 grid leak ..	100,000
R8 V3 anode load ..	1,000,000
R9 V4 grid I.F. stopper ..	25,000
R10	250,000

Other Components	Approx. Values (ohms)
L1 Aerial coupling coils ..	1.2
L2 Band-pass primary coils ..	3.0
L3 Band-pass secondary coils ..	1.2
L4 Part of volume control circuit ..	12.6
L5 Oscillator coupling coils ..	1.2
L6 Part of volume control circuit ..	290.0
L7 Oscillator tuning coils ..	0.3
L8 1st I.F. trans. { Pri. ..	0.3
L9 1st I.F. trans. { Sec. ..	3.2
L10 2nd I.F. trans. { Pri. ..	12.5
L11 2nd I.F. trans. { Sec. ..	120.0
L12 Fixed reaction coil ..	120.0
L13 Speaker speech coil ..	120.0
L14 1st intervalve trans. { Pri. ..	0.15
L15 1st intervalve trans. { Sec. ..	2.5
L16 1st intervalve trans. { Pri. ..	1,800.0
L17 1st intervalve trans. { Sec. ..	3,900.0
T1 Driver trans. { Pri. ..	440.0
T2 Driver trans. { Sec. (total) ..	240.0
T3 Speaker input { Pri. ..	720.0
T4 Speaker input { Sec. ..	0.25
S1-S3 Waveband switches ..	—
S4-S6 Local-distant switches ..	—
S7 L.T. switch, ganged R6 ..	—
S8 H.T. circuit fuse ..	—

Valve	Anode Volts	Anode Current (mA)	Screen Volts	Screen Current (mA)
V1 SP2 ..	130	0.7	90	0.2
V2 VP2 ..	130	0.2	90	Very low
V3 PM1HL	72	1.1	—	—
V4 PM2DL	125	3.4	—	—
V5 PM2B	128*	0.5*	—	—

* Each anode.

GENERAL NOTES

Switches.—All the switches are in a single unit beneath the chassis, shown in our under-chassis view. Note that some of the switches in the unit are not used, while some of the tags are common to two switches. The table (col. 2) gives the switch positions for the various control settings, O indicating open, and C, closed.

Switch	Off	M	L	Local
S1	C	C	O	C
S2	O	C	O	C
S3	O	C	O	C
S4	C	C	C	O
S5	C	O	O	C
S6	O	O	O	C
S7	O	C	O	C
S8	O	C	C	C

In the "local" position of the switch, the receiver operates on the M.W. band.

Coils.—These are in five screened units on the chassis deck. The L1-L4 unit also contains C1, which is a small condenser consisting of a single turn of tinned copper wire covered with sleeving.

The second I.F. transformer, L14, L15 also contains an extra winding L16.

Fuse F1.—This is an M.E.S. type lamp bulb. It is marked "3.5 V."

Batteries.—The batteries supplied are: L.T., Exide celluloid case 2 V 25 AH cell, type 1CA3; H.T. and G.B., Drydex yellow triangle combined 120 V H.T. and 9 V G.B., type S48.