

CIRCUIT ALIGNMENT

When the receiver leaves the factory, **C1** is adjusted to 0.00002 μ F, which occurs at about half a turn from maximum. It may be adjusted to obtain the optimum compromise between selectivity and sensitivity, according to local conditions, but after adjusting it alignment should be checked.

MW.—Switch set to MW, feed in to **A** and **E** sockets, via a dummy aerial, a weak 250 m (1,200 kc/s) signal, tune it in, and adjust **C23** and the gain control in turn for maximum output short of oscillation.

LW.—Switch set to LW, feed in a 1,000 m (300 kc/s) signal, tune it in, and adjust **C20** for maximum output.

Finally, connect the aerial with which it will be used and check whether **C1** requires adjustment. If it does, repeat circuit alignment.

RADIOGRAM MODIFICATIONS

The principal differences between the BC3335 and the "Carnival" radiogram BC3338 consist of the addition of a pick-up input filter, with gram switching and a volume control, and provision for the connection of an external speaker.

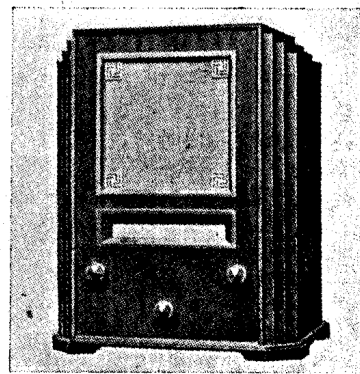
A 0.003 μ F condenser and 10,000 Ω resistor in series are shunted across the pick-up input, the input then being taken via a 100,000 Ω limiter to a 25,000 Ω volume control. The slider of the control and the "bottom" of the input circuit are then connected to the same points in the circuit as the PU sockets in our circuit diagram for the BC3335.

The external speaker sockets are connected between the "top" end of **L9**, via a 1 μ F condenser, and chassis.

RESISTORS		Values (ohms)
R1	Gain control ...	8,000
R2	V1 anode and V1, V2	15,000
R3	SG's HT feed potential	30,000
R4	divider	50,000
R5	V1 GB resistor ...	400
R6	V2 CG decoupling ...	100,000
R7	V2 grid leak ...	2,000,000
R8	V2 GB resistor ...	200
R9	V2 anode load ...	20,000
R10	Part reaction coupling ...	120
R11	V3 GB resistor ...	260
R12	V3 CG decoupling ...	100,000
R13	V3 SG HT feed ...	15,000
R14	HT circuit "bleeder" ...	45,000

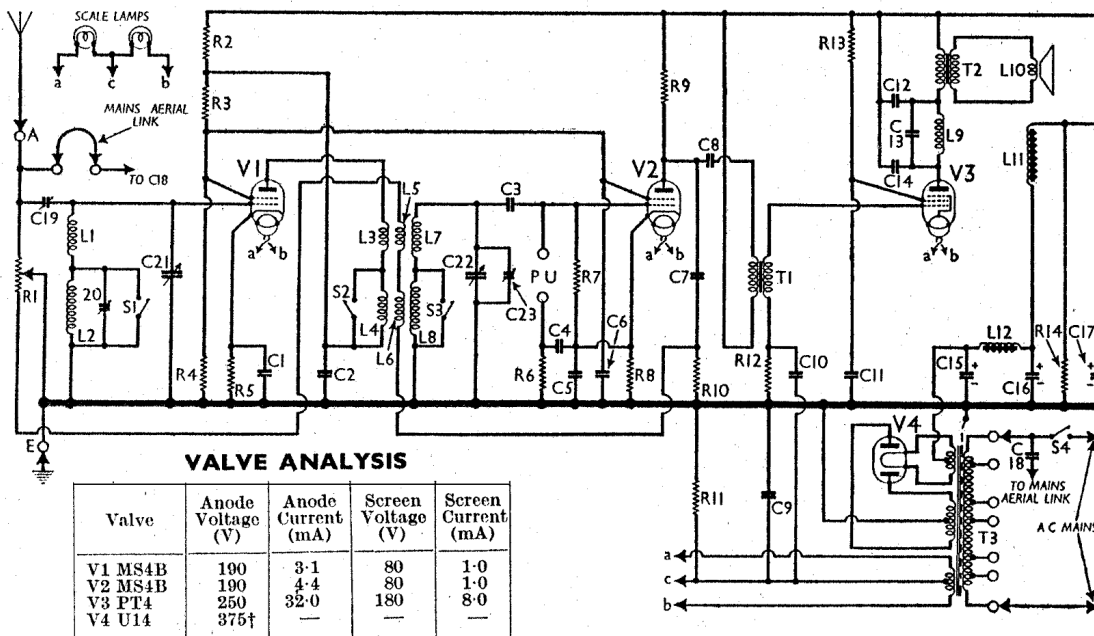
CONDENSERS		Values (μ F)
C1	V1 cathode by-pass ...	0.25
C2	V1 anode decoupling ...	0.25
C3	V2 CG condenser ...	0.0002
C4	V2 CG decoupling ...	0.25
C5	V2 cathode by-pass ...	0.25
C6	V1, V2 SG's decoupling ...	0.25
C7	Reaction coupling ...	0.001
C8	AF coupling to T1 ...	0.1
C9	V3 heater by-pass ...	1.0
C10	V3 CG decoupling ...	1.0
C11	V3 SG decoupling ...	1.0
C12	Heterodyne filter Con-	0.003
C13		0.0005
C14	densers ...	0.003
C15*	HT smoothing conden-	8.0
C16*		8.0
C17*	sers ...	8.0
C18	Mains aerial coupling ...	0.001
C19†	Aerial circuit trimmer ...	0.00005
C20†	Aerial circ. LW trimmer ...	—
C21†	Aerial circuit tuning ...	—
C22†	RF trans. sec. tuning ...	—
C23†	RF trans. MW trimmer ...	—

* Electrolytic. † Variable. ‡ Pre-set.



The appearance of the GEC Gala table models.

OTHER COMPONENTS		Approx. Values (ohms)
L1	Aerial tuning coils ...	1.5
L2		14.0
L3	RF transformer primary coils ...	10.0
L4		30.0
L5	Reaction coupling coils, total ...	8.0
L6		1.5
L7	RF transformer secondary coils ...	14.0
L8		880.0
L9	Heterodyne filter coil ...	2.5
L10	Speaker speech coil ...	1,160.0
L11	Speaker field coil ...	630.0
L12	HT smoothing choke ...	1,750.0
T1	Intervalve { Pri. ...	7,000.0
	trans. { Sec. ...	400.0
T2	Speaker input { Pri. ...	0.4
	trans. { Sec. ...	26.0
T3	Mains { Pri. total ...	0.1
	trans. { Heater sec. ...	0.1
	trans. { Rect. heat. sec. ...	1,000.0
	trans. { HT sec., total ...	—
S1-S3	Waveband switches ...	—
S4	Mains switch ...	—



VALVE ANALYSIS

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 MS4B	190	3.1	80	1.0
V2 MS4B	190	4.4	80	1.0
V3 PT4	250	32.0	180	8.0
V4 U14	375†	—	—	—

† Each anode, A.C.

There are, in addition, considerable differences in chassis layout. While the upper deck remains more or less as we show it, the remainder of the chassis below that is comparatively shallow. The **A** and **E** and external LS sockets and mains connections are three blocks mounted on the base of the cabinet, which is an upright console, and the speaker is mounted on the cabinet, midway between base and chassis.

The gram volume control is gauged with **R1**, but an additional control is fitted, just below the tuning control, with a push-pull action to switch to radio (knob in) or gram (knob out).

Circuit diagram of the GEC Gala table receiver BC3335. The 25 c/s model BC3334, the 100 c/s model BC3333 and the Carnival radiogram model BC3338 are also covered, the differences being fully described overleaf under "BC3333/4, Modifications," and "Radiogram Modifications." A U-shaped link permits mains aerial connection to be made or disconnected easily. No hum neutralising coil is fitted to the speaker.