

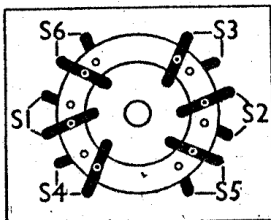
G.E.C. - TRF3

VALVE ANALYSIS

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 VS24	114	1.9	50	0.3
V2 VP21	40	2.2	50	0.8
V3 PT2	110	4.2	114	0.9

RESISTORS		Values (ohms)
R1	Aerial circuit shunt ...	0.900
R2	V1 gain control ...	50,000
R3	V1 fixed GB resistor ...	2,000
R4	V1 CG decoupling ...	33,000
R5	LW reaction damping ...	990
R6	V2 grid leak ...	4,000,000
R7	V2 GB potential divider {	77,000
R8		220,000
R9	V2 anode load ...	33,000
R10	Auto * GB potential divider... {	500
R11		500

Diagram of switch unit as seen from the rear beneath the chassis.

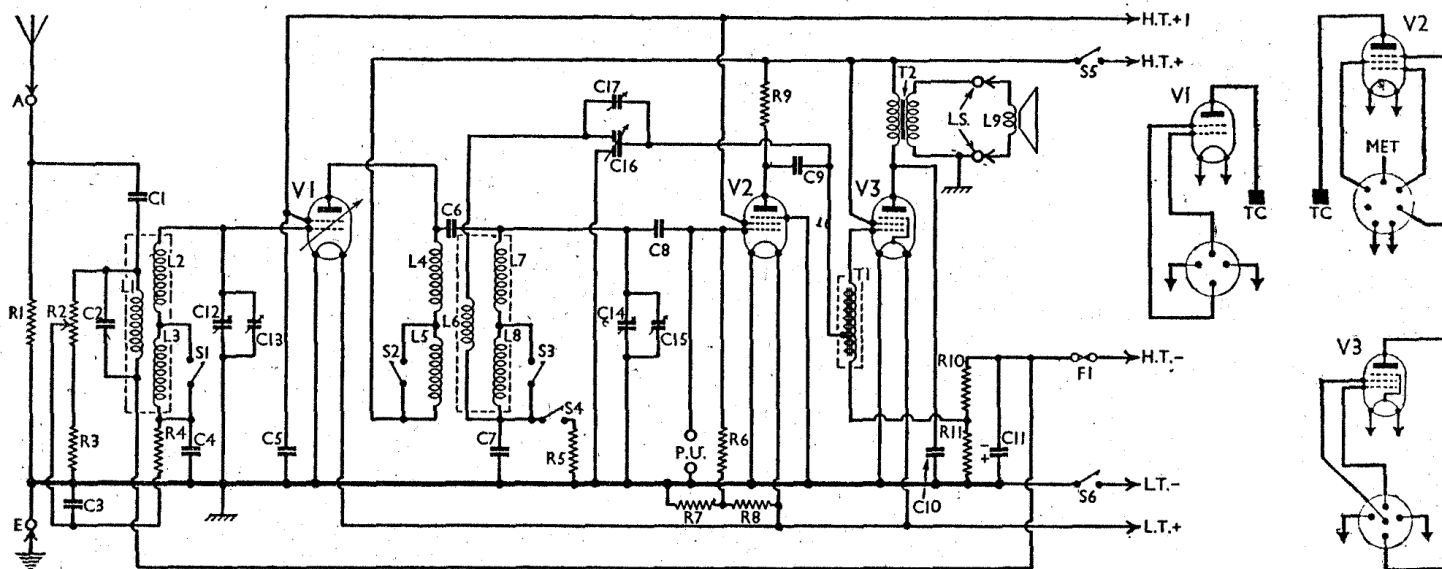


Switch	Off	MW	LW
S1	○	○	—
S2	—	○	—
S3	—	○	—
S4	—	—	○
S5	—	○	○
S6	—	○	○

CAPACITORS		Values (μF)
C1	Aerial series coupling ...	0.003
C2	Aerial circuit shunt ...	0.00005
C3	Part input control ...	0.02
C4	V1 CG decoupling ...	0.005
C5	V1, V2 SG's decoupling ...	0.25
C6	V1 to V2 RF coupling ...	0.000011
C7	Part reaction coupling ...	0.005
C8	V2 CG capacitor ...	0.00005
C9	AF coupling to T1 ...	0.1
C10	Fixed tone corrector ...	0.002
C11*	Auto GB by-pass ...	35.0
C12†	Aerial circuit tuning ...	—
C13†	Aerial MW trimmer ...	—
C14†	V2 grid circuit tuning ...	—
C15†	V2 grid MW trimmer ...	—
C16†	Reaction control ...	0.00037
C17‡	Pre-set reaction coupling ...	—

* Electrolytic. † Variable. ‡ Pre-set.

OTHER COMPONENTS		Approx. Values (ohms)
L1	Aerial coupling coil ...	5.5
L2	Aerial tuning coils {	2.6
L3		18.0
L4	V1 anode choke coils {	40.0
L5		135.0
L6	Reaction coil ...	0.5
L7	RF transformer secondary {	2.6
L8		18.0
L9	Speaker speech coil ...	1.9
T1	Intervalve trans., total ...	2,500.0
T2	Output trans. { Pri. ...	850.0
	Sec. ...	0.6
S1-S4	Waveband switches ...	—
S5	HT circuit switch ...	—
S6	LT switch ...	—



CIRCUIT ALIGNMENT

With the gang at minimum, the pointer should cover the zero mark at the low wavelength end of the scale. If it does not, remove chassis from cabinet and turn the clip bodily round its spindle to the correct position.

MW.—Switch set to MW, connect signal generator via a dummy aerial to **A** and **E** sockets, tune to 214 m on scale, advance the gain control well towards maximum and the reaction control as far as possible short of oscillation. Feed in a weak 214 m (1,400 kc/s) signal, and reduce it if necessary so that only a moderate output is indicated, then adjust **C15** and **C13** for maximum output, retarding reaction if necessary from time to time to avoid oscillation.

Tune to 300 m on scale, feed in a 300 m (1,000 kc/s) signal, and turn the reaction control to minimum. Now adjust **C17** to the point where oscillation commences, then give it one complete turn in the opposite direction.

LW.—There are no specific LW adjustments, but a check should be made over the whole scale on both wavebands to see that oscillation occurs nowhere when the reaction control is at minimum.