PHILCO - 55

CAPACITORS (*Continued*)		Values (μF)
C12*	HT smoothing capacitors	6·0
C13*	HT smoothing capacitors	6·0
C14†	Aerial circuit tuning ...	—
C15‡	Aerial MW trimmer ...	—
C16†	1st RF trans. sec. tuning	—
C17‡	1st RF trans. MW trimmer	—
C18†	2nd RF trans. sec. tuning	—
C19‡	2nd RF trans. MW trimmer	—

* Electrolytic. † Variable. ‡ Pre-set.

VALVE ANALYSIS

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 24	225	4·0	75	1·7
V2 24	225	4·0	75	1·7
V3 24	95	0·7	55	0·3
V4 47E	220	31·0	230	6·0
V5 80	300†	—	—	—

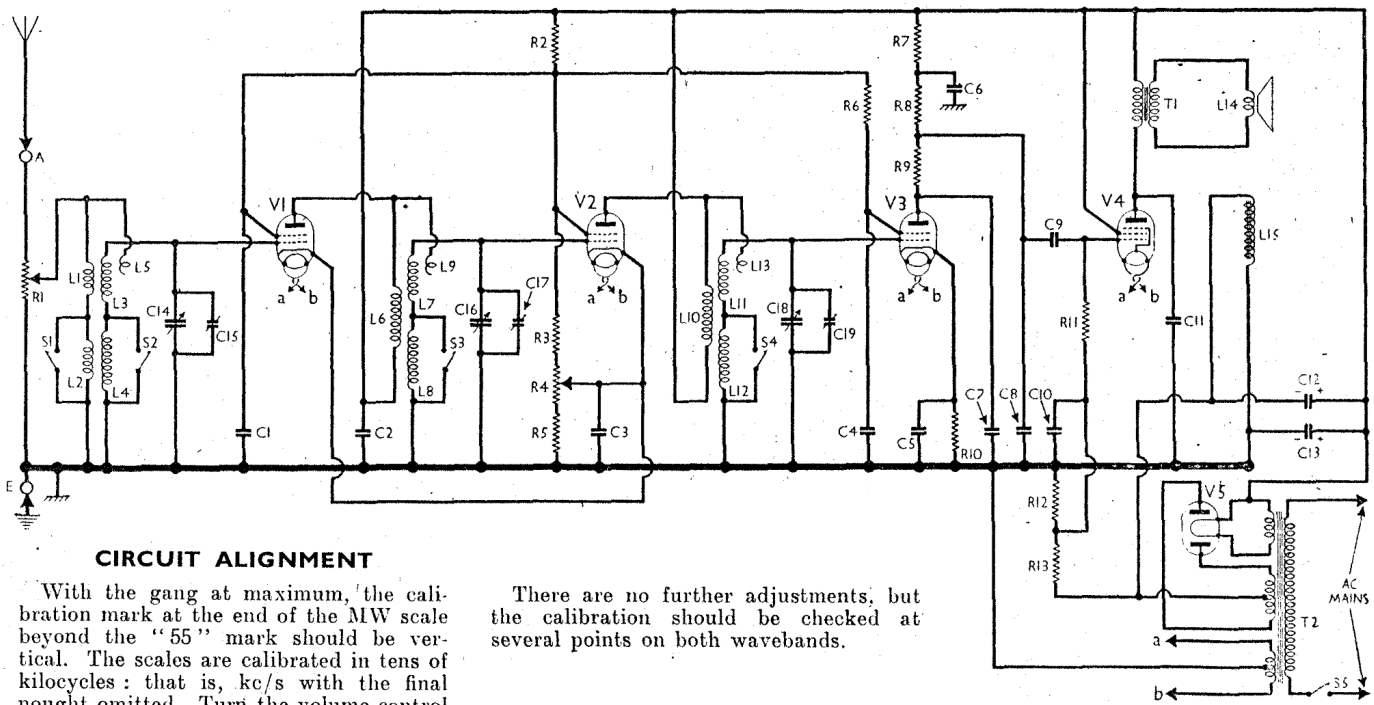
† Each anode to chassis, AC.

OTHER COMPONENTS		Approx. Values (ohms)
L1	Aerial coupling coils ...	25·0
L2	Aerial coupling coils ...	100·0
L3	Aerial circuit tuning coils	7·0
L4	Aerial circuit tuning coils	46·0
L5	"Top" coupling ...	—
L6	1st RF trans. pri. coil ...	70·0
L7	1st RF trans. secondary tuning coils	7·0
L8	1st RF trans. secondary tuning coils	46·0
L9	"Top" coupling ...	—
L10	2nd RF trans. pri. coil ...	70·0
L11	2nd RF trans. secondary tuning coils ...	7·0
L12	2nd RF trans. secondary tuning coils ...	46·0
L13	"Top" coupling ...	—
L14	Speaker speech coil ...	2·0
L15	Speaker field coil... ...	1,140·0
T1	Speaker input trans. Pri.	350·0
	Speaker input trans. Sec.	0·2
T2	Mains trans. Pri., total ...	30·0
	Mains trans. Heater sec. ...	Very low
	Mains trans. Rect. heat. sec.	Very low
	Mains trans. HT sec., total...	640·0
S1–S4	Waveband switches ...	—
S5	Mains switch	—

RESISTORS		Values (ohms)
R1	Aerial input control ...	5,000
R2	V1, V2 SG potential divider resistors	25,000
R3	V1, V2 SG potential divider resistors	15,000
R4	V1, V2 gain control ...	1,000
R5	V1, V2 fixed GB resistor	150
R6	V3 SG HT feed	99,000
R7	V3 anode decoupling ...	99,000
R8	V3 anode load	240,000
R9	V3 anode RF filter ...	10,000
R10	V3 GB resistor	32,000
R11	V4 CG resistor	490,000
R12	V4 GB potential divider, shunting L15	160,000
R13	V4 GB potential divider, shunting L15	490,000

CAPACITORS		Values (μF)
C1	V1, V2 SG's decoupling...	0·5
C2	HT circuit RF by-pass...	0·05
C3	V1, V2 cathodes by-pass	0·18
C4	V3 SG decoupling ...	0·25
C5	V3 cathode by-pass ...	0·5
C6	V3 anode decoupling ...	0·15
C7	RF filter capacitors ...	0·00025
C8	RF filter capacitors ...	0·00025
C9	V3 to V4 AF coupling ...	0·01
C10	V4 CG decoupling ...	0·1
C11	Fixed tone corrector ...	0·01

(*continued overleaf*)



CIRCUIT ALIGNMENT

With the gang at maximum, the calibration mark at the end of the MW scale beyond the "55" mark should be vertical. The scales are calibrated in tens of kilocycles : that is, kc/s with the final nought omitted. Turn the volume control to maximum.

MW.—Connect signal generator via a 0.0002 μF capacitor to **A** and **E** clips, and connect a good earth to the **E** clip. Tune to 1,400 kc/s (140 on scale), switch set to MW (control anti-clockwise), feed in a 1,400 kc/s (214 m) signal, and adjust **C19** for maximum output, using a fibre spanner. Then adjust **C17** and **C15** for maximum output.

There are no further adjustments, but the calibration should be checked at several points on both wavebands.

Metal Capacitor Block.—C1, C4, C5, C6 and **C10** are contained in a single metal-clad unit mounted on the rear chassis member. All five capacitors have one side returned to the case, and their free ends are attached to flexible leads which emerge from one end of the case. The colour coding of these leads is indicated in our under-chassis view. The makers' part number for the unit is 03459.