

EVER READY - SKY LEADER

CIRCUIT ALIGNMENT

I.F. Stages.—Switch receiver to M.W., and turn gang to maximum capacitance. Turn volume control to maximum. Connect an output meter across the secondary of **T2**. Disconnect the earthing side of **C4** from chassis, and connect signal generator output to the free end via a 5.6Ω resistor, and to chassis.

Feed in a modulated 470kc/s signal and adjust the cores of **L9**, **L11** and **L13**, using a non-metallic trimming tool, for maximum output, reducing the signal generator output as the signals come into line to avoid A.G.C. action. Then repeat this operation, keeping input signal as low as possible.

Very little adjustment should have been necessary unless some components have been replaced, but if more drastic treatment is rendered necessary the cores should be unscrewed some distance before making the adjustments. They should then be made as

Resistors

R1	56kΩ	B2
R2	10kΩ*	B1
R3	3.9kΩ*	F5
R4	68kΩ	E5
R5	680Ω	E5
R6	1.2kΩ	E5
R7	22kΩ	E5
R8	4.7kΩ	E5
R9	1kΩ	E5
R10	3.9kΩ	E5
R11	8.2kΩ	E5
R12	5kΩ	C1
R13	1.2kΩ	D5
R14	10kΩ	D5
R15	33kΩ	D5
R16	680Ω	D5
R17	470Ω	D5
R18	4.7kΩ*	D5
R19	100Ω*	D5
R20	4.7Ω	C2
R21	680Ω	C3
R22	10Ω	C3

Capacitors

C1	20pF	A1
C2	157.2pF	A1
C3	60pF	B2
C4	0.1μF	B1
C5	0.01μF	F5

Coils**

L1	3.5	B1
L2	1.5	A1
L3	18.0	C1
L4	—	B1
L5	1.5	C1
L6	0.5	A2
L7	—	A2
C6	200pF	F5
C7	60pF	B2
C8	20pF	A1
C9	110.6pF	A2
C10	250pF†	B2
C11	8μF	B2
C12	0.1μF	E5
C13	56pF†	E5
C14	250pF†	B2
C15	0.1μF	E5
C16	0.1μF	E5
C17	18pF†	E5
C18	250pF†	B2
C19	0.01μF	E5
C20	100μF	D6
C21	0.04μF	D5
C22	8μF	D5
C23	0.002μF	D5
C24	100μF	D6
C25	0.1μF	C2
C26	100μF	D5

L8	2.5	A2
L9	—	B2
L10	—	B2
L11	—	B2
L12	—	B2
L13	—	B2
L14	0.5	B2
L15	2.5	—

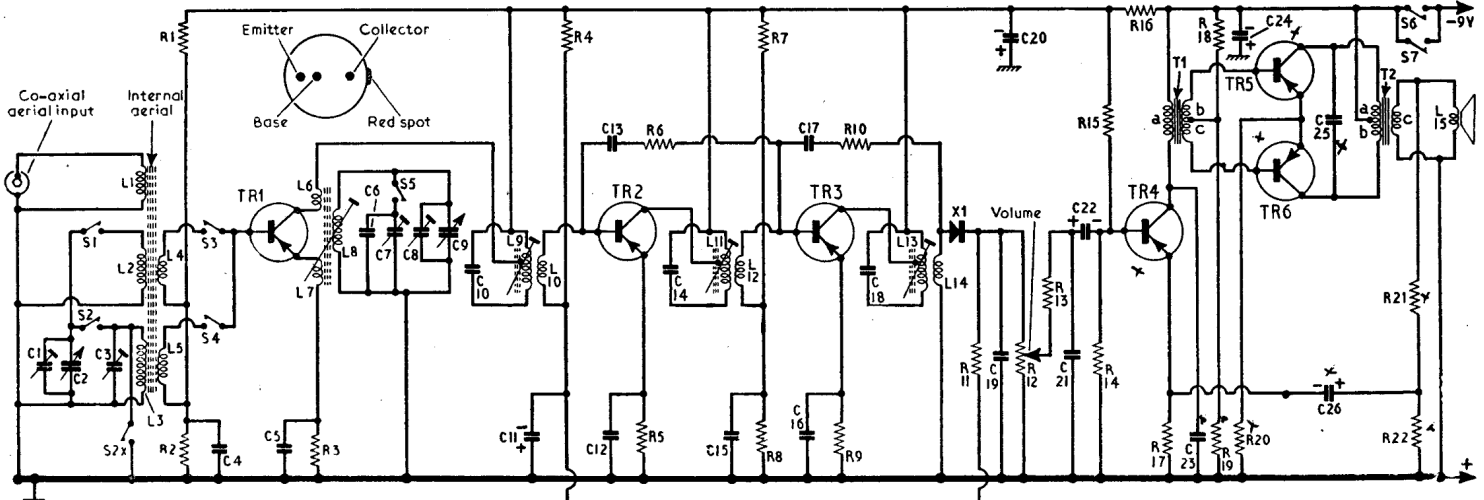
Miscellaneous**

T1	{ a 500.0 } C2
	{ b 50.0 }
	{ c 50.0 }
T2	{ a 2.900.0 } C3
	{ b 2.900.0 }
	{ c 0.2 }
X1	OA70 E5
S1-S5	— B3
S6	— E5
S7	— F5

**Approximate D.C. resistance in ohms.

*±5 per cent. †±2 per cent. ‡±1pF. §±10 per cent.

Note: Unless otherwise indicated, all fixed resistors are rated at ±10 per cent.



before, to the first peak reached as the cores are screwed in.

I.F. Sensitivity.—If a 470kc/s signal, modulated 30 per cent, is now fed in via **C4**, not more than 150μV should be needed to produce an output of 50mW.

I.F. Bandwidth.—Under the same conditions as for I.F. sensitivity, the bandwidth should be between 7kc/s and 14kc/s for a 6dB loss.

Disconnect signal generator and reconnect the free lead of **C4** to chassis. Open gang half way, connect signal generator output to **L1**, and readjust **L9** for maximum output.

R.F. and Oscillator Stages.—Couple the signal by means of a coil of wire connected across the signal generator output. The coil should contain 20 turns of 20-24 S.W.G. wire wound with a 4in diameter and 2½in long. The coil should be placed in the same plane as and parallel to the coils on the ferrite rod, at a distance of about two feet, and it should not be allowed to move once its position is fixed, so as to permit sensitivity measurements.

M.W.—Tune receiver to 500m (5 on scale), feed in a 500m (600kc/s) signal, and adjust the core of **L8** for maximum output. Tune to 230m (mark on scale), feed in a 230m (1,304kc/s) signal, and adjust **C8**, then **C1**, for maximum output. Return to 500m, feed in a 600kc/s signal, and readjust **L8** for maximum output while rocking the gang for optimum results. Then repeat the adjustments at 230m.

L.W.—Switch receiver to L.W., set the gang to minimum capacitance, feed in a 270kc/s signal, and adjust **C7** for maximum output. Tune receiver to 1,400m (mark on scale between 13 and 15), feed in a 214kc/s signal, and adjust **C3** for maximum output.

MODIFICATIONS

There have been three versions, or runs, of the chassis. The first up to serial No. SLR 005867, the second to SLR 028309, and the third from SLR 028310 onwards. Our sample receiver was of the latest chassis, and this Service Sheet is based on it.

The differences in the immediately preceding chassis are as follows: **TR4** was an OC71, and **TR5**, **TR6** were OC72s; **R21** was 470Ω, **R18** was 5.1kΩ, **R20** was 10Ω and **C25** was 0.04. These differences were introduced to increase the output from about 200mW to to some 300mW.

In the earliest chassis the aerial circuit was different, **L2** and **L3** being connected in series with a short-circuiting switch across **L3**, on M.W. In addition, most of the resistors were rated at ±5 per cent tolerance. Exceptions were **R13**, **R22** (±10 per cent) and **R12** (±20 per cent).

Transistor	Collector (V)	Base (V)	Emitter (V)
TR1	OC44 ..	7.2	1.08
TR2	OC45 ..	7.2	0.77
TR3	OC45 ..	7.16	1.19
TR4	OC78D ..	7.87	1.4
TR5	OC78 ..	†	0.17
TR6	OC78 ..	†	0.17

† Matched pair; total collector current = 2.47mA.