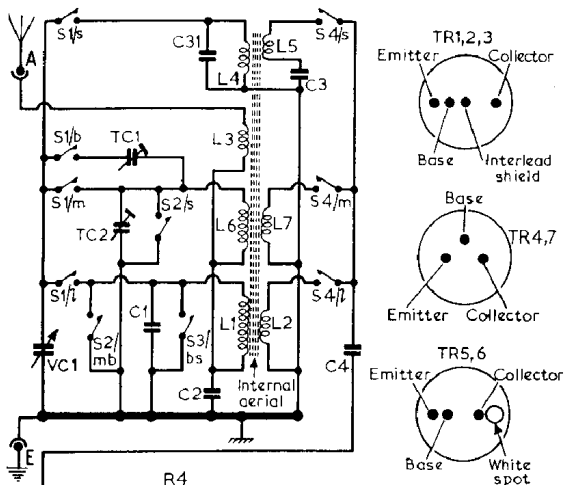


# SOBELL - S324



## Resistors

R1	33k $\Omega$	B2
R2	6.8k $\Omega$	B2
R3	1k $\Omega$	B2
R4	100 $\Omega$	B2
R5	680 $\Omega$	B2
R6	82k $\Omega$	B2
R7	1.8k $\Omega$	B2
R8	680 $\Omega$	B2
R9	22k $\Omega$	B2
R10	12k $\Omega$	B2
R11	4.7k $\Omega$	B2
R12	680 $\Omega$	B2
R13	1k $\Omega$	C2
R14	560 $\Omega$	C2
R15	22k $\Omega$	C2
R16	12k $\Omega$	C1
R17	10 $\Omega$	C2
R18	470 $\Omega$	C2
R19	1k $\Omega$	C2
R20	68 $\Omega$	C2
R21	560 $\Omega$	C2
R22	2.2 $\Omega$	C2
R23	2.2 $\Omega$	C2
R24	100k $\Omega$	C1
VR1	4.7k $\Omega$	D1
VR2	22k $\Omega$	D1

## Capacitors

C1	56pF	B2
C2	2,200pF	C1
C3	1,000pF	B1
C4	0.01 $\mu$ F	B2

C5	0.02 $\mu$ F	B2
C6	2,200pF	B2
C7	210pF	A2
C8	210pF	A2
C9	15pF	B2
C10	2,200pF	A2
C11	0.05 $\mu$ F	B2
C12	0.05 $\mu$ F	B2
C13	0.05 $\mu$ F	B2
C14	10 $\mu$ F	B2
C15	10 $\mu$ F	B2
C16	0.05 $\mu$ F	B2
C17	0.05 $\mu$ F	B2
C18	560pF	B2
C19	560pF	B2
C20	250pF	B2
C21	250pF	C2
C22	0.01 $\mu$ F	C2
C23	0.01 $\mu$ F	C2
C24	100 $\mu$ F	C2
C25	10 $\mu$ F	C2
C26	0.033 $\mu$ F	C2
C27	250pF	B2
C28	300pF	C2
C29	300 $\mu$ F	C2
C30	300 $\mu$ F	C2
C31	3.3pF	B1
C32	2,200pF	C2
TC1	40pF	B1
TC2	5pF	C1
TC3	15pF	B2
TC4	15pF	B2

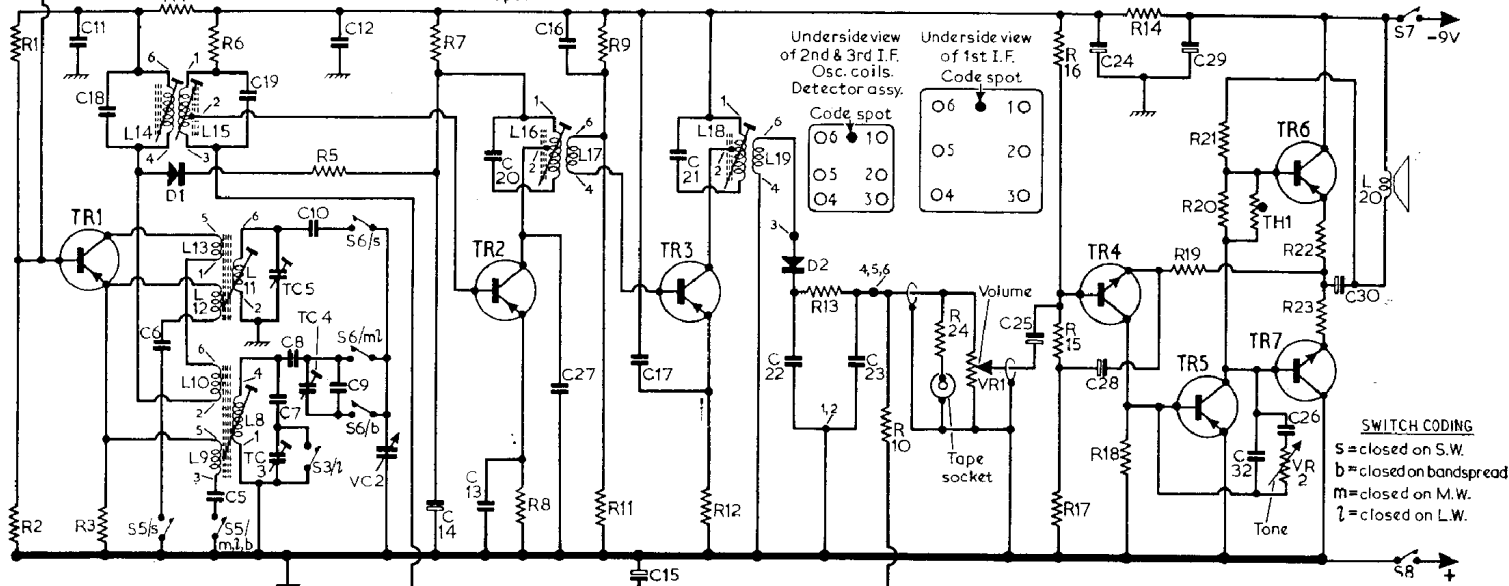
TC5	5pF	B2
VC1	196pF	B1
VC2	196pF	B1

## Coils

L1	—	B1
L2	—	B1
L3	—	C1
L4	—	B1
L5	—	B1
L6	—	C1
L7	—	C1
L8	—	B2
L9	—	B2
L10	—	B2
L11	—	B2
L12	—	B2
L13	—	B2
L14	—	B2
L15	—	B2
L16	—	B2
L17	—	B2
L18	—	C2
L19	—	C2
L20	8 $\Omega$	C2

## Miscellaneous

D1	OA79	B2
D2	OA90	C2
S1-S6	—	A1
S7, S8	—	D1
TH1	VA1040	C2



Transistor Table

Transistor	Emitter (V)	Base (V)	Collector (V)
TR1	AF115 ..	1.1	1.12
TR2	AF117 ..	0.63	0.86
TR3	AF117 ..	0.95	1.15
TR4	AC127 ..	4.5	4.3
TR5	OC81D ..	—	0.18
TR6	OC81 ..	4.9*	5.1
TR7	AC127 ..	4.9*	4.8

\* Measured at the junction R22, R23.

## CIRCUIT ALIGNMENT

**Equipment Required.**—A 0-100mW audio output meter with an impedance to match 8 $\Omega$ ; an a.m. signal generator with a low impedance output modulated 30 per cent; an r.f. coupling coil formed by winding approximately 14 turns of 18 s.w.g. enamelled copper on a lin diameter former to a length of 1-1 1/2 in; a 0.01 $\mu$ F isolating capacitor and insulated trimming tools.

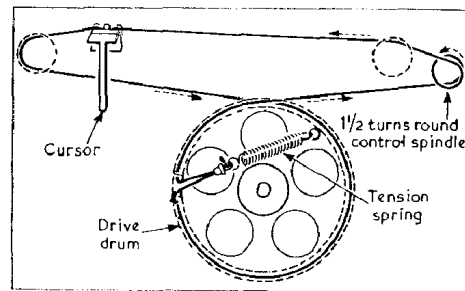
Note: Alignment points 1-6 quoted in the instructions which follow, refer to calibration points which are provided on the bracket beneath the cursor back.

During the alignment the input signal level should be regulated so that the receiver output does not exceed 50mW with the volume control at maximum.

All cores should be adjusted to the outer peak.

- 1.—Connect the audio output meter in place of the loudspeaker. Connect the signal generator via the 0.01 $\mu$ F capacitor to TR1 base. Switch receiver to m.w. and set the tuning gang to its mid-position.
- 2.—Feed in a 470kc/s modulated signal and adjust L18 (upper), L16 (upper), L15 (upper) and L14 (lower) for maximum output. Repeat as necessary.
- 3.—Check that the datum on the cursor carriage coincides with calibration mark 1 when viewed from the rear with the tuning gang fully closed. Switch receiver to l.w. and set the cursor on calibration mark 4. Connect the signal generator to the r.f. coupling coil and place the coil about 6in from the ferrite rod aerial.
- 4.—Feed in 220kc/s signal and adjust L8 and L1 for maximum output.
- 5.—Switch receiver to m.w. and set the cursor to mark 6. Feed in a 1,440kc/s signal and adjust TC3 and TC2 for maximum output.
- 6.—Tune receiver to 600kc/s (calibration mark 2). Feed in a 600kc/s signal and adjust L6 for maximum output.
- 7.—Repeat adjustments to TC2 and L6.
- 8.—Switch receiver to bandspread and set the cursor to calibration mark 3. Feed in a 1,440kc/s signal and adjust TC4 and TC1 for maximum output.

- 9.—Switch receiver to s.w. with the cursor at calibration mark 3, feed in a 6.85Mc/s signal and adjust L11 for maximum output.
- 10.—Set the cursor at calibration mark 5. Feed in a 15Mc/s signal and adjust TC5 for maximum output.
- 11.—Repeat operations 9 and 10.
- 12.—Set the cursor to calibration mark 3. Feed in a 6.85Mc/s signal and adjust L4 for maximum output.



Scale drive assembly drawn with the tuning gang fully closed

**SWITCH CODING**  
S = closed on S.W.  
b = closed on bandspread  
m = closed on M.W.  
l = closed on L.W.