MURPHY - B802

Resistors			Capacitors		
R1	22kΩ	D2	C1	40pF	C1
R2	5·6kΩ	D2	C2a	118pF	D2
R3	330Ω	D3	C2b	118pF	D2
R4	1·5kΩ	D3	C3	22pF	C2
R5	330kΩ	B2	C4	15pF	D3
R6	680Ω	C3	C5	0·01μF	D2
R7	4·7kΩ	C3	C6	0·1μF	D3
R8	22kΩ	C3	C7	0·02μF	D3
R9	1kΩ	C3	C8	200pF	C3
R10	330Ω	C3	C9	40pF	C3
R11	1kΩ	B3	C10	200pF	C3
R12	120kΩ	C2	C11	100pF	C3
R13	18kΩ	C1	C12	150pF	D3
R14	3·3kΩ	C2	C13	15pF	D2
R15	68kΩ	C2	C14	200pF	C3
R16	10kΩ	C2	C15	0·1μF	C3
R17	1kΩ	C2	C16	200pF	C3
R18	5·6kΩ	C2	C17	0·1μF	B3
R19	330Ω	C2	C18	0·1μF	B3
R20	1·5kΩ	C2	C19	200pF	B3
R21	56kΩ	C2	C20	0·1μF	C3
R22	10kΩ	C2	C21	0·01μF	B3
R23	560Ω	B2	C22	0·1μF	B3
R24	330Ω	C2	C23	8μF	C3
R25	1·5kΩ	B2	C24	8μF	C2
R26	68Ω	B1	C25	160μF	C3
R27	1·5kΩ	B2	C26	8μF	C2
R28	68Ω	B3	C27	8μF	C2
R29	270kΩ	C2	C28	50μF	C2
R30	4·7Ω	B2	C29	4μF	C2
R31	4·7Ω	B3	C30	30μF	B1
R32	330Ω	D3	C31	50μF	B1
RV1	5kΩ	B1			

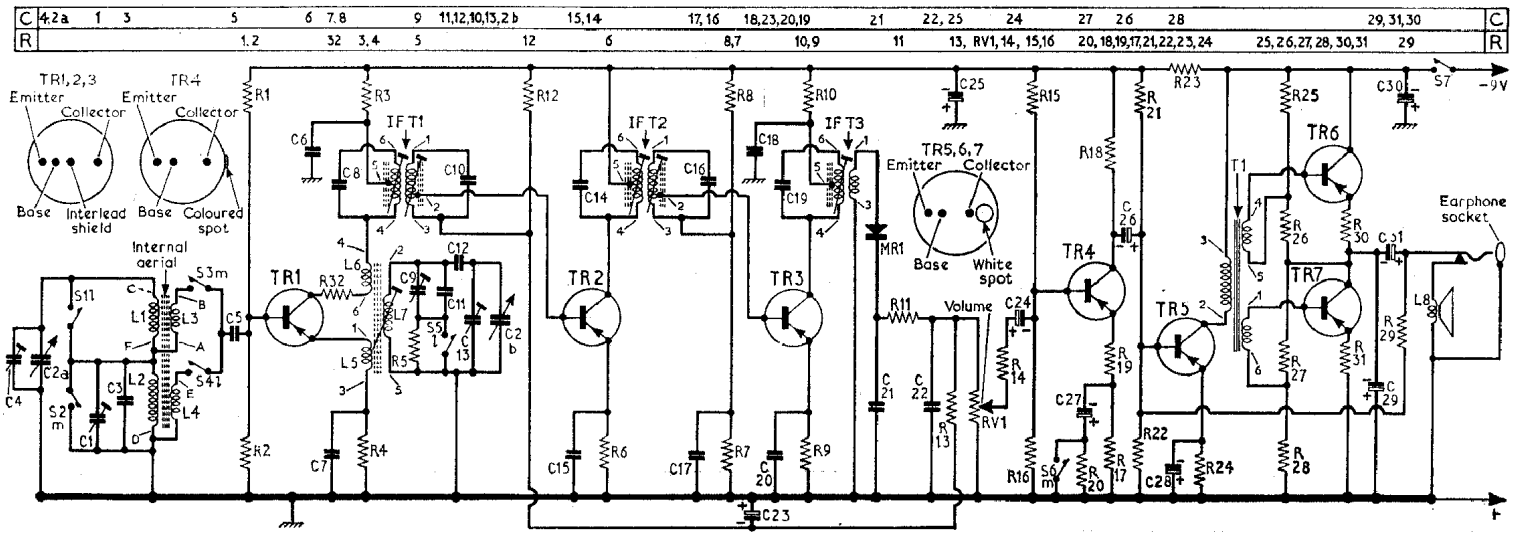
Coils and Transformers*		
L1	5·5	B1
L2	19·5	D1
L3	—	B1
L4	1·5	D1
L5	—	D3
L6	—	D3
L7	—	D3
L8	15·0	—
IFT1 pri.	8·5	C3
IFT1 sec.	8·5	C3
IFT2 pri.	8·5	C3
IFT2 sec.	8·5	C3
IFT3 pri.	9·0	B3
IFT3 sec.	1·5	B3
T1 pri.	200·0	B2
T1 sec.	48·0	B2
T1 sec.	52·0	B2
Miscellaneous		
MR1	OA90	B3
S1-S6	—	A2
S7	—	A1

**Approximate d.c. resistance in ohms.*

Transistor Table

Transistor		Emitter (V)	Base (V)	Collector (V)
TR1	AF117	1·2	1·3	6·4
TR2	AF117	0·75	0·8	6·8
TR3	AF117	0·85	1·1	6·6
TR4	OC71	0·6	0·7	3·8
TR5	OC81D	0·67	0·72	8·5
TR6	OC81	4·4	4·5	9·0
TR7	OC81	—	0·2	4·3

TR6 *and* **TR7** *are a matched pair.*



CIRCUIT ALIGNMENT

Equipment Required.—An a.m. signal generator modulated 30 per cent at 400 c/s; an audio output meter matched to 15Ω impedance and fitted with a screened lead, a non-metallic trimming tool; a length of insulated wire formed into an r.f. coupling loop; a 0.1μF capacitor; a 2.2pF capacitor and a 12kΩ resistor.

The oscillator and i.f. circuits should be aligned with the chassis removed from its case, and the signal generator should be switched on about 15 minutes before commencing alignment. The output meter should be connected to replace the loudspeaker, but if at any time the loudspeaker and output meter are connected together, the output should not be allowed to exceed about 70 mW otherwise the output transistors may become damaged. During alignment the signal input should be adjusted to give an output of 50mW (20mW if the loudspeaker is kept in circuit). The outer peak is the correct one for all IFT adjustments.

1.—Connect the signal generator via the 0.1μF capacitor to the tuning gang aerial section **C2a.** Connect the audio output meter in place of the loudspeaker. A convenient method of achieving this is to connect via the earphone socket using the correct type of plug. Set the volume control to maximum and the tuning to about 300m.

2.—Feed in a 470 kc/s signal 30 per cent modulated at 400 c/s and adjust **IFT3, IFT2** and **IFT1** in that order, once only, for maximum output.

3.—If interference is being experienced, desensitize the receiver for r.f. alignment by connecting the 12kΩ resistor between the junction **R12, R13** and chassis.

4.—Connect the signal generator to **C2a** via the 2.2pF capacitor. Fully mesh the tuning gang and check that the cursor lines up with the datum dot at the l.f. end of the scale, then set the cursor at 600 kc/s (500m). Feed in a 600 kc/s signal and adjust **L7** for maximum output.

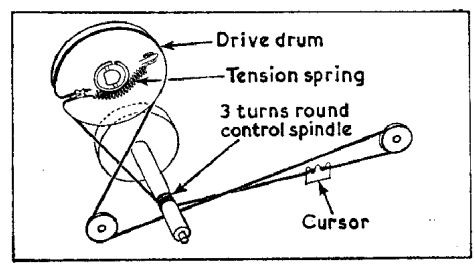
5.—Tune receiver to 1,500 kc/s (200m). Feed in a 1,500 kc/s signal and adjust **C13** for maximum output. Check that 1,550 kc/s is being received at the h.f. end of the m.w. band.

6.—Repeat operations 4 and 5 and check calibration at both points.

7.—Switch receiver to l.w. and tune to 214 kc/s (1,402m). Feed in a 214 kc/s signal and adjust **C9** for maximum output.

8.—Connect the signal generator to the r.f. coupling loop and loosely couple the loop to the ferrite rod aerial. Switch receiver to m.w. Tune to 600 kc/s (500m) and feed in a 600 kc/s signal. Adjust **L1** for maximum output. **L1** is adjusted by sliding the former along the ferrite rod, which necessitates removing the chassis from the case.

9.—Tune receiver to 1,500 kc/s (200m) and feed in a 1,500 kc/s signal. Adjust **C4** for maximum output.



10.—Switch receiver to l.w. and tune to 214 kc/s (1,402m). Feed in a 214 kc/s signal and adjust **C1** for maximum output. Do not attempt adjustment of l.w. aerial coil **L2.**