Resistors		
R1	5·6kΩ	A1
R2	27kΩ	A1
R3	1kΩ	B1
R4	100kΩ	B1
R5	100kΩ	B2
R6	680Ω	B2
R7	10kΩ	B2
R8	27kΩ	B2
R9	5·6kΩ	B2
R10	560Ω	B2
R11	4·7kΩ	A2
R12	5kΩ	A1
R13	800Ω	A2
R14	12kΩ	A2
R15	82kΩ	A2
R16	12kΩ	A1
R17	100Ω	A2
R18	390Ω	A2
R19	680Ω	A2
R20	5·6Ω	A2
R21	2·2Ω	A2
R22	2·2Ω	A2
R23	100Ω	A2
R24	10Ω	B2

Capacitors		
C1	6·8pF	A1
C2	25pF	A1
C3	255pF	C1
C4	60pF	C1
C5	25pF	A2
C6	2,000pF	A1
C7	0·01µF	B1
C8	5,000pF	C2
C9	25pF	B1
C10	2,000pF	B1
C11	255pF	C1
C12	230pF	B1
C13	25pF	B1
C14	210pF	B1
C15	25pF	B1
C16	250pF	B2
C17	60µF*	B2
C18	0·02µF	B2
C19	250pF	B2
C20	0·02µF	B2
C21	0·02µF	B2
C22	375pF	A2
C23	0·02µF	B2
C24	0·02µF	A2
C25	0·5µF*	A1
C26	20µF	A2
C27	60µF	A2
C28	150µF	B2
C29	75µF	A2
C30	150µF	A2
C31	0·033µF*	A2
C32	0·033µF	A2

Coils†		
L1	—	C1
L2	1·0	A1
L3	10·0	C1
L4	—	A1
L5	—	A1
L6	—	B1
L7	—	B1
L8	2·5	C1
L9	—	B2
L10	—	B2
L11	—	B2
L12	10·0	B2
L13	—	B2
L14	10·0	B2
L15	—	B2
L16	4·5	A2
L17	—	A2
L18	15·0	—

Miscellaneous		
S1-S15	—	B1
S16	—	A1
W1	OA70	A2
W2	AA120	A2

*In some receivers C17 and C25 are 75µF, C31 is 0·1µF, and a 100Ω resistor is fitted in series with TR3 base.
†Approximate d.c. resistance in ohms.

Transistor Table

Transistor		Emitter (V)	Base (V)
TR1	AF115	1·0	1·1
TR2	AF117	0·45	0·65
TR3	AF117	0·95	1·1
TR4	OC71*	0·2	0·3
TR5	OC81D*	0·55	0·7
TR6	OC81*	5·0†	5·15
TR7	AC127*	5·0†	4·85

*In some receivers TR4 may be AC155, TR5 AC113, TR6 AC154 and TR7 AC157.
†Measured at the junction of R21 and R22.

I.F. transformers M.W. and S.W. osc coils S.W. ae coil

Pin connections viewed from copper side of printed board

CIRCUIT ALIGNMENT

Equipment Required.—An a.m. signal generator modulated 30 per cent; an audio output meter with an impedance of 15Ω, or alternatively a model 8 Avometer set to its 10V a.c. range; a 0.1µF capacitor and a 25pF capacitor, and a length of insulated wire to be used as an r.f. coupling loop.

During alignment the input signal level should be regulated to maintain a receiver output level of 50mW.

1.—Switch receiver to m.w. and turn the tuning gang to maximum capacitance. Set the volume control to maximum output. Connect the audio output meter in place of the loudspeaker or connect the Avometer across the speaker speech coil.

2.—Connect the signal generator via the 0.1µF capacitor across the tuning gang aerial section C3. Feed in a 475kc/s 30 per cent modulated signal and adjust L16, L14 and L12 for maximum output, repeating until there is no further improvement.

3.—Connect the signal generator to the r.f. coupling loop and loosely couple the loop to the ferrite rod aerial. Tune receiver to 500m. Feed in a 600kc/s signal and adjust L8 and L2 for maximum output.

4.—Tune receiver to 200m. Feed in a 1,500kc/s signal and adjust C13 and C2 for maximum output.

5.—Repeat operations 3 and 4 for correct calibration.

6.—Switch receiver to l.w. and adjust the tuning so that the cursor lies exactly under the "14" of 1,400m on l.w. scale. Feed in a 220kc/s signal and adjust C15 and L3 for maximum output.

7.—Disconnect the lead from the telescopic aerial tag and connect the signal generator via the 25pf capacitor to the lead. Unscrew the core of L11 until it just protrudes from its can.

8.—Switch receiver to s.w. and adjust the tuning so that the m.w. cursor coincides with the centre of the 500m mark on the m.w. scale. Feed in a 6.77Mc/s signal and screw in the core of L11 to obtain maximum output from the third peak. Then adjust L4 for maximum output.

9.—Adjust the tuning control so that the m.w. and l.w. cursor coincides with the centre of the 200m mark on the m.w. scale. Feed in a 15.45Mc/s signal and adjust C9 and C5 for maximum output.

10.—Repeat operations 7, 8 and 9 for correct calibration and output.

MARCONIPHONE – 4116
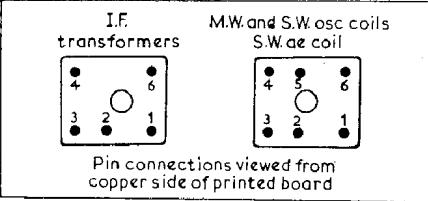
Scale drive assembly shown with the tuning gang fully closed. Approximately 30 in of nylon braided cord is required for replacement