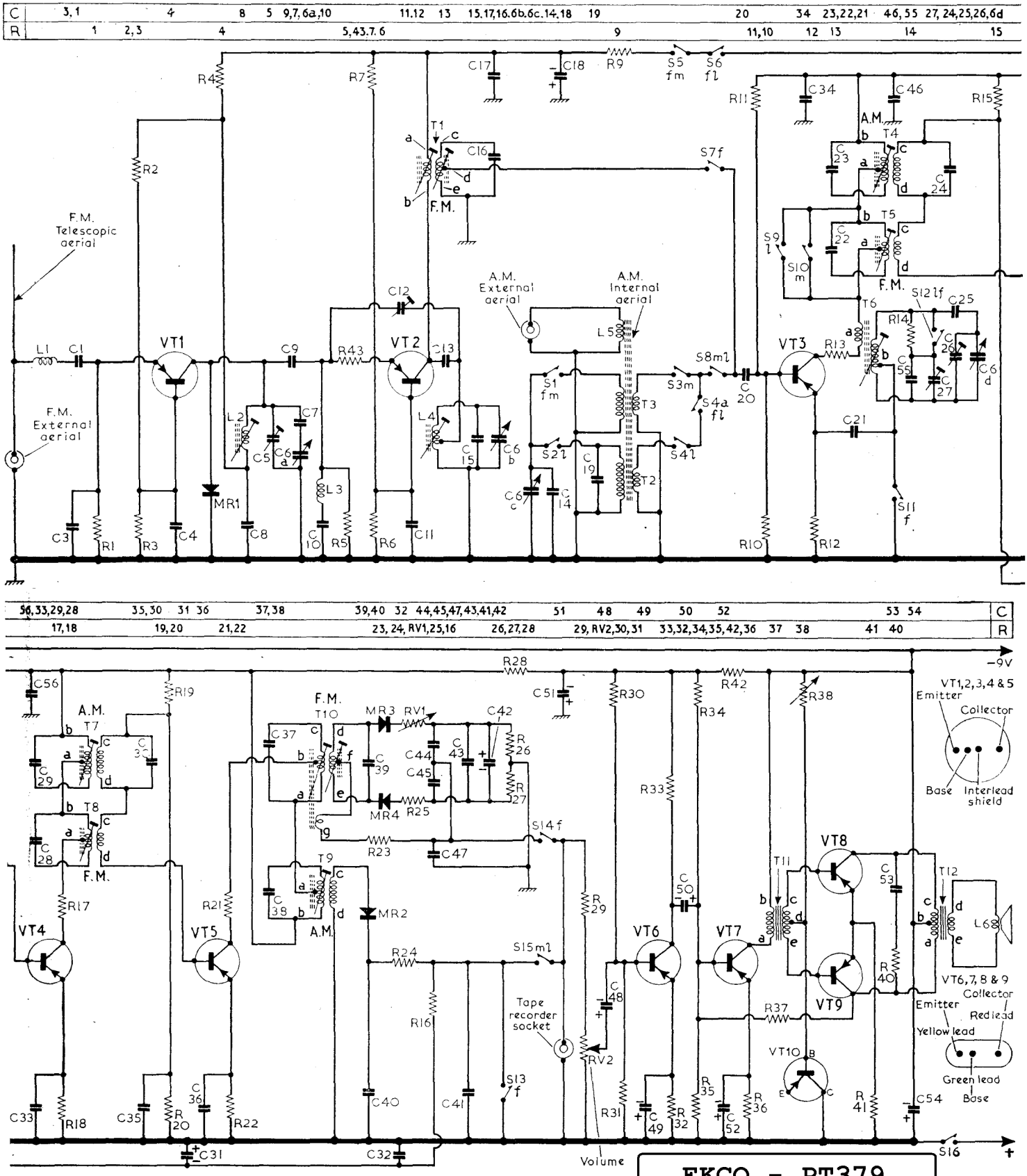


EKCO - PT379

Resistors

R1	560Ω	R15	56kΩ	R30	120kΩ
R2	10kΩ	R16	8·2kΩ	R31	47kΩ
R3	2·7kΩ	R17	220Ω	R32	6·2kΩ
R4	180Ω	R18	680Ω	R33	12kΩ
R5	560Ω	R19	10kΩ	R34	100kΩ
R6	1·5kΩ	R20	2·7kΩ	R35	22kΩ
R7	6·8kΩ	R21	220Ω	R36	680Ω
R8	—	R22	1kΩ	R37	560kΩ
R9	470Ω	R23	100Ω	R38	15kΩ
R10	1·2kΩ	R24	470Ω	R39	—
R11	6·8kΩ	R25	2·2kΩ	R40	150Ω
R12	1kΩ	R26	4·7kΩ	R41	4·7Ω
R13	220Ω	R27	4·7kΩ	R42	220Ω
R14	150kΩ[8]	R28	470Ω	R43	18Ω
R15	56kΩ	R29	3·9kΩ	RV1	5kΩ
				RV2	5kΩ

Capacitors

C1	8·2pF	C16	68pF	C31	8μF[2]	C45	0·01μF
C2	—	C17	0·01μF	C32	0·001μF	C46	0·04μF
C3	0·001μF	C18	100μF[1]	C33	0·04μF	C47	0·01μF[7]
C4	0·001μF	C19	60pF	C34	0·04μF	C48	8μF[3]
C5	8pF	C20	0·01μF	C35	0·02μF[5]	C49	100μF[4]
C6	196pF	C21	0·01μF	C36	0·04μF	C50	8μF[3]
C7	82pF	C22	39pF	C37	39pF	C51	100μF[1]
C8	0·001μF	C23	250pF	C38	250pF	C52	100μF[4]
C9	3pF	C24	0·001μF	C39	47pF	C53	0·04μF
C10	220pF	C25	260pF	C40	0·01μF	C54	100μF[1]
C11	0·001μF	C26	—	C41	0·01μF[6]	C55	200pF
C12	8pF	C27	30pF	C42	10μF	C56	0·04μF
C13	68pF	C28	39pF	C43	0·01μF		
C14	—	C29	250pF	C44	0·01μF		
C15	15pF	C30	0·001μF	C45	0·01μF		

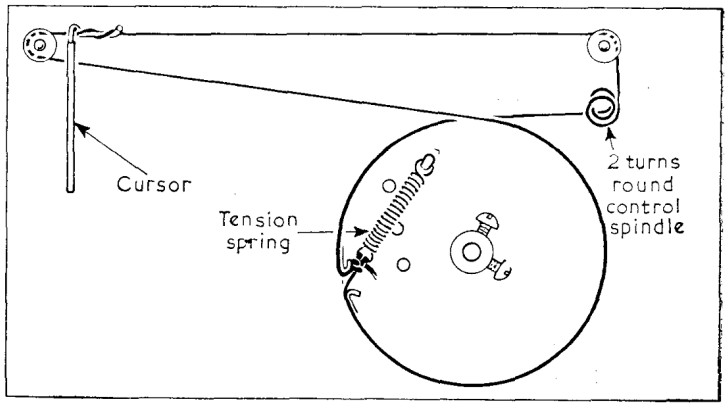
*Approximate D.C. resistance in ohms.
†Matched pair.
[1]160μF in some receivers.
[2]5μF in some receivers
[3]2μF in some receivers.
[4]64μF in some receivers
[5]0·04μF in later receivers.
[6]0·04μF in later receivers.
[7]0·02μF in later receivers.
[8]82kΩ in later receivers.
§No component.

CIRCUIT ALIGNMENT

Equipment Required.—An A.M./F.M. signal generator; an output wattmeter; a sweep generator; an oscilloscope; a non-metallic bladed type trimming tool for the I.F. cores; two 0.1μF capacitors and an R.F. coupling coil constructed by winding 20 turns of 20 S.W.G. enamelled copper wire on an air cored 4in diameter former, spaced to a length of 2⅜in. If a sweep generator and an oscilloscope are not available for visual alignment, an alternative meter alignment procedure is given which requires a 0-50μA meter and two matched 100kΩ resistors.

F.M. I.F. Alignment (Visual)

1.—Switch receiver to F.M. and tune to the L.F. end of the band. Turn the volume control to minimum output position (fully clockwise). Connect the oscilloscope across **R27** and disconnect one end of **C42** (location ref. F4).
2.—Connect the sweep generator to the base of **VT5,** feed in a 10.7 Mc/s signal and adjust the primary of **T10** (C1) for peak output.
3.—Transfer the generator to the base of **VT4** and adjust the core of **T8** (B1) for peak output.
4.—Re-connect **C42,** transfer the oscilloscope to the junction of **R23** and **C47** and transfer the sweep generator to the switch side of **C20.** Feed in a 10.7 Mc/s signal and adjust **RV1** (C1) and **T10** secondary for a symmetrical "S" curve and maximum A.M. rejection.
5.—Disconnect **C42** and transfer the oscilloscope to the top of **MR4** (C1). Switch the input attenuation to −10dB and adjust **T5** for peak output. Re-adjust **T5, T8** and the primary of **T10** for maximum output, at the same time maintaining a symmetrical curve.
6.—Transfer the signal generator to **VT2** base (top of **R6**) and adjust **T1** primary and secondary cores for best response.



Drive cord assembly as seen from the front with the tuning gang at maximum capacitance (fully meshed)

Drive Cord Replacement.—For a new drive cord, 32in of nylon/glass yarn is required. Remove chassis from the case and viewing from the front, turn the tuning gang to the fully meshed position. Tie the tension spring to one end of the cord and secure the knot with shellac. Attach spring on the retaining hook in drive drum and wind ½ turn clockwise round the drum then 2 turns anti-clockwise round tuning spindle. From the tuning spindle, continue round the two small pulleys as shown in the drawing below and return to the drive drum where ⅔ turn is made in a clockwise direction. Secure the free end of the cord to tension spring and seal knot with shellac.

Switches.—S1-S17 are waveband and battery on/off switches which are combined in a press-button unit shown in location reference D/E3. The three wave-band positions are inter-dependent.

An illustration of the individual switch contacts is shown in col. 4. On the circuit diagram suffix letters *m, l,* and *f* are added to the switch numbers and these indicate the position(s) in which the switch closes, where *m* means M.W., *l* means L.W. and *f* means F.M.

Battery.—9V Ever-Ready PP7, Vidor 6007, Exide DT7 or any equivalent.

7.—Switch to L.W. and tune to 1,400m. Feed in a 214kc/s signal and adjust **T2** (L.W. aerial coil) and **C27**(E3) for maximum output.

The ferrite rod aerial coils are sealed on the rod in production and should not require adjustment except after replacing the rod or the coils.

EKCO - PT379

F.M. I.F. Alignment (Meter Method)

1.—Switch receiver to F.M. and tune to the L.F. end of the band. Turn the volume control to minimum output position. Connect the two 100kΩ resistors in series across **R26, R27** and connect the 0-50μA meter between their junction and chassis.

Note: **RV1** can only be set correctly using the visual method. If misadjustment is suspected, it should be set to the mid-position.

2.—Connect the F.M. signal generator to the base of **VT5** and adjust the primary of **T10** for maximum reading on the μA meter.
3.—Transfer the μA meter between the junction of 100kΩ resistors and the junction of **R23** and **T10** tertiary winding. Adjust **T10** secondary for *zero* reading on the meter (the reading should swing from one polarity to the other through zero).
4.—Re-connect the meter between the junction of the 100kΩ resistors and chassis. Transfer the signal generator to the base of **VT4** and adjust the core of **T8** for maximum deflection on the meter. Re-check the tuning of **T10** primary, **T8** and **T5** for peak output.

A.M. I.F. Alignment

1.—Switch to M.W. and tune receiver to a quiet spot around 460m. Turn the volume control to maximum output (fully anti-clockwise). Connect the output wattmeter with a 3 ohms dummy load in parallel, across the loudspeaker heads. If the output meter is used without a dummy load leave the speaker connected.
2.—Connect the A.M. signal generator, with a 0.1μF capacitor in each lead, across the secondary of **T3.** Feed in a 470kc/s 30% modulated signal and adjust the cores of **T4**(B1), **T7**(B1) and **T9**(C1) for maximum output, reducing the input as necessary to maintain the output level at 50mW. Repeat until no further improvement can be obtained.

R.F. Alignment

1.—Switch receiver to F.M. and tune to the 92 Mc/s mark on tuning scale. Connect the output meter as in "A.M. I.F. Alignment" operation 1. Set the volume control for maximum output. Connect the F.M. signal generator to the external F.M. aerial socket and adjust the input for slightly less than 50mW output.
2.—Feed in a 92 Mc/s signal and adjust **L2**(A2) and **L4**(A2) for maximum output.
3.—Tune receiver to 102 Mc/s, feed in a 102 Mc/s signal and adjust **C5**(J4) for maximum output.
4.—Switch receiver to M.W. and tune to the 500m mark on scale. Transfer the signal generator leads to the coupling coil and place the coil about 15in from the centre of **T3** (M.W. aerial coil), coaxial with ferrite rod.
5.—Feed in a 600kc/s signal and adjust **T6**(B1) and **T3** for maximum output.
6.—Tune receiver to 200m, feed in a 1,500kc/s signal and adjust **C14** and **C26**(A2) for maximum output.