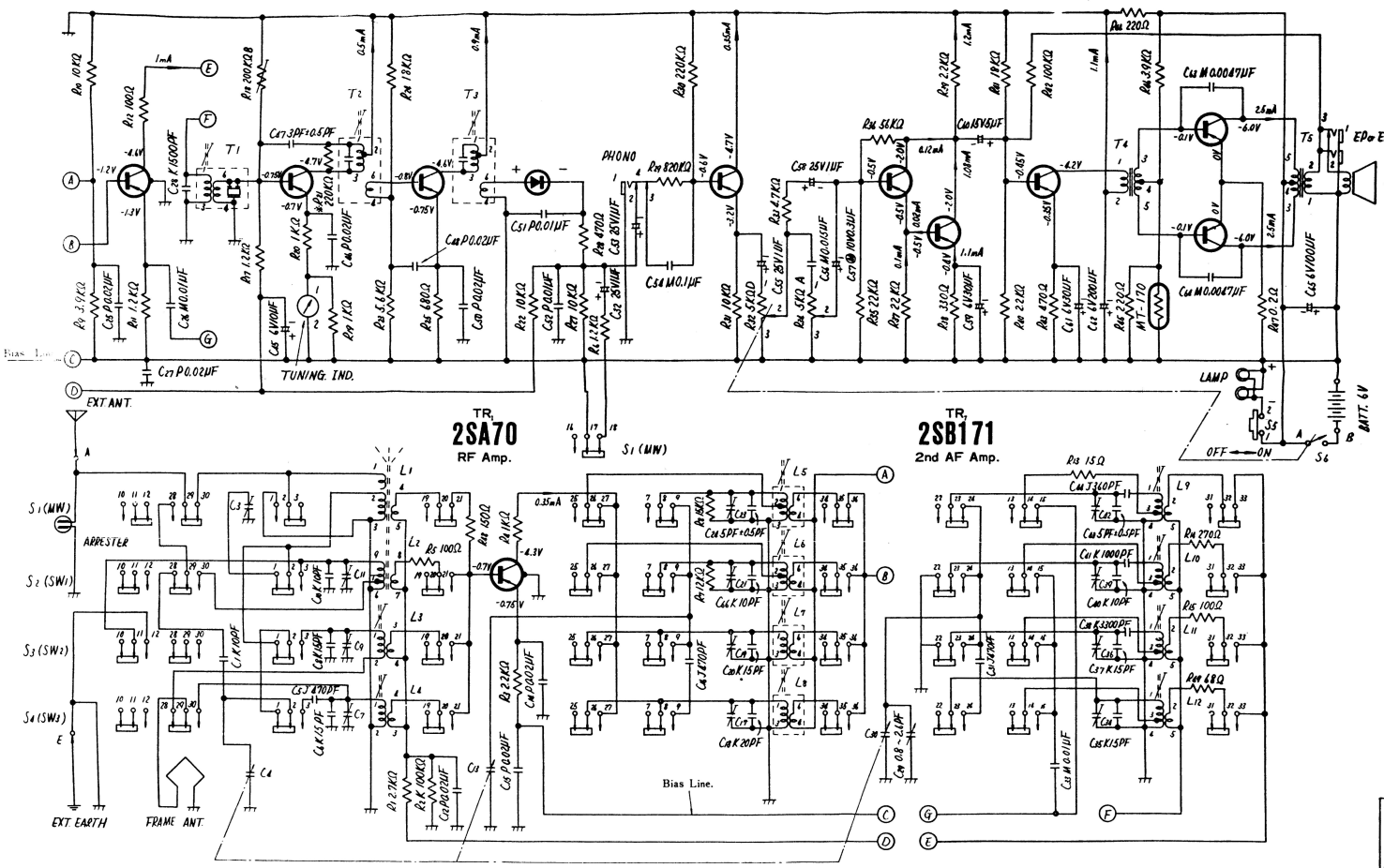
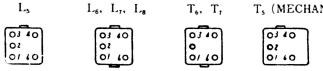
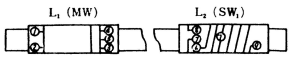
TR2	TR3	TR4	D1	TR5	TR6	TR8	TR9 & TR10
2SA70	2SA101	2SA101	0A70	2SB173	2SB173	2SB171	2SB178×2
Conv.	1st IF Amp.	2nd IF Amp.	Det & AGC	PRE Amp.	1st AF Amp.	3rd AF Amp.	Power Amp.



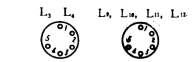


Detector Coil

IF Transformer



Antenna Coil



SW2, SW3 Antenna Coil

Oscillator Coil

Band Selector Switch

Notes:

1. $S_1 \sim S_4$: Band selector switch in "MW" position.
2. S_5 : Dial light switch in "OFF" position.
3. S_6 : Power source switch in "OFF" position.
4. Measured voltages for $TR_1 \sim TR_{10}$ are from transistor terminal to bias line.
5. The value of resistance marked with ※ is standard and it may be changed by the characteristics of transistors.
   ※R21 = 330KΩ, 220KΩ or 150KΩ
6. DC Voltage measurements are taken with circuit tester (10KΩ/V).
7. Capital lettes (M, K, J, P) in the circuit diagram show allowable tolelance of capacitors as follows.
   M = ±20% K = ±10% J = ±5% P = +100% − 0%
8. Tolerance of all resistors is ±10%.
9. Battery current:
   No signal.....12 ~ 20mA
   Maximum output .....150~190mA
10. PF = pico farad = mmf
    μF = micro farad = MF

Resistors, Transistors, Diodes & Thermister

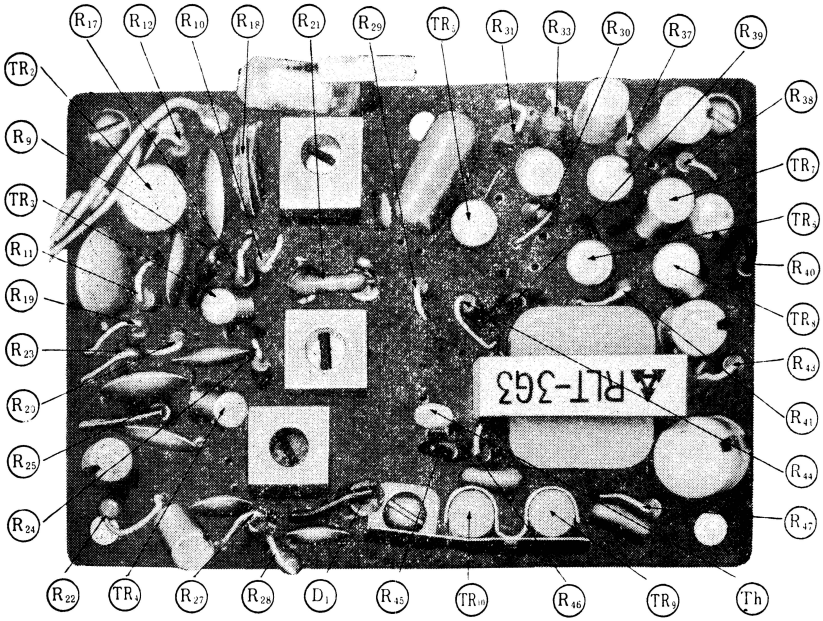


Fig. 13 Top View - Electrical Parts Identification.

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Capacitors & Transformers

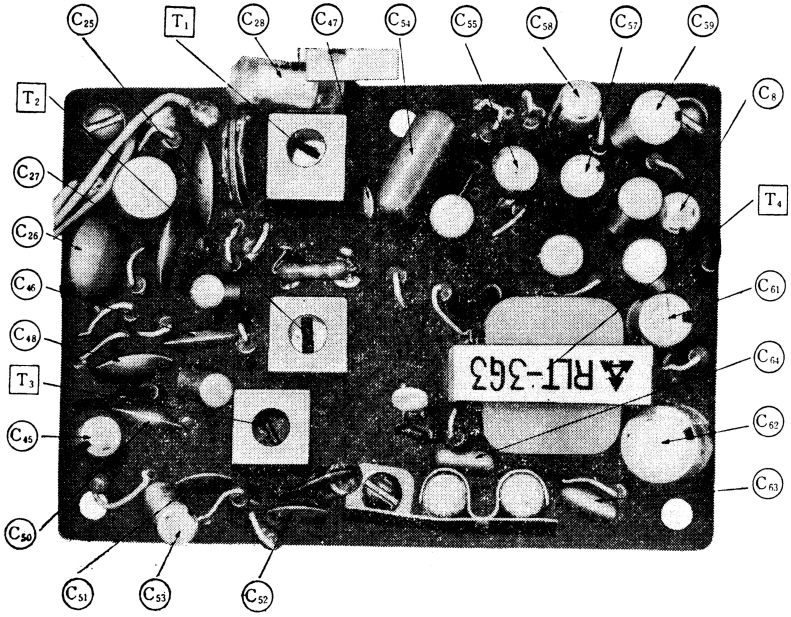
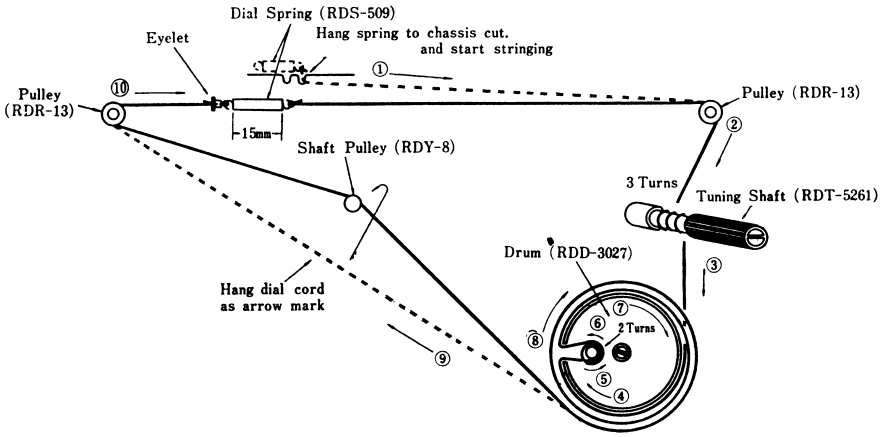


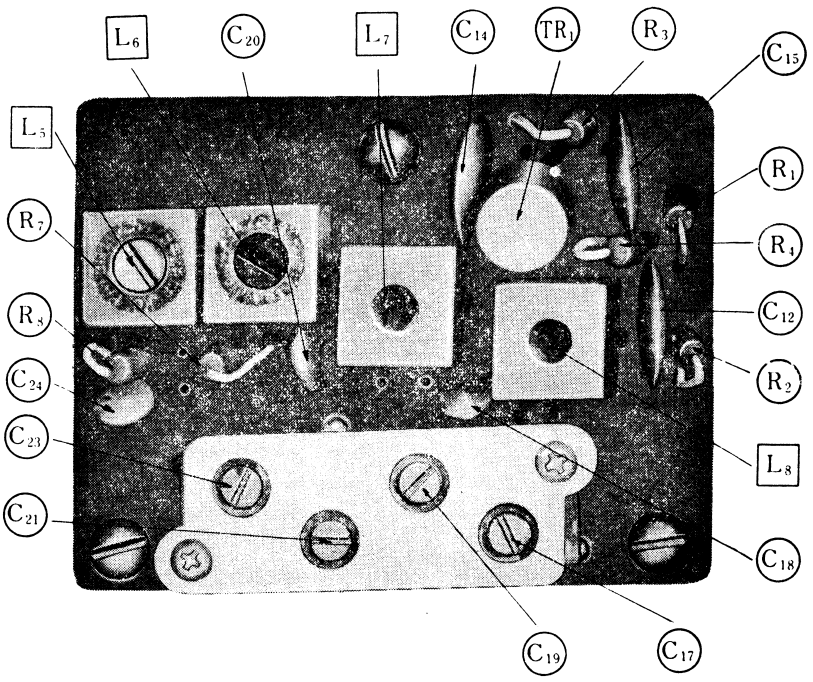
Fig. 14 Top View - Electrical Parts Identification.



1. Hang one end of the tension spring to chassis cut and start stringing in accrodance with the numerical order, and then take the tension spring out of chassis cut.
2. Fasten the dial cord end to the another end of the tension spring with eyelet.
3. Cement knot of the cord with lacquer.
4. Tuning gang is positioned at maximum capacity.
5. Dial cord length is 85cm (33½″).

Dial Cord Stringing Guide.

Resistors, Capacitors, Transistor & Detector Coil



Top View - Electrical Parts Identification.

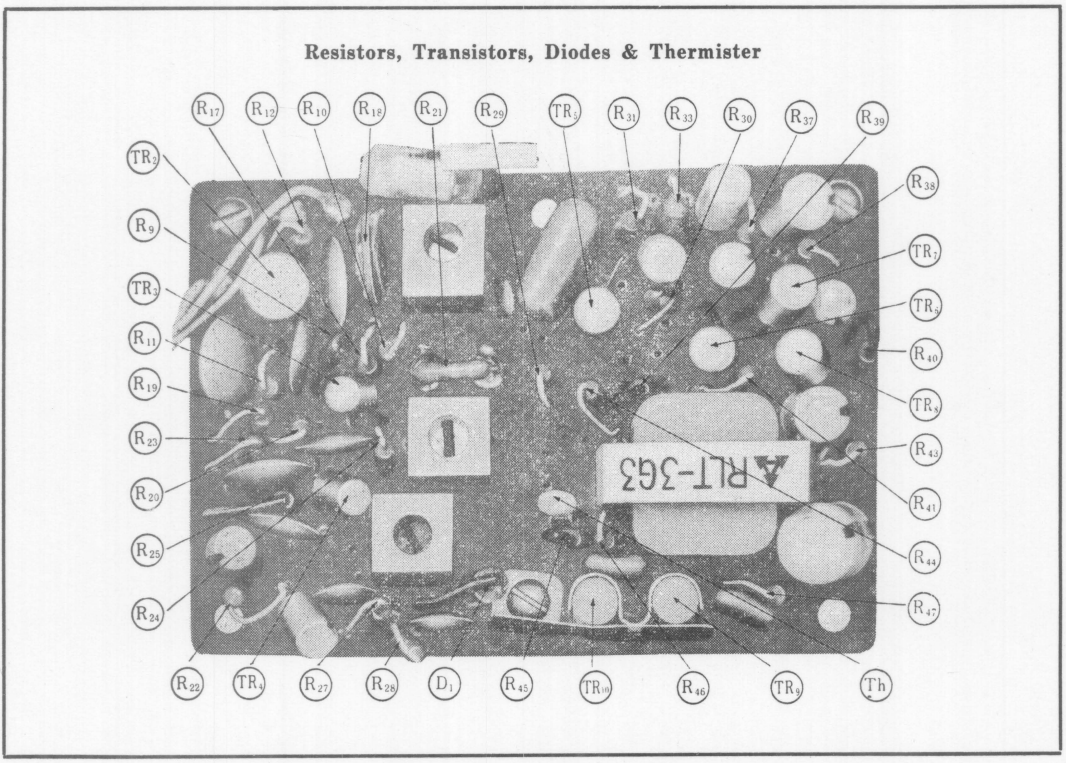


Fig. 13 Top View - Electrical Parts Identification.

NATIONAL MODEL R-470

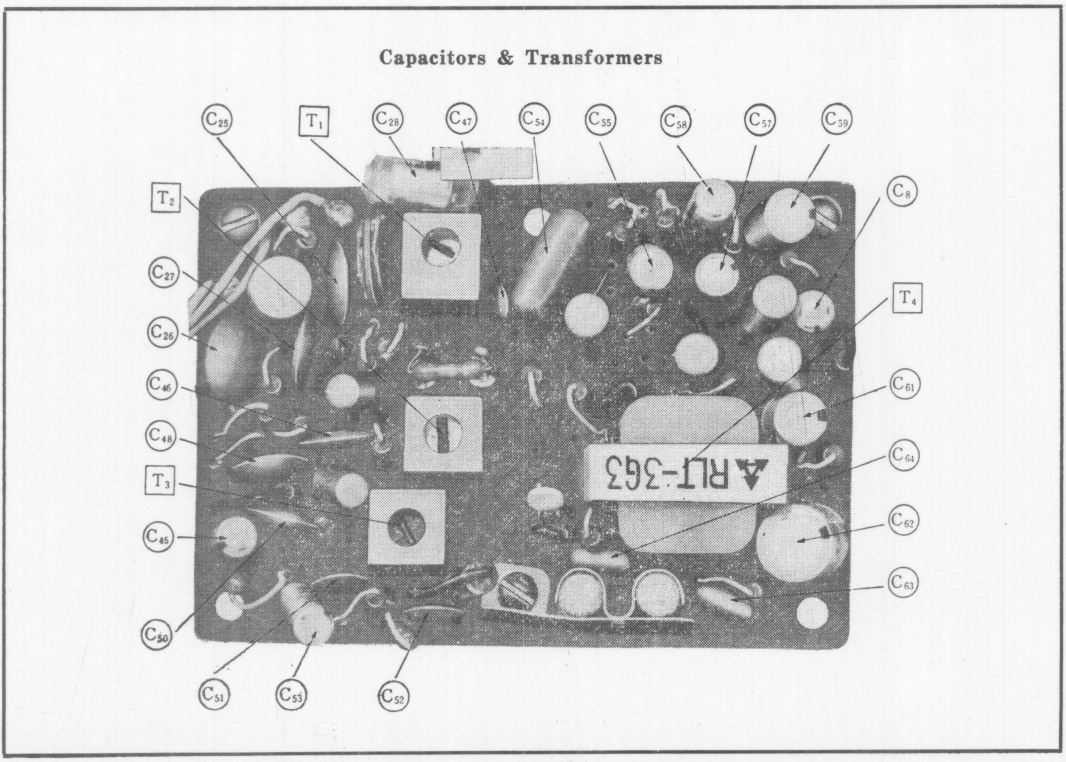
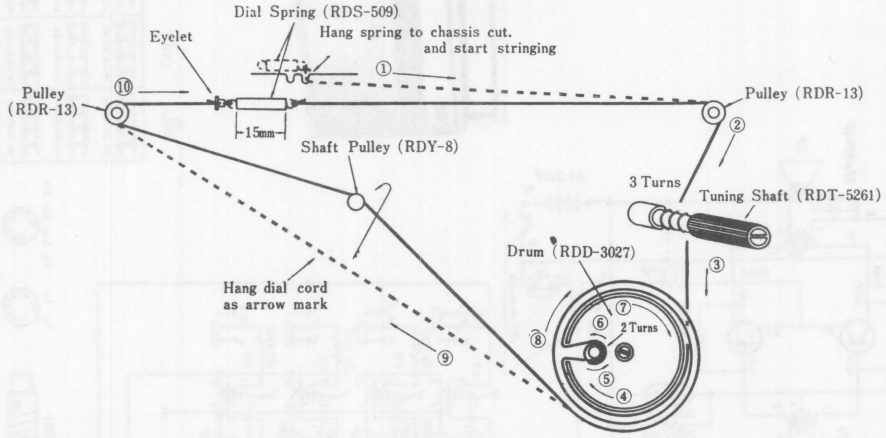


Fig. 14 Top View - Electrical Parts Identification.



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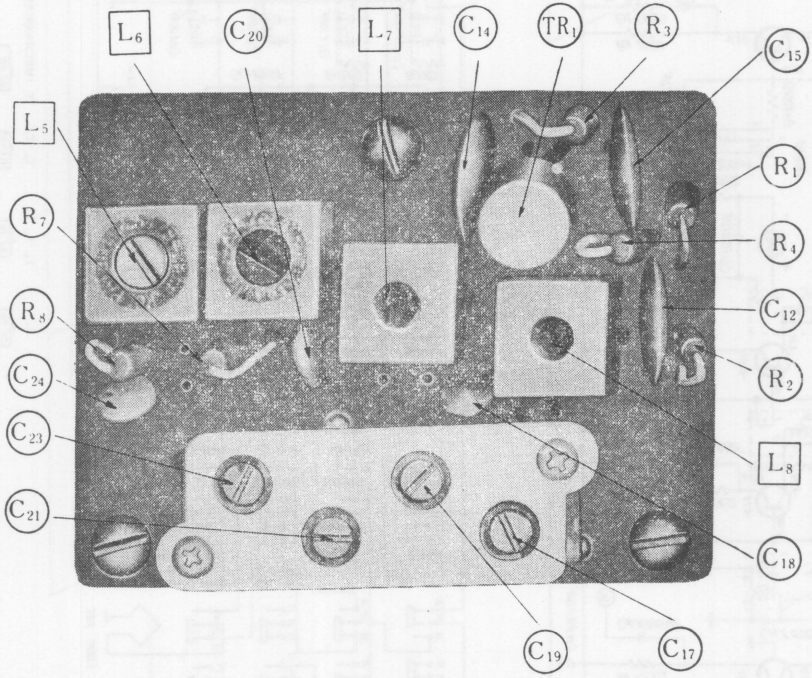
Dial Cord Stringing Guide.

Resistors, Capacitors, Transistor & Detector Coil



Top View - Electrical Parts Identification.