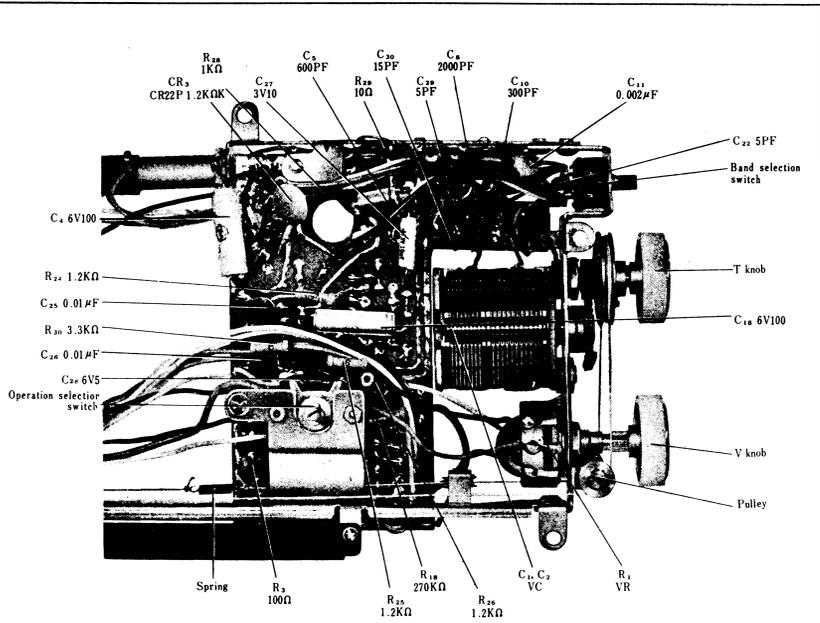


ALIGNMENT PROCEDURE

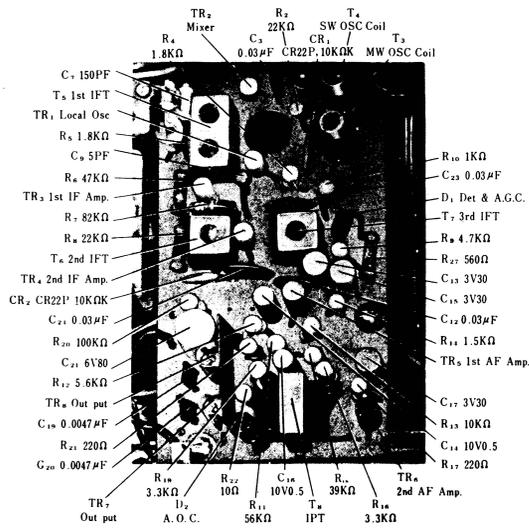
MAIN PARTS OF SET

- OUTPUT METER Connect Output Meter across speaker voice coil terminals.
 OUTPUT LEVEL Attenuate Signal Generator output always to maintain 0.2 volt on Output Meter to prevent overloading of the receiver.
 SIGNAL GENERATOR..... Modulate Signal Generator at 1000 c/s (IF), 400 c/s (RF) and connect the lead wires of Signal Generator output to Radiation Loop Coil.
 RADIO RECEIVER..... Place the radio 24" (60cm) away from Radiation Loop Coil.
 Set volume control to maximum.
 Set tone switch to high.
 RADIATION LOOP COIL... Make up a 20 turn, 10" (25cm) diameter bobbin, using 0.04" (1mm) copper wire.

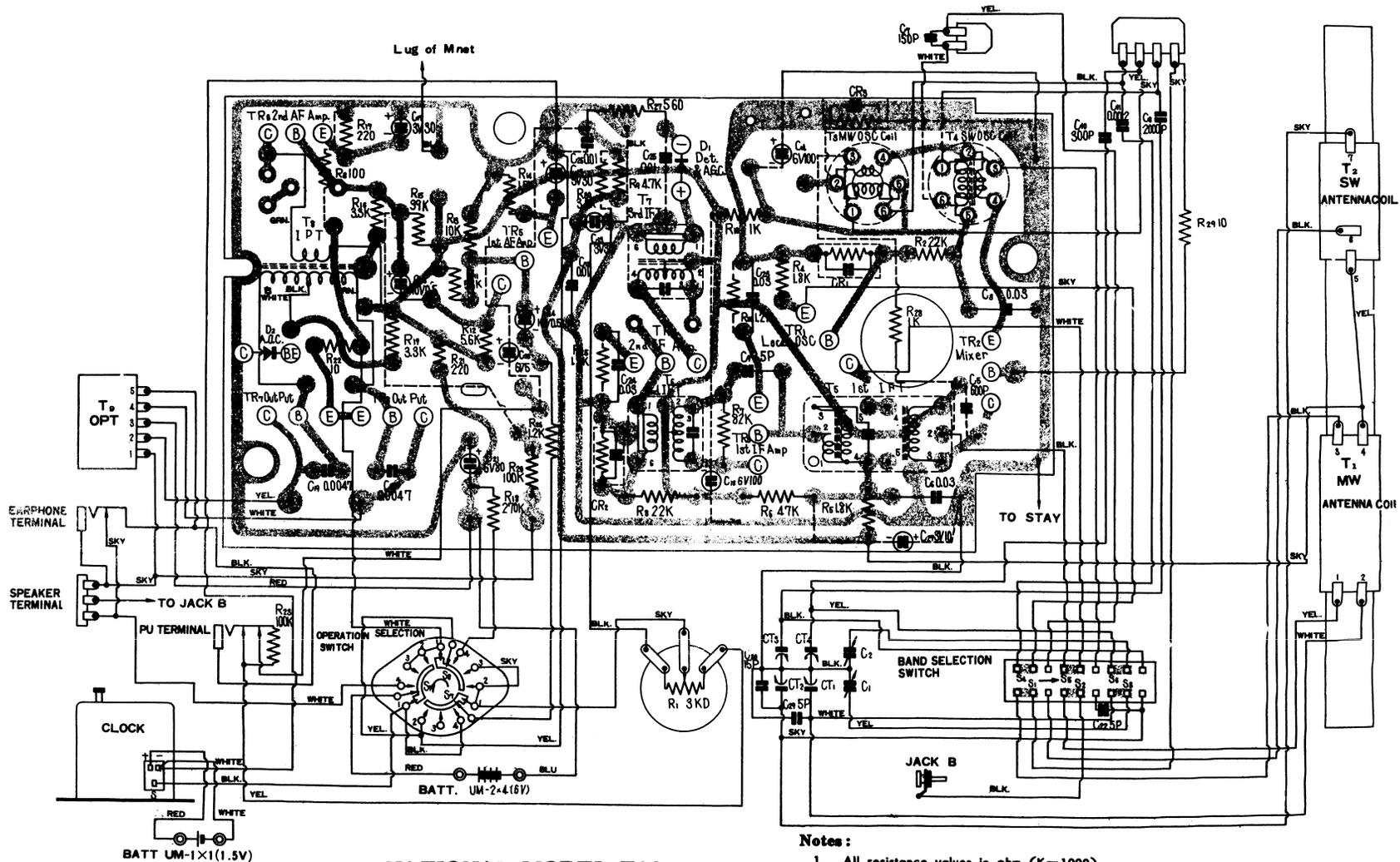


Circuit	Step	Signal generator output	Dial setting	Adjusting for maximum output
IF	1	455 KC	Variable capacitor at maximum capacity	IF transformers (T ₇ , T ₆ , T ₅)
	2	455 KC		Repeat three times step ①.
MW	3	600 KC	600 KC	MW OSC coil (T ₃) MW ANT coil (T ₁)
	4	1500 KC	1500 KC	MW OSC trimmer (CT ₄) MW ANT trimmer (CT ₁)
	5	600 KC & 1500 LC	600 KC & 1500 KC	Repeat three times steps ③ and ④.
RF	6	4 MC	4 MC	SW OSC coil (T ₄) SW ANT coil (T ₂)
	7	10 MC	10 MC	SW OSC trimmer (CT ₃) SW ANT trimmer (CT ₂)
	8	4 MC & 10 MC	4 MC & 10 MC	Repeat three times steps ⑥ and ⑦.

MAIN PARTS LIST



Symbol	Parts Name or No.	Description
Resistors:		
R ₁	NV-24CL 26 3KΩ D DT	Variable resistor
R ₂	RD ¹ / ₄ RNYJ 22K	Fixed, Carbon 1/4W ± 5%
R ₃	RD ¹ / ₄ LZK 100	Fixed, Carbon 1/4W ± 10%
R ₄ , R ₅	RD ¹ / ₄ RNZK 1.8K	Fixed, Carbon 1/4W ± 10%
R ₆	RD ¹ / ₄ LJY 47K	Fixed, Carbon 1/4W ± 5%
R ₇	RD ¹ / ₄ LZK 82K	Fixed, Carbon 1/4W ± 10%
R ₈	RD ¹ / ₄ LZK 22K	Fixed, Carbon 1/4W ± 10%
R ₉	RD ¹ / ₄ RNZK 4.7K	Fixed, Carbon 1/4W ± 10%
R ₁₀	RD ¹ / ₄ RNZK 1K	Fixed, Carbon 1/4W ± 10%
R ₁₁	RD ¹ / ₄ RNZK 56K	Fixed, Carbon 1/4W ± 10%
R ₁₂	RD ¹ / ₄ RNZK 5.6K	Fixed, Carbon 1/4W ± 10%
R ₁₃	RD ¹ / ₄ RNZK 10K	Fixed, Carbon 1/4W ± 10%
R ₁₄	RD ¹ / ₄ RNZK 1.5K	Fixed, Carbon 1/4W ± 10%
R ₁₅	RD ¹ / ₄ RNZK 39K	Fixed, Carbon 1/4W ± 10%
R ₁₆ , R ₁₉	RD ¹ / ₄ RNZK 3.3K	Fixed, Carbon 1/4W ± 10%
R ₁₇ , R ₂₁	RD ¹ / ₄ RNZK 220	Fixed, Carbon 1/4W ± 10%
R ₁₈	RD ¹ / ₄ LZK 270K	Fixed, Carbon 1/4W ± 10%
R ₂₀	RD ¹ / ₄ RNZK 100K	Fixed, Carbon 1/4W ± 10%
R ₂₂	RD ¹ / ₄ RNZK 10	Fixed, Carbon 1/4W ± 10%
R ₂₃	RD ¹ / ₄ LZK 100K	Fixed, Carbon 1/4W ± 10%
R ₂₄ , R ₂₅ , R ₂₆	RD ¹ / ₄ LZK 1.2K	Fixed, Carbon 1/4W ± 10%
R ₂₇	RD ¹ / ₄ LZK 560	Fixed, Carbon 1/4W ± 10%
R ₂₈	RC ¹ / ₄ BFK 1K	Fixed, Solid 1/4W ± 10%
R ₂₉	RC ¹ / ₄ BFK 10	Fixed, Solid 1/4W ± 10%
R ₃₀	RD ¹ / ₄ LZK 3.3K	Fixed, Carbon 1/4W ± 10%



NATIONAL MODEL T90

Notes:

1. All resistance values in ohm (K=1000).
2. All capacitance values in μF ($P = \mu\mu\text{F}$).
3. Lead wires on the back side of printed circuit board are indicated in dotted line.
4. Band selection switch is now at "MW" position. Slide it MW in the direction of arrow mark.
5. Operation selection switch is now at "AUTO" position. Turn it ON, OFF, ALARM in the direction of arrow mark.

MAIN PARTS OF SET

