

SONY

SERVICING GUIDE

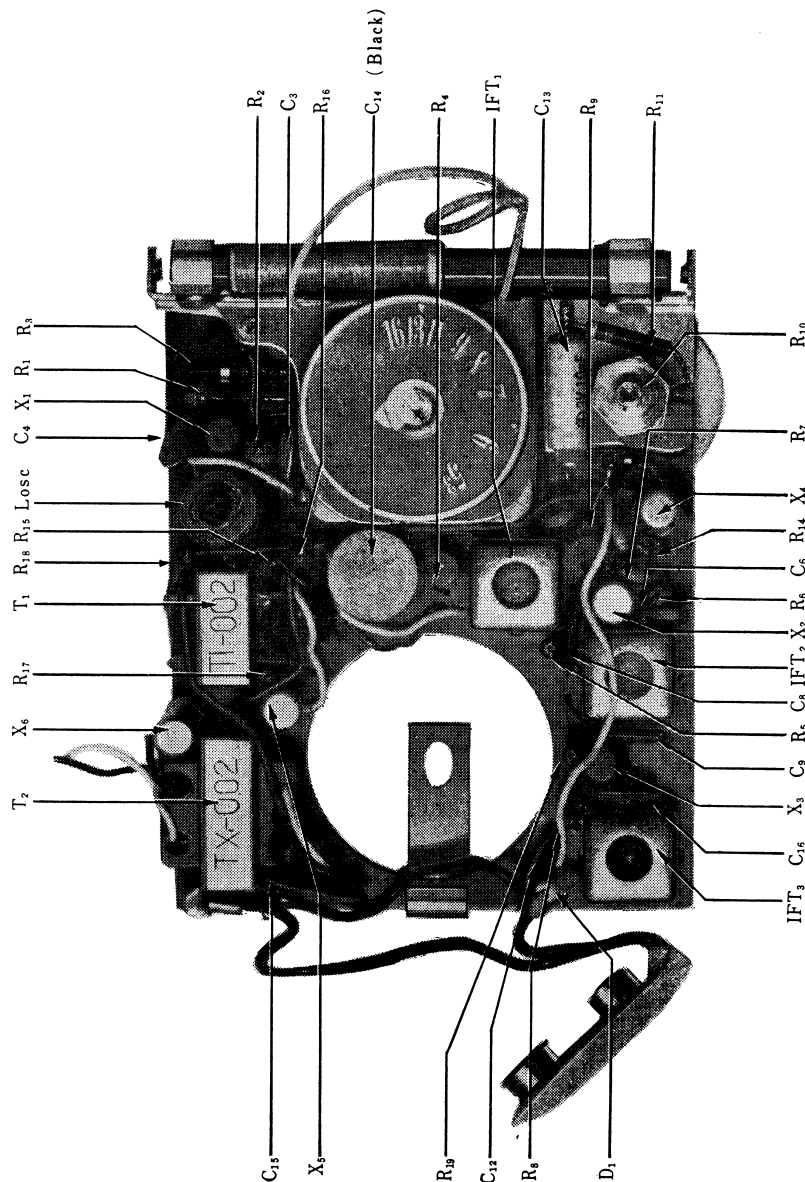
TR-610



Specifications for TR-610

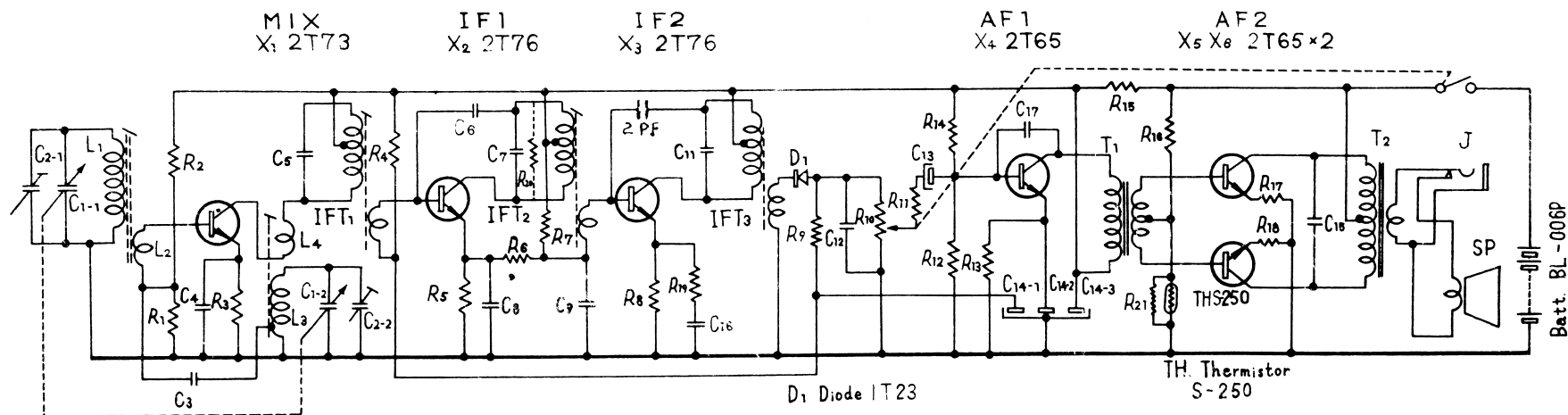
Circuit	: 6 transistor superheterodyne
Covering frequency	: 535~1,605 kc
IF frequency	: 455 kc
Sensitivity	: 400 μ V/m at 10 mW output
Selectivity	: 18 db at 10 kc off resonance
Antenna system	: Built-in ferrite bar antenna
Output power	: 50 mW (undistorted), 0.63 Volt across 8 Ω load
Current drain	: Approx. 5 mA at zero signal
Speaker	: 2 $\frac{1}{4}$ " PM dynamic 8 Ω
Battery	: Lamination type 9 Volts Eveready 216, NEDA 1604, RCA VC312 or equivalent
Dimensions	: 4 $\frac{5}{16}$ " $\times$ 2 $\frac{1}{2}$ " $\times$ 1"
Weight	: 9 ozs.
Color	: Black & gold, Red & gold, Cream & gold

TR-610 Mounted circuit board



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CIRCUIT DIAGRAM FOR TR-610

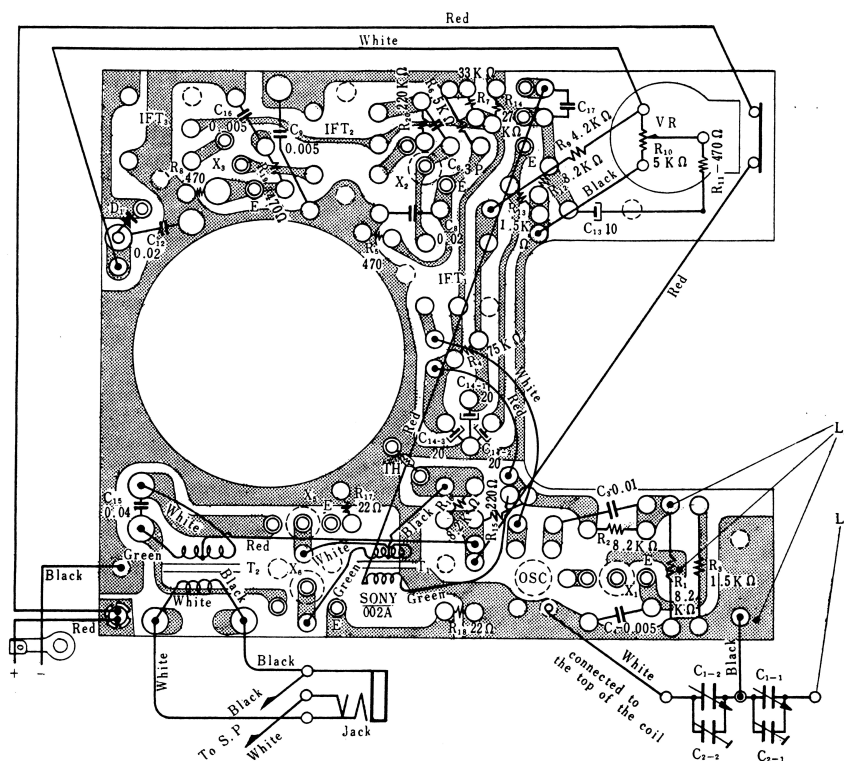


L ₁ L ₂	Antenna Coil	R ₁	8.2KΩ ± 5% ¼ W	R ₁₁	470Ω ± 20% ¼ W	R ₂₁	220Ω ± 20% ¼ W	C ₁₁	200pF (inside IFT)
L ₃ L ₄	Oscillator Coil	R ₂	*110KΩ ± 20% "	R ₁₂	8.2KΩ ± 10% "	C ₁	RVC-2 M. Tuning Cop. Trimmer	C ₁₂	0.02μF
IFT ₁	L.F. Trans.	R ₃	1.5KΩ ± 50% "	R ₁₃	1.5KΩ ± 20% "	C ₂		C ₁₃	10μF 3 V
IFT ₂	"	R ₄	*130KΩ ± 20% "	R ₁₄	27KΩ " "	C ₃	0.01μF	C ₁₄₋₁	20μF 10V
IFT ₃	"	R ₅	470Ω " "	R ₁₅	220Ω " "	C ₄	0.005μF	C ₁₄₋₂	20μF 10V
T ₁	Input Trans.	R ₆	1.5KΩ " "	R ₁₆	7.5KΩ ± 10% "	C ₅	200pF (inside IFT)	C ₁₄₋₃	20μF 10V
T ₂	Output Trans.	R ₇	33KΩ ± 10% "	R ₁₇	22Ω ± 20% "	C ₆	2 pF	C ₁₅	0.04μF
J	Earphone Jack	R ₈	470Ω ± 20% "	R ₁₈	22Ω " "	C ₇	200pF (inside IFT)	C ₁₆	0.005μF
SP	2 ½" P. D. Speaker 8Ω	R ₉	8.2KΩ ± 10% "	R ₁₉	150Ω " "	C ₈	0.02μF	C ₁₇	100pF
		R ₁₀	5KΩ VR with Switch	R ₂₀	220KΩ " "	C ₉	0.005μF	B	BL-006p 9 V

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Note: * Adjusting Resistors
C₁₀ is not in use.

TR-610 Circuit board printed side



Voltage and current distributions

		Volt	Scale range of the meter Volt	Current μ A
X ₁	E	0.58	1	390
	B	0.44	"	
	C	8.5	25	
X ₂	E	0.26	1	370
	B	0.34	"	
	C	8.5	25	
X ₃	E	0.26	1	380
	B	0.42	"	
	C	8.0	25	
X ₄	E	1.6	5	1.1 mA
	B	1.6	"	
	C	8.0	"	
X ₅	E	0		
X ₆	B	0.15	1	600
	C	8.5	25	

Negative lead wire of the meter was connected to the negative pole of the Battery voltage was kept at 9.0 Volts.
 Internal resistance of the voltmeter 20 k Ω /Volt.
 Battery current at zero signal 5 mA $\pm$ 20%.