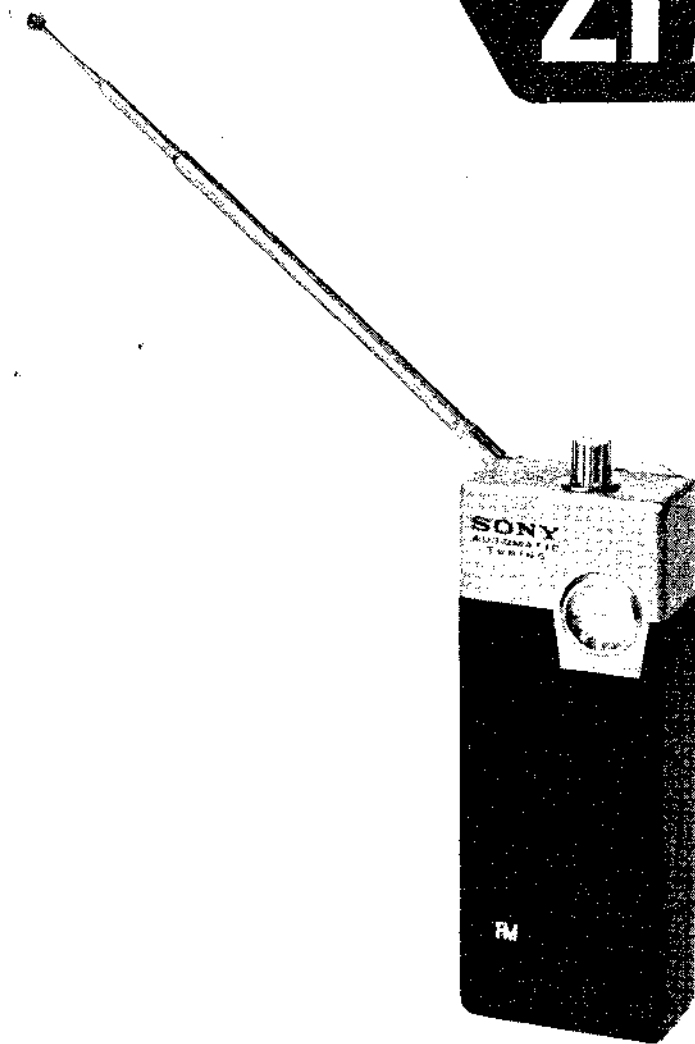


2FA-24W

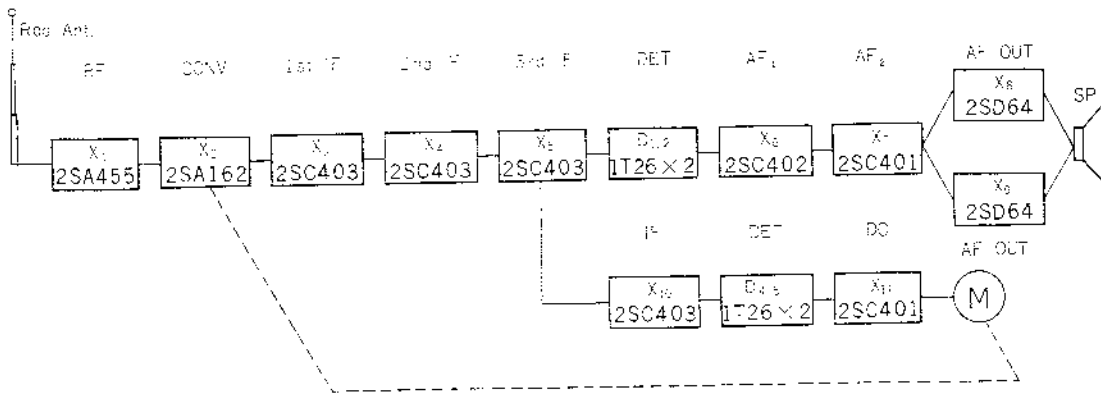


Specifications

Circuit :	11 Transistor Superheterodyne
Frequency Coverage :	FM 86.5~108 Mc (3.53~2.78 m)
Antenna System :	Built-in Telescopic Antenna
Intermediate Frequency :	10.7 Mc
Maximum Sensitivity :	10 μ V/m
(at 10 mW output)	
Output Power :	115 mW (undistorted) 200 mW (maximum)
Current Drain :	16 mA at zero signal, 77 mA at 115 mW output
Power Source :	3 "Mercury Cell" Mallory RM-640 or Eveready E-640, 3.9 V in total
Speaker :	40 mm (1-9/16") FM dynamic, 8 Ω
Dimensions :	48 (W) \times 120 (H) \times 26.5 (D) mm (1-7/8 \times 4-3/4 \times 1-1/16")
Weight :	210 g. (7 ozs.)

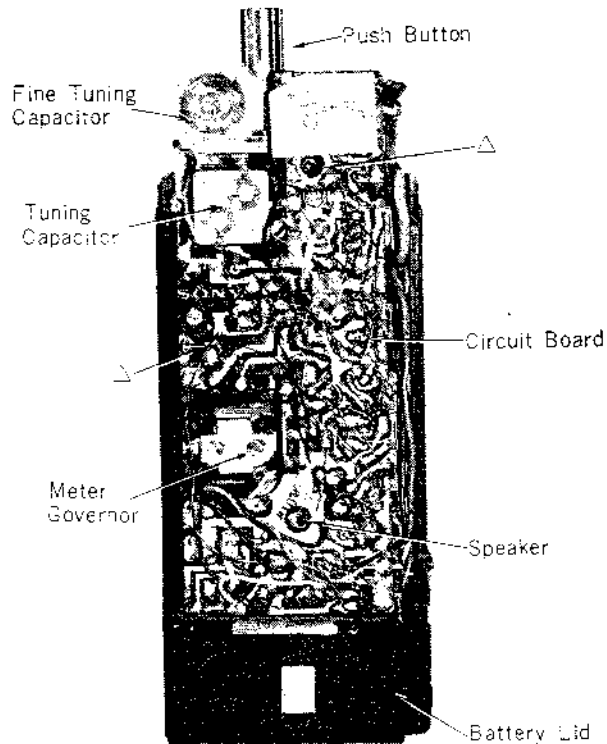
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Block Diagram



Removal of Chassis

- (1) Remove the four Screws securing the Top Panel to the Cabinet.
- (2) Remove the Phillips Screws on the Top Panel near the Telescopic Antenna.
- (3) Remove the Telescopic Antenna from the Antenna Catch.
- (4) Remove the Top Panel gently from the Cabinet by pulling straight up.
- (5) Open the Battery Lid.
- (6) Remove the Back Cover gently from the Cabinet taking care not to cut the leads.
- (7) Remove the two Screws marked with Δ in Fig. 1) securing the Chassis to the Cabinet.
- (8) Remove the Chassis gently from the Cabinet taking care not to cut the leads.



(Fig. 1)

Adjustment and Alignment

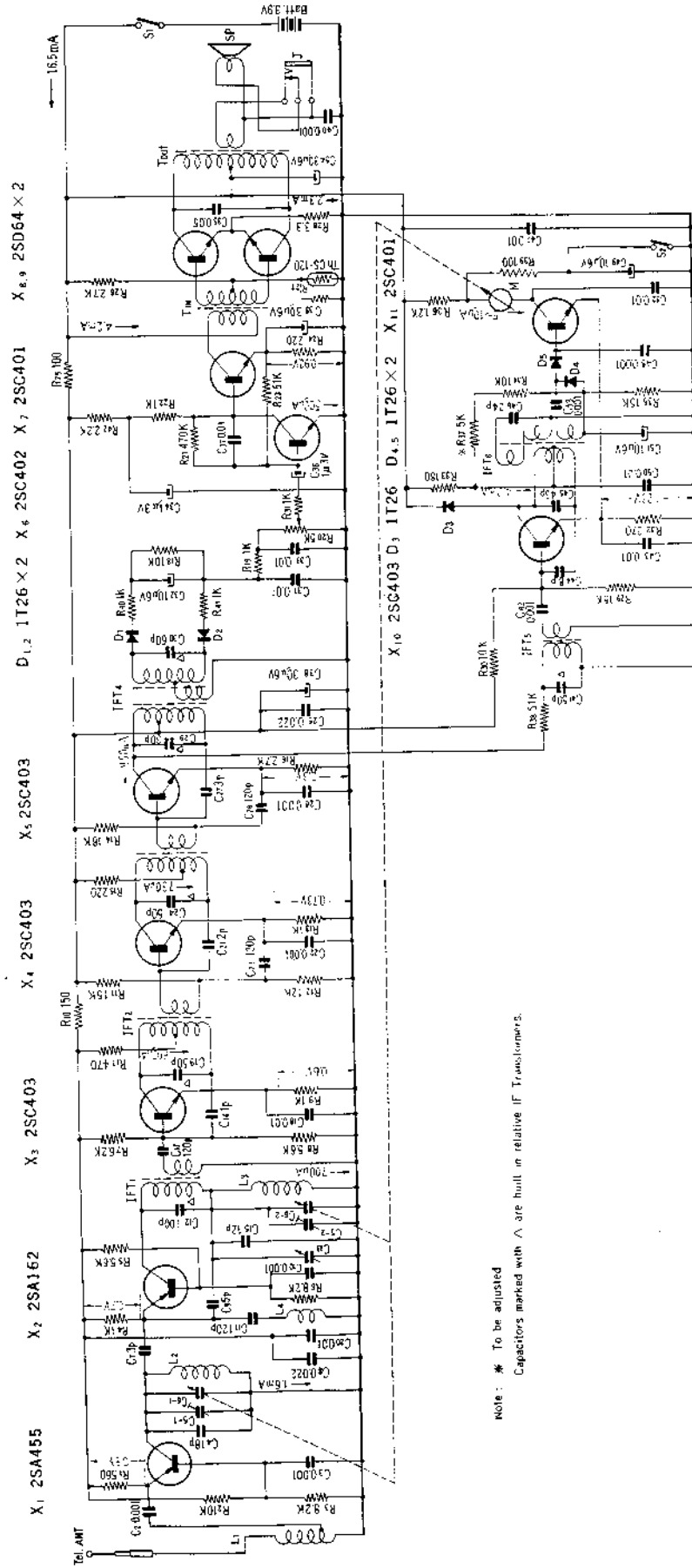
a) Frequency Coverage Adjustment

Lower Limit	Adjust	Upper Limit	Adjust
85.5 Mc	Core of OSC Coil (L_3)	109.5 Mc	OSC Trimmer (C_{5-2})

b) Tracking Adjustment

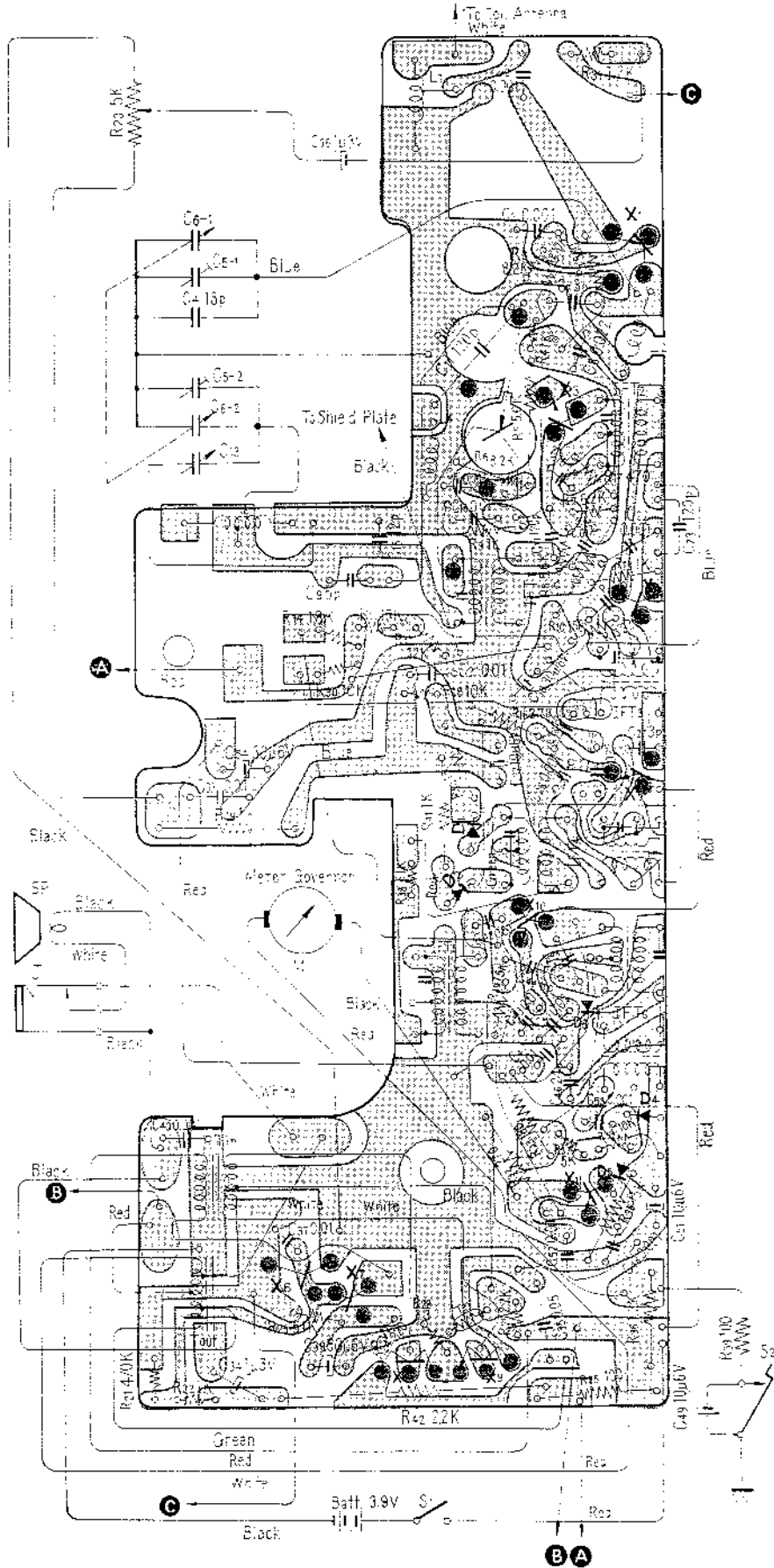
Lower Checking Point	Adjust	Upper Checking Point	Adjust
86 Mc	Core and Gap of RF Coil (L_2)	108 Mc	ANT Trimmer (C_{5-1})

Schematic Diagram



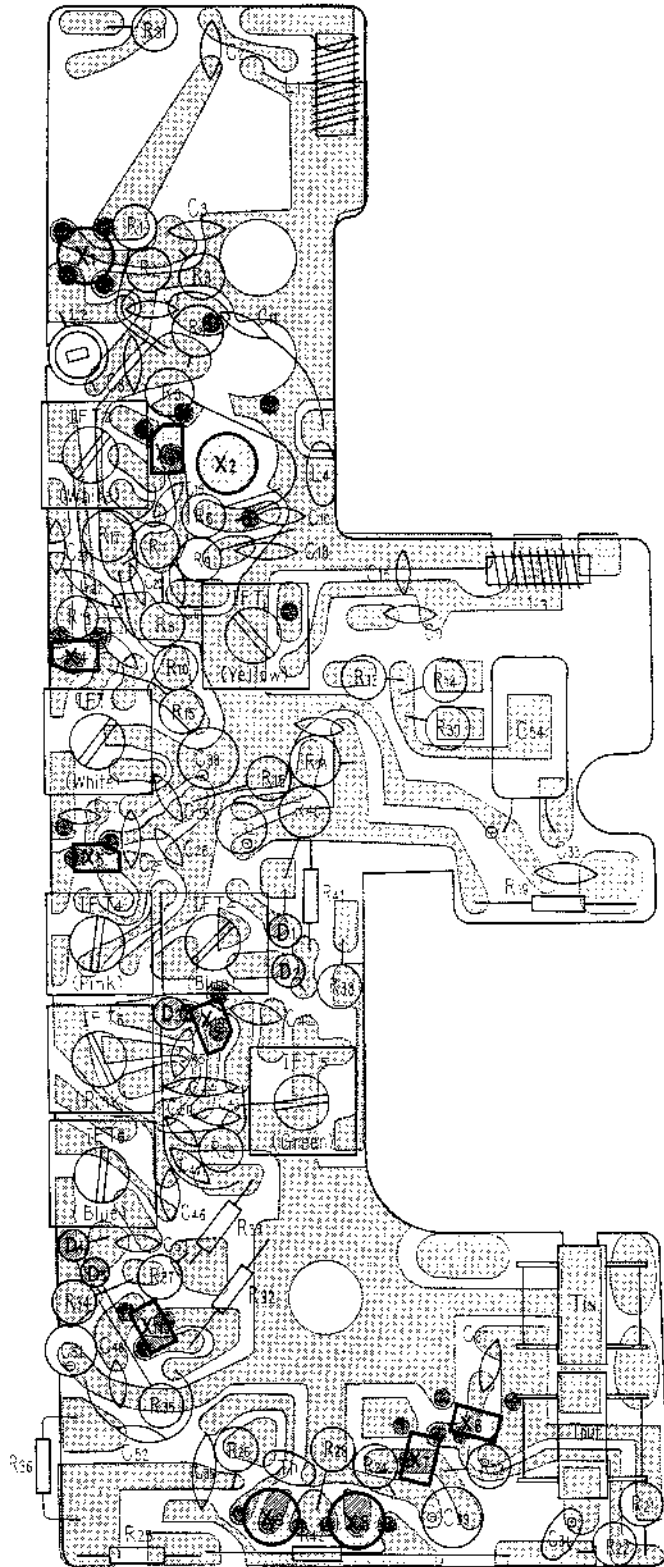
Mounting Diagram

— Printed Side —



Mounting Diagram

- Parts Side -



Electrical Parts List

Part No.	Symbol	Description	Part No.	Symbol	Description
1-501-069-11	Tel. ANT	Telescopic Antenna	1-201-201-11	R ₂₉	15K Ω 1/8W Composition
1-401-239-11	L ₁	FM, Antenna Coil	-145-11	R ₃₀	10K Ω " "
1-405-149-12	L ₂	FM, RF Coil	-279-11	R ₃₁	1.2K " "
-258-11	L ₃	FM, Oscillator Coil	-996-11	R ₃₂	270 Ω " "
1-407-101-11	L ₄	Micro Inductor 2.2μH	-829-11	R ₃₃	180 Ω " "
1-403-242-11	IFT ₁	FM, Single Tuned IF Transformer	-145-11	R ₃₄	10K Ω " "
-244-11	IFT ₂	" "	-201-11	R ₃₅	15K Ω " "
-244-11	IFT ₃	" "	-279-11	R ₃₆	1.2K Ω " "
-245-11	IFT ₄	FM, Double Tuned IF Transformer for Discriminator	-135-11	*R ₃₇	2.2K Ω " "
-243-11	IFT ₅	FM, Single Tuned IF Transformer	1-203-074-11	R ₃₈	51K Ω 1/10W Ceramic
-225-11	IFT ₆	FM, Double Tuned IF Transformer	1-201-130-11	R ₃₉	220 Ω 1/8W Composition
1-423-094-11	T ₁	Driver Transformer	-163-11	R ₄₀	1K Ω " "
1-427-164-11	T ₂	Output Transformer	-163-11	R ₄₁	1K Ω " "
			-135-11	R ₄₂	2.2K Ω " "
	S ₁	Power Switch (Built in Volume Control)			Capacitor
	S ₂	Start Switch (Built in Meter Governor)	1-101-125-15	C ₁	—deleted—
			-125-15	C ₂	0.001μF Ceramic
1-502-130-11	SP	Speaker	-863-11	C ₃	0.001μF "
1-507-011-01	J	Earphone Jack		C ₄	18PF "
1-520-201-12	M	Meter Governor with Start Switch	1-151-114-11	C ₅₋₁₋₂	Trimmer Capacitor, 2 unit
1-528-020-11	Batt.	Mercury Battery, 3.9 V in total		C ₆₋₁₋₂	Tuning Capacitor, 2 gang
	X ₁	Transistor 2SA455	1-101-612-11	C ₇	3PF Ceramic
	X ₂	" 2SA162	1-105-353-12	C ₈	0.022μF Mylar
	X ₃	" 2SC403	1-101-012-11	C ₉	5PF Ceramic
	X ₄	" 2SC403	-125-15	C ₁₀	0.001μF "
	X ₅	" 2SC403	-340-11	C ₁₁	120PF "
	X ₆	" 2SC402		C ₁₂	100PF (Built in IFT ₁)
	X ₇	" 2SC401	1-151-115-11	C ₁₃	Fine Tuning Capacitor
	X ₈	" 2SD64		C ₁₄	—deleted—
	X ₉	" 2SD64	1-101-051-11	C ₁₅	12PF Ceramic
	X ₁₀	" 2SC403	-602-11	C ₁₆	1PF "
	X ₁₁	" 2SC401	-340-11	C ₁₇	120PF "
	D ₁	Diode 1T261	-072-14	C ₁₈	0.01μF "
	D ₂	" 1T261	1-101-072-15	C ₁₉	50PF (Built in IFT ₂)
	D ₃	" 1T261	-607-11	C ₂₀	0.01μF Ceramic
	D ₄	" 1T261	-125-15	C ₂₁	2PF "
	D ₅	" 1T261	-340-11	C ₂₂	0.001μF "
	Tn	Thermistor CS-120		C ₂₃	120PF "
			1-105-353-12	C ₂₄	50PF (Built in IFT ₃)
			1-101-125-15	C ₂₅	0.022μF Mylar
			-612-11	C ₂₆	0.001μF Ceramic
			-340-11	C ₂₇	3PF "
1-201-132-11	R ₁	560 Ω 1/8W Composition		C ₂₈	120PF "
-145-11	R ₂	10K Ω " "	1-101-072-14	C ₂₉	30PF (Built in IFT ₄)
-141-11	R ₃	8.2K Ω " "	1-121-104-11	C ₃₀	60PF (Built in IFT ₄)
-163-11	R ₄	1K Ω " "	1-101-072-14	C ₃₁	0.01μF Ceramic
-106-11	R ₅	5.6K Ω " "	1-101-072-14	C ₃₂	10μF 6V Electrolytic
-141-11	R ₆	8.2K Ω " "	1-127-053-11	C ₃₃	0.01μF Ceramic
-136-11	R ₇	6.2K Ω " "	1-101-796-11	C ₃₄	1μF 3V Electrolytic
-106-11	R ₈	5.6K Ω " "	1-127-053-11	C ₃₅	0.05μF Ceramic
-163-11	R ₉	1K Ω " "	1-101-072-14	C ₃₆	1μF 3V Electrolytic
-873-11	R ₁₀	150 Ω " "	1-121-102-11	C ₃₇	0.01μF Ceramic
-201-11	R ₁₁	15K Ω " "	-102-11	C ₃₈	30μF 6V Electrolytic
-146-11	R ₁₂	12K Ω " "	1-101-125-15	C ₃₉	30μF 6V "
-163-11	R ₁₃	1K Ω " "		C ₄₀	0.001μF Ceramic
-824-11	R ₁₄	18K Ω " "	1-101-125-15	C ₄₁	50PF (Built in IFT ₅)
-130-11	R ₁₅	220 Ω " "	-072-15	C ₄₂	0.001μF Ceramic
-819-11	R ₁₆	2.7K Ω " "	-958-11	C ₄₃	0.01μF "
-162-11	R ₁₇	470 Ω " "	-879-11	C ₄₄	8PF "
-145-11	R ₁₈	10K Ω " "	-868-11	C ₄₅	43PF "
-163-11	R ₁₉	1K Ω " "	-072-15	C ₄₆	24PF "
1-221-585-13	R ₂₀	5K Ω Volume Control	-125-15	C ₄₇	0.01μF "
1-201-818-11	R ₂₁	470K Ω 1/8W Composition		C ₄₈	0.001μF "
-163-11	R ₂₂	1K Ω " "	1-121-104-11	C ₄₉	10μF 6V Electrolytic
-153-11	R ₂₃	51K Ω " "	1-101-072-15	C ₅₀	0.01μF Ceramic
-130-11	R ₂₄	220 Ω " "	1-121-104-11	C ₅₁	10μF 6V Electrolytic
-679-11	R ₂₅	100 Ω " "	1-101-072-14	C ₅₂	0.01μF Ceramic
-819-11	R ₂₆	2.7K Ω " "	-125-15	C ₅₃	0.001μF "
	R ₂₇	220 Ω (Built in Thermistor)	1-121-102-11	C ₅₄	30μF 6V Electrolytic
1-201-820-11	R ₂₈	3.3 Ω 1/8W Composition			

* To be adjusted

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