

# TECHNICAL MANUAL

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**ROTEL<sup>®</sup>**

**RA-820BX2**

STEREO INTEGRATED AMPLIFIER

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**ROTEL ELECTRONICS CO., LTD.**

ROTEL BLDG., 3F. NO. 35, FUSING N. ROAD, TAIPEI, TAIWAN, REPUBLIC OF CHINA

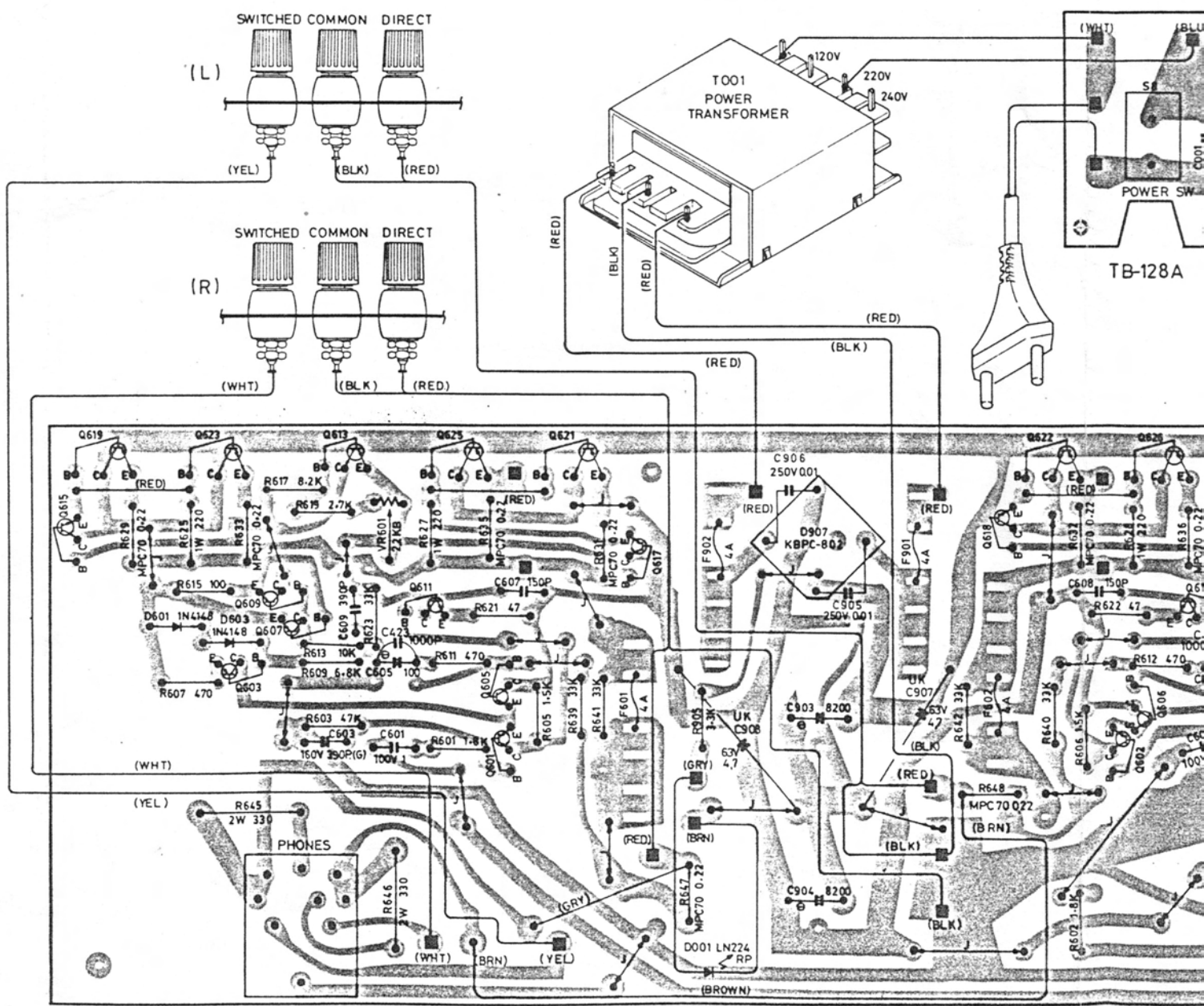
# Power Amplifier Bias Adjustment

Instruments: DC milli-voltmeter

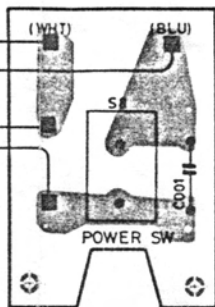
Notes: Prior to Bias Adjustment, run about 5 minutes with rated output (8 ohm) and warm up Power Transistor and Heat Sink.  
Set Volume Control to Minimum.

Step	Coupling		Adjust	Adjust for
	Plus Lead	Minus Lead		
1	TP3	TP1	VR601	DC milli-voltmeter reads 4.4mV
2	TP4	TP2	VR602	

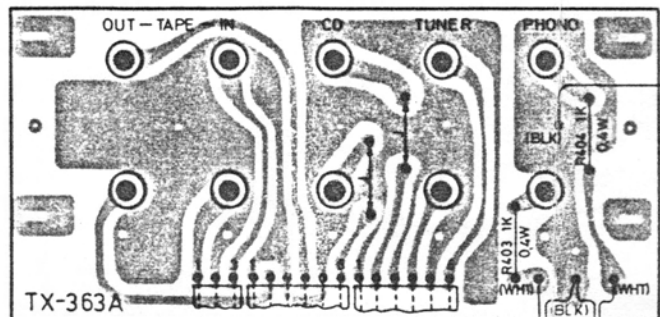
## Wiring Diagram



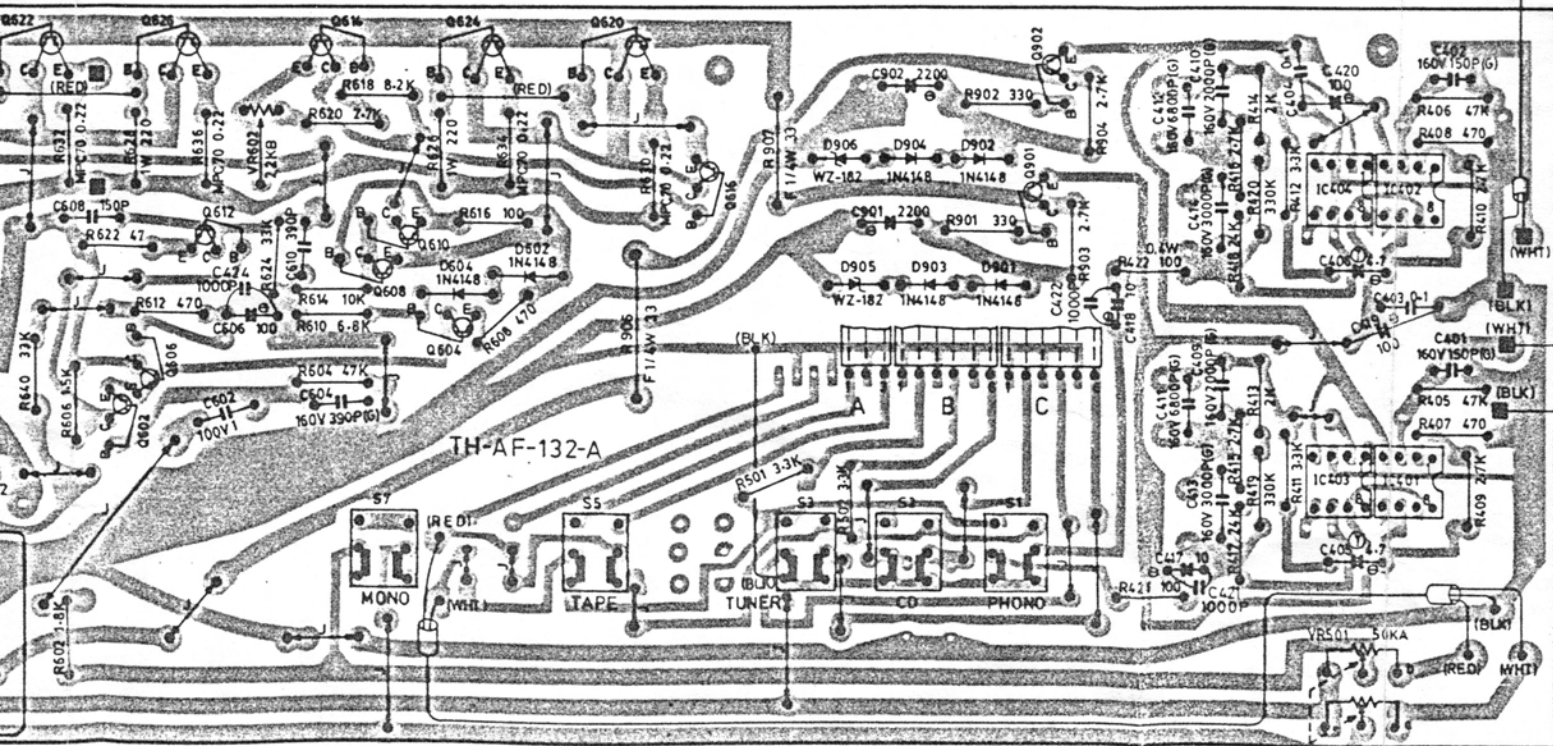
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TB-128A

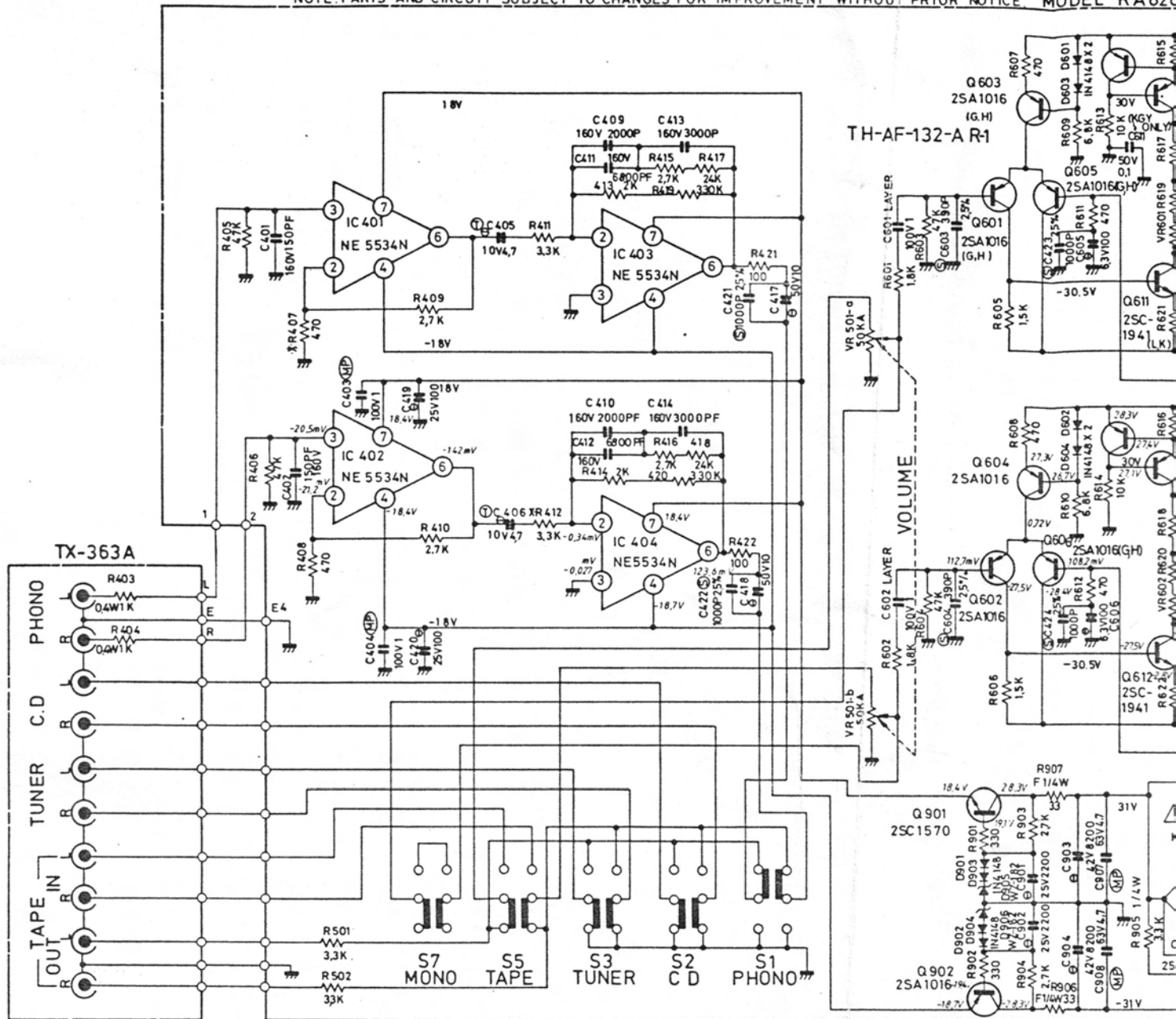


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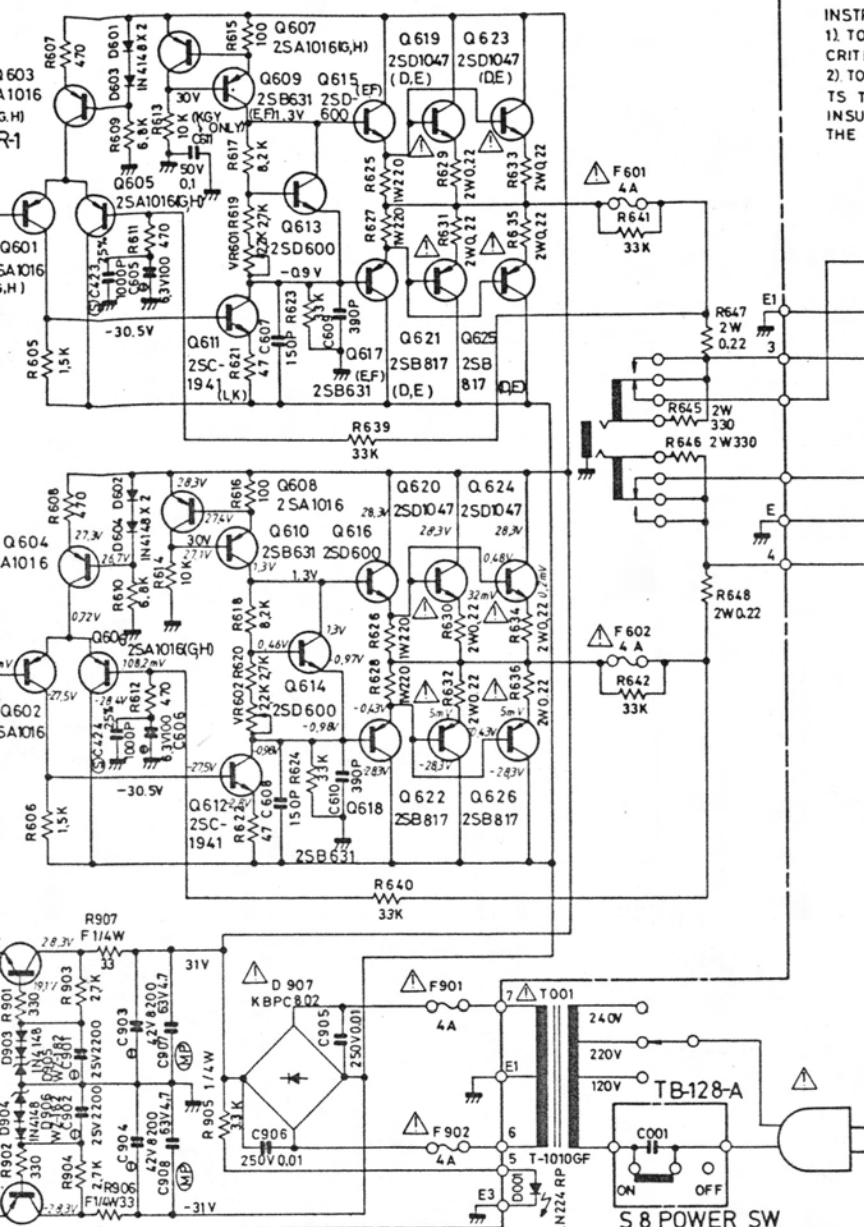
# Schematic Diagram

NOTE: PARTS AND CIRCUIT SUBJECT TO CHANGES FOR IMPROVEMENT WITHOUT PRIOR NOTICE MODEL RA-820

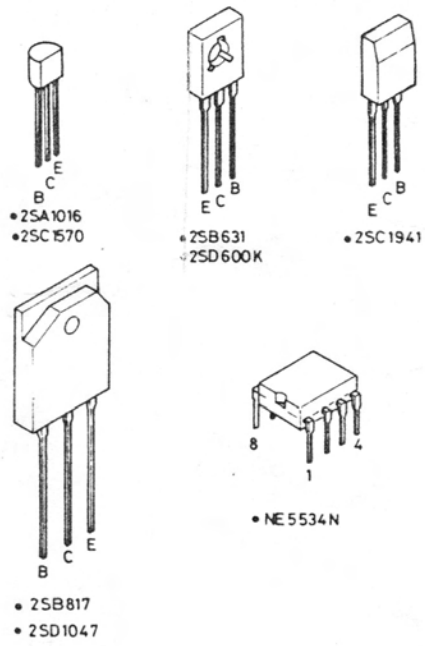
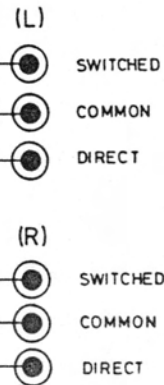


## Repair Parts List

Schematic Location	Computer NO.	Description
IC401-404	IC00000731	NE5534N, Phono Amp.
Q601,602	TR10000023	2SA1016(E,F), Differential Amp.
Q603,604	TR10000023	2SA1016(E,F), Constant Current
Q605,606	TR10000023	2SA1016(E,F), Differential Amp.
Q607,608	TR10000023	2SA1016(E,F), Main Amp. Bias Compensator
Q609,610	TR10000047	2SB631(E,D), Main Amp. Bias Compensator
Q611,612	TR30000169	2SC1941(L,K), Pre-Driver
Q613,614	TR30000110	2SD600K(E,D), Idling Driver
Q615,616	TR30000110	2SD600K(E,D), Driver
Q617,618	TR10000047	2SB631(E,D), Driver
Q619,620 623,624	TR40000021	2SD896(E,D), Power Amp.
Q621,622 625,626	TR40000014	2SB776(E,D), Power Amp.
Q901	TR30000108	2SC1570(E,D), Stabilizer



INSTRUCTIONS FOR SERVICE PERSONNEL  
 1) TO USE ONLY REPLACEMENT PARTS THAT HAVE THE CRITICAL CHARACTERISTICS RECOMMENDED BY MANUFACTURER.  
 2) TO MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.



Schematic Location	Computer NO.	Description
Q902	TR10000023	2SA1016(E,F), Stabilizer
D601-604	DD10000100	1N4148, Bias Compensator
D901,902	DD10000100	1N4148, Regulator Diode
D903,904	DD10000100	1N4148, Regulator Diode
D905,906	DD20000041	WZ-18Z, Zener Regulator
D907	DD10000147	KBPC-802, Rectifier
D001	DD40000095	LN224RP, Power LED
VR501	RV10000408	4TR-1505, 50KAx2 VOLUME Control
VR601,602	RV40000010	H1021A 2.2KB, Bias Adj.
S1-S7	SH17000018	4TR-1562, Switch Push 7 Key TUNER/CD PHONO/TAPE/MONO
S8	SH40000120	C-3600B, Power Switch
T001	PT00000175	022 T-1010GF, Power Transformer
	PT00000187	022 T-1010AF, Power Transformer