



Technical Manual

STEREO POWER AMPLIFIER RHB10

Table of Contents

Specification.....1
Parts List.....2.3
PCB Assembly.....4.5
Adjustment.....6
Wiring Diagram.....7.8
Schematic Diagram.....9.10

Specifications

Continuous Power Output	200 watts per channel, Min. RMS, both channels driven into 8 ohms from 20 to 20,000Hz with no more than 0.03% total harmonic distortion
Continuous Power Output	330 watts per channel, Min. RMS, both channels driven into 4 ohms from 20 to 20,000Hz with no more than 0.03% total harmonic distortion
Total Harmonic Distortion (20-20,000Hz)	No more than 0.03% (continuous rated power output)
Intermodulation Output (60Hz:7kHz=4:1)	No more than 0.03% (continuous rated power output)
Output Speaker.....	4- 8 ohms
Peak Current (0.1 ohms, 10μsec, 1 Puls).....	150 A

Slew Rate	± 40V/μsec
Damping Factor	550 (20 to 20,000Hz, 8 ohms)
Input Sensitivity/ Impedance.....	0.775V/30 kohms
Frequency Response ...	10-130,000Hz, +0dB, -1dB
Single-to-Noise Ratio (IHF, A Network).....	130dB
Crosstalk (20-20kHz)	100dB
Power Requirement.....	120V/60Hz, 220V/50Hz, 240V/50Hz
Power Requirement.....	550 watts
Dimensions (overall).....	470(W) × 195(H) × 375(D) mm 18-1/2" × 7-11/16" × 14-25/32"
Weight (net)	28.5kg/62.7 lbs

- Specifications and design subject to possible modification without notice.
- * Measured pursuant to the Federal Trade Commission's Trade Regulation Rule on Power Claims for Amplifiers (applicable to the U.S.A. only).

Serial No.
Beginning

Parts List

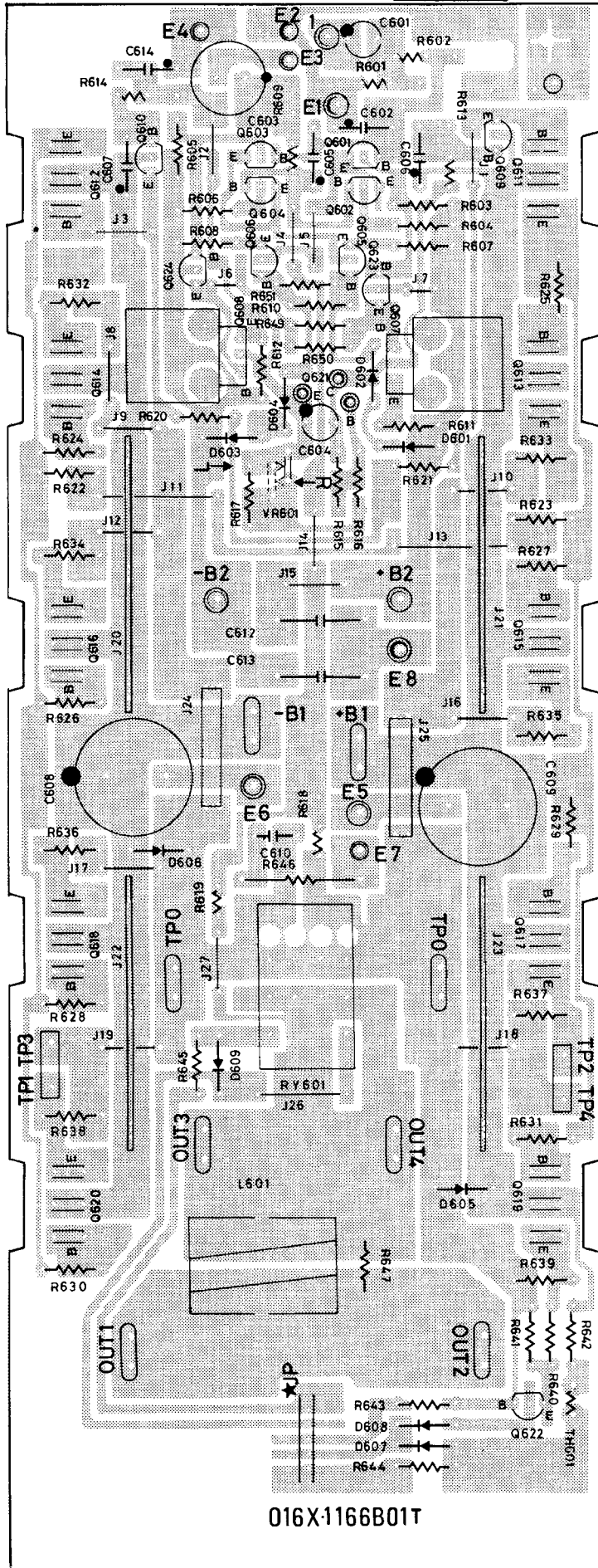
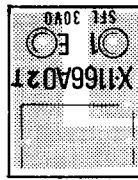
SYMBOL	PARTS NO.	DESCRIPTION
<u>X-1165 PCB ASSEMBLY</u>		
	068 C-4274A05	JUMPER CONNECTOR
	068 C-3963#11	WIRE WITH LED CONNECTOR
	069 C-4370A00	PCB TYPE SCREW TERMINAL
	069 4TR-2641#2	FASTON TAB
C701	041 U10V22	CAP,ELEC.10V22UF
C703	041 U10V220	CAP,ELEC.10V220UF
C704	041 U50V4.7	CAP,ELEC.50V4.7UF
C705	041 U10V47	CAP,ELEC.10V47UF
C706	041 U100V10	CAP,ELEC.100V10UF
C707,C708	041 U100V100	CAP,ELEC.100V100UF
C709	044 DE7150F472M	SPARK KILLER
C901,C902	043 500VZF103	CAP,CERAMIC 500V0.01UF
C903,C904	043 500VZF103	CAP,CERAMIC 500V0.01UF
C905,C906	044 ML400V0.01	CAP,METAL FILM 400V0.01UF
C907,C908	044 ML400V0.01	CAP,METAL FILM 400V0.01UF
C909,C910	044 ML400V0.01	CAP,METAL FILM 400V0.01UF
C911,C912	044 ML400V0.01	CAP,METAL FILM 400V0.01UF
C913,C914	041 LGS1K682MHS	CAP,ELEC.80V6800MF GS
C915,C916	041 LGS1K682MHS	CAP,ELEC.80V6800MF GS
D701,D711	034 1N4003	DIODE
D710,D712	034 SEL121ORD	LED 3F RED
D713	034 SEL121ORD	LED 3F RED
D901,D902	034 BR84	DIODE
D903,D904	034 BR84	DIODE
F901,F902	036 (J)250V8A	FUSE
F903,F904	036 (J)250V8A	FUSE
IC701	031 MPC1237HA	IC
Q701	031 2SC2362K	TRANSISTOR
Q702	031 2SD600K-EF	TRANSISTOR
R701	053 103J	R,CARBON 1/4W 10K
R702	053 683J	R,CARBON 1/4W 68K
R703	053 153J	R,CARBON 1/4W 15K
R704	053 824J	R,CARBON 1/4W 820K
R705	053 562J	R,CARBON 1/4W 5.6K
R706	053 273J	R,CARBON 1/4W 27K
R707	054 RSS1X-180F	R,METAL 1W 180
R708	054 RSS3X-1.3KF	R,METAL 3W 1.3K
R709	054 RSS2X-3.9KF	R,METAL 2W 3.9K
R710,R711	054 ERF10AJ100	R,METAL 10W 10R
R712	053 103J	R,CARBON 1/4W 10K
R901,R903	054 ERQ14AJ2R2P	R,FUSIBLE 1/4W 2.2
R905,R906	054 RSS2X-6.8KF	R,METAL 2W 6.8K
R907,R908	054 RSS2X-6.8KF	R,METAL 2W 6.8K
RY701	063 G4W-1112P-VD	RELAY DC24V TV-8
S701	063 UI300B	THERMOSTAT UI-2
S702	061 4TR-2763	PUSH SW
S703	061 C-4176A01	POWER SW

SYMBOL	PARTS NO.	DESCRIPTION
<u>X-1166(L/R) PCB ASSEMBLY</u>		
	068 C-4349A04	WIRE WITH TR CONNECTOR
	069 4TR-2742A	TR LAG TERMINAL
	019 C-4377A05	JAMPER HOUSING
	017 C-4378A01	HEAT SINKER
	066 PK4-32A00T	1P RCA PIN JACK
	019 BUSH2SD1062	2SD1062 TYPE BUSH
C601	041 50BGF4R7M	CAP,ELEC.50V4.7UF
C602	044 FKP100V681H	CAP,P.PFILM 100V680P
C603	041 25BGF100M	CAP,ELEC.25V100UF
C604	041 50BGF10M	CAP,ELEC.50V10UF
C605,C606	044 #S50V221J	CAP,STYROL 105-062
C607	044 #S50V221J	CAP,STYROL 105-062
C608,C609	041 UVX2A102M	CAP,ELEC.100V1000UF
C610	044 MKT18-100V104	CAP,METAL 100V0.1UF-K
C612,C613	044 MKT22-100V105	CAP,METAL 100V1UF-K
C614	044 #S50V331J	CAP,STYROL 105-063
D601,D602	034 1N4148	DIODE
D603,D604	034 1N4148	DIODE
D605,D606	034 1N4003	DIODE
D607,D608	034 1N4148	DIODE
D609	034 1N4148	DIODE
L161	021 RL-161	SPEAKER COIL
Q601,Q602	033 2SA1016K	TRANSISTOR
Q603,Q604	033 2SC2362K	TRANSISTOR
Q605,Q622	033 2SA1016K	TRANSISTOR
Q606	033 2SC2362K	TRANSISTOR
Q607	033 2SA1011-DE	TRANSISTOR
Q608	033 2SC2344-DE	TRANSISTOR
Q609,Q623	033 2SC2910-RST	TRANSISTOR
Q610,Q624	033 2SA1208-RST	TRANSISTOR
R601	054 VSH333	R,METAL 33K
R602	054 VSH101	R,METAL 1K
R603,R604	054 MK21K54FECZ	R,METAL 1% 1.54K
R605,R606	054 MK21K54FECZ	R,METAL 1% 1.54K
R607,R608	054 MK2221RFECZ	R,METAL 1% 221R
R609	054 VSH561	R,METAL 560R
R610,R651	054 MK2100KFECZ	R,METAL 1% 100K
R611,R612	054 MK2100RFECZ	R,METAL 1% 100R
R613,R614	054 VSH101	R,METAL 100R
R615	054 MK25K62FECZ	R,METAL 1% 5.62K
R616	054 MK21K21FECZ	R,METAL 1% 1.21K
R618	054 VSH753	R,METAL 75K
R619	054 VSH473	R,METAL 47K
R620,R621	054 MK2511RFECZ	R,METAL 1% 511R
R622,R623	054 MK222R1FECZ	R,METAL 1% 22.1R
R624,R625	054 VSH100	R,METAL 10R
R626,R627	054 VSH100	R,METAL 10R
R628,R629	054 VSH100	R,METAL 10R

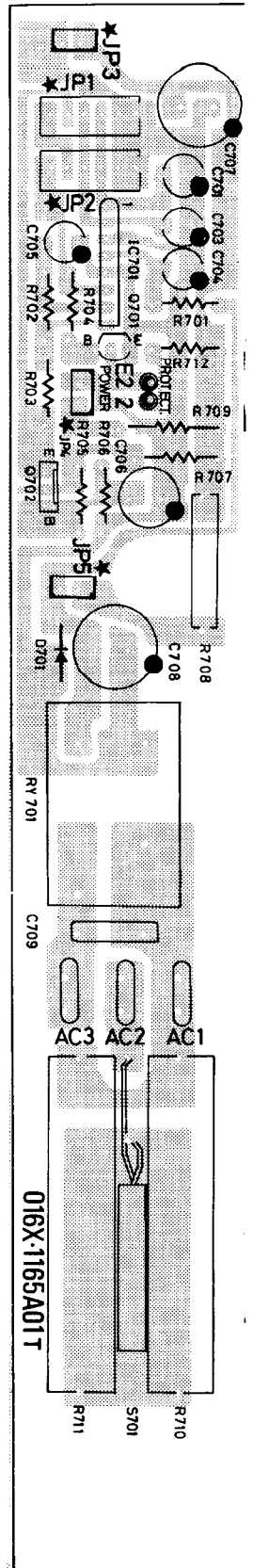
SYMBOL	PARTS NO.	DESCRIPTION
R630,R631	054 VSH100	R,METAL 10R
R632,R633	054 MPC74-0.22F	R,METAL 5W0.22R
R634,R635	054 MPC74-0.22F	R,METAL 5W0.22R
R636,R637	054 MPC74-0.22F	R,METAL 5W0.22R
R638,R639	054 MPC74-0.22F	R,METAL 5W0.22R
R640	054 MK2100RFEZ	R,METAL 1% 100R
R641	054 MK282R5FEZ	R,METAL 1% 82.5R
R642,R643	054 TMK256K2FEZ	R,METAL 1% 56.2K
R644,R617	054 MK2001KFEZ	R,METAL 1% 1K
R645	054 MK2010RFEZ	R,METAL 1% 10R
R646	054 RSS3X-10F	R,METAL 3W10R
R647	054 MPC71-1F	R,METAL 5W1R
R649,R650	054 MK268K1FEZ	R,METAL 1% 68.1K
RY601	063 MY4Z-02	RELAY DC24V
TH601	034 TD5C350D	THERMISTOR
VR601	051 VM6CKPH1S2.2K	R,SEMI FIXED
<u>HEAT SINK" ASSEMBLY</u>		
	017 PM3-06A00	HEAT SINKER
Q611	033 2SD1047-DE	TRANSISTOR
Q612	033 2SB817-DE	TRANSISTOR
Q613,Q615	033 2SC3858-GY	POWER TRANSISTOR
Q614,Q616	033 2SA1494-GY	POWER TRANSISTOR
Q617,Q619	033 2SC3858-GY	POWER TRANSISTOR
Q618,Q620	033 2SA1494-GY	POWER TRANSISTOR
Q621	032 2SD600K-F	TRANSISTOR
<u>OTHER</u>		
	015 TRP-573	PRINTED REAR CHASSIS
	019 C-2654A#9	26F RUBBER SHEET
	019 C-4418A00	26F FOOT
	067 C-4425A01	SPEAKER TERMINAL WHT
	067 C-4425A02	SPEAKER TERMINAL RED
	069 4TR-2786	AC INLET
	011 PM2-01A00	FRONT PANEL
	012 PK4-16A00	15X15 PUSH BUTTON
	019 PK4-19A00T	15X15 BUTTON RING
	019 PM4-08A00T	PUSH RING
	019 PM4-09A00T	LED REFLECTOR
	019 PM4-13A00T	SPRING
	019 4TTL-15	BUTTON CONNECTOR
	034 LTL2201A	LED 1X5 RED
	013 PM4-18A00T	JOINT SUPPORT
	013 PM4-14A01T	ORNAMENTAL BOARD SUPPORT
	013 PM4-14A02T	ORNAMENTAL BOARD SUPPORT
	014 PM4-15A01T	ORNAMENTAL SIDE BOARD
	013 PM2-05B00T	TRANS" SUPPORT
	013 PM3-20B00T	SUB CHASSIS

SYMBOL	PARTS NO.	DESCRIPTION
	013 PM4-10A00T	EARTH BOARD
	013 PM4-12B00T	SW JOINT SUPPORT
	013 PM4-16A00T	BOTTOM COVER
	013 PM4-19A00T	PCB SUPPORT
	015 PM2-02B00T	FRONT CHASSIS
	018 PM2-03B00T	MAIN CHASSIS
	019 PK4-07A00T	METAL FOOT
T001,T002	022 T-1032M01	POWER TRANSFORMER
D001,D002	034 BR154	POWER DIODE
C001,C002	041 C-4405A01	C,ELEC.80V22000UF GS
C003,C004	041 C-4405A01	C.ELEC.80V22000UF GS
	014 PM2-17B00T	TOP COVER
	019 C-4406A01	PREVENTIONAL VIBRATION - SHEET
	019 JHG-010	RCA PINJACK CAP
	081 C-4123A04	STYROL BOARD 220X435X30
	081 C-4123A05	STYROL BOARD 435X550X30
	081 C-4123A06	STYROL BOARD 140X440X40
	081 PM4-22A00	INSIDE CARTON
	081 PM4-23A00	PACKING
	081 PM4-25A00	OUTSIDE CARTON

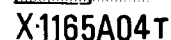
PCB Assembly



016X-1166B01T

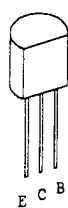


016X-1165A01T

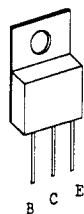


INSTRUCTIONS FOR SERVICING PERSONNEL

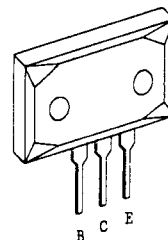
- 1) USE ONLY THE REPLACEMENT PARTS THAT HAVE THE CRITICAL CHARACTERISTICS RECOMMENDED BY MANUFACTURER.
- 2) TAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE SUFFICIENTLY INSULATED FROM THE POWER SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO CUSTOMER.



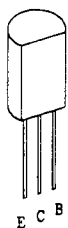
2SA1016
2SC2362



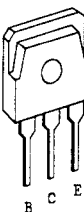
2SA1011
2SC2344



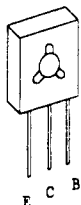
2SA1494
2SC3858



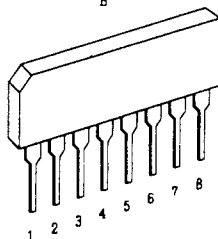
2SA2910
2SC1208



2SA1186
2SC2837



2SD600K



μPC 1237H

Adjustment

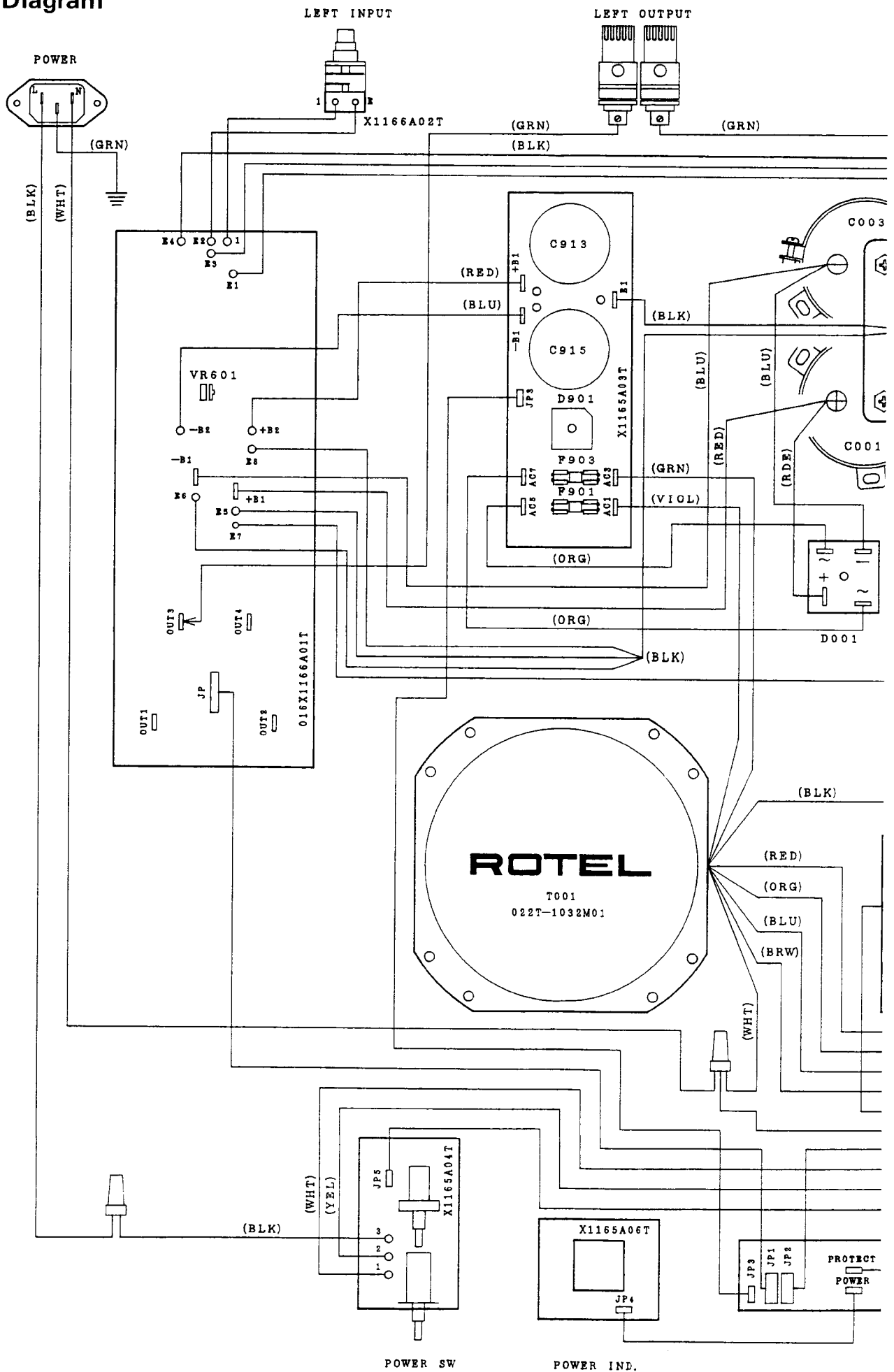
Power Amplifier Bias Adjustment

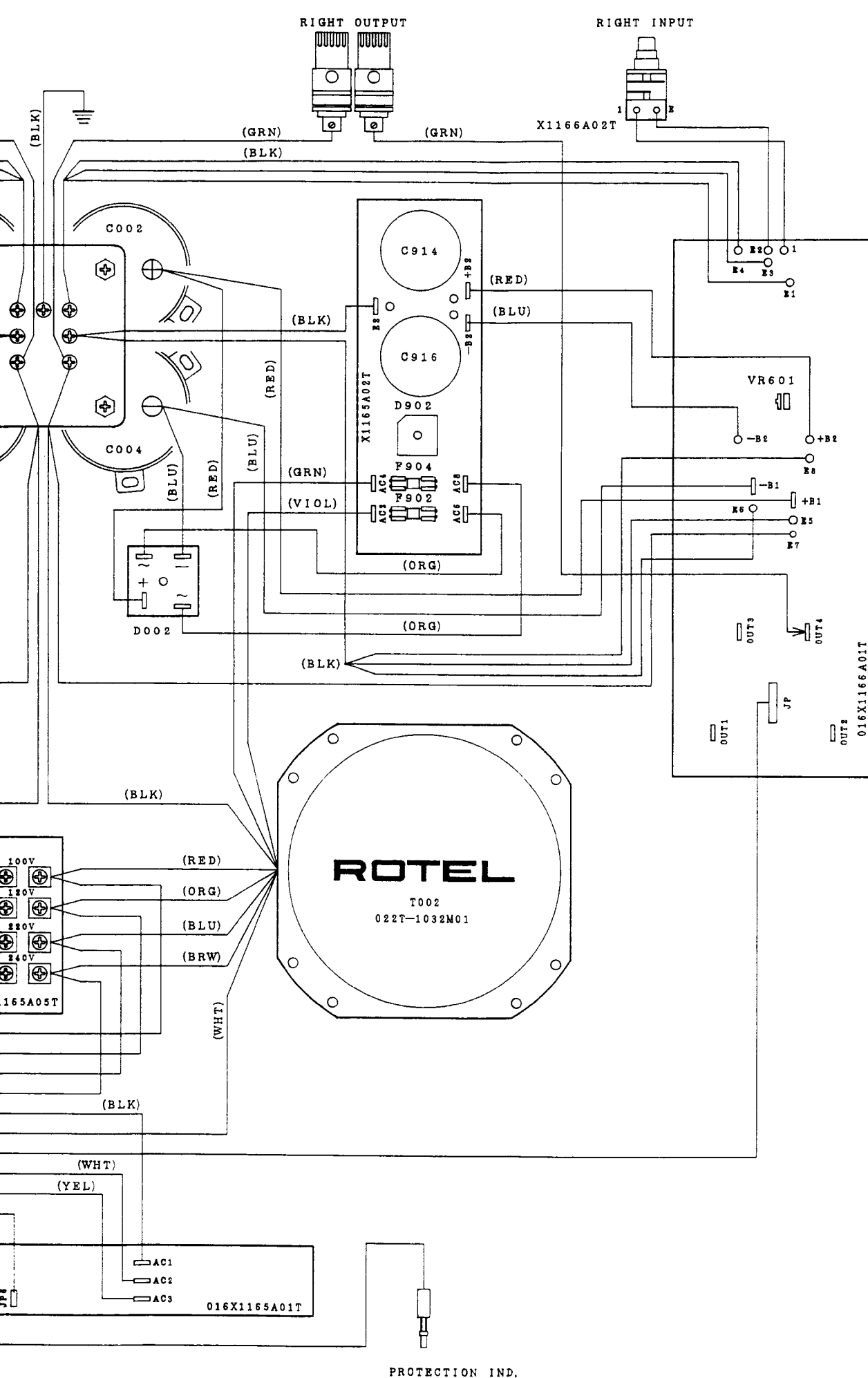
Instruments : DC milli-voltmeter

Notes : Prior to Bias Adjustment, run about 5 minutes with rated output (8 ohms) and warm up Power Transistor and Heat Sink. Set input off.

Step	Coupling		Location	Adjust	Adjust for
	Plus Lead	Minus Lead			
L-CH	TP3	TP1	016X-1166 PCB	VR601	DC milli-voltmeter reads 10 mV
R-CH	TP4	TP2	016X-1166 PCB	VR601	

Wiring Diagram





Schematic Diagram

RHB-10 STEREO POWER AMPLIFIER

