Quality Uncompromised

ROTEL®

Technical Manual

STEREO POWER AMPLIFIER
RB-870BX

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Specifications

Continuous Power Output	100 watts* per channel, min. RMS both channels driven into 8 ohms from 20 to 20,000 Hz with no more than 0.03% total harmonic distortion.
DIN Power Output	200 watts per channel (1 kHz, 4 ohms, 1% THD)
Peak Current (0.1 ohms, 10 μsec, 1 pulse).	50 A
Bridged Power	300 watts (mono) min. RMS driven into 8 ohms from 20 to 20,000 Hz with no more than 0.05% total harmonic distortion.
Total Harmonic Distortion (20 to 20,000 Hz)	No more than 0.03% (continuous rated power output) No more than 0.03% (continuous 1/2 rated power output) No more than 0.03% (1 watts per channel power output, 8 ohms)
Intermoduration Distortion (60 Hz : 7 kHz = 4 : 1)	No more than 0.03% (continuous rated power output) No more than 0.03% (continuous 1/2 rated power output) No more than 0.03% (1 watt per channel power output, 8 ohms)
Output	Speaker 8 ohms nominal
Damping Factor	180 (20 to 20,000 Hz, 8 ohms)
Input Sensitivity/Impedance	1.0V/2 kohms
Frequency Response	4 to 100,000 Hz, +0.5 dB, –3.0 dB
Signal-to-Noise Ratio (IHF A network)	110 dB
Power Requirement	120V/60 Hz, 220V/50 Hz, 240V/50 Hz or 120, 220, 240V/ 50-60 Hz (switchable) (depending on destinations)
Power Consumption	500 watts
Dimensions (overall)	430(W) x 109(H) x 315(D) mm 16-15/16" x 4-7/32" x 12-13/32"
Weight (net)	9.4 kg/20.68 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

THE ROTEL CO., LTD.
ROTEL ELECTRONICS CO., LTD.

1-36-8 OHOKAYAMA, MEGURO-KU, TOKYO 152, JAPAN
3RD FLOOR, ROTEL BLDG., NO. 35 FUSHING, NORTH ROAD, TAIPEI, TAIWAN, REPUBLICK OF CHINA

Parts List

Schematic Location	Computer No.	Description
Q601	0322SA1016-FG	
Q602	0322SA1016-FG	
Q603	0322SA1016-FG	
Q604	0322SC1941-KL	
Q605	0322SB605-KL	
Q606	0322SB631K-EF	
Q607	0322SD600K-E	Idling Driver
Q608	0332SD600K-EF	Driver
Q609	0332SB631K-EF	Driver
Q610	0332SD1047-DE	Power Driver
Q611	0332SD1047-DE	Power Driver
Q612	0332SD1047-DE	Power Driver
Q613	0332SB817-DE	Power Driver
Q614	0332SB817-DE	Power Driver
Q615	0332SB817-DE	Power Driver
Q901	0322SC2362-FG	
D601	0341S1588	
D602	0341S1588	
D603	034DS135C	
D604	034DS135C	
D605	034KBPC804	Rectifier
D606	0341S1588	

Schematic Location	Computer No.	Description
D607	034DS135C	
D901	034IS1588	
TH601	034TD5C350D	Temperature Compensator
VR601	051SF687A-2K	Bias Adj.
RY901	0630RZ-SS224L	Relay
S901	064C-4173A05	
C001	044DE7150F472M	Spark Killer
S001	061C-4176A02	Power Switch
T001	022T-1016G01	Power Transformer
D001	034SEL1124R	Power Indicator
	011PF4-13A00	Front Panel
	0124TR-2176	Knob (Power)
	0143TR-2349	Ornamental Side Plate
	0143TUV-6#4	Upper Cover
	017C-4322A01	Head Sink
	017C-4323A00	Sub Heat Sink
	066C-4225A04	2P Pin Jack (Input)
	0673TR-2045#3	Output Terminal (Red)
	0673TR-2045#4	Output Terminal (Black)
	069C-4304A01	Voltage Selector

Adjustment

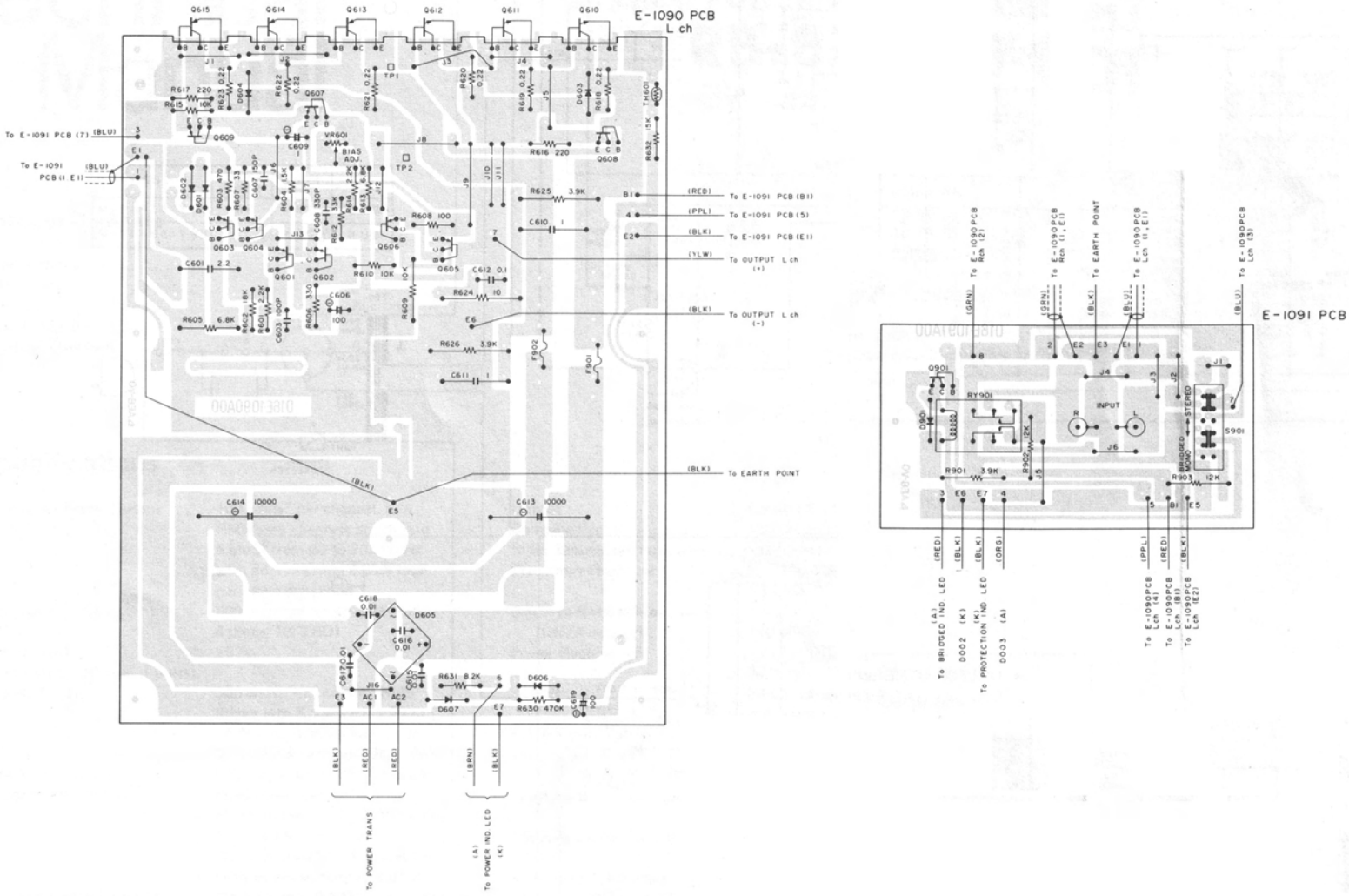
Power Amplifier Bias Adjustment

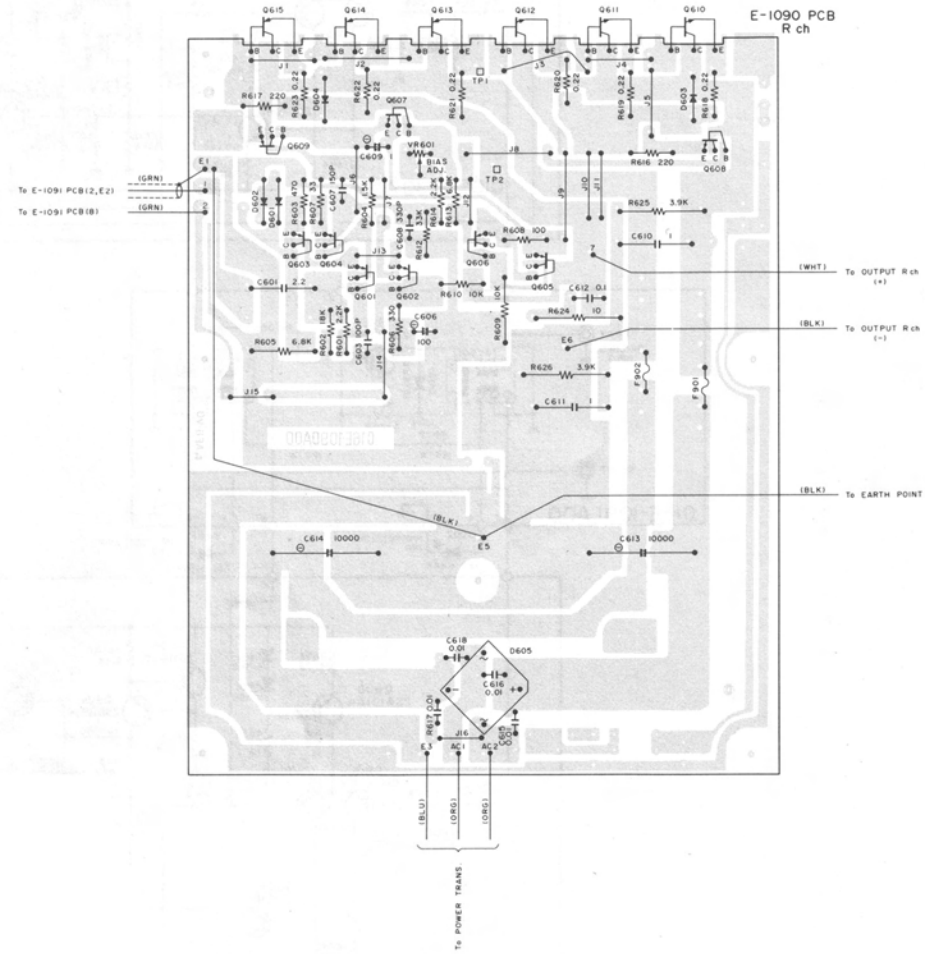
Instruments : DC milli-voltmeter

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.

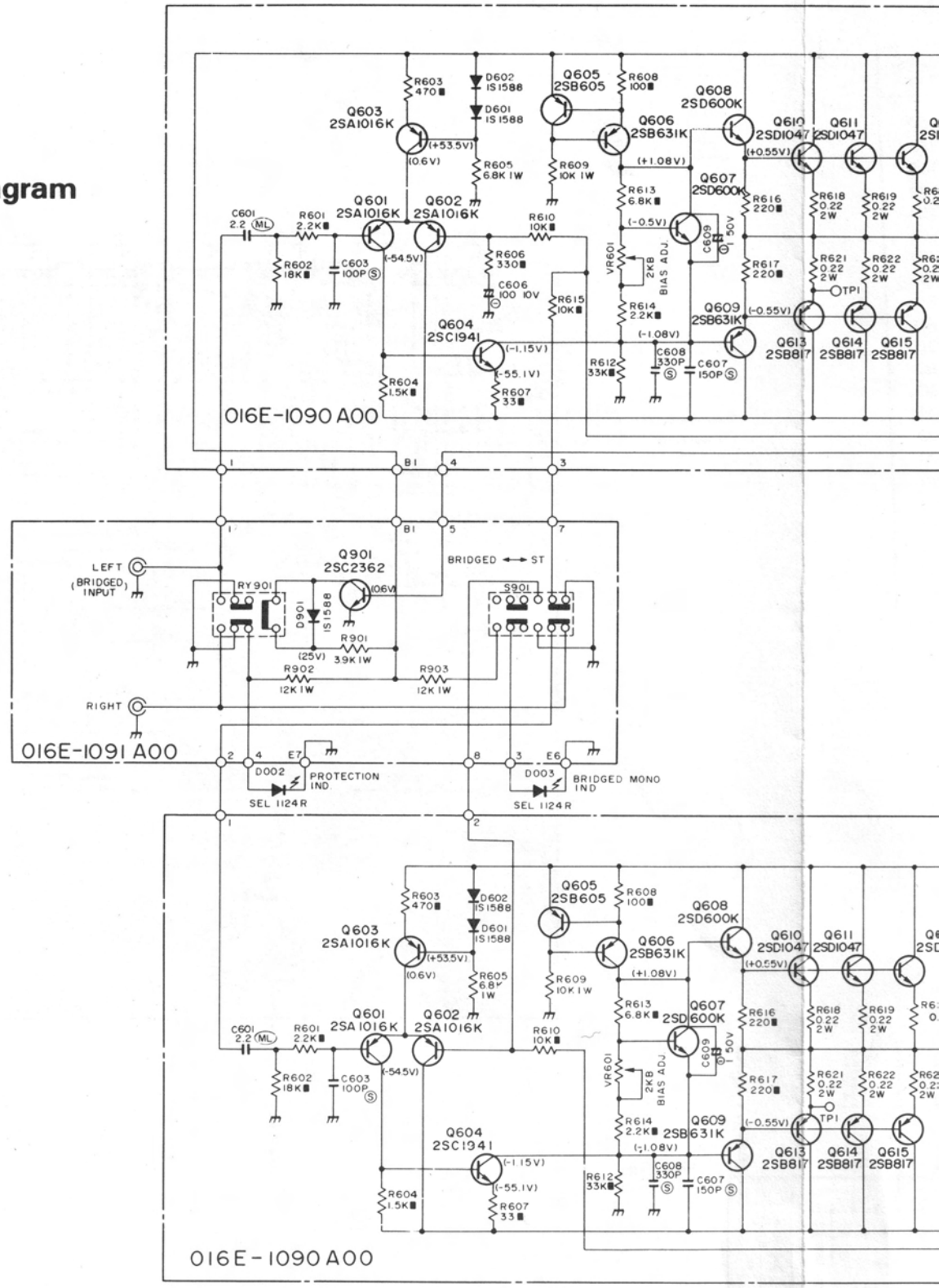
Step	Coupling		Location	Adjust	Adjust for
	Plus Lead	Minus Lead			
1	TP2	TP1	E-1090 PCB (Lch)	VR601	DC milli-voltmeter reads 5 mV
2	TP2	TP1	E-1090 PCB (Rch)	VR601	

Wiring Diagram





Schematic Diagram



RB-870BX

(RESISTORS)

5% TOLERANCE UNLESS OTHERWISE NOTED.

K . . . . . KILO OHM

■ . . . . . FIXED PRECISION METAL FILM RESISTORS. (F): 1%

NON MARK . . . . . LOW NOISE TYPE CARBON RESISTORS. 1/4 WATT

(CAPACITORS)

Ⓢ . . . . . POLYSTYRENE FILM CAPACITORS.

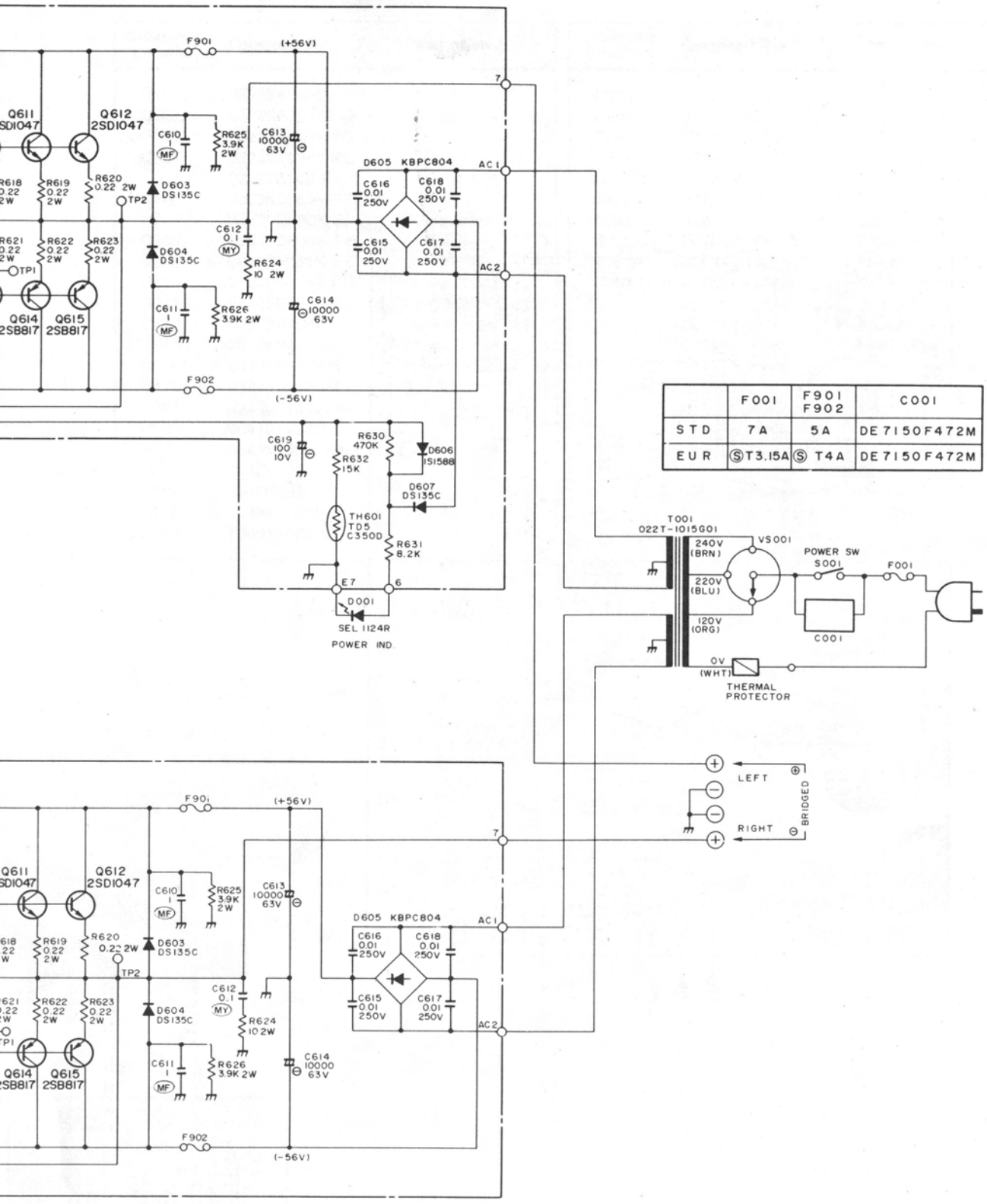
(MY) . . . . . MYLAR FILM CAPACITORS.

(MP) . . . . . METALIZED POLYSTER FILM CAPACITORS.

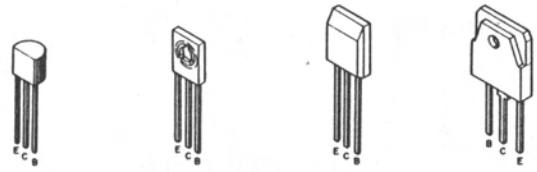
⊣⊢ . . . . . ELECTROLYTIC CAPACITORS.

NON MARK . . . . . CERAMIC CAPACITORS.

(ML) . . . . . METAL LAYER CAPACITORS.



	F001	F901 F902	C001
STD	7A	5A	DE7150F472M
EUR	Ⓢ T3.15A	Ⓢ T4A	DE7150F472M



- UNLESS OTHERWISE NOTED IN SCHEMATIC ALL CAPACITANCE VALUES ARE EXPRESSED IN MFD.
- VOLTAGE READING WITH VTVM FROM THE POINT SHOWN TO THE CHASSIS GROUND. (LINE VOLTAGE 120 VOLTS)
- VOLTAGE READING MAY ±20%