

SIP-300 SERVICE NOTES

First Edition

(2nd Printing JAN. 20, 1984 E-2)

SPECIFICATIONS

GUITAR PRE-AMP SIP-300

Input level

HI: min** -38dB (10mV)
 max +14dB (4V)
 LO: min* -28dB (30mV)
 max +24dB (12V)

*Nominal level: +4dBm; EFFECT: other controls max.

Input impedance

HI: 250kΩ
 LO: 100kΩ

Output level

Balanced: nom +4dBm (1.23V)
 max +20dBm (7.75V)
 Unbalanced: nom +0.5dBm (820mV)
 max +16dB (4.8V)

Output impedance:

600Ω (balanced and unbalanced)

Frequency range:

20Hz-30kHz

S/N:

greater than 74dB (nominal operating levels)

Distortion:

0.1% (20Hz-10kHz, ±10dBm unbalanced)

Overdrive maximum gain: 42dB

CONTROL & SWITCH

Overdrive: VOLUME I
 VOLUME II

Tone Creator:

BASS (-16dB to +16dB/50Hz)
 MIDDLE (-10dB to +15dB/1kHz)
 TREBLE (-15dB to 19dB/9kHz)

Selectable:

BASS (40Hz/50Hz)
 MIDDLE (50Hz/1kHz)
 TREBLE (6kHz/9kHz)

Filter:

LOW CUT (60Hz, 12dB/oct)
 HIGH CUT (6kHz, 12dB/oct)

Final Amp: VOLUME
 MASTER VOLUME

CONNECTION JACKS

Input: HIGH GAIN
 LOW GAIN

Output: BALANCED (XLR)
 UNBALANCED
 (STANDARD JACK)

Ext. Effect Loop: SEND
 RETURN

Foot Switch: OVERDRIVE BYPASS
 (FS-1) (LED)

Power Consumption: 8W

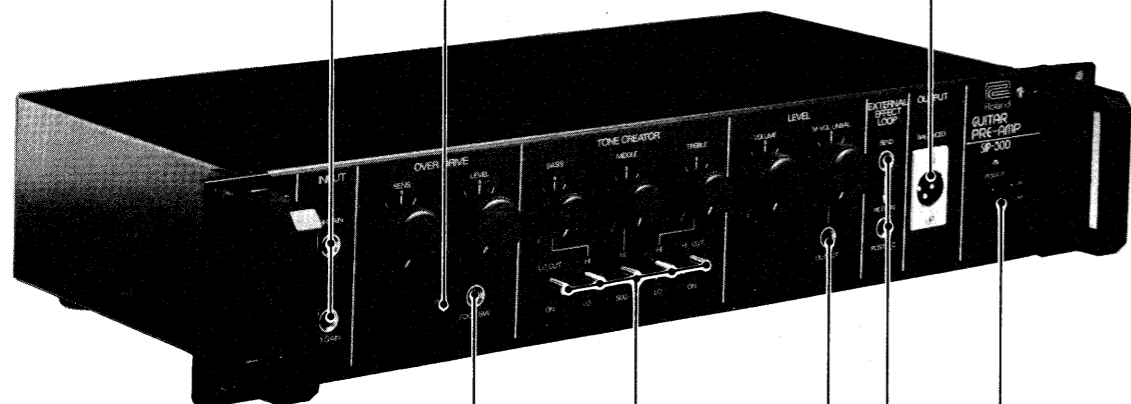
Weight: 4.0kg

Dimension:
 482(W) x 92(H) x 247(D)mm

Jack HLJ-0261-01-030
 (009-037)

LED TLR-124
 (019-028)

Receptacle
 NC-3P or D-3M (010-264)



Switch
 SLR-022-L
 (001-266)

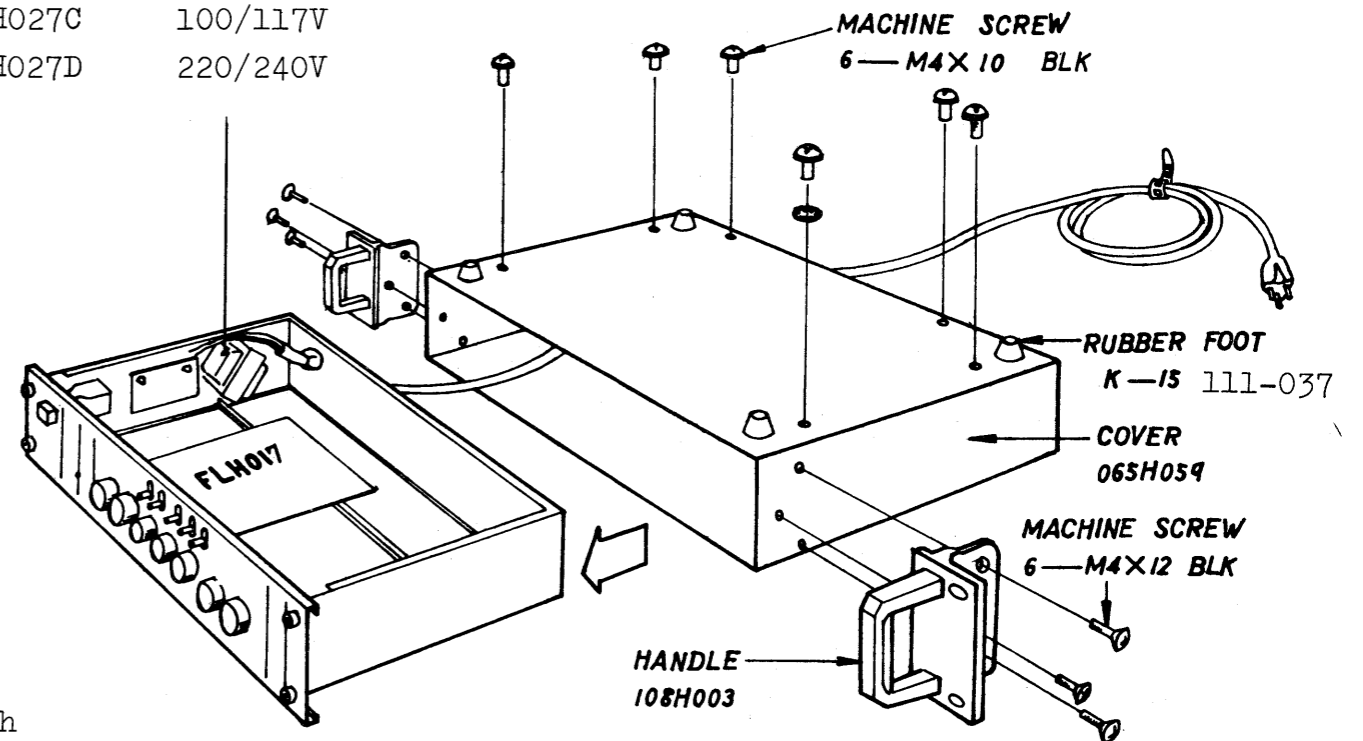
Jack HLJ-0264-01-030
 (009-030)

Button No.9 (BLK)
 (016-009)

SIP-300 DISASSEMBLY

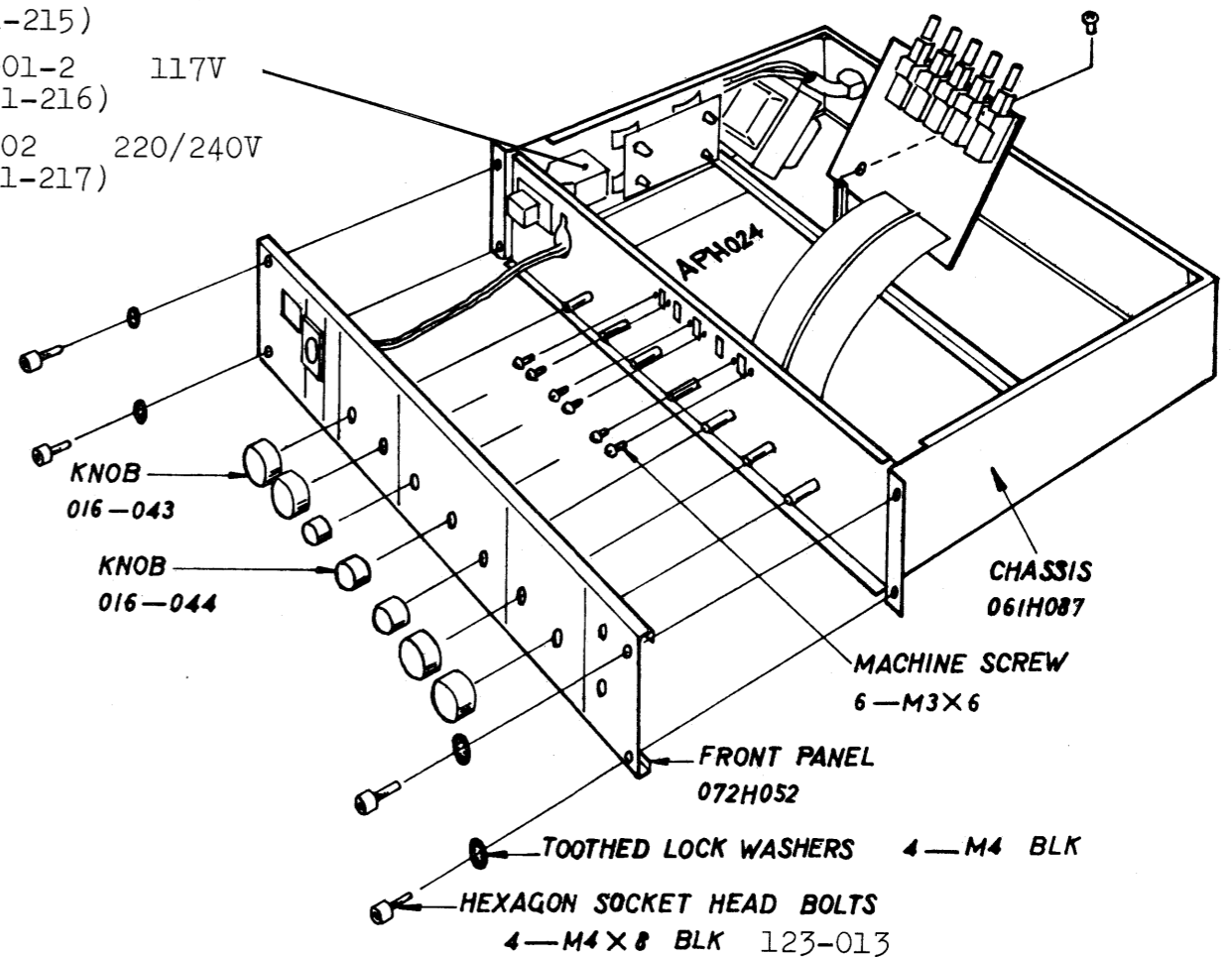
Power transformer

022H027C 100/117V
 022H027D 220/240V



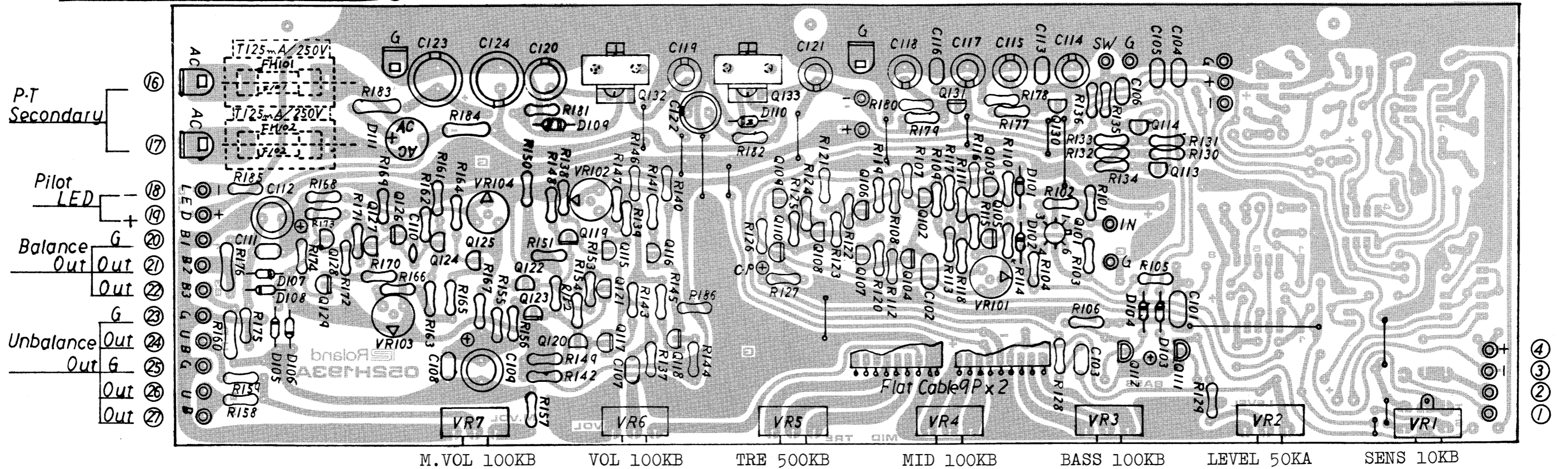
Switch

SDG5P-001-1 100V
 (001-215)
 SDG5P-001-2 117V
 (001-216)
 SDG5P-502 220/240V
 (001-217)



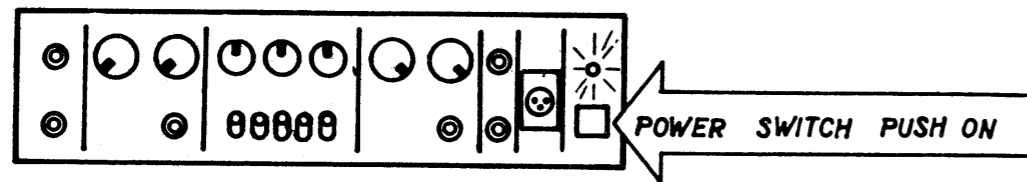
APH24A(141H024A) (PCB052H193A)

	No	AC 100V 117V	AC 220V 240V
Fuse Holder	FH101 FH102	None	TF758
Fuse	F101 F102	Wire Jumper	Ⓢ I25mAT



SIP-300 ADJUSTMENT PROCEDURE

SET THE CONTROL PANEL AS SHOWN BELOW



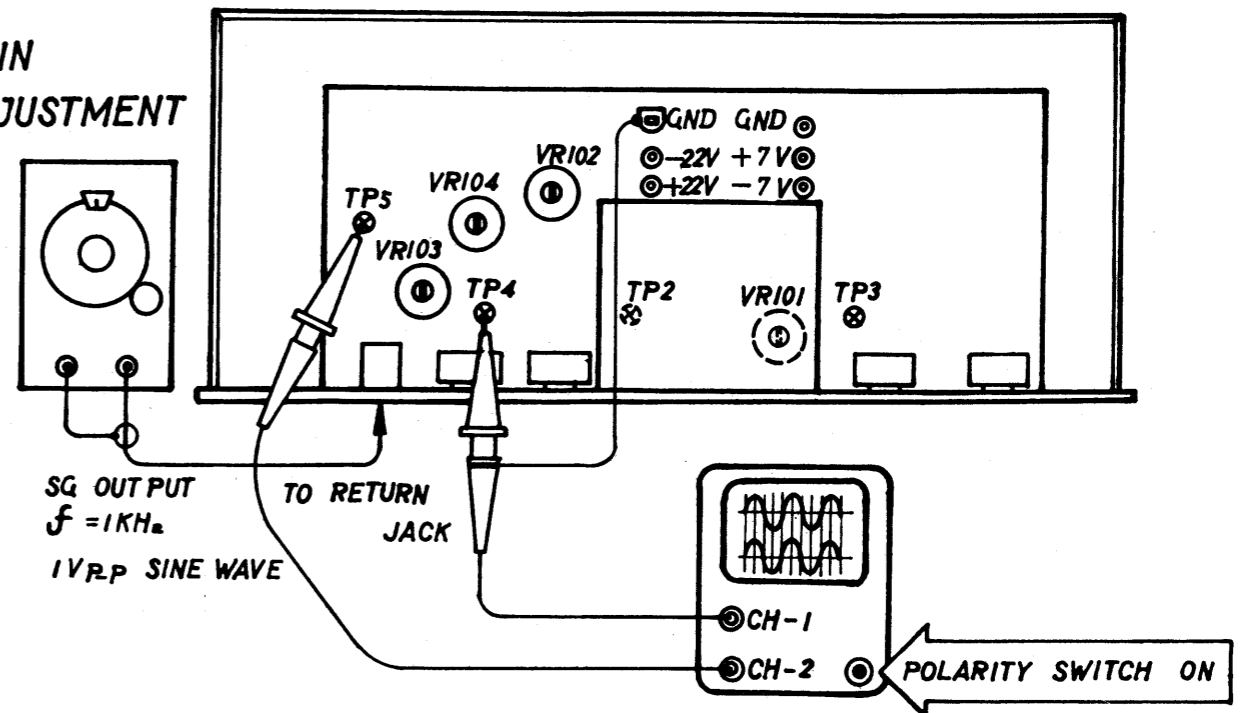
1. VOLTAGE CHECK

+21.5V (±1.3V)	+7.2V (±0.6V)
-21.5V (±1.3V)	-7.2V (±0.6V)

2. BIAS ADJUSTMENT

- ① TP2: To be adjusted to +1V DC at no input signal with VR101 (OVER DRIVE)
- ② TP3: For checking Normal/Effect signals
- ③ TP4: To be adjusted to 0V DC at no input signal with VR102 (FINAL AMP)
- ④ TP5: To be adjusted to 0V DC at no input signal with VR103 (INVERTER)

3. GAIN ADJUSTMENT



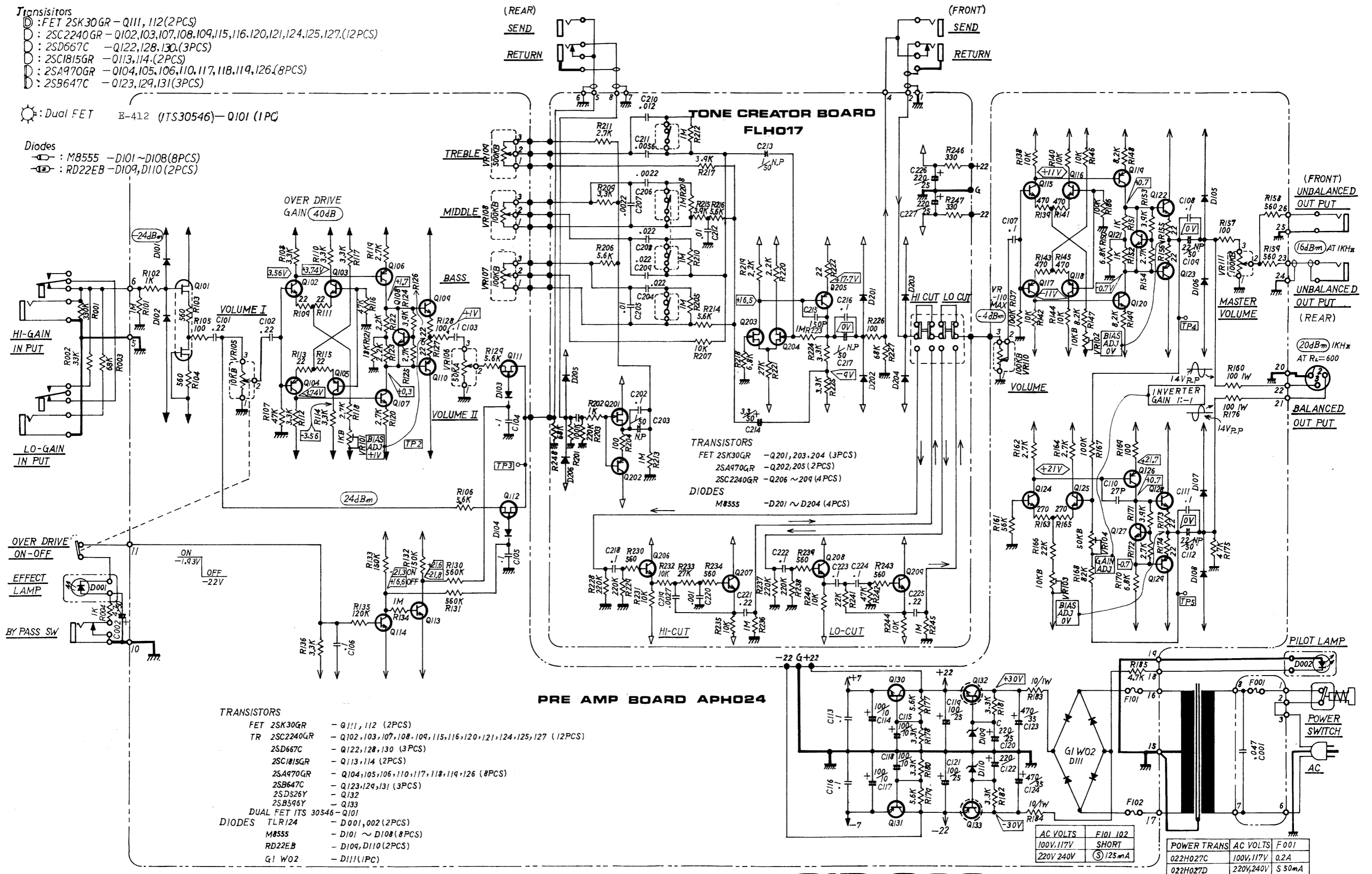
Connect and set instruments as shown above.

- 1. Adjust VR104 so that CH-2 output equals CH-1's in amplitude. (11V pp)
- 2. Make sure that there is a 180° phase shift between them when POLARITY is OFF.

- Transistors**
 ○ : FET 2SK30GR - Q111, 112 (2PCS)
 ○ : 2SC2240GR - Q102, 103, 107, 108, 109, 115, 116, 120, 121, 124, 125, 127 (12PCS)
 ○ : 2SD667C - Q122, 128, 130 (3PCS)
 ○ : 2SC1815GR - Q113, 114 (2PCS)
 ○ : 2SA970GR - Q104, 105, 106, 110, 117, 118, 119, 126 (8PCS)
 ○ : 2SB647C - Q123, 129, 131 (3PCS)

☉ : Dual FET E-412 (ITS30546) - Q101 (1PC)

- Diodes**
 ○ : M8555 - D101 ~ D108 (8PCS)
 ○ : RD22EB - D109, D110 (2PCS)



SIP-300 CIRCUIT DIAGRAM

PARTS LIST

072H052 Panel H52 front
 061H087 Chassis H87
 065H059 Cover H59
 108H003 Handle H3
 064-265 Holder no.265
 120-015 Long nut no.15(spacer)3x12mm
 120-017 Long nut no.17 3x54mm
 065-261 Cover no.261 SLR-022-L
 111-037 Rubber foot K-15

016-043 Knob no.43 rotary large
 016-044 Knob no.44 rotary middle
 016-009 Button no.9 blk power switch

009-030 Jack HLJ-0264-01-030
 009-037 Jack HLJ-0261-01-030 w/switch
 010-264 XLR connector male
 NC-3P or D-3M

PCB

141H024A APH24A Preamp (PCB 052H193A)
 145H017A FLH17A Tone creator(052H192A)
 149H079A OPH79A Terminal (052H185A)
 149H080A OPH80A (PCB 052H185A) 117V
 149H081A OPH81A (052H185A) 220/240V
 052H195 LED mounting less parts

SWITCH

001-215 SDG5P-001-1 power 100V
 001-216 SDG5P-001-2 power 117V
 001-217 SDG5P-502 power 220/240V
 001-266 SLR-022-L lever

022H027C Power transformer 100/117V
 022H027D Power transformer 220/240V

SEMICONDUCTOR

Transistor

017-036 E-412 (ITS30546) dual FET
 017-016 2SK30A-GR FET
 017-119 2SA970-GR
 017-128 2SB596-Y
 017-127 2SB647-C
 017-106 2SC1815-GR
 017-123 2SC2240-GR
 017-090 2SD526-Y
 017-126 2SD667-C

Diode

018-087 M8555
 018-082 W02 rectifier bridge
 018-050 RD22EB zener
 019-028 TLR-124 LED

POTENTIOMETER

026-413 EVHCCEK20B14 w/switch
 026-264 EVHCCA(VM10R)K20A54 50KA
 026-277 VM10R(EVHCCA)K20B55 500KB
 026-272 VM10R(EVHCCA)K20B15 100KB
 030-465 SR19R 10KB trimmer
 030-469 SR19R 50KB trimmer
 030-459 SR19R 1KB trimmer

FUSE. FUSEHOLDER

008-057 Fuse SEMKO T125A sec.220/240V
 008-053 Fuse SEMKO T50mA prim.220/240V
 008-012 Fuse MGP 0.2A prim. 117V
 012-003 Clip TF-758

CAPACITOR

Polyester Film

035-047 ECQ-E10473MV 0.047mfd/1000V 100V
 035-108 ECQ-U1A473MC 0.047mfd/125AC 117V
 035-310 ECQ-E2A473MCS 0.047/1000V 220/240V

Electrolytics

032-190 ECEA50N1 1mfd/50V Bi-polar
 032-278 ECEA50N22 22mfd/50V Bi-polar
 ECEA1HV4R7S 4.7mfd/50V
 ECEA1AS101 100mfd/10V
 ECEA1ES101 100mfd/25V
 ECEA1ES221 220mfd/25V
 ECEA1VS473 470mfd/35V

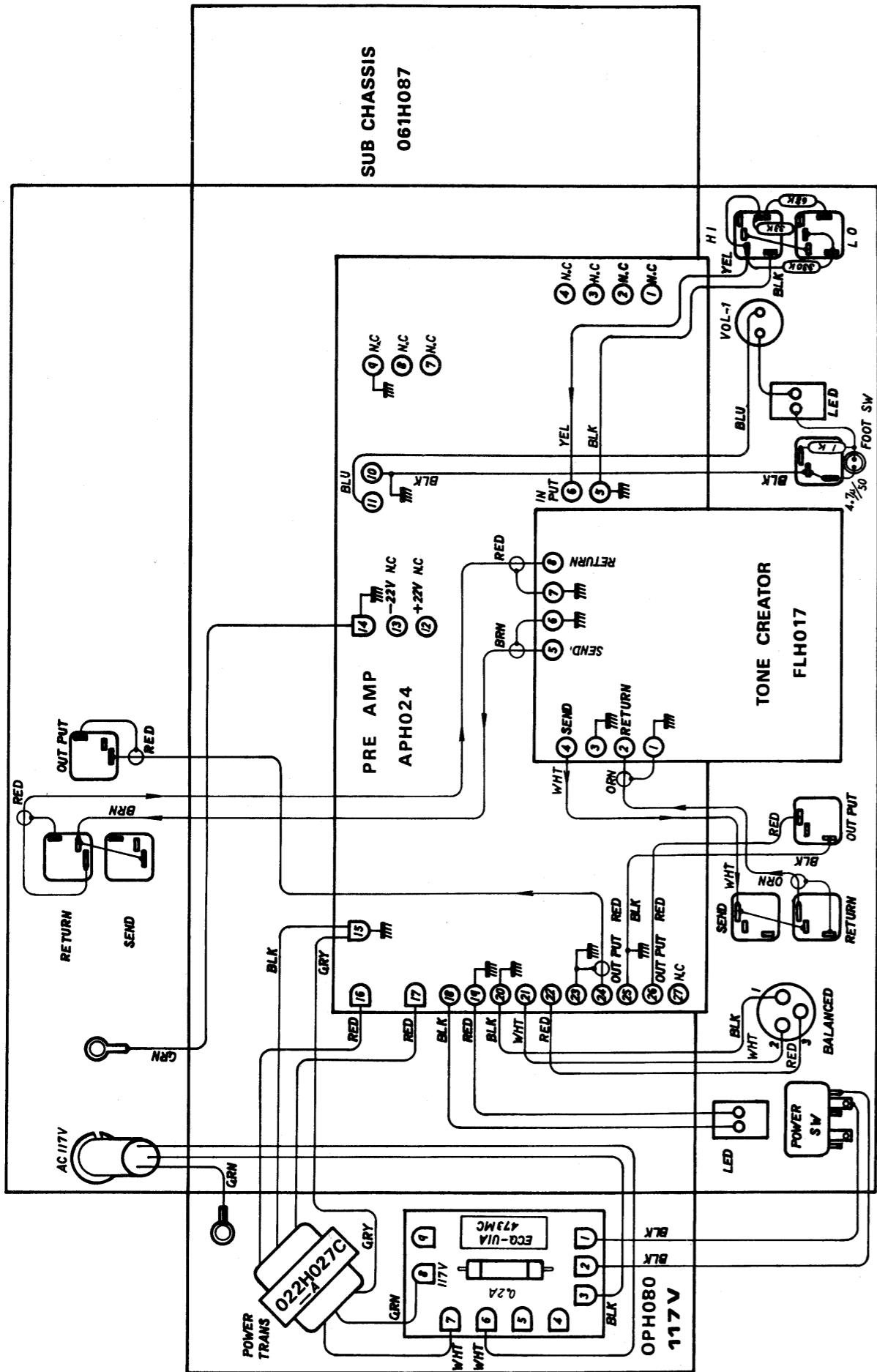
RESISTOR

044-587 ERG-1ANJ-100 10-ohm 1w
 044-586 ERG-1ANJ-101 100-ohm 1w

MISCELLANEOUS

047-040 Line cord strain relief
 SR-4N-4 100V
 047-031 SR-6N3-4 117V
 047-003 BU-4801 220/240V
 047-023 EA-1702B clamp 220/240V
 064H074 Holder H74 100V
 064H075 Holder H75 220/240V
 053H049 Flat cable H49 9-lead 120mm
 048-018 Heat sink no.18 (SB-7)
 073-037 Poly carbonate pipe 18mm
 123-013 Hexagon socket head bolt 4x8mm
 042-041 Earth terminal no.41

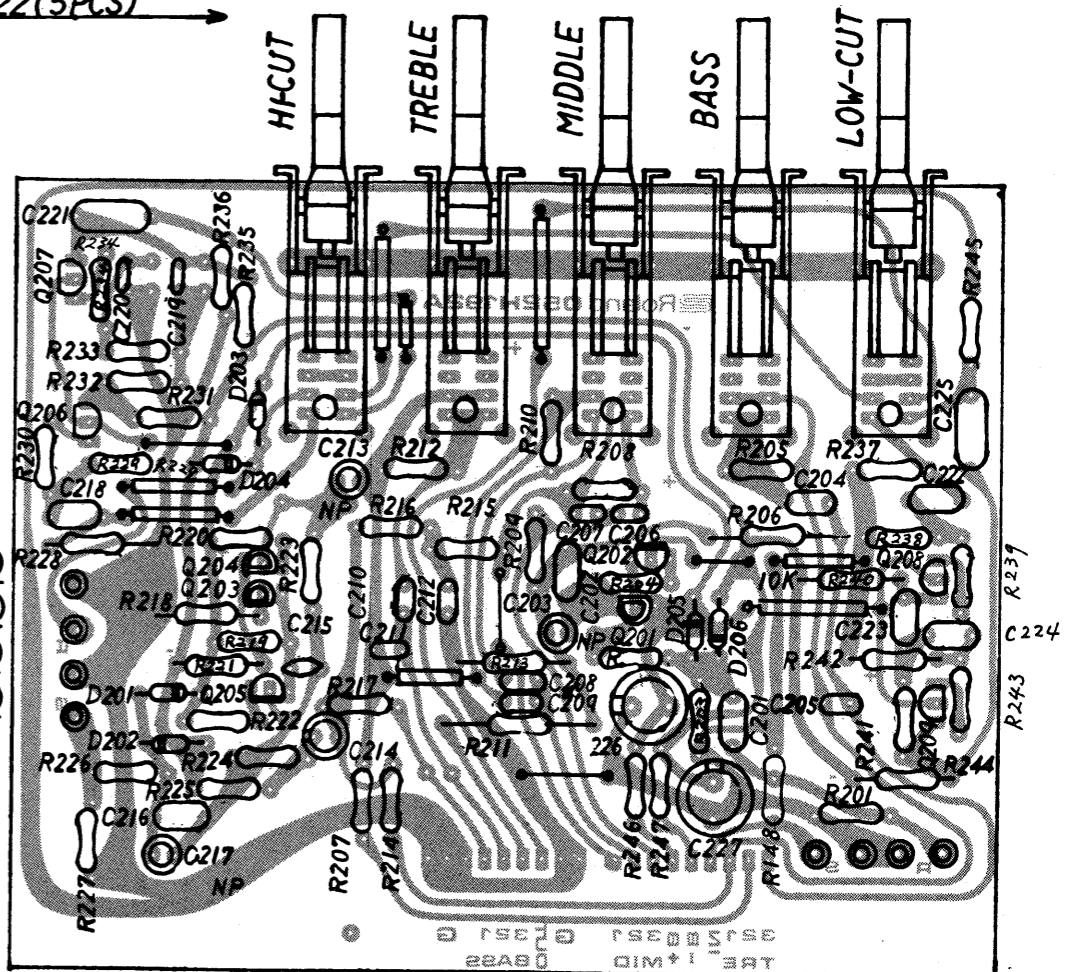
SIP-300 WIRING DIAGRAM



FRONT PANEL

Switch SLR-022(5PCS)
FLH17A(145H017A)
 (PCB052H192A)

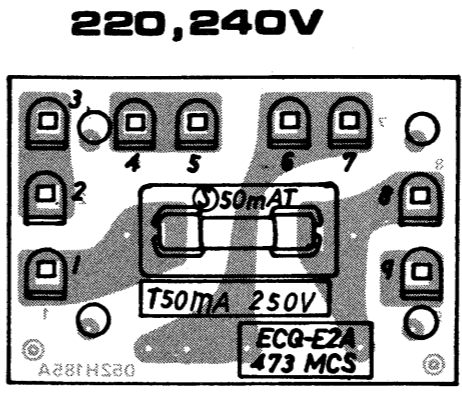
Post T-C
 G ①
 Return ②
 G ③
 Send ④



Send ⑤
 G ⑥
 Return ⑦
 Pre T-C

- Transistors**
- Ⓚ: 2SK30GR - Q201, 203, 204 (3PCS)
 - Ⓚ: 2SA970GR - Q202, 205 (2PCS)
 - Ⓚ: 2SC2240GR - Q206 ~ Q209 (4PCS)

- Diodes**
- Ⓚ: M8555 - D201 ~ D206 (6PCS)
 - : Jumper Wire with Tube



OPH 081A 149H081A
 (PCB 052H185A)

