

# Service Manual



**CIRCUIT DESCRIPTIONS  
REPAIR & ADJUSTMENTS**



**ORDER NO.  
ARP-691-0**

**STEREO AMPLIFIER**

# A-77X

MODEL A-77X COMES IN SEVEN VERSIONS DISTINGUISHED AS FOLLOWS:

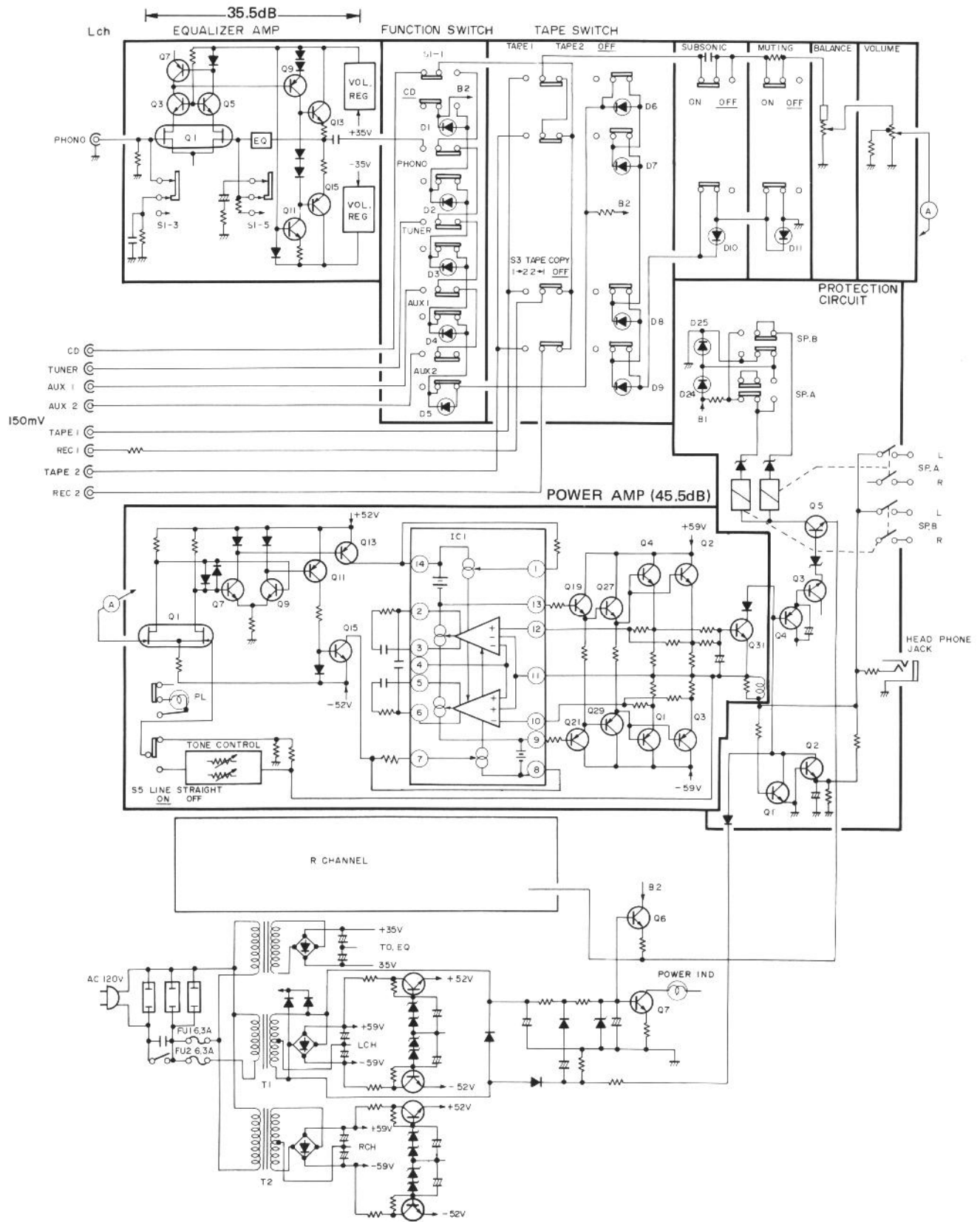
Type	Voltage	Remarks	Black	Silver
KU	AC120V only	U.S.A. model	○	—
KC	AC120V only	Canada model	○	—
HE	AC220V, 240V (switchable)	European continent model	○	○
HB	AC220V, 240V (switchable)	United Kingdom model	○	—
S	AC110V, 120V, 220V, 240V (switchable)	General export model	○	—
S/G	AC110V, 120V, 220V, 240V (switchable)	U.S. Military model	○	—
HEZ	AC220V, 240V (switchable)	West Germany model	○	○

- This service manual is applicable to the KU type.  
For servicing of the KC, HE, HB and S, S/G, HEZ types, please refer to the additional service manual.

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### 3. BLOCK DIAGRAM



# 7. P.C. BOARDS CONNECTION DIAGRAM

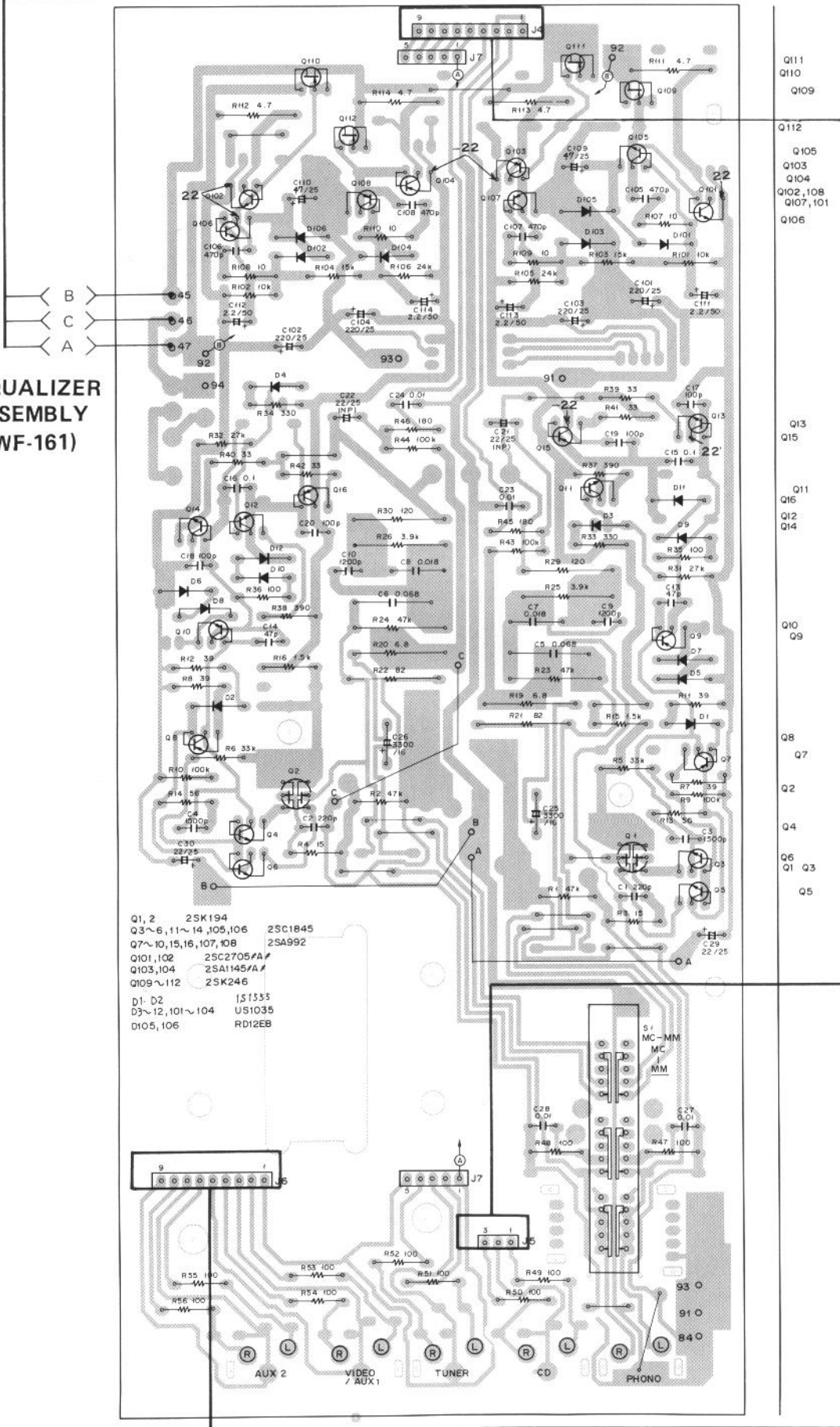
A

B

C

D

EQUALIZER ASSEMBLY (GWF-161)

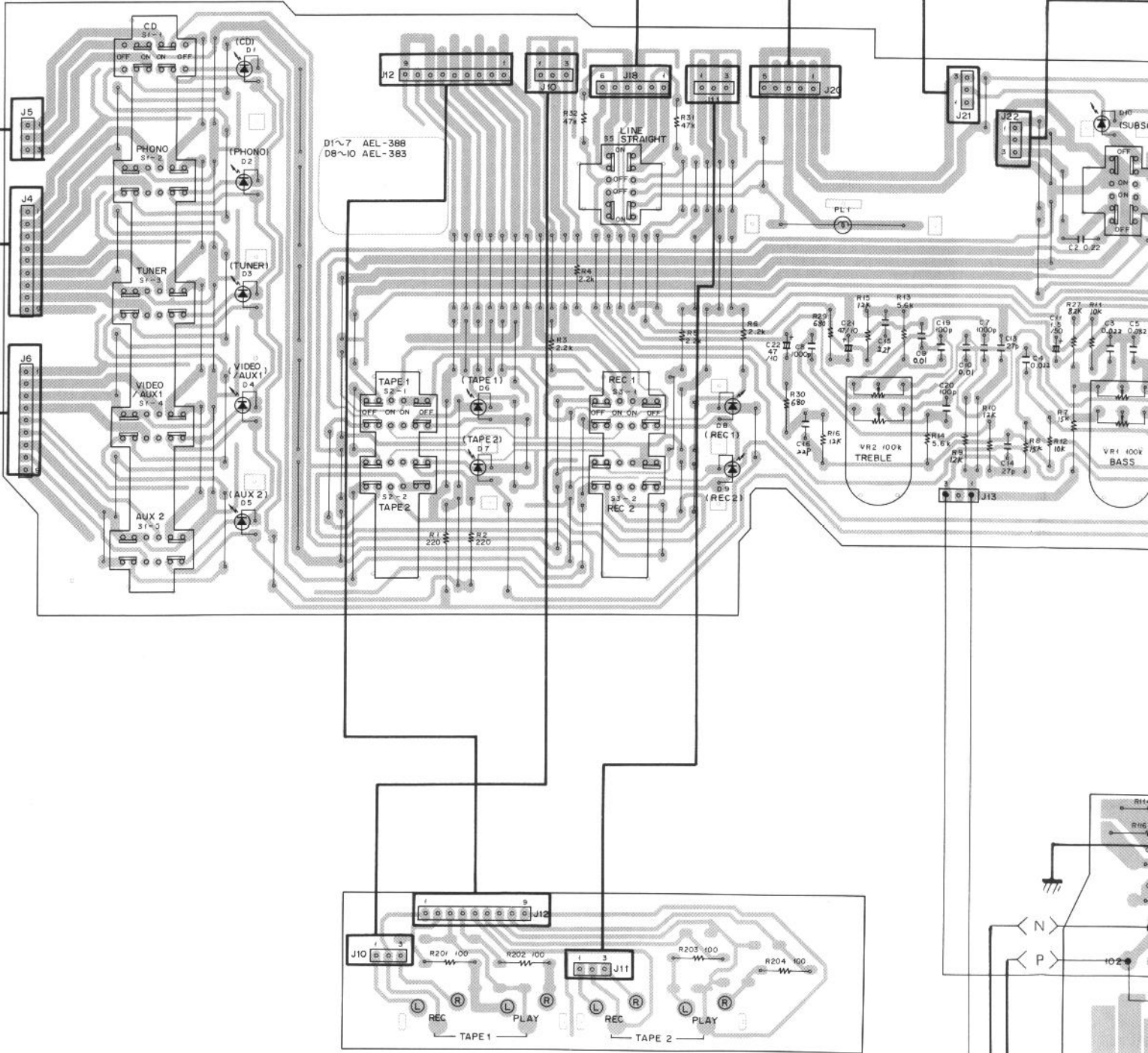


- Q1, 2 2SK194
- Q3~6, 11~14, 105, 106 2SC1845
- Q7~10, 15, 16, 107, 108 2SA992
- Q101, 102 2SC2705FA
- Q103, 104 2SA1145FA
- Q109~112 2SK246
- D1, D2 1S1535
- D3~12, 101~104 US1035
- D105, 106 RD12EB

- Q111
- Q110
- Q109
- Q112
- Q105
- Q103
- Q104
- Q102, 108
- Q107, 101
- Q106
- Q13
- Q15
- Q11
- Q16
- Q12
- Q14
- Q10
- Q9
- Q8
- Q7
- Q2
- Q4
- Q6
- Q1
- Q3
- Q5

FUNC

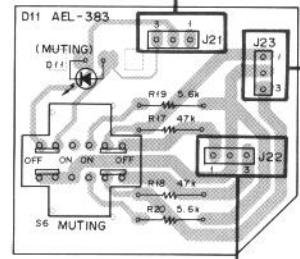
FUNCTION ASSEMBLY (GWS-523)



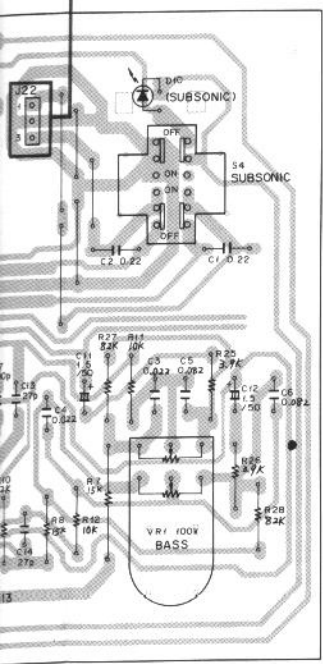
PIN JACK ASSEMBLY (GWY-107)

A  
B  
C

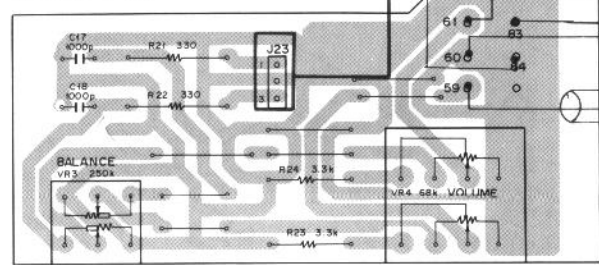
A



MUTING SWITCH ASSEMBLY



VOLUME ASSEMBLY (GWY-111)



D  
E  
F  
G

B

M

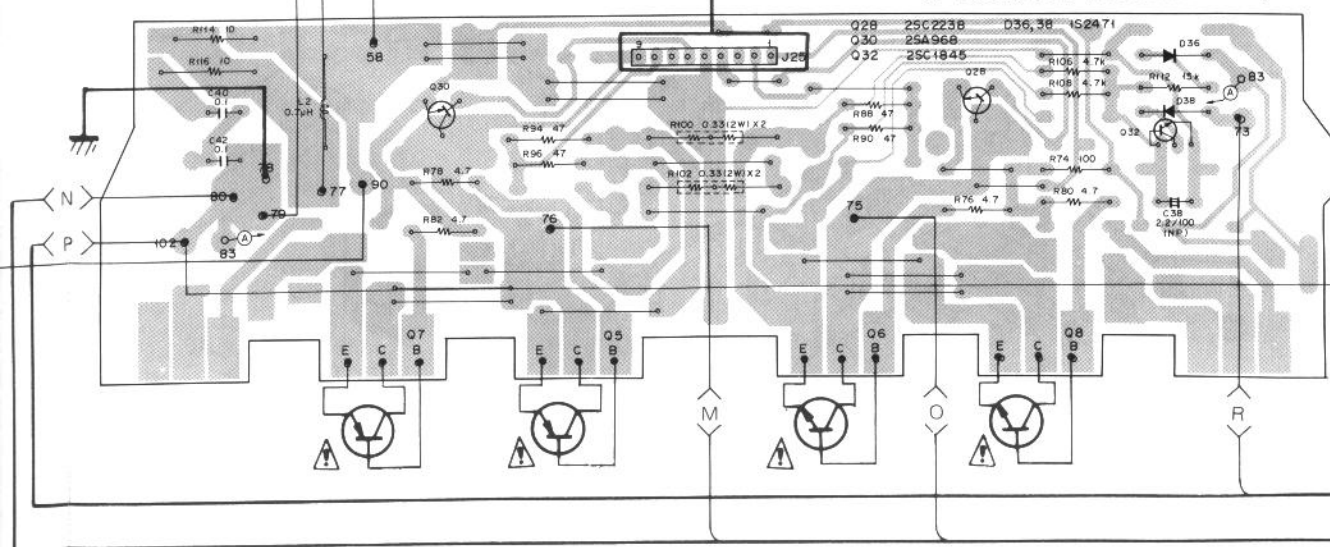
I

J

K

C

R OUTPUT ASSEMBLY (GWH-173)



H

D

N

O

P

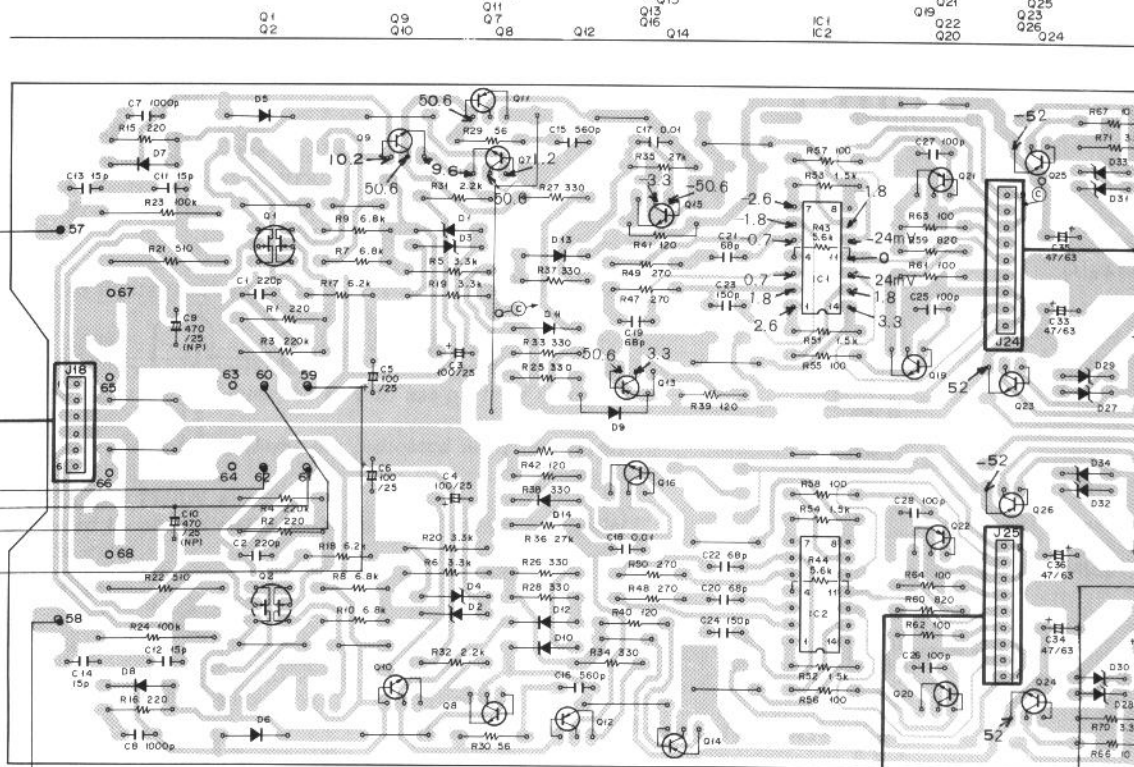
1

2

3

A  
B  
C

### VOLTAGE AMPLIFIER ASSEMBLY (GWH-171)



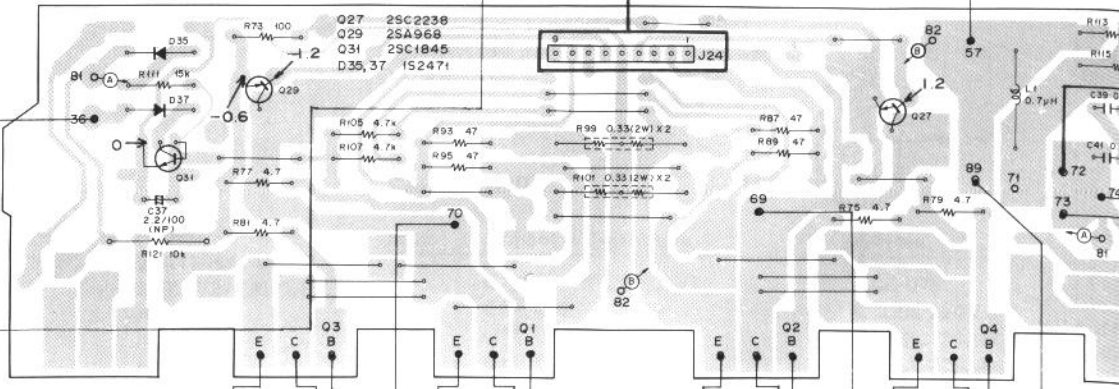
IC 1,2	PA0016	Q13,14,21,22,25,26	D1-4	RD22EB
Q 1,2	2SK129A	Q15,16,19,20,23,24	D5-8	US4035
Q 7-10	2SC1845	D35,37	D9-14	11E2
Q 11-12	2SA992		D27-34	RD27EB

D  
E  
F  
G

M

I  
J  
K

### L OUTPUT ASSEMBLY (GWH-172)



H

N  
O  
P

1

2

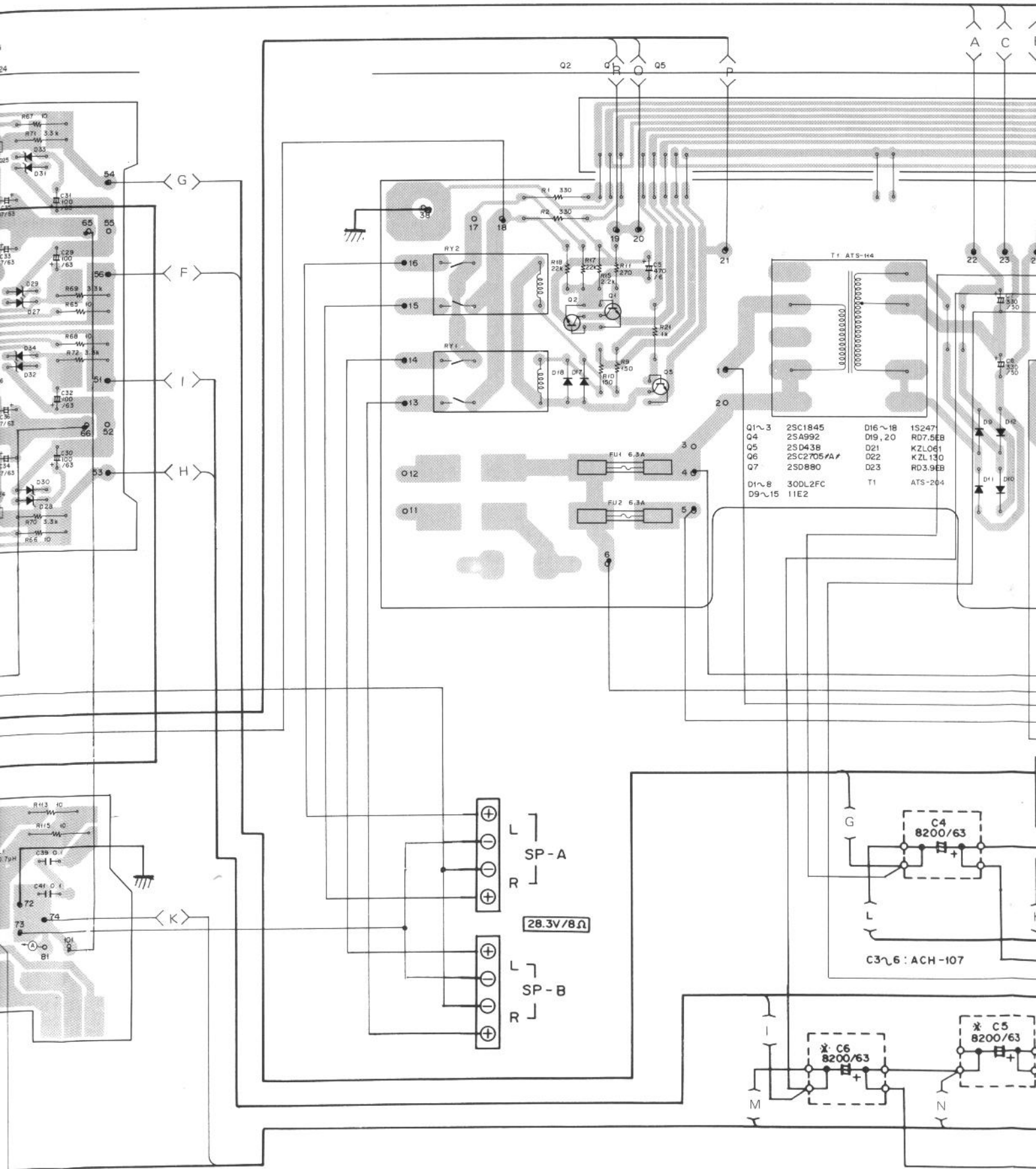
3

A

B

C

D

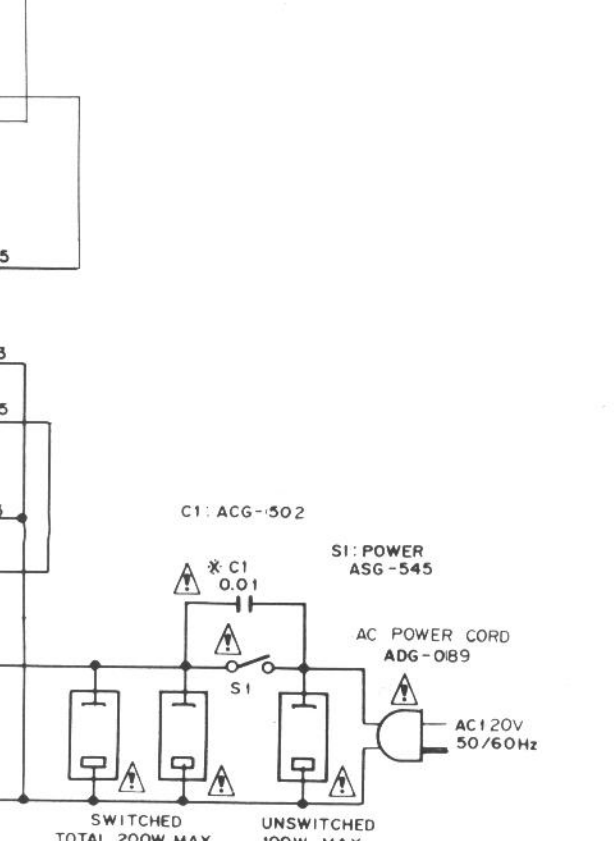
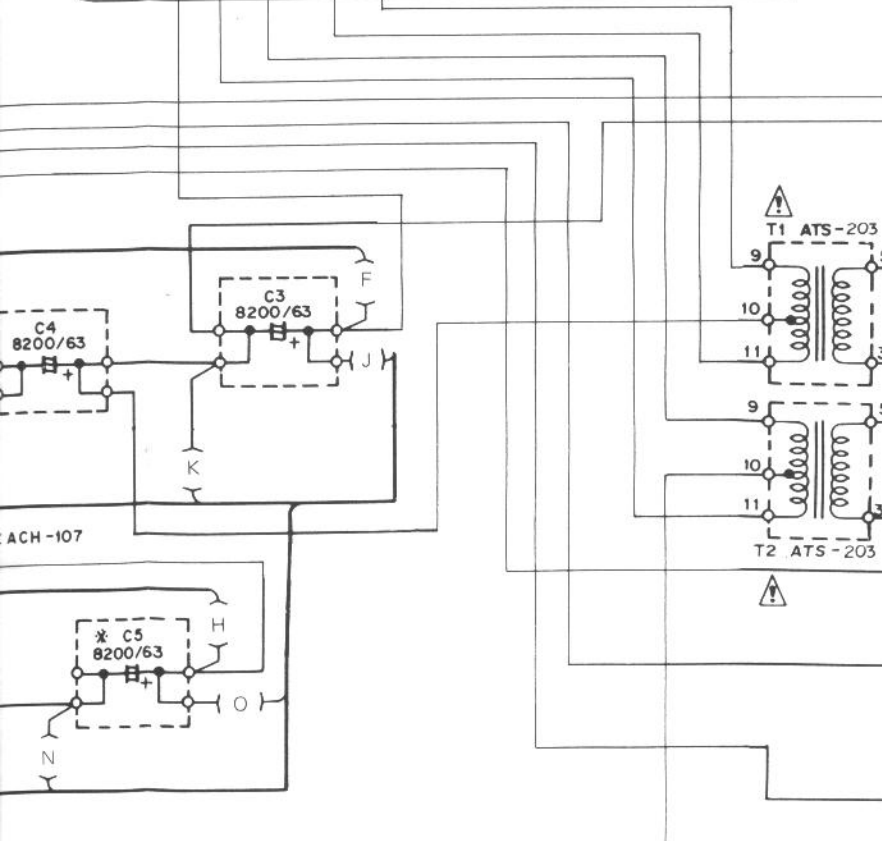
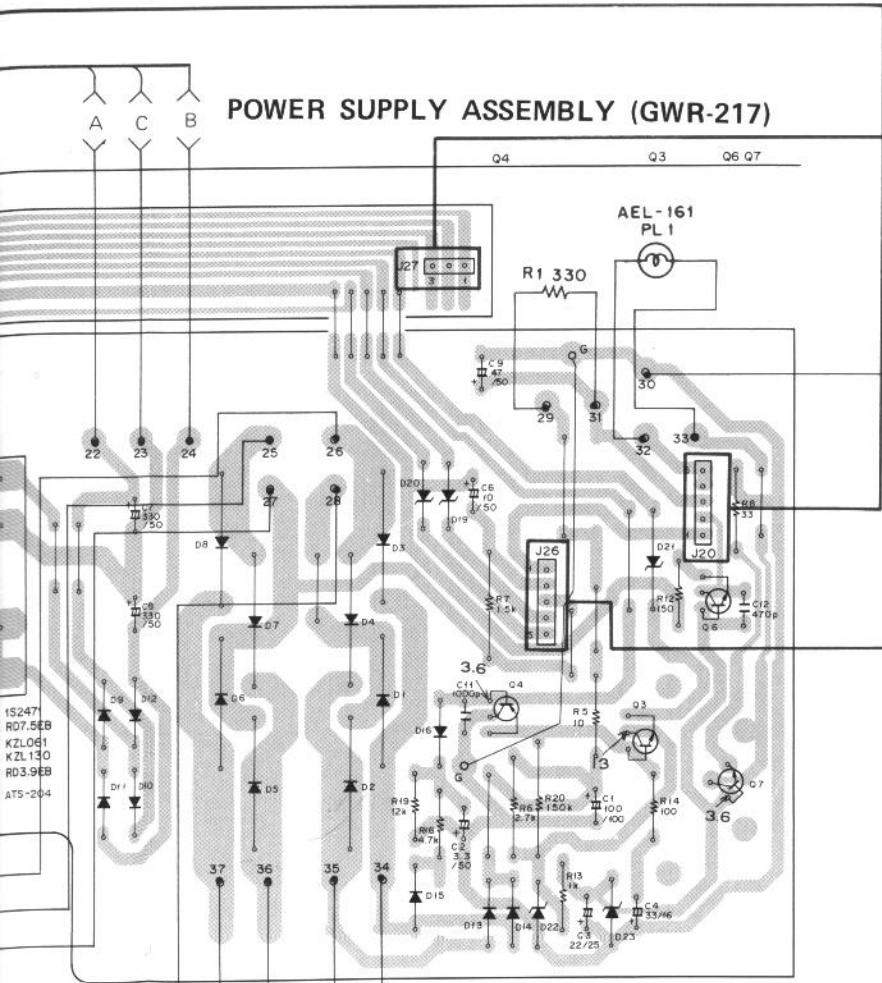
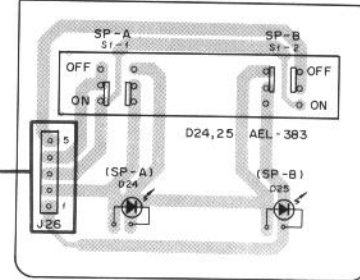


### POWER SUPPLY ASSEMBLY (GWR-217)

### HEADPHONE ASSEMBLY



### SPEAKER SWITCH ASSEMBLY



A

B

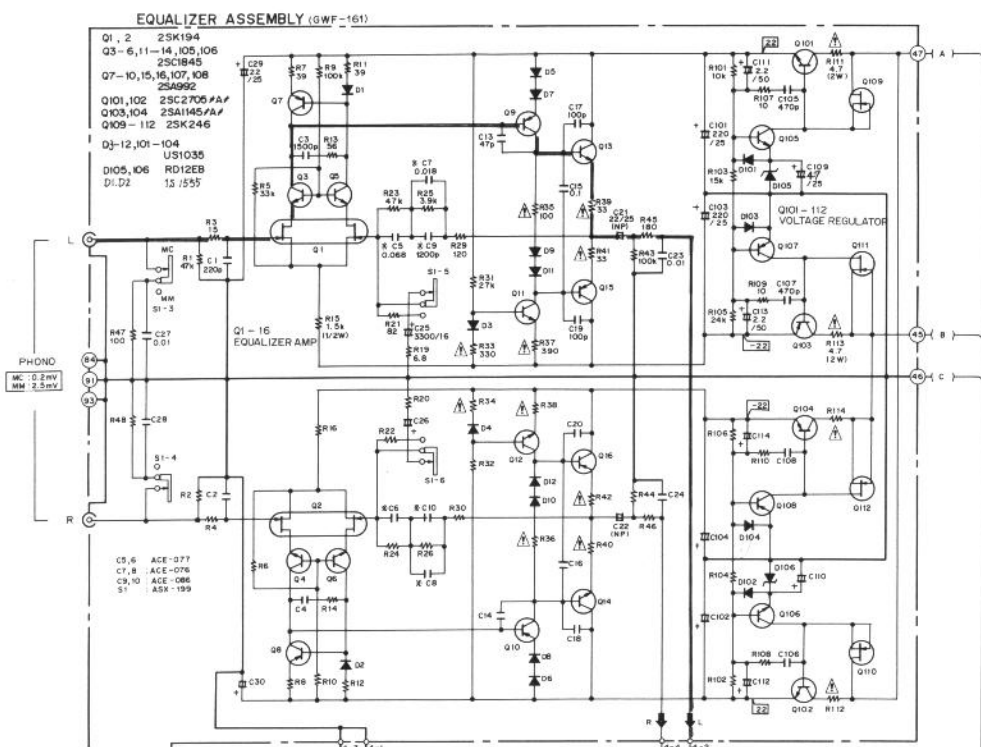
C

D

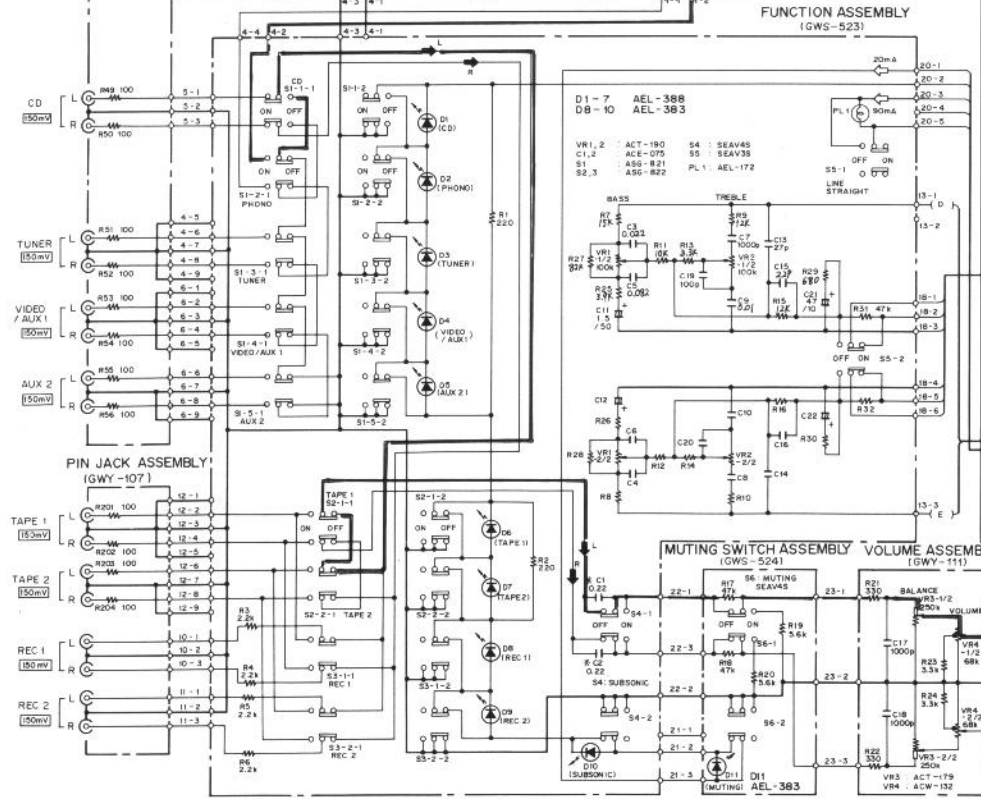


# 8. SCHEMATIC DIAGRAM

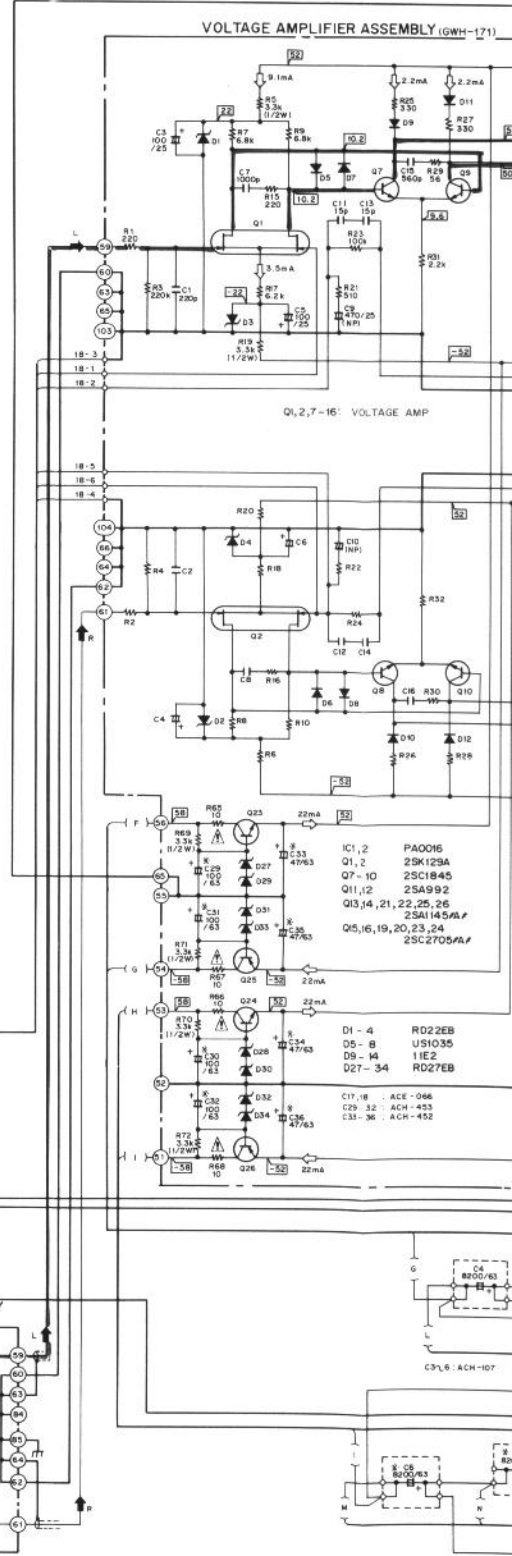
A



B



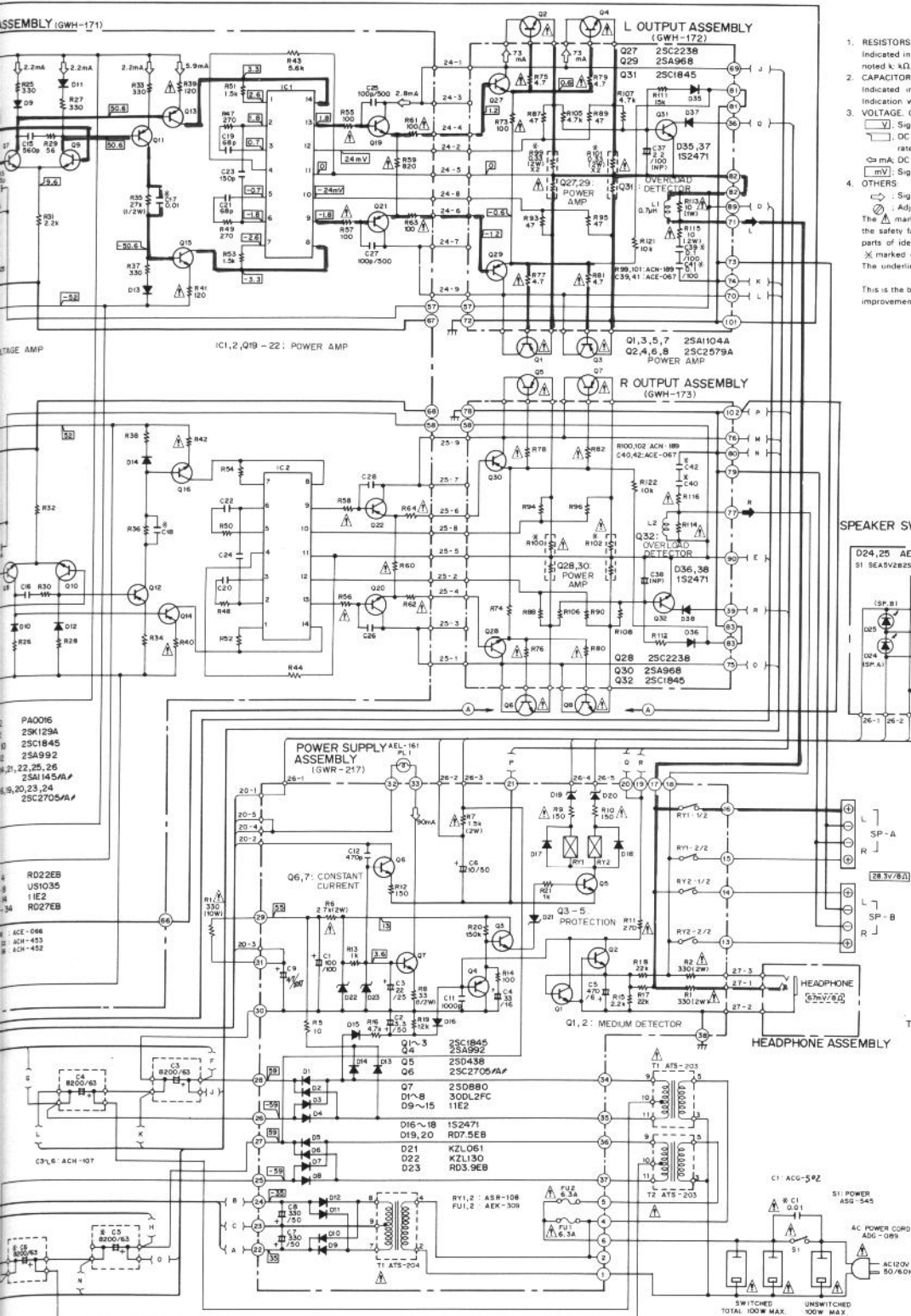
C



D

NOTE:

The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.



- RESISTORS:** Indicated in Ω, 1/4W, 1/8W, ±5% tolerance unless otherwise noted. k: kΩ, M: MΩ, (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% tolerance.
- CAPACITORS:** Indicated in capacity (μF)/voltage (V) unless otherwise noted. p: pF. Indication without voltage is 50V except electrolytic capacitor.
- VOLTAGE, CURRENT:**
  - V: Signal voltage at 120 W + 120 W, 8Ω output (1 kHz)
  - DC voltage (V) at no input signal. Value in [ ] is DC voltage at rated power.
  - mA: DC current at no input signal
  - mV: Signal voltage at FM 400 Hz ± 75 kHz DEV.
- OTHERS:**
  - : Signal route
  - ⊗: Adjusting point
  - △: Mark found on some component parts indicates the importance of the safety factor of the part. When replacing, be sure to use parts of identical designation.
  - ⊗: Marked capacitors and resistors have parts numbers.
  - ⊔: The underlined indicates the switch position.

2SA1145(A)

2SC2705(A)

2SA992  
2SC1845

- SWITCHES:**

FUNCTION ASSEMBLY	SWITCH	POSITION
S1-1	CD	ON - OFF
S1-2	PHONO	ON - OFF
S1-3	TUNER	ON - OFF
S1-4	VIDEO/AUX1	ON - OFF
S1-5	AUX 2	ON - OFF
S2	TAPE MONITOR	TAPE1 - TAPE2 - OFF
S3	TAPE COPY	1-2 - 2-1 - OFF
S4	SUBSONIC	ON OFF
S5	LINE STRAIGHT	ON - OFF

EQUALIZER ASSEMBLY	SWITCH	POSITION
S1	MC - MM/SELECT	MM - MC

MUTING SWITCH ASSEMBLY	SWITCH	POSITION
S6	MUTING	ON - OFF

SPEAKER SELECT ASSEMBLY	SWITCH	POSITION
S1-1	A	ON - OFF
S1-2	B	ON - OFF

OTHER

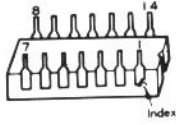
SWITCH	POSITION	
S1	POWER	ON - OFF

2SA968  
2SC2238  
2SD880

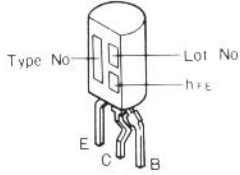
2SA1104(A)  
2SC2579(A)

External Appearance of Transistors and ICs

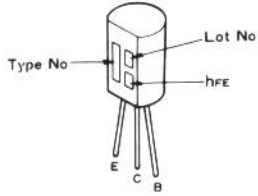
PA0016



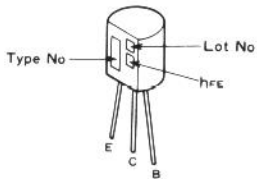
2SA1145(A)



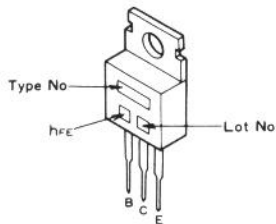
2SC2705(A)



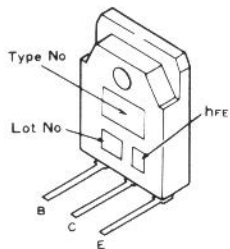
2SA992  
2SC1845



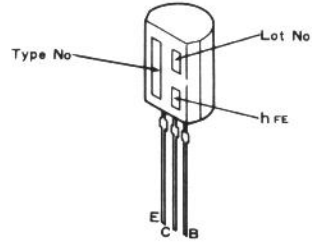
2SA968  
2SC2238  
2SD880



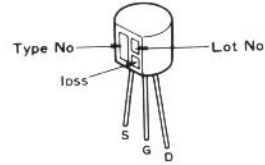
2SA1104A(A)  
2SC2579A(A)



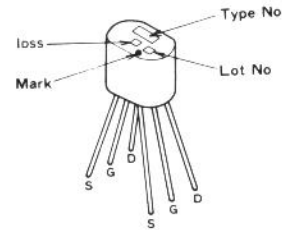
2SD438



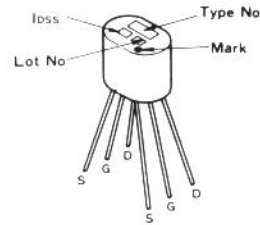
2SK246



2SK194



2SK129A



A

B

C

D

ADDITIONAL

 PIONEER®

# Service Manual

ORDER NO.  
ARP-692-0

STEREO AMPLIFIER

# A-77X(BK)

HE, HB, S, S/G


## A-77X HE

- For Servicing this model, please refer to the A-77X /KU Service manual (ARP-691-0) with the exception of this Additional Service Manual.

- This additional service manual is applicable to the HE, HB, S, S/G types.
- A-77X is the same as the A-77X [BK] except for the exterior design (color).

Type	Applicable model		Power equipment	Destination
	A-77X [BK]	A-77X		
HE	○	○	AC220V (240V) switchable	European continent
HB	○	—	AC240V (220V) switchable	United Kingdom
S	○	—	AC110V, 120V, AC220V, 240V (switchable)	General market
S/G	○	—	AC110V, 120V, AC220V, 240V (switchable)	U.S. Military

**NOTES:**

- Parts without part number cannot be supplied.
- The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your Parts Stock Control, the fast moving items are indicated with the marks **★★** and **★**.  
**★★ GENERALLY MOVES FASTER THAN ★**  
This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

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**PIONEER ELECTRONICS (USA) INC.** P.O. Box 1760, Long Beach, California 90801 U.S.A.  
TEL: (800) 421-1404, (800) 237-0424  
**PIONEER ELECTRONIC (EUROPE) N.V.** Keetberglaan 1, 2740 Beveren, Belgium TEL: 03/775-2808  
**PIONEER ELECTRONICS AUSTRALIA PTY. LTD.** 178-184 Boundary Road, Braeside, Victoria 3195, Australia  
TEL: (03) 580-9911

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The A-77X/HE, HB, S, S/G types are the same as the A-77X/KU type with the exception of the following sections.

**Contrast of Miscellaneous Parts**

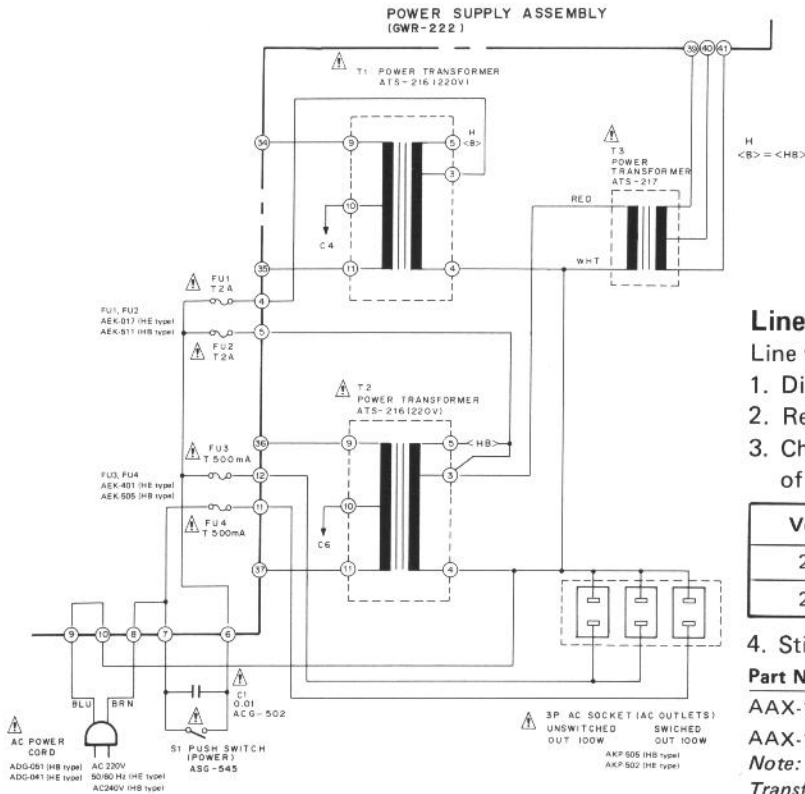
Mark	Symbol & Description	Part No.				
		KU type	HE type	HB type	S type	S/G type
⚠ ★	Power supply assembly	GWR-217	GWR-222	GWR-222	GWR-225	GWR-225
⚠ ★	T1 Power transformer (AC120V)	ATS-203	.....	.....	.....	.....
⚠ ★	T1 Power transformer (AC220V, 240V)	.....	ATS-216	ATS-216	.....	.....
⚠ ★	T1 Power transformer (AC110, 120, 220, 240V)	.....	.....	.....	ATS-224	ATS-224
⚠ ★	T2 Power transformer (AC120V)	ATS-203	.....	.....	.....	.....
⚠ ★	T2 Power transformer (AC220V, 240V)	.....	ATS-216	ATS-216	.....	.....
⚠ ★	T2 Power transformer (AC110, 120, 220, 240V)	.....	.....	.....	ATS-224	ATS-224
⚠ ★	T3 Power transformer (AC120V)	ATS-204	.....	.....	.....	.....
⚠ ★	T3 Power transformer (AC220V)	.....	ATS-217	ATS-217	.....	.....
⚠ ★	T3 Power transformer (AC120V only)	.....	.....	.....	ATS-226	ATS-226
⚠ ★★	FU1, FU2 Fuse (6.3A)	AEK-309	.....	.....	.....	.....
⚠ ★★	FU1, FU2 Fuse (T2A)	.....	AEK-017	AEK-511	.....	.....
⚠ ★★	FU3, FU4 Fuse (T500mA)	.....	AEK-401	AEK-505	.....	.....
⚠ ★★	FU1 - FU4 Fuse (3.15A)	.....	.....	.....	AEK-124	AEK-124
⚠ ★★	Line voltage selector	.....	.....	.....	AKX-507	AKX-507
⚠	AC socket 3P	AKP-504	AKP-502	AKP-505	AKP-504	AKP-504
	Side board	AMS-057	.....	.....	AMS-057	AMS-057
	Operating instructions (English)	ARB-660	.....	ARB-660	ARB-660	ARB-660
	Operating instructions (English/German/French/Italian)	.....	ARE-140	.....	.....	.....
	Strain relief	.....	AEC-882	AEC-882	.....	.....
⚠	AC power cord	ADG-089	ADG-041	ADG-051	ADG-087	ADG-087
	Nylon rivet (Black)	AEP-194	AEP-194	AEP-194	AEP-194	AEP-194
	Nyling rivet (Silver)	.....	AEP-210	.....	.....	.....
	Packing case (Black)	AHE-517	AHE-629	AHE-629	AHE-517	AHE-602
	Packing case (Silver)	.....	AHE-630	.....	.....	.....
	Carton spacer	.....	.....	.....	.....	AHB-152
	Screw (3 x 6)	.....	BBZ030P060FZK	BBZ030P060FZK	BBZ030P060FZK	BBZ030P060FZK
	Front panel assembly (black)	ANY-048	ANY-048	ANY-048	ANY-048	ANY-048
	Front panel assembly (silver)	.....	ANY-052	.....	.....	.....
	Bonnet case (Silver)	.....	ANE-573	.....	.....	.....
	Knob (VOLUME) (Silver)	.....	AAB-432	.....	.....	.....
	Rotary knob (PHONO-SELECTOR) (Silver)	.....	AAB-427	.....	.....	.....
	Rotary knob (BALANCE) (Silver)	.....	AAB-429	.....	.....	.....
	Rotary knob (BASS, TREBLE) (Silver)	.....	AAB-430	.....	.....	.....
	Push knob (POWER) (Silver)	.....	AAY-277	.....	.....	.....

**Power supply assembly (GWR-223, GWR-225)**

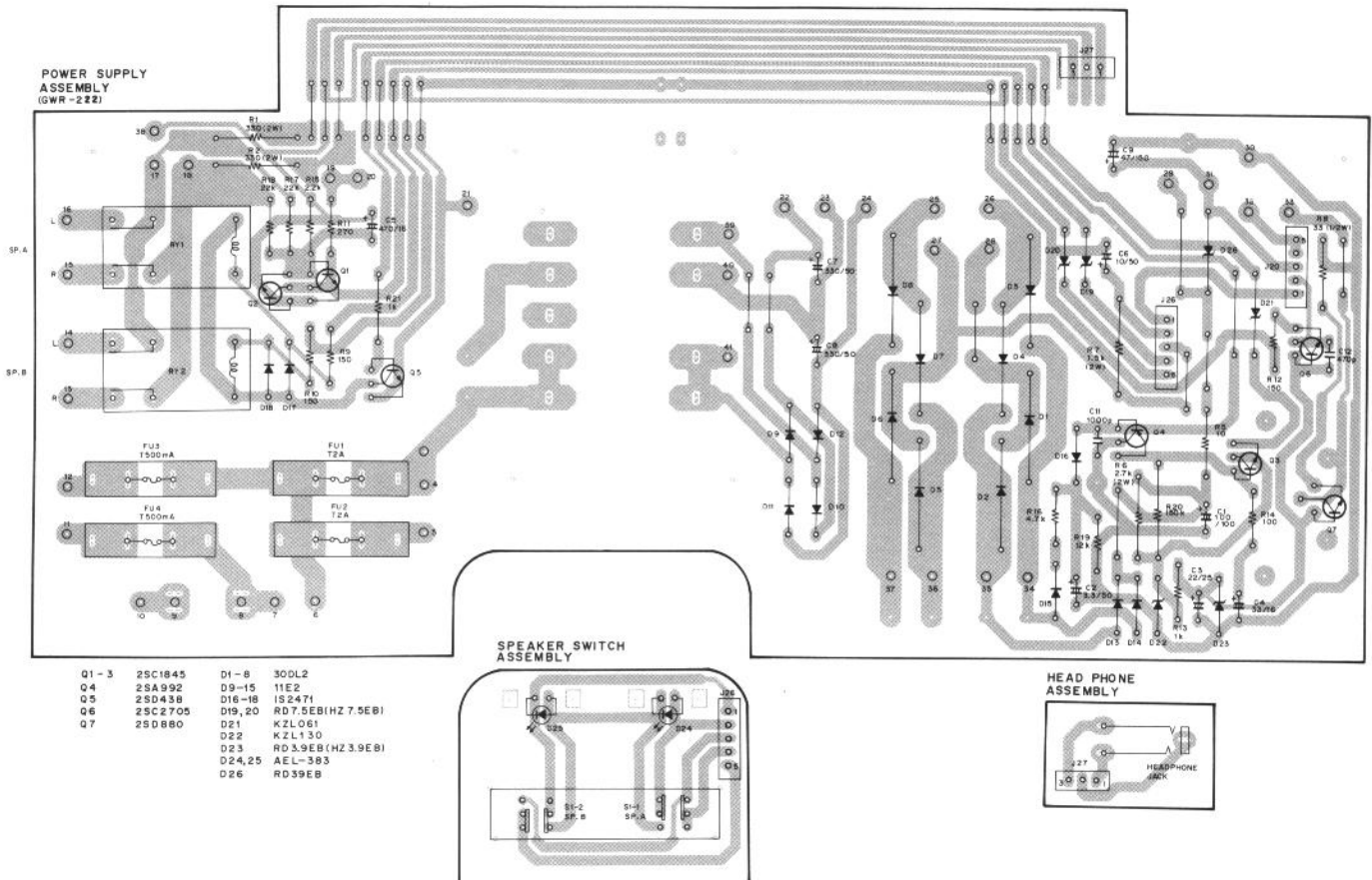
The power supply assembly GWR-223 and GWR-225 are the same as the (GWR-217) with the exception of the following section.

Mark	Symbol & Description	Part No.		
		GWR-217 KU type	GWR-222 HE, HB types	GWR-225 S, S/G types
⚠ ★	T1 Power transformer (120V)	ATS-204	.....	.....

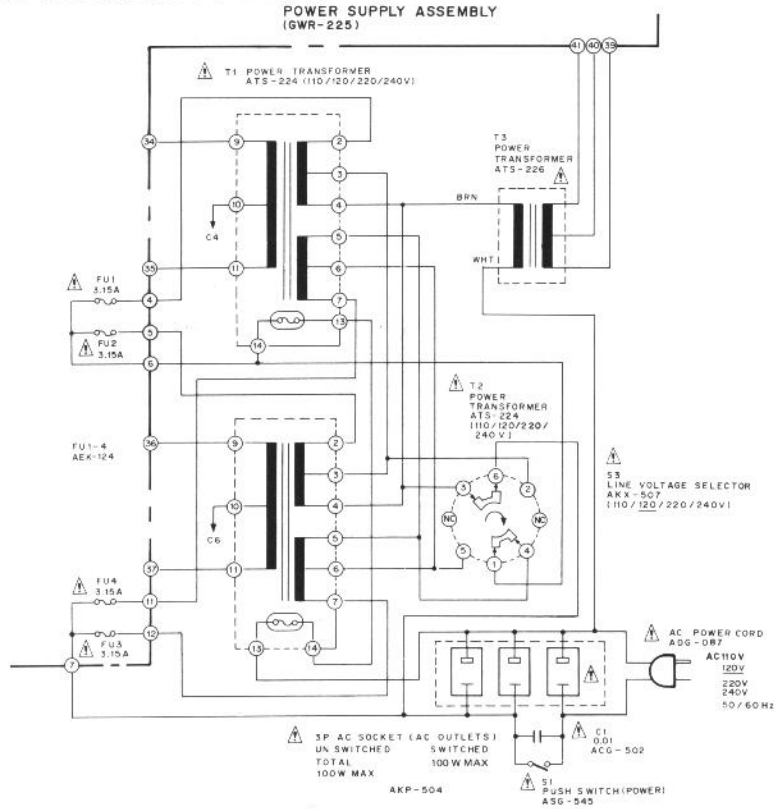
**SCHEMATIC DIAGRAM FOR HE, HB types**



**P.C. BOARD PATTERN FOR HE, HB types**



**SCHEMATIC DIAGRAM FOR S, S/G types**



**P.C. BOARD PATTERN FOR S, S/G types**

