

# TA-AX220

## SERVICE MANUAL

Canadian Model  
AEP Model  
UK Model  
E Model



### SPECIFICATIONS

#### Amplifier section

Continuous RMS power output  
(both channels driven simultaneously)

Canadian model:

At 40 Hz - 20 kHz, 0.08% THD  
50 + 50 watts (8 ohms)

AEP, UK, E model:

At 1 kHz, 5% THD  
40 + 40 watts (8 ohms)

At 1 kHz, 0.08% THD  
35 + 35 watts (8 ohms)

At 40 Hz - 20 kHz, 0.08% THD  
30 + 30 watts (8 ohms)

Peak music power output (E model)

300 W (8 ohms, 5% THD)

Music power output (E model)

150 W (8 ohms, 5% THD)

Power bandwidth (IHF)

20 Hz - 30 kHz

Dynamic headroom

1.2 dB ('78 IHF)

Harmonic distortion

Less than 0.08% at rated output

Intermodulation (IM) distortion

(60 Hz : 7 kHz = 4 : 1) Less than 0.08% at rated output

Frequency response

PHONO : RIAA equalization curve  $\pm 0.5$  dB

TUNER/CD  
VIDEO/TAPE } 15 Hz - 70 kHz  $\pm 3.0$  dB

Residual noise

Less than 100  $\mu$ V (8 ohms, network A)

Damping factor

36 (8 ohms, 1 kHz)

Inputs

	Sensitivity	Impedance	S/N (weighting network, input level)
TUNER CD VIDEO TAPE	150 mV	50 kohms	98 dB 85 dB* (A, 150 mV)

\* '78 IHF

Outputs

REC OUT

Voltage 150 mV

Impedance 4.7 k ohms

SPEAKER

Accepts speakers of  
8 - 16 ohms.

HEADPHONES

Accepts low impedance head-  
phones.

— Continued on page 2 —

ATTENTION AU COMPOSANT AYANT RAPPORT  
À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET  
UNE MARQUE  $\triangle$  SUR LES DIAGRAMMES SCHE-  
MATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES  
POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REM-  
PLACER CES COMPOSANTS QUE PAR DES PIÈCES  
SONY DONT LES NUMÉROS SONT DONNÉS DANS CE  
MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR  
SONY.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  
 $\triangle$  ON THE SCHEMATIC DIAGRAMS AND IN THE  
PARTS LIST ARE CRITICAL TO SAFE OPERATION.  
REPLACE THESE COMPONENTS WITH SONY PARTS  
WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS  
MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

INTEGRATED STEREO AMPLIFIER  
**SONY**





**Tone controls**  
**BASS**  
 ±8 dB at 100 Hz (turnover freq. 300 Hz)  
**TREBLE**  
 ±7 dB at 10 kHz (turnover freq. 3 kHz)

**Base boost control**  
 5 dB at 60 Hz

**General System**  
 Preamp section: low-noise IC NF type equalizer amplifier  
 Power amplifier section: quasi-complementary SEPP OTL OCL power amplifier with all stages direct coupled

**Power requirements**  
 Canadian model: 120 V ac, 60 Hz  
 AEP, G-AEP model: 220 V ac (or 240 V ac adjustable by authorized Sony personnel), 50/60 Hz  
 UK model: 240 V ac (or 220 V ac adjustable by authorized Sony personnel), 50 Hz  
 E model: 120, 220 or 240 V ac adjustable, 50/60 Hz

**Power consumption**  
 Canadian model: 170 W  
 AEP, G-AEP, E model: 80 W  
 UK model: 65 W

**AC outlets**  
 Canadian, E model:  
 2 switched total 100 watts max.  
 1 unswitched 100 watts max.  
 AEP, G-AEP, UK model:  
 3 switched total 100 watts max.

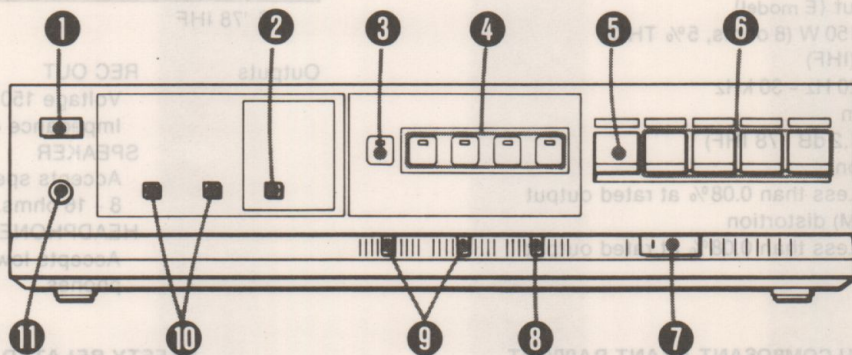
**Dimensions**  
 Canadian, UK and E model:  
 Approx. 430 x 106 x 250 mm  
 (17 x 4¼ x 9⅞ inches)  
 AEP, G-AEP model:  
 Approx. 430 x 106 x 255 mm  
 (17 x 4¼ x 10⅛ inches)  
 including projecting parts and controls

**Weight**  
 Canadian model:  
 Approx. 5.5 kg (12 lbs 3 oz) net  
 AEP, G-AEP, UK and E model:  
 Approx. 4.6 kg (10 lbs 3 oz) net

## FEATURES

- Power output of 30 + 30 watts (40 Hz - 20 kHz, 0.08 % THD).
- Independent CD inputs for connecting a CD player to your stereo system.
- Ability to drive two pairs of speaker systems either individually or simultaneously.

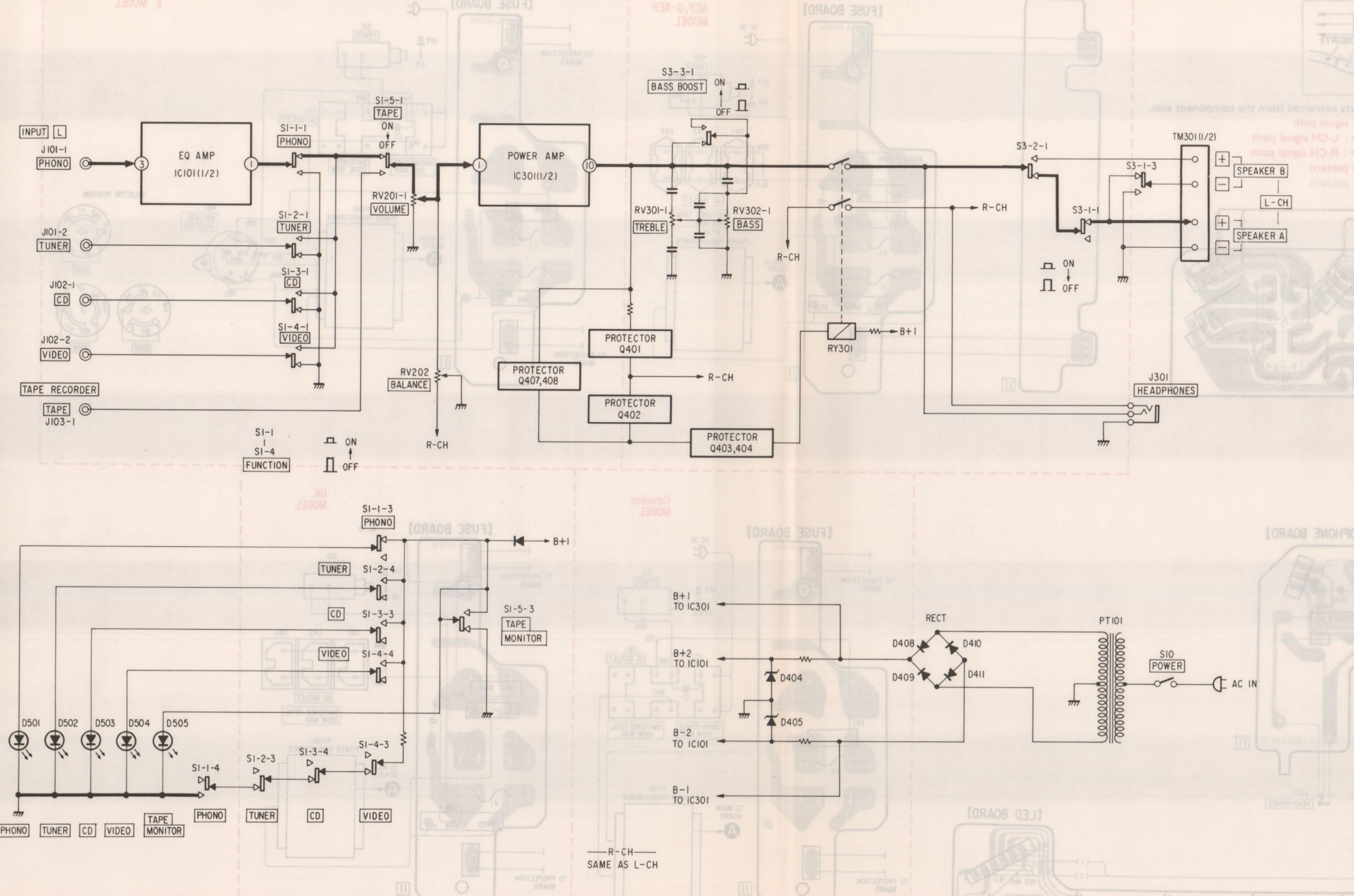
## FUNCTION OF CONTROLS



- ① POWER switch :
- ② BASS BOOST switch :
- ③ TAPE indicator :
- ④ FUNCTION display :
- ⑤ MONITOR TAPE button :
- ⑥ FUNCTION buttons :
- ⑦ VOLUME control :
- ⑧ BALANCE control :
- ⑨ BASS and TREBLE tone controls :
- ⑩ SPEAKERS select buttons :
- ⑪ HEADPHONES jack (stereo phone jack) :

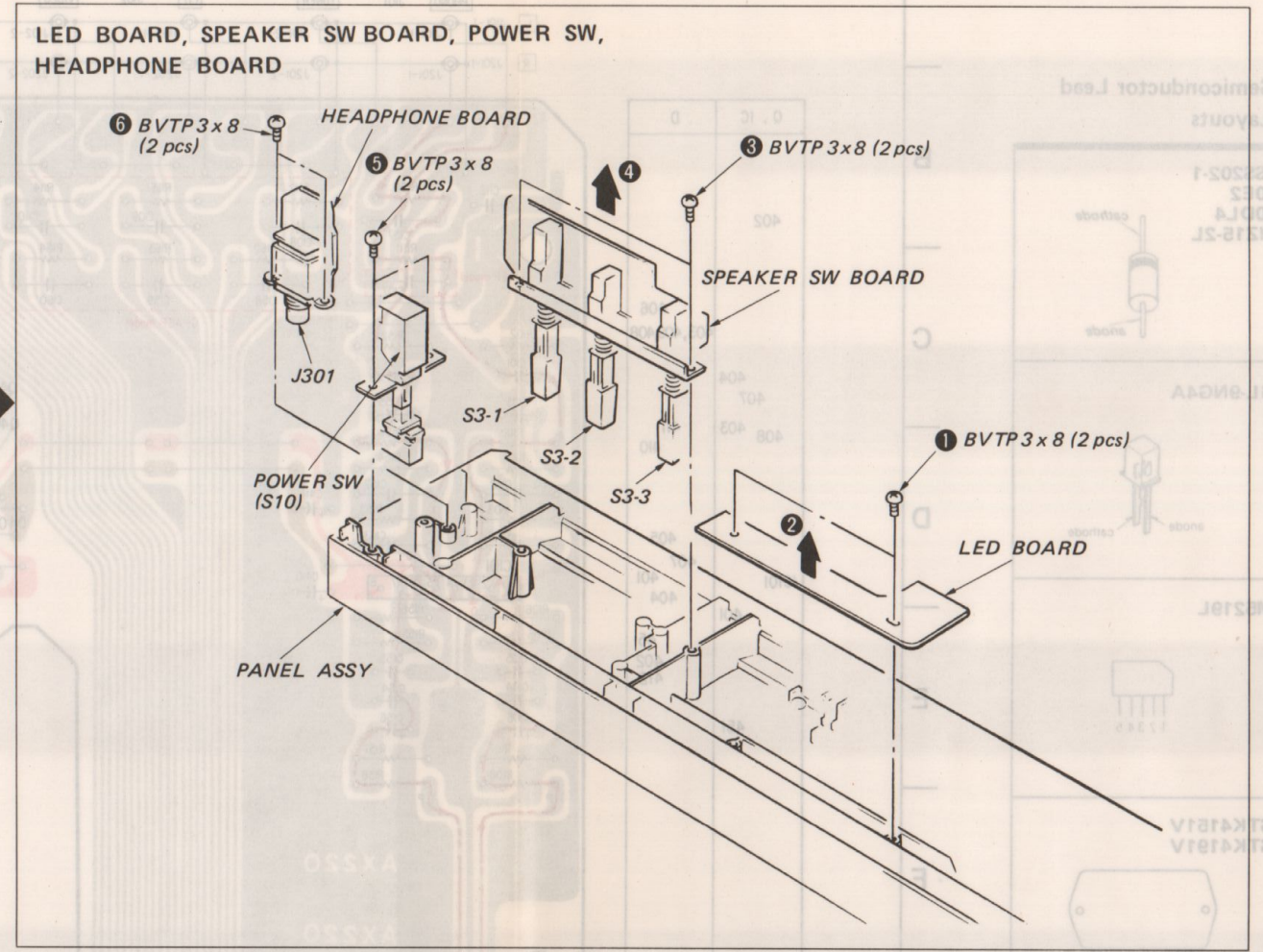
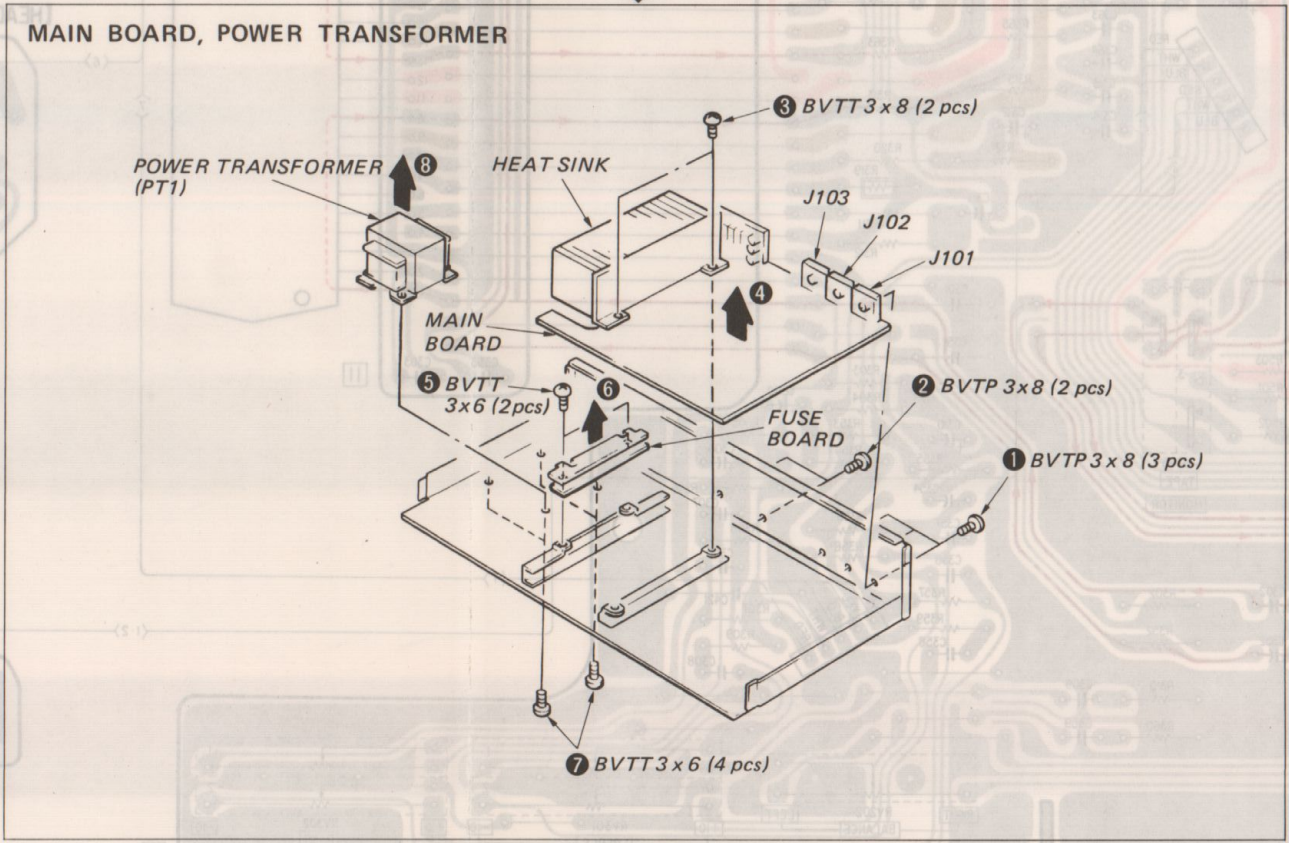
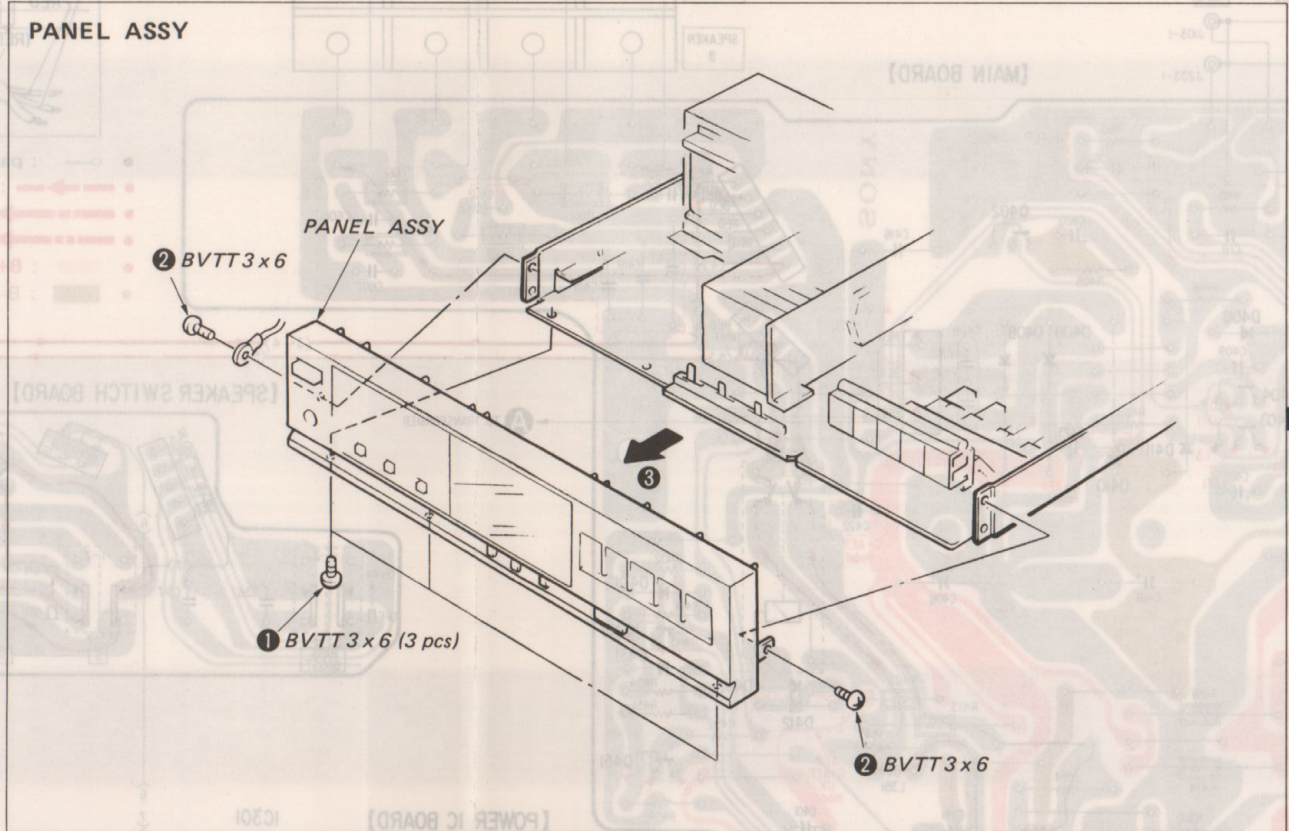


**SECTION 1  
BLOCK DIAGRAM**



**SECTION 2  
DISASSEMBLY**

• Follow the disassembly procedure in the numerical order given.



**MODEL IDENTIFICATION**  
- Specification Label -

**SONY** MODEL NO. TA-AX220

**INTEGRATED STEREO AMPLIFIER**

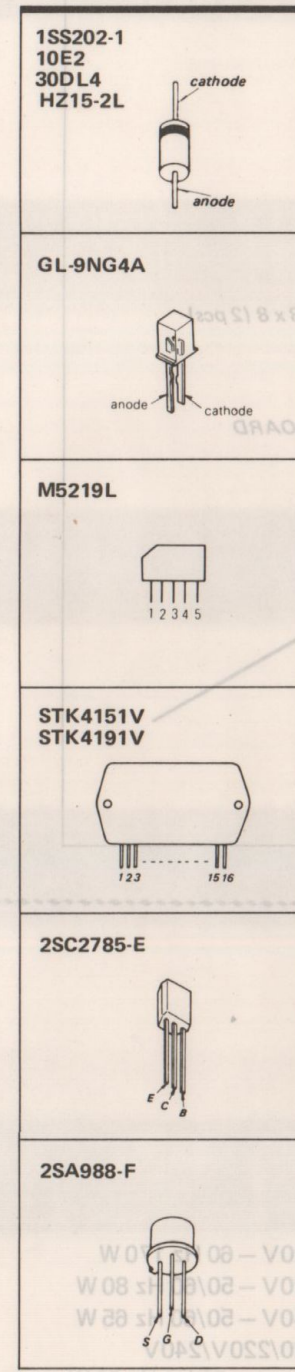
SERIAL NO.  
MADE IN JAPAN

{	Canadian model:	AC: 120V - 60 Hz 170 W
	AEP, G-AEP model:	AC: 220V - 50/60 Hz 80 W
	UK model:	AC: 240V - 50/60 Hz 65 W
	E model:	AC: 120/220V/240V - 50/60 Hz 80 W



**SECTION 3  
DIAGRAMS**

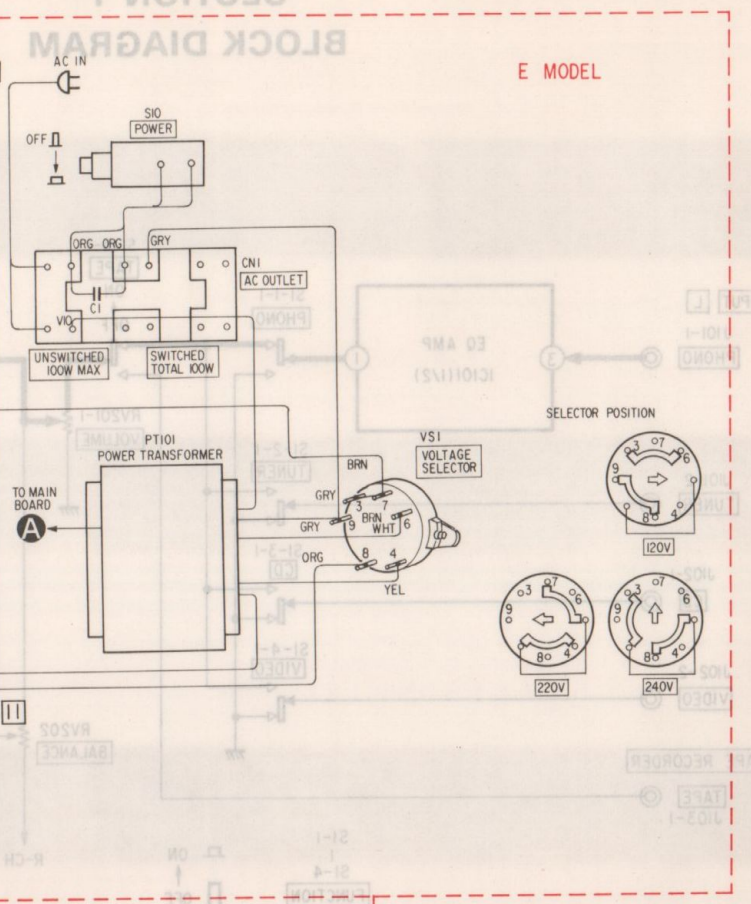
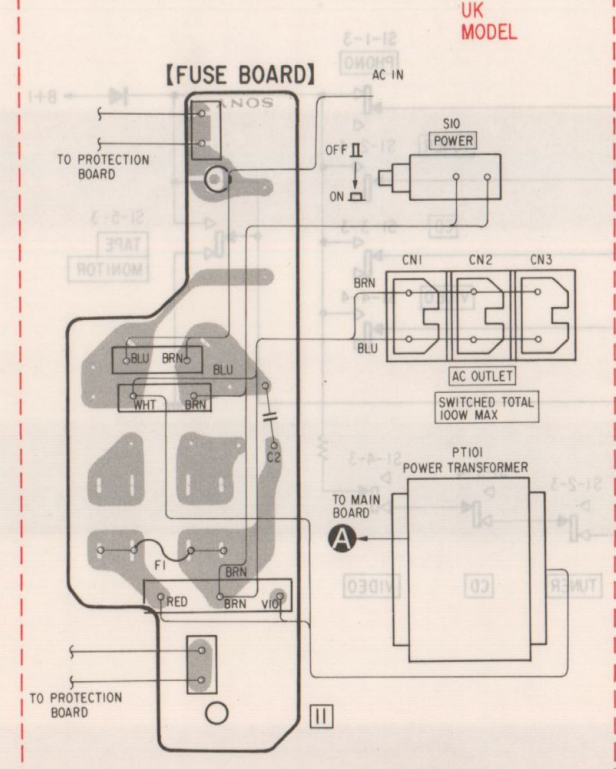
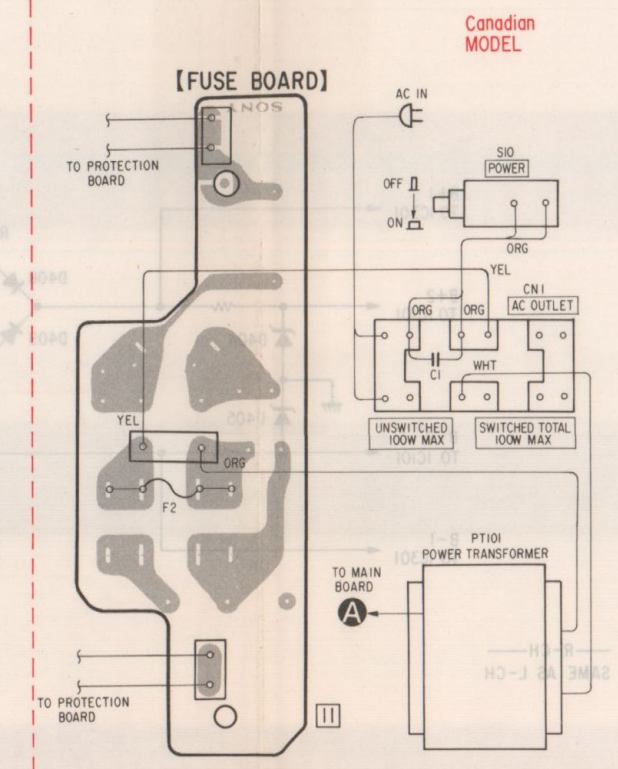
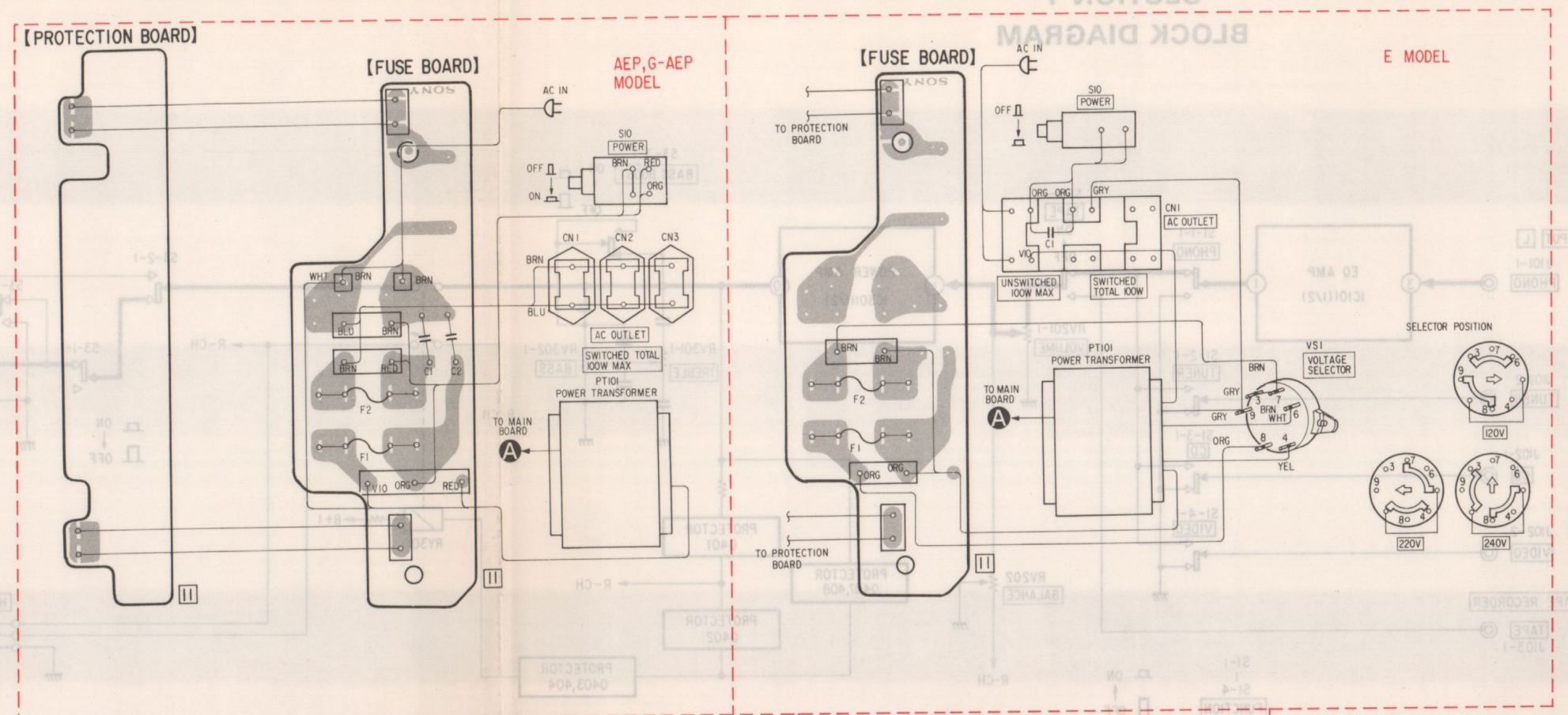
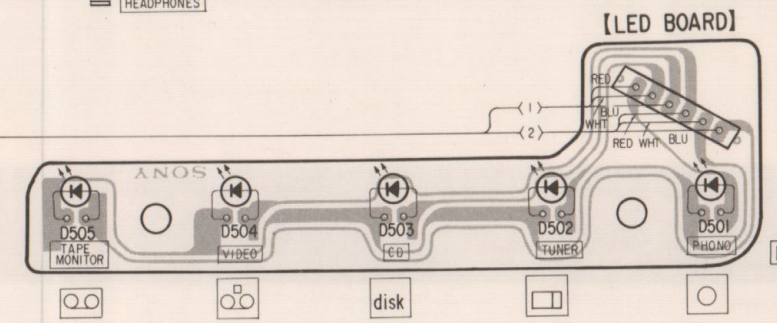
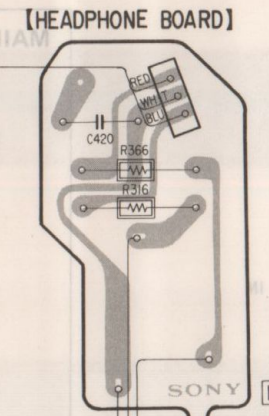
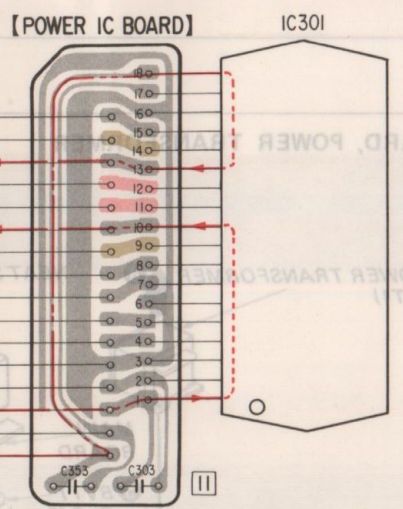
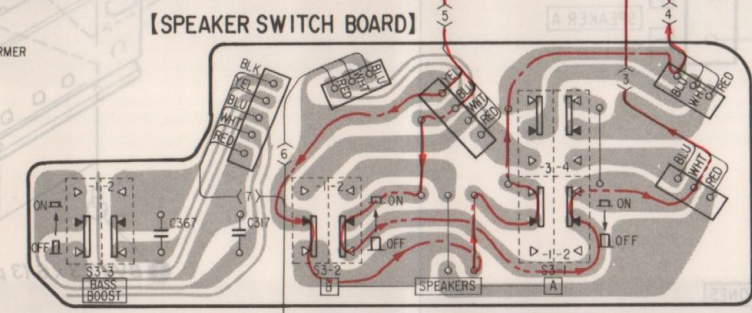
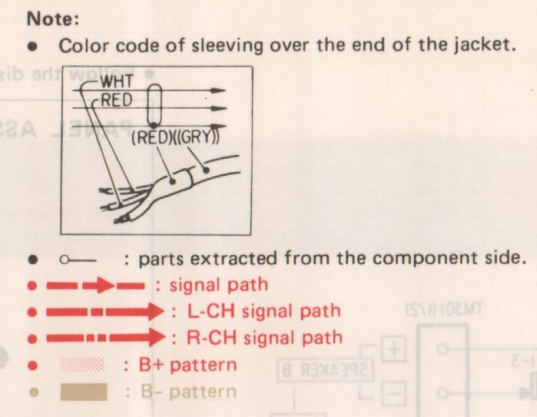
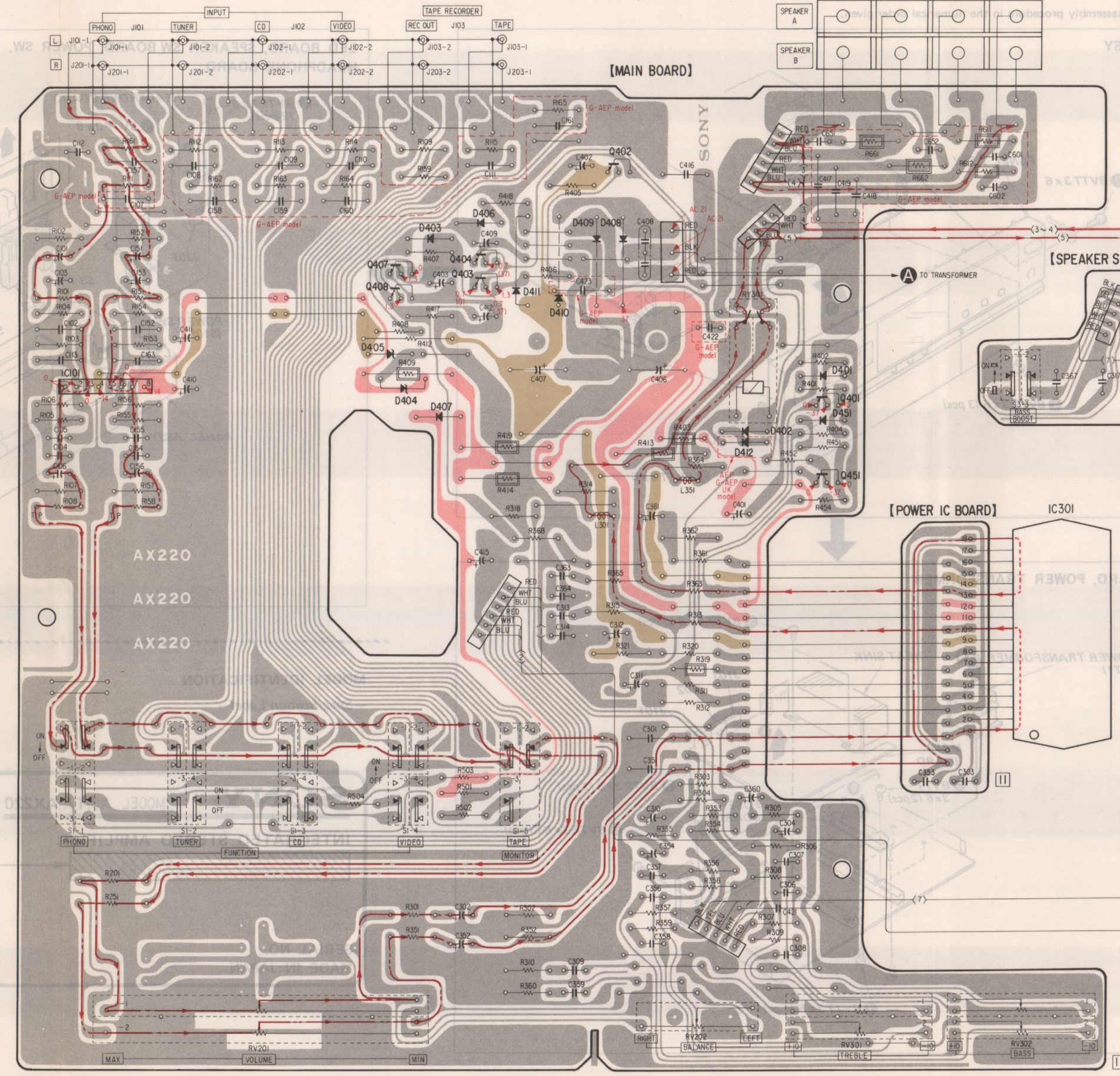
**Semiconductor Lead  
Layouts**



**3-1. MOUNTING DIAGRAM**

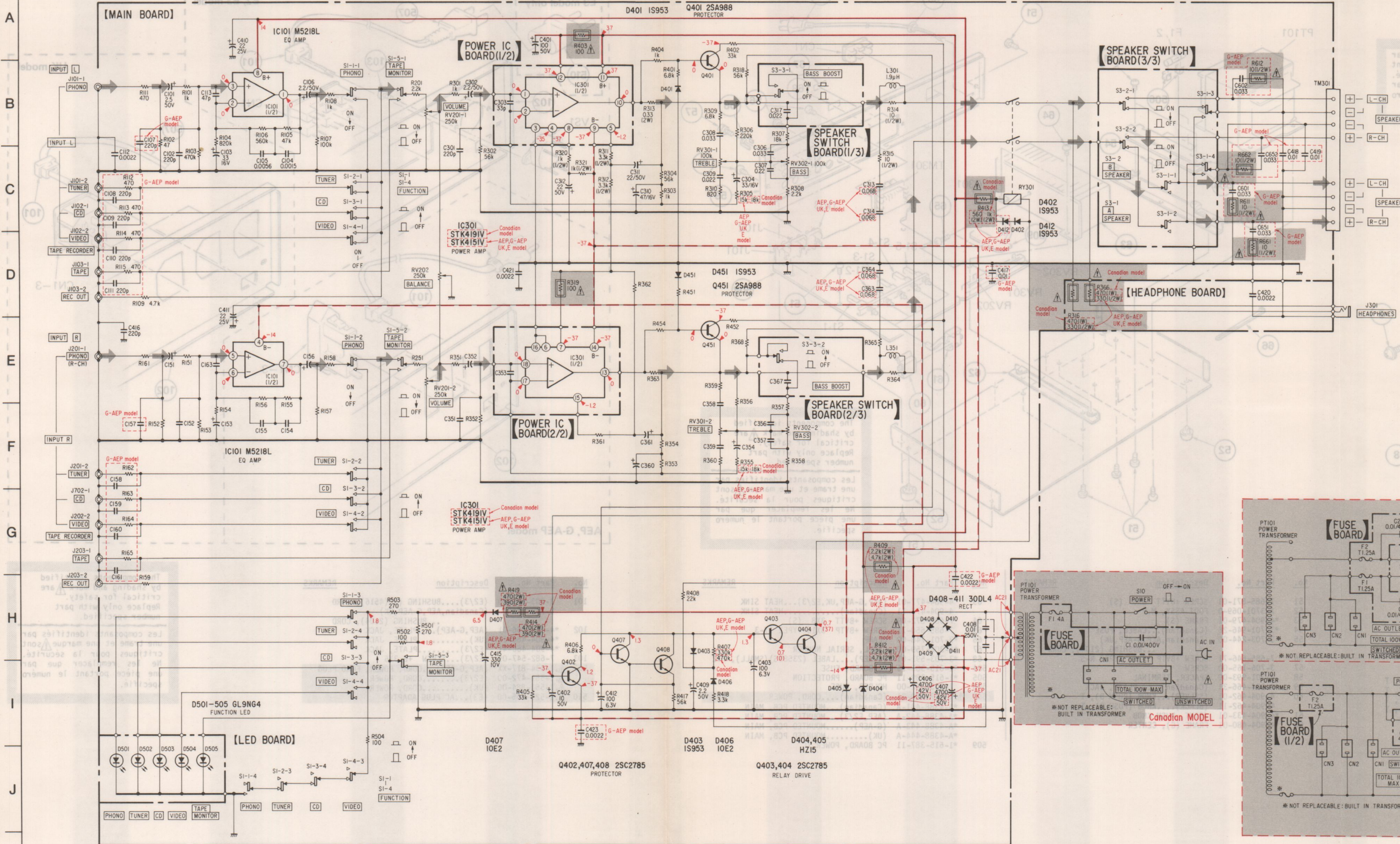
A  
B  
C  
D  
E  
F  
G  
H  
I  
J

Q. IC	D
402	406
403, 409, 408	
404	411
407	410
408	403
IC101	405
401	401
401	404
451	402
402	412
451	451
IC301	
505, 503, 501	
504, 502	
Q. IC	D





3-2. SCHEMATIC DIAGRAM



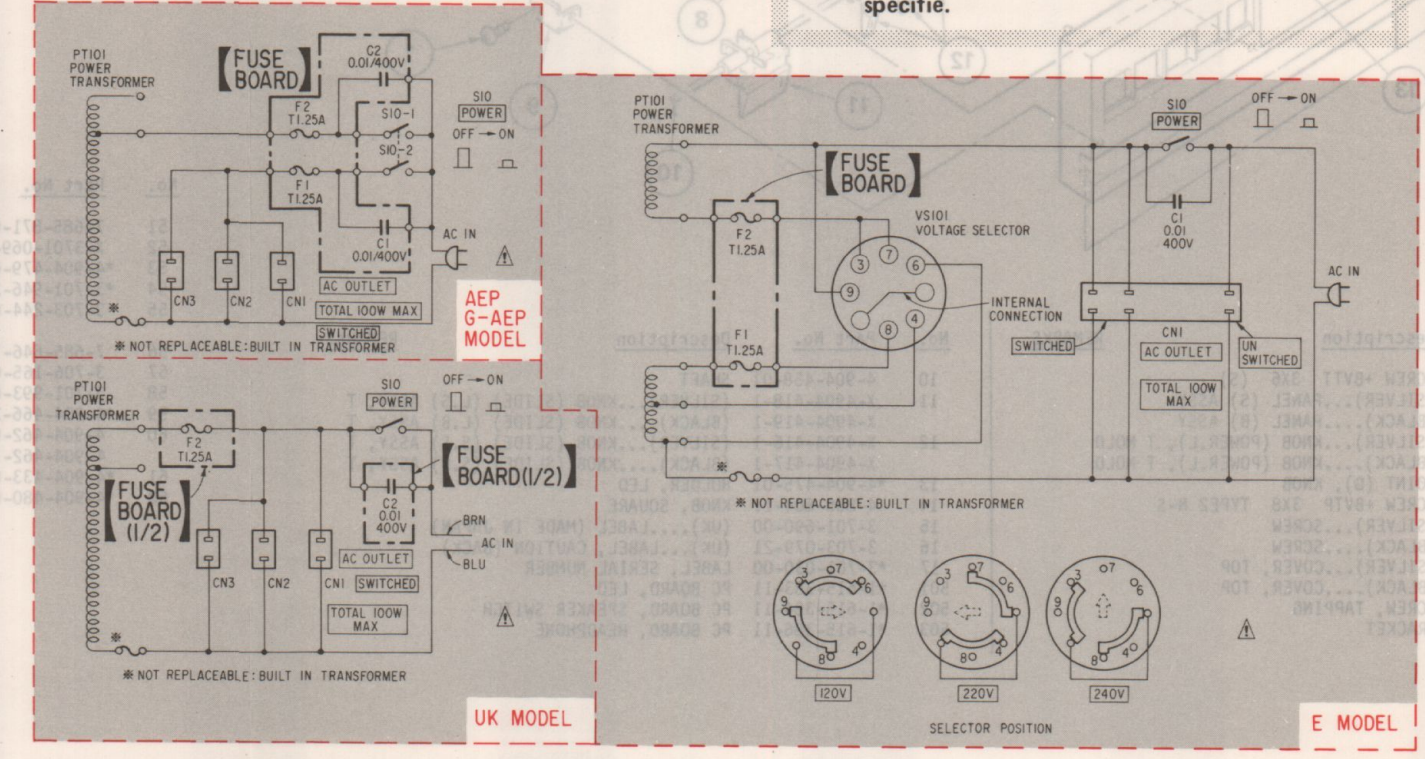
- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.
  - : signal path.
  - ⚡ : nonflammable resistor.
  - : B+ bus.
  - Voltages are dc with respect to ground unless otherwise noted.
  - Readings are taken under no-signal conditions with VOM (50k $\Omega$ /V).
  - Voltage variations may be noted due to normal production tolerances.
  - Switches:

Ref. No.	Switch	Position
S1-1	PHONO	ON
S1-2	TUNER	OFF
S1-3	CD	OFF
S1-4	VIDEO	OFF
S1-5	TAPE MONITOR	OFF
S3-1	SPEAKER A	ON
S3-2	SPEAKER B	OFF
S3-3	BASS BOOST	OFF
S10	POWER	OFF

Note: Voltages are measured with a VOM (50k $\Omega$ /V).

Note: The components identified by shading and mark ⚡ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et une marque ⚡ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



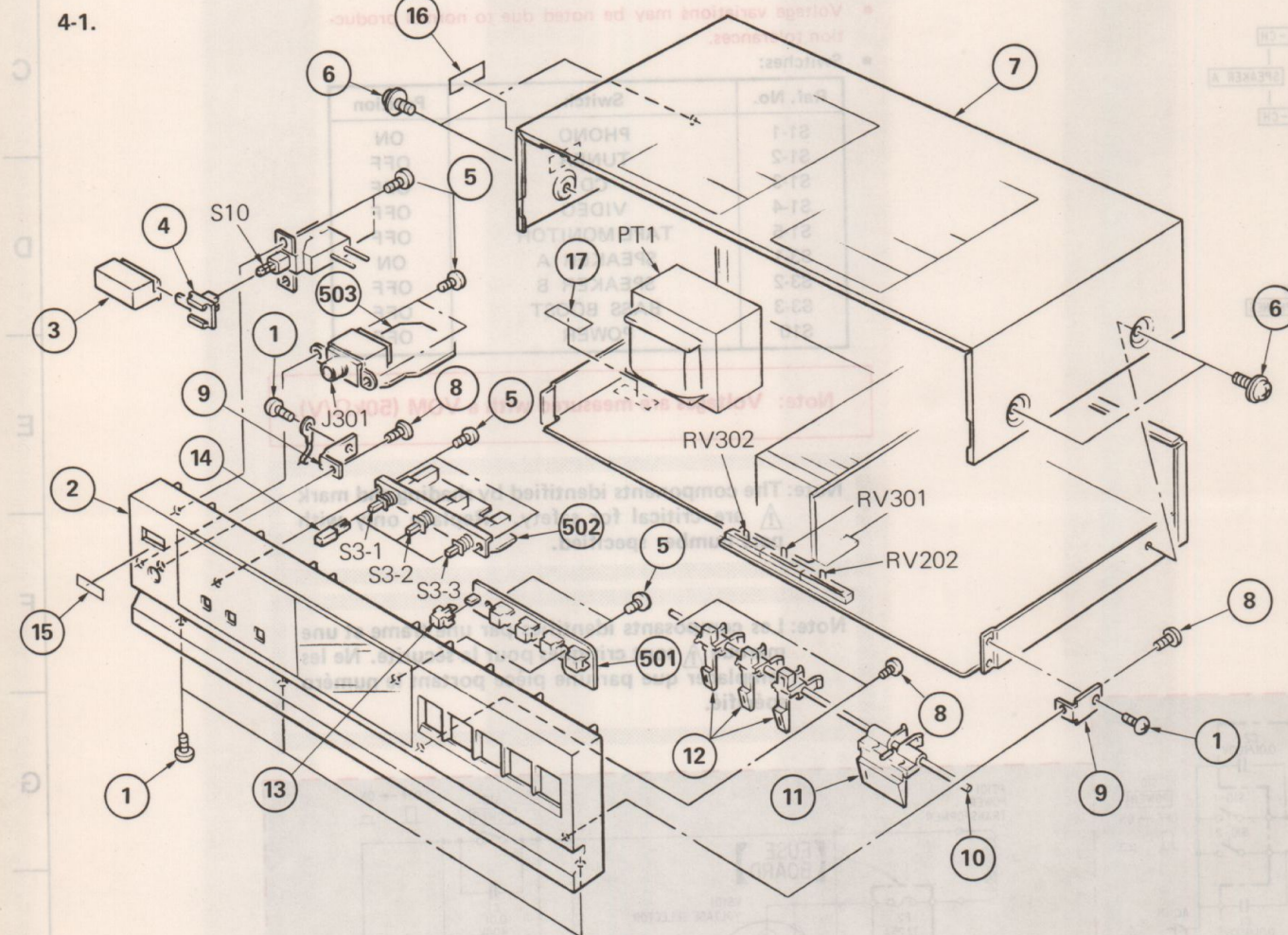


**SECTION 4**  
**EXPLODED VIEWS AND PARTS LIST**

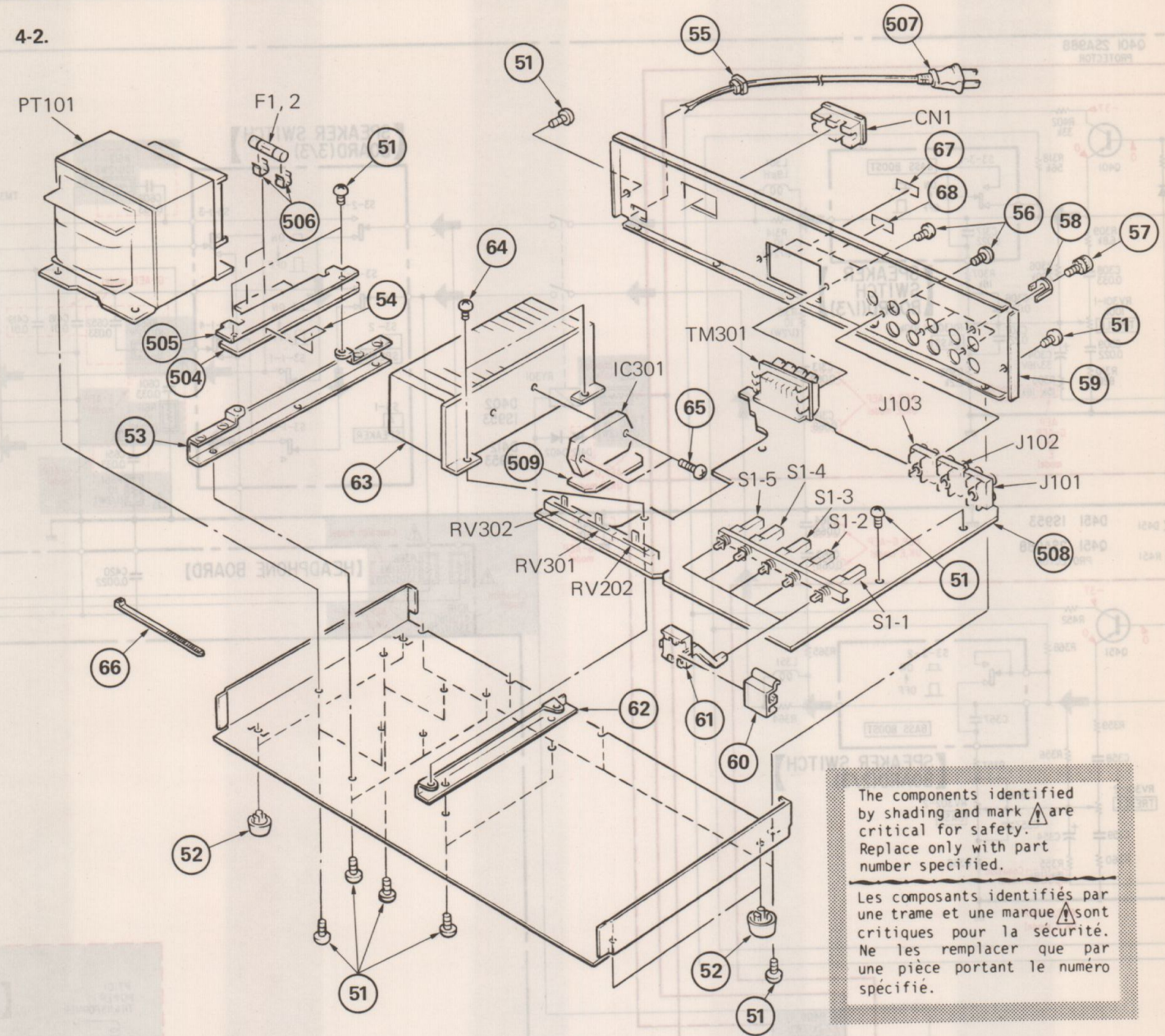
**NOTE:**  
The mechanical parts with no reference number in the exploded views are not supplied.  
Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.  
The construction parts of an assembled part are indicated with a collation number on the remark column.

The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

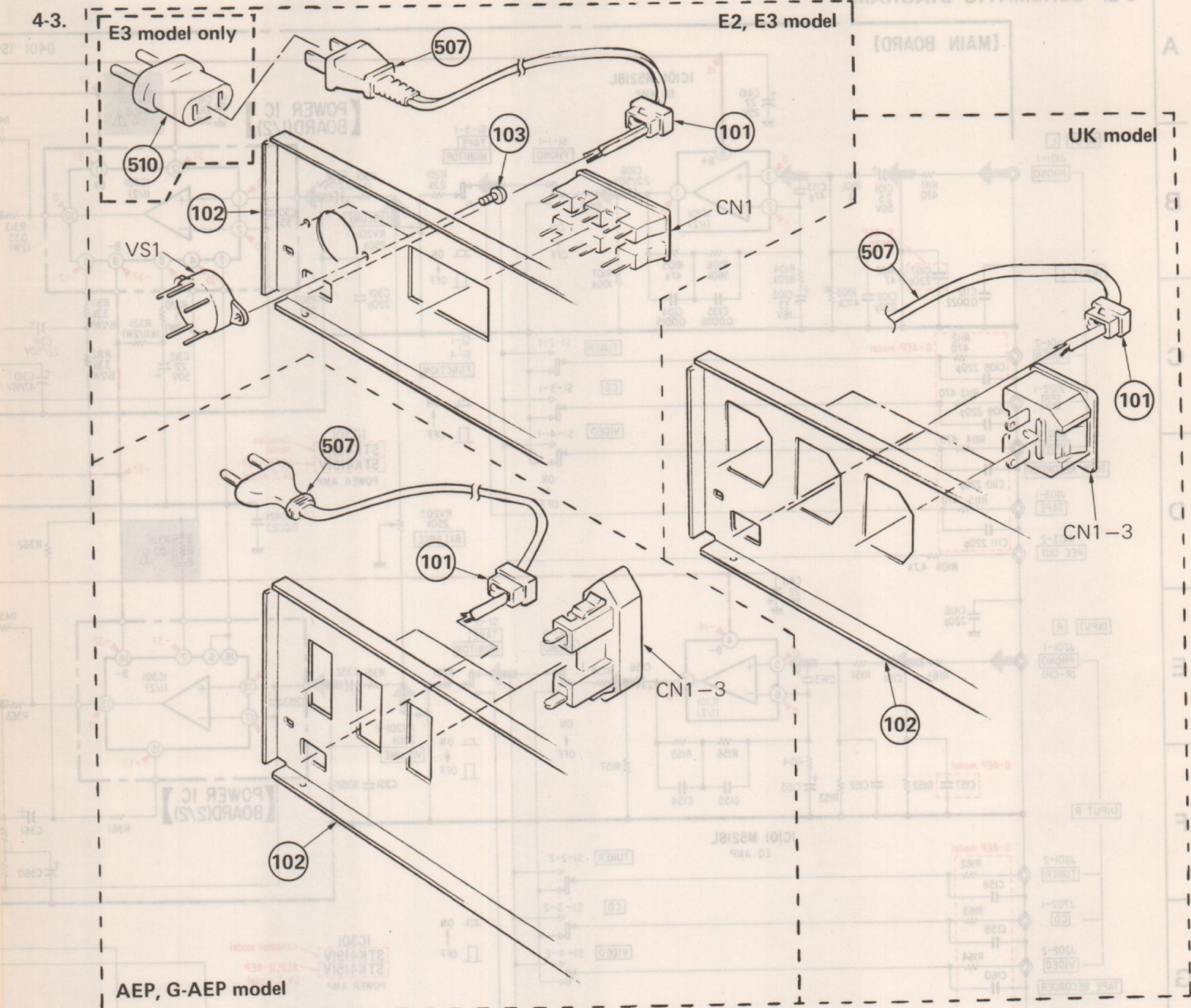


No.	Part No.	Description	REMARKS	No.	Part No.	Description	REMARKS
1	7-685-871-01	SCREW +BVTT 3X6 (S)		10	4-904-458-01	SHAFT	
2	X-4904-420-1	(SILVER)...PANEL (S) ASSY		11	X-4904-418-1	(SILVER)...KNOB (SLIDE) (L.S) ASSY, T	
3	X-4904-421-1	(BLACK)...PANEL (B) ASSY		12	X-4904-419-1	(BLACK)...KNOB (SLIDE) (L.B) ASSY, T	
4	3-318-911-01	(SILVER)...KNOB (POWER.L), T MOLD		13	X-4904-416-1	(SILVER)...KNOB (SLIDE) (S.S) ASSY, T	
5	3-318-911-11	(BLACK)...KNOB (POWER.L), T MOLD		14	X-4904-417-1	(BLACK)...KNOB (SLIDE) (S.B) ASSY, T	
6	*4-902-831-01	JOINT (G), KNOB		15	*4-904-475-01	HOLDER, LED	
7	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S		16	4-855-804-11	KNOB, SQUARE	
8	4-889-321-01	(SILVER)...SCREW		17	3-701-690-00	(UK)...LABEL (MADE IN JAPAN)	
9	4-889-321-11	(BLACK)...SCREW		501	3-703-079-21	(UK)...LABEL, CAUTION (BACK)	
10	4-904-474-01	(SILVER)...COVER, TOP		502	*3-701-030-00	LABEL, SERIAL NUMBER	
11	4-904-474-11	(BLACK)...COVER, TOP		503	*1-615-383-11	PC BOARD, LED	
12	3-703-137-00	SCREW, TAPPING		504	*1-615-384-11	PC BOARD, SPEAKER SWITCH	
13	*4-904-476-01	BRACKET		505	*1-615-386-11	PC BOARD, HEADPHONE	



The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.  
Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

No.	Part No.	Description	REMARKS	No.	Part No.	Description	REMARKS
51	7-685-871-01	SCREW +BVTT 3X6 (S)		63	4-904-477-01	(AEP,G-AEP,UK,E2/3)...HEAT SINK	
52	X-3701-069-0	FOOT ASSY, M.F		64	4-904-477-11	(Canadian)...HEAT SINK	
53	*4-904-479-01	FRAME (S)		65	7-685-872-09	SCREW +BVTT 3X8 (S)	
54	*3-701-946-26	(Canadian)...LABEL, FUSE		66	7-685-650-71	SCREW +BVTP 3X16 TYPE2 IT-3	
55	3-703-244-00	(Canadian,AEP,G-AEP,UK)...BUSHING (2104), CORD		67	*3-701-748-00	CLAMP	
56	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S		68	*4-302-759-00	LABEL, SERIAL NUMBER	
57	3-706-165-00	SCREW		69	*3-703-591-01	(G-AEP)...LABEL (23585S) (SMALL), FTZ	
58	3-701-993-00	SPACER, TERMINAL		70	*1-615-385-11	PC BOARD, FUSE	
59	*4-904-466-31	(Canadian)...PLATE, JACK		71	*1-615-389-11	PC BOARD, PROTECTION	
60	4-904-462-01	(SILVER)...KNOB (PUSH D), T		72	1-533-162-00	HOLDER, FUSE	
61	4-904-462-11	(BLACK)...KNOB (PUSH D), T		73	*1-557-480-21	(Canadian)...CORD, POWER	
62	*4-904-433-01	JOINT, PUSH KNOB		74	*A-4388-441-A	(Canadian)...MOUNTED PCB, MAIN	
63	*4-904-480-01	FRAME (C), CENTER		75	*A-4388-442-A	(AEP,E2/3)...MOUNTED PCB, MAIN	
				76	*A-4388-443-A	(G-AEP)...MOUNTED PCB, MAIN	
				77	*A-4388-444-A	(UK)...MOUNTED PCB, MAIN	
				78	*1-615-387-11	PC BOARD, POWER IC	



No.	Part No.	Description	REMARKS
79	507	CORD, POWER, EURO PLUG	
80	510	AC PLUG ADAPTOR	
81	101	(E2/3)...BUSHING (S)(4516), CORD	
82	102	(Canadian,AEP,G-AEP,UK)...BUSHING (2104), CORD	
83	103	(AEP,G-AEP)...PLATE, JACK	
84	101	(UK)...PLATE, JACK	
85	102	(E2/3)...PLATE, JACK	
86	103	(E2/3)...SCREW +B 3X6	
87	101	(AEP,G-AEP)...CORD, POWER, EURO PLUG	
88	102	(E2/3)...CORD, POWER	
89	103	(UK)...CORD, POWER	
90	101	(E3)...AC PLUG ADAPTOR	

The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.  
Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



## SECTION 5 ELECTRICAL PARTS LIST

**NOTE:**

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

**CAPACITORS:**  
MF:µF, PF:µµF.  
**RESISTORS**  
• All resistors are in ohms.  
• F : nonflammable

**COILS**  
• MMH : mH, UH : µH

**SEMICONDUCTORS**

In each case, U : µ, for example:  
UA...: µA..., UPA...: µPA..., UPC...: µPC,  
UPD...: µPD...

The components identified by shading and mark **△** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **△** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

ELECTRICAL PARTS

Ref.No.	Part No.	Description
501	*1-615-383-11	PC BOARD, LED
502	*1-615-384-11	PC BOARD, SPEAKER SWITCH
503	*1-615-386-11	PC BOARD, HEADPHONE
504	*1-615-385-11	PC BOARD, FUSE
505	*1-615-389-11	PC BOARD, PROTECTION
506	1-533-162-00	HOLDER, FUSE
507	△.1-534-817-XX △.1-551-472-00 △.1-551-884-00 △.1-557-480-21	(AEP,G-AEP)...CORD, POWER, EURO PLUG (E2/3).....CORD, POWER (UK).....CORD, POWER (Canadian)....CORD, POWER
508	*A-4388-441-A *A-4388-442-A *A-4388-443-A *A-4388-444-A	(Canadian)...MOUNTED PCB, MAIN (AEP,E2/3)...MOUNTED PCB, MAIN (G-AEP).....MOUNTED PCB, MAIN (UK).....MOUNTED PCB, MAIN
509	*1-615-387-11	PC BOARD, POWER IC
510	△.1-526-565-00	(E3)...AC PLUG ADAPTOR
511	*1-535-139-00	BASE POST 19MM (10MM PITCH) 2P
512	*1-535-140-00	(AEP,G-AEP,UK)...BASE POST 19MM (10MM PITCH) 3P
514	*1-560-708-00	PIN, CONNECTOR 2P
515	*1-562-249-00	SOCKET, CONNECTOR 4P
516	*1-562-250-00	SOCKET, CONNECTOR 5P
517	*1-562-251-00	SOCKET, CONNECTOR 6P
518	*1-562-327-00	SOCKET, CONNECTOR 3P
C1	1-161-744-00	(Canadian,AEP,G-AEP,E2/3) ...CERAMIC 0.01MF 400V
C2	1-161-744-00	(AEP,G-AEP,UK)...CERAMIC 0.01MF 400V
C101	1-123-381-00	ELECT 2.2MF 20% 50V
C102	1-161-315-00	CERAMIC 220PF 10% 50V
C103	1-123-318-00	ELECT 33MF 20% 16V
C104	1-106-176-00	MYLAR 0.0015MF 5% 50V
C105	1-106-190-00	MYLAR 0.0056MF 5% 50V
C106	1-123-381-00	ELECT 2.2MF 20% 50V
C107	1-161-315-00	(G-AEP)...CERAMIC 220PF 10% 50V
C108	1-161-315-00	(G-AEP)...CERAMIC 220PF 10% 50V
C109	1-161-315-00	(G-AEP)...CERAMIC 220PF 10% 50V
C110	1-161-315-00	(G-AEP)...CERAMIC 220PF 10% 50V
C111	1-161-315-00	(G-AEP)...CERAMIC 220PF 10% 50V
C112	1-102-121-00	CERAMIC 0.0022MF 10% 50V
C113	1-161-267-00	CERAMIC 47PF 5% 50V
C151	1-123-381-00	ELECT 2.2MF 20% 50V
C152	1-161-315-00	CERAMIC 220PF 10% 50V
C153	1-123-318-00	ELECT 33MF 20% 16V
C154	1-106-176-00	MYLAR 0.0015MF 5% 50V
C155	1-106-190-00	MYLAR 0.0056MF 5% 50V
C156	1-123-381-00	ELECT 2.2MF 20% 50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description
C157	1-161-315-00	(G-AEP)...CERAMIC 220PF 10% 50V
C158	1-161-315-00	(G-AEP)...CERAMIC 220PF 10% 50V
C159	1-161-315-00	(G-AEP)...CERAMIC 220PF 10% 50V
C160	1-161-315-00	(G-AEP)...CERAMIC 220PF 10% 50V
C161	1-161-315-00	(G-AEP)...CERAMIC 220PF 10% 50V
C163	1-161-267-00	CERAMIC 47PF 5% 50V
C301	1-161-315-00	CERAMIC 220PF 10% 50V
C302	1-123-381-00	ELECT 2.2MF 20% 50V
C303	1-102-963-00	CERAMIC 33PF 10% 50V
C304	1-123-318-00	ELECT 33MF 20% 16V
C306	1-136-159-00	FILM 0.033MF 5% 50V
C307	1-136-169-00	FILM 0.22MF 5% 50V
C308	1-106-184-00	MYLAR 0.0033MF 5% 50V
C309	1-136-157-00	FILM 0.022MF 5% 50V
C310	1-123-332-00	ELECT 47MF 20% 16V
C311	1-123-357-00	ELECT 22MF 20% 50V
C312	1-123-357-00	ELECT 22MF 20% 50V
C313	1-136-163-00	FILM 0.068MF 5% 50V
C314	1-136-163-00	FILM 0.068MF 5% 50V
C317	1-136-157-00	FILM 0.022MF 5% 50V
C351	1-161-315-00	CERAMIC 220PF 10% 50V
C352	1-123-381-00	ELECT 2.2MF 20% 50V
C353	1-102-963-00	CERAMIC 33PF 10% 50V
C354	1-123-318-00	ELECT 33MF 20% 16V
C356	1-136-159-00	FILM 0.033MF 5% 50V
C357	1-136-169-00	FILM 0.22MF 5% 50V
C358	1-106-184-00	MYLAR 0.0033MF 5% 50V
C359	1-136-157-00	FILM 0.022MF 5% 50V
C360	1-123-332-00	ELECT 47MF 20% 16V
C361	1-123-357-00	ELECT 22MF 20% 50V
C363	1-136-163-00	FILM 0.068MF 5% 50V
C364	1-136-163-00	FILM 0.068MF 5% 50V
C367	1-136-157-00	FILM 0.022MF 5% 50V
C401	1-123-360-00	ELECT 100MF 20% 50V
C402	1-123-356-00	ELECT 10MF 20% 50V
C403	1-123-307-00	ELECT 100MF 20% 6.3V
C406	1-124-362-00	(AEP,G-AEP,UK,E2/3)...ELECT 4700MF 20% 42V
C406	1-124-588-00	(Canadian)...ELECT 4700MF 20% 50V
C407	1-124-362-00	(AEP,G-AEP,UK,E2/3)...ELECT 4700MF 20% 42V
C407	1-124-588-00	(Canadian)...ELECT 4700MF 20% 50V



ELECTRICAL PARTS

Ref.No.	Part No.	Description			
C408	1-102-394-00	CERAMIC			250V
C409	1-123-381-00	ELECT	2.2MF	20%	50V
C410	1-123-330-00	ELECT	22MF	20%	25V
C411	1-123-330-00	ELECT	22MF	20%	25V
C412	1-123-307-00	ELECT	100MF	20%	6.3V
C415	1-123-476-00	ELECT	330MF	20%	10V
C416	1-161-326-00	CERAMIC	0.0022MF	30%	50V
C417	1-136-153-00	(G-AEP)...METALIZED FILM	0.01MF	5% 50V	
C418	1-136-153-00	(G-AEP)...METALIZED FILM	0.01MF	5% 50V	
C419	1-136-153-00	(G-AEP)...METALIZED FILM	0.01MF	5% 50V	
C420	1-161-326-00	CERAMIC	0.0022MF	30%	50V
C421	1-161-326-00	CERAMIC	0.0022MF	30%	50V
C422	1-102-121-00	(G-AEP)...CERAMIC	0.0022MF	10%	50V
C423	1-161-326-00	(G-AEP)...CERAMIC	0.0022MF	30%	50V
C601	1-136-159-00	(G-AEP)...FILM	0.033MF	5%	50V
C602	1-136-159-00	(G-AEP)...FILM	0.033MF	5%	50V
C651	1-136-159-00	(G-AEP)...FILM	0.033MF	5%	50V
C652	1-136-159-00	(G-AEP)...FILM	0.033MF	5%	50V
CN1	△. 1-526-574-00	(E2/3).....OUTLET, AC	(AC OUTLET)		
	△. 1-526-751-00	(UK).....OUTLET, AC	(AC OUTLET)		
	△. 1-526-794-11	(AEP,G-AEP)....OUTLET, AC	(AC OUTLET)		
	△. 1-526-896-00	(Canadian)....OUTLET, AC	(AC OUTLET)		
CN2	△. 1-526-751-00	(UK).....OUTLET, AC	(AC OUTLET)		
	△. 1-526-794-11	(AEP,G-AEP)....OUTLET, AC	(AC OUTLET)		
CN3	△. 1-526-751-00	(UK).....OUTLET, AC	(AC OUTLET)		
	△. 1-526-794-11	(AEP,G-AEP)....OUTLET, AC	(AC OUTLET)		
D401	8-719-107-94	DIODE 1SS202-1			
D402	8-719-107-94	DIODE 1SS202-1			
D403	8-719-107-94	DIODE 1SS202-1			
D404	8-719-910-52	DIODE HZ15-2L			
D405	8-719-910-52	DIODE HZ15-2L			
D406	8-719-200-02	DIODE 10E2			
D407	8-719-200-02	DIODE 10E2			
D408	8-719-230-24	DIODE 30DL4			
D409	8-719-230-24	DIODE 30DL4			
D410	8-719-230-24	DIODE 30DL4			
D411	8-719-230-24	DIODE 30DL4			
D412	8-719-107-57	DIODE (AEP,G-AEP,UK,E2/3)....DIODE 1S953			
D451	8-719-107-94	DIODE 1SS202-1			
D501	8-719-919-70	DIODE GL-9NG4A			
D502	8-719-919-70	DIODE GL-9NG4A			
D503	8-719-919-70	DIODE GL-9NG4A			
D504	8-719-919-70	DIODE GL-9NG4A			
D505	8-719-919-70	DIODE GL-9NG4A			

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
F1	△. 1-532-285-00	(AEP,G-AEP,E2/3)...FUSE, TIME-LAG			
F1	△. 1-532-598-00	(Canadian).....FUSE, GLASS TUBE			
F2	△. 1-532-285-00	(AEP,G-AEP,UK,E2/3)...FUSE, TIME-LAG			
IC101	8-759-600-02	IC M5218L			
IC301	8-749-941-50	(AEP,G-AEP,UK,E2/3)...IC STK4151V			
IC301	8-749-941-91	(Canadian)...IC STK4191V			
J101	1-507-908-11	JACK, PIN 4P (PHONO/TUNER)			
J102	1-507-908-11	JACK, PIN 4P (CD/VIDEO)			
J103	1-507-908-11	JACK, PIN 4P (REC OUT/TAPE)			
J301	1-507-982-11	JACK (LARGE TYPE)(HEADPHONES)			
L301	*1-420-872-00	COIL, AIR CORE			
L351	*1-420-872-00	COIL, AIR CORE			
PT101	△. 1-447-825-11	(E2/3).....TRANSFORMER, POWER			
PT101	△. 1-447-826-11	(AEP,G-AEP,UK)...TRANSFORMER, POWER			
PT101	△. 1-448-129-11	(Canadian).....TRANSFORMER, POWER			
Q401	8-729-108-14	TRANSISTOR 2SA988-F			
Q402	8-729-178-54	TRANSISTOR 2SC2785-E			
Q403	8-729-178-54	TRANSISTOR 2SC2785-E			
Q404	8-729-178-54	TRANSISTOR 2SC2785-E			
Q407	8-729-178-54	TRANSISTOR 2SC2785-E			
Q408	8-729-178-54	TRANSISTOR 2SC2785-E			
Q451	8-729-108-14	TRANSISTOR 2SA988-F			
R101	1-247-131-00	CARBON	1K	5%	1/4W
R102	1-247-171-00	CARBON	47K	5%	1/4W
R103	1-246-537-00	CARBON	470K	5%	1/4W
R104	1-247-129-00	CARBON	820	5%	1/4W
R105	1-247-171-00	CARBON	47K	5%	1/4W
R106	1-246-539-00	CARBON	560K	5%	1/4W
R107	1-247-179-00	CARBON	100K	5%	1/4W
R108	1-247-131-00	CARBON	1K	5%	1/4W
R109	1-247-147-00	CARBON	4.7K	5%	1/4W
R111	1-247-123-00	CARBON	470	5%	1/4W
R112	1-246-465-00	(G-AEP)...CARBON	470	5%	1/4W
R113	1-246-465-00	(G-AEP)...CARBON	470	5%	1/4W
R114	1-246-465-00	(G-AEP)...CARBON	470	5%	1/4W
R115	1-246-465-00	(G-AEP)...CARBON	470	5%	1/4W
R151	1-247-131-00	CARBON	1K	5%	1/4W
R152	1-247-171-00	CARBON	47K	5%	1/4W
R153	1-246-537-00	CARBON	470K	5%	1/4W
R154	1-247-129-00	CARBON	820	5%	1/4W
R155	1-247-171-00	CARBON	47K	5%	1/4W
R156	1-246-539-00	CARBON	560K	5%	1/4W
R157	1-247-179-00	CARBON	100K	5%	1/4W

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ELECTRICAL PARTS

Ref.No.	Part No.	Description	Part No.	No.
R158	1-247-131-00	CARBON	1K 5%	1/4W
R159	1-247-147-00	CARBON	4.7K 5%	1/4W
R161	1-247-123-00	CARBON	470 5%	1/4W
R162	1-246-465-00	(G-AEP)...CARBON	470 5%	1/4W
R163	1-246-465-00	(G-AEP)...CARBON	470 5%	1/4W
R164	1-246-465-00	(G-AEP)...CARBON	470 5%	1/4W
R165	1-246-465-00	(G-AEP)...CARBON	470 5%	1/4W
R201	1-247-139-00	CARBON	2.2K 5%	1/4W
R251	1-247-139-00	CARBON	2.2K 5%	1/4W
R301	1-247-131-00	CARBON	1K 5%	1/4W
R302	1-247-173-00	CARBON	56K 5%	1/4W
R303	1-247-131-00	CARBON	1K 5%	1/4W
R304	1-247-173-00	CARBON	56K 5%	1/4W
R305	1-247-159-00	(AEP,G-AEP,UK,E2/3)...CARBON	15K 5%	1/4W
R305	1-247-161-00	(Canadian).....CARBON	18K 5%	1/4W
R306	1-246-529-00	CARBON	220K 5%	1/4W
R307	1-247-161-00	CARBON	18K 5%	1/4W
R308	1-247-139-00	CARBON	2.2K 5%	1/4W
R309	1-247-151-00	CARBON	6.8K 5%	1/4W
R310	1-247-129-00	CARBON	820 5%	1/4W
R311	1-247-252-00	CARBON	3.3K 5%	1/2W
R312	1-247-252-00	CARBON	3.3K 5%	1/2W
R313	1-217-152-00	RES, METAL PLATE 0.33		
R314	1-247-192-00	CARBON	10 5%	1/2W
R315	1-247-192-00	CARBON	10 5%	1/2W
R316	1-247-228-00	(AEP,G-AEP,UK,E2/3)...CARBON	330 5%	1/2W
R316	△.1-213-139-00	(Canadian).....METAL OXIDE	470 5%	1W F
R318	1-247-173-00	CARBON	56K 5%	1/4W
R319	△.1-247-107-00	CARBON	100 5%	1/4W F
R320	1-247-240-00	CARBON	1K 5%	1/2W
R321	1-247-240-00	CARBON	1K 5%	1/2W
R351	1-247-131-00	CARBON	1K 5%	1/4W
R352	1-247-173-00	CARBON	56K 5%	1/4W
R353	1-247-131-00	CARBON	1K 5%	1/4W
R354	1-247-173-00	CARBON	56K 5%	1/4W
R355	1-247-159-00	(AEP,G-AEP,UK,E2/3)...CARBON	15K 5%	1/4W
R355	1-247-161-00	(Canadian).....CARBON	18K 5%	1/4W
R356	1-246-529-00	CARBON	220K 5%	1/4W
R357	1-247-161-00	CARBON	18K 5%	1/4W
R358	1-247-139-00	CARBON	2.2K 5%	1/4W
R359	1-247-151-00	CARBON	6.8K 5%	1/4W
R360	1-247-129-00	CARBON	820 5%	1/4W
R361	1-247-252-00	CARBON	3.3K 5%	1/2W
R362	1-247-252-00	CARBON	3.3K 5%	1/2W
R363	1-217-152-00	RES, METAL PLATE 0.33		
R364	1-247-192-00	CARBON	10 5%	1/2W
R365	1-247-192-00	CARBON	10 5%	1/2W

ELECTRICAL PARTS

Ref.No.	Part No.	Description	Part No.	No.
R366	1-247-228-00	(AEP,G-AEP,UK,E2/3)...CARBON	330 5%	1/2W
R366	△.1-213-139-00	(Canadian).....METAL OXIDE	470 5%	1W F
R368	1-247-173-00	CARBON	56K 5%	1/4W
R401	1-247-151-00	CARBON	6.8K 5%	1/4W
R402	1-247-167-00	CARBON	33K 5%	1/4W
R403	△.1-247-107-00	CARBON	100 5%	1/4W F
R404	1-247-131-00	CARBON	1K 5%	1/4W
R405	1-247-167-00	CARBON	33K 5%	1/4W
R406	1-247-151-00	CARBON	6.8K 5%	1/4W
R407	1-246-533-00	(AEP,G-AEP,UK,E2/3)..CARBON	330K 5%	1/4W
R407	1-246-537-00	(Canadian).....CARBON	470K 5%	1/4W
R408	1-247-163-00	CARBON	22K 5%	1/4W
R409	△.1-206-672-00	(AEP,G-AEP,UK,E2/3)...METAL OXIDE	2.2K 5%	2W F
R409	△.1-206-680-00	(Canadian)...METAL OXIDE	4.7K 5%	2W F
R412	△.1-206-672-00	(AEP,G-AEP,UK,E2/3)...METAL OXIDE	2.2K 5%	2W F
R412	△.1-206-680-00	(Canadian)...METAL OXIDE	4.7K 5%	2W F
R413	△.1-206-658-00	(AEP,G-AEP,UK,E2/3)...METAL OXIDE	560 5%	2W F
R413	△.1-206-664-00	(Canadian)...METAL OXIDE	1K 5%	2W F
R414	△.1-206-654-00	(AEP,G-AEP,UK,E2/3)...METAL OXIDE	390 5%	2W F
R414	△.1-206-656-00	(Canadian)...METAL OXIDE	470 5%	2W F
R417	1-247-173-00	CARBON	56K 5%	1/4W
R418	1-247-143-00	CARBON	3.3K 5%	1/4W
R419	△.1-206-654-00	(AEP,G-AEP,UK,E2/3)...METAL OXIDE	390 5%	2W F
R419	△.1-206-656-00	(Canadian)...METAL OXIDE	470 5%	2W F
R451	1-247-151-00	CARBON	6.8K 5%	1/4W
R452	1-247-167-00	CARBON	33K 5%	1/4W
R454	1-247-131-00	CARBON	1K 5%	1/4W
R501	1-247-117-00	CARBON	270 5%	1/4W
R502	1-247-107-00	CARBON	100 5%	1/4W
R503	1-247-117-00	CARBON	270 5%	1/4W
R504	1-247-107-00	CARBON	100 5%	1/4W
R611	△.1-224-825-00	(G-AEP)...CARBON	10 5%	1/2W F
R612	△.1-224-825-00	(G-AEP)...CARBON	10 5%	1/2W F
R661	△.1-224-825-00	(G-AEP)...CARBON	10 5%	1/2W F
R662	△.1-224-825-00	(G-AEP)...CARBON	10 5%	1/2W F
RV201	1-230-778-11	RES, VAR, SLIDE 250K/250K (VOLUME)		
RV202	1-230-779-11	RES, VAR, SLIDE 250K (BALANCE)		
RV301	1-230-777-11	RES, VAR, SLIDE 100K/100K (TREBLE)		
RV302	1-230-777-11	RES, VAR, SLIDE 100K/100K (BASS)		

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## ELECTRICAL PARTS

Ref.No.	Part No.	Description
RY301	1-515-533-11	RELAY
S1	1-570-192-11	SWITCH, PUSH(5 KEY)(FUNCTION/MONITOR)
S3	1-570-193-11	SWITCH, PUSH(3 KEY)(SPEAKER/BASS BOOST)
S10	△.1-553-318-41	(Canadian,UK,E2/3)...SWITCH, PUSH (AC POWER)(1 KEY)(POWER)
S10	△.1-554-685-61	(AEP,G-AEP)...SWITCH, PUSH (AC POWER)(1 KEY)(POWER)
TM301	1-536-633-00	TERMINAL BOARD, ANTENNA(8P)(SPEAKER A/B)
VS1	△.1-526-576-51	(E2/3)...SELECTOR, POWER VOLTAGE (VOLTAGE SELECTOR)

## ACCESSORY & PACKING MATERIAL

No.	Part No.	Description
151	3-701-630-00	BAG, POLYETHYLENE
152	3-760-341-11	(Canadian,AEP,UK,E2/3) ....MANUAL, INSTRUCTIONS
153	3-760-341-41	(AEP,G-AEP)...MANUAL, INSTRUCTIONS
154	4-876-352-00	SHEET, PROTECTION
155	4-904-442-01	CUSHION (LEFT), LOWER
156	4-904-443-01	CUSHION (RIGHT), LOWER
157	4-904-444-01	CUSHION (LEFT), UPPER
158	4-904-445-01	CUSHION (RIGHT), UPPER
159	4-904-465-01	INDIVIDUAL CARTON

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The components identified by shading and mark **△** are critical for safety. Replace only with part number specified.

Les composants identifiés par une trame et une marque **△** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.