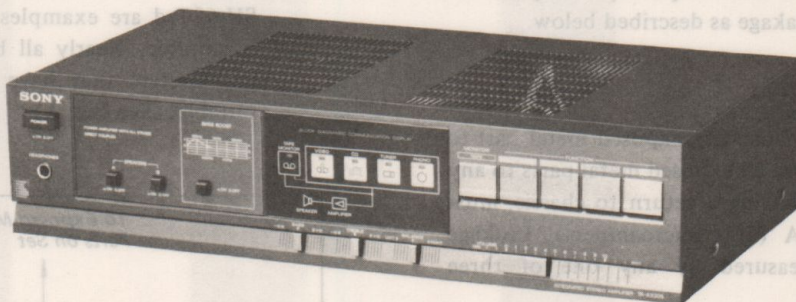


TA-AX205

SERVICE MANUAL

US Model
AEP Model
UK Model



SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

(US model)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 8 ohm loads, both channels driven, from 40 – 20,000 Hz; rated 30 watts per channel minimum RMS power, with no more than 0.08% total harmonic distortion from 250 milliwatts to rated output.

Outputs

REC OUT : Voltage 150 mV, Impedance 4.7 kilohms

speaker : Accepts speakers of 8 to 16 ohms

Headphones : Accepts headphone of 8 ohms or more

SYSTEM CONTROL terminal (5 pin)

Continuous RMS power output

AEP, G-AEP and UK model:

40 + 40 watts
(8 ohms, at 1 kHz, 5% THD)
35 + 35 watts
(8 ohms, at 1 kHz, 0.08% THD)
30 + 30 watts
(8 ohms, 40 Hz – 20 kHz, 0.08% THD)

Peak music power output

300 W (8 ohms, 5% THD)

Music power output

150 W (8 ohms, 5% THD)

Inputs

	Sensitivity	Impedance
PHONO	2 mV	50 kilohms
TUNER/CD/ VIDEO/TAPE	150 mV	50 kilohms

Frequency response

PHONO : RIAA curve ± 0.5 dB

TUNER/CD/VIDEO/TAPE :

15 Hz – 70 kHz ± 3 dB

General

Dimensions

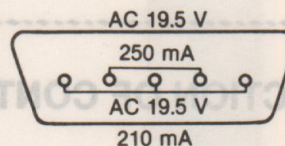
US, UK model: Approx. 430 x 106 x 250 mm
(17 x 4 $\frac{1}{4}$ x 9 $\frac{7}{8}$ inches)

AEP, G-AEP model: Approx. 430 x 106 x 255 mm
(17 x 4 $\frac{1}{4}$ x 10 $\frac{1}{8}$ inches)

incl. projecting parts and controls

Weight

Approx. 4.7 kg (10 lb 6 oz) net



SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK Δ 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®

AUD

SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

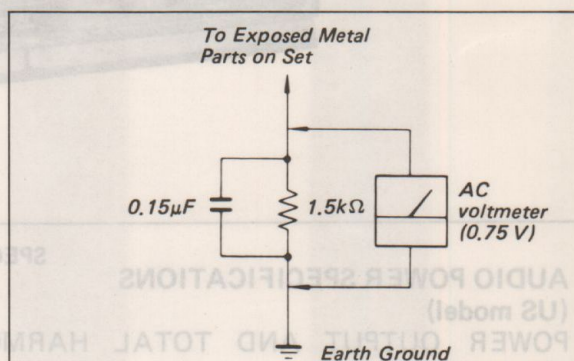
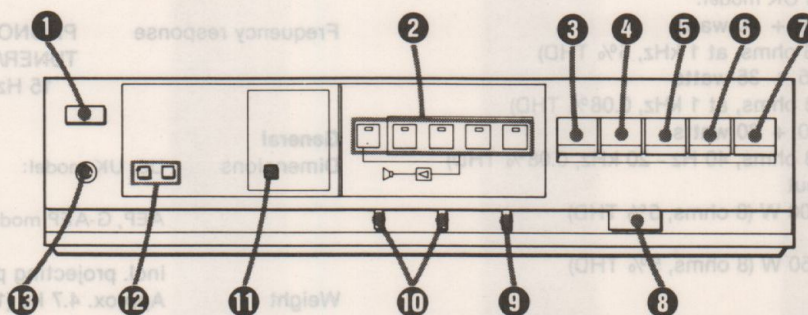


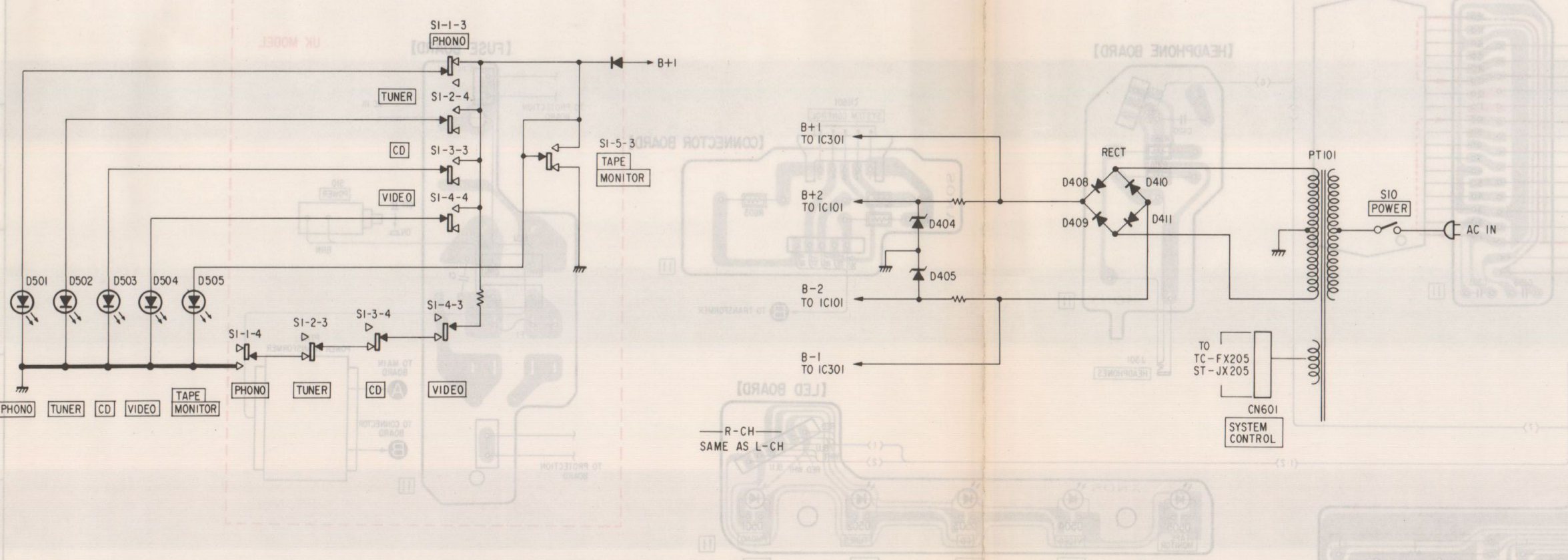
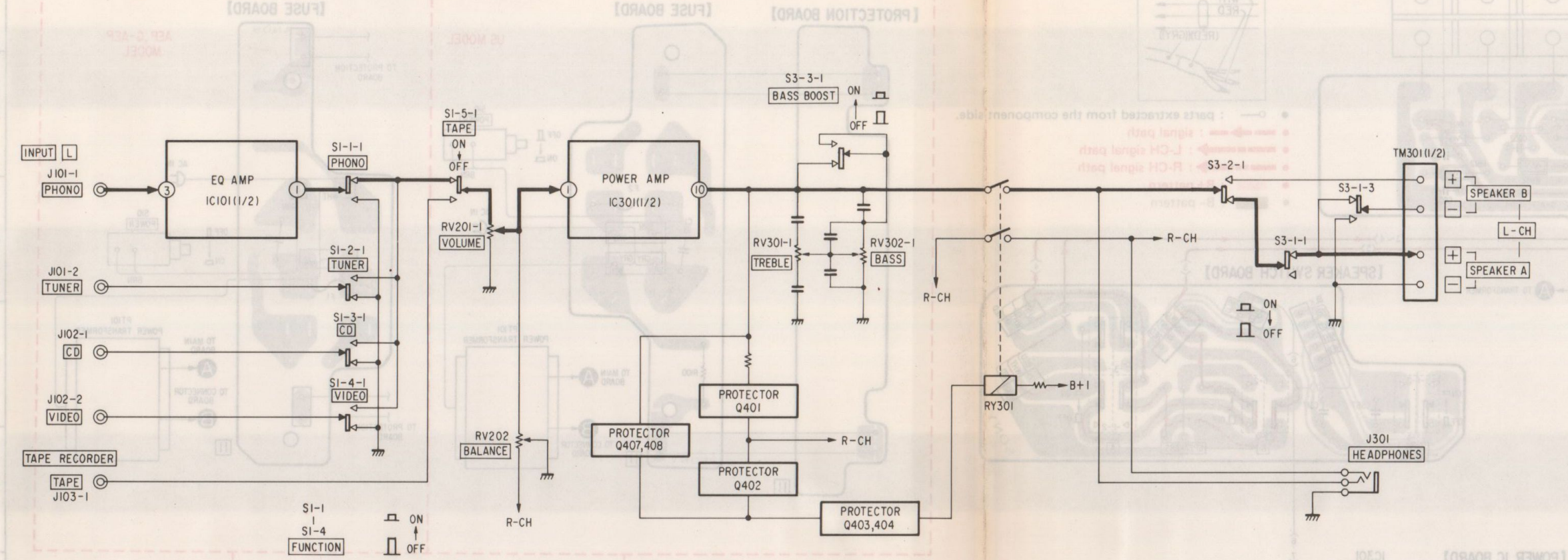
Fig. A. Using an AC voltmeter to check AC leakage.

FUNCTION OF CONTROLS



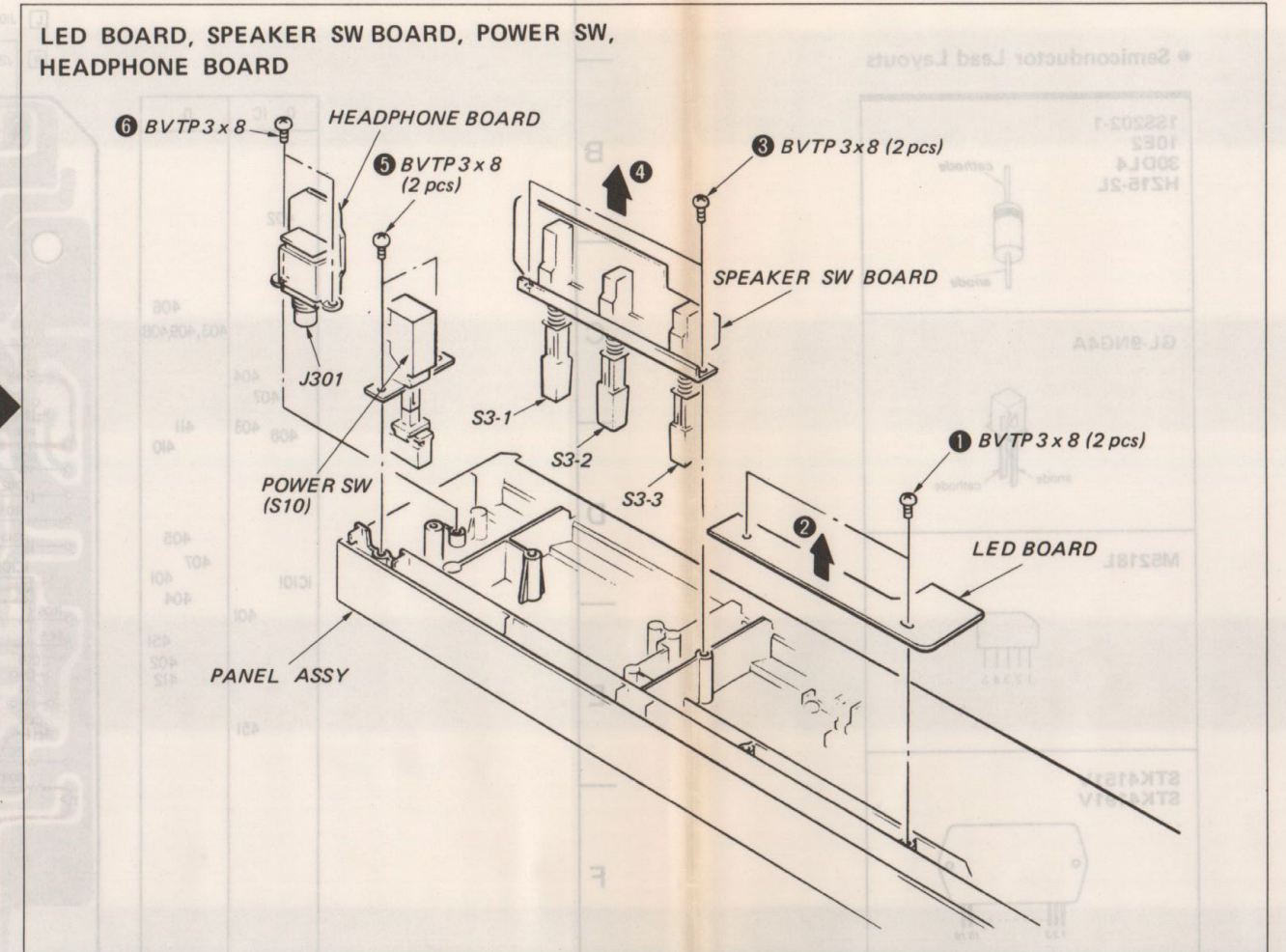
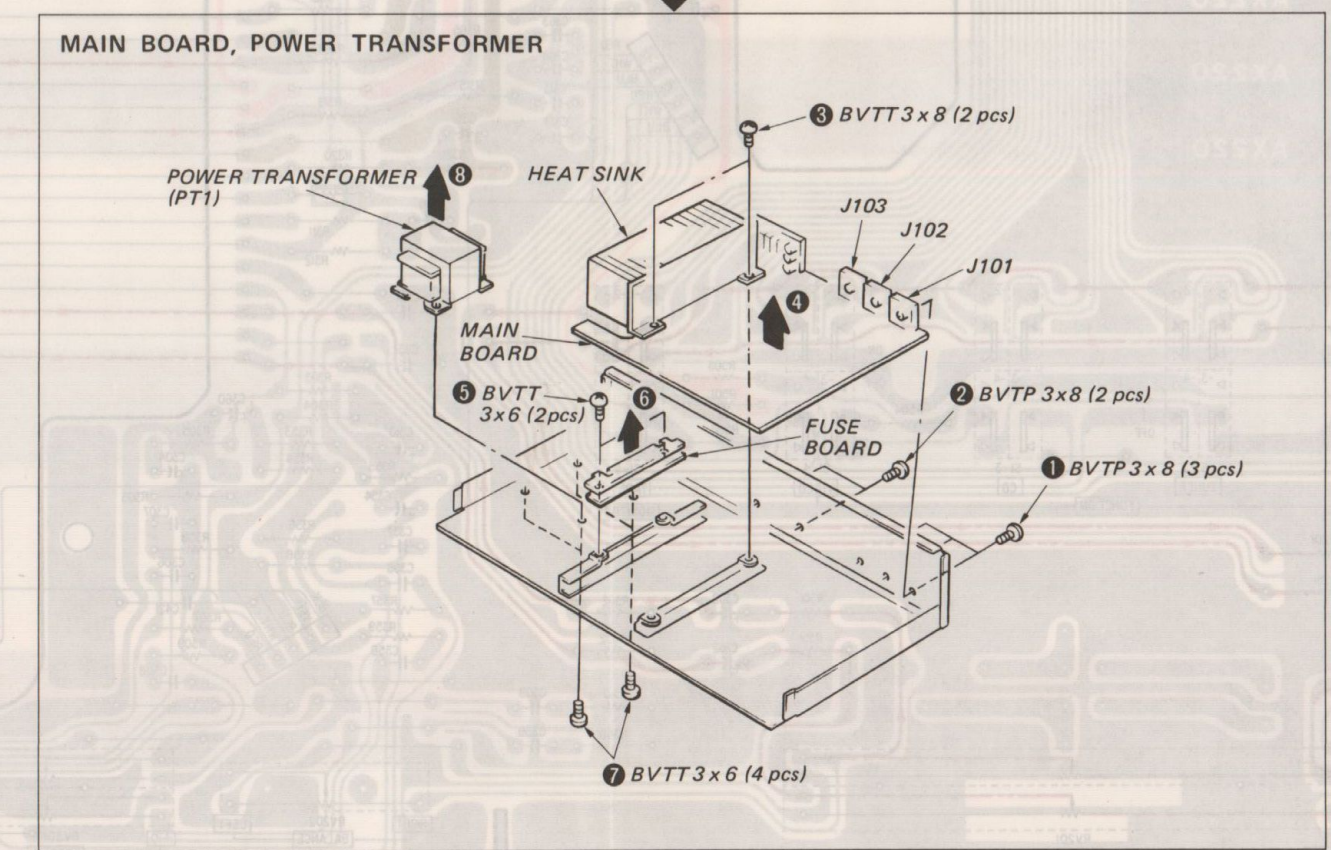
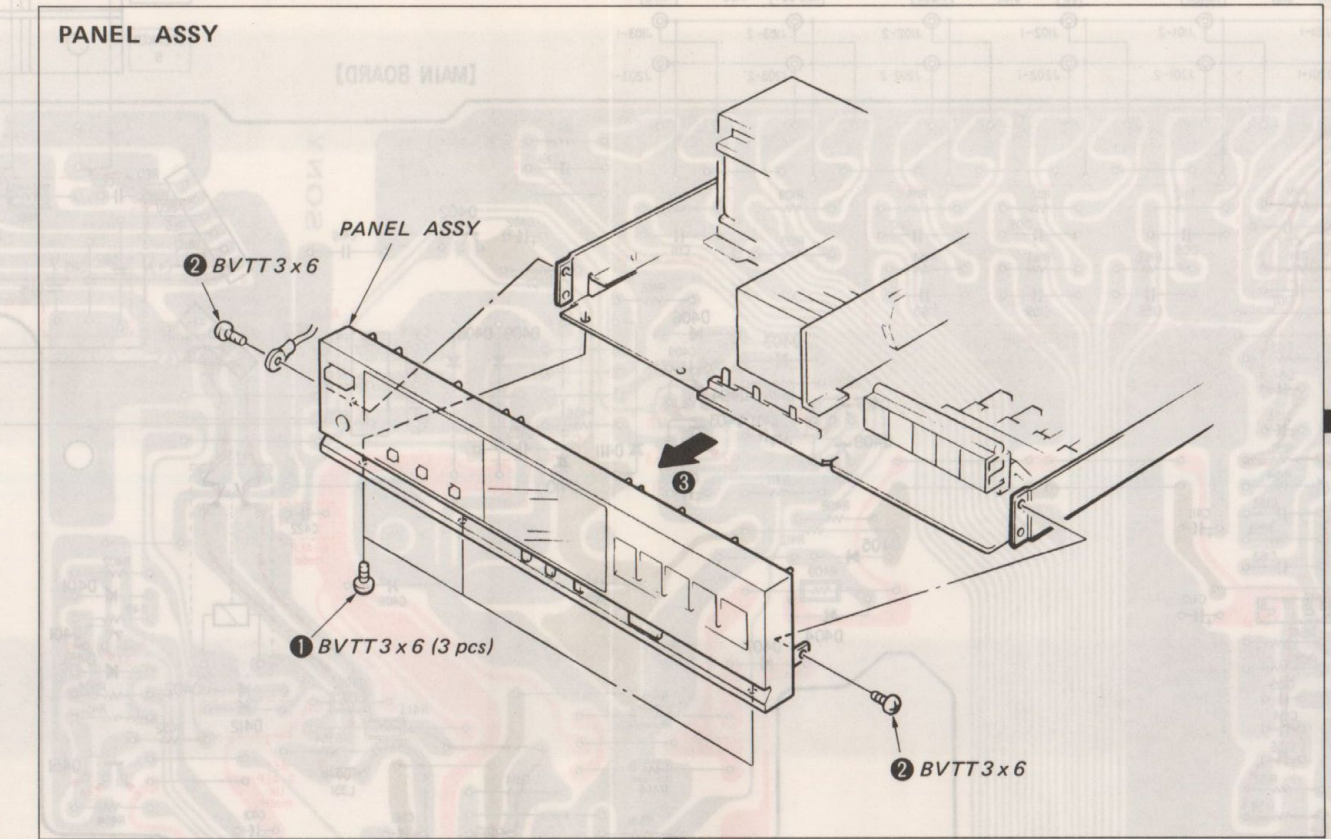
- | | |
|-----------------------|--|
| 1 POWER switch | 9 BALANCE control |
| 2 Function display | 10 BASS and TREBLE tone controls |
| 3 MONITOR TAPE button | 11 BASS BOOST switch |
| 4 VIDEO button | 12 SPEAKERS select buttons |
| 5 CD button | 13 HEADPHONES jack (stereo phone jack) |
| 6 TUNER button | |
| 7 PHONO button | |
| 8 VOLUME control | |

SECTION 1
BLOCK DIAGRAM



SECTION 2
DISASSEMBLY

• Follow the disassembly procedure in the numerical order given.



MODEL IDENTIFICATION
— Specification Label —

SONY MODEL NO. TA-AX205

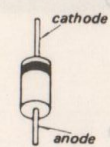
INTEGRATED STEREO AMPLIFIER

SERIAL NO. _____
MADE IN JAPAN

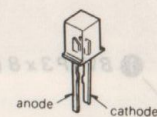
US model: AC: 120V - 60Hz 115W
AEP, G-AEP model: AC: 220V - 50/60Hz 95W
UK model: AC: 240V - 50/60Hz 80W

SECTION 3
DIAGRAMS

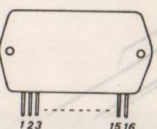
Semiconductor Lead Layouts

1SS202-1
10E2
30DL4
HZ15-2L

GL-9NG4A



M5218L

STK4151V
STK4191V

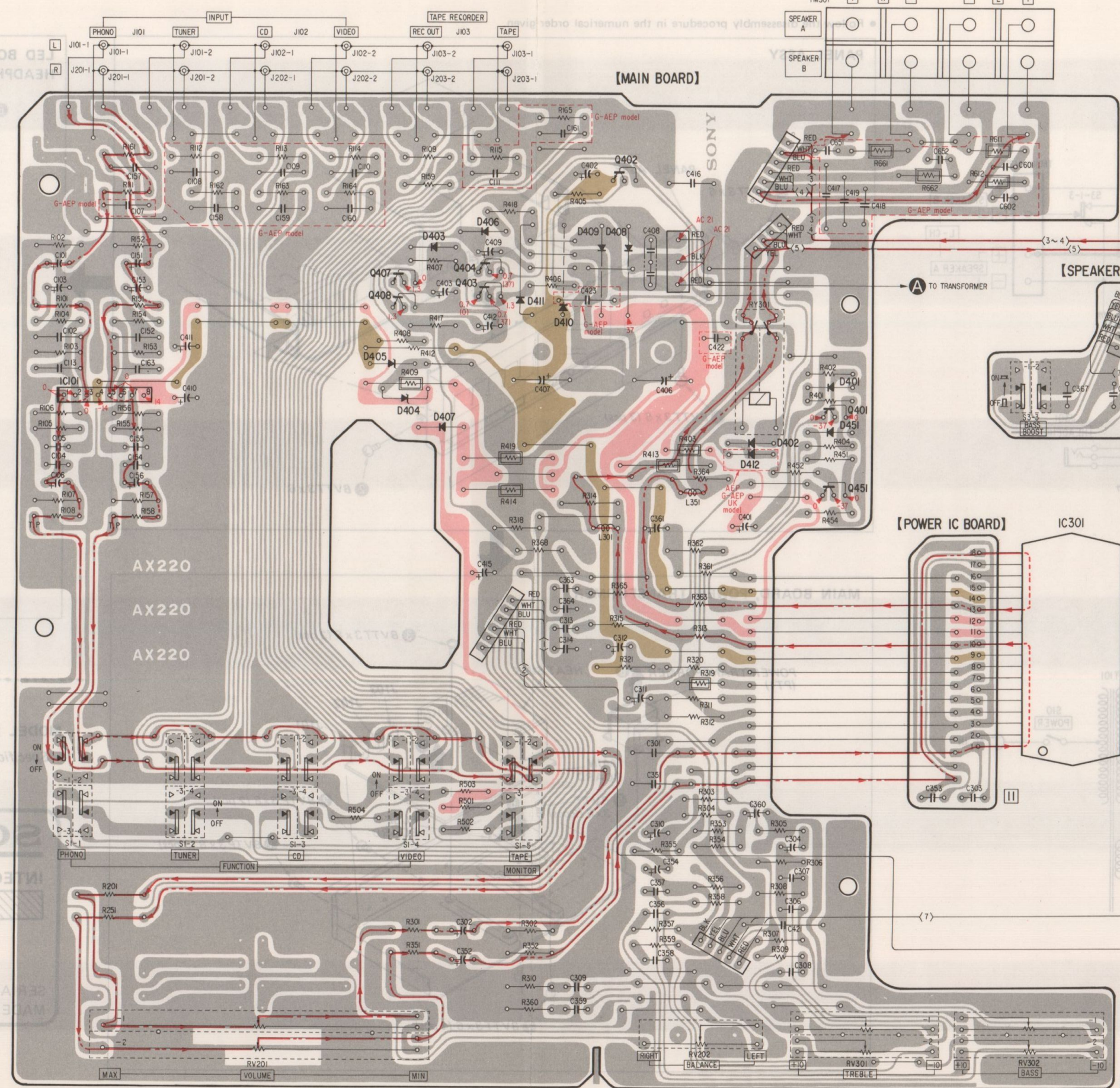
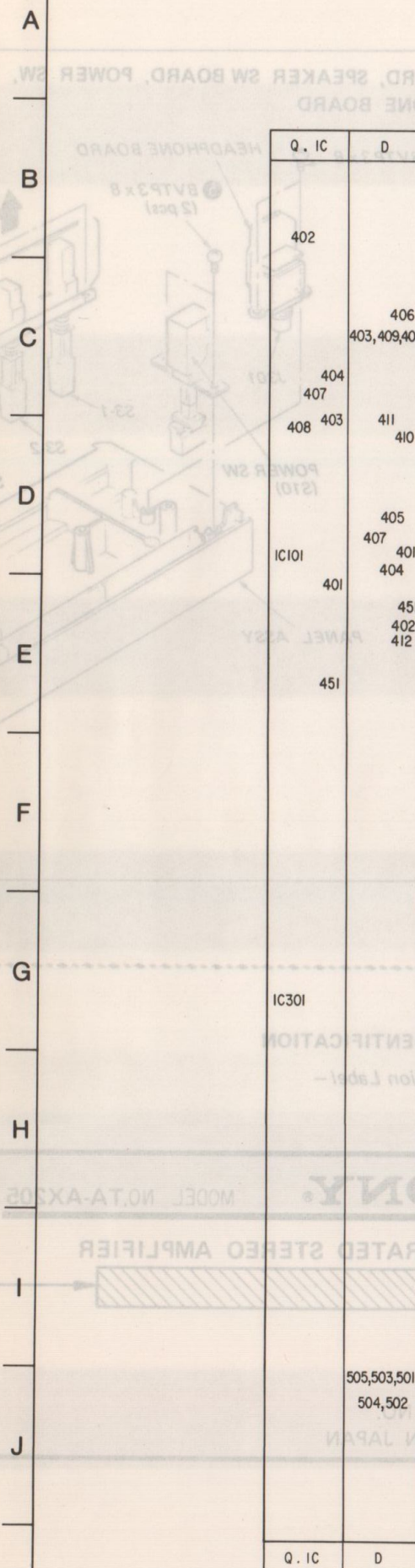
2SC2785-E



2SA988-F

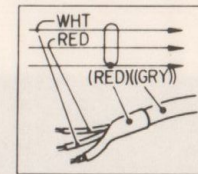


3-1. MOUNTING DIAGRAM



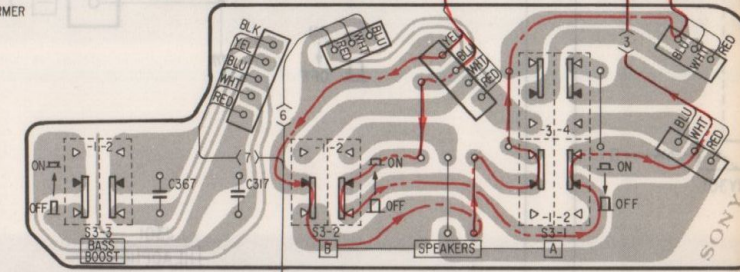
Note:

- Color code of sleeving over the end of the jacket.

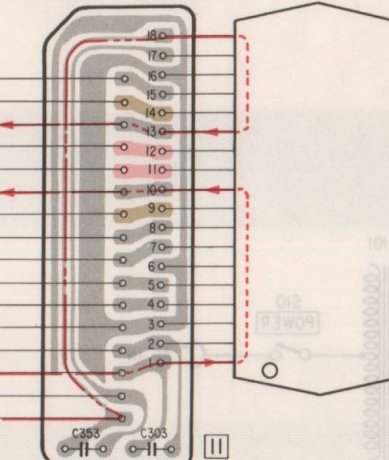


- parts extracted from the component side.
- signal path
- L-CH signal path
- R-CH signal path
- B+ pattern
- B- pattern

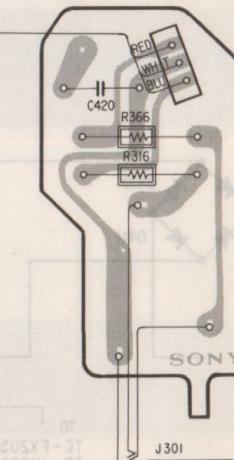
[SPEAKER SWITCH BOARD]



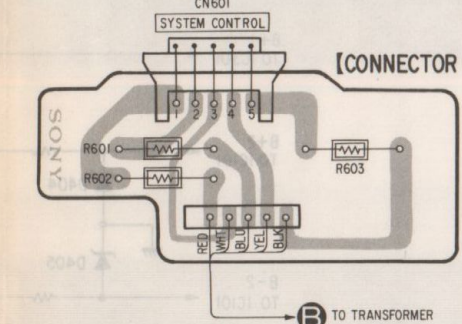
[POWER IC BOARD]



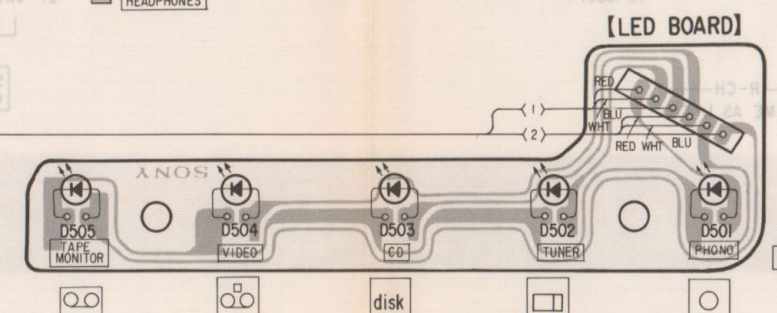
[HEADPHONE BOARD]



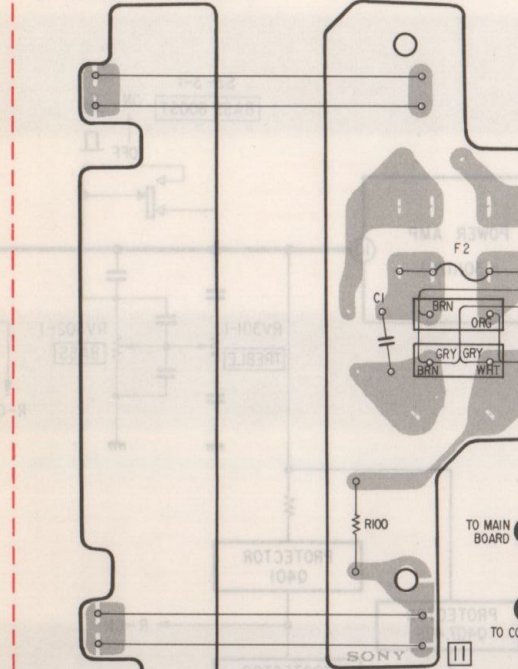
[CONNECTOR BOARD]



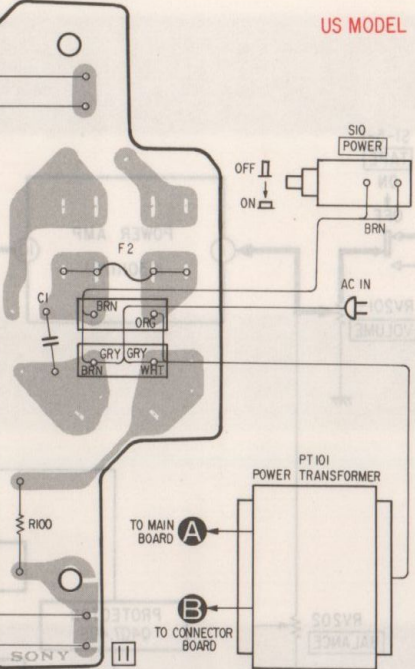
[LED BOARD]



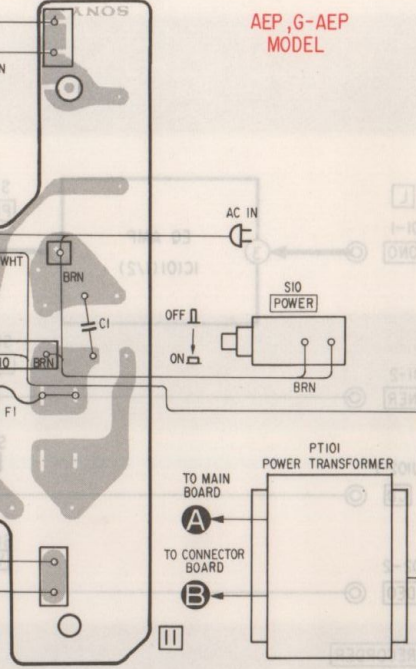
[PROTECTION BOARD]



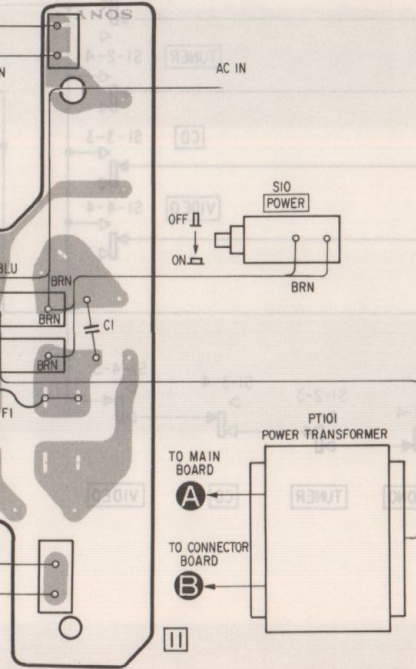
[FUSE BOARD]



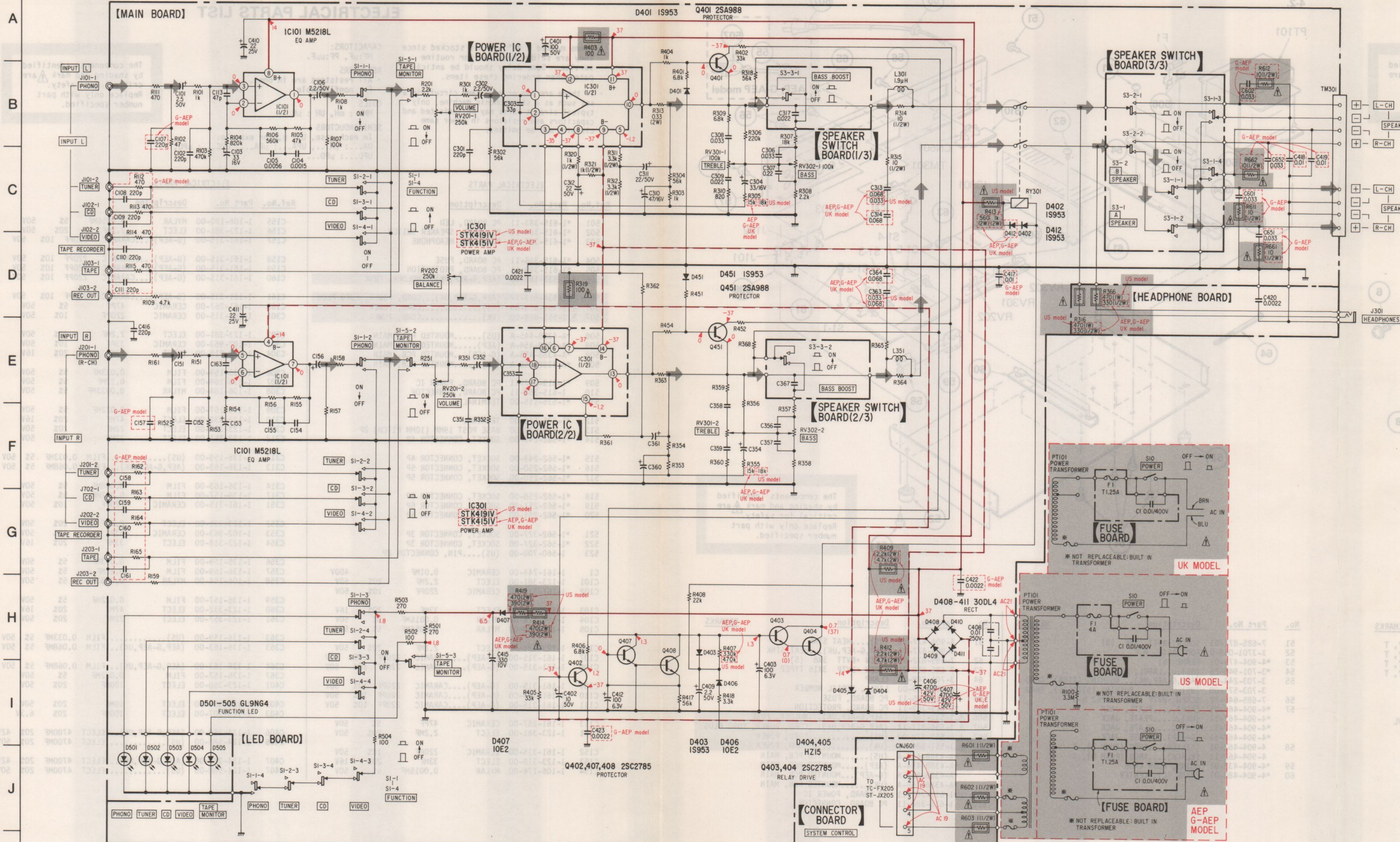
[FUSE BOARD]



[FUSE BOARD]



3-2. SCHEMATIC DIAGRAM



Note:

- All capacitors are in μF unless otherwise noted. μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- Signal path.
- Nonflammable resistor.
- B+ bus.
- B- bus.
- Volts are dc with respect to ground unless otherwise noted.
- Readings are taken under no-signal conditions with VOM (50k Ω /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

Note: Voltages are measured with a VOM (50k Ω /V).

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

SECTION 4
EXPLODED VIEWS AND PARTS LIST

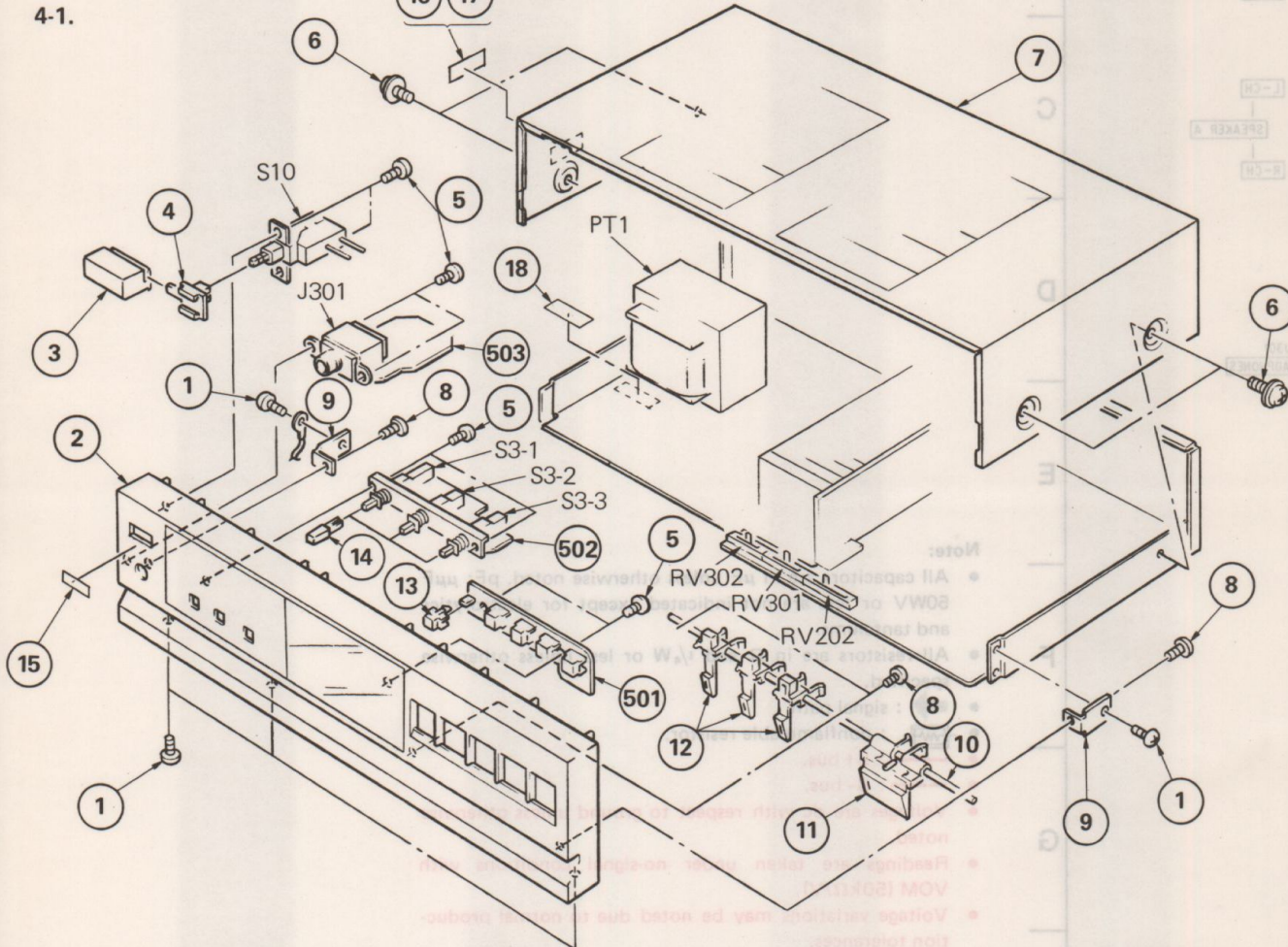
NOTE:

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.

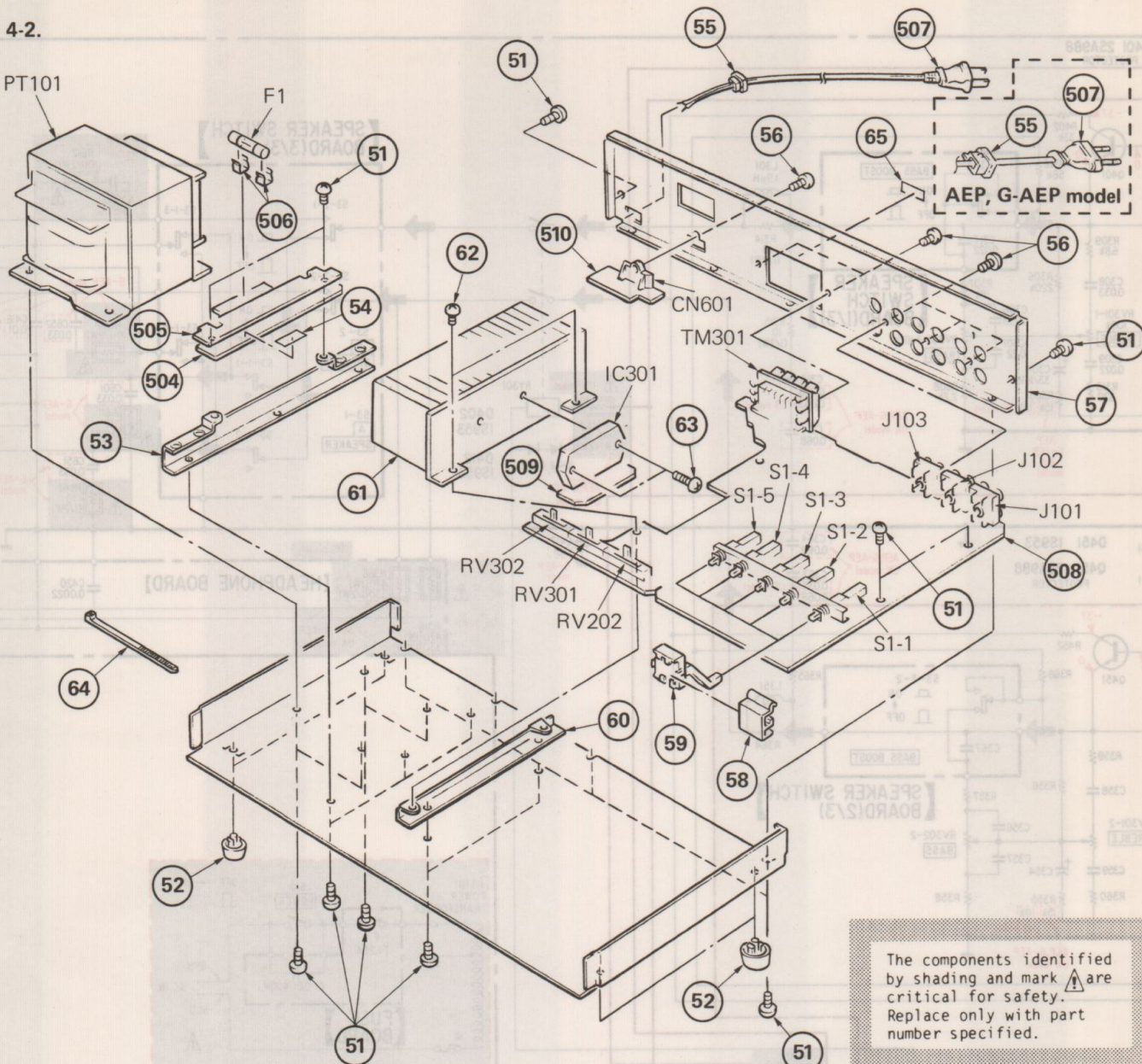
The construction parts of an assembled part are indicated with a collation number in the remark column.

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



No.	Part No.	Description	REMARKS	No.	Part No.	Description	REMARKS
1	7-685-871-01	SCREW +BVTT 3X6 (S)		11	X-4904-418-1	(SILVER)...KNOB (SLIDE) (L.S) ASSY, T	
2	X-4904-422-1	(SILVER)...PANEL (S) ASSY		12	X-4904-419-1	(BLACK)...KNOB (SLIDE) (L.B) ASSY, T	
3	X-4904-423-1	(BLACK)...PANEL (B) ASSY		13	X-4904-416-1	(SILVER)...KNOB (SLIDE) (S.S) ASSY, T	
4	3-318-911-01	(SILVER)...KNOB (POWER.L), T MOLD		14	X-4904-417-1	(BLACK)...KNOB (SLIDE) (S.B) ASSY, T	
5	3-318-911-11	(BLACK)...KNOB (POWER.L), T MOLD		15	*4-904-475-02	HOLDER, LED	
6	*4-902-831-01	JOINT (G), KNOB		16	4-855-804-11	KNOB, SQUARE	
7	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S		17	3-701-690-00	(UK)...LABEL (MADE IN JAPAN)	
8	4-889-321-01	(SILVER)...SCREW		18	3-703-079-21	(UK)...LABEL, CAUTION (BACK)	
9	4-889-321-11	(BLACK)...SCREW		19	3-703-680-00	(US)...LABEL, CAUTION, SUB, NEW UL	
10	4-904-474-01	(SILVER)...COVER, TOP		20	3-701-030-00	LABEL, SERIAL NUMBER	
11	4-904-474-11	(BLACK)...COVER, TOP		21	*1-615-383-11	PC BOARD, LED	
12	3-703-137-00	SCREW, TAPPING		22	*1-615-384-11	PC BOARD, SPEAKER SWITCH	
13	*4-904-476-01	BRACKET		23	*1-615-386-11	PC BOARD, HEADPHONE	
14	4-904-458-01	SHAFT					

4-2.



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

No.	Part No.	Description	REMARKS	No.	Part No.	Description	REMARKS
51	7-685-871-01	SCREW +BVTT 3X6 (S)		61	4-904-477-11	(US)...HEAT SINK	
52	X-3701-069-0	FOOT ASSY, M.F		62	4-904-477-01	(AEP,G-AEP,UK)...HEAT SINK	
53	*4-904-479-01	FRAME (S)		63	7-685-872-09	SCREW +BVTT 3X8 (S)	
54	*3-701-946-26	(US)...LABEL, FUSE		64	7-685-650-71	SCREW +BVTP 3X16 TYPE2 IT-3	
55	3-703-244-00	(AEP,G-AEP,UK)...BUSHING (2104), CORD		65	4-302-759-00	CLAMP	
56	3-703-571-00	(US)...BUSHING (S) (4516), CORD		66	*1-615-385-11	PC BOARD, FUSE	
57	7-685-646-71	SCREW +BVTP 3X8 TYPE2 N-S		67	*1-615-389-11	PC BOARD, PROTECTION	
58	*4-904-467-01	(AEP)...PLATE, JACK		68	*1-533-162-00	(AEP,G-AEP,UK)...HOLDER, FUSE	
59	*4-904-467-11	(UK)...PLATE, JACK		69	*1-534-817-XX	(AEP,G-AEP,UK)...CORD, POWER, EURO PLUG	
60	*4-904-467-31	(US)...PLATE, JACK		70	*1-551-628-00	(US)...CORD, POWER	
				71	*1-551-884-00	(UK)...CORD, POWER	
				72	*A-4388-445-A	(US)...MOUNTED PCB, MAIN	
				73	*A-4388-454-A	(AEP)...MOUNTED PCB, MAIN	
				74	*A-4388-455-A	(G-AEP)...MOUNTED PCB, MAIN	
				75	*A-4388-456-A	(UK)...MOUNTED PCB, MAIN	
				76	*1-615-387-11	PC BOARD, POWER IC	
				77	1-615-388-11	PC BOARD, CONNECTOR	

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.

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	(AEP,G-AEP,UK)...HOLDER, FUSE			
507	*1-534-817-XX	(AEP,G-AEP,UK)...CORD, POWER, EURO PLUG			
507	*1-551-628-00	(US)...CORD, POWER			
507	*1-551-884-00	(UK)...CORD, POWER			
508	*A-4388-445-A	(US)...MOUNTED PCB, MAIN			
508	*A-4388-454-A	(AEP)...MOUNTED PCB, MAIN			
508	*A-4388-455-A	(G-AEP)...MOUNTED PCB, MAIN			
508	*A-4388-456-A	(UK)...MOUNTED PCB, MAIN			
509	*1-615-387-11	PC BOARD, POWER IC			
510	1-615-388-11	PC BOARD, CONNECTOR			
511	*1-535-115-00	TERMINAL			
512	*1-535-116-00	BASE POST 19MM (10MM PITCH) 2P			
513	*1-535-139-00	SOCKET, CONNECTOR 4P			
514	*1-562-249-00	SOCKET, CONNECTOR 4P			
515	*1-562-250-00	SOCKET, CONNECTOR 5P			
516	*1-562-250-00	SOCKET, CONNECTOR 5P			
517	*1-562-250-00	SOCKET, CONNECTOR 6P			
518	*1-562-250-00	SOCKET, CONNECTOR 6P			
519	*1-562-251-00	SOCKET, CONNECTOR 3P			
520	*1-562-251-00	SOCKET, CONNECTOR 3P			
521	*1-562-327-00	SOCKET, CONNECTOR 3P			
522	*1-562-327-00	SOCKET, CONNECTOR 3P			
523	1-560-708-00	(US)...PIN, CONNECTOR 2P			
C1	1-161-744-00	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
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

Ref.No.	Part No.	Description			
C155	1-106-190-00	MYLAR	0.0056MF	5%	50V
C156	1-123-381-00	ELECT	2.2MF	20%	50V
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	0.022MF	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	1-136-159-00	(US)...FILM	0.033MF	5%	50V
C313	1-136-163-00	(AEP,G-AEP,UK)...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	0.022MF	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	1-136-159-00	(US)...FILM	0.033MF	5%	50V
C363	1-136-163-00	(AEP,G-AEP,UK)...FILM	0.068MF	5%	50V
C364	1-136-163-00	(AEP,G-AEP,UK)...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)...ELECT	4700MF	20%	42V
C406	1-124-588-00	(US)...ELECT	4700MF	20%	50V
C407	1-124-362-00	(AEP,G-AEP,UK)...ELECT	4700MF	20%	42V
C407	1-124-588-00	(US)...ELECT	4700MF	20%	50V

ELECTRICAL PARTS

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
C408	1-102-394-00	CERAMIC 0.01MF	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	
CN601	1-562-067-00	SOCKET, CONNECTOR 5P (SYSTEM CONTROL)			
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	(AEP,G-AEP,UK)...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			
F1	1-532-285-00	(AEP,G-AEP,UK)...FUSE, TIME-LAG			
F1	1-532-598-00	(US).....FUSE, GLASS TUBE			
IC101	8-759-600-02	IC M5218L			
IC301	8-759-941-50	(AEP,G-AEP,UK)...IC STK4151V			
IC301	8-759-941-91	(US).....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 (TAPE/REC OUT)			
J301	1-507-982-11	JACK (LARGE TYPE)(HEADPHONES)			

ELECTRICAL PARTS

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
L301	*1-420-872-00	COIL, AIR CORE			
L351	*1-420-872-00	COIL, AIR CORE			
PT101	1-448-126-11	(US).....TRANSFORMER, POWER			
PT101	1-448-127-11	(AEP,G-AEP,UK)...TRANSFORMER, POWER			
Q401	8-729-108-14	TRANSISTOR 2SA988-A			
Q402	8-729-178-55	TRANSISTOR 2SC2785-E			
Q403	8-729-178-55	TRANSISTOR 2SC2785-E			
Q404	8-729-178-55	TRANSISTOR 2SC2785-E			
Q407	8-729-178-55	TRANSISTOR 2SC2785-E			
Q408	8-729-178-55	TRANSISTOR 2SC2785-E			
Q451	8-729-108-14	TRANSISTOR 2SA988-A			
R100	1-202-725-00	(US)...SOLID 3.3MF 10%	1/2W		
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		
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	1-247-717-11	CARBON 2.2K 5%	1/4W		
R251	1-247-717-11	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		

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

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R305	1-247-159-00	(AEP,G-AEP)...CARBON	15K	5%	1/4W
R305	1-247-161-00	(US).....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	1-247-717-11	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	1-207-615-00	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	△.1-213-139-00	(US).....METAL OXIDE	470	5%	1W F
R316	1-247-228-00	(AEP,G-AEP,UK)...CARBON	330	5%	1/2W
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)...CARBON	15K	5%	1/4W
R355	1-247-161-00	(US).....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	1-247-717-11	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	1-207-615-00	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
R366	△.1-213-139-00	(US).....CARBON	18K	5%	1/4W
R366	△.1-247-228-00	(AEP,G-AEP,UK)...CARBON	330	5%	1/2W
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)...CARBON	330K	5%	1/4W
R407	1-246-537-00	(US).....CARBON	470K	5%	1/4W

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R408	1-247-163-00	CARBON	22K	5%	1/4W
R409	△.1-206-672-00	(AEP,G-AEP,UK)..METAL OXIDE	2.2K	5%	2W F
R409	△.1-206-680-00	(US).....METAL OXIDE	4.7K	5%	2W F
R412	△.1-206-672-00	(AEP,G-AEP,UK)..METAL OXIDE	2.2K	5%	2W F
R412	△.1-206-680-00	(US).....METAL OXIDE	4.7K	5%	2W F
R413	△.1-206-658-00	(AEP,G-AEP,UK)..METAL OXIDE	560	5%	2W F
R413	△.1-206-664-00	(US).....METAL OXIDE	1K	5%	2W F
R414	△.1-206-654-00	(AEP,G-AEP,UK)..METAL OXIDE	390	5%	2W F
R414	△.1-206-656-00	(US).....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)..METAL OXIDE	390	5%	2W F
R419	△.1-206-656-00	(US).....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
R601	△.1-217-422-00	FUSIBLE	1	5%	1/2W F
R602	△.1-217-422-00	FUSIBLE	1	5%	1/2W F
R603	△.1-217-422-00	FUSIBLE	1	5%	1/2W F
R611	△.1-244-825-00	(G-AEP)...CARBON	10	5%	1/2W F
R612	△.1-244-825-00	(G-AEP)...CARBON	10	5%	1/2W F
R661	△.1-244-825-00	(G-AEP)...CARBON	10	5%	1/2W
R662	△.1-244-825-00	(G-AEP)...CARBON	10	5%	1/2W
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)
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)(SPEAKERS/BASS BOOST)			
S10	△.1-553-318-41	SWITCH, PUSH(AC POWER)(1 KEY)			
TM301	1-536-633-00	TERMINAL BOARD, ANTENNA (8P)			
		(SPEAKER A/SPEAKER B)			

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