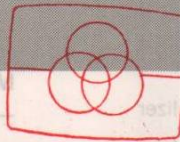


TA-A200

SERVICE MANUAL



Free service manuals
Gratis schema's
Digitized by

www.freeservicemanuals.info

AEP Model
UK Model



SPECIFICATIONS

Amplifier

Continuous RMS power output (both channels driven simultaneously)

- at 1 kHz
 - 55 W + 55 W (5% THD, 8 ohms)
 - 43 W + 43 W (0.05% THD, 8 ohms)
- at 40 Hz - 20 kHz
 - 40 W + 40 W (0.05% THD, 8 ohms)
- DIN 45500
 - at 40 Hz - 12.5 kHz
 - 48 W + 48 W (0.05% THD, 8 ohms)

Power bandwidth (IHF)
10 Hz - 40 kHz (8 ohms, 20 watts)

Dynamic headroom
1.5 dB (*78 IHF)

Harmonic distortion
Less than 0.05% at rated output

Intermodulation (IM) distortion (60 Hz : 7 kHz = 4 : 1)
Less than 0.05% at rated output

Frequency response
PHONO: RIAA equalization curve ± 0.5 dB
TUNER, CD, VIDEO/AUX, TAPE1, TAPE2/DAT:
7 Hz - 100 kHz ± 3 dB

Residual noise
Less than 170 μ V (8 ohms, network A)

Damping factor
36 (8 ohms, 1 kHz)

Input

Input jack	Jack type	Sensitivity	Impedance	S/N (weighting network, input level)
PHONO	Phono	2.0 mV	50 kilohms	70 dB 74 dB* (A, 2.0 mV)
TUNER CD VIDEO/AUX TAPE	Phono	150 mV	50 kilohms	100 dB 86 dB* (150 mV)

*78 IHF

Output

REC OUT	Phono jacks	Voltage 150 mV Impedance 470 ohms
SPEAKERS	—	Accepts speakers of 8 - 16 ohms.
HEAD-PHONES	Stereo phone jack	Accepts low and high impedance headphones.

Tone controls

	Response	Turnover frequency
BASS	± 10 dB (100 Hz)	500 Hz
TREBLE	± 10 dB (10 kHz)	3 kHz

Loudness (Attenuation 30 dB)

- +6 dB (100 Hz)
- +3 dB (10 kHz)

— Continued on page 2 —

INTEGRATED STEREO AMPLIFIER
SONY®



General System

Preamplifier: Low-noise, high-gain equalizer amplifier
 Power amplifier: Pure-complementary SEPP OCL power amplifier with all stages directly coupled

Power requirements

G-AEP, AEP model: 220 V AC (or 240 V AC adjustable by authorized Sony personnel), 50 Hz
 UK model: 240 V AC (or 220 V AC adjustable by authorized Sony personnel), 50 Hz

Power consumption

G-AEP, AEP model: 85 W
 UK model: 230 W

AC outlets

G-AEP, AEP model: 3 switched, total 100 watts max.
 UK model: 1 switched, 100 watts max.

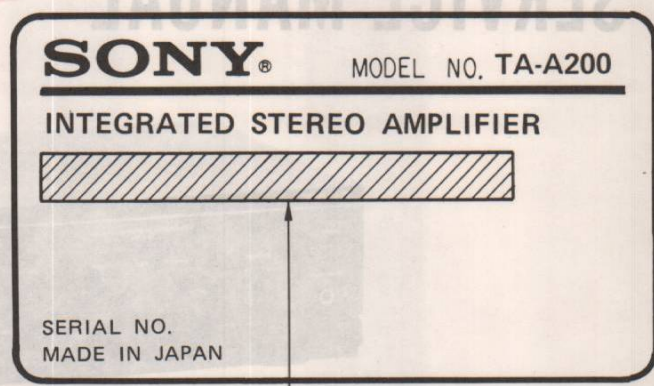
Dimensions

Approx. 430 x 118 x 265 mm (w/h/d)
 (17 x 4 5/8 x 10 3/8 inches)

Weight

5.5 kg (12 lb 2 oz)

MODEL IDENTIFICATION
 — Specification Label —



G-AEP, AEP Model: AC: 220 V ~ 50/60 Hz 85 W
 UK Model: AC: 240 V ~ 50/60 Hz 230 W

SPECIFICATIONS

Input	Input jack	Jack type	Sensitivity	Impedance	SN (weighting level)
PHONO	PHONO	Phono	5.0 mV	50 kilohms	74 dB* (A, 2.0 mV)
TUNER CD VIDEO/AUX TAPE	VIDEO/AUX TAPE	Phono	150 mV	50 kilohms	100 dB (150 mV)

Output	REG OUT	Jack type	Voltage	Impedance
SPEAKERS	—	—	—	—
HEAD- PHONES	—	—	—	—

Tone controls	Response	Turnover frequency
BASS	±10 dB (100 Hz)	500 Hz
TREBLE	±10 dB (10 kHz)	3 kHz

TABLE OF CONTENTS

Section	Title	Page
Specifications	Specifications	1
Model Identification	Model Identification	2
Location and Function of Controls	Location and Function of Controls	3
1. DIAGRAMS		
Circuit Boards Location	Circuit Boards Location	5
1-1. Schematic Diagram	1-1. Schematic Diagram	6
1-2. Mounting Diagram	1-2. Mounting Diagram	9
2. EXPLODED VIEWS AND PARTS LIST		
2. EXPLODED VIEWS AND PARTS LIST	2. EXPLODED VIEWS AND PARTS LIST	13
3. ELECTRICAL PARTS LIST		
3. ELECTRICAL PARTS LIST	3. ELECTRICAL PARTS LIST	15
Troubleshooting	Troubleshooting	18

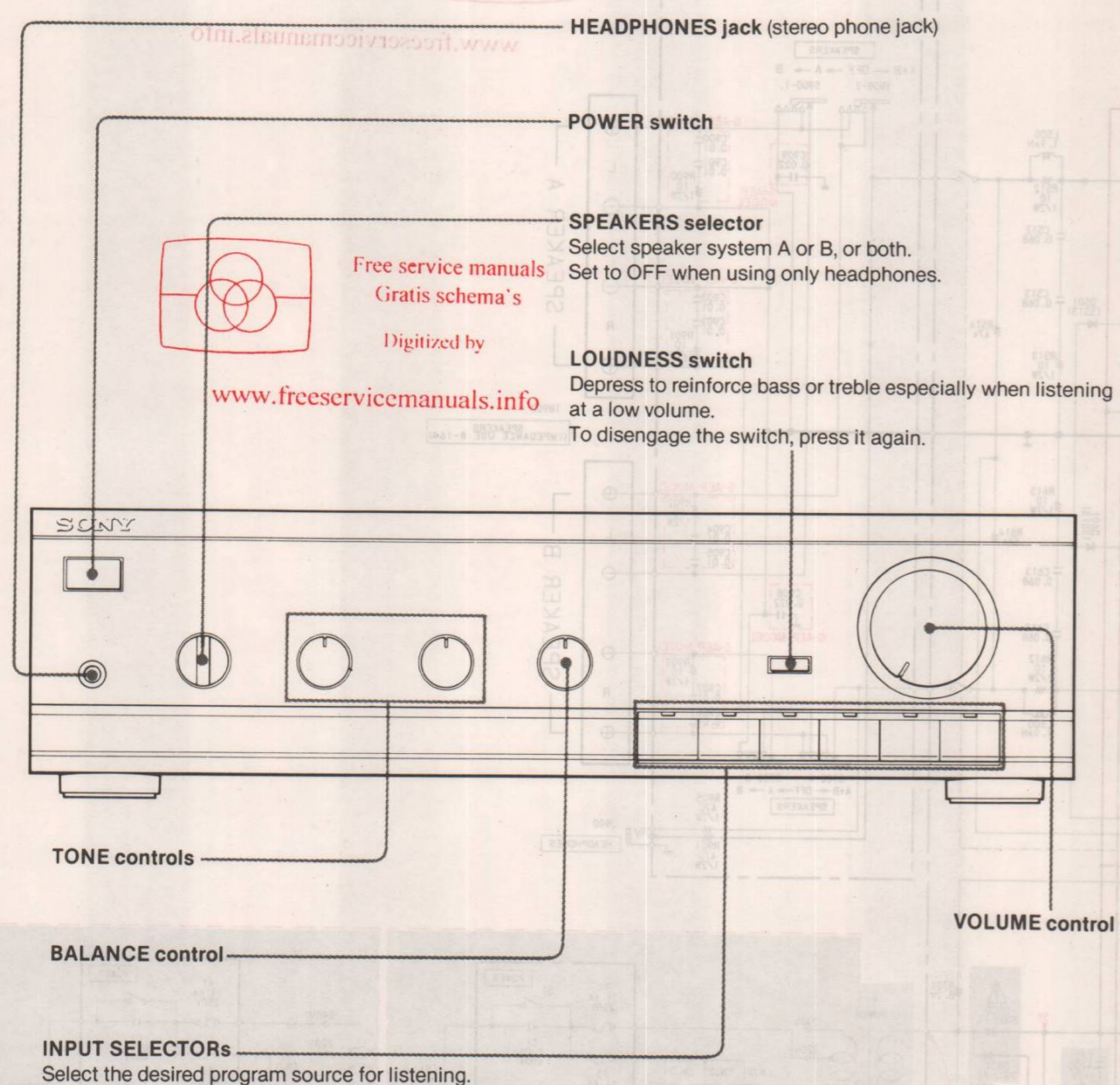
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK 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.

SECTION 1
DIAGRAMS

LOCATION AND FUNCTION OF CONTROLS

FRONT PANEL



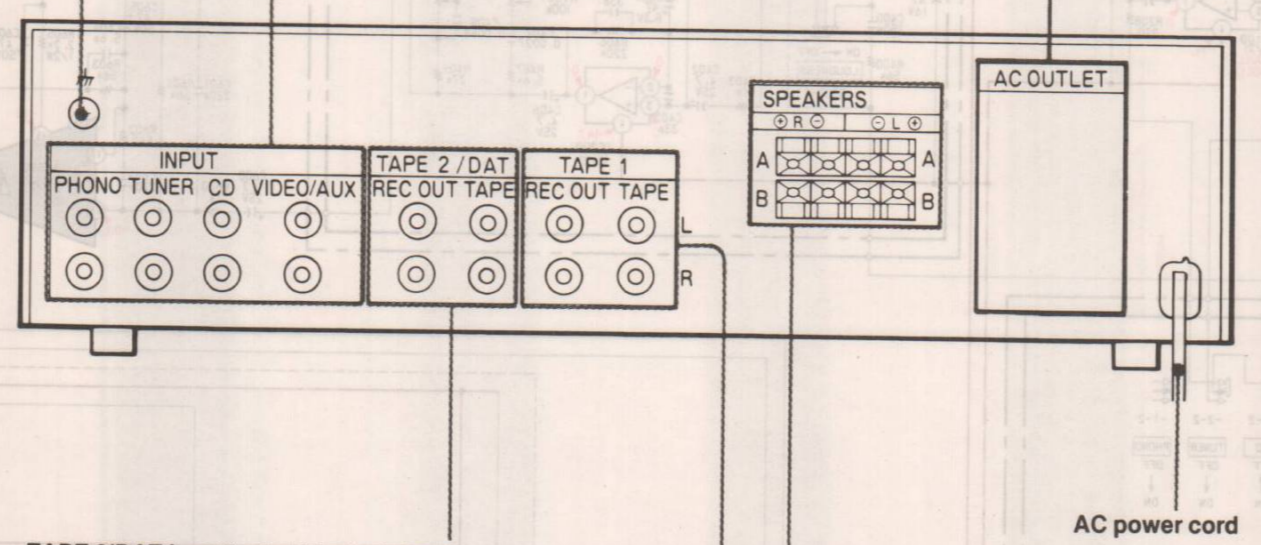
TAPE 1	To play back the tape recorder connected to the TAPE 1 jacks
TAPE 2/DAT	To play back the tape recorder connected to the TAPE 2/DAT jacks
VIDEO/AUX	To listen to the sound of the video equipment or other audio equipment connected to the VIDEO/AUX INPUT jacks
CD	To play back the compact disc player connected to the CD INPUT jacks
TUNER	To listen to the radio programs of the tuner connected to the TUNER INPUT jacks
PHONO	To play the turntable system connected to the PHONO INPUT jacks

REAR PANEL

INPUT jacks (phono)

PHONO	Connect a turntable system.
TUNER	Connect a tuner.
CD	Connect a compact disc player.
VIDEO/AUX	Connect to the audio output jacks of a VTR or other audio equipment.

(phono ground) terminal
To prevent hum, be sure to connect the ground wire of the turntable system.



TAPE 2/DAT input/output jacks (phono)
Connect to the input and output jacks of a tape recorder.

REC OUT	To the LINE IN jacks
TAPE	To the LINE OUT jacks

TAPE 1 input/output jacks (phono)
Connect to the input and output jacks of a tape recorder.

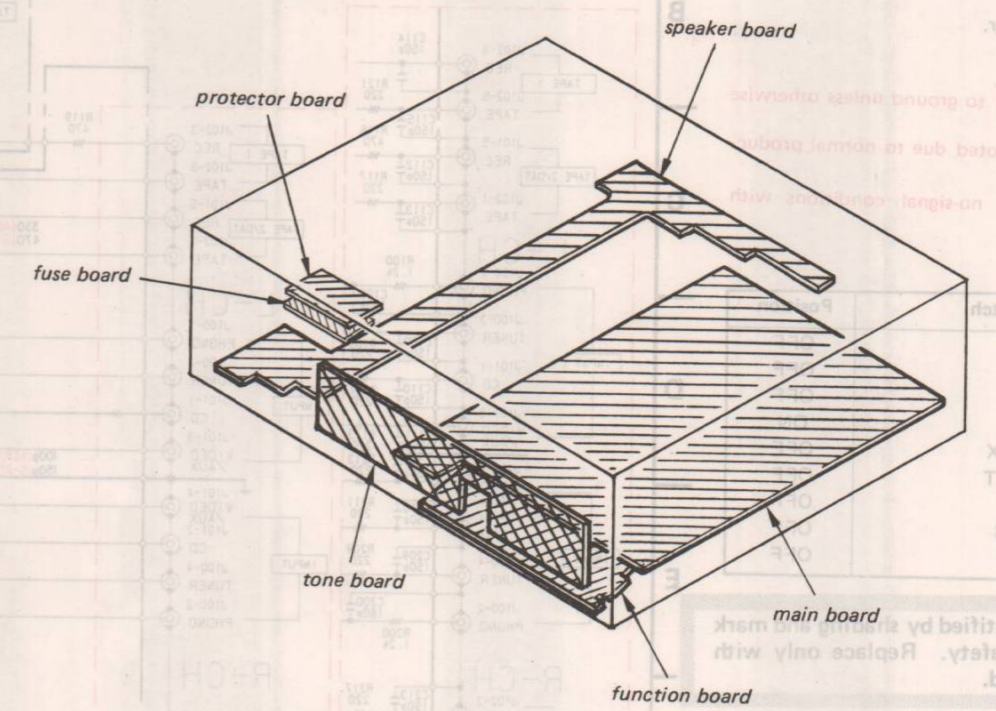
REC OUT	To the LINE IN jacks
TAPE	To the LINE OUT jacks

AC OUTLETS
Use these to power other audio units whose power consumption is less than the wattage indicated on the AC outlet.
These AC outlets are controlled by the POWER switch.

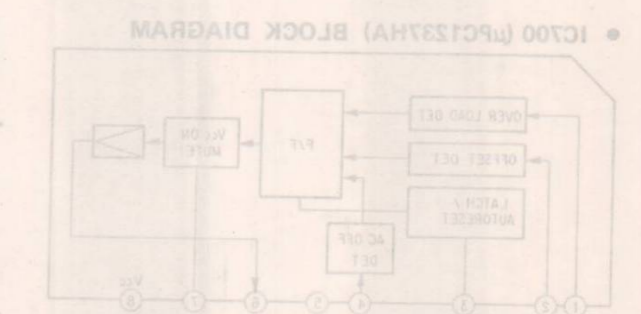
For the Canadian model only
SWITCHED: controlled by the POWER switch.
UNSWITCHED: not controlled by the POWER switch.

Caution
Do not connect any home electrical appliances or other high-wattage equipment to these AC outlets.

• CIRCUIT BOARDS LOCATION




Note: The components identified by a triangle are critical for safety. Replace only with part number specified.



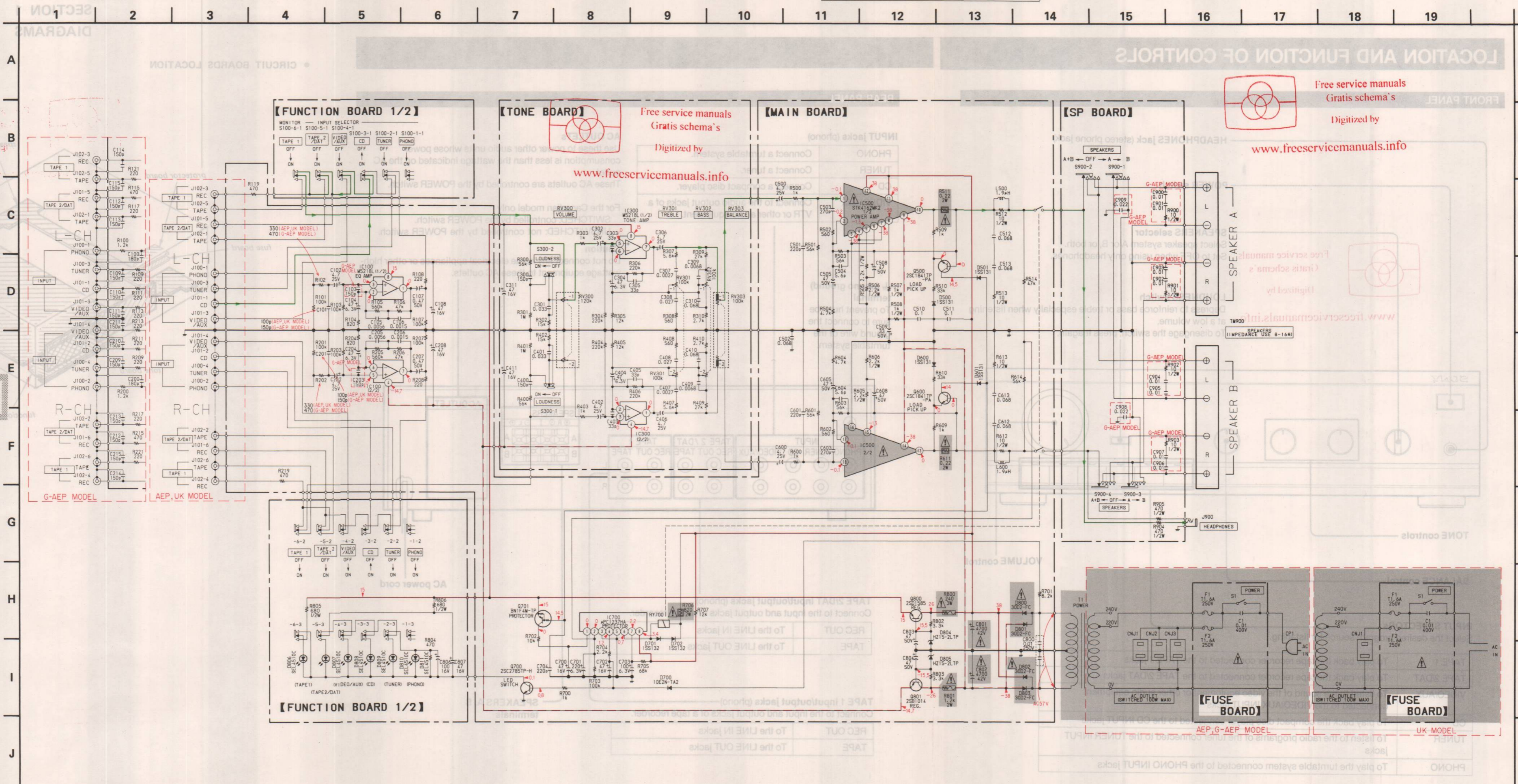
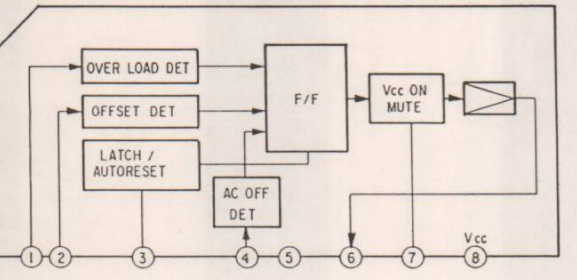
1-1. SCHEMATIC DIAGRAM

- Note:**
- All capacitors are in μF unless otherwise noted. pF : μmF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $\frac{1}{2}W$ or less unless otherwise specified.
 - : signal path.
 - Ⓜ : nonflammable resistor.
 - : B+ bus.
 - : B- bus.
 - Voltagess are dc with respect to ground unless otherwise noted.
 - Voltage variations may be noted due to normal production tolerances.
 - Readings are taken under no-signal conditions with a VOM (50 $k\Omega/V$).
 - Switch

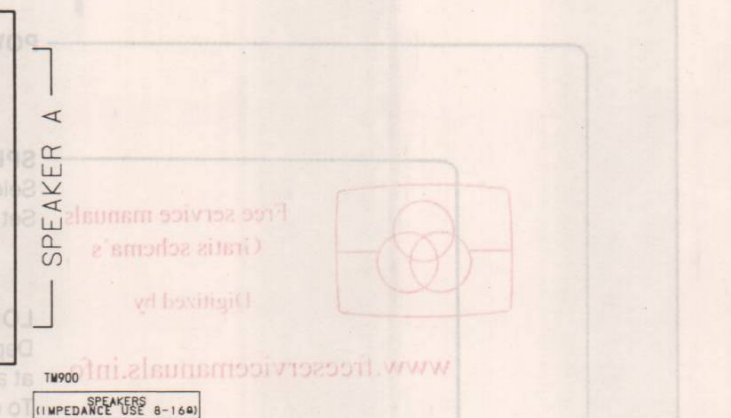
Ref. No.	Switch	Position
S1	POWER	OFF
S100-1	PHONO	OFF
S100-2	TUNER	OFF
S100-3	CD	ON
S100-4	VIDEO/AUX	OFF
S100-5	TAPE 2/DAT	OFF
S100-6	TAPE 1	OFF
S300	LOUDNESS	OFF
S900	SPEAKERS	OFF

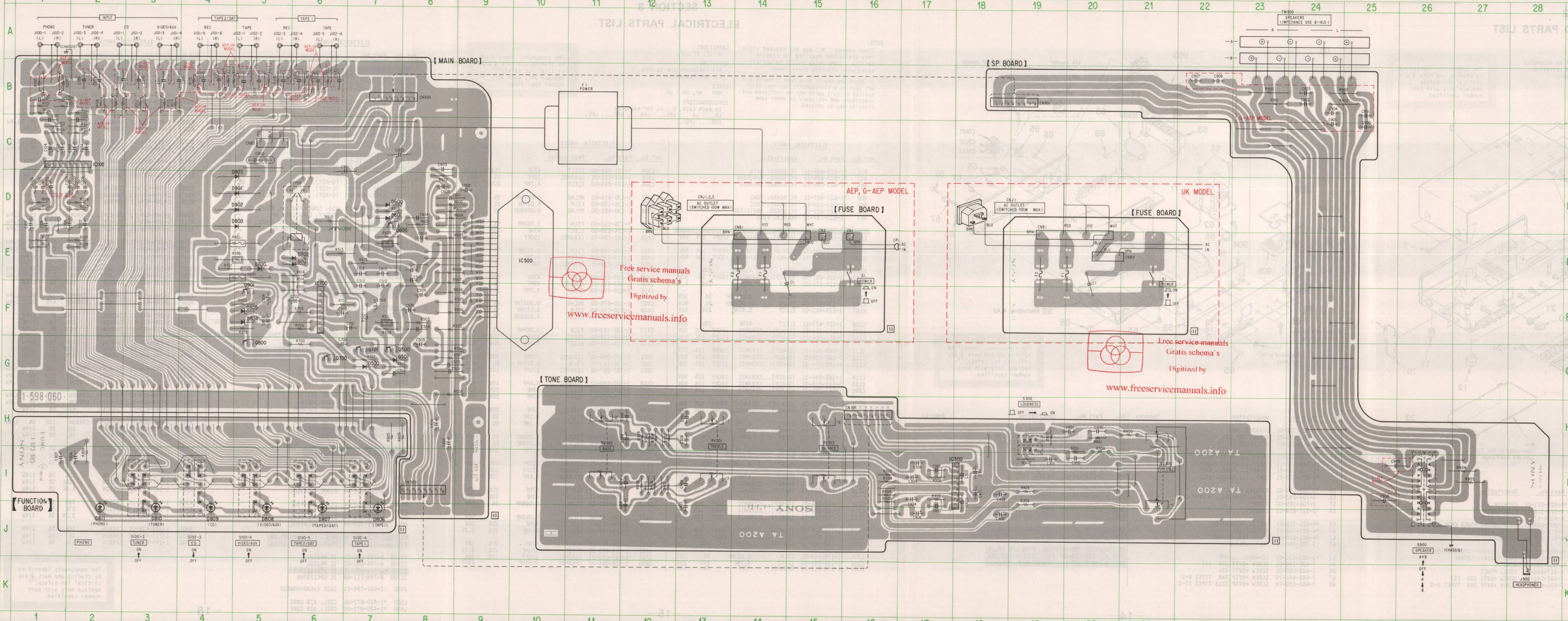
Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

IC700 ($\mu\text{PC1237HA}$) BLOCK DIAGRAM



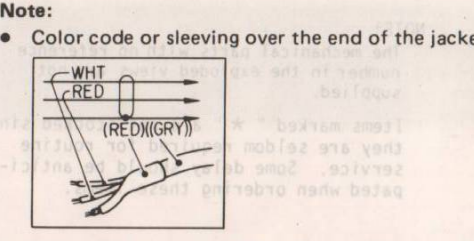
Free service manuals
Gratis schema's
Digitized by
www.freeservicemanuals.info



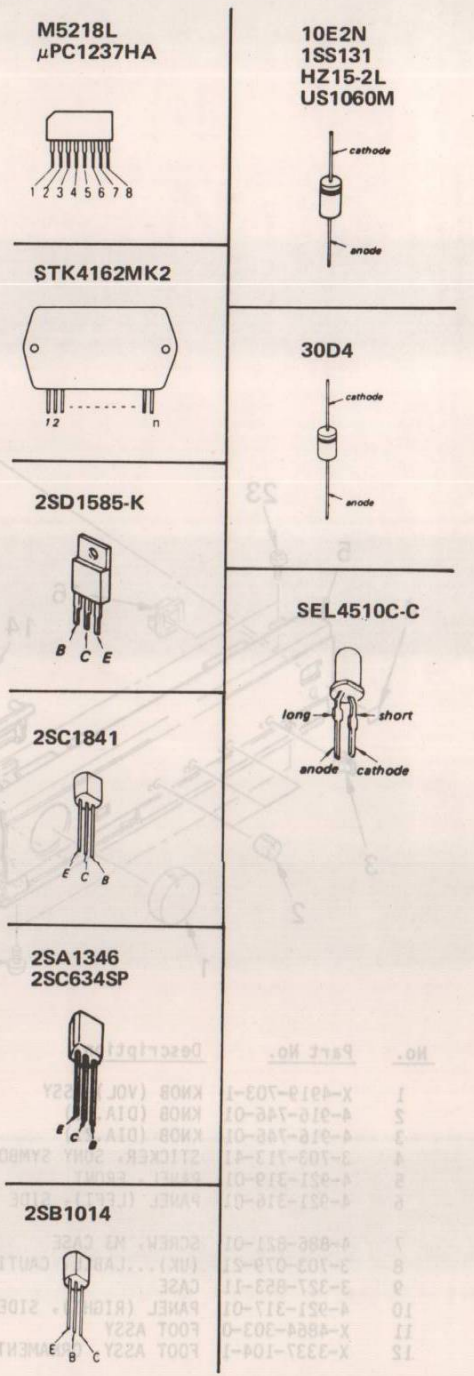


SEMICONDUCTOR LOCATION

Ref. No.	Location
D500	G-7
D501	G-7
D600	D-7
D601	D-7
D700	E-5
D701	E-6
D702	E-6
D800	D-5
D801	D-5
D802	D-5
D803	D-5
D804	F-5
D805	F-5
D806	J-7
D807	J-6
D808	J-5
D809	J-4
D810	J-3
D811	J-2
IC100	C-2
IC300	I-18
IC500	E-10
IC700	F-6
Q500	G-7
Q600	D-7
Q700	G-6
Q701	G-7
Q800	G-5
Q801	F-5



Semiconductor Lead Layouts



Free service manuals
Gratis schema's
Digitized by
www.freeservicemanuals.info

Free service manuals
Gratis schema's
Digitized by
www.freeservicemanuals.info

SECTION 2 EXPLODED VIEWS AND PARTS LIST

SECTION 3 ELECTRICAL 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.

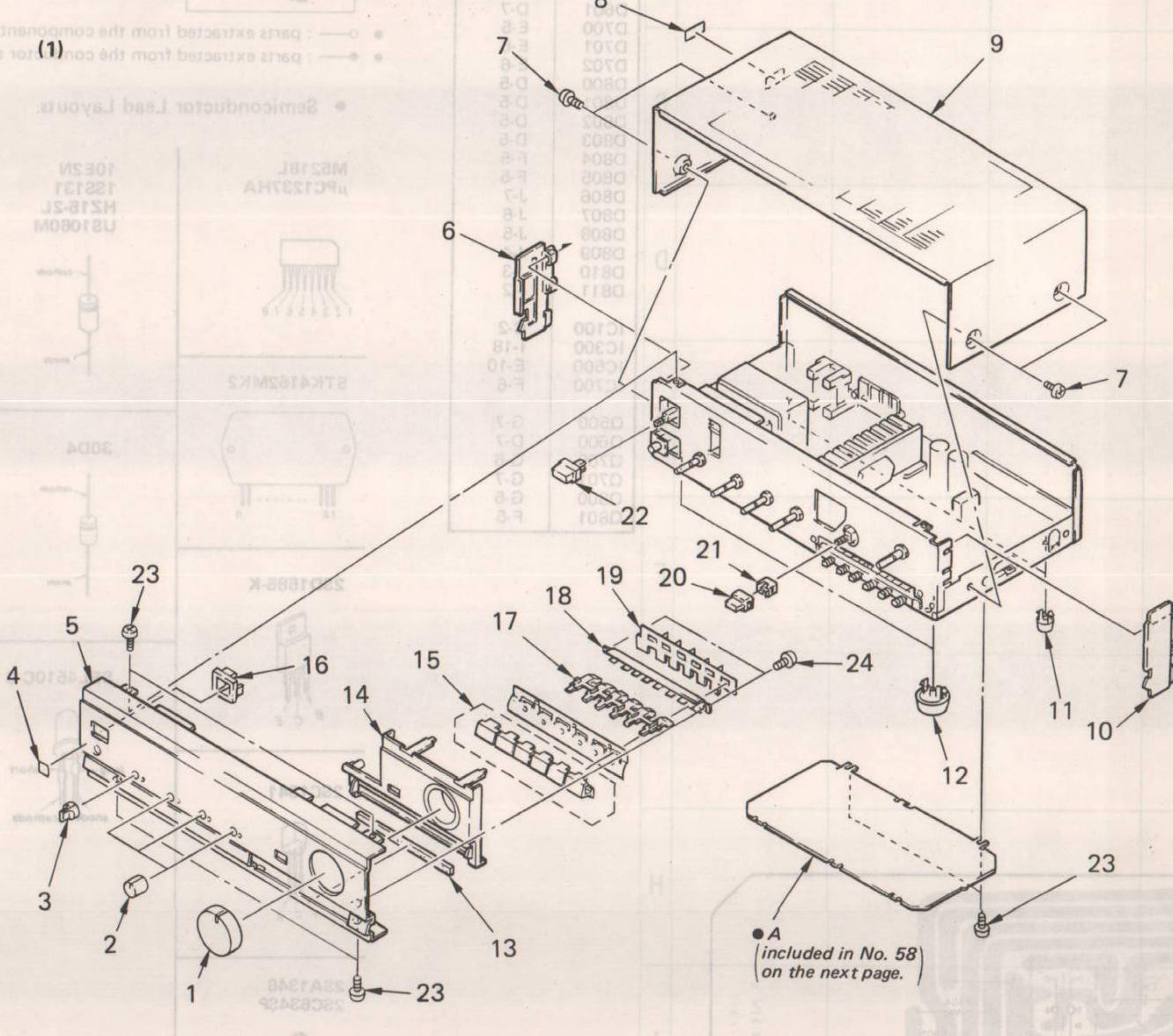


Table with 4 columns: No., Part No., Description, Remarks. Lists mechanical parts such as knobs, screws, and plates.

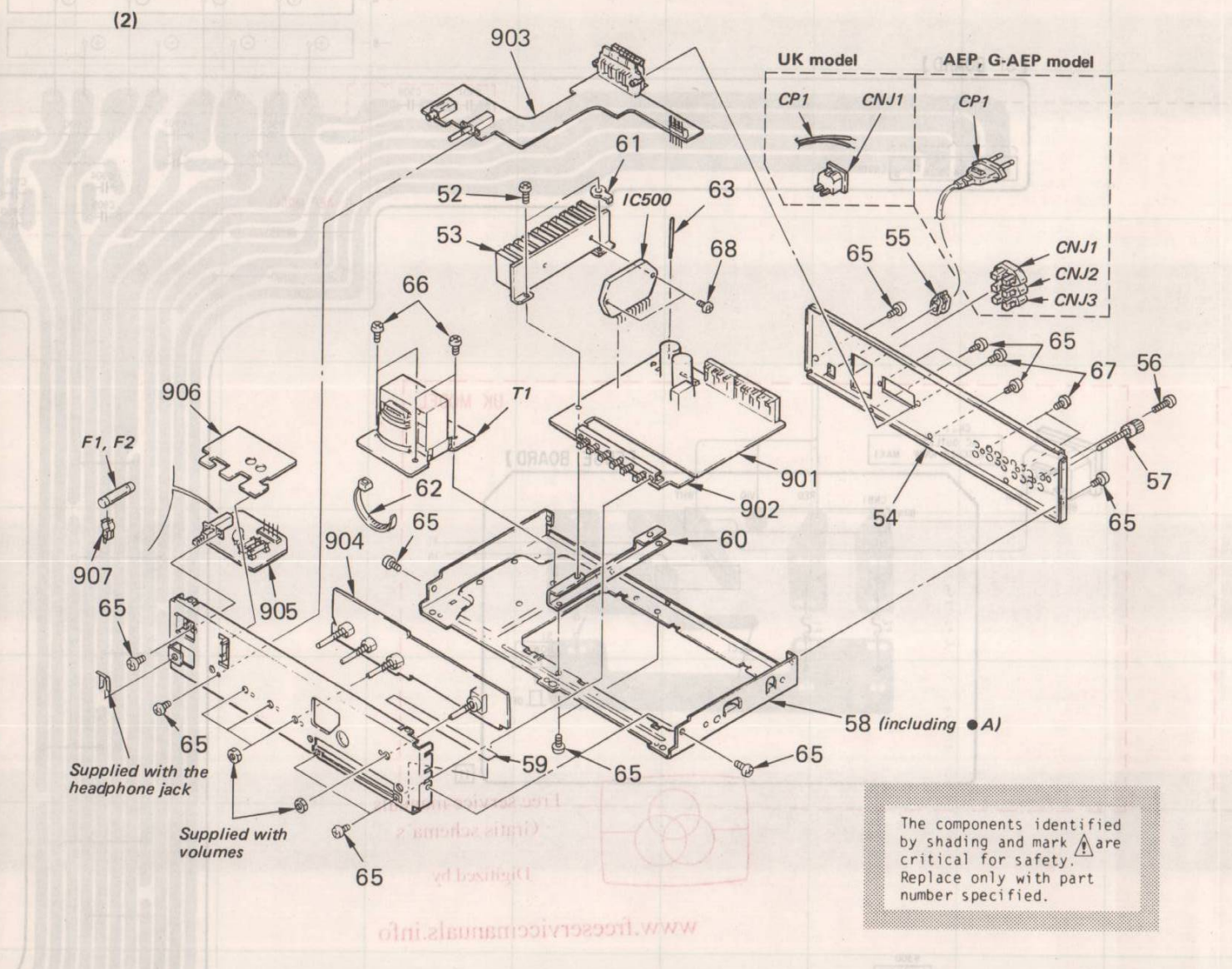


Table with 4 columns: No., Part No., Description, Remarks. Lists electrical components like boards, capacitors, and fuses.

NOTE: Items marked * are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items. CAPACITORS: MF:µF, PF:µµF. RESISTORS: All resistors are in ohms. F: nonflammable. COILS: mH, UH: µH. SEMICONDUCTORS: In each case, U: u, for example: UA...µA..., UPA...µPA..., UPC...µPC, UPD...µPD...

Table with 4 columns: Ref.No., Part No., Description, Remarks. Lists electrical parts like resistors, capacitors, and semiconductors.

Table with 4 columns: Ref.No., Part No., Description, Remarks. Lists electrical parts like transistors, diodes, and ICs.

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

ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R403	1-249-417-11	CARBON	1K	5%	1/4W
R404	1-247-887-00	CARBON	220K	5%	1/4W
R405	1-249-430-11	CARBON	12K	5%	1/4W
R406	1-247-887-00	CARBON	220K	5%	1/4W
R407	1-247-849-00	CARBON	5.6K	5%	1/4W
R408	1-249-414-11	CARBON	560	5%	1/4W
R409	1-249-434-11	CARBON	27K	5%	1/4W
R410	1-249-422-11	CARBON	2.7K	5%	1/4W
R500	1-247-713-11	CARBON	1K	5%	1/4W
R501	1-249-466-11	CARBON	56K	5%	1/4W
R502	1-247-710-11	CARBON	560	5%	1/4W
R503	1-249-466-11	CARBON	56K	5%	1/4W
R504	1-247-721-11	CARBON	4.7K	5%	1/4W
R505	1-247-756-11	CARBON	2.2K	5%	1/2W
R506	1-247-756-11	CARBON	2.2K	5%	1/2W
R507	1-247-752-11	CARBON	1K	5%	1/2W
R508	1-247-752-11	CARBON	1K	5%	1/2W
R509	1-247-713-11	CARBON	1K	5%	1/4W
R510	1-247-726-11	CARBON	33K	5%	1/4W
R511	▲.1-217-151-00	RES. METAL PLATE 0.22			
R512	1-247-727-11	CARBON	10	5%	1/2W
R513	1-247-727-11	CARBON	10	5%	1/2W
R514	1-249-465-11	CARBON	47K	5%	1/4W
R600	1-247-713-11	CARBON	1K	5%	1/4W
R601	1-249-466-11	CARBON	56K	5%	1/4W
R602	1-247-710-11	CARBON	560	5%	1/4W
R603	1-249-466-11	CARBON	56K	5%	1/4W
R604	1-247-721-11	CARBON	4.7K	5%	1/4W
R605	1-247-756-11	CARBON	2.2K	5%	1/2W
R606	1-247-756-11	CARBON	2.2K	5%	1/2W
R609	1-247-713-11	CARBON	1K	5%	1/4W
R610	1-247-726-11	CARBON	33K	5%	1/4W
R611	▲.1-217-151-00	RES. METAL PLATE 0.22			
R612	1-247-727-11	CARBON	10	5%	1/2W
R613	1-247-727-11	CARBON	10	5%	1/2W
R614	1-249-466-11	CARBON	56K	5%	1/4W
R700	1-247-713-11	CARBON	1K	5%	1/4W
R701	1-247-724-11	CARBON	8.2K	5%	1/4W
R702	1-247-725-11	CARBON	10K	5%	1/4W
R703	1-249-469-11	CARBON	100K	5%	1/4W
R704	1-247-717-11	CARBON	2.2K	5%	1/4W
R705	1-249-467-11	CARBON	68K	5%	1/4W
R706	▲.1-206-662-00	METAL OXIDE	820	5%	2W F
R707	1-249-459-11	CARBON	12K	5%	1/4W
R800	▲.1-206-710-00	METAL OXIDE	240	5%	3W F

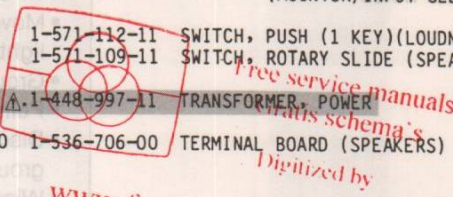
ELECTRICAL PARTS

Ref.No.	Part No.	Description			
R801	▲.1-206-666-00	METAL OXIDE	1.2K	5%	2W F
R802	1-247-719-11	CARBON	3.3K	5%	1/4W
R803	1-247-719-11	CARBON	3.3K	5%	1/4W
R804	1-247-708-11	CARBON	470	5%	1/4W
R805	1-247-750-11	CARBON	680	5%	1/2W
R806	1-247-750-11	CARBON	680	5%	1/2W
R900	1-247-727-11	CARBON	10	5%	1/2W
R901	1-247-727-11	(G-AEP)...CARBON	10	5%	1/2W
R902	1-247-727-11	(G-AEP)...CARBON	10	5%	1/2W
R903	1-247-727-11	(G-AEP)...CARBON	10	5%	1/2W
R904	1-247-747-11	CARBON	470	5%	1/2W
R905	1-247-747-11	CARBON	470	5%	1/2W
RV300	1-237-846-11	RES. VAR. CARBON 120K/120K (VOLUME)			
RV301	1-237-740-11	RES. VAR. CARBON 100K/100K (TREBLE)			
RV302	1-237-740-11	RES. VAR. CARBON 100K/100K (BASS)			
RV303	1-237-739-11	RES. VAR. CARBON 100K/100K (BALANCE)			
RY700	1-515-533-11	RELAY			
S1	▲.1-554-920-11	SWITCH, PUSH (AC POWER)(1 KEY)			
S100	1-571-118-11	SWITCH, PUSH (6 KEY) (MOINTOR/INPUT SELECTOR)			
S300	1-571-112-11	SWITCH, PUSH (1 KEY)(LOUDNESS)			
S900	1-571-109-11	SWITCH, ROTARY SLIDE (SPEAKERS)			
T1	▲.1-448-997-11	TRANSFORMER, POWER			
TM900	1-536-706-00	TERMINAL BOARD (SPEAKERS)			

ACCESSORY & PACKING MATERIAL

Part No.	Description
3-304-973-00	SHEET, PROTECTION
3-327-844-31	INDIVIDUAL CARTON
3-701-630-00	BAG, POLYETHYLENE
3-769-414-11	(AEP,UK)...MANUAL, INSTRUCTION
3-769-414-41	(G-AEP)...MANUAL, INSTRUCTION
4-921-311-01	CUSHION

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



www.freeservicemanuals.info

Free service manuals
Circuit schema's
Digitized by
www.freeservicemanuals.info



English
87H057-1
Printed in Japan
© 1987.8

Sony Corporation
Audio Group

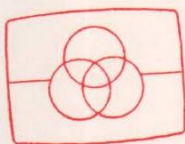
9-825-874-11

TROUBLESHOOTING

Should any problem persist after you have made these checks, consult your nearest Sony service facility. Before going through the check list below, first refer back to the connection and operating procedures.

Symptom	Remedy
No audio	<ul style="list-style-type: none"> • Check power cord connection. • Check speaker and program source connections. • Check SPEAKERS selector setting. • Check INPUT SELECTOR. • Adjust VOLUME control.
No audio from one channel or unbalanced left and right volume	<ul style="list-style-type: none"> • Adjust BALANCE control. • Check speaker and input connections of inoperative channel.
Abrupt sound loss from both speakers	<ul style="list-style-type: none"> • Turn off amplifier. Check speaker terminals and connecting cords for short.
Lack of bass sound or obscure instrument position	<ul style="list-style-type: none"> • Check speaker +/- connections for proper phasing.
Severe hum or noise	<ul style="list-style-type: none"> • TV or VTR is too close to audio system. • Move connecting cords away from transformers, motors or fluorescent lights. • Ground turntable system. • Fully insert connecting cord plugs. • Disconnect turntable ground wire when using an MM cartridge with a ground piece. • Wipe plugs and jacks with a cloth lightly moistened with methanol.

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



Free service manuals
Gratis schema's
Digitized by

www.freeremotemanuals.info

9-952-874-11

Sony Corporation
Audio Group

English
87H0557-1
Printed in Japan
© 1987, 8