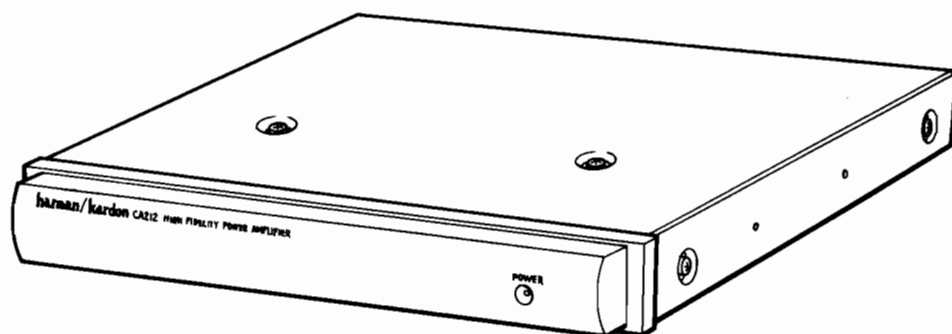


The Harman Kardon Model CA212

Manual 133A

HIGH FIDELITY POWER AMPLIFIER

Technical Manual



The following marks found in the parts list of this manual identify the models as follows.

-  : General model
-  : Japan model

harman/kardon

240 Crossways Park West, Woodbury, N.Y. 11797
1112-3152133A7 P-088803 1200 Printed in Japan

SPECIFICATIONS

Power Output, RMS	: 12 watts per channel into 4 Ohms, 20 ~ 20,000Hz	Power Supply	: DC +13.8V (11 ~ 16V usable), negative ground
HCC (High instantaneous Current Capability)	: 5A	Typical Input Current Requirements	
THD	: No more than 1% (4 Ohms)	At Idle	: 0.3A
Negative Feedback	: 35dB	Full Power Music Signal	: 1.2A (4 Ohms/ch.)
Power Bandwidth	: 10Hz to 30,000Hz	Full Power Sine Wave	: 3.6A (4 Ohms/ch.)
Frequency Response	: 10Hz to 100,000Hz +0, -3dB	Dimensions (W x H x D)	: 7-1/8" x 1" x 5-7/8" (180 x 25 x 149 mm)
Signal-to Noise Ratio	: 84dB	Weight	: 2lbs. (0.9kg)
Input Sensitivity/Impedance	: 0.1V/0.5V (Switchable)/ 22k Ohms	Chassis Dimensions (W x H x D)	: 7" x 1" x 5-1/8" (178 x 25 x 130 mm)

Specifications and components subject to change without notice.
Overall performance will be maintained or improved.

DISASSEMBLY PROCEDURES (REFER TO PAGES 3 AND 7)

① CABINET TOP (119) REMOVAL

Remove 6 screws (A) and then remove the Cabinet Top (119).

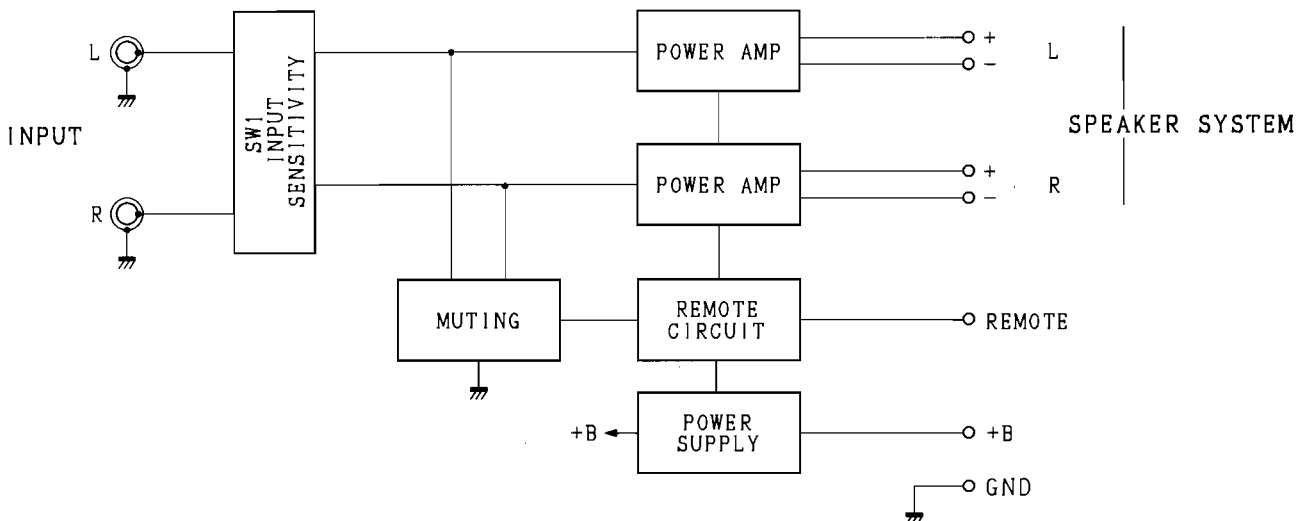
② FRONT PANEL ASS'Y (AB) REMOVAL

1. Remove the Cabinet Top (119), referring to the previous step ①.
2. Remove 2 screws (B) and then remove the Front Panel Ass'y (AB).

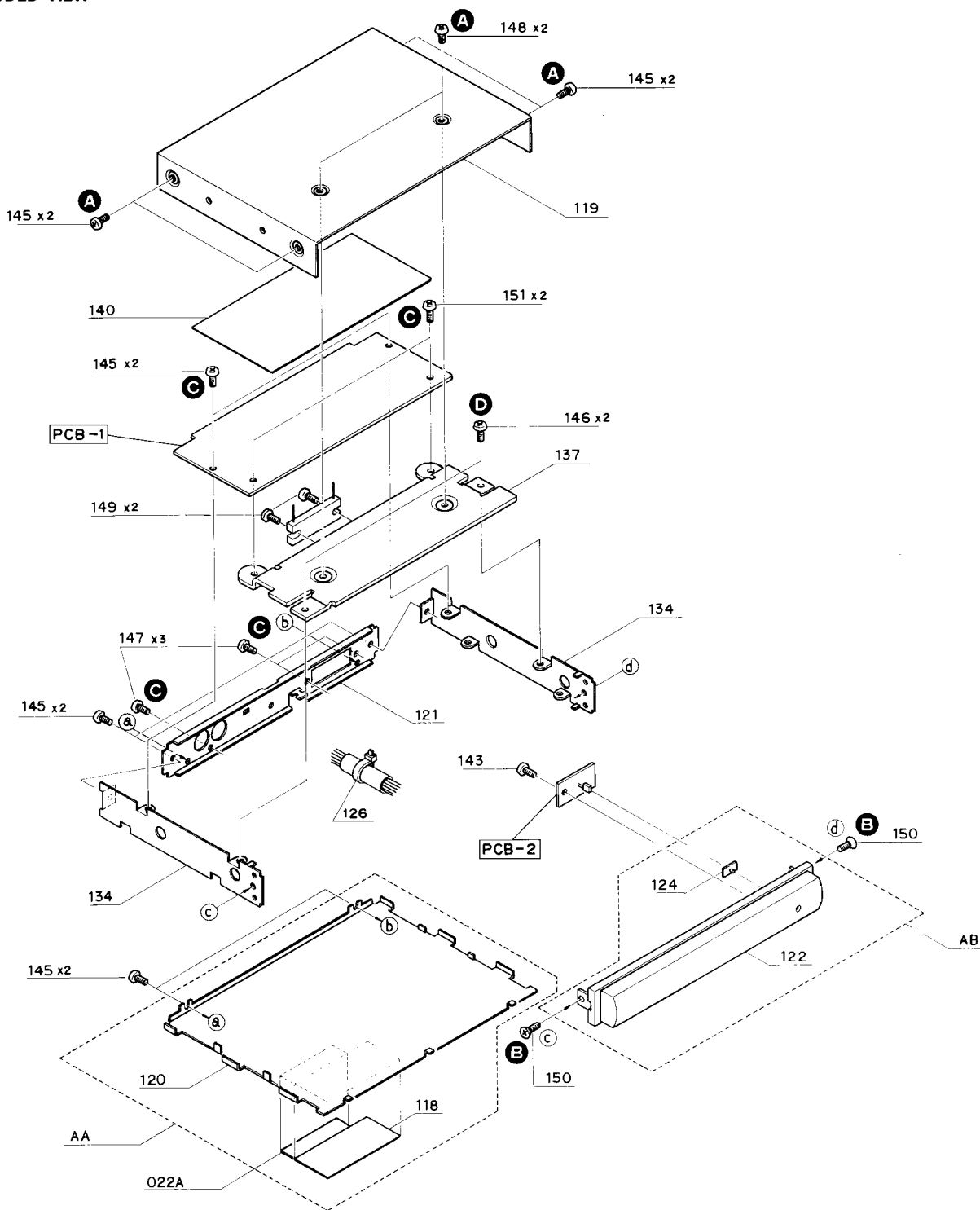
③ MAIN P. C. BOARD (PCB-1) REMOVAL

1. Remove the Cabinet Top (119), referring to the previous step ①.
2. Remove 7 screws (C) and remove 2 screws (D), then remove the Main P. C. Board (PCB-1).

BLOCK DIAGRAM



GENERAL UNIT
EXPLODED VIEW



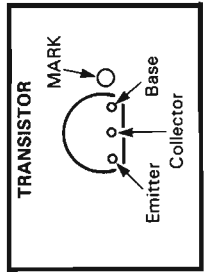
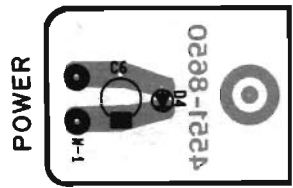
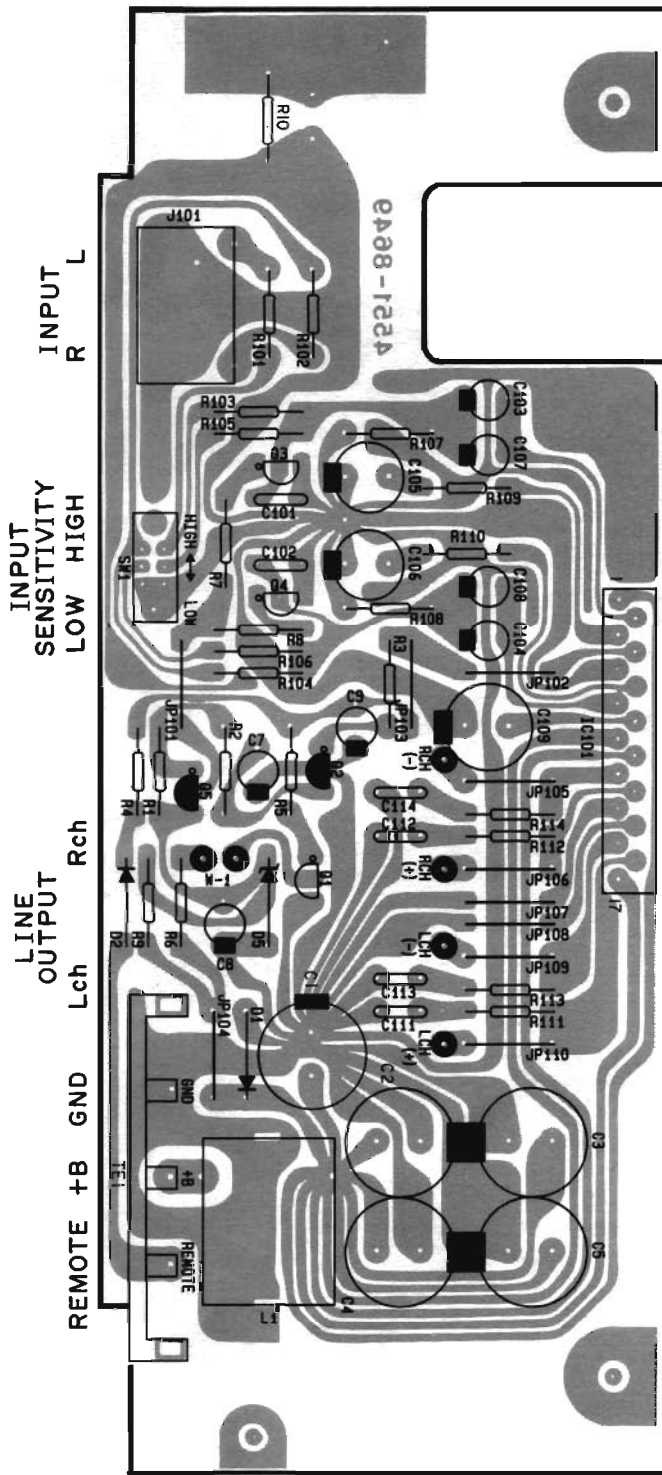
PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
AA	A424-CA212A	CABINET BACK ASS'Y	137	2222-7245	HEAT SINK
AB	A442-CA212A	FRONT PANEL ASS'Y	140	2224-7126	INSULATOR
O22A	1756-14508	LABEL G	143	2347-R0120082	SCREW
118	1751-10011	LABEL	145	2347-260547	SCREW
119	1414-12101	CABINET	146	2347-260827	SCREW
120	1424-25601	CABINET BACK	147	2347-30104	SCREW
121	1424-25801	CABINET BACK	148	2347-R0126084	SCREW
122	1442-18301	PANEL	149	2347-R0130104	SCREW
124	1732-02101	INDICATOR	150	2343-260527	SCREW
126	2240-7120	HOLDER	151	2347-R0126084	SCREW
134	2219-8227	METAL FITTG			

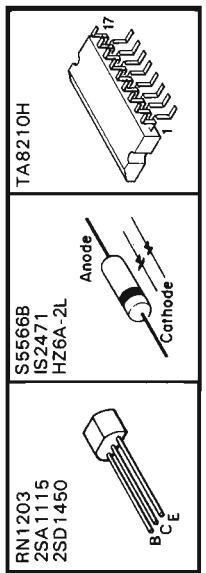
P. C. BOARDS

PCB-1 Main P. C. Board

PCB-2 LED P. C. Board



PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.



1
2
3
4
5
6
7

ELECTRICAL PARTS LIST


Ser. No.	Ref. No.	Part No.	Description
PCB-1 MAIN P.C.BOARD			
CAPACITORS			
514	C1	5345-S04CM108	CAP, MINI ELE 1000 μ /16V
514	C2	5345-S04CM108	CAP, MINI ELE 1000 μ /16V
514	C3	5345-S04CM108	CAP, MINI ELE 1000 μ /16V
514	C4	5345-S04CM108	CAP, MINI ELE 1000 μ /16V
514	C5	5345-S04CM108	CAP, MINI ELE 1000 μ /16V
518	C7	5345-226C041	CAP, MINI ELE 22 μ /16V
518	C8	5345-226C041	CAP, MINI ELE 22 μ /16V
520	C9	5345-104F0951	CAP, MINI ELE .1 μ /50V
523	C101	5359-S010K151	CAP, PPP 150P
523A	C101	5359-S010K331	CAP, PPP 330P G
523	C102	5359-S010K151	CAP, PPP 150P
523A	C102	5359-S010K331	CAP, PPP 330P G
516	C103	5345-106C0951	CAP, MINI ELE 10 μ /16V
516	C104	5345-106C0951	CAP, MINI ELE 10 μ /16V
517	C105	5345-107C041	CAP, MINI ELE 100 μ /16V
517	C106	5345-107C041	CAP, MINI ELE 100 μ /16V
519	C107	5345-335F0951	CAP, MINI ELE 3.3 μ /50V
519	C108	5345-335F0951	CAP, MINI ELE 3.3 μ /50V
513	C109	5345-477C045	CAP, MINI ELE 470 μ /16V
522	C111	5354-124593	CAP, MYL .12 μ
522	C112	5354-124593	CAP, MYL .12 μ
522	C113	5354-124593	CAP, MYL .12 μ
522	C114	5354-124593	CAP, MYL .12 μ
RESISTORS			
531	R1	5135-104522	RES, CBN 1/2P 100K
532	R2	5135-333522	RES, CBN 1/2P 33K
534	R3	5135-223522	RES, CBN 1/2P 22K
533	R4	5135-102522	RES, CBN 1/2P 1K
534	R5	5135-223522	RES, CBN 1/2P 22K
533	R6	5135-102522	RES, CBN 1/2P 1K
536	R7	5135-103522	RES, CBN 1/2P 10K
536	R8	5135-103522	RES, CBN 1/2P 10K
535	R9	5135-682522	RES, CBN 1/2P 6.8K
521	R10	5135-221522	RES, CBN 1/2P 220
525	R101	5135-331522	RES, CBN 1/2P 330
525	R102	5135-331522	RES, CBN 1/2P 330
526	R103	5135-183522	RES, CBN 1/2P 18K
526	R104	5135-183522	RES, CBN 1/2P 18K
527	R105	5135-472522	RES, CBN 1/2P 4.7K
527	R106	5135-472522	RES, CBN 1/2P 4.7K
528	R107	5135-473522	RES, CBN 1/2P 47K
528	R108	5135-473522	RES, CBN 1/2P 47K
529	R109	5135-821522	RES, CBN 1/2P 820
529	R110	5135-821522	RES, CBN 1/2P 820
530	R111	5135-2R2522	RES, CBN 1/2P 2.2
530	R112	5135-2R2522	RES, CBN 1/2P 2.2
530	R113	5135-2R2522	RES, CBN 1/2P 2.2
530	R114	5135-2R2522	RES, CBN 1/2P 2.2
INTEGRATED CIRCUITS			
501	IC101	5653-TA8210H	IC, LINEAR
TRANSISTORS			
503	Q1	5613-RN1203	XISTOR, NPN R
504	Q2	5611-1115(E)OR(F)	XISTOR, PNP R
502	Q3	5614-1450(T)OR(S)	XISTOR, NPN A
502	Q4	5614-1450(T)OR(S)	XISTOR, NPN A
504	Q5	5611-1115(E)OR(F)	XISTOR, PNP R
DIODES			
507	D1	5632-S5566B	DIODE, RECT
509	D2	5636-1S2471	DIODE, SWITCH
508	D5	5635-HZ6A-2L	DIODE, ZENER
MISCELLANEOUS			
541	J101	4489-01201002	PIN JACK, MLT
537	L1	5583-50401	COIL, AF CH
539	SW1	4421-00402022	SWITCH, SLIDE
542	TE1	4214-185	TERMINAL
544	W1	4132-R0202051	CORD, 2C
546		4163-706118	CONNECTOR W/W, SP ch R
547		4163-707118	CONNECTOR W/W, SP ch L

Ser. No.	Ref. No.	Part No.	Description
PCB-2 LED P.C.BOARD			
CAPACITORS			
515	C6	5345-106C0951	CAP, MINI ELE 10 μ /16V
DIODES			
505	D4	5637-851RCPP	LED

ABBREVIATIONS IN PARTS LIST

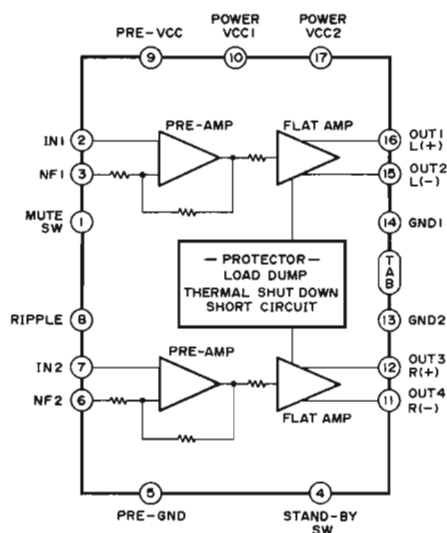
CAPACITORS	RESISTORS
CAP, MINI ELE : Electrolytic	RES, CBN 1/2P : Carbon 1/2W
CAP, PPP : Polypropylene	TRANSISTORS
CAP, MYL : Mylar	XISTOR : Transistor

NOTE

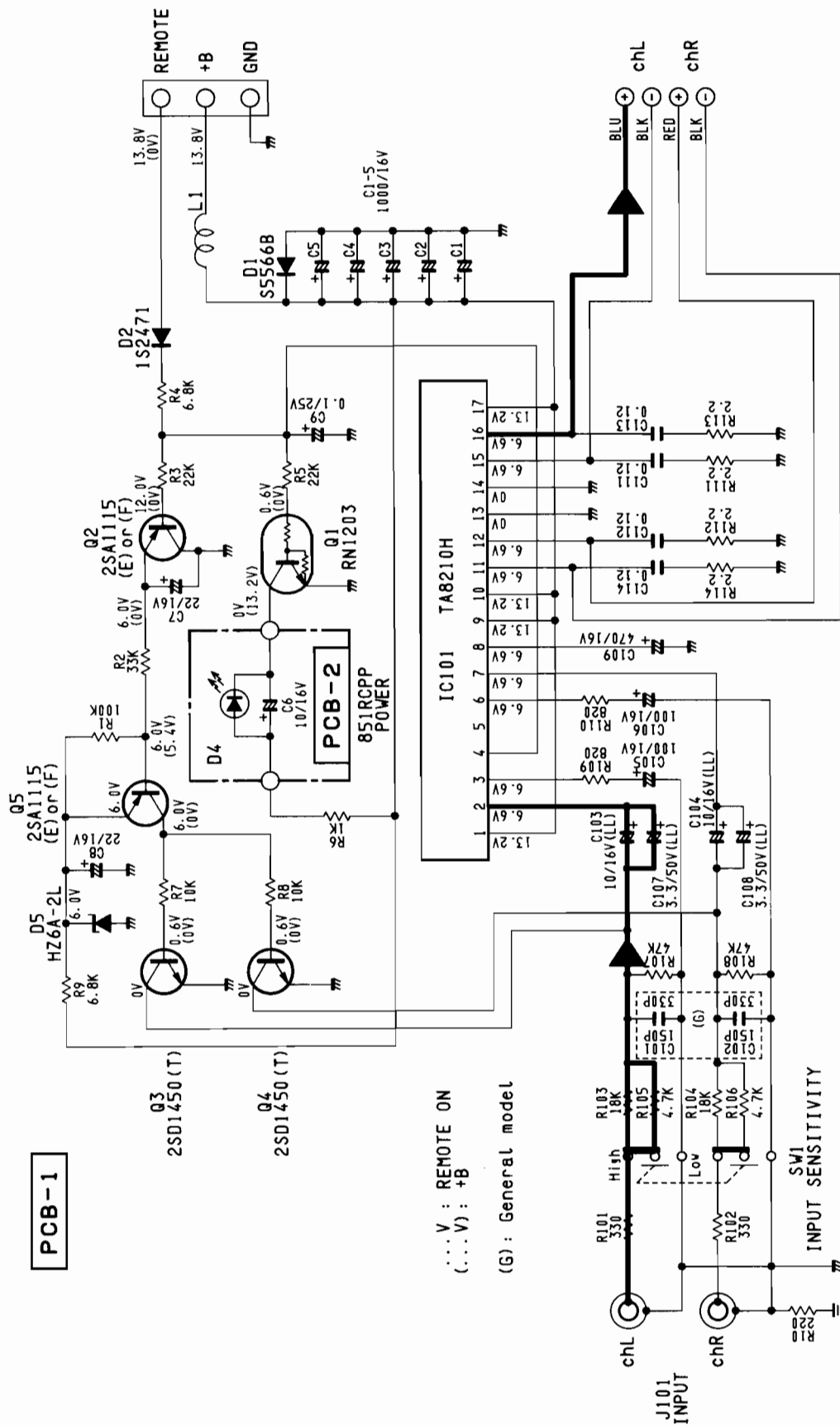
 SAFETY RELATED COMPONENT. USE ONLY EXACT REPLACEMENT PART AS SPECIFIED.

IC BLOCK DIAGRAM

TA8210H : IC101 POWER AMP



SCHMATIC DIAGRAM



...V : REMOTE ON
 (...V) : +B
 (G) : General model

- NOTE:
1. ALL RESISTANCE VALUES ARE IN Ω .
 $K\Omega=1000\Omega$, $M\Omega=1000K\Omega$.
 2. THE WATTAGE OF RESISTORS IS 1/2W UNLESS OTHERWISE NOTED.
 3. ALL CAPACITANCE VALUES ARE IN μF UNLESS OTHERWISE NOTED. $P=\mu F$.

PACKAGE

