

# SERVICE MANUAL

STEREO RECEIVER

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual" AV-D58 (U), (S/M Code No. 09-012-444-0T1).

**aiwa**  
S/M Code No. 09-013-444-0R1

REVISION  
DATA

# SPECIFICATIONS

## <FM tuner section>

**Tuning range** 87.5 MHz to 108 MHz  
**Usable sensitivity (IHF)** 13.2 dBf  
**Antenna terminals** 75 ohms (unbalanced)

## <AM tuner section>

**Tuning range** 531 kHz to 1602 kHz (9 kHz step)  
 530 kHz to 1710 kHz (10 kHz step)  
**Usable sensitivity** 350 µV/m  
**Antenna** Loop antenna

## <Amplifier section>

**Power output**

**Front**  
 80 W + 80 W (40 Hz - 20 kHz, T.H.D. less than 1 %, 8 ohms)  
 105 W + 105 W (1 kHz, T.H.D. less than 10 %, 8 ohms)

**Rear (Surround)**  
 80 W + 80 W (40 Hz - 20 kHz, T.H.D. less than 1 %, 8 ohms)

**Center**  
 80 W (40 Hz - 20 kHz, T.H.D. less than 1 %, 8 ohms)  
 105 W (1 kHz, T.H.D. less than 10 %, 8 ohms)

**Total harmonic distortion** 0.1 % (60 W, 1 kHz, 8 ohms, Front)

## Inputs

**AUDIO IN**  
 PHONO : 2.5 mV, adjustable (47 kohms)  
 VIDEO 1/DVD/MD, VIDEO 2/LD/TV, VIDEO 3, CD : 300 mV adjustable (47 kohms)  
 TAPE MONITOR : 350 mV, adjustable (47 kohms)  
 AUX : 300 mV, adjustable (47 kohms)

**DIGITAL IN**  
 COAXIAL (VIDEO 2) :  
 OPTICAL (VIDEO 1) :  
 accept linear PCM signals and bit stream of Dolby Digital and DTS Surround (32 kHz, 44.1 kHz and 48 kHz and 96 kHz)

VIDEO IN : 1 Vp-p (75 ohms)


## Outputs

AUDIO OUT (REC OUT) : 300 mV (1 kohm)  
 VIDEO OUT (MONITOR) : 1 Vp-p (75 ohms)  
 SUPER WOOFER : 1.5 V  
 FRONT SPEAKERS IMP : 8 ohms : accepts speakers of 8 ohms or more  
 SURROUND SPEAKERS IMP : 8 ohms : accepts speakers of 8 ohms or more  
 CENTER SPEAKERS IMP : 8 ohms : accepts speakers of 8 ohms or more  
 PHONES (stereo jack) : accepts headphones of 32 ohms or more -20 dB -20 dB

## Muting

### <General>

**Power requirements** 120 V AC, 60 Hz  
**Power consumption** 155 W  
**Power consumption in standby mode** ECO OFF : 28.5 W  
 ECO ON : 1.1 W  
**Dimensions of main unit (W x H x D)** 430 x 155 x 402 mm (17 x 6<sup>1</sup>/<sub>8</sub> x 15<sup>7</sup>/<sub>8</sub> in.)  
**Weight of main unit** 8.9 kg (19 lb 10 oz.)

- Design and specifications are subject to change without notice.
- Manufactured under license from Dolby Laboratories Licensing Corporation.  
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# ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC							
	87-A21-760-040		C-IC, NJM4580V		87-A40-764-080		ZENER, UZ10BSC
	8B-AR1-601-030		C-IC, UPD780228GF-082		87-A40-740-080		ZENER, UZ3.3BSA
	87-A21-831-010		IC, SPS-422-1-F1		87-A40-757-080		ZENER, UZ7.5BSC
	87-020-784-040		C-IC, TC4053BF		87-A40-488-080		DIODE, 1SS244
	87-A21-703-040		C-IC, SN74LV244APW		87-A40-751-080		ZENER, UZ6.2BSB
	87-A21-916-040		C-IC, SN74LV125APW		87-A40-646-010		DIODE, FMB-G16L
	87-A21-825-040		C-IC, M61501FP		87-017-149-080		ZENER, HZS6A2L
	87-A21-884-030		C-IC, CS4228A	MAIN C.B			
	87-017-585-080		C-IC, NJM4580E				
	87-020-903-010		IC, NJM7805FA	C101	87-010-235-080		CAP, E 470-16 SME
	87-A21-883-030		C-IC, CS8415A	C102	87-A12-072-080		CAP, E 100-25 SMG
	87-A20-870-010		IC, GP1F37R	C103	87-A12-068-080		CAP, E 470-16 SMG
	87-A21-885-030		C-IC, CS49326	C104	87-A12-076-080		CAP, E 22-35 SMG
	87-A21-695-010		IC, LA1845L	C105	87-A12-072-080		CAP, E 100-25 SMG
	87-A20-820-010		IC, BA7625	C106	87-A12-091-080		CAP, E 10-50 SMG
	87-A21-928-010		IC, LC72131D-N	C107	87-A12-080-080		CAP, E 220-35 SMG
TRANSISTOR				C108	87-012-276-080		CAP, CHIP SS 1500 PBK
	87-026-245-080		TR, DTC114ES	C109	87-012-368-080		C-CAP, S 0.1-50 F
	87-A30-612-080		TR, 2SC5343Y	C110	87-012-368-080		C-CAP, S 0.1-50 F
	87-A30-476-010		TR, KTA1046Y	C111	87-012-368-080		C-CAP, S 0.1-50 F
	87-A30-071-080		C-TR, RT1N 144C	C112	87-012-368-080		C-CAP, S 0.1-50 F
	89-110-372-080		TR, 2SA1037K(R)	C113	87-A12-780-090		CAP, E 4700-35 M 85 SKR
	87-A30-085-040		C-TR, CSA1362GR	C114	87-A12-780-090		CAP, E 4700-35 M 85 SKR
	89-318-155-080		TR, 2SC1815GR	C115	87-012-368-080		C-CAP, S 0.1-50 F
	87-026-213-080		CHIP-TR, DTC114YKA	C116	87-012-368-080		C-CAP, S 0.1-50 F
	89-320-011-080		TR, 2SC2001K	C117	87-012-368-080		C-CAP, S 0.1-50 F
	87-A30-629-010		TR, 2SA1931	C118	87-012-368-080		C-CAP, S 0.1-50 F
	89-110-155-080		TR, 2SA1015GR	C119	87-A12-383-000		CAP, E 3300-65 M 85 IV LELON
	87-A30-494-080		TR, 2SA1980G	C120	87-A12-383-000		CAP, E 3300-65 M 85 IV LELON
	87-A30-097-010		TR, FN 1016	C121	87-A12-072-080		CAP, E 100-25 SMG
	87-A30-107-070		C-TR, CMBT5401	C122	87-A12-089-080		CAP, E 3.3-50 SMG
	87-A30-098-010		TR, FP 1016	C126	87-A12-091-080		CAP, E 10-50 SMG
	87-A30-268-040		C-TR, 2SA1514K(S)	C127	87-012-286-080		CAP, U 0.01-25
	87-A30-075-080		C-TR, 2SA1235F	C129	87-A10-712-080		C-CAP, S 0.22-50 Z F
	87-A30-257-080		C-TR, 2SD1306E	C130	87-A10-712-080		C-CAP, S 0.22-50 Z F
	87-A30-076-080		C-TR, 2SC3052F	C131	87-A12-796-080		CAP, E 47-16 105 FA
	86-NFZ-667-040		C-TR, DTC123JKA	C132	87-010-405-080		CAP, ELECT 10-50V
	87-A30-106-070		C-TR, CMBT5551	C135	87-A12-383-000		CAP, E 3300-65 M 85 IV LELON
	87-A30-087-080		C-FET, 2SK2158	C136	87-A12-383-000		CAP, E 3300-65 M 85 IV LELON
	87-A30-196-080		TR, 2SC4115SRS	C145	87-012-286-080		CAP, U 0.01-25
	87-A30-086-040		C-TR, CSD1306E	C203	87-012-368-080		C-CAP, S 0.1-50 F
	87-A30-484-080		C-TR, KRA102S	C204	87-012-368-080		C-CAP, S 0.1-50 F
	87-A30-190-080		TR, CC5551	C205	87-012-368-080		C-CAP, S 0.1-50 F
	87-A30-186-010		FET, 2SK3053	C206	87-012-368-080		C-CAP, S 0.1-50 F
	87-A30-072-080		C-TR, RT1P 144C	C207	87-012-282-080		CAP, U 4700P-50
	89-327-143-080		TR, 2SC27140	C208	87-012-282-080		CAP, U 4700P-50
	87-A30-489-080		C-TR, KRA107S	C211	87-012-282-080		CAP, U 4700P-50
	89-503-602-080		C-FET, 2SK360E	C217	87-012-286-080		CAP, U 0.01-25
	87-A30-234-080		TR, CSC4115BC	C218	87-012-286-080		CAP, U 0.01-25
DIODE				C300	87-A11-548-080		C-CAP, S 560P-50 K B
	87-020-465-080		DIODE, 1SS133	C303	87-012-275-080		C-CAP, U 1200P-50 B
	87-A40-749-080		ZENER, UZ5.6BSB	C304	87-012-275-080		C-CAP, U 1200P-50 B
	87-A40-755-080		ZENER, UZ7.5BSA	C305	87-A12-090-080		CAP, E 4.7-50 SMG
	87-A40-748-080		ZENER, UZ5.6BSA	C306	87-A12-090-080		CAP, E 4.7-50 SMG
	87-A40-547-090		DIODE, D5SBA20	C307	87-010-866-080		CAP, E 10-63 M VX
	87-A40-269-080		C-DIODE, MC2836	C308	87-016-299-080		CAP, E 10-100 SME
	87-A40-270-080		C-DIODE, MC2838	C309	87-A12-092-080		CAP, E 22-50 SMG
	87-A40-768-080		ZENER, UZ16BSA	C310	87-A12-092-080		CAP, E 22-50 SMG
	87-A40-956-080		DIODE, EK04	C311	87-012-195-080		C-CAP, U 100P-50CH
	87-070-274-080		DIODE, 1N4003 SEM	C312	87-012-195-080		C-CAP, U 100P-50CH
	87-A40-673-090		DIODE, D10XB20	C313	87-012-164-080		C-CAP, U 2P-50 CK
	87-A40-780-080		ZENER, UZ33BSD	C314	87-012-164-080		C-CAP, U 2P-50 CK
	87-A40-747-080		ZENER, UZ5.1BSB	C315	87-A10-897-080		CAP, E 100-25 BP SME
	87-A40-752-080		ZENER, UZ6.2BSB	C316	87-A10-897-080		CAP, E 100-25 BP SME
				C317	87-A11-548-080		C-CAP, S 560P-50 K B
				C318	87-A11-548-080		C-CAP, S 560P-50 K B
				C319	87-012-368-080		C-CAP, S 0.1-50 F
				C321	87-012-282-080		CAP, U 4700P-50
				C322	87-012-368-080		C-CAP, S 0.1-50 F

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C323	87-A11-548-080		C-CAP,S 560P-50 K B	C566	87-A12-090-080		CAP,E 4.7-50 SMG
C325	87-012-368-080		C-CAP,S 0.1-50 F	C567	87-A12-090-080		CAP,E 4.7-50 SMG
C326	87-012-282-080		CAP,U 4700P-50	C568	87-A12-090-080		CAP,E 4.7-50 SMG
C327	87-012-274-080		CHIP CAP,U 1000P-50B	C569	87-A12-090-080		CAP,E 4.7-50 SMG
C328	87-012-274-080		CHIP CAP,U 1000P-50B	C570	87-A12-090-080		CAP,E 4.7-50 SMG
C330	87-012-368-080		C-CAP,S 0.1-50 F	C571	87-A12-090-080		CAP,E 4.7-50 SMG
C331	87-012-368-080		C-CAP,S 0.1-50 F	C572	87-A12-090-080		CAP,E 4.7-50 SMG
C336	87-A11-548-080		C-CAP,S 560P-50 K B	C577	87-A12-062-080		CAP,E 100-10 SMG
C341	87-A11-548-080		C-CAP,S 560P-50 K B	C579	87-010-759-080		C-CAP,U 0.1-25F
C342	87-A11-548-080		C-CAP,S 560P-50 K B	C700	87-A12-090-080		CAP,E 4.7-50 SMG
C343	87-A11-548-080		C-CAP,S 560P-50 K B	C702	87-010-759-080		C-CAP,U 0.1-25F
C344	87-012-273-080		C-CAP,U 820P-50 B	C703	87-A10-918-080		CAP,E 100-16 SMG
C345	87-012-273-080		C-CAP,U 820P-50 B	C704	87-A12-090-080		CAP,E 4.7-50 SMG
C346	87-012-274-080		CHIP CAP,U 1000P-50B	C705	87-010-190-080		S CHIP F 0.01
C402	87-012-277-080		C-CAP, U 1800P-50 B	C706	87-010-759-080		C-CAP,U 0.1-25F
C403	87-A12-091-080		CAP,E 10-50 SMG	C708	87-A12-068-080		CAP,E 470-16 SMG
C404	87-A11-548-080		C-CAP,S 560P-50 K B	C709	87-A10-918-080		CAP,E 100-16 SMG
C405	87-A12-092-080		CAP,E 22-50 SMG	C800	87-010-759-080		C-CAP,U 0.1-25F
C406	87-012-195-080		C-CAP,U 100P-50CH	C801	87-010-759-080		C-CAP,U 0.1-25F
C407	87-012-164-080		C-CAP,U 2P-50 CK	C900	87-010-759-080		C-CAP,U 0.1-25F
C408	87-A10-897-080		CAP,E 100-25 BP SME	C901	87-A12-092-080		CAP,E 22-50 SMG
C409	87-A11-548-080		C-CAP,S 560P-50 K B	C902	87-A12-092-080		CAP,E 22-50 SMG
C410	87-012-368-080		C-CAP,S 0.1-50 F	C903	87-A12-092-080		CAP,E 22-50 SMG
C411	87-012-282-080		CAP,U 4700P-50	C906	87-A12-071-080		CAP,E 47-25 SMG
C412	87-A11-548-080		C-CAP,S 560P-50 K B	C907	87-010-759-080		C-CAP,U 0.1-25F
C415	87-010-866-080		CAP,E 10-63 M VX	C908	87-010-387-080		CAP,E 470-25 SME
C420	87-012-368-080		C-CAP,S 0.1-50 F	C909	87-010-371-080		CAP, ELECT 470-6.3V
C421	87-A11-548-080		C-CAP,S 560P-50 K B	C910	87-010-371-080		CAP, ELECT 470-6.3V
C422	87-012-273-080		C-CAP,U 820P-50 B	C915	87-012-186-080		C-CAP,U 39P-50 CH
C501	87-A12-090-080		CAP,E 4.7-50 SMG	CN110	87-A60-620-010		CONN,3P V 2MM JMT
C502	87-A12-090-080		CAP,E 4.7-50 SMG	CN202	87-099-573-010		CONN,18P TUC-P18P-B1
C503	87-012-336-080		CAP,CHIP SS 3300 SL	CN502	87-099-571-010		CONN,14P TUC-P14P-B1
C504	87-012-336-080		CAP,CHIP SS 3300 SL	CN503	87-A60-056-010		CONN,12P V 9604S-12C
C505	87-A10-305-080		CAP,M 0.068-50 J	CN508	87-A60-041-010		CONN,30P V 9604S-30C
C506	87-A10-305-080		CAP,M 0.068-50 J	CNA101	8A-AR3-654-010		CONN ASSY,9P VH
C509	87-A10-298-080		CAP,M 0.018-50 J	CNA201	8B-AR3-665-010		CONN ASSY,4P VH (BAR)
C510	87-A10-298-080		CAP,M 0.018-50 J	CNA400	8B-AR1-660-010		CONN ASSY,6P VH (BAR)
C511	87-A12-090-080		CAP,E 4.7-50 SMG	CNA901	8B-AR3-648-010		CONN ASSY,2P -VIDEO3
C512	87-A12-090-080		CAP,E 4.7-50 SMG	J501	87-099-609-010		JACK,PIN 4P KM EARTH
C513	87-A12-071-080		CAP,E 47-25 SMG	J502	87-099-609-010		JACK,PIN 4P KM EARTH
C514	87-A12-071-080		CAP,E 47-25 SMG	J700	87-A60-244-010		JACK,PIN 1P BLK
C515	87-010-370-080		CAP,E 330-6.3 SME	J901	87-099-911-010		JACK,PIN 3P YEL
C516	87-010-370-080		CAP,E 330-6.3 SME	J902	87-099-912-010		JACK,PIN 3P YEL W/E
C517	87-010-759-080		C-CAP,U, 0.1-25F	J903	87-099-911-010		JACK,PIN 3P YEL
C518	87-016-083-080		C-CAP,S 0.15-16 RK	J904	87-099-911-010		JACK,PIN 3P YEL
C519	87-016-083-080		C-CAP,S 0.15-16 RK	L101	87-A50-693-010		COIL,39UH-RCR-110D
C531	87-A10-305-080		CAP,M 0.068-50 J	L901	87-005-239-080		COIL,100UH
C532	87-A10-293-080		CAP,M 6800P-50 J	R51	87-A00-571-050		RES,M/F 0.15-2W J RZ
C533	87-016-083-080		C-CAP,S 0.15-16 RK	R143	87-A00-258-080		RES,M/F 0.22-1W J
C536	87-A12-090-080		CAP,E 4.7-50 SMG	R211	87-A00-571-050		RES,M/F 0.15-2W J RZ
C537	87-012-274-080		CHIP CAP,U 1000P-50B	R212	87-A00-571-050		RES,M/F 0.15-2W J RZ
C538	87-010-759-080		C-CAP,U, 0.1-25F	R215	87-A00-571-050		RES,M/F 0.15-2W J RZ
C539	87-A12-087-080		CAP,E 1-50 SMG	R216	87-A00-571-050		RES,M/F 0.15-2W J RZ
C540	87-A12-070-080		CAP,E 33-25 SMG	R235	87-A00-373-050		RES,M/F 270-1W J VTP
C541	87-A10-293-080		CAP,M 6800P-50 J	R236	87-A00-373-050		RES,M/F 270-1W J VTP
C542	87-A10-293-080		CAP,M 6800P-50 J	R237	87-A00-878-050		RES,M/F 220-1W J
C543	87-A12-091-080		CAP,E 10-50 SMG	R238	87-A00-878-050		RES,M/F 220-1W J
C544	87-A12-091-080		CAP,E 10-50 SMG	R331	87-A00-571-050		RES,M/F 0.15-2W J RZ
C545	87-010-759-080		C-CAP,U 0.1-25F	R332	87-A00-571-050		RES,M/F 0.15-2W J RZ
C546	87-A10-305-080		CAP,M 0.068-50 J	R380	87-A00-571-050		RES,M/F 0.15-2W J RZ
C547	87-010-759-080		C-CAP,U 0.1-25F	R416	87-A00-571-050		RES,M/F 0.15-2W J RZ
C549	87-010-759-080		C-CAP,U 0.1-25F	R424	87-A00-571-050		RES,M/F 0.15-2W J RZ
C554	87-016-083-080		C-CAP,S 0.15-16 RK	R587	87-A00-147-090		RES,M/F 68-1W J RSF(S)
C555	87-A12-090-080		CAP,E 4.7-50 SMG	S292	87-A90-174-010		SW,PUSH 2-2-2
C556	87-A12-091-080		CAP,E 10-50 SMG	TH201	87-A91-042-080		C-THMS,100K 55001
C559	87-A10-293-080		CAP,M 6800P-50 J	TH202	87-A91-042-080		C-THMS,100K 55001
C560	87-010-759-080		C-CAP,U 0.1-25F	TH301	87-A91-042-080		C-THMS,100K 55001
C561	87-A10-039-080		C-CAP,U 470P-50 J CH	TH302	87-A91-042-080		C-THMS,100K 55001
C562	87-A10-039-080		C-CAP,U 470P-50 J CH	TH401	87-A91-042-080		C-THMS,100K 55001
C565	87-A12-090-080		CAP,E 4.7-50 SMG	WH101	87-A90-510-010		HLDR,WIRE 2.5-9P

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
FRONT C.B				C218	87-012-368-080		C-CAP,S 0.1-50 F
C101	87-012-195-080		C-CAP,U 100P-50CH	C219	87-012-336-080		CAP, CHIP SS 3300 SL
C102	87-012-195-080		C-CAP,U 100P-50CH	C220	87-012-336-080		CAP, CHIP SS 3300 SL
C103	87-010-759-080		C-CAP,U 0.1-25F	CN101	87-A60-079-010		CONN,08P H 9604S-08F
C104	87-010-759-080		C-CAP,U 0.1-25F	CN104	87-A60-061-010		CONN,06P V 9604S-06C
C105	87-A10-189-040		CAP,E 220-10	CN105	87-A60-066-010		CONN,30P H 9604S-30F
C107	87-012-286-080		CAP, U 0.01-25	CN107	87-A60-074-010		CONN,19P H 9604S-19F
C108	87-010-759-080		C-CAP,U 0.1-25F	FFC101	88-908-101-110		FF-CABLE, 8P 1.25 10MM
C109	87-012-176-080		CAP 15P	FFC104	88-906-061-110		FF-CABLE,6P 1.25 60MM
C110	87-012-198-080		CAP 180P	FFC105	88-930-441-110		FF-CABLE,30P 1.25 440MM
C111	87-A10-039-080		C-CAP,U 470P-50 J CH	FFC107	88-919-331-110		FF-CABLE,19P 1.25 330MM
C112	87-012-274-080		CHIP CAP,U 1000P-50B	FL201	8B-AR3-601-010		FL,HNA-12SM12 BAR-3
C113	87-012-199-080		CAP 220P	L101	87-A50-655-010		COIL,CLK 4.19MHZ (TOKO)7KLY
C114	87-012-199-080		CAP 220P	LED2	87-A40-317-080		LED,SLR-342VCT31 RED
C115	87-012-199-080		CAP 220P	LED3	87-A40-317-080		LED,SLR-342VCT31 RED
C116	87-012-278-080		C-CAP,U 2200P-50 B	LED4	87-A40-317-080		LED,SLR-342VCT31 RED
C117	87-012-278-080		C-CAP,U 2200P-50 B	LED5	87-A40-317-080		LED,SLR-342VCT31 RED
C118	87-012-274-080		CHIP CAP,U 1000P-50B	LED6	87-A40-317-080		LED,SLR-342VCT31 RED
C119	87-012-286-080		CAP, U 0.01-25	LED7	87-A40-317-080		LED,SLR-342VCT31 RED
C120	87-010-759-080		C-CAP,U, 0.1-25F	LED8	87-A40-317-080		LED,SLR-342VCT31 RED
C121	87-A10-189-040		CAP,E 220-10	LED9	87-A40-317-080		LED,SLR-342VCT31 RED
C122	87-010-759-080		C-CAP,U 0.1-25F	LED10	87-A40-317-080		LED,SLR-342VCT31 RED
C123	87-010-759-080		C-CAP,U 0.1-25F	S301	87-A90-095-080		SW,TACT EVQ11G04M
C124	87-010-759-080		C-CAP,U 0.1-25F	S302	87-A90-095-080		SW,TACT EVQ11G04M
C126	87-015-699-040		CAP,E 10-50 7L	S306	87-A90-095-080		SW,TACT EVQ11G04M
C128	87-015-699-040		CAP,E 10-50 7L	S307	87-A90-095-080		SW,TACT EVQ11G04M
C129	87-010-787-080		CAP, U 0.022-25	S309	87-A90-095-080		SW,TACT EVQ11G04M
C130	87-012-278-080		C-CAP,U 2200P-50 B	S310	87-A90-095-080		SW,TACT EVQ11G04M
C134	87-010-785-080		C-CAP,U 0.015-25BK	S313	87-A90-095-080		SW,TACT EVQ11G04M
C136	87-012-278-080		C-CAP,U 2200P-50 B	S314	87-A90-095-080		SW,TACT EVQ11G04M
C138	87-010-759-080		C-CAP,U 0.1-25F	S315	87-A90-095-080		SW,TACT EVQ11G04M
C139	87-012-274-080		CHIP CAP,U 1000P-50B	S316	87-A90-095-080		SW,TACT EVQ11G04M
C141	87-012-195-080		C-CAP,U 100P-50CH	S318	87-A90-095-080		SW,TACT EVQ11G04M
C142	87-012-172-080		CAPACITOR CHIP U 10P CH	S319	87-A90-095-080		SW,TACT EVQ11G04M
C143	87-012-172-080		CAPACITOR CHIP U 10P CH	S320	87-A90-095-080		SW,TACT EVQ11G04M
C144	87-012-172-080		CAPACITOR CHIP U 10P CH	S321	87-A90-095-080		SW,TACT EVQ11G04M
C145	87-012-172-080		CAPACITOR CHIP U 10P CH	SW101	87-A92-067-010		SW,RTRY EC12E12204N
C146	87-012-172-080		CAPACITOR CHIP U 10P CH	SW102	87-A92-068-010		SW,RTRY EC12E12504N
C147	87-012-172-080		CAPACITOR CHIP U 10P CH	TUNER C.B			
C148	87-012-172-080		CAPACITOR CHIP U 10P CH	C772	87-012-286-080		CAP, U 0.01-25
C149	87-012-172-080		CAPACITOR CHIP U 10P CH	C784	87-012-286-080		CAP, U 0.01-25
C150	87-012-172-080		CAPACITOR CHIP U 10P CH	C785	87-012-286-080		CAP, U 0.01-25
C151	87-012-172-080		CAPACITOR CHIP U 10P CH	C786	87-012-286-080		CAP, U 0.01-25
C152	87-012-172-080		CAPACITOR CHIP U 10P CH	C788	87-012-167-080		C-CAP,U 5P-50 CH
C153	87-012-172-080		CAPACITOR CHIP U 10P CH	C789	87-A11-228-080		CHIP CAPACITOR,U 0.027-25 KB
C155	87-012-195-080		C-CAP,U 100P-50CH	C790	87-A11-228-080		CHIP CAPACITOR,U 0.027-25 KB
C156	87-012-195-080		C-CAP,U 100P-50CH	C791	87-010-831-080		C-CAP,U,0.1-16F
C157	87-012-195-080		C-CAP,U 100P-50CH	C792	87-012-286-080		CAP, U 0.01-25
C158	87-012-195-080		C-CAP,U 100P-50CH	C793	87-A11-056-080		C-CAP,U 1-10 Z F
C159	87-012-195-080		C-CAP,U 100P-50CH	C795	87-012-286-080		CAP, U 0.01-25
C160	87-012-195-080		C-CAP,U 100P-50CH	C799	87-A12-070-080		CAP,E 33-25 SMG
C161	87-012-195-080		C-CAP,U 100P-50CH	C800	87-010-829-080		CAP, U 0.047-16
C162	87-010-677-040		CAP,E 0.15-50 7L	C801	87-A11-056-080		C-CAP,U 1-10 Z F
C201	87-012-336-080		CAP, CHIP SS 3300 SL	C802	87-010-829-080		CAP, U 0.047-16
C202	87-012-336-080		CAP, CHIP SS 3300 SL	C804	87-A12-062-080		CAP,E 100-10 SMG
C203	87-012-336-080		CAP, CHIP SS 3300 SL	C807	87-A10-463-080		C-CAP,U 0.47-10 Z F
C204	87-012-336-080		CAP, CHIP SS 3300 SL	C808	87-A11-056-080		C-CAP,U 1-10 Z F
C205	87-012-336-080		CAP, CHIP SS 3300 SL	C809	87-A11-056-080		C-CAP,U 1-10 Z F
C206	87-012-336-080		CAP, CHIP SS 3300 SL	C810	87-010-831-080		C-CAP,U,0.1-16F
C207	87-012-336-080		CAP, CHIP SS 3300 SL	C811	87-A10-463-080		C-CAP,U 0.47-10 Z F
C208	87-012-336-080		CAP, CHIP SS 3300 SL	C812	87-A10-463-080		C-CAP,U 0.47-10 Z F
C209	87-012-336-080		CAP, CHIP SS 3300 SL	C814	87-012-286-080		CAP, U 0.01-25
C210	87-012-336-080		CAP, CHIP SS 3300 SL	C815	87-A10-463-080		C-CAP,U 0.47-10 Z F
C211	87-012-336-080		CAP, CHIP SS 3300 SL	C816	87-A10-463-080		C-CAP,U 0.47-10 Z F
C212	87-012-336-080		CAP, CHIP SS 3300 SL	C821	87-A11-063-080		C-CAP,S 4.7-10 Z F
C213	87-010-408-040		CAP,E 47-50 SME	C823	87-012-273-080		C-CAP,U 820P-50 B
C214	87-012-368-080		C-CAP,S 0.1-50 F	C824	87-A11-063-080		C-CAP,S 4.7-10 Z F
C216	87-015-699-040		CAP,E 10-50 7L	C825	87-010-829-080		CAP, U 0.047-16
C217	87-015-699-040		CAP,E 10-50 7L				

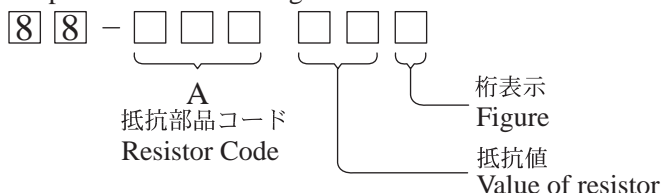
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C831	87-A12-092-080		CAP,E 22-50 SMG	X991	87-A70-306-010		VIB,XTAL 4.500MHZ CSA-309ST
C836	87-012-286-080		CAP, U 0.01-25				
C842	87-012-286-080		CAP, U 0.01-25				
C844	87-012-286-080		CAP, U 0.01-25				
C850	87-A11-056-080		C-CAP,U 1-10 Z F				
					DIGITAL C.B		
C851	87-012-286-080		CAP, U 0.01-25	C101	87-A12-091-080		CAP,E 10-50 SMG
C852	87-012-286-080		CAP, U 0.01-25	C102	87-A12-091-080		CAP,E 10-50 SMG
C853	87-012-286-080		CAP, U 0.01-25	C103	87-012-172-080		CAPACITOR CHIP U 10P CH
C855	87-012-280-080		CAP, U 3300P-50	C104	87-012-172-080		CAPACITOR CHIP U 10P CH
C856	87-012-280-080		CAP, U 3300P-50	C105	87-010-759-080		C-CAP,U 0.1-25F
				C106	87-A10-369-080		C-CAP,S 0.47-16 K B
C858	87-010-831-080		C-CAP,U 0.1-16F	C107	87-A12-068-080		CAP,E 470-16 SMG
C860	87-012-286-080		CAP, U 0.01-25	C108	87-010-759-080		C-CAP,U 0.1-25F
C902	87-012-169-080		C-CAP,U 7P-50 CH	C109	87-A12-068-080		CAP,E 470-16 SMG
C908	87-012-174-080		CAP CHIP CERA SS 12P CHJ	C110	87-010-759-080		C-CAP,U 0.1-25F
C909	87-012-274-080		CHIP CAP,U 1000P-50B				
				C111	87-A12-091-080		CAP,E 10-50 SMG
C911	87-012-170-080		C-CAP,U 8P-50 CH	C112	87-A12-091-080		CAP,E 10-50 SMG
C912	87-012-195-080		C-CAP,U 100P-50CH	C113	87-012-195-080		C-CAP,U 100P-50CH
C913	87-012-286-080		CAP, U 0.01-25	C114	87-012-195-080		C-CAP,U 100P-50CH
C914	87-012-286-080		CAP, U 0.01-25	C115	87-012-284-080		CAP, U 6800P-50
C915	87-012-286-080		CAP, U 0.01-25				
				C116	87-012-284-080		CAP, U 6800P-50
C918	87-012-164-080		C-CAP,U 2P-50 CK	C117	87-012-278-080		C-CAP,U 2200P-50 B
C920	87-012-180-080		C-CAP,U 22P-50 CH	C118	87-012-278-080		C-CAP,U 2200P-50 B
C921	87-012-186-080		C-CAP,U 39P-50 CH	C119	87-012-282-080		CAP, U 4700P-50
C922	87-012-174-080		CAP CHIP CERA SS 12P CHJ	C120	87-012-282-080		CAP, U 4700P-50
C923	87-012-270-080		CAP, U 470P-50				
				C121	87-012-278-080		C-CAP,U 2200P-50 B
C924	87-012-174-080		CAP CHIP CERA SS 12P CHJ	C122	87-012-278-080		C-CAP,U 2200P-50 B
C927	87-012-195-080		C-CAP,U 100P-50CH	C123	87-A12-091-080		CAP,E 10-50 SMG
C961	87-012-170-080		C-CAP,U 8P-50 CH	C124	87-A12-091-080		CAP,E 10-50 SMG
C963	87-010-831-080		C-CAP,U 0.1-16F	C125	87-010-759-080		C-CAP,U 0.1-25F
C971	87-010-381-080		CAP, ELECT 330-16V				
				C151	87-A12-091-080		CAP,E 10-50 SMG
C972	87-A11-063-080		C-CAP,S 4.7-10 Z F	C152	87-A12-091-080		CAP,E 10-50 SMG
C973	87-012-286-080		CAP, U 0.01-25	C153	87-012-172-080		CAPACITOR CHIP U 10P CH
C974	87-012-286-080		CAP, U 0.01-25	C154	87-012-172-080		CAPACITOR CHIP U 10P CH
C976	87-010-831-080		C-CAP,U 0.1-16F	C155	87-010-759-080		C-CAP,U 0.1-25F
C979	87-012-195-080		C-CAP,U 100P-50CH				
				C156	87-A10-369-080		C-CAP,S 0.47-16 K B
C981	87-A12-071-080		CAP,E 47-25 SMG	C157	87-010-759-080		C-CAP,U 0.1-25F
C982	87-010-831-080		C-CAP,U 0.1-16F	C159	87-016-083-080		C-CAP,S 0.15-16 RK
C983	87-A11-132-080		CAP,TC U 0.01-50 K B	C160	87-016-083-080		C-CAP,S 0.15-16 RK
C984	87-012-286-080		CAP, U 0.01-25	C161	87-012-195-080		C-CAP,U 100P-50CH
C985	87-012-195-080		C-CAP,U 100P-50CH				
				C162	87-012-195-080		C-CAP,U 100P-50CH
C987	87-012-286-080		CAP, U 0.01-25	C163	87-010-759-080		C-CAP,U 0.1-25F
C990	87-012-195-080		C-CAP,U 100P-50CH	C165	87-012-284-080		CAP, U 6800P-50
C991	87-012-176-080		CAP 15P	C166	87-012-284-080		CAP, U 6800P-50
C992	87-012-176-080		CAP 15P	C167	87-012-278-080		C-CAP,U 2200P-50 B
C993	87-012-274-080		CHIP CAP,U 1000P-50B				
				C168	87-012-278-080		C-CAP,U 2200P-50 B
C994	87-012-195-080		C-CAP,U 100P-50CH	C169	87-012-278-080		C-CAP,U 2200P-50 B
C995	87-012-274-080		CHIP CAP,U 1000P-50B	C170	87-012-278-080		C-CAP,U 2200P-50 B
C996	87-012-195-080		C-CAP,U 100P-50CH	C171	87-012-282-080		CAP, U 4700P-50
C997	87-010-831-080		C-CAP,U 0.1-16F	C172	87-012-282-080		CAP, U 4700P-50
C998	87-A12-071-080		CAP,E 47-25 SMG				
				C173	87-A12-091-080		CAP,E 10-50 SMG
C999	87-012-286-080		CAP, U 0.01-25	C174	87-A12-091-080		CAP,E 10-50 SMG
CF831	87-008-261-010		FILTER, SFE10.7MA5-A	C175	87-010-759-080		C-CAP,U 0.1-25F
CF832	87-008-261-010		FILTER, SFE10.7MA5-A	C201	87-A12-091-080		CAP,E 10-50 SMG
CN992	87-A60-056-010		CONN,12P V 9604S-12C	C202	87-A12-091-080		CAP,E 10-50 SMG
D902	87-A40-916-040		C-VARI-CAP,HVC202A				
				C203	87-012-172-080		CAPACITOR CHIP U 10P CH
D903	87-A40-916-040		C-VARI-CAP,HVC202A	C204	87-012-274-080		CHIP CAP,U 1000P-50B
FFC992	88-912-131-110		FF-CABLE,12P 1.25 130MM	C205	87-010-759-080		C-CAP,U 0.1-25F
J832	87-A61-535-010		TERMINAL,ANT 2P HSP-302V	C206	87-A10-369-080		C-CAP,S 0.47-16 K B
J940	87-A60-633-010		CONN,2P H 2.5MM JMT	C207	87-010-759-080		C-CAP,U 0.1-25F
L801	87-A50-608-010		COIL,FM DET-N(TOK)				
				C209	87-A12-091-080		CAP,E 10-50 SMG
L802	87-A91-551-010		FLTR,PCFJZH-450 L(TOK)	C210	87-A12-091-080		CAP,E 10-50 SMG
L811	87-005-847-080		COIL,2.2UH(CECS)	C211	87-012-195-080		C-CAP,U 100P-50CH
L832	87-005-847-080		COIL,2.2UH(CECS)	C212	87-012-278-080		C-CAP,U 2200P-50 B
L903	88-ZA1-602-110		COIL,FM-RF-U2 2G	C213	87-010-759-080		C-CAP,U 0.1-25F
L904	88-ZA1-601-010		COIL,FM-RF-U1 2G				
				C215	87-010-759-080		C-CAP,U 0.1-25F
L906	87-005-847-080		COIL,2.2UH(CECS)	C217	87-012-284-080		CAP, U 6800P-50
L907	8A-NEC-611-010		COIL,FM OSC U 2G	C218	87-012-284-080		CAP, U 6800P-50
L908	88-ZA1-624-010		COIL,FM IFT 7-6.2 (COILS)	C219	87-012-278-080		C-CAP,U 2200P-50 B
L951	8A-NF8-667-010		COIL,AM PACK 4(TOK)	C220	87-012-278-080		C-CAP,U 2200P-50 B
R790	87-012-286-080		CAP, U 0.01-25				



REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C808	87-012-195-080		C-CAP,U 100P-50CH				
C809	87-A12-092-080		CAP,E 22-50 SMG				
C810	87-A12-092-080		CAP,E 22-50 SMG				
C811	87-012-273-080		C-CAP,U 820P-50 B				
C812	87-012-273-080		C-CAP,U 820P-50 B				
C813	87-A10-897-080		CAP,E 100-25 BP SME				
C814	87-A10-897-080		CAP,E 100-25 BP SME				
C815	87-012-164-080		C-CAP,U 2P-50 CK				
C816	87-012-164-080		C-CAP,U 2P-50 CK				
C817	87-A11-548-080		C-CAP,S 560P-50 K B				
C818	87-A11-548-080		C-CAP,S 560P-50 K B				
C819	87-A11-548-080		C-CAP,S 560P-50 K B				
C820	87-A11-548-080		C-CAP,S 560P-50 K B				
C821	87-A11-548-080		C-CAP,S 560P-50 K B				
C822	87-A11-548-080		C-CAP,S 560P-50 K B				
C823	87-A11-548-080		C-CAP,S 560P-50 K B				
C824	87-A11-548-080		C-CAP,S 560P-50 K B				
C827	87-012-368-080		C-CAP,S 0.1-50 F				
C828	87-010-866-080		CAP,E 10-63 M VX				
C831	87-012-274-080		CHIP CAP,U 1000P-50B				
C832	87-012-274-080		CHIP CAP,U 1000P-50B				
C870	87-010-866-080		CAP,E 10-63 M VX				
CN801	87-099-562-010		CONN,18P TUC-P18X-B1				
				PT C.B			
				C1	87-A12-074-080		CAP,E 470-25 SMG
				C2	87-A12-089-080		CAP,E 3.3-50 SMG
				C3	87-A11-148-080		CAP,TC U 0.1-50 Z F
				C4	87-A11-148-080		CAP,TC U 0.1-50 Z F
				C5	87-A11-148-080		CAP,TC U 0.1-50 Z F
				△ CN3	87-A60-851-010		CONN,9P V VH
				△ CNA1	8A-AR3-651-110		CONN ASSY,2P AC-OUTLET
				△ CNA2	88-805-033-690		CONN ASSY,3P 300
				△ PR1	87-A91-276-080		FUSE,125MA 125V F 251
				△ PT1	8B-AR3-621-010		PT,U EI85-60 BAR-3
				△ PT2	8Z-NF8-661-010		PT,SUB ZNF-8(U)
				△ RY1	87-A91-368-010		RELAY,ACDC12V DG12D-O(M)-2
				△ T1	87-A60-317-010		TERMINAL, 1P MSC
				△ T2	87-A60-317-010		TERMINAL, 1P MSC
				AC OUTLET C.B			
				△ F102	87-A91-230-010		FUSE,4A 125V T 51S
				△ FC103	87-033-147-010		FUSE CLAMP
				△ FC104	87-033-147-010		FUSE CLAMP
				△ J101	87-A61-192-010		OUTLET,AC CCT 1304-0202

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち  
Chip Resistor Part Coding



チップ抵抗  
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法/Dimensions (mm)			抵抗コード : A Resistor Code : A	
				外形/Form	L	W		t
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128



# TRANSISTOR ILLUSTRATION



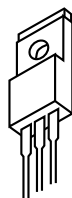
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E C B

2SC2001K



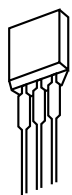
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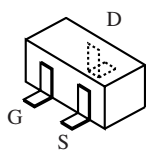
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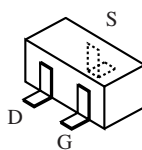
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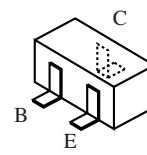
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D G S

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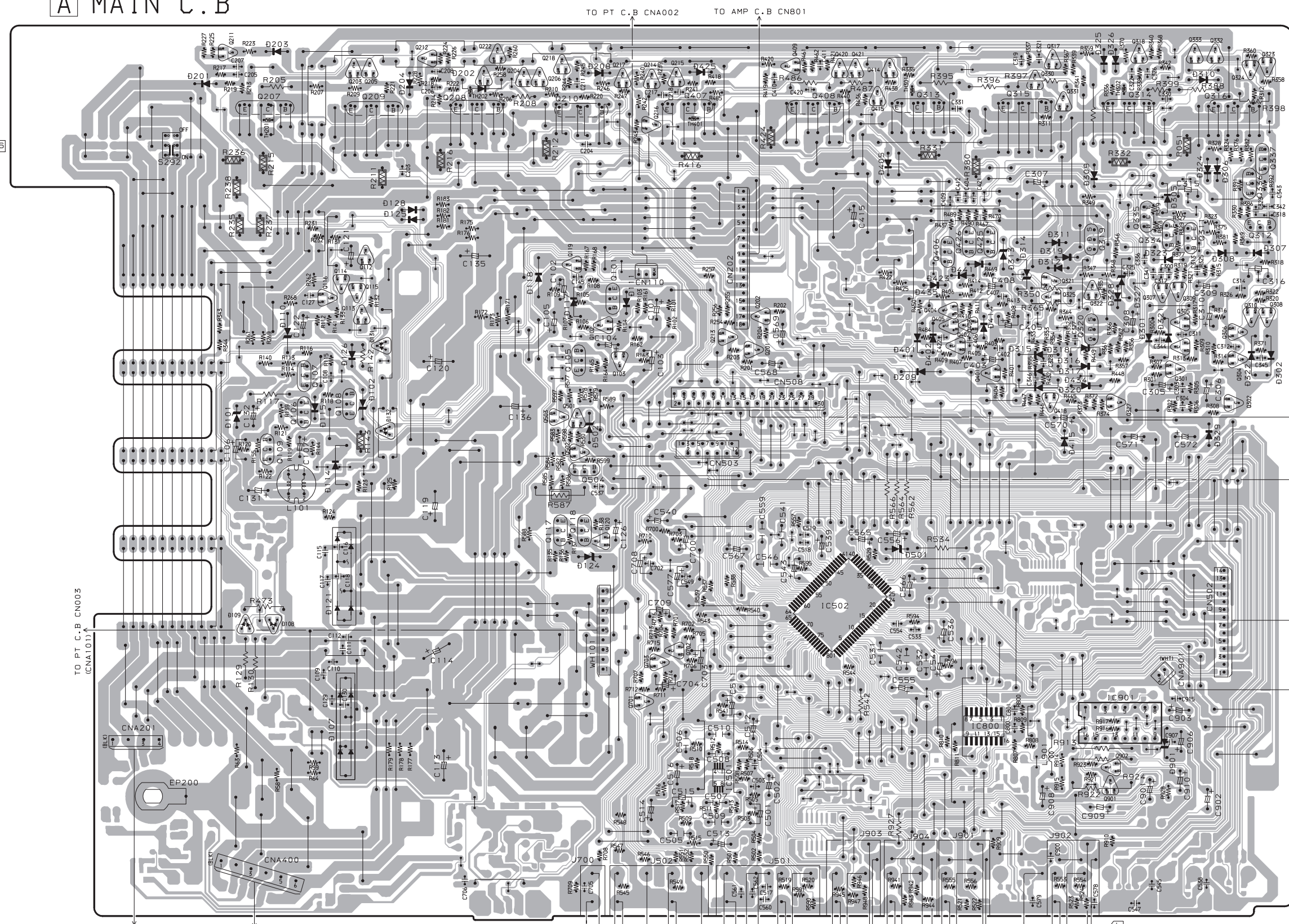


B E C

2SA1037K(R) CSA1362GR  
2SA1514K(S) CSD1306E  
2SA1235F DTC114YKA  
2SC2714O DTC123JKA  
2SC3052F KRA102S  
2SD1306E KRA107S  
CMBT5401 RT1N144C  
CMBT5551 RT1P144C

A MAIN C.B

S292 FRONT SPEAKERS OFF ON

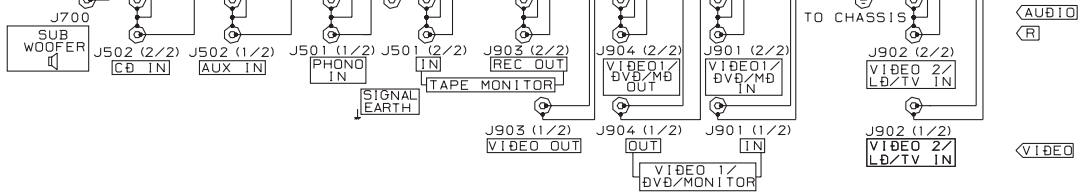


TO PT C.B CN003 (CNA101)

TO SPEAKER C.B CN51 TO SPEAKER C.B CN50

TO PT C.B CNA002 TO AMP C.B CN801

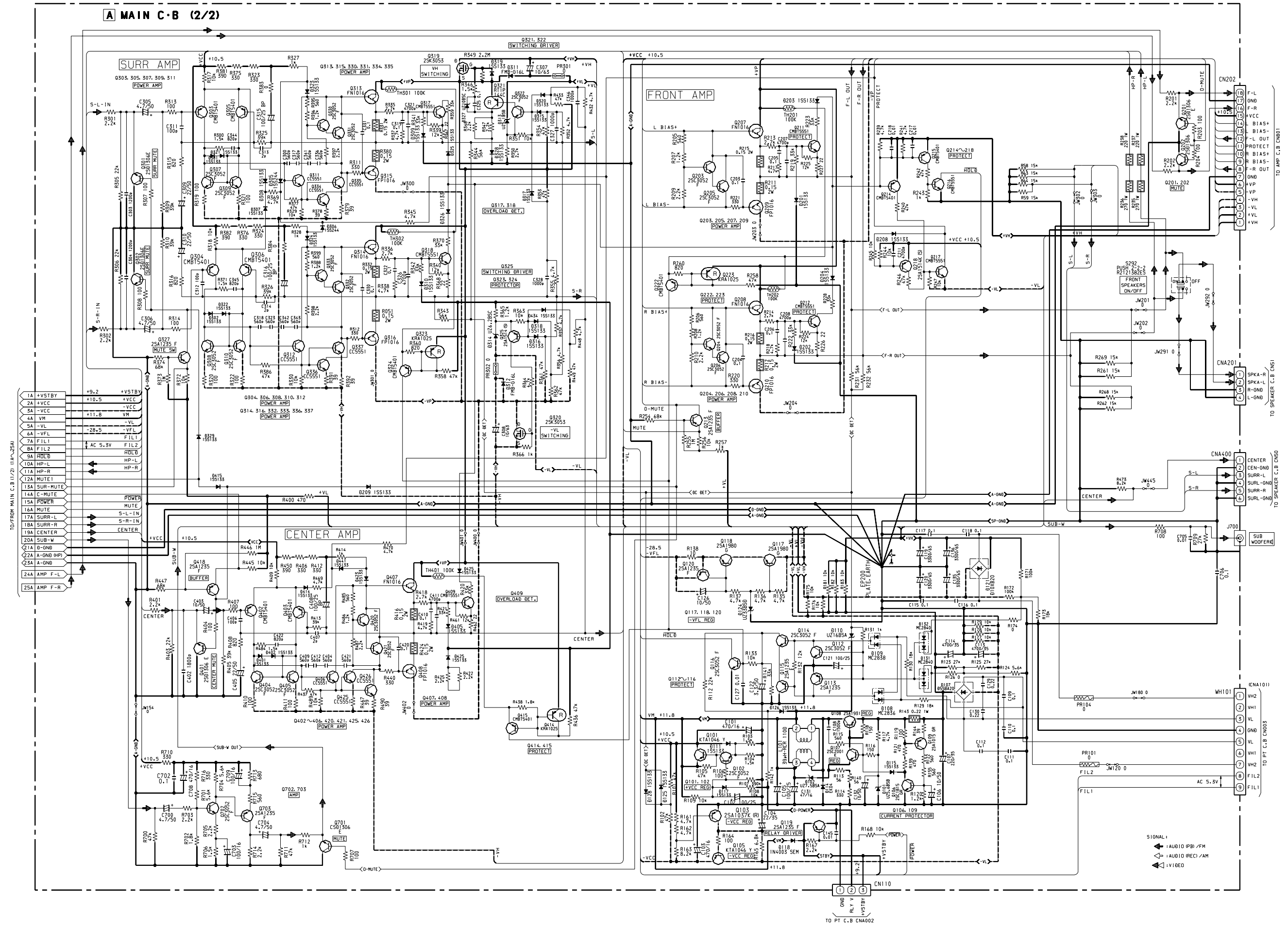
TO FRONT C.B CN105 TO TUNER C.B CN992 TO DIGITAL C.B CN102 TO HP/VIDEO C.B CN501



A B C D E F G H I J K L M N O P Q R S T U



SCHEMATIC DIAGRAM - 2 (MAIN 2/2)



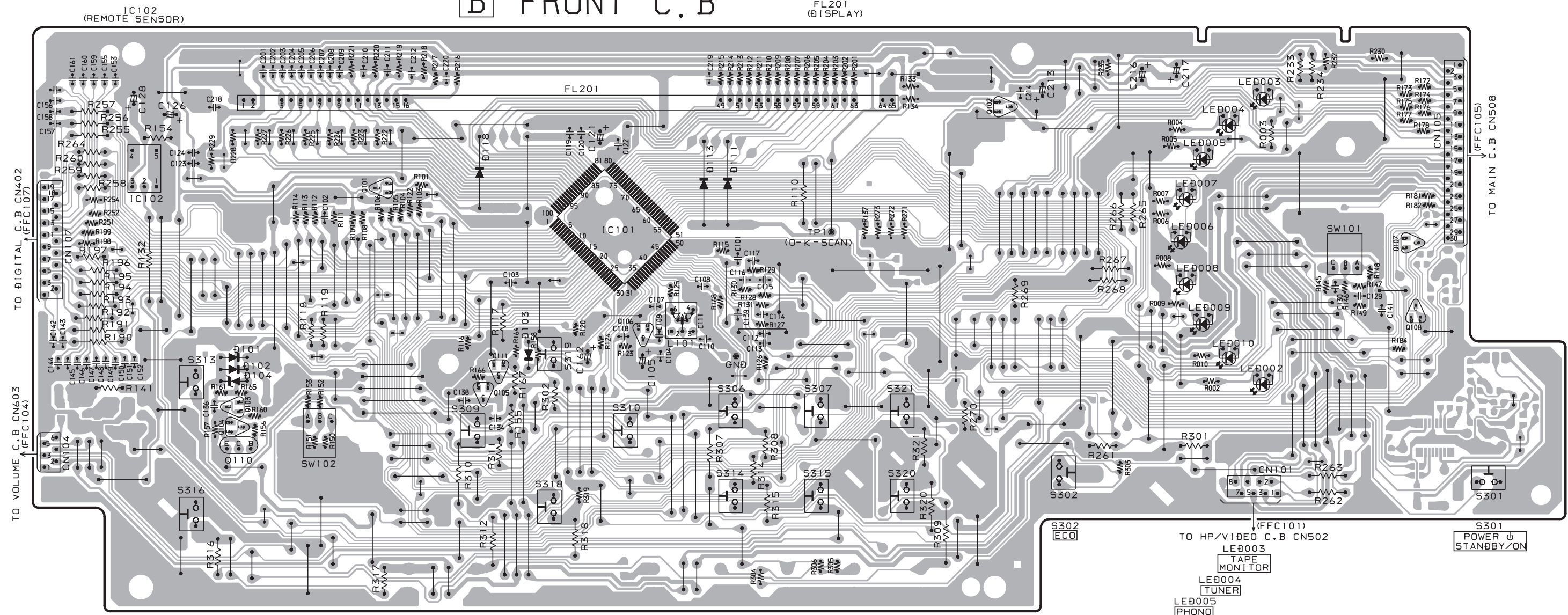
WIRING - 2 (FRONT)

32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

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**B** FRONT C.B

FL201  
(DISPLAY)



- S313 ENTER
- SW102 MULTI JOG
- S309 SURROUND
- S318 BASS
- S310 BSP
- S306 TAPE MONITOR
- S307 SOURCE DIRECT
- S321 CLOCK
- S314 TUNING UP (A)
- S315 TUNING DOWN (V)
- S320 T-BASS
- S302 ECO
- S301 POWER OFF STANDBY/ON
- TO HP/VIDEO C.B. CN502
- LED003 TAPE MONITOR
- LED004 TUNER
- LED005 PHONO
- LED007 CD
- LED006 AUX
- LED008 VIDEO 1
- LED009 VIDEO 2
- LED010 VIDEO 3
- LED002 ECO
- SW101 FUNCTION

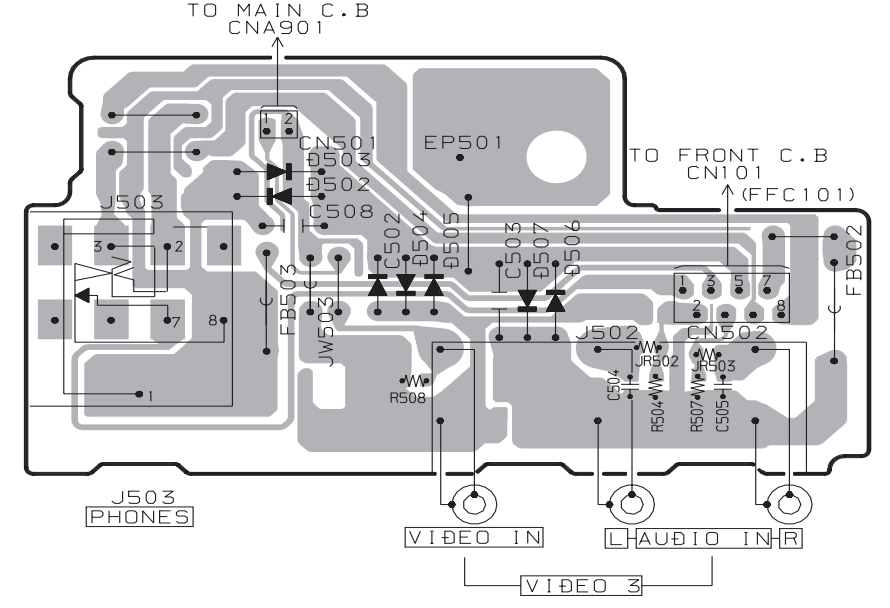




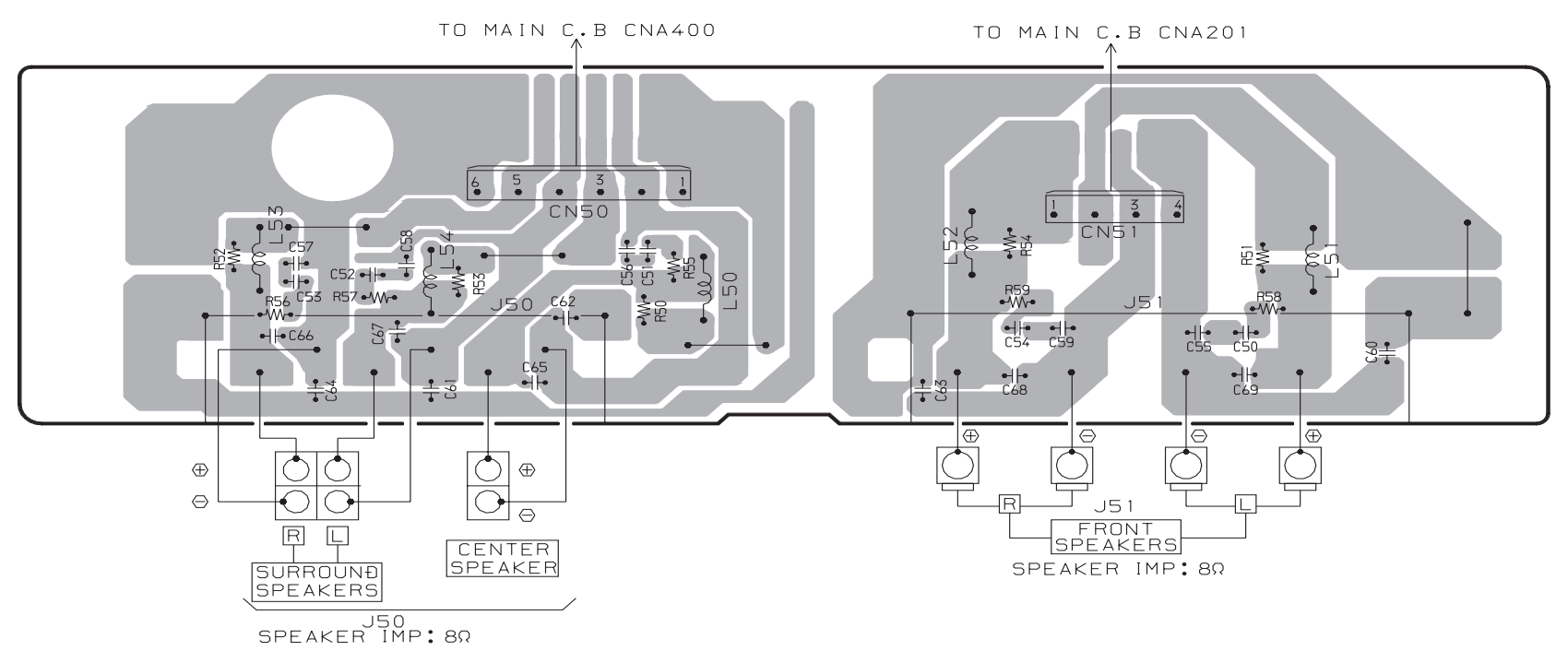




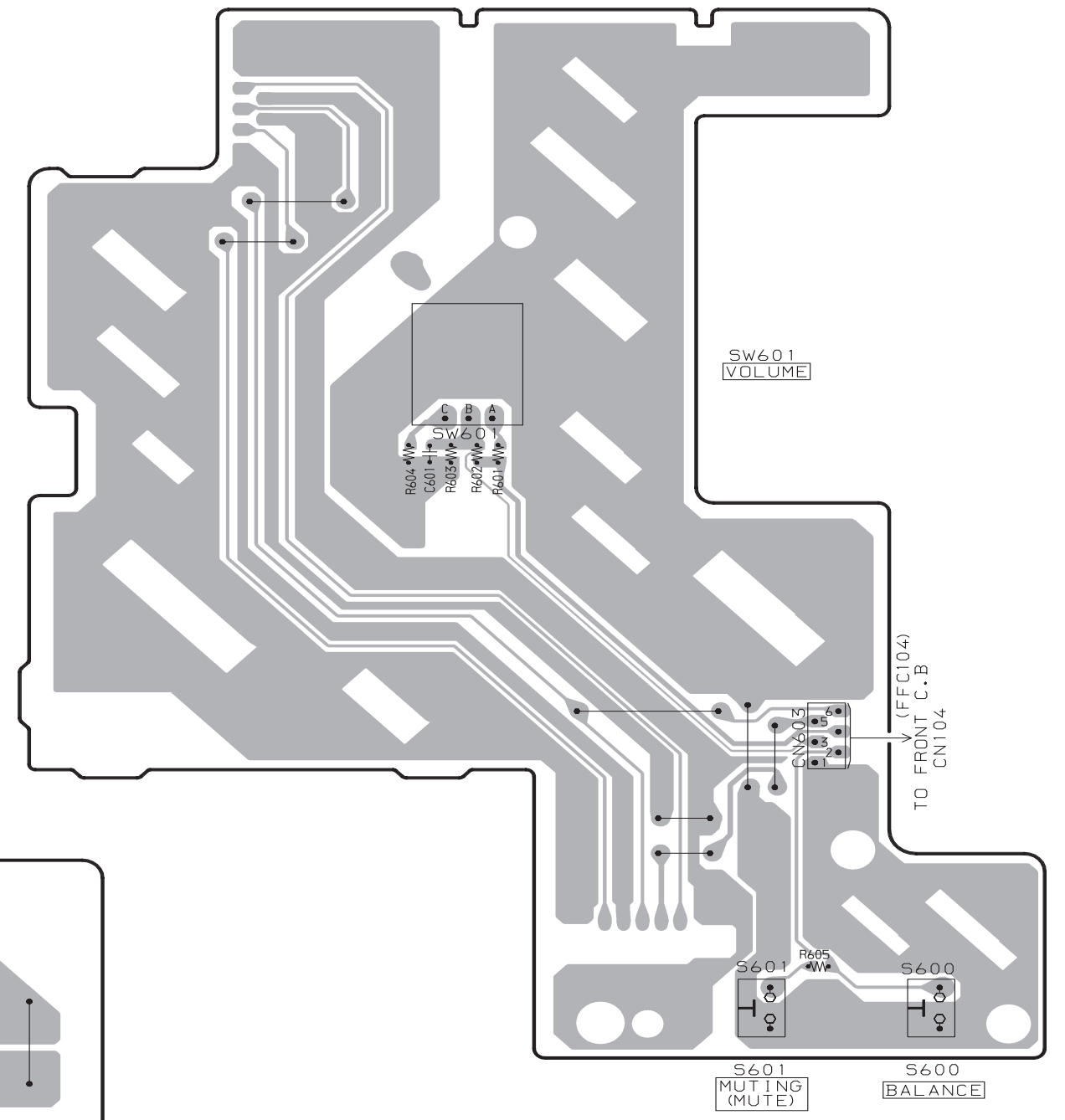
**F** HP / VIDEO C. B



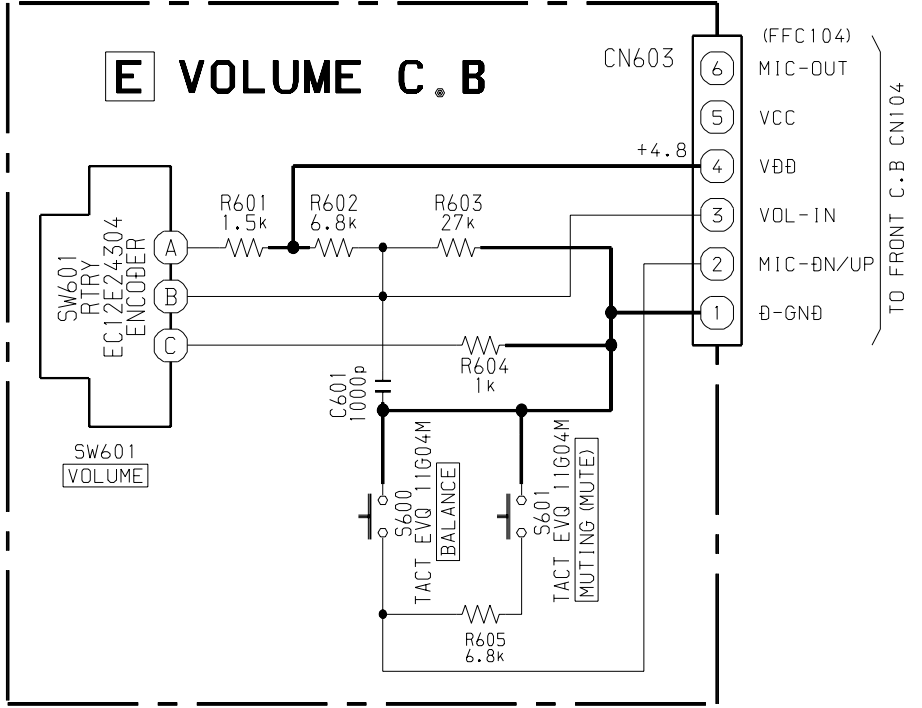
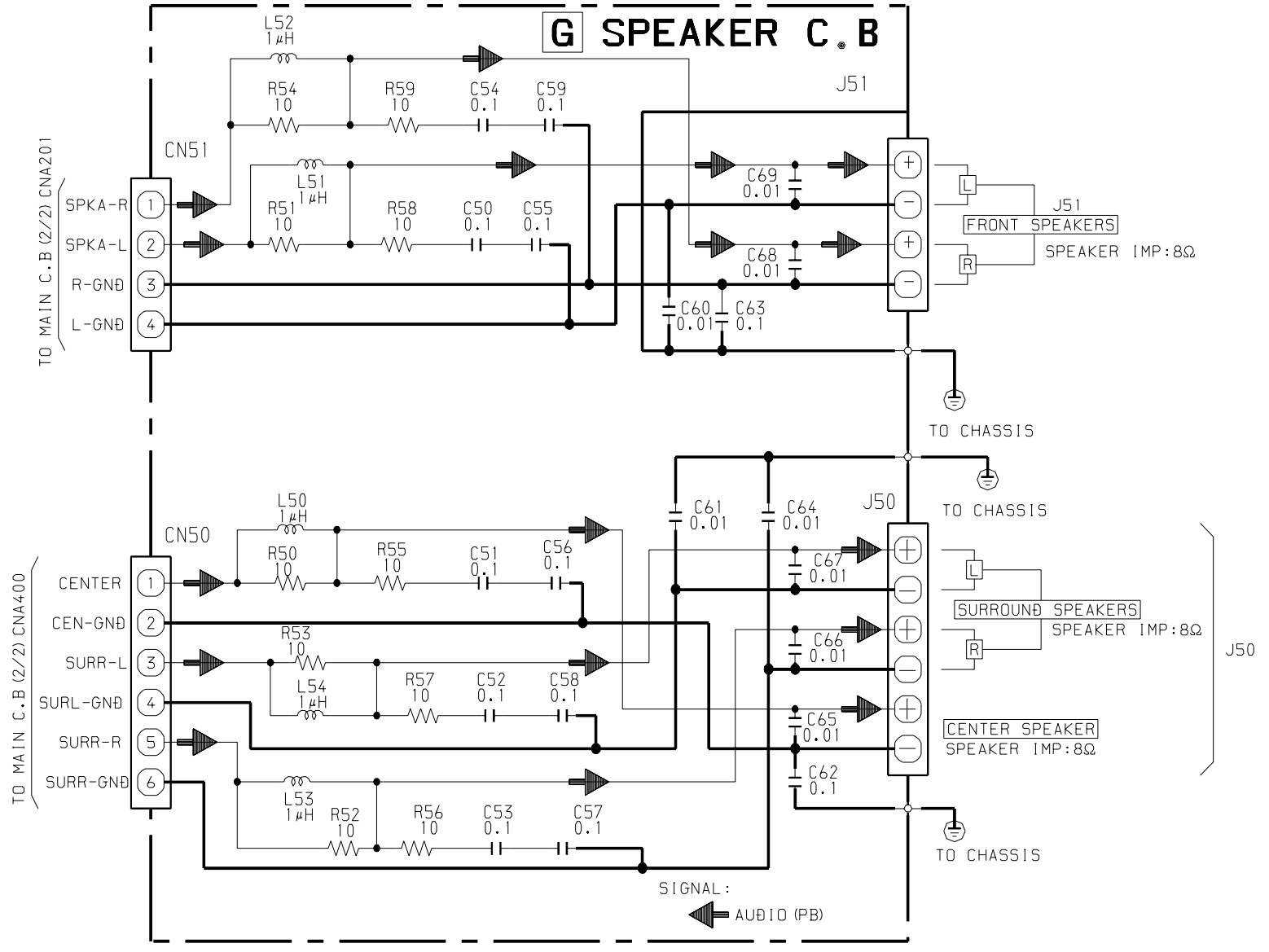
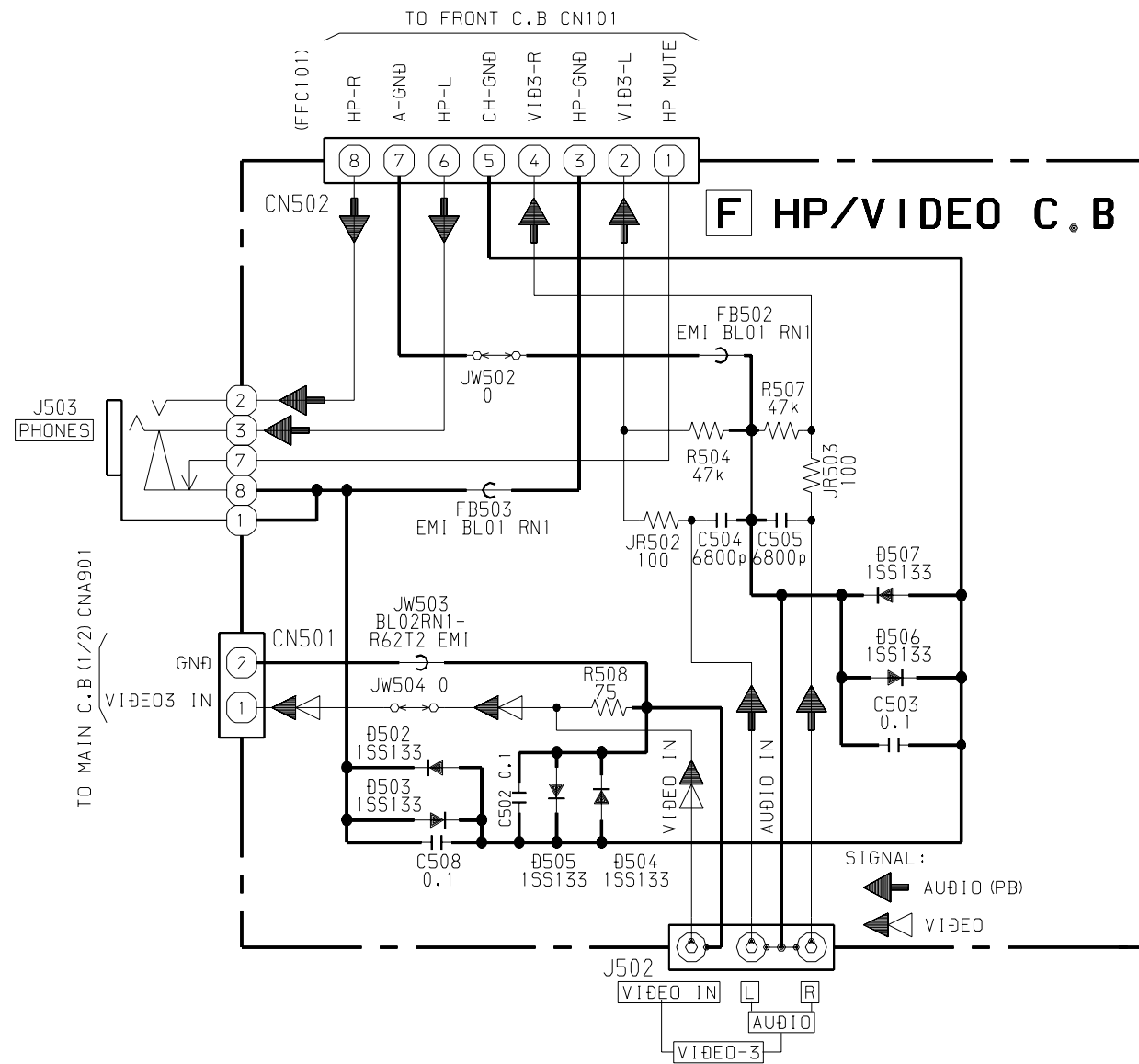
**G** SPEAKER C. B



**E** VOLUME C. B

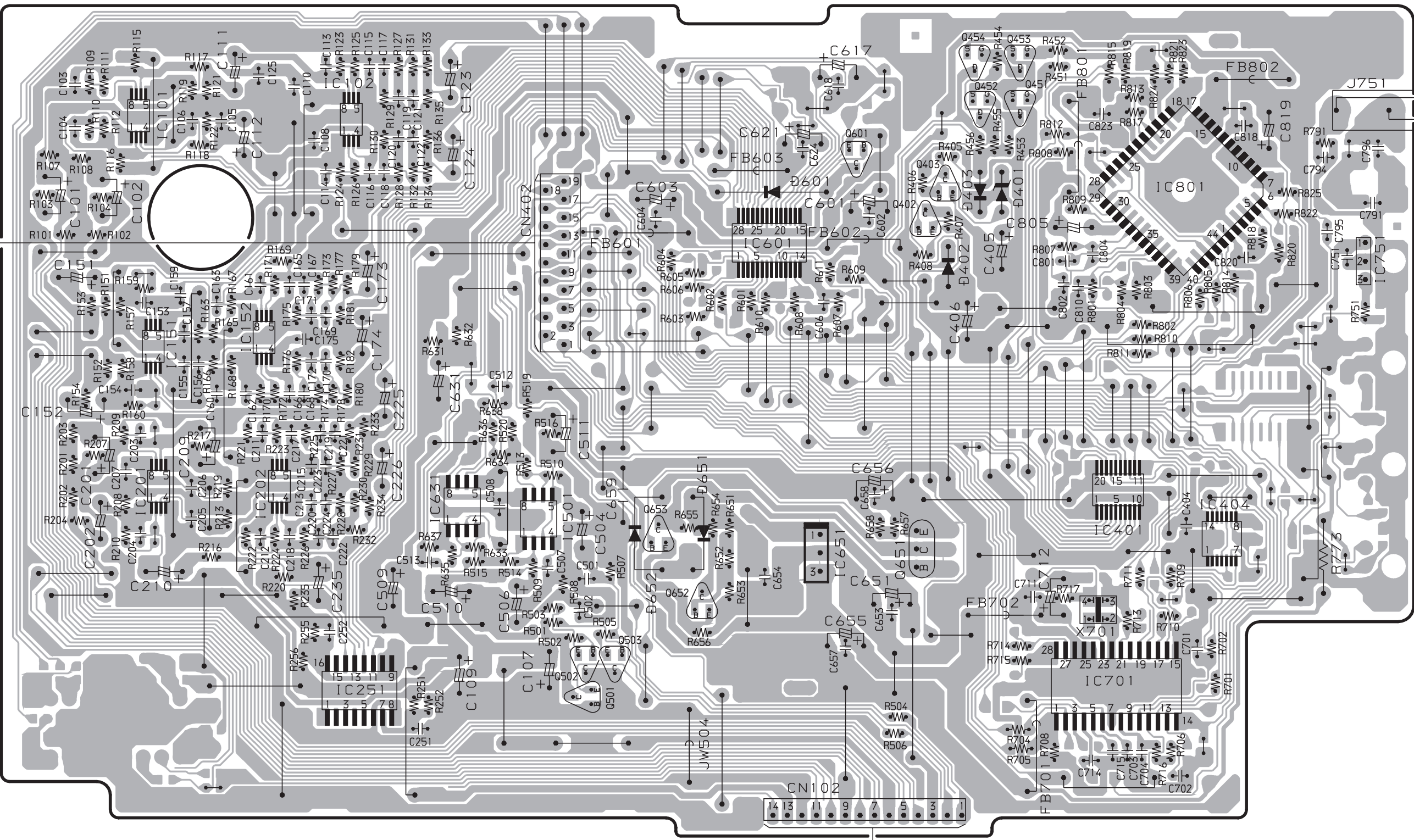


SCHEMATIC DIAGRAM - 5 (HP/VIDEO / VOLUME / SPEAKER)



# D DIGITAL C.B

TO FRONT C.B CN107  
(FFC107)



J751  
VIDEO 2  
COAXIAL IN

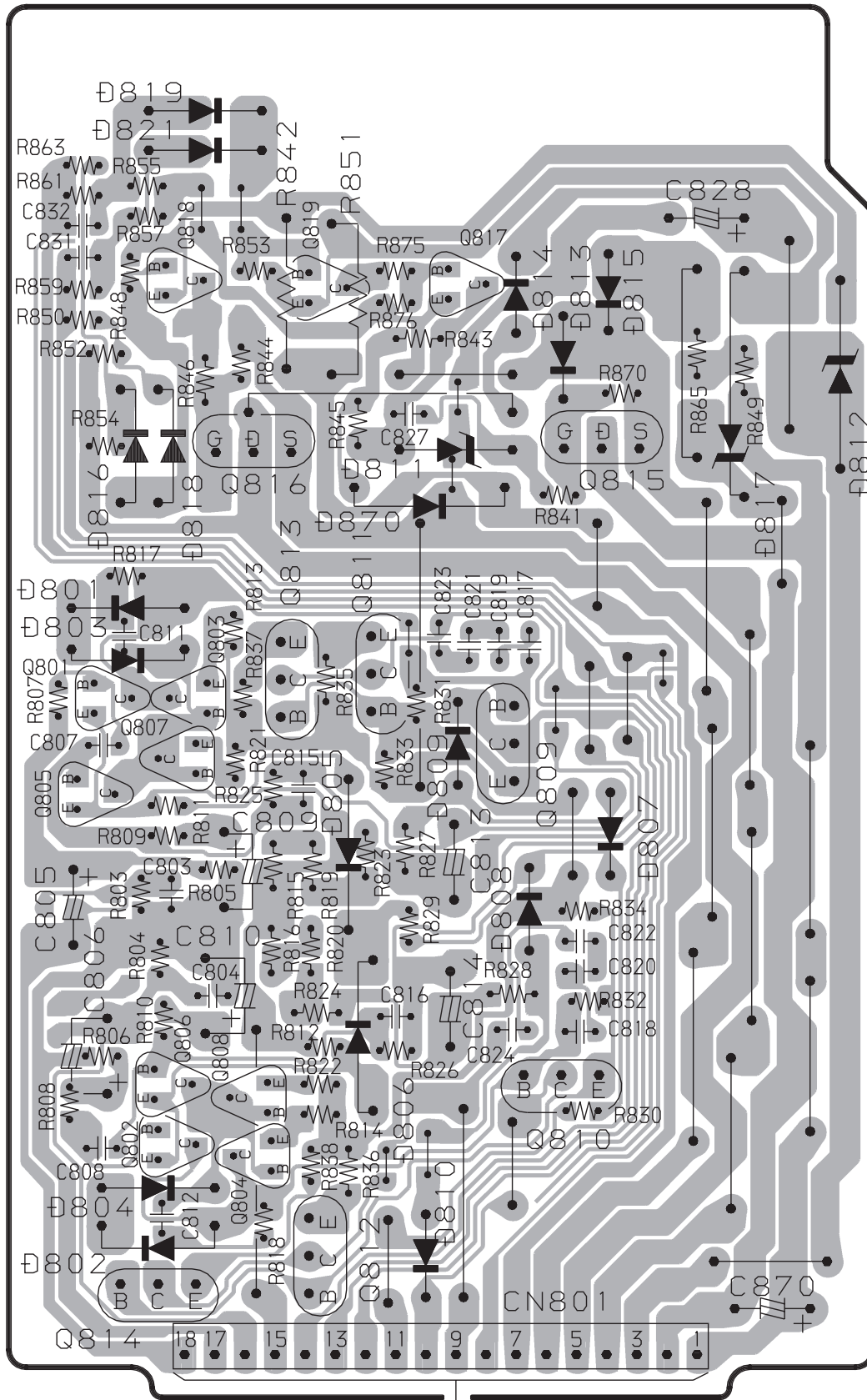
IC751  
VIDEO 2  
OPTICAL IN

TO MAIN C.B CN502



15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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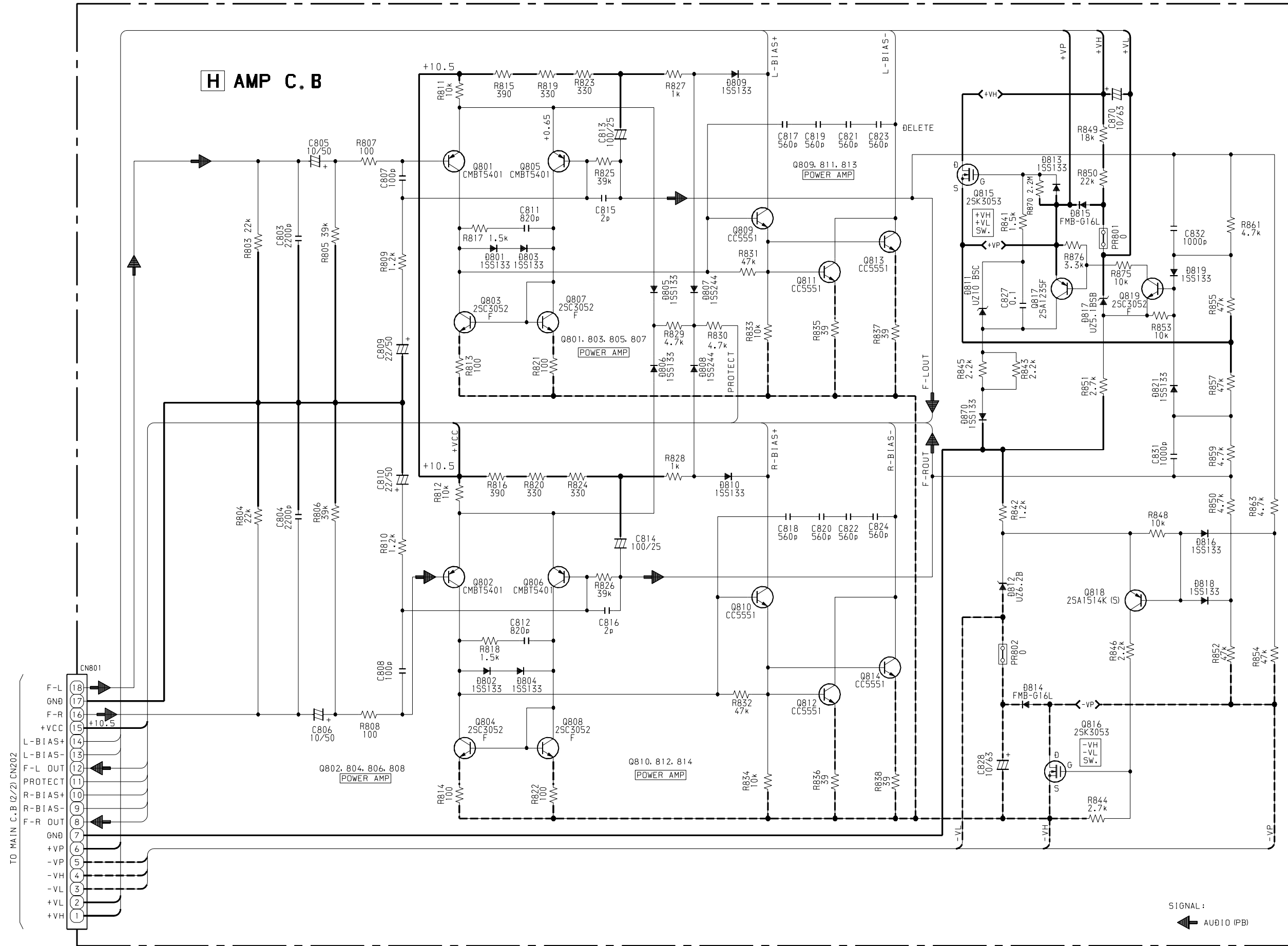
# H AMP C.B



TO MAIN C.B CN202

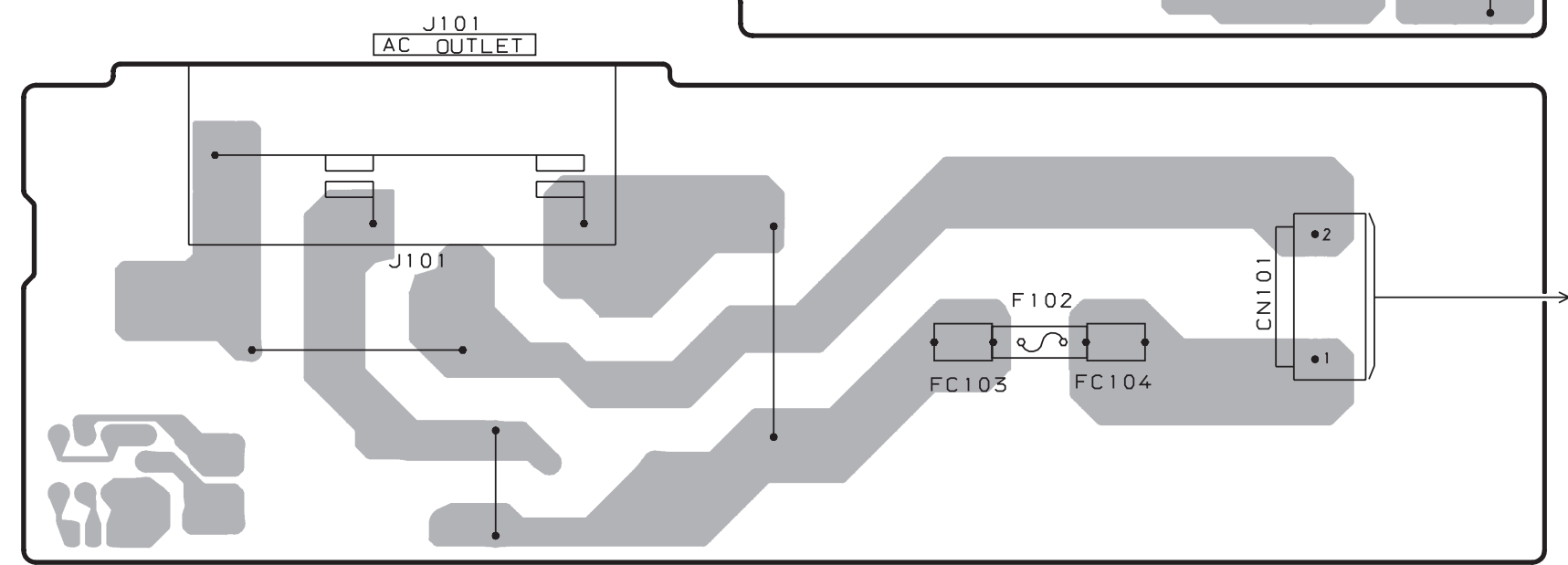
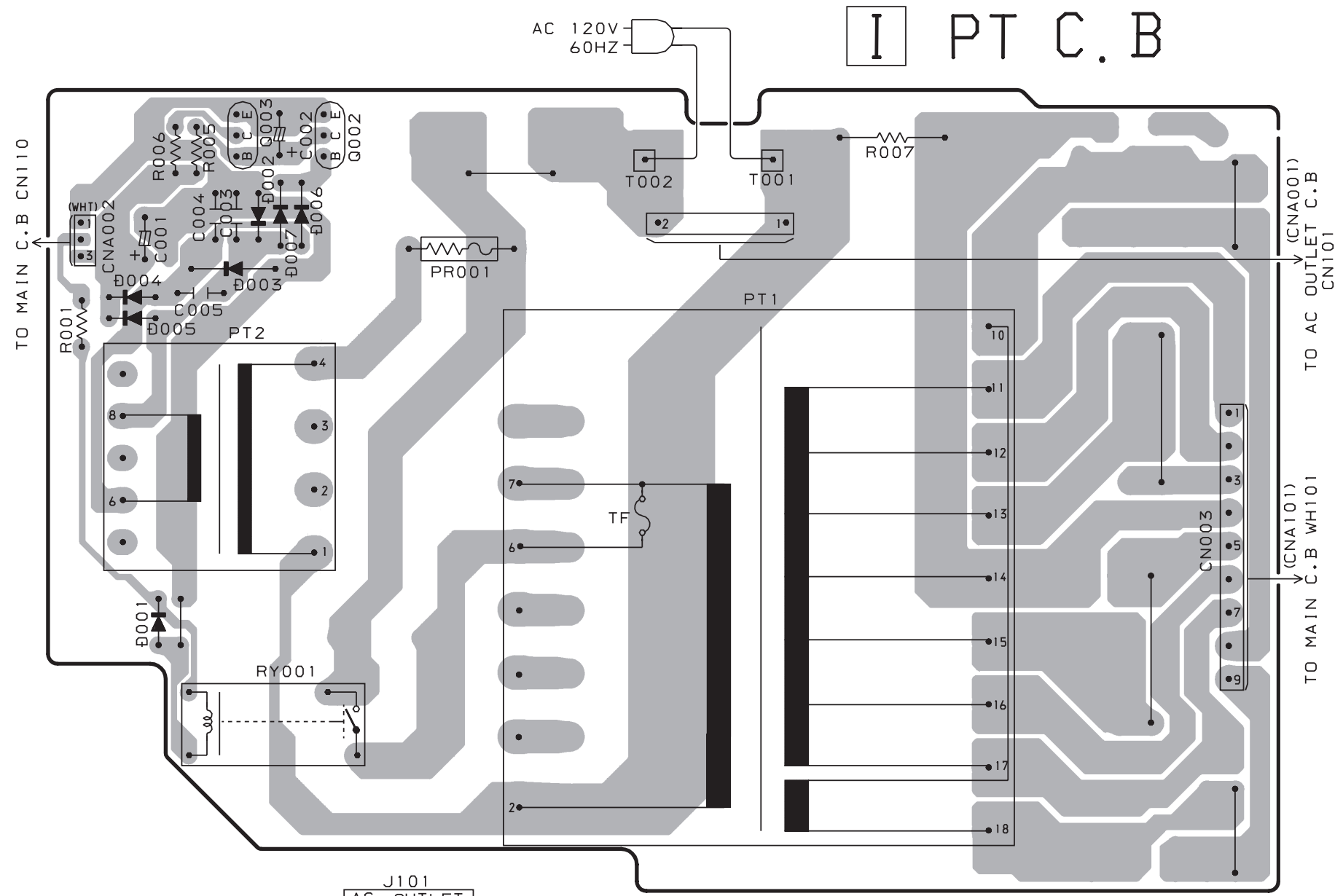
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SCHEMATIC DIAGRAM - 7 (AMP)



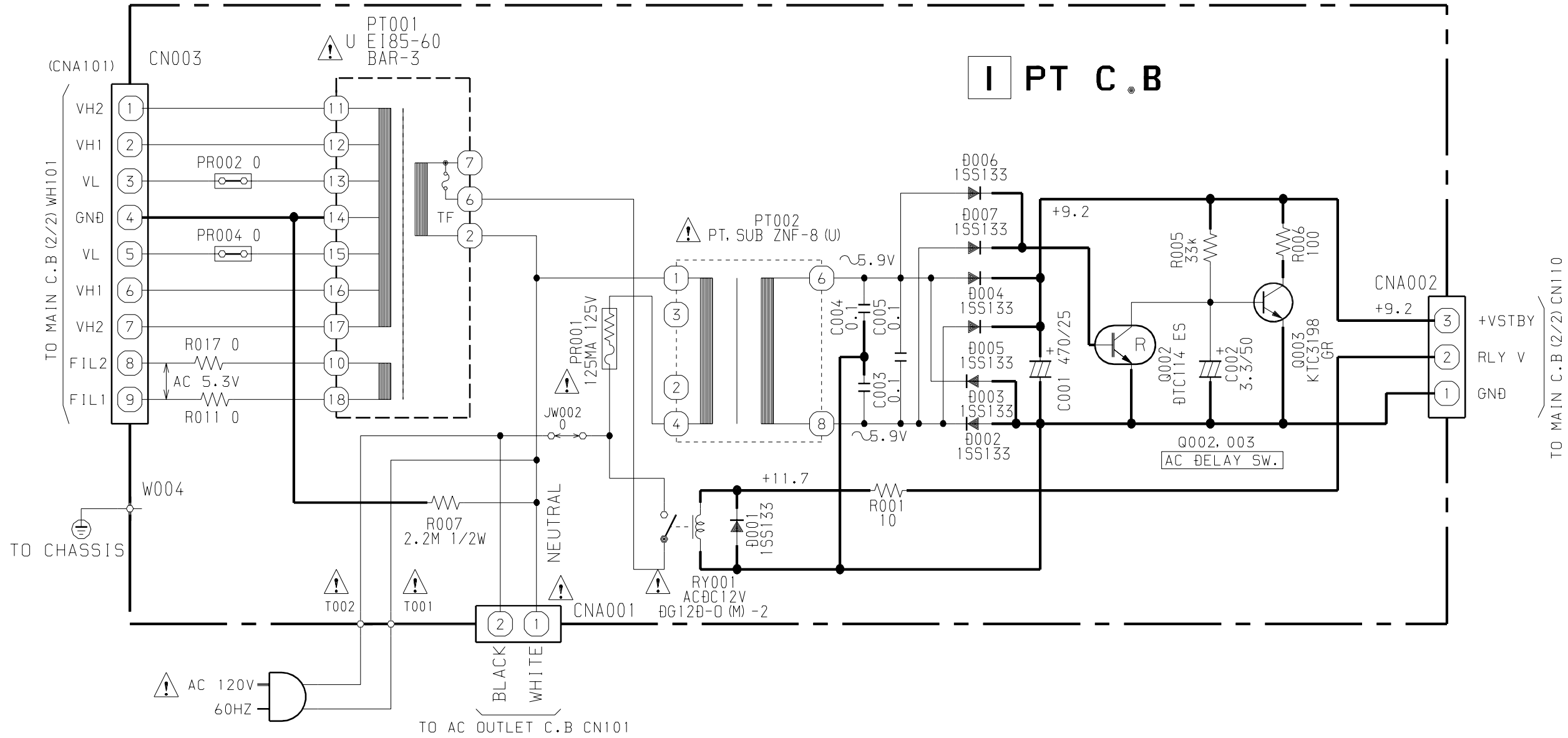
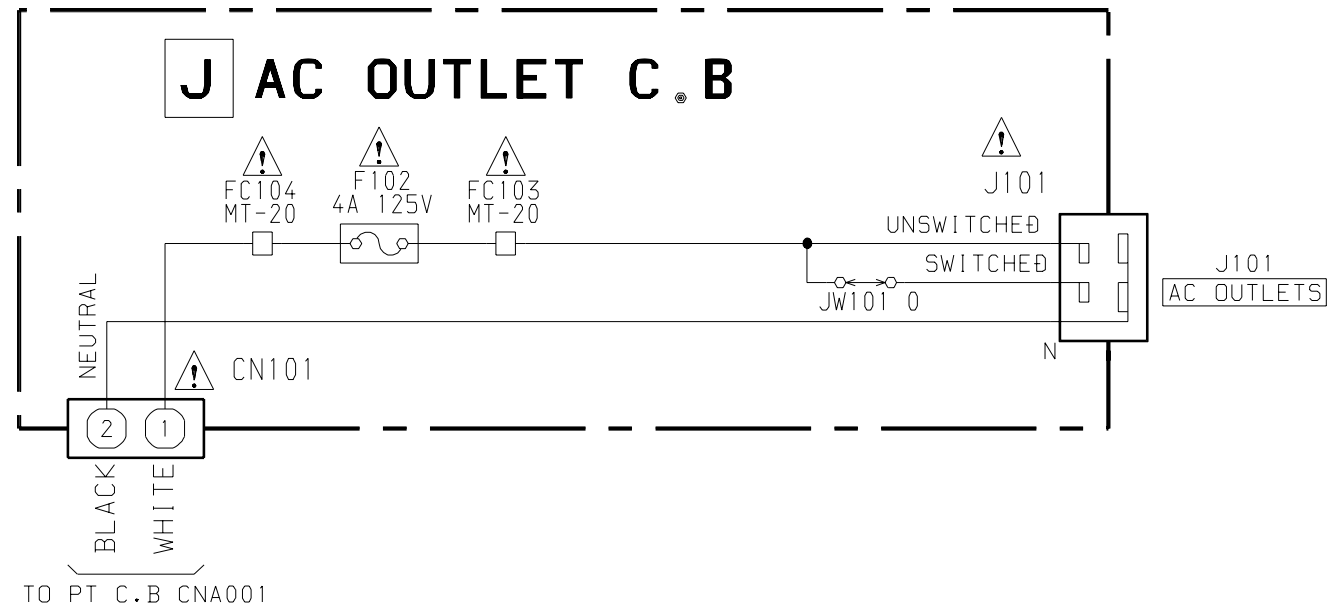
WIRING - 7 (PT / AC OUTLET)

32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1



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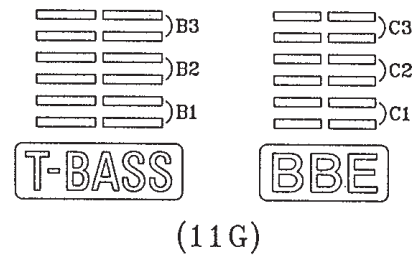
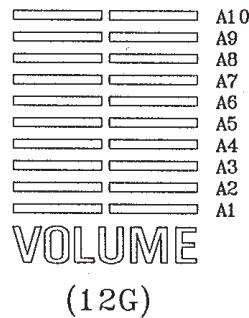
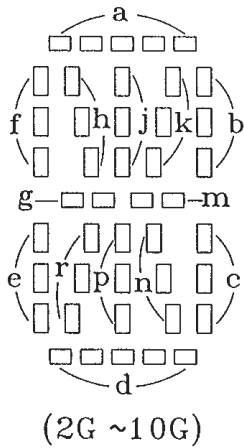
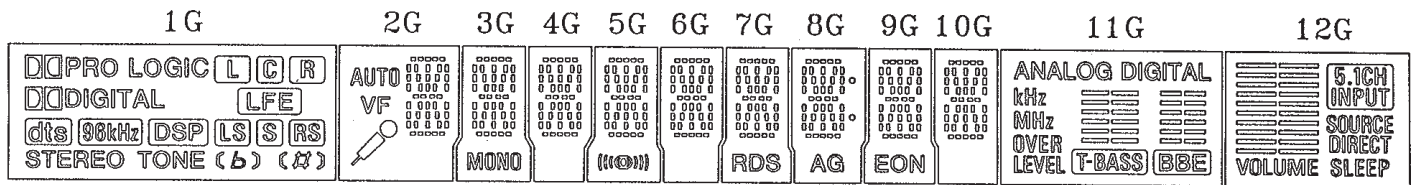
SCHEMATIC DIAGRAM - 8 (AC OUTLET / PT)





# FL (HNA-12SM12 BAR-3) GRID ASSIGNMENT / ANODE CONNECTION

## GRID ASSIGNMENT

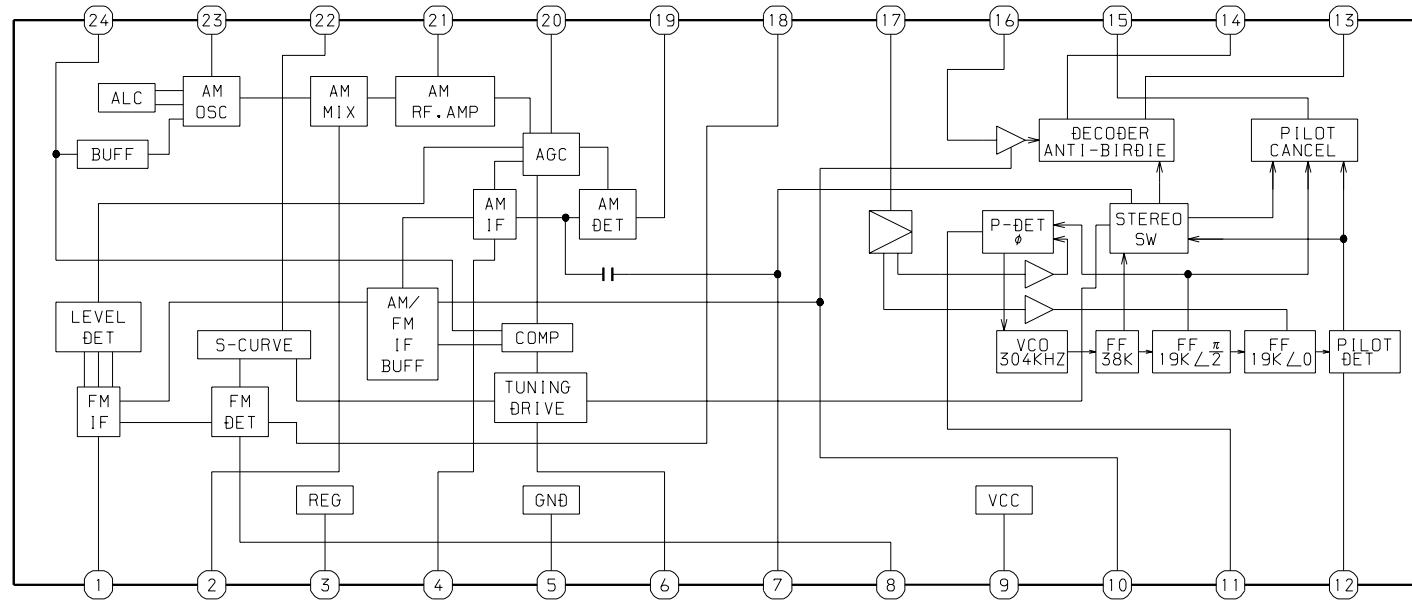


## ANODE CONNECTION

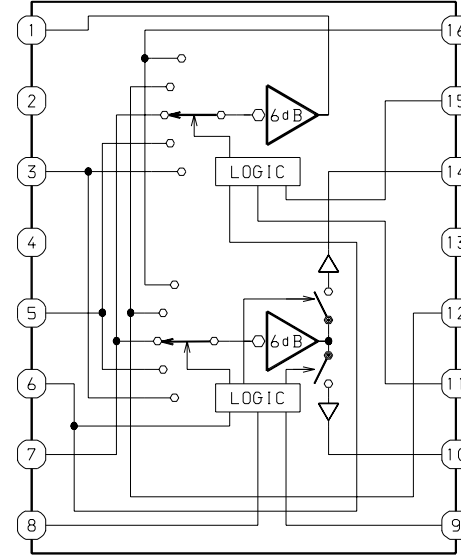
	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G
P1	L	d	d	d	d	d	d	d	d	d	ANALOG	A10
P2	C	n	n	n	n	n	n	n	n	n	DIGITAL	A9
P3	R	p	p	p	p	p	p	p	p	p	kHz	A8
P4	LFE	r	r	r	r	r	r	r	r	r	MHz	A7
P5	LS	e	e	e	e	e	e	e	e	e	/	A6
P6	S	c	c	c	c	c	c	c	c	c	B1	A5
P7	RS	g	g	g	g	g	g	g	g	g	B2	A4
P8	STEREO	m	m	m	m	m	m	m	m	m	B3	A3
P9	TONE	f	f	f	f	f	f	f	f	f	C3	A2
P10	dts	b	b	b	b	b	b	b	b	b	C2	A1
P11	b #	k	k	k	k	k	k	k	k	k	C1	VOLUME
P12	((#))	j	j	j	j	j	j	j	j	j	BBE	SLEEP
P13	((b))	h	h	h	h	h	h	h	h	h	T-BASS	/
P14	DSP	a	a	a	a	a	a	a	a	a	/	/
P15	96kHz	AUTO	MONO	/	((O))	/	RDS	o(u)	EON	/	OVER LEVEL	SOURCE DIRECT
P16	PRO LOGIC	VF	/	/	/	/	/	o(L)	/	/	/	5.1CH INPUT
P17	DIGITAL	/	/	/	/	/	/	AG	/	/	/	/

# IC BLOCK DIAGRAM

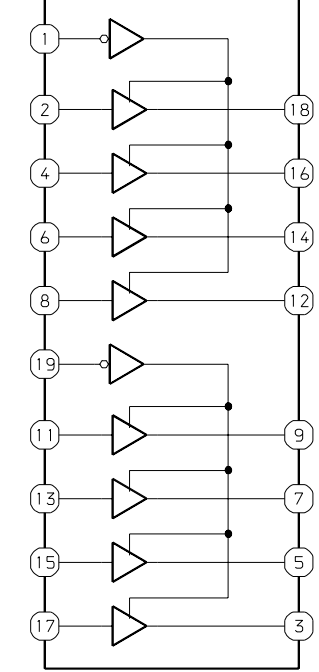
IC, LA1845L



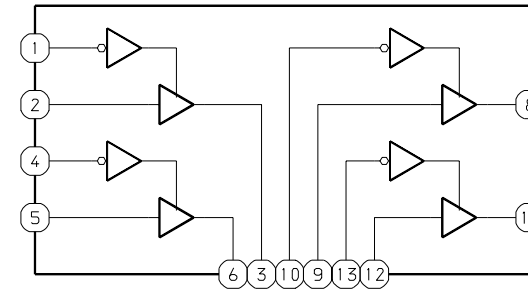
IC, BA7625



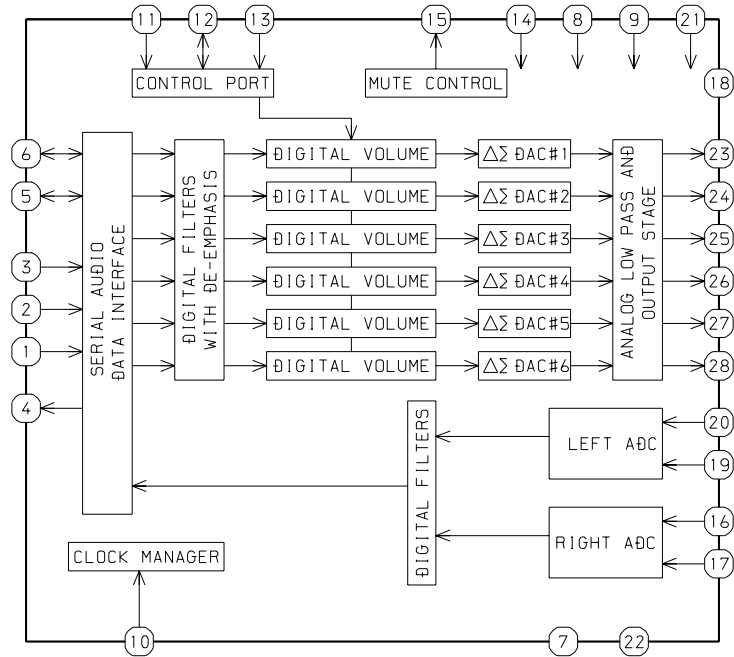
IC, SN74LV244A



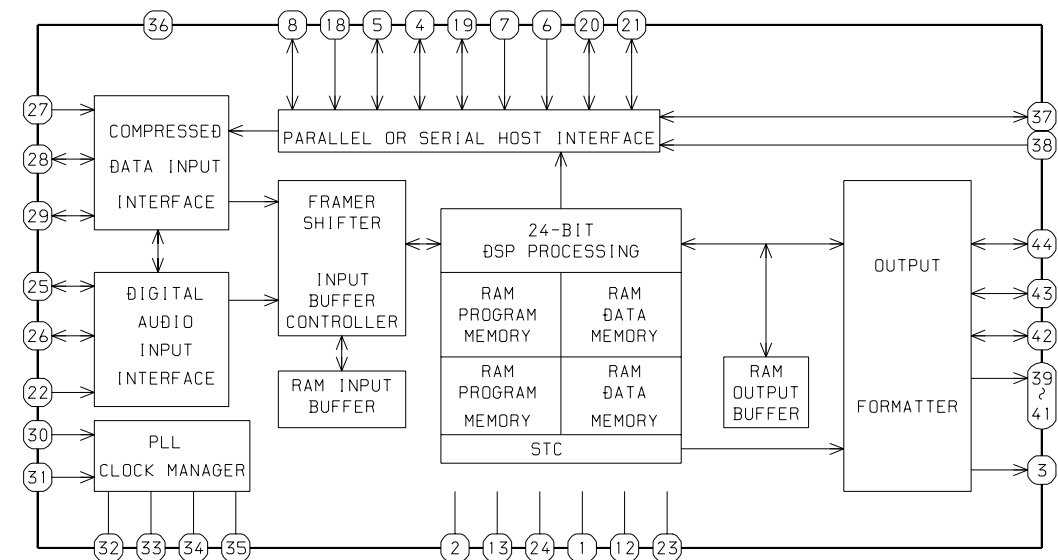
IC, SN74LV125APW



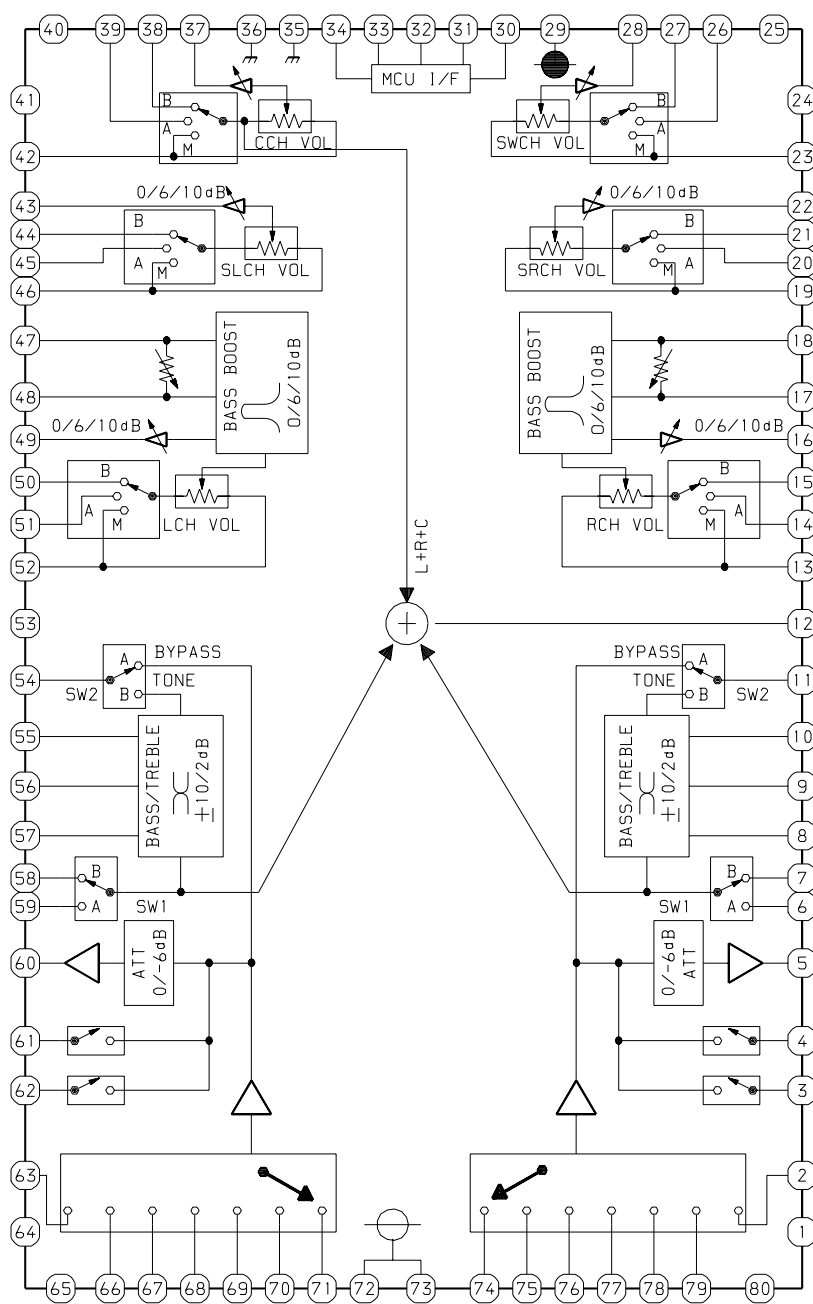
IC, CS4228A



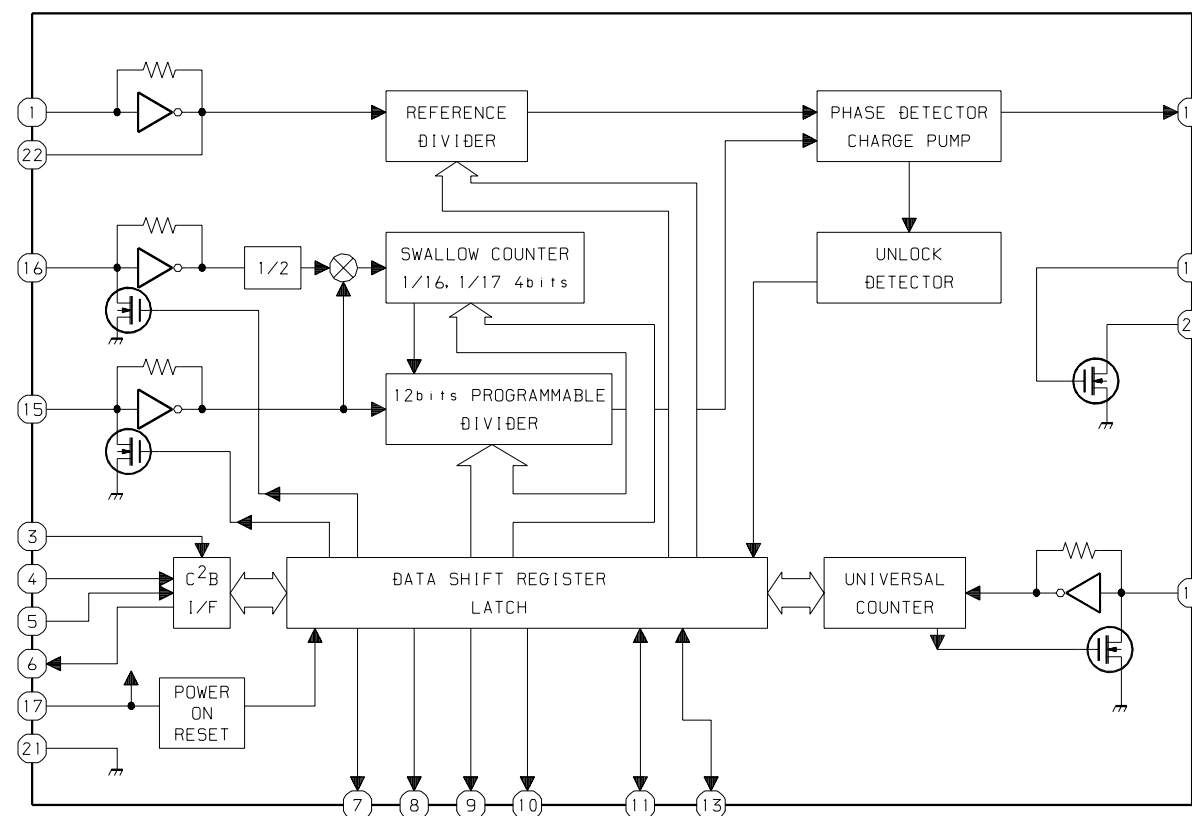
IC, CS49326



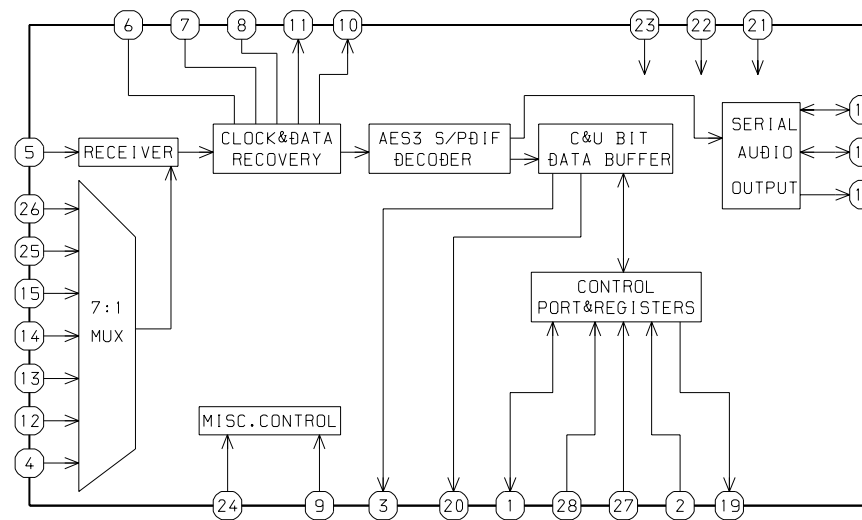
IC, M61501FP



IC, LC72131D-N



IC, CS8415A



## IC DESCRIPTION

IC, UPD780228GF-082

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{O-K-SCAN}}$	O	Switch scan timing output.
2	TUNER ON	O	Tuner ON/OFF output.
3	O-DATA(M)	O	Data output for sound.
4	C	-	Connected to a pulled up resistor.
5	O-STB(M)	O	Latch strobe output for sound control.
6	O-MUTE	O	System mute ON/OFF output..
7	O-CLK (M)	O	Clock output.
8	I-TM-BASE	I	Time-base single input.
9	$\overline{\text{O-POWER}}$	O	System power supply $\overline{\text{ON}}$ /OFF output.
10	O-5VMRESET	O	Reset output for IC, CS8415A.
11	O-5VDSP/RESET	O	Reset output for IC, CS49326.
12	$\overline{\text{I-MIC}}$	-	Connected to a pulled up resistor.
13	O-5VDSP/CSN	O	Chip select output for IC, CS49326.
14	O-5VMOSI	O	Serial control data for IC, CS4228A.
15	O-2VMISO(MISO)/ SUR-MUTE	O	Serial control data output for IC, CS49326.
16	O-5VSCK/C-MUTE	O	Clock serial control output for IC, CS4228A.
17	IC	-	Connected to GND.
18	VSS	-	GND.
19	VDD+5V	-	Power supply input.
20	O-2VINTRQ	O	Control port interrupt request output for IC, CSA9326
21	O-CLK-SW	O	Pre-emphasis output for IC, CS8415A.
22	I-RDS-DATA	I	RDS serial data input. (Not used)
23	O-5VMISO	O	Serial control data output for IC, CS8415A.
24	A	-	Connected to a pulled up resistor.
25	O-MCU/B	-	Connected to a pulled up resistor.
26	O-8415CSN	O	Chip select output for IC, CS8415A.
27	O-4228CSN	O	Chip select output for IC, CS4228A.
28	I-RDS-CLK	I	RDS clock input. (Not used)
29	RERR	O	Receiver error output for IC, CS8415A.
30	$\overline{\text{RESET}}$	I	Reset input.
31	O-PLL-CE	O	PLL IC chip enable output for IC, LC72131D-N.
32	O-TAPE-ATT	O	ATT output for function tape.
33	O-STB (MIC)	-	Not used.
34	I-RMC	I	System remote control signal input.
35	O-STB (T92)	-	Connected to a pulled down resistor.
36	C-SHIFT	O	Micon clock shift output.
37	VDD1	-	Power supply input.
38,39	X2,X1	-	4.19 MHz oscillator circuit.
40	VSS1	-	GND.
41	AVDD	-	Power supply input.

Pin No.	Pin Name	I/O	Description
42	$\overline{\text{HOLD}}$	I	Power failure detected input "L" to stop and hold memory.
43	I-RE-VOL	I	Volume rotary encoder signal input (Main vol L & R).
44	RDS-SIG	I	RDS signal level input. (Not used)
45	I-JOG2	I	Multi jog rotary encoder signal input.
46	I-FU-JOG1	I	Function rotary encoder signal input.
47,48	I-KEY2,1	I	Key input (A/D).
49	$\overline{\text{I-TUNE/IFC}}$	I	Tune-IF count serial data input.
50	AVSS	-	GND.
51,52	BBE1,2	O	BBE boost level control signal output.
53	TAPE-MON	O	Tape monitor control signal output.
54	$\overline{\text{ECO}}$	O	ECO LED $\overline{\text{ON}}$ /OFF output.
55,56	AV-B,A	O	VIDEO - SW control signal output.
57	SW-RELAY	O	Relay switch $\overline{\text{ON}}$ /OFF output.
58	SUB ON/OFF	O	Sub-woofer ON/ $\overline{\text{OFF}}$ output.
59	NC	-	Connected to GND through a resistor.
60	VIDEO1	O	VIDEO1 LED $\overline{\text{ON}}$ /OFF output.
61	VIDEO2	O	VIDEO2 LED $\overline{\text{ON}}$ /OFF output.
62	VIDEO3	O	VIDEO3 LED $\overline{\text{ON}}$ /OFF output.
63	I-HP-MUTE	I	Headphone mute detected input.
64	$\overline{\text{CD}}$	O	CD LED $\overline{\text{ON}}$ /OFF output.
65	$\overline{\text{AUX}}$	O	AUX LED $\overline{\text{ON}}$ /OFF output.
66	$\overline{\text{TAPE-MON}}$	O	TAPE MONITOR LED $\overline{\text{ON}}$ /OFF output.
67	$\overline{\text{TUNER}}$	O	TUNER LED $\overline{\text{ON}}$ /OFF output.
68	$\overline{\text{PHONO}}$	O	PHONO LED $\overline{\text{ON}}$ /OFF output.
69	I-STEREO	I	Tuner stereo detected input.
70~72	P1~P3	O	FL segment P1~P3 output.
73	LW/P4	I/O	LW data input to diode (Not used) / FL segment P4 output.
74	RDS/P5	I/O	RDS data input to diode (Not used) / FL segment P5 output.
75	$\overline{\text{BBE}}/P6$	I/O	BBE data input to diode (Not used) / FL segment P6 output.
76	AMST/WIDE/P7	I/O	AM stereo, wide band data input to diode (Not used) / FL segment P7 output.
77	AM10K/P8	I/O	AM10K data input to diode (Not used) / FL segment P8 output.
78	KARAOKE/P9	I/O	KARAOKE data input to diode (Not used) / FL segment P9 output.
79	VDD2	-	Power supply input.
80	-VFL	-	Power supply input for FL display.
81~88	P10~P17	O	FL segment P10~P17 output.
89~100	G12~G1	O	FL grid G12~G1 output.

## ADJUSTMENT <TUNER / FRONT>

### < TUNER SECTION >

1. Clock frequency Check  
Settings : • Test point : TP2 (CLK)  
Method : Set to AM 1710kHz and check that the test point is 2160kHz  $\pm$  45Hz.
2. AM VT Check  
Settings : • Test point : TP1 (VT)  
Method : Set to AM 1710kHz, AM 530kHz and check that the test point is less than 8.5V(1710kHz) and more than 0.6V(530kHz).
3. AM Tracking Adjustment  
Settings : • Test point : TP8 (Rch), TP9 (Lch)  
• Adjustment location :  
L951(1/3) ..... 1000kHz  
Method : Set to AM 1000kHz and adjust L951(1/3) so that the test point is maximum.
4. AM IF Adjustment  
Settings : • Test point : TP8 (Rch), TP9 (Lch)  
• Adjustment location :  
L802 ..... 450kHz
5. FM VT Adjustment  
Settings : • Test point : TP1 (VT)  
• Adjustment location : L907  
Method : Set to FM 108.0MHz and adjust L907 so that the test point becomes 7.0V  $\pm$  0.05V. Then set to FM 87.5MHz and check that the test point is more than 0.5V.
6. FM Tracking Adjustment  
Settings : • Test point : TP8 (Rch), TP9 (Lch)  
• Adjustment location : L904  
Method : Set to FM 98.0MHz and adjust L904 so that test point is maximum. and distortion is minimum.
7. FM Tracking Check  
Settings : • Test point : TP8 (Rch), TP9 (Lch)  
Method : Set to FM 98.0MHz and check that the test point is less than 9.0dB $\mu$ V.
8. DC Balance / Mono Distortion Adjustment  
Settings : • Test point : TP3, TP4 (DC Balance)  
: TP8 (Rch), TP9 (Lch) (Distortion)  
• Adjustment location : L801  
• Input level : 60dB $\mu$ V  
Method : Set to FM 98.0MHz and adjust L801 so that the distortion is less than 1.3%. Then check the voltage between TP3 and TP4 is 0V  $\pm$  0.5V.

### < FRONT SECTION >

1.  $\mu$ -CON OSC Adjustment  
Settings : • Test point : TP1 (O-K-SCAN) and GND  
• Adjustment location : L101  
Method : Insert AC plug while pressing TUNER function key. Adjust L101 so that the frequency at the test point is 78.4Hz  $\pm$  0.08Hz (12.742ms  $\sim$  12.768ms).



# MECHANICAL PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8B-AR1-065-010		KNOB, RTRY JOG	31	8B-AR3-040-010		PANEL, REAR UBM
2	8B-AR3-030-010		PANEL, FR U	32	8B-AR1-215-010		HLDR, PWB F AMP
3	8B-AR1-060-010		KEY, ENTER	33	8B-AR1-209-010		HLDR, PWB MAIN
4	8B-AR3-050-010		KEY, T-BASS 3U	34	8B-AR1-006-010		BTN, SP
5	8B-AR1-015-010		WINDOW, DISP DD DTS	35	8B-AR1-205-010		HLDR, PWB DD
6	8A-AR3-045-110		KNOB, RTRY VOL	36	8B-AR1-212-010		HLDR, PWB TUNER
7	8B-AR3-002-010		RING, VOL M	37	87-033-209-010		TERMINAL, EARTH
8	8B-AR3-003-010		RING, FUN M	38	8B-AR1-207-010		HLDR, SIDE R
9	8A-AR3-009-010		REFLECTOR, FUN	39	8B-AR1-208-010		HLDR, SIDE L
10	87-CE3-023-010		BADGE, AIWA 30N SILV	40	88-912-131-110		FF-CABLE, 12P 1.25 130MM
11	8B-AR1-055-010		KEY, SOUND	41	8B-AR1-216-010		HLDR, P/T H8.0
12	8B-AR3-020-010		CABI, FR U	A	87-067-703-010		TAPPING SCREW, BVT2+3-10
13	8B-AR3-004-010		RING, FOOT SP	B	87-721-095-410		QT2+3-8GLD W/O SLOT
14	8A-AR3-024-010		KEY, BAL	C	87-067-641-010		UTT2+3-8 (W/O SLOT) BL
15	8A-AR3-020-010		KEY, ECO	D	87-067-584-010		TAPPING SCREW, BVT2+3-6
16	8A-AR3-021-010		KEY, POWER	E	87-067-581-010		TAPPING SCREW, BVT2+3-15
17	8B-AR1-211-010		GUIDE, FL 150-25	F	87-B10-091-010		UTT2+3-10 W/O BLK
18	88-908-101-110		FF-CABLE, 8P 1.25 100MM	G	87-067-958-010		BVTT+3-10
19	88-906-061-110		FF-CABLE, 6P 1.25 60MM	H	87-067-632-010		TAPPING SCREW, BVT2+3-15
20	88-919-331-110		FF-CABLE, 19P 1.25 330MM	I	87-067-579-010		TAPPING SCREW, BVT2+3-8
21	88-930-441-110		FF-CABLE, 30P 1.25 440MM	J	87-078-200-010		S-SCREW, ITC+4-8 R
22	8B-AR2-045-110		CABI, STEEL				
23	8B-AR1-003-010		FOOT, REAR BLK				
△	24	88-AR1-218-010	HLDR, PWB H8.9				
△	25	87-085-189-010	BUSHING, CORD (U)				
△	26	87-A80-110-010	AC CORD ASSY, U				
△	27	8B-AR1-206-010	HLDR, HT-SINK				
△	28	8B-AR1-217-010	HLDR, SUB P/T				
△	29	8B-AR3-621-010	PT, U EI85-60 BAR-3				
△	30	8B-AR1-214-110	HLDR, PWB AC-OUTLET				

## COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue	GL	Light Green	HT	Transparent Gray



## ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8B-AR3-903-010		IB,U(ESF)M
2	87-006-226-010		AM-LOOPANT C0
3	87-043-115-010		ANT,FEEDER FM
4	8A-AR2-701-110		RC UNIT,RC-AAR02 BLK

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