

# SERVICE MANUAL

COMPACT DISC  
STEREO SYSTEM

BASIC TAPE MECHANISM : 2ZM-1 R10NM  
BASIC CD MECHANISM : TN-CCD1001-902M

SYSTEM	SPEAKER
XR-MS3	SX-MS7

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual" XR-MS3 (U,EZ), (S/M Code No. 09-001-422-6T1).
- This Service Manual does not include "CD ELECTRICAL SECTION". These items will be issued in the next Supplement.

# aiwa

S/M Code No. 09-002-422-6R1

REVISION  
DATA

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# SPECIFICATIONS

## <FM tuner section>

<b>Tuning range</b>	87.5 MHz to 108 MHz
<b>Usable sensitivity (IHF)</b>	U : 13.2 dBf EZ : 16.8 dBf
<b>Antenna terminals</b>	75 ohms (unbalanced)

## <AM (MW) tuner section>

<b>Tuning range</b>	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
<b>Usable sensitivity</b>	350 $\mu$ V/m
<b>Antenna</b>	Loop antenna

## <LW tuner section> (EZ)

<b>Tuning range</b>	144 kHz to 290 kHz
<b>Usable sensitivity</b>	1400 $\mu$ V/m
<b>Antenna</b>	Loop antenna

## <Amplifier section>

<b>Power output</b>	U : 10 W + 10 W (50 Hz to 20 kHz, T.H.D. less than 1 %, 6 ohms) 15 W + 15 W (50 Hz to 20 kHz, T.H.D. less than 10 %, 6 ohms) EZ : Rated : 12 W + 12 W (6 ohms, T.H.D. 1 %, 1 kHz / DIN 45500) Reference : 15 W + 15 W (6 ohms, T.H.D. 10 %, 1 kHz / DIN 45324) DIN MUSIC POWER 20 W + 20 W
<b>Total harmonic distortion (U)</b>	0.15 % (6W, 1 kHz, 6 ohms, DIN AUDIO)
<b>Input</b>	VIDEO / AUX: 500 mV
<b>Outputs</b>	SPEAKERS: accept speakers of 6 ohms or more PHONES (stereo mini jack): accepts headphones of 16 ohms or more DIGITAL OUT (OPTICAL) jack

## <Compact disc player section>

<b>Laser</b>	Semiconductor laser ( $\lambda = 780$ nm)
<b>D-A converter</b>	1 bit dual
<b>Signal-to-noise ratio</b>	85 dB (1 kHz, 0 dB)
<b>Harmonic distortion</b>	0.05 % (1 kHz, 0 dB)
<b>Wow and flutter</b>	Unmeasurable

## <Cassette deck section>


<b>Track format</b>	4 tracks, 2 channels stereo
<b>Frequency response</b>	CrO <sub>2</sub> tape : 50 Hz – 16000 Hz Normal tape : 50 Hz – 15000 Hz
<b>Signal-to-noise ratio</b>	60 dB (Dolby B NR ON, CrO <sub>2</sub> tape peak level)
<b>Recording system</b>	AC bias
<b>Heads</b>	Recording / Playback head x 1, erase head x 1

## <General>

<b>Power requirements</b>	U : 120 V AC, 60 Hz EZ : 230 V AC, 50 Hz
<b>Power consumption</b>	U : 45 W EZ : 57 W
<b>Standby power consumption</b>	U : 1.9 W (power-economizing mode set to ON) EZ : 1.7 W (power-economizing mode set to ON)
<b>Dimensions of main unit (W x H x D)</b>	100 x 210.6 x 271.5 mm (4 x 8 <sup>3</sup> / <sub>8</sub> x 10 <sup>3</sup> / <sub>4</sub> in.)
<b>Weight of main unit</b>	3.8 kg (8 lbs 6 oz.)

## <Speaker system>

<b>Cabinet type</b>	2 way, bass reflex (magnetic shielded type)
<b>Speakers</b>	Woofer : 85 mm Tweeter: 22 mm dome type
<b>Impedance</b>	6 ohms
<b>Output sound pressure level</b>	86 dB/W/m
<b>Dimensions (W x H x D)</b>	100 x 206 x 188 mm (4 x 8 <sup>1</sup> / <sub>8</sub> x 7 <sup>1</sup> / <sub>2</sub> in.)
<b>Weight</b>	1.5 kg (3 lbs 5 oz.)

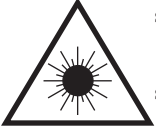
- Design and specifications are subject to change without notice.
- The word "BBE" and the "BBE symbol" are trademarks of BBE Sound, Inc.  
Under license from BBE Sound, Inc.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.  
"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

## PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

### WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- s Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- s Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

### VAROITUS!

Laitteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

### WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

### CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

### ATTENTION

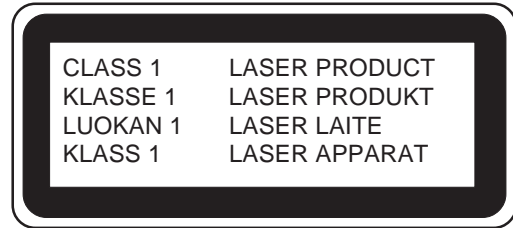
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

### ADVARSEL

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the rear exterior.

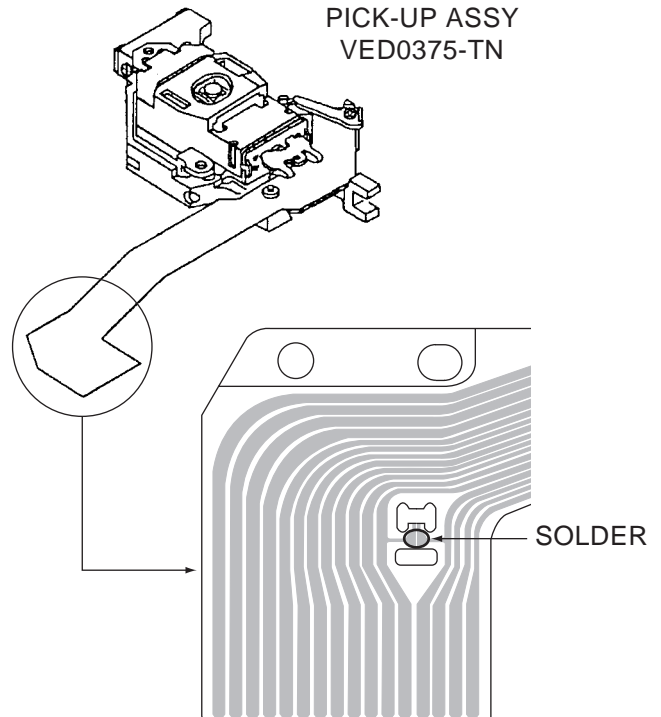


## Precaution to replace Optical block

### (VED0375-TN)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

- 1) After the connection, remove solder shown in right figure.



# SERVICE JIG AND TOOLS

The distance between the FRONT C.B and the MAIN C.B may be extended with the jig when repairing the FRONT C.B.

Name: JIG, EXT 18P  
No.: SV-J00-071-010

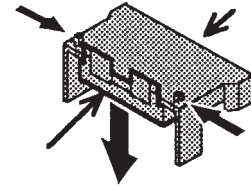


Fig. 1

## 1. Assemble Method

- 1) Remove the solders on the pattern side of JIG C.B.
- 2) Remove the covers by pushing the picks of sockets (as shown by Fig. 1).
- 3) Insert and solder the parts into JIG C.B (as shown by Fig. 2).
- 4) Insert FFC cable into each connector to connect a socket part and a plug part (Fig. 2).

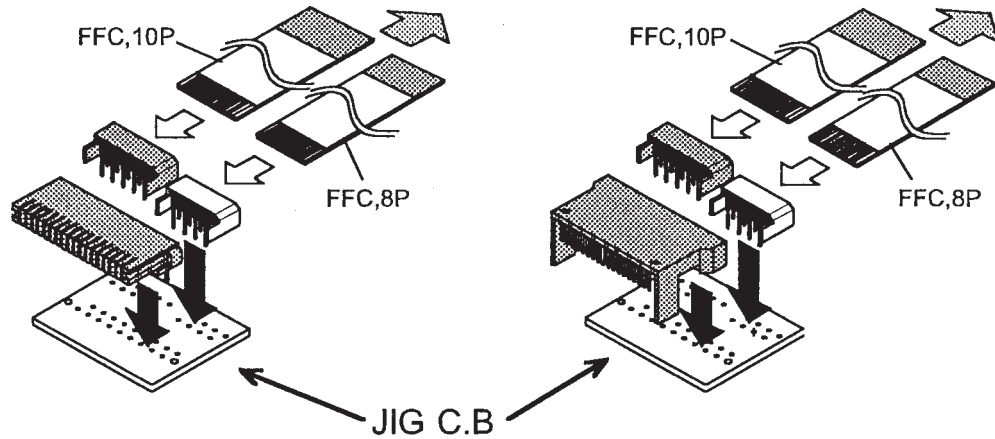


Fig. 2

## 2. Connection

As shown in the figure below, connect the plug side to the FRONT C.B and the socket side to the MAIN C.B.

- Beware of short circuit on the pattern side of the JIG C.B and FFC coming off.

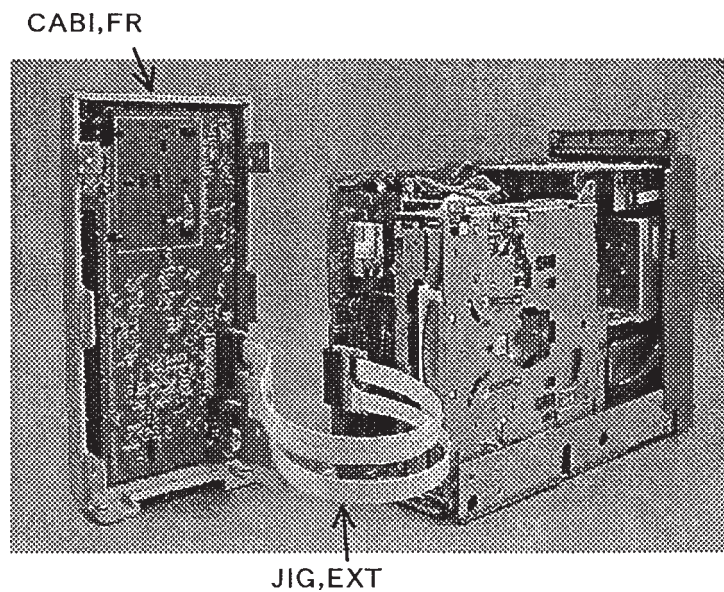
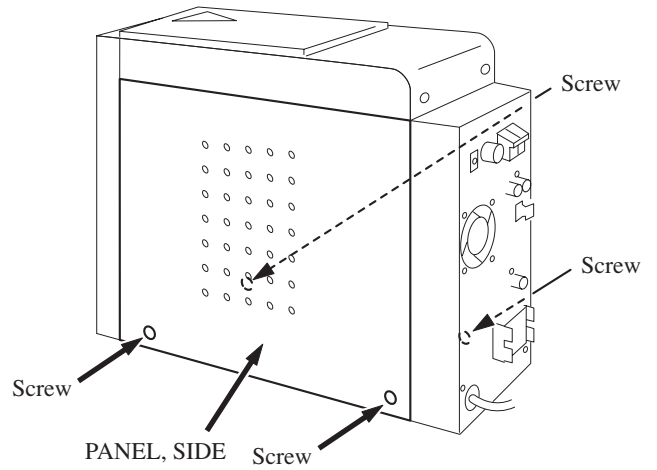


Fig. 3

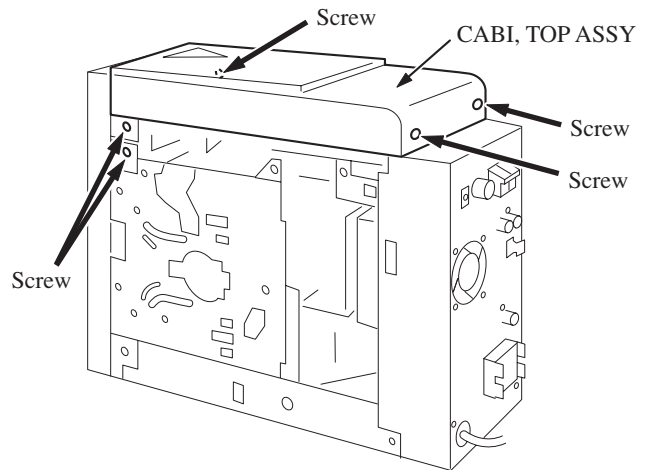
# DISASSEMBLY INSTRUCTIONS

## 1. CD BLOCK

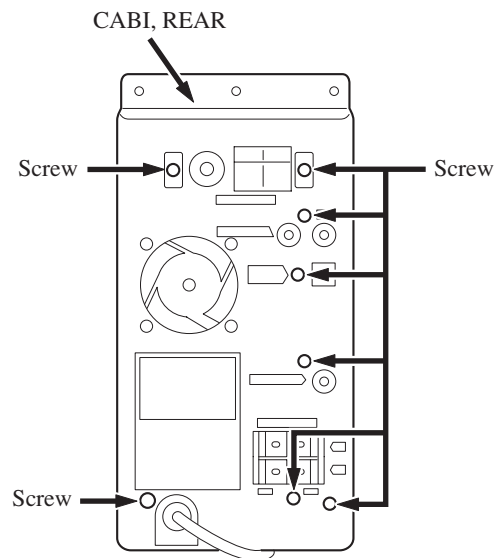
- 1) Remove the PANEL, SIDE.  
Remove the four screws indicated by the arrows and remove the PANEL, SIDE (right and left).



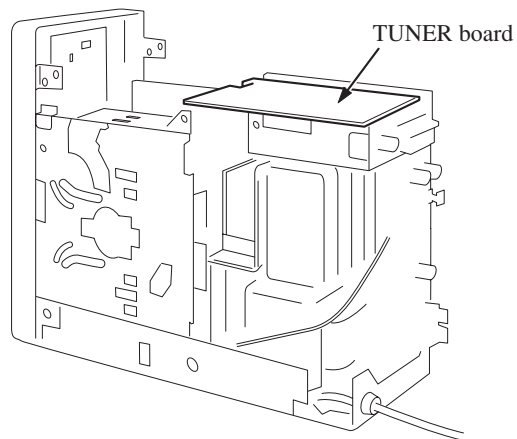
- 2) Remove the CABI, TOP ASSY.  
Remove the five screws indicated by the arrows and remove the CABI, TOP ASSY.



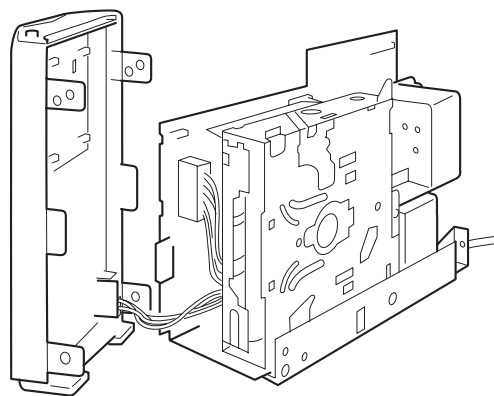
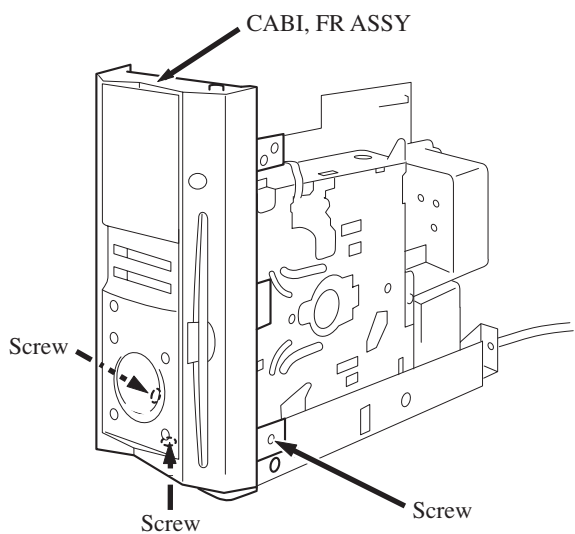
- 3) Remove the CABI, REAR.  
Remove the eight screws indicated by the arrows and remove the CABI, REAR.



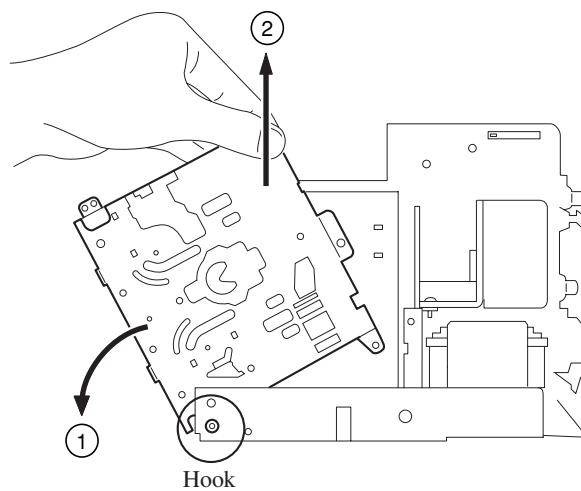
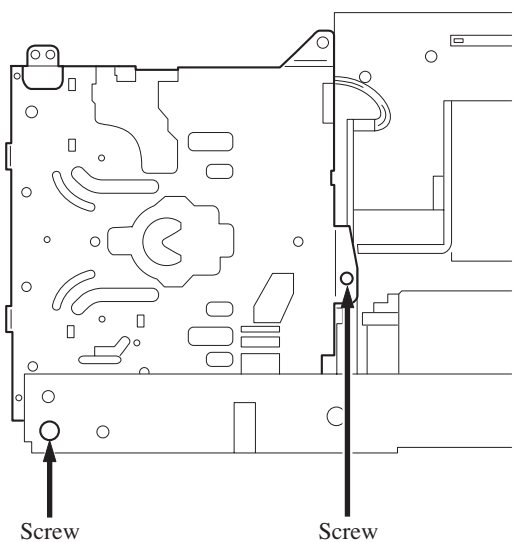
- 4) Remove the TUNER board.  
Remove the TUNER board connected to the connector.



- 5) Remove the CABI, FR ASSY.  
Remove the three screws indicated by the arrows and remove the CABI, FR ASSY.

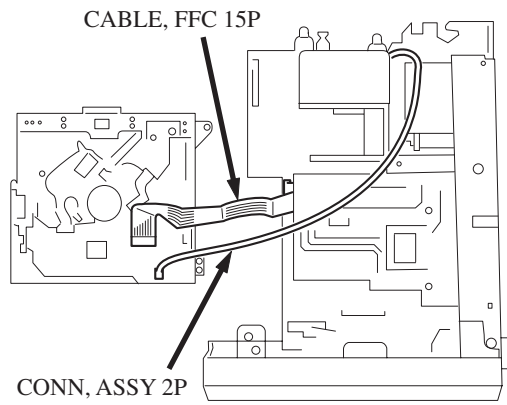
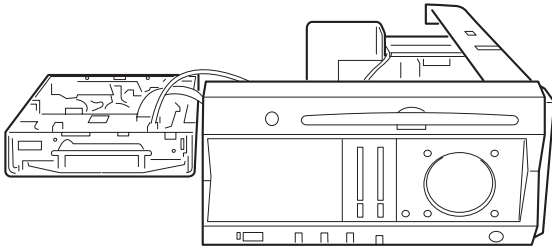


- 6) Remove the CD MECHA.  
(1) Remove the two screws indicated by the arrows.  
(2) Lift up the CD MECHA in the direction of arrow 1 and hook in the position indicated in circle.  
(3) Remove the CD MECHA in the direction of arrow 2.



- 7) Lay the XR-MS3 in its Service Position.
- (1) Attach the CABI, FR ASSY.
  - (2) Place the main unit and the CD unit as shown below.
  - (3) Connect the CABLE, FFC 15P and CONN, ASSY 2P to the CD MECHA and turn on the main power.

Service Position

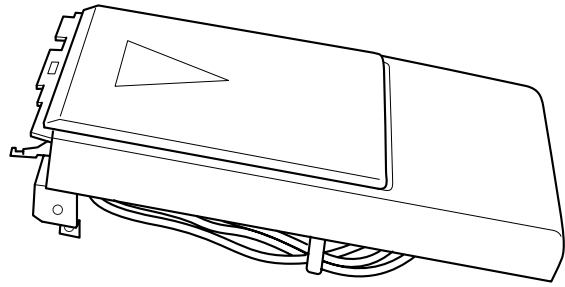




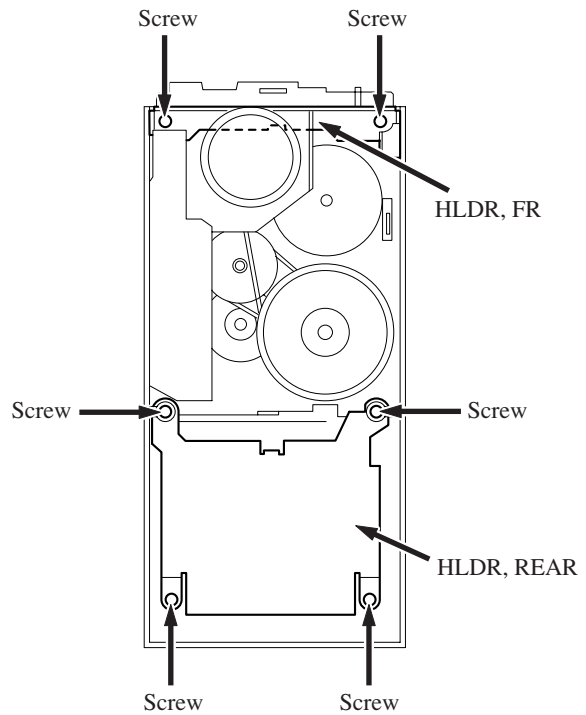
## 2. CASSETTE BLOCK

- 1) Remove the CABI, TOP ASSY in the same procedure (1 ~ 3) as for CD block.

CABI, TOP ASSY

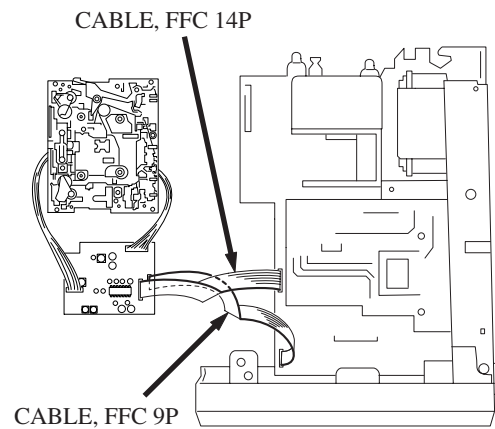
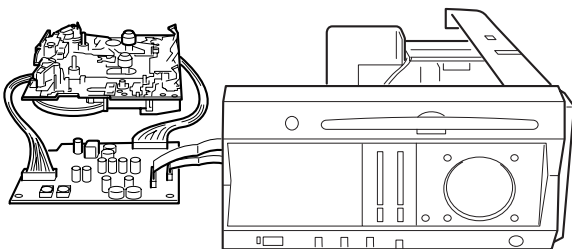


- 2) Remove the HLDR, FR and HLDR, REAR.  
Remove the six screws indicated by the arrows and remove the HLDR, FR and HLDR, REAR.



- 3) Remove the HLDR, FR and HLDR, REAR.  
Remove the six screws indicated by the arrows and remove the HLDR, FR and HLDR, REAR.

Service Position



# ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
<b>IC</b>				C6	87-010-196-080		CHIP CAPACITOR,0.1-25
	8A-CJ5-601-010		C-IC,LC876580W-5N98	C7	87-010-194-080		CAP, CHIP 0.047
	87-070-246-010		IC,GP1U271X	C8	87-010-196-080		CHIP CAPACITOR,0.1-25
	87-A20-909-010		IC,LA4663	C9	87-A12-033-090		CAP,E 6800-25 SMG30L
	87-017-915-080		IC,BU4094BCF	C10	87-010-409-080		CAP,E 220-50 SME
	87-017-585-080		IC,NJM4580E	C11	87-010-380-080		CAP, ELECT 47-16V
	87-A20-355-010		IC,CXA1553P	C13	87-010-408-080		CAP, ELECT 47-50V
	87-A20-783-040		C-IC,BA7762AFS	C14	87-010-235-080		CAP,E 470-16 SME
	87-A21-022-040		C-IC,BA3880FS	C15	87-010-387-080		CAP,E 470-25 SME
	87-A21-103-040		C-IC,MM1454XFBE	C16	87-012-369-080		C-CAP,S 0.047-50F
	87-A21-111-040		C-IC,M62495FP	C17	87-012-369-080		C-CAP,S 0.047-50F
	87-017-825-010		IC,GP1F32T	C18	87-A10-776-080		CAP,E 1000-25 M 105 KMG
	87-020-454-010		IC,DN6851	C19	87-010-403-080		CAP, ELECT 3.3-50V
	87-070-127-110		IC,LC72131D	C30	87-010-112-080		CAP, ELECT 100-16V
	87-A20-913-010		IC,LA1837NL	C31	87-016-126-080		CAP,E 470-16 M 105 KME
	87-A20-440-040		C-IC,BU1920FS<EZ>	C61	87-010-260-080		CAP, ELECT 47-25V
<b>TRANSISTOR</b>				C62	87-010-496-040		CAP,E 3.3-50 GAS
	89-213-702-010		TR,2SB1370E	C91	87-010-401-080		CAP, ELECT 1-50V
	87-A30-076-080		C-TR,2SC3052F	C92	87-010-263-080		CAP, ELECT 100-10V
	87-026-610-080		TR,KTC3198GR	C93	87-010-553-040		CAP,E 47-16 GAS
	87-A30-075-080		C-TR,2SA1235F	C101	87-010-754-080		CAP,E220-10 SRA 7L
	87-A30-234-080		TR,CSC4115BC	C102	87-010-754-080		CAP,E220-10 SRA 7L
	89-418-580-080		TR,2SD1858TV2	C103	87-010-196-080		CHIP CAPACITOR,0.1-25
	87-026-245-080		TR,DTC114ES	C104	87-010-198-080		CAP, CHIP 0.022
	87-A30-198-080		TR,KTC3199GR	C105	87-010-196-080		CHIP CAPACITOR,0.1-25
	87-026-609-080		TR,KTA1266GR	C106	87-010-400-040		CAP,E 0.47-50
	87-026-210-080		CHIP-TR,DTC144EK	C108	87-010-313-080		CAP, CHIP 18P
	87-A30-087-080		C-FET,2SK2158	C109	87-012-156-080		C-CAP,S 220P-50 CH
	87-A30-073-080		C-TR,RT1N 141C	C110	87-010-196-080		CHIP CAPACITOR,0.1-25
	87-026-236-080		C-TR,DTC124EK	C111	87-010-079-040		CAP,E 100-6.3 5L
	87-A30-086-070		C-TR,CSD1306E	C112	87-010-194-080		CAP, CHIP 0.047
	87-026-211-080		C-TR,DTA144EK	C114	87-010-194-080		CAP, CHIP 0.047
	87-A30-240-080		TR,CSA1585BC	C115	87-010-405-040		CAP,E 10-50
	87-A30-159-080		C-TR,KTA1298Y	C116	87-010-196-080		CHIP CAPACITOR,0.1-25
	87-A30-072-080		C-TR,RT1P 144C	C117	87-010-196-080		CHIP CAPACITOR,0.1-25
	87-A30-273-040		C-TR,DTC124EKA	C118	87-010-196-080		CHIP CAPACITOR,0.1-25
	87-A30-202-080		C-TR,RT1P441C	C129	87-010-316-080		C-CAP,S 33P-50 CH
	89-505-434-540		C-FET,2SK543(4/5)	C130	87-010-178-080		CHIP CAP 1000P
	87-A30-074-080		C-TR,RT1P 141C	C201	87-010-491-040		CAP,E 0.22-50 GAS
	89-327-143-080		C-TR,2SC2714(0.1W)	C202	87-010-545-040		CAP,E 0.22-50 SME
<b>DIODE</b>				C203	87-010-178-080		CHIP CAP 1000P
	87-020-465-080		DIODE,1SS133	C204	87-010-178-080		CHIP CAP 1000P
	87-A40-224-010		DIODE,GBU8DL	C205	87-010-546-040		CAP,E 0.33-50
	87-A40-313-080		C-DIODE,MC 2840	C206	87-010-546-040		CAP,E 0.33-50
	87-A40-346-080		ZENER,MTZJ 8.2C	C211	87-010-405-040		CAP,E 10-50
	87-A40-345-080		ZENER,MTZJ10C	C212	87-010-260-080		CAP, ELECT 47-25V
	87-070-274-080		DIODE,1N4003 SEM	C215	87-010-405-080		CAP, ELECT 10-50V
	87-A40-336-080		ZENER,MTZJ27D T-72	C216	87-010-405-080		CAP, ELECT 10-50V
	87-A40-435-080		ZENER,MTZJ30D	C217	87-012-368-080		C-CAP,S 0.1-50 F
	87-A40-270-080		C-DIODE,MC2838	C218	87-012-368-080		C-CAP,S 0.1-50 F
	87-A40-004-080		ZENER,MTZJ16A	C219	87-012-368-080		C-CAP,S 0.1-50 F
	87-070-136-080		ZENER,MTZJ5.1B	C220	87-012-368-080		C-CAP,S 0.1-50 F
	87-A40-509-080		ZENER,MTZJ6.8C	C221	87-010-405-080		CAP, ELECT 10-50V
	87-A40-269-080		C-DIODE,MC2836	C223	87-010-196-080		C-CAP,S 0.1-25 ZF
	87-A40-235-080		ZENER,MTZJ9.1C	C301	87-010-322-080		C-CAP,S 100P-50 CH
	87-A40-293-080		ZENER,DZ2.7M	C302	87-010-322-080		C-CAP,S 100P-50 CH
	87-A40-438-080		ZENER,MTZJ4.7A	C303	87-016-044-040		CAP,E 100-16 GAS
	87-017-149-080		ZENER,HZS6A2L	C304	87-016-044-040		CAP,E 100-16 GAS
<b>MAIN C.B</b>				C305	87-010-071-040		CAP,E 1-50 M 5L SRE
C1	87-010-194-080		CAP, CHIP 0.047	C306	87-010-071-040		CAP,E 1-50 M 5L SRE
C2	87-010-194-080		CAP, CHIP 0.047	C307	87-010-553-040		CAP,E 47-16 GAS
C3	87-010-196-080		CHIP CAPACITOR,0.1-25	C308	87-010-555-040		CAP,E 100-10 GAS
C4	87-010-196-080		CHIP CAPACITOR,0.1-25	C401	87-010-196-080		CHIP CAPACITOR,0.1-25
C5	87-010-196-080		CHIP CAPACITOR,0.1-25	C402	87-010-260-080		CAP, ELECT 47-25V
				C403	87-010-404-080		CAP, ELECT 4.7-50V
				C404	87-010-404-080		CAP, ELECT 4.7-50V
				C405	87-010-404-080		CAP, ELECT 4.7-50V
				C406	87-010-404-080		CAP, ELECT 4.7-50V
				C407	87-010-188-080		CAP,CHIP 6800P
				C408	87-010-188-080		CAP,CHIP 6800P



REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C352	87-012-140-080	CAP	470P	C711	87-010-260-080	CAP, ELECT	47-25V
C354	87-010-175-080	CAP	560P	C712	87-010-831-080	C-CAP, U	0.1-16F
C355	87-010-178-080	CHIP CAP	1000P	C713	87-012-286-080	CAP, U	0.01-25<EZ>
C356	87-010-260-040	CAP, E	47-25 SME	C714	87-012-286-080	CAP, U	0.01-25
C357	87-010-197-080	CAP, CHIP	0.01 DM	C715	87-012-195-080	C-CAP, U	100P-50CH<EZ>
C358	87-010-183-080	C-CAP, S	2700P-50 B	C717	87-012-286-080	CAP, U	0.01-25
C359	87-010-183-080	C-CAP, S	2700P-50 B	C719	87-012-286-080	CAP, U	0.01-25
C360	87-010-183-080	C-CAP, S	2700P-50 B	C720	87-012-195-080	C-CAP, U	100P-50CH
C370	87-010-196-080	CHIP CAPACITOR	0.1-25	C721	87-012-176-080	CAP, 15P	
C371	87-010-177-080	C-CAP, S	820P-50 SL	C722	87-012-176-080	CAP, 15P	
C372	87-010-177-080	C-CAP, S	820P-50 SL	C723	87-012-274-080	CHIP CAP, U	1000P-50B
C373	87-010-179-080	CAP, CHIP	S B1200P	C725	87-012-274-080	CHIP CAP, U	1000P-50B<U>
C374	87-010-179-080	CAP, CHIP	S B1200P	C725	87-018-131-080	CAP, TC U	1000P-50 KB<EZ>
C375	87-010-545-040	CAP, E	0.22-50 SME	C727	87-010-196-080	CHIP CAPACITOR	0.1-25
C376	87-010-545-040	CAP, E	0.22-50 SME	C728	87-010-248-080	CAP, ELECT	220-10V
C378	87-010-196-080	CHIP CAPACITOR	0.1-25	C729	87-012-274-080	CHIP CAP, U	1000P-50B
C386	87-010-759-080	C-CAP, U	0.1-25F	C731	87-012-286-080	CAP, U	0.01-25
C388	87-012-266-080	C-CAP, U	220P-50 B	C733	87-010-987-080	C-CAP, S	1500P-50 CH<U>
CN251	87-A60-626-010	CONN, 9P	V 2MM JMT	C733	87-012-280-080	C-CAP, U	3300P-50 KB<EZ>
CN351	87-A60-625-010	CONN, 8P	V 2MM JMT	C734	87-010-987-080	C-CAP, S	1500P-50 CH<U>
CN601	87-A60-891-080	C-CONN, 14P	V FMN-BMTTN-TF	C734	87-012-280-080	C-CAP, U	3300P-50 KB<EZ>
CN902	87-A60-888-080	C-CONN, 9P	V FMN-BMTTN-TF	C735	87-010-987-080	C-CAP, S	1500P-50 CH<U>
FC601	8A-CL5-628-010	CABLE, FFC	14P-1.0 160	C736	87-010-987-080	C-CAP, S	1500P-50 CH<U>
FC902	8A-CL5-627-010	CABLE, FFC	9P-1.0 220	C737	87-A10-592-080	C-CAP, S	0.015-50 J B<U>
L301	87-A50-049-010	COIL, TRAP	85K(COI)	C738	87-A10-592-080	C-CAP, S	0.015-50 J B<U>
L302	87-A50-049-010	COIL, TRAP	85K(COI)	C751	87-012-365-080	C-CAP, S	0.027-25VBK<U>
L351	87-007-342-010	COIL, OSC	85K BIAS	C752	87-012-365-080	C-CAP, S	0.027-25VBK<U>
SFR303	87-024-435-080	SFR 33K	RH 063EC	C752	87-012-282-080	C-CAP, U	4700P-50 KB<EZ>
SFR304	87-024-435-080	SFR 33K	RH 063EC	C753	87-012-195-080	C-CAP, U	100P-50 J CH<EZ>
SFR305	87-A90-433-080	SFR, 50K	H NVZ6TLTA	C755	87-012-286-080	CAP, U	0.01-25<EZ>
SFR306	87-A90-433-080	SFR, 50K	H NVZ6TLTA	C756	87-012-286-080	CAP, U	0.01-25
SFR351	87-A90-433-080	SFR, 50K	H NVZ6TLTA	C757	87-012-188-080	C-CAP, U	47P-50 CH
SFR352	87-A90-433-080	SFR, 50K	H NVZ6TLTA	C758	87-012-167-080	C-CAP, U	5P-50 CH
				C761	87-010-196-080	C-CAP, S	0.1-25 ZF<EZ>
				C762	87-012-286-080	CAP, U	0.01-25<EZ>
VM C.B				C763	87-010-829-080	CAP, U	0.047-16
C27	87-012-140-080	CAP	470P	C764	87-012-337-080	C-CAP, U	56P-50 CH<U>
C28	87-010-263-080	CAP, ELECT	100-10V<U>	C765	87-012-286-080	CAP, U	0.01-25
C29	87-010-247-080	CAP, ELECT	100-50V	C766	87-010-197-080	C-CAP, S	0.01-25 KB<EZ>
CN3	87-009-033-010	CONNECTOR	5P	C768	87-012-286-080	CAP, U	0.01-25
R20	87-A00-261-080	RES, M/F	0.56-1W J<U>	C769	87-010-260-080	CAP, ELECT	47-25V
				C770	87-010-829-080	CAP, U	0.047-16
HP-JACK C.B				C771	87-010-383-080	CAP, ELECT	33-25V
CN102	87-A60-668-010	CONN, 4P	H 2MM JMT	C772	87-010-829-080	CAP, U	0.047-16
J101	87-A60-420-010	JACK, 3.5	ST (MSC)	C773	87-010-196-080	CHIP CAPACITOR	0.1-25
				C774	87-010-263-080	CAP, ELECT	100-10V
				C775	87-010-404-080	CAP, ELECT	4.7-50V
PT C.B				C776	87-012-286-080	CAP, U	0.01-25
△ C1	87-A10-479-080	CAP, CER	2200P-250 M E KH	C777	87-010-400-080	CAP, ELECT	0.47-50V<U>
△ CN1	87-A60-645-010	CONN, 3P	V VH	C777	87-010-493-080	CAP, E	0.47-50 M 5L SRE<EZ>
△ CN2	87-A60-621-010	CONN, 4P	V 2MM JMT	C778	87-010-401-080	CAP, ELECT	1-50V
△ F1	87-A91-276-080	FUSE, 125MA	125V F 251<U>	C779	87-010-401-080	CAP, ELECT	1-50V
△ PT1	8Z-NF8-662-010	PT, SUB	ZNF-8(E)<EZ>	C780	87-010-196-080	CHIP CAPACITOR	0.1-25
△ PT1	8Z-NF8-661-010	PT, SUB	ZNF-8(U)<U>	C781	87-010-405-080	CAP, ELECT	10-50V
△ PT2	8A-CJ5-622-010	PT, ACJ-5	EZ<EZ>	C782	87-010-405-080	CAP, ELECT	10-50V
△ PT2	8A-CJ5-621-010	PT, ACJ-5	U<U>	C783	87-012-286-080	CAP, U	0.01-25
△ RY1	87-A90-977-010	RELAY, AC12V	DG12D1-O(M)	C784	87-012-286-080	CAP, U	0.01-25
△ T1	87-A60-317-010	TERMINAL, 1P	MSC	C785	87-010-401-080	CAP, ELECT	1-50V<U>
△ T2	87-A60-317-010	TERMINAL, 1P	MSC	C785	87-010-402-080	CAP, ELECT	2.2-50V<EZ>
				C786	87-010-401-080	CAP, ELECT	1-50V<U>
TUNER C.B				C786	87-010-402-080	CAP, ELECT	2.2-50V<EZ>
C701	87-010-381-080	CAP, ELECT	330-16V	C787	87-012-275-080	C-CAP, U	1200P-50 B<EZ>
C702	87-010-404-080	CAP, ELECT	4.7-50V	C788	87-012-275-080	C-CAP, U	1200P-50 B<EZ>
C703	87-012-286-080	CAP, U	0.01-25	C789	87-012-275-080	C-CAP, U	1200P-50 B
C704	87-012-286-080	CAP, U	0.01-25	C790	87-012-275-080	C-CAP, U	1200P-50 B
C705	87-A10-592-080	C-CAP, S	0.015-50 J B<U>	C791	87-010-405-080	CAP, ELECT	10-50V
C706	87-A10-592-080	C-CAP, S	0.015-50 J B<U>	C793	87-012-273-080	C-CAP, U	820P-50 B
C709	87-012-195-080	C-CAP, U	100P-50CH	C794	87-010-406-080	CAP, ELECT	22-50
				C795	87-010-596-080	CAP, S	0.047-16
				C796	87-010-403-080	CAP, ELECT	3.3-50V

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C797	87-012-276-080		C-CAP,U 1500P-50 KB<EZ>	FFE801	A8-6ZA-191-130		6ZA-1 FEENM<EZ>
C798	87-012-276-080		C-CAP,U 1500P-50 KB<EZ>	J801	87-A60-702-010		TERMINAL,ANT 4P CJ-9036<U>
C799	87-010-829-080		CAP,U 0.047-16	J801	87-033-241-010		TERMINAL,ANT 2P AJ-2039<EZ>
C812	87-012-286-080		CAP,U 0.01-25	L771	87-A50-266-010		COIL,FM DET-2N(TOK)
C814	87-012-286-080		CAP,U 0.01-25<EZ>	L772	87-A90-110-010		FLTR,PCFJZH-450 (TOK)<U>
C820	87-010-260-080		CAP,ELECT 47-25V	L772	87-A91-110-010		FLTR,PCFJZH-450(TOK)<EZ>
C821	87-012-286-080		CAP,U 0.01-25	L781	87-005-847-010		COIL,2.2UH K CECS<EZ>
C822	87-012-286-080		CAP,U 0.01-25	L791	87-A50-027-010		COIL,1 POLE MPX(TOK)<EZ>
C823	87-012-286-080		CAP,U 0.01-25	L792	87-A50-027-010		COIL,1 POLE MPX(TOK)<EZ>
C828	87-010-196-080		CHIP CAPACITOR,0.1-25	L832	87-005-847-080		COIL,2.2UH K CECS<EZ>
C829	87-010-196-080		CHIP CAPACITOR,0.1-25	L851	87-005-847-080		COIL,2.2UH K CECS<EZ>
C859	87-012-286-080		C-CAP,U 0.01-25 KB<EZ>	L941	87-A50-020-010		COIL,ANT LW(COI)252KHZ<EZ>
C861	87-012-199-080		C-CAP,U 220P-50 J CH<EZ>	L942	87-A50-019-010		COIL,OSC LW(COI) 856KHZ<EZ>
C862	87-012-199-080		C-CAP,U 220P-50 J CH<EZ>	L981	8Z-ZA1-667-010		COIL,AM PACK 4F(TOK)<U>
C863	87-012-270-080		C-CAP,U 470P-50 KB<EZ>	L981	8Z-ZA1-665-010		COIL,AM PACK 2(TOK)<EZ>
C864	87-010-405-080		CAP,E 10-50 M 11L SME<EZ>	TC942	87-011-164-010		TRIMMER,CER 30P 4.5X3.9 VCT31<EZ>
C865	87-010-196-080		C-CAP,S 0.1-25 ZF<EZ>	X721	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309
C866	87-010-405-080		CAP,E 10-50 M 11L SME<EZ>	X851	87-A70-091-010		VIB,XTAL 4.332MHZ CSA-309<EZ>
C867	87-012-286-080		C-CAP,U 0.01-25 KB<EZ>				
C868	87-012-184-080		C-CAP,U 33P-50 J CH<EZ>				
C869	87-012-180-080		C-CAP,U 22P-50 J CH<EZ>	DECK C.B			
C940	87-012-286-080		C-CAP,U 0.01-25 KB<EZ>	CNA1	82-ZM1-636-010		CONN ASSY,9P
C942	87-012-168-080		C-CAP,U 6P-50 D CH<EZ>	SFR1	87-024-581-010		SFR,3.3K H KVSF637A
C947	87-012-286-080		C-CAP,U 0.01-25 KB<EZ>	SOL2	82-ZM1-634-010		SOL ASSY,23K
C949	87-A10-039-080		C-CAP,U 470P-50 J CH<EZ>	SW2	87-036-110-010		SW,MICRO SPPB62
C952	87-012-286-080		C-CAP,U 0.01-25 KB<EZ>	SW3	87-036-110-010		SW,MICRO SPPB62
C958	87-010-197-080		C-CAP,S 0.01-25 KB<EZ>	SW4	87-036-110-010		SW,MICRO SPPB62
C959	87-010-196-080		CHIP CAPACITOR,0.1-25<U>	SW5	87-036-110-010		SW,MICRO SPPB62
C959	87-010-831-080		C-CAP,U 0.1-16 ZF<EZ>	SW6	87-A90-248-010		SW,MICRO ESE11SH2CXQ
C960	87-010-196-080		CHIP CAPACITOR,0.1-25	W1	82-ZM1-625-010		RBN-CORD,4P-5S
C961	87-012-170-080		C-CAP,U 8P-50 CH<U>	RELAY C.B			
C962	87-010-401-080		CAP,E 1-50 M 11L SME<EZ>				
C963	87-010-196-080		CHIP CAPACITOR,0.1-25<U>	CN301	8A-CL5-625-010		CONN ASSY,8P RPB
CF801	87-008-261-010		FILTER, SFE10.7MA5-A<U>				
CF801	87-008-423-010		FLTR,CF SFE10.7MS3G-A<EZ>				
CF802	87-008-261-010		FILTER, SFE10.7MA5-A<U>				
CF802	82-785-747-010		CF,MS2 GHY R<EZ>				
CN701	87-A60-700-010		CONN,13P H GRY TUC-P13X-C1<U>				
CN701	87-A60-650-010		CONN,16P H GRY TUC-P16X-C1<EZ>				
FFE801	A8-8ZA-190-030		8ZA-1 FEUNM<U>				

○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



A  
抵抗部品コード  
Resistor Code

桁表示  
Figure  
抵抗値  
Value of resistor

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



E C B

CSA1585  
CSC4115  
KTA1266  
KTC3198  
KTC3199



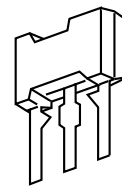
B C E

2SB1370



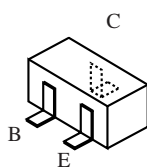
E C B

DTC114ES

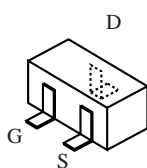


E C B

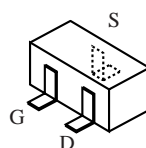
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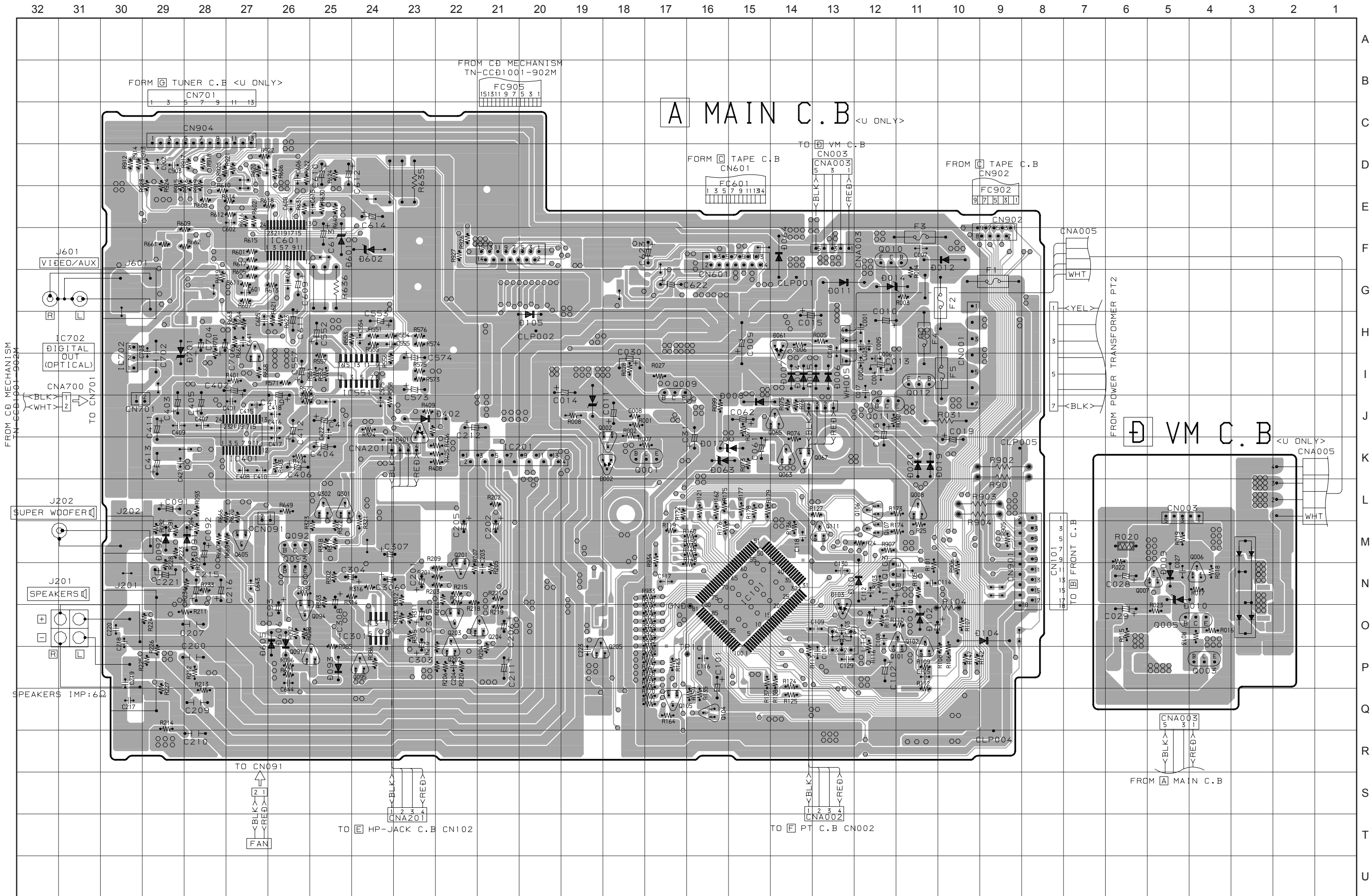
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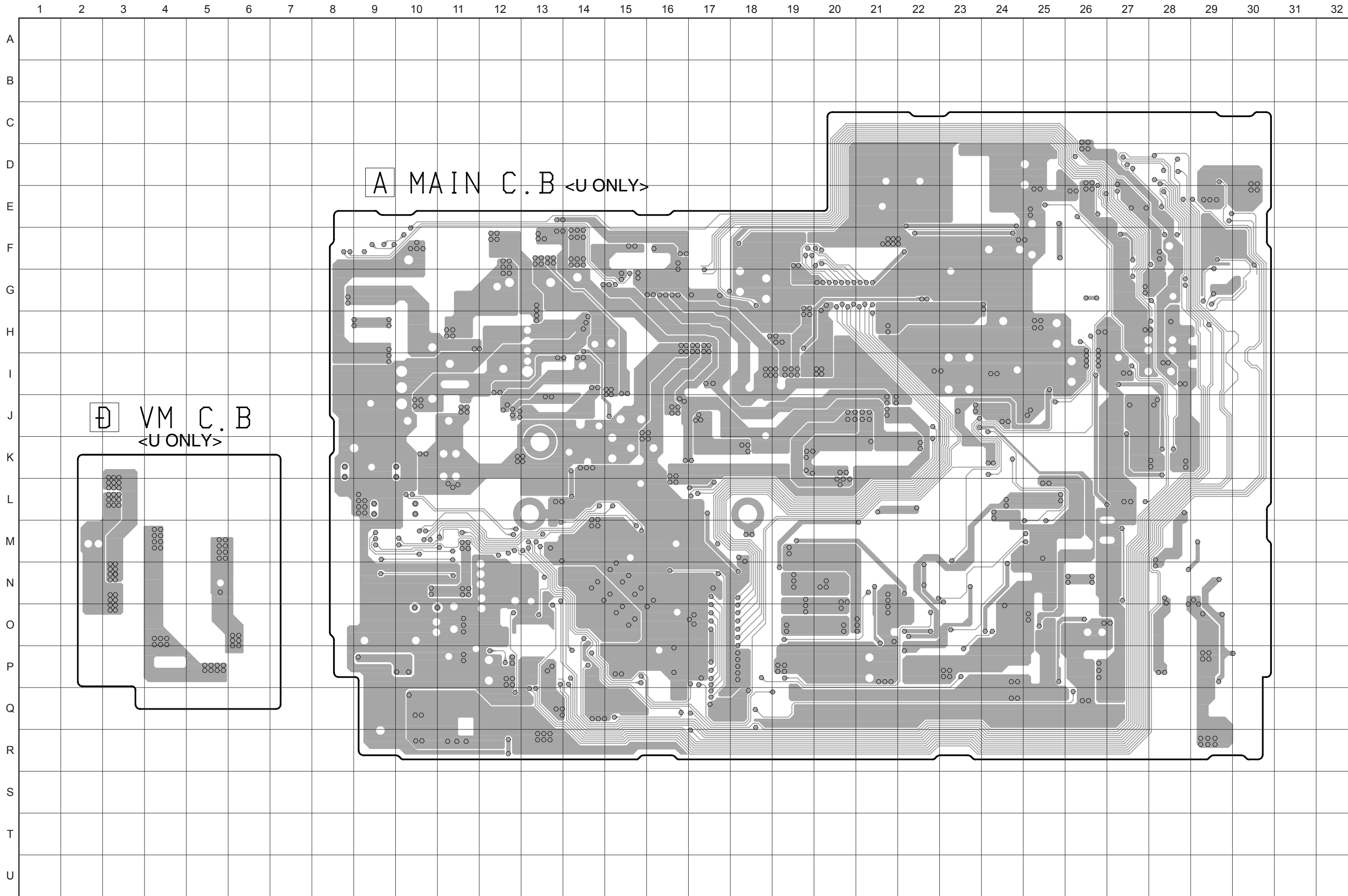


2SK2158



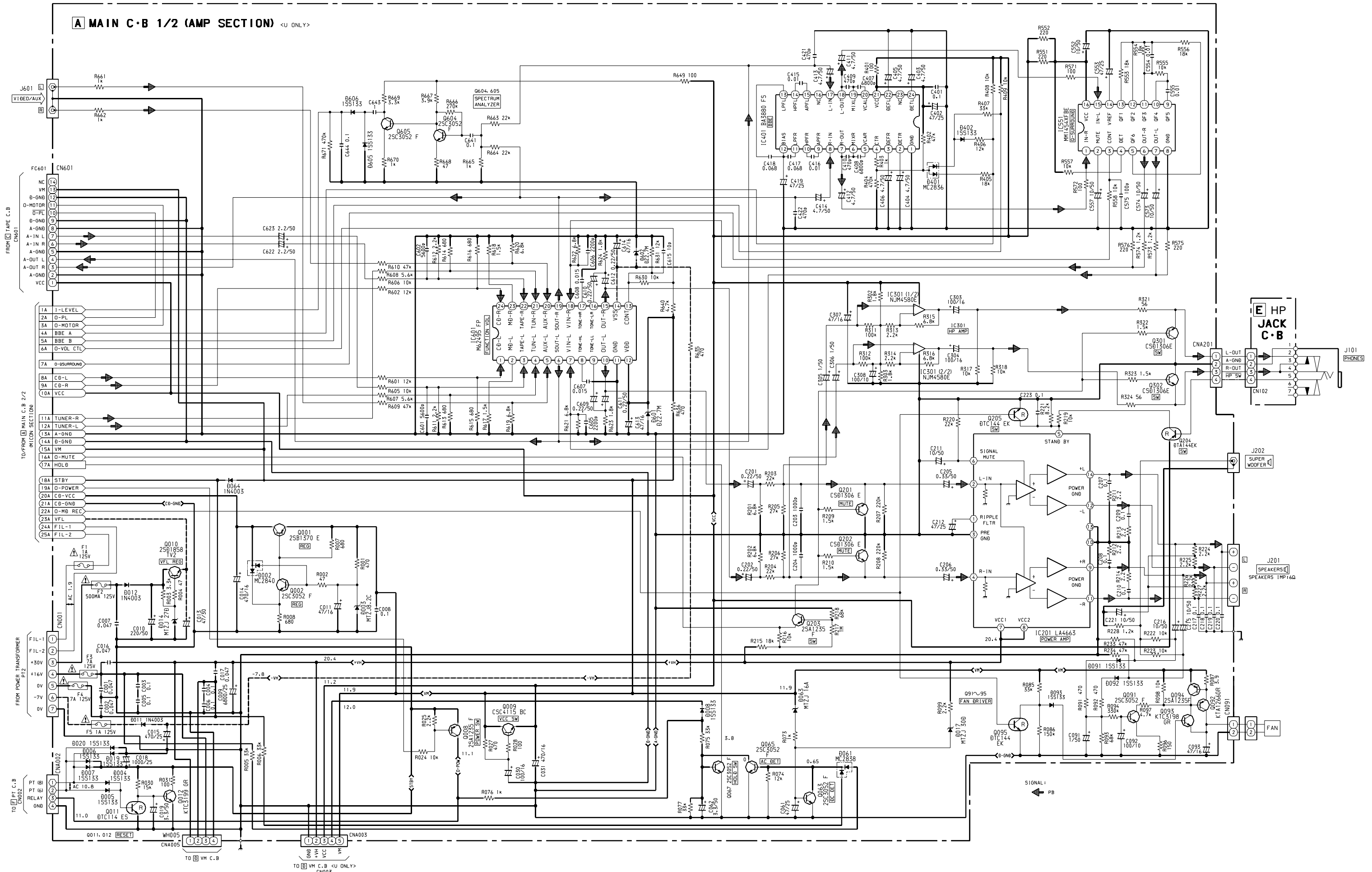
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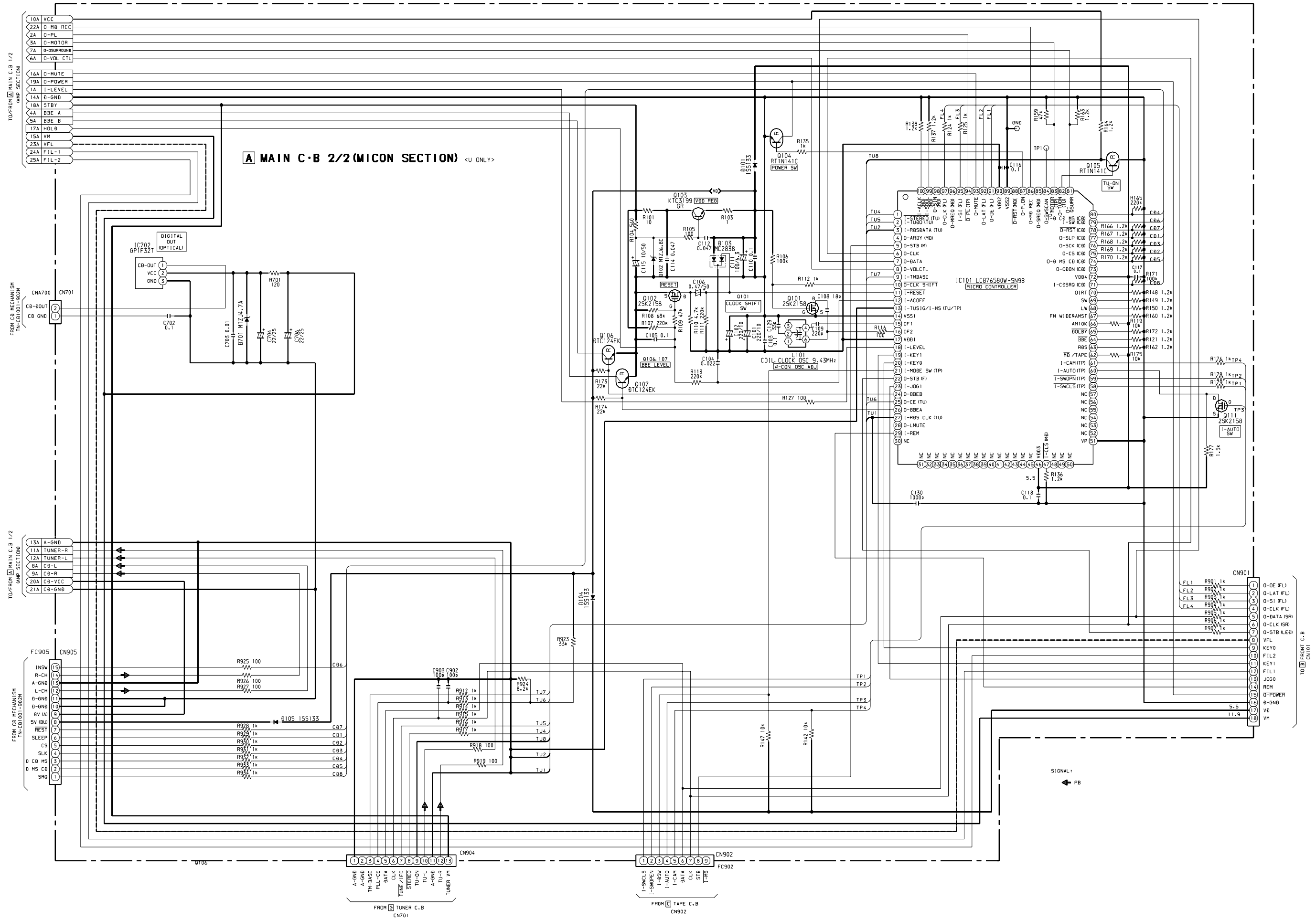


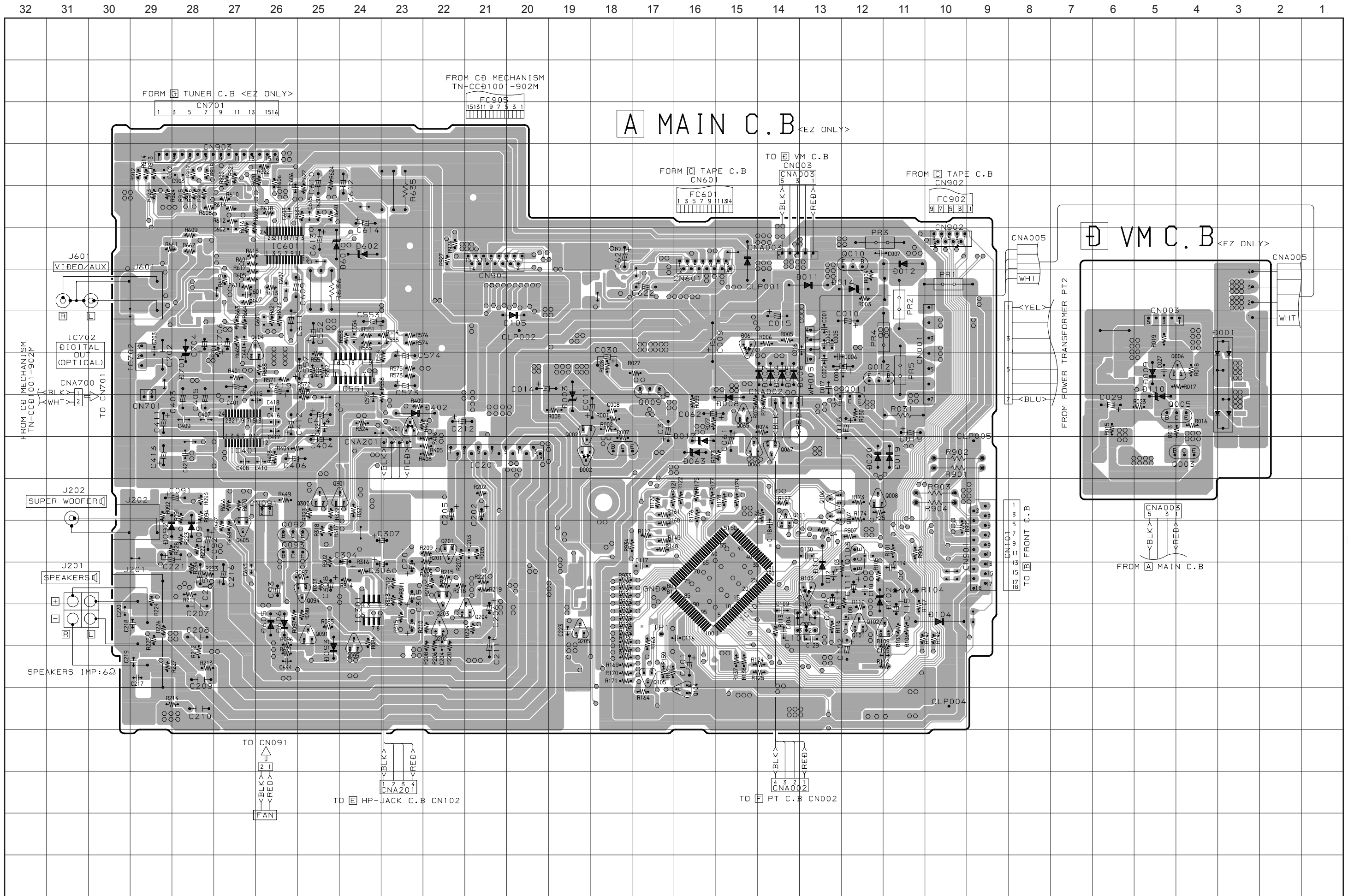


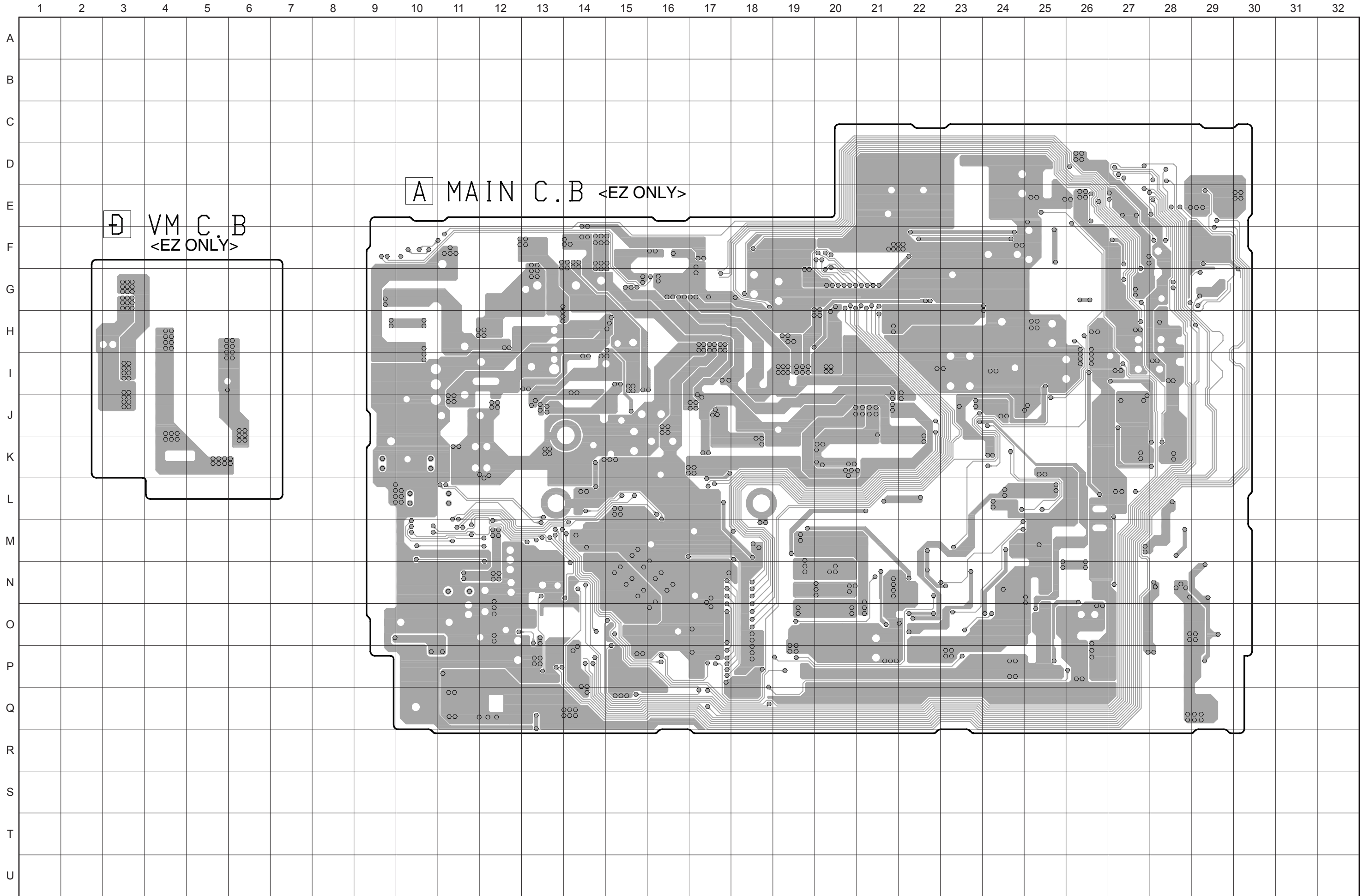
SCHEMATIC DIAGRAM - 1 (U : MAIN 1/2 / HP JACK)



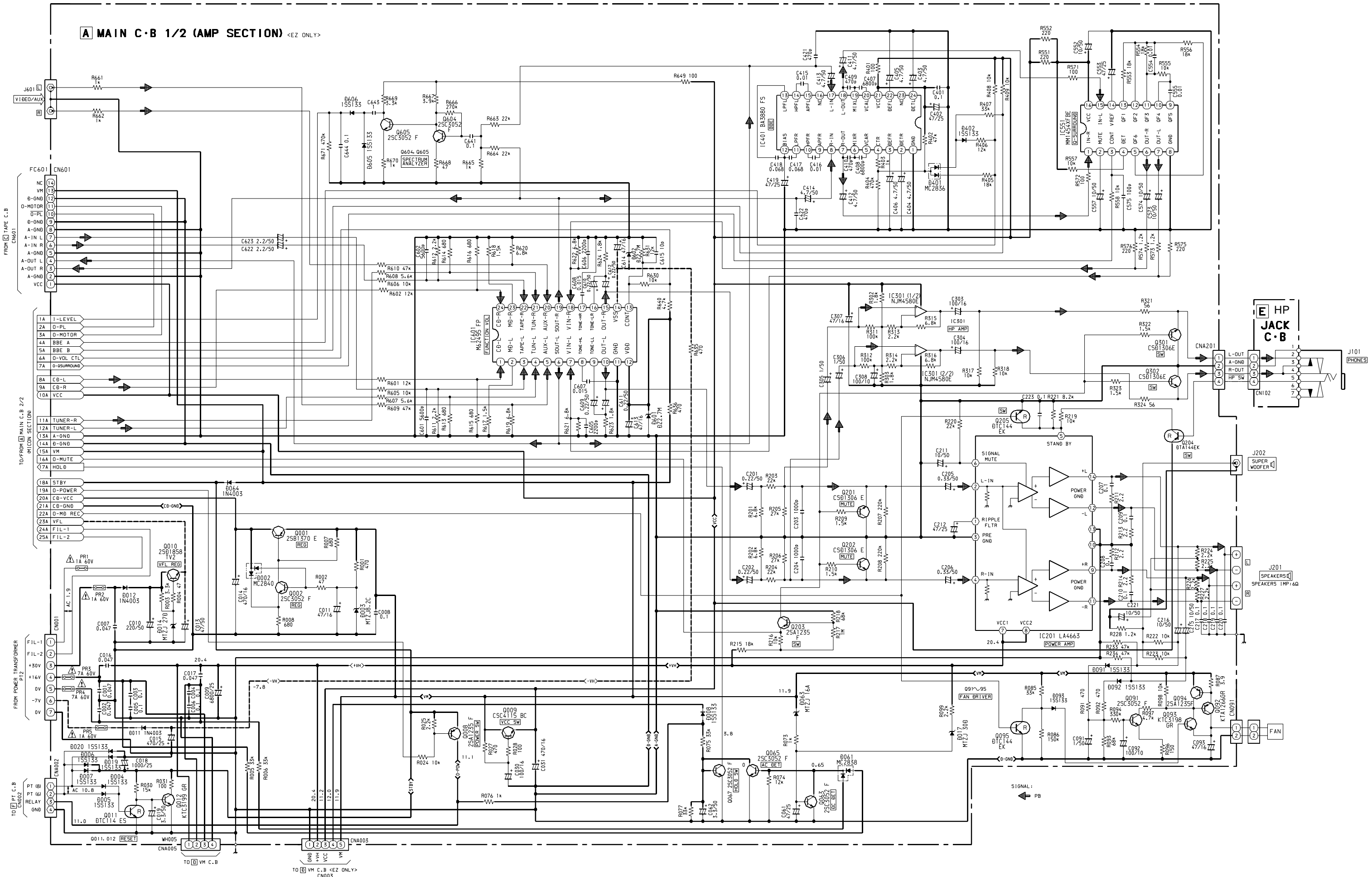
SCHEMATIC DIAGRAM - 2 (U : MAIN 2 / 2)



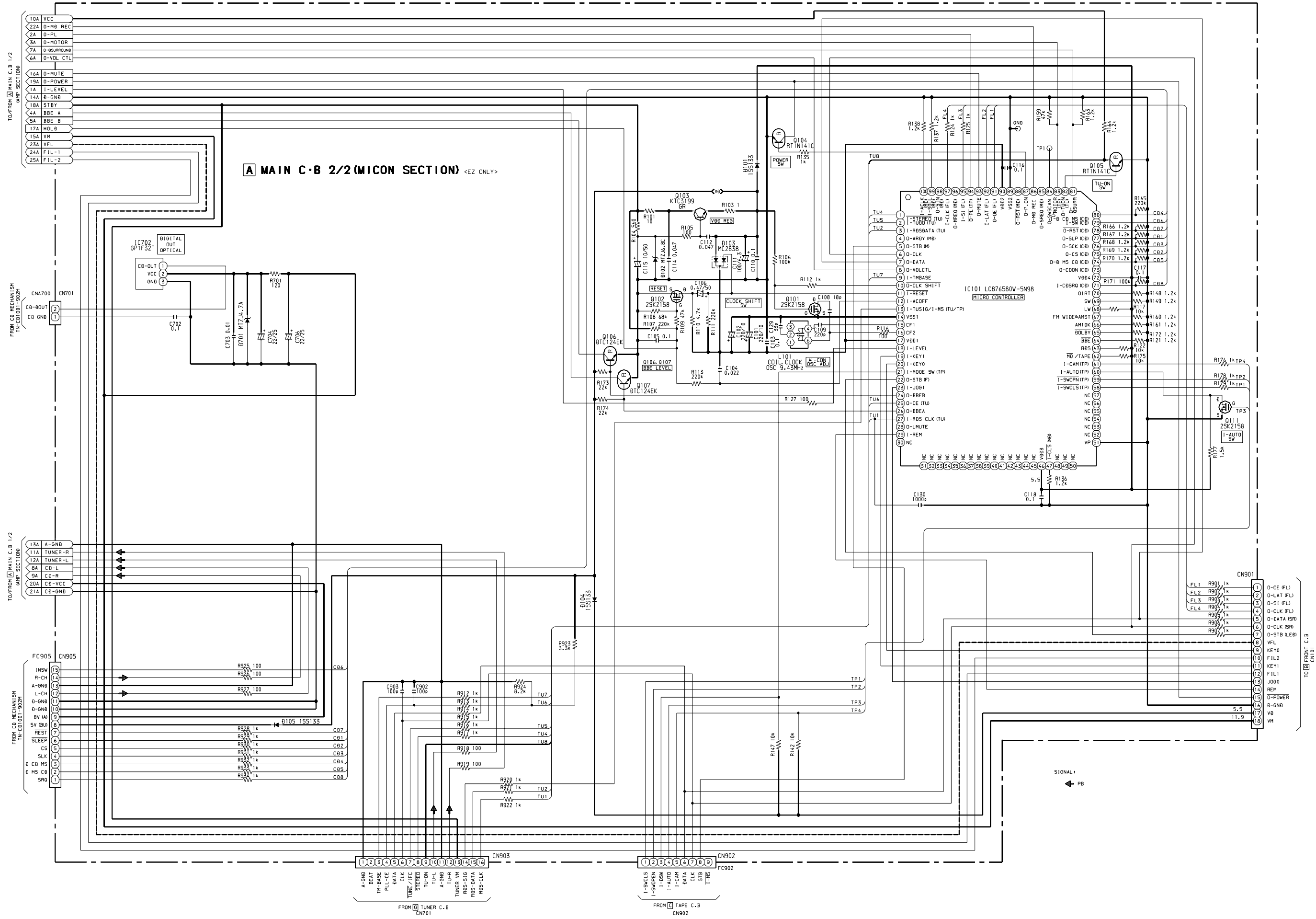




SCHEMATIC DIAGRAM - 3 (EZ : MAIN 1 / 2 / HP JACK)



SCHEMATIC DIAGRAM - 4 (EZ : MAIN 2 / 2)

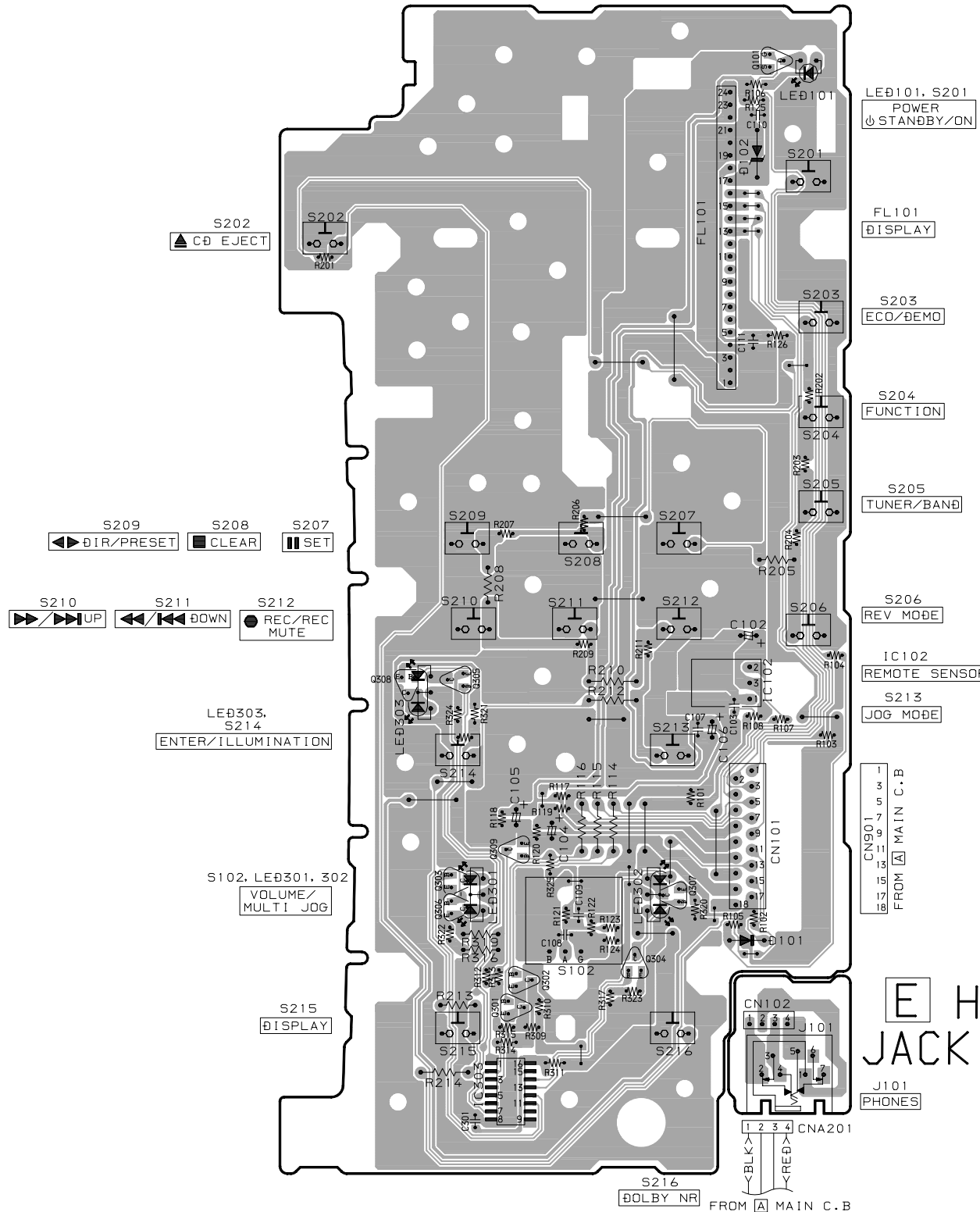


WIRING - 3 (FRONT/HP JACK)

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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U

**B** FRONT C.B

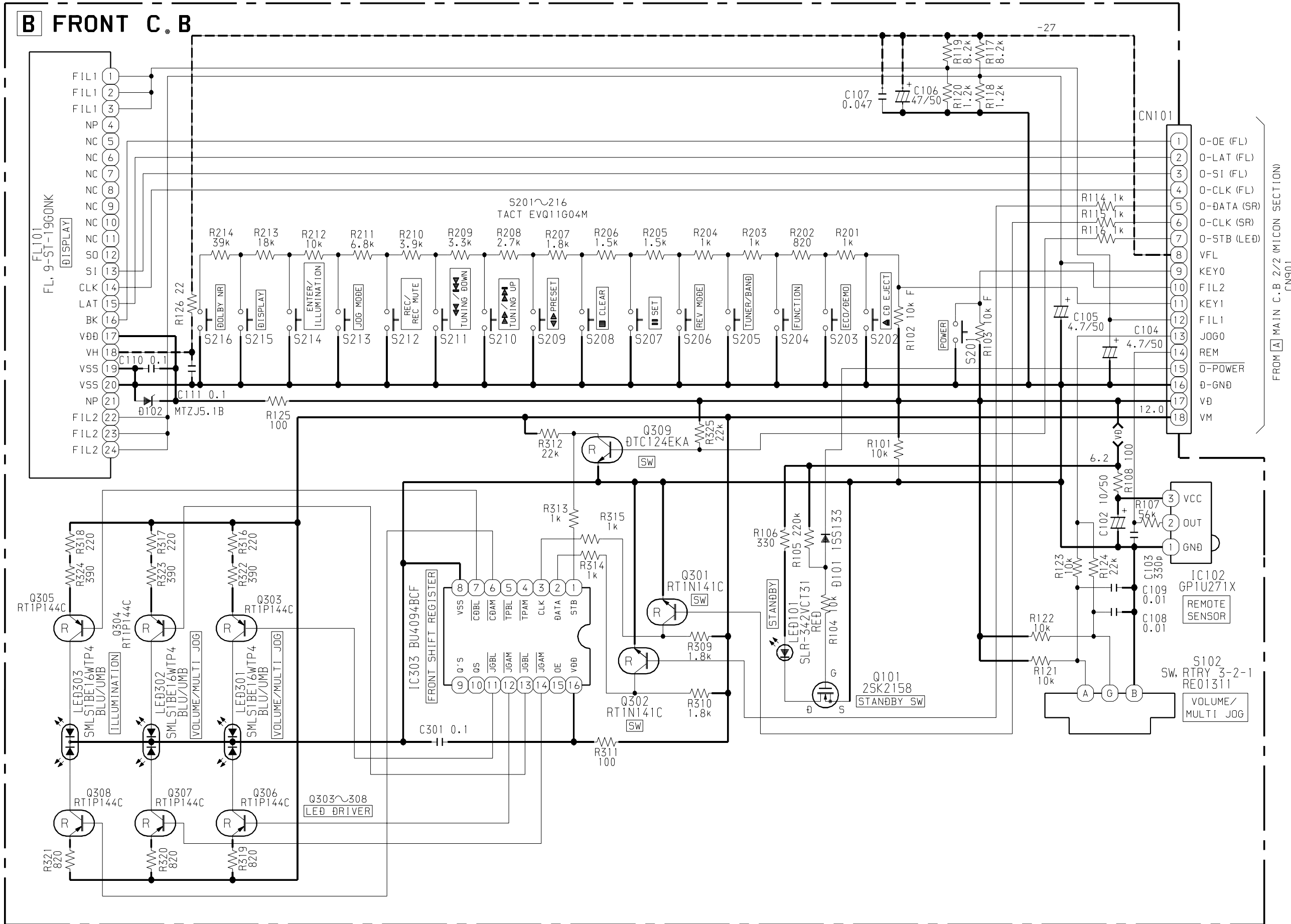


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18  
FROM MAIN C.B

**E** HP-JACK C.B

J101 PHONES

1 2 3 4  
Y-BLK X  
Y-RED X  
FROM MAIN C.B



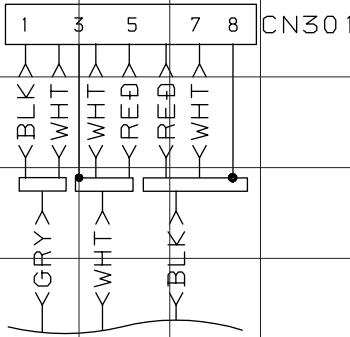
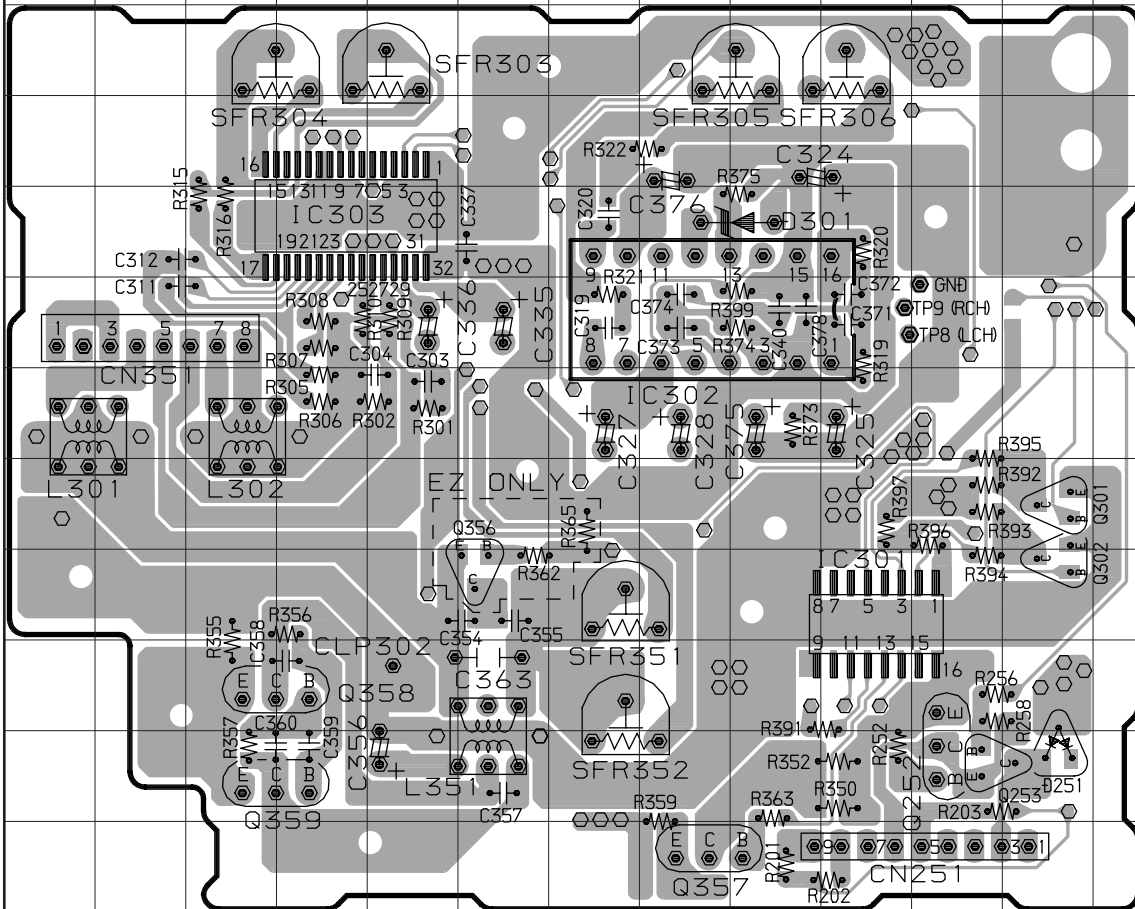


WIRING - 4 (TAPE) <1/2>

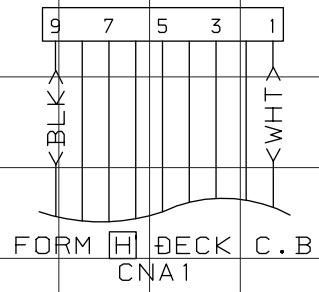
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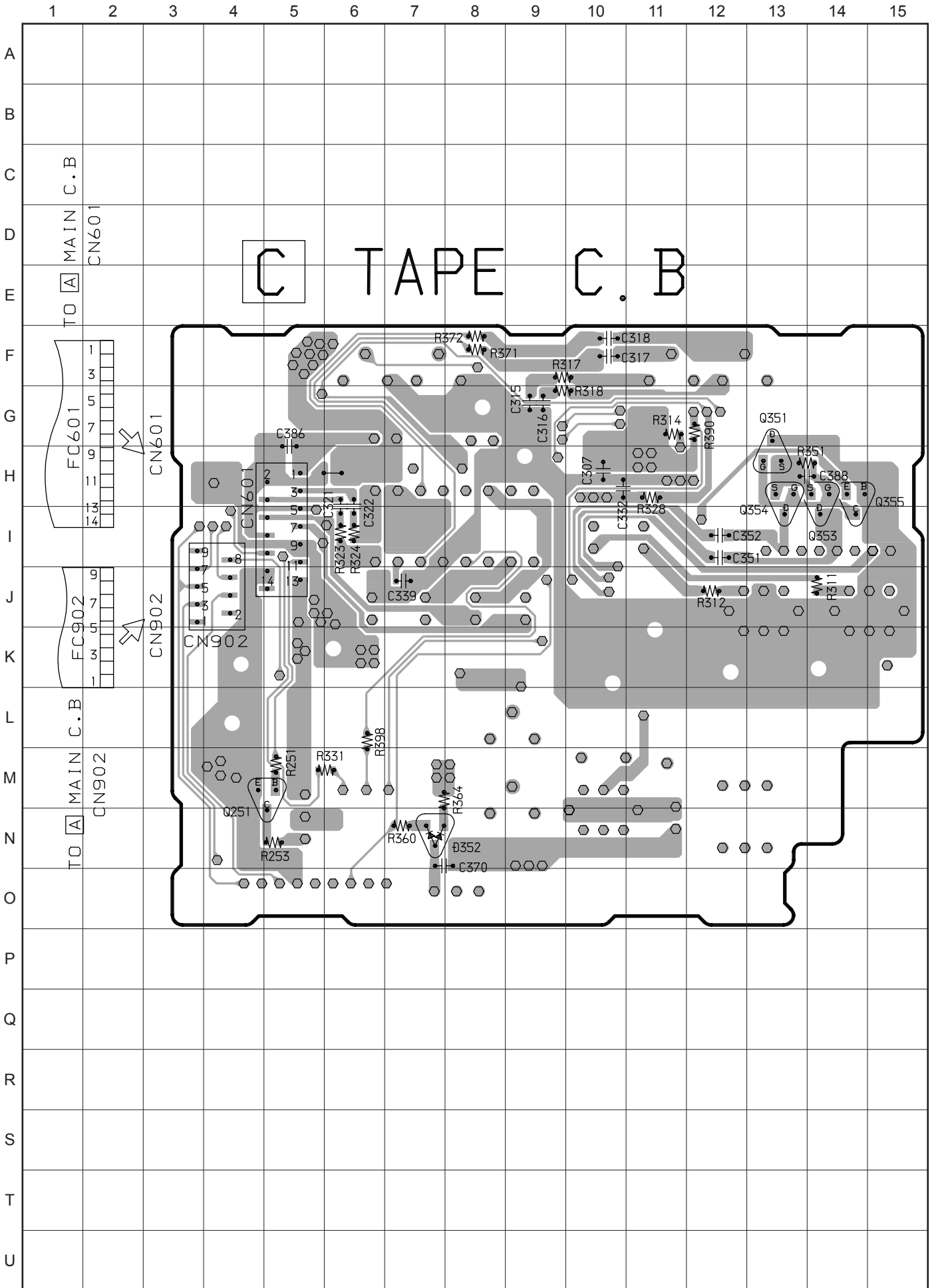
C TAPE C.B



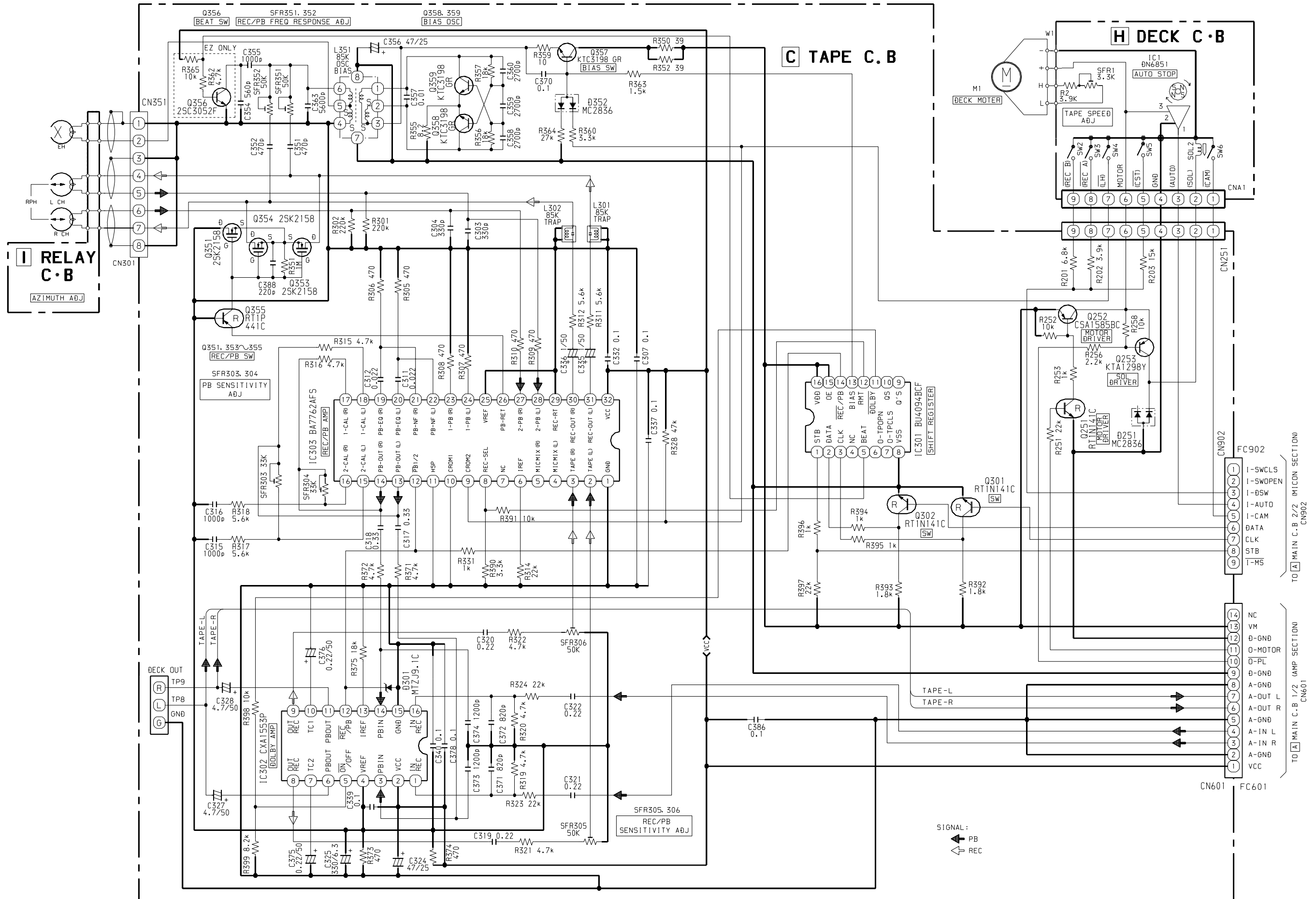
FROM I RELAY C.B



WIRING - 4 (TAPE) <2/2>



SCHEMATIC DIAGRAM - 6 (TAPE / DECK / RELAY)

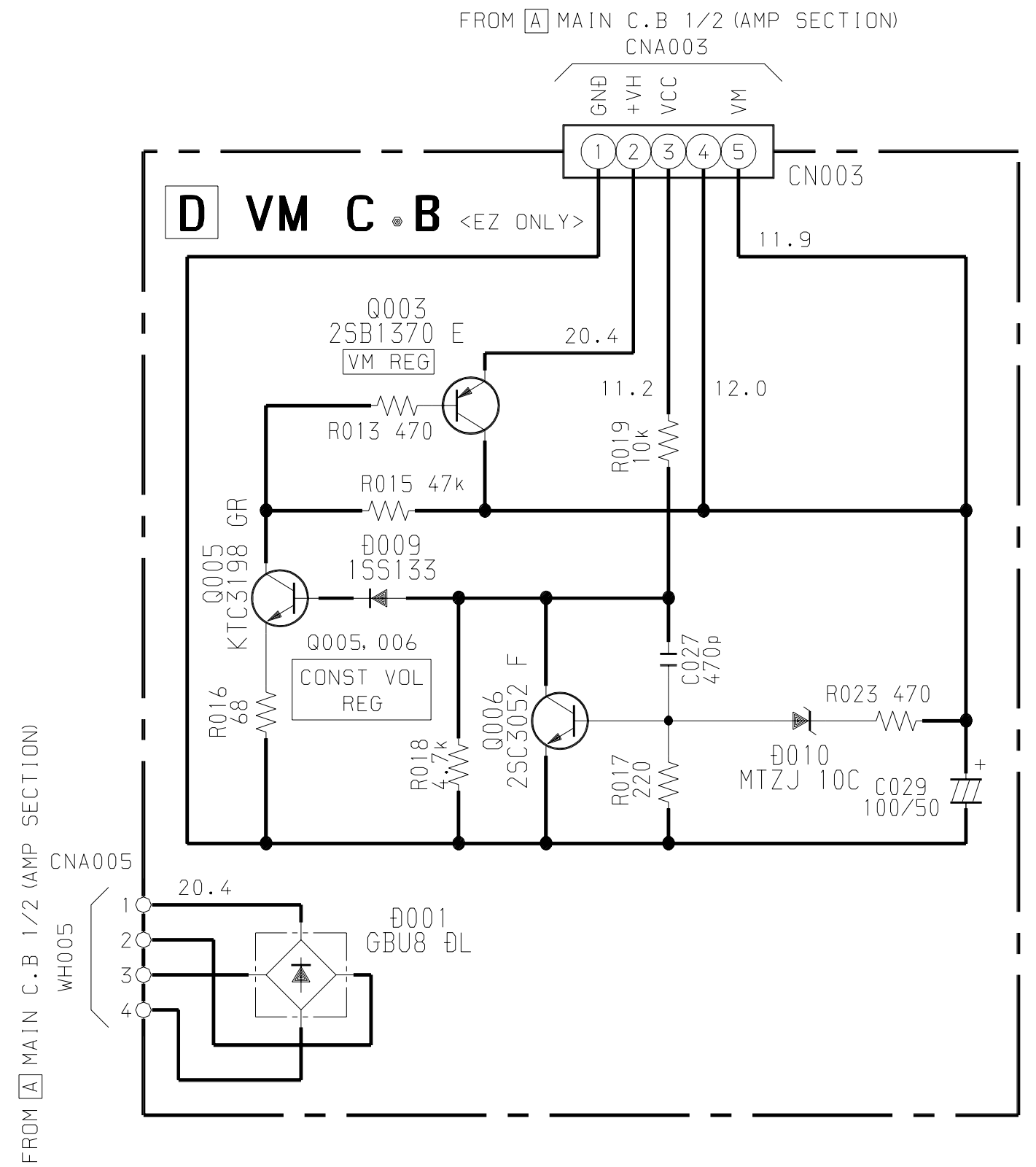
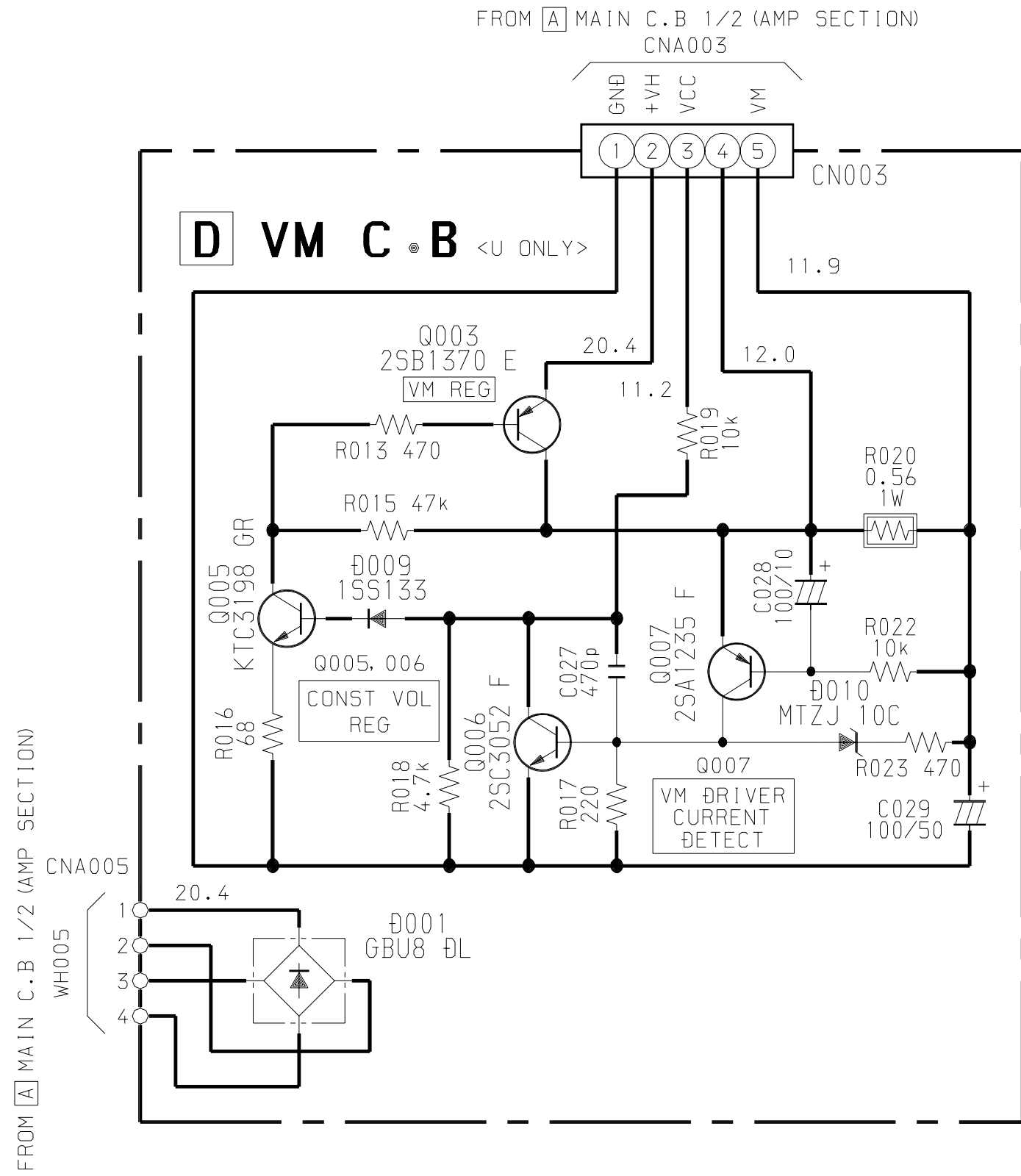


SIGNAL :  
 ↗ PB  
 ↖ REC

TO MAIN C.B. 2/2 (MICRON SECTION)  
 CN902

TO MAIN C.B. 1/2 (AMP SECTION)  
 CN601

SCHEMATIC DIAGRAM - 7 (VM)

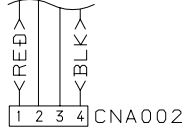


WIRING - 5 (U: PT)

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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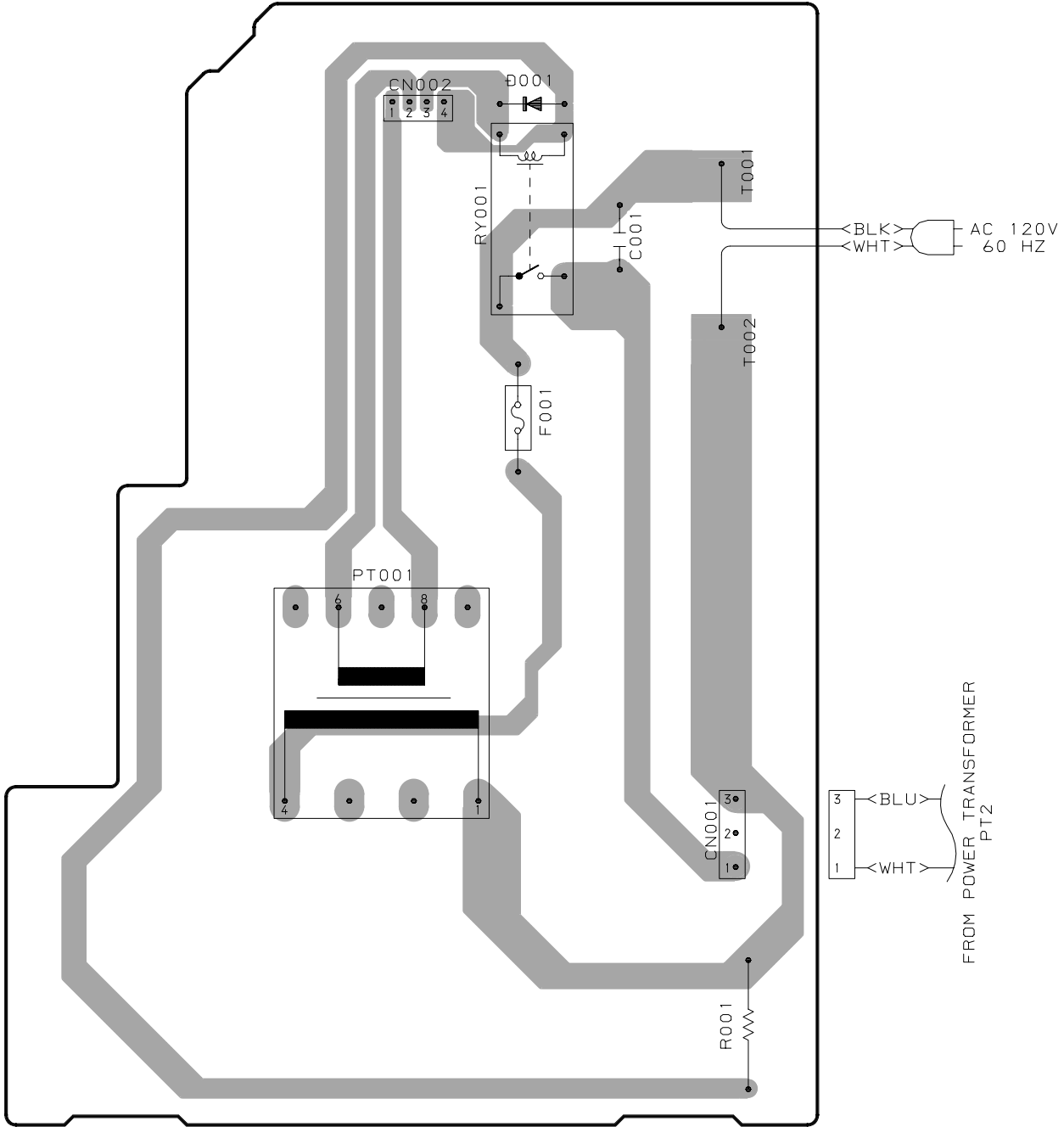
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FROM [A] MAIN C.B



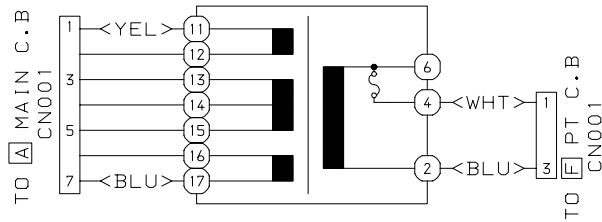
[F] PT C.B

<U ONLY>



FROM POWER TRANSFORMER PT2

POWER TRANSFORMER PT2

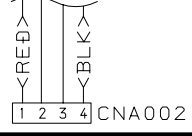


WIRING - 6 (EZ: PT)

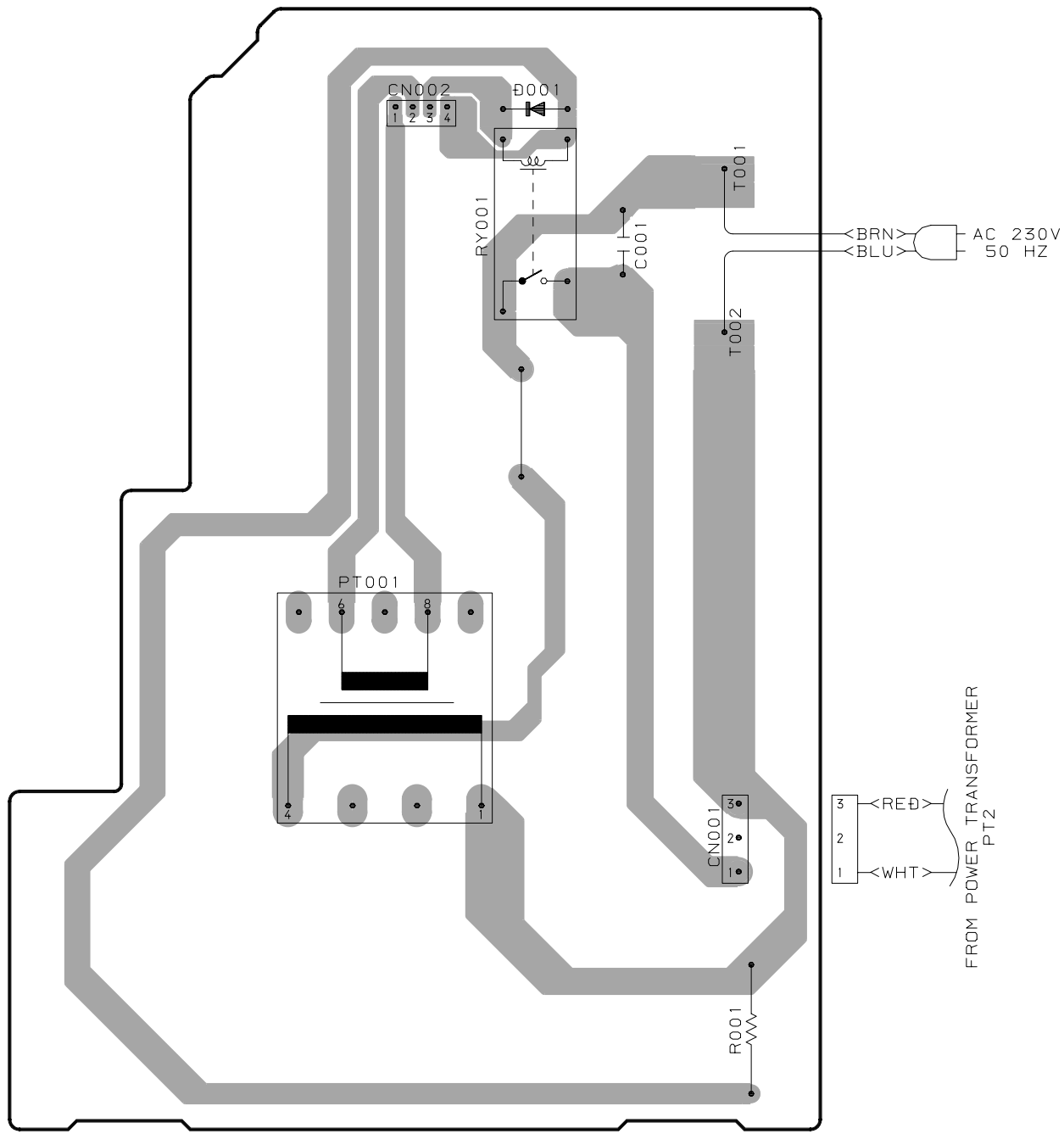
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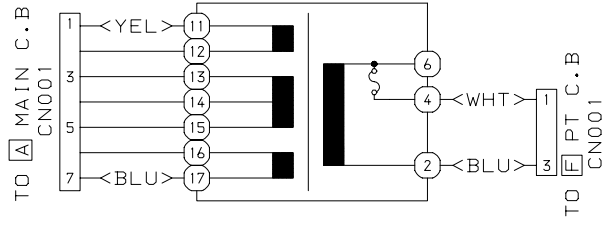
FROM [A] MAIN C.B

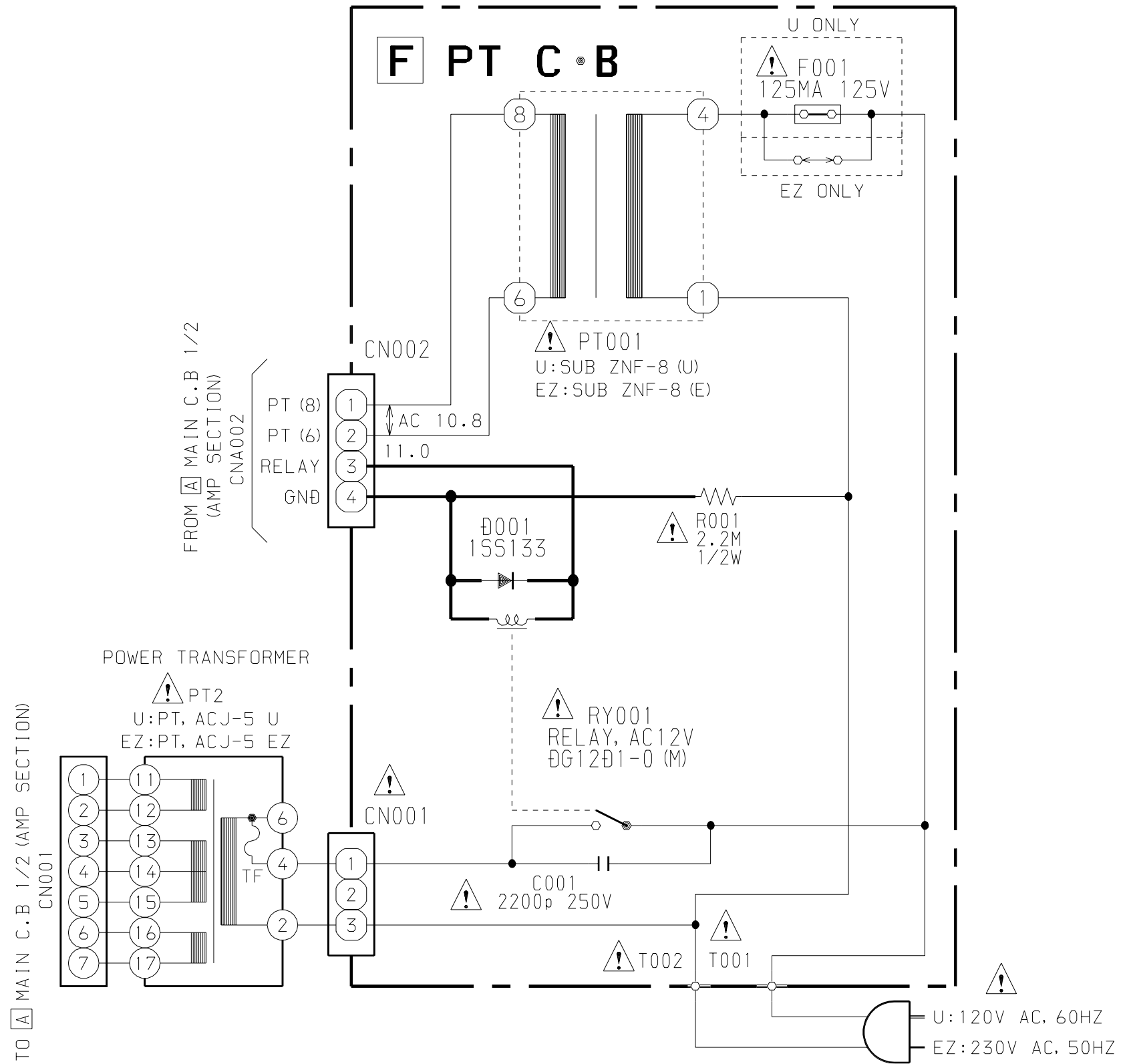


[F] PT C.B  
<EZ ONLY>



POWER TRANSFORMER PT2

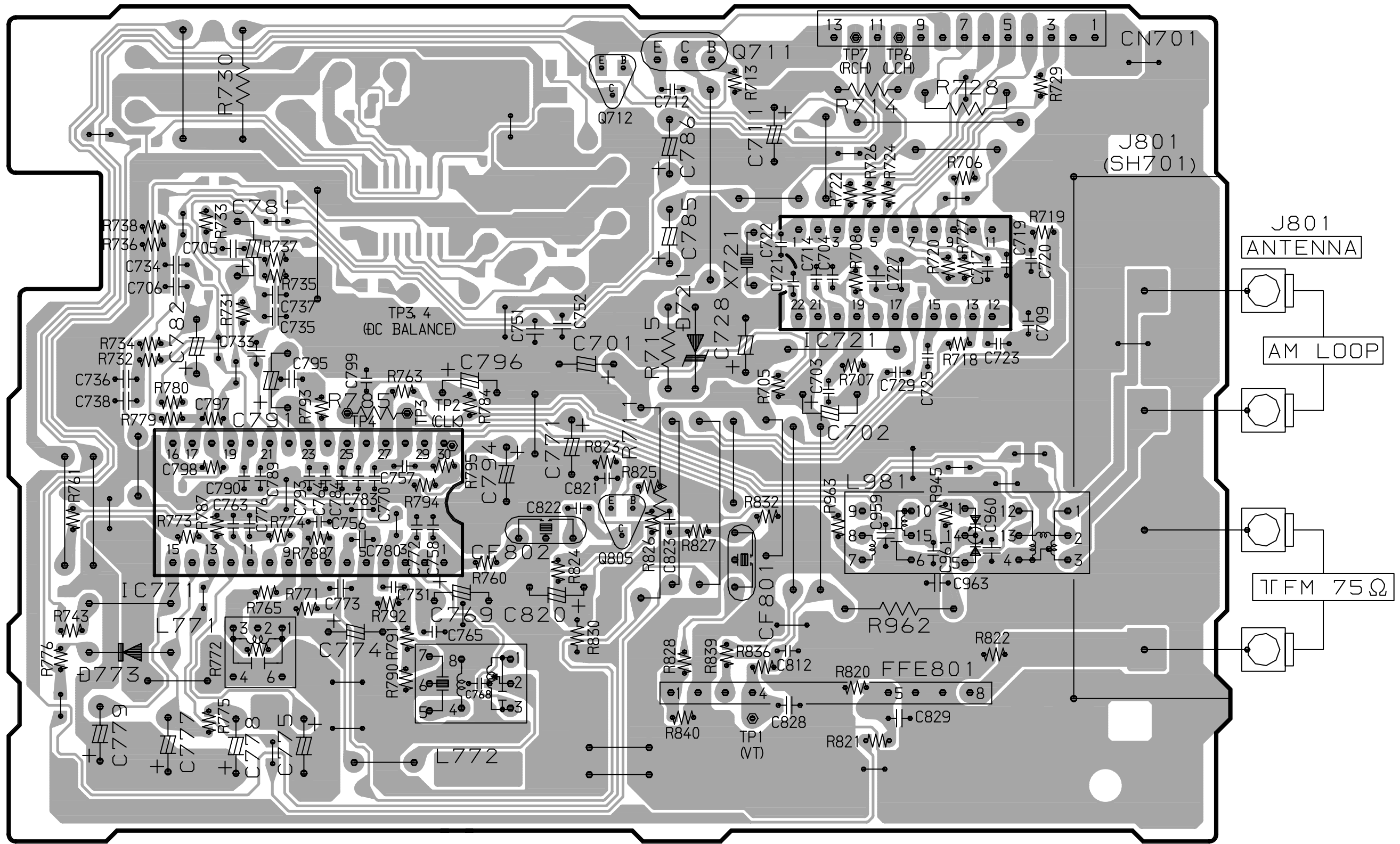




# G TUNER C.B. <U ONLY>

FROM A MAIN C.B. CN904

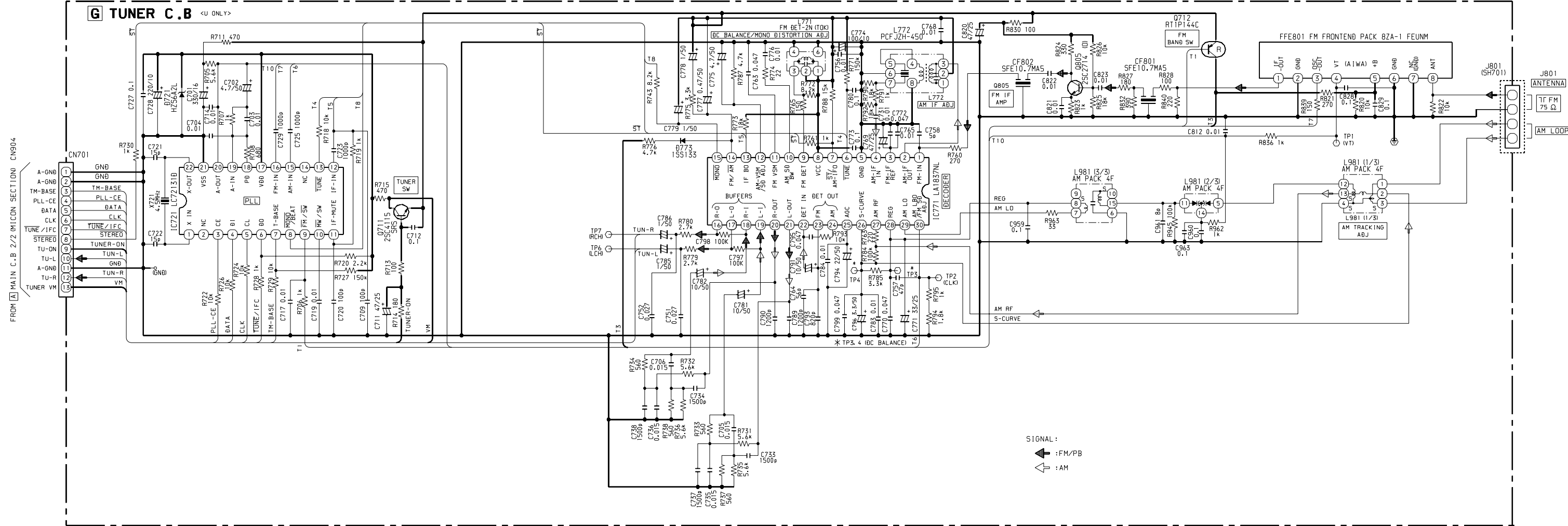
13 11 9 7 5 3 1



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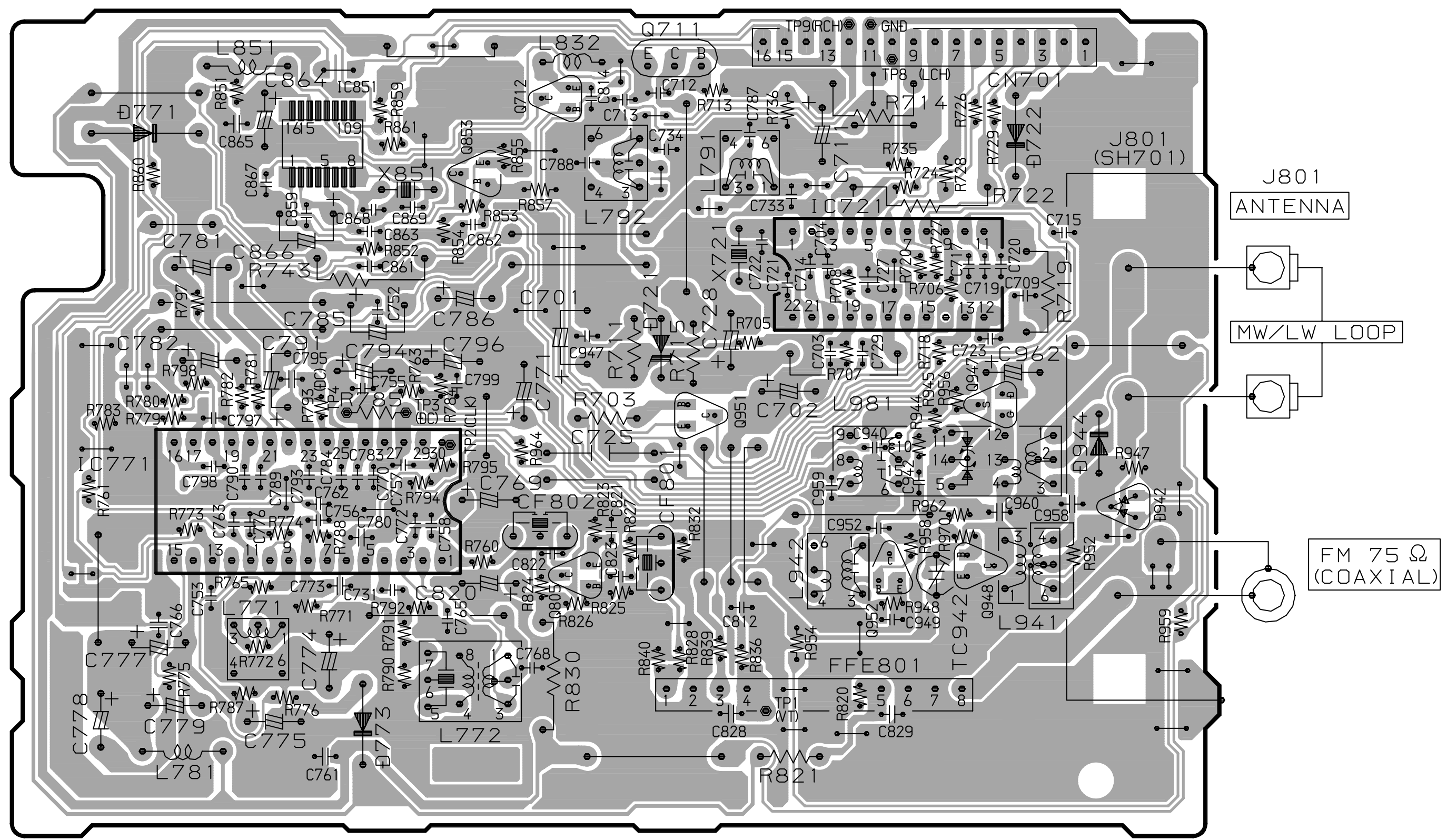


SCHEMATIC DIAGRAM - 9 (U : TUNER)



# G TUNER C.B. <EZ ONLY>

CN903  
16 15 13 11 9 7 5 3 1  
TO A MAIN C.B. CN903

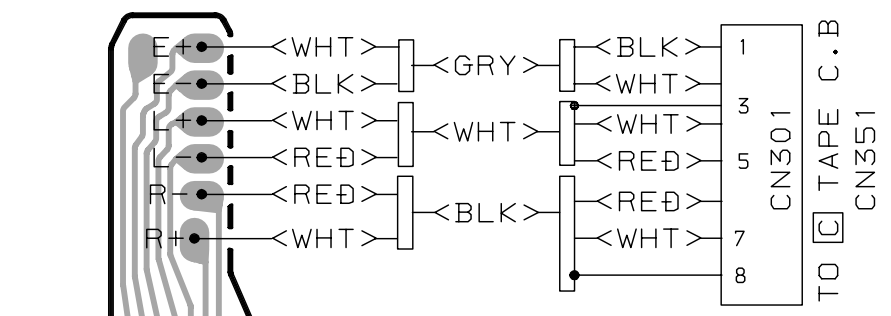
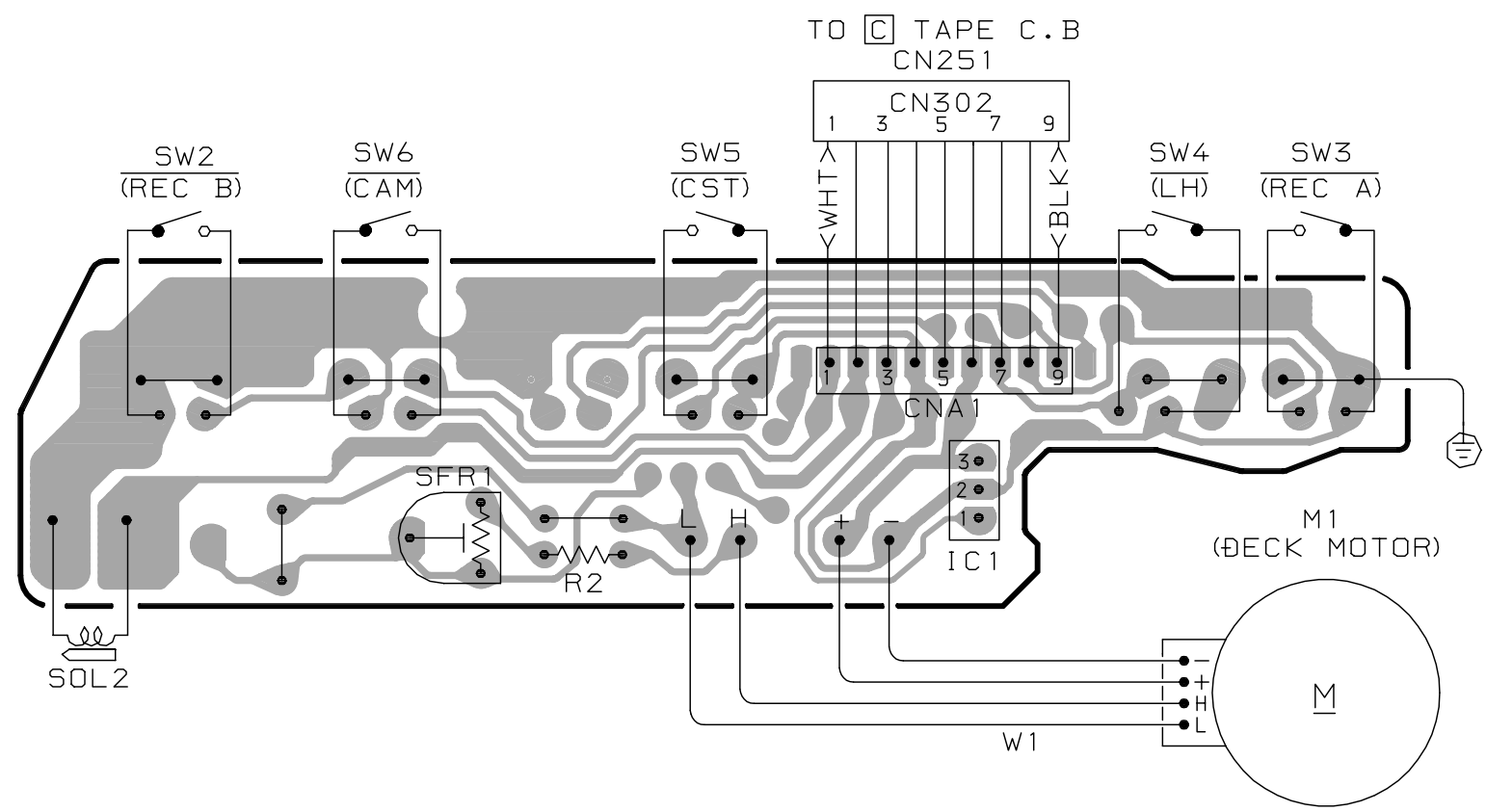




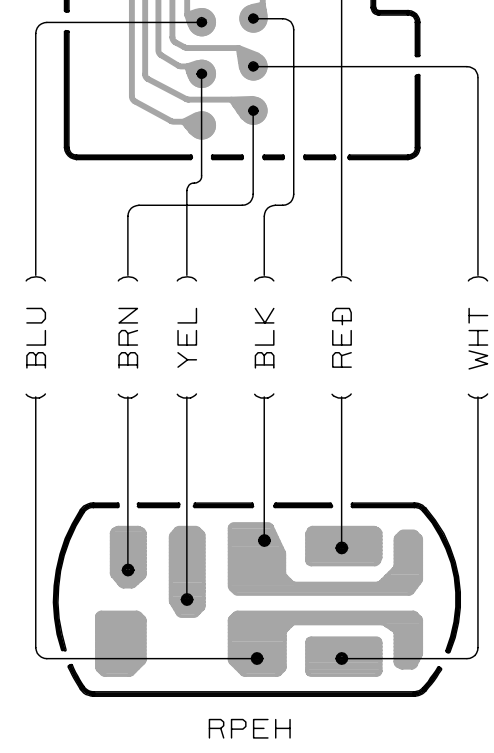
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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# H DECK C.B

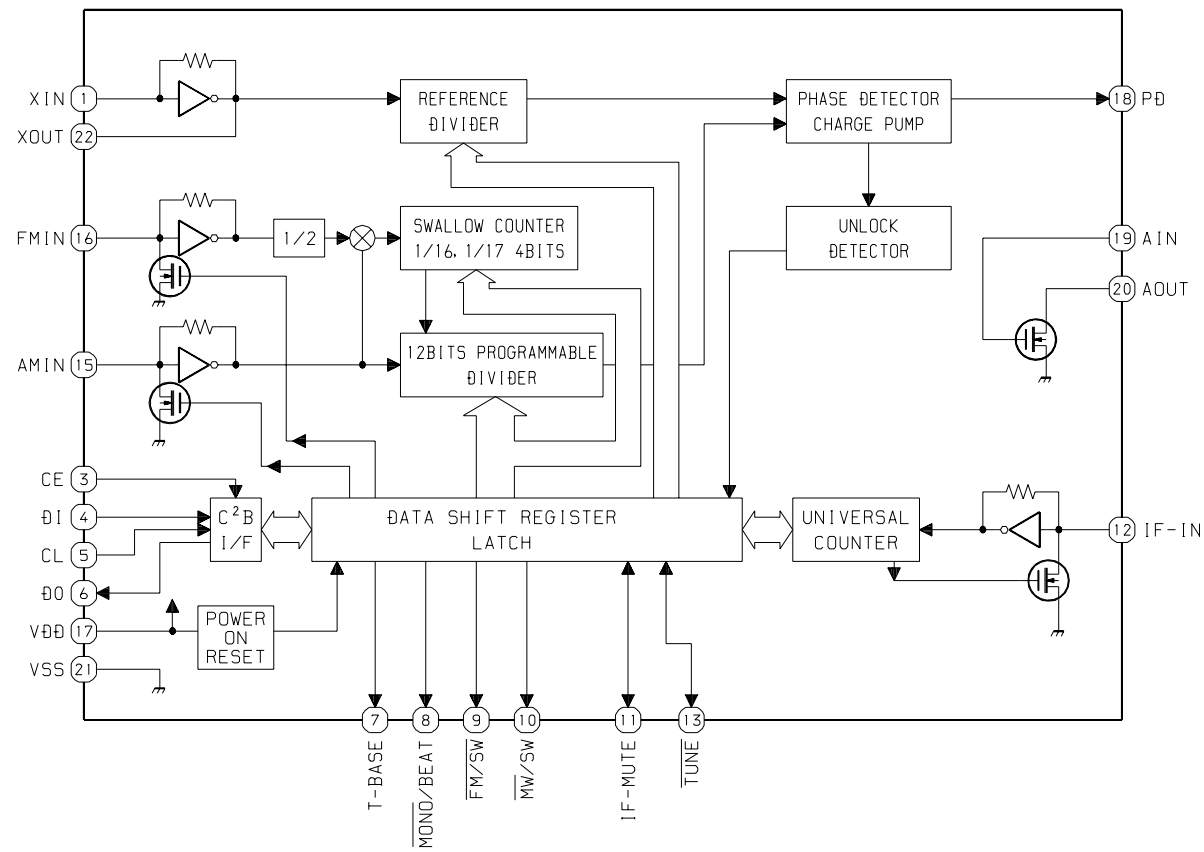


# I RELAY C.B

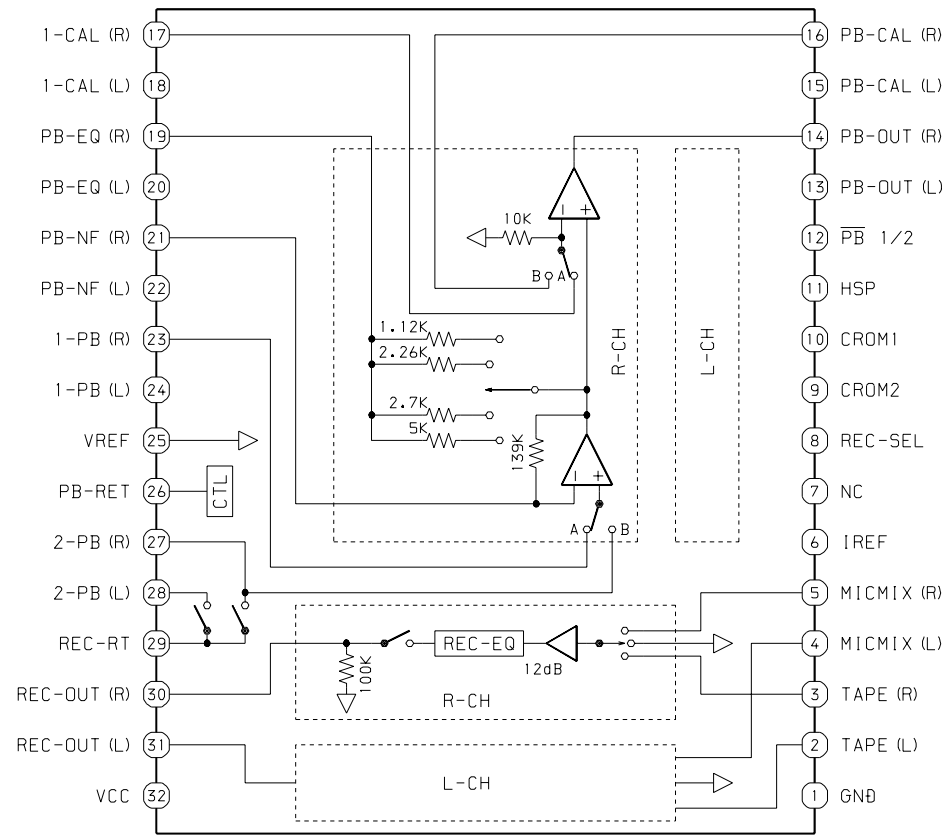


# IC BLOCK DIAGRAM

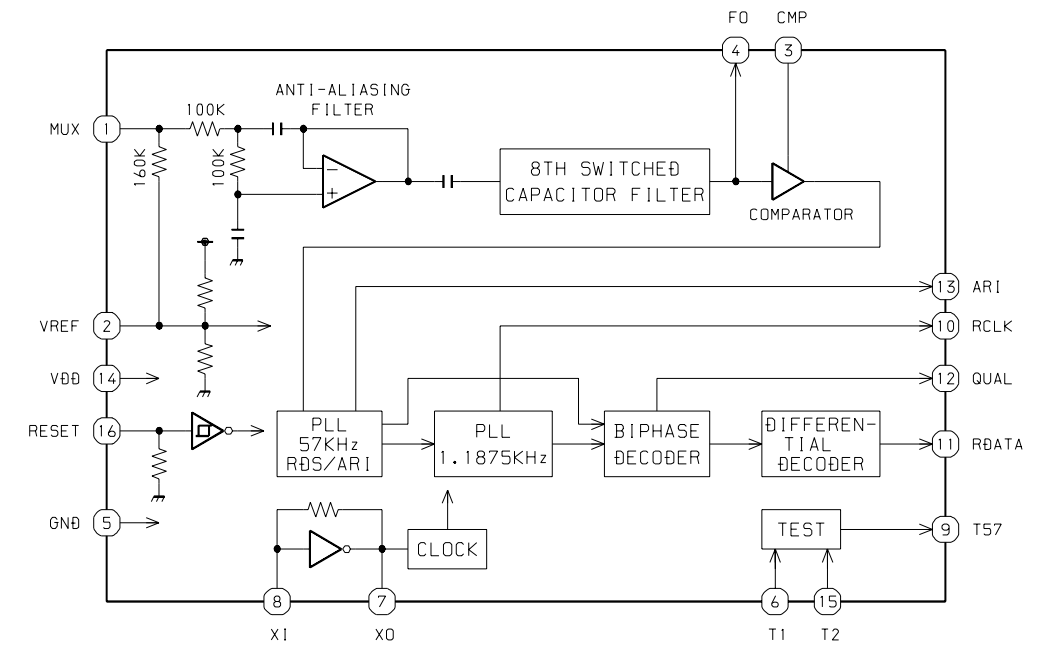
IC, LC72131D



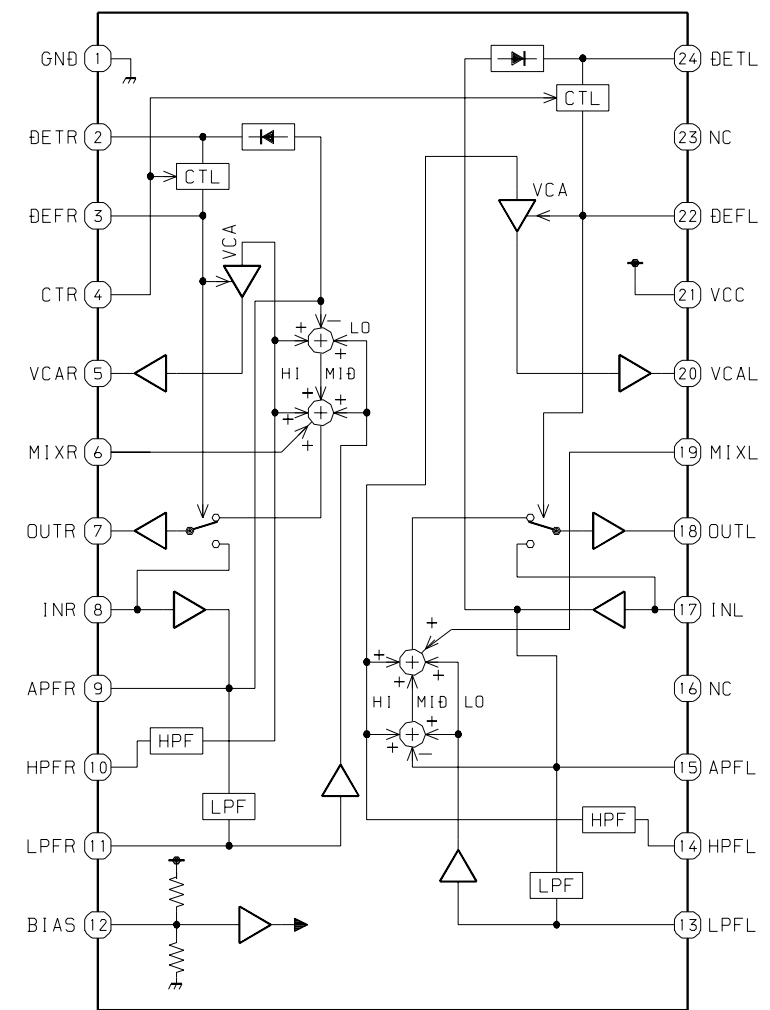
IC, BA7762AFS



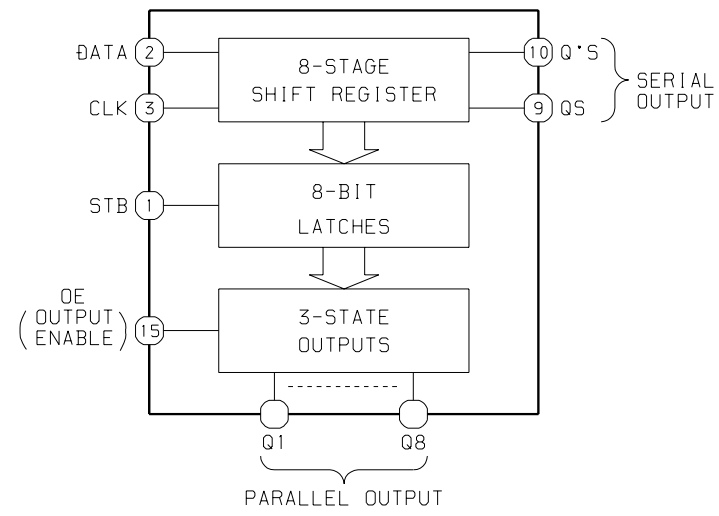
IC, BU1920FS



IC, BA3880FS



IC, BU4094BCF

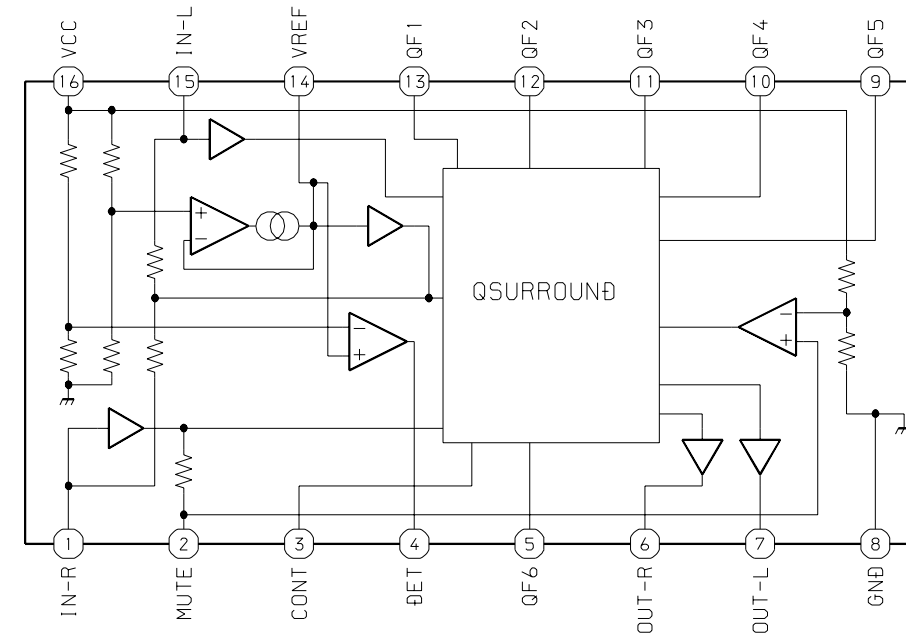


TRUTH TABLE

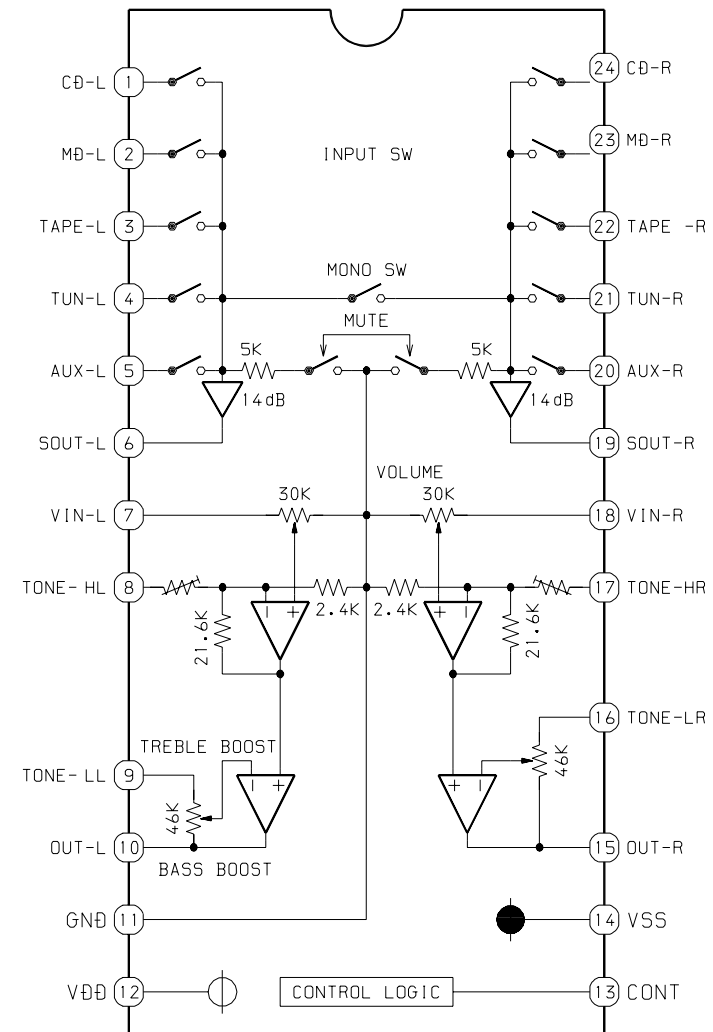
CLOCK	OUTPUT ENABLE	STROBE	DATA	PARALLEL OUTPUTS		SERIAL OUTPUTS	
				Q1	Qn	Q5	Q'S
$\downarrow$	L	x	x	Z	Z	Q7	NO CHG.
$\uparrow$	L	x	x	Z	Z	NO CHG.	QS
$\downarrow$	H	L	x	NO CHG.	NO CHG.	Q7	NO CHG.
$\downarrow$	H	H	L	L	Qn-1	Q7	NO CHG.
$\downarrow$	H	H	H	H	Qn-1	Q7	NO CHG.
$\uparrow$	H	x	x	NO CHG.	NO CHG.	NO CHG.	QS

Z = HIGH IMPEDANCE  
x = DON'T CARE

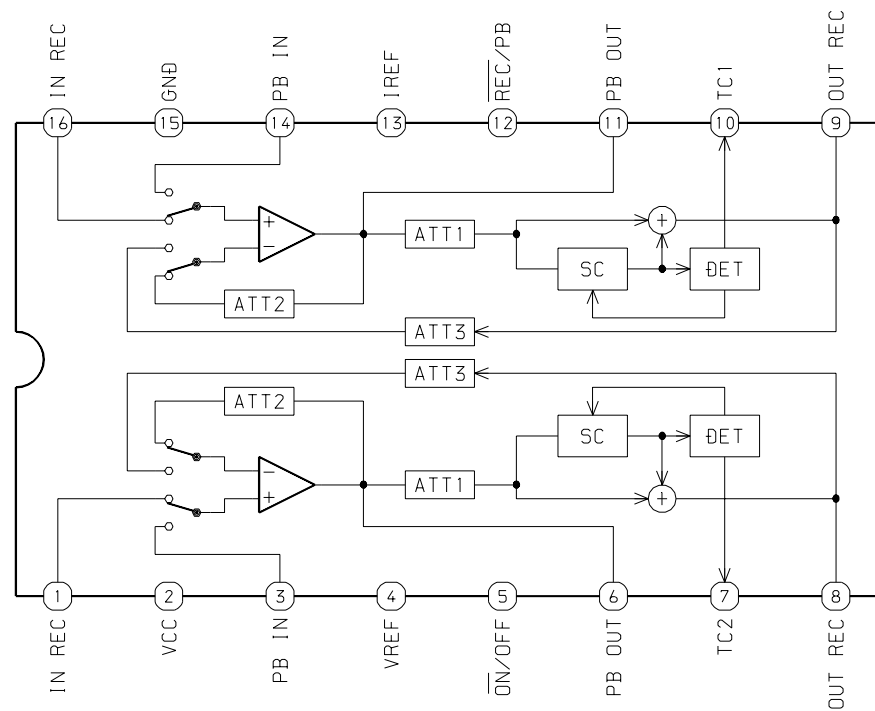
IC, MM1454XFBE



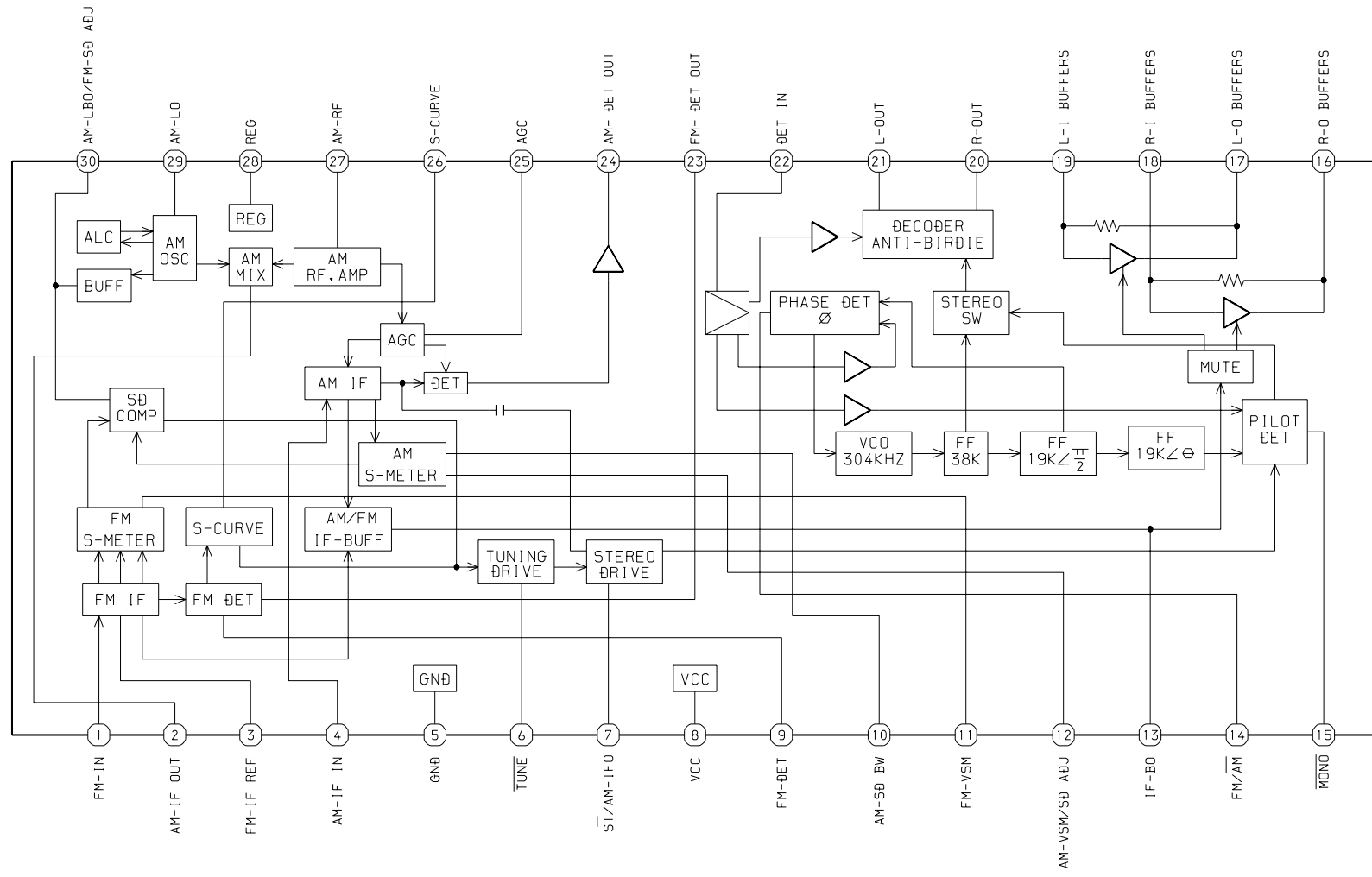
IC, M62495FP



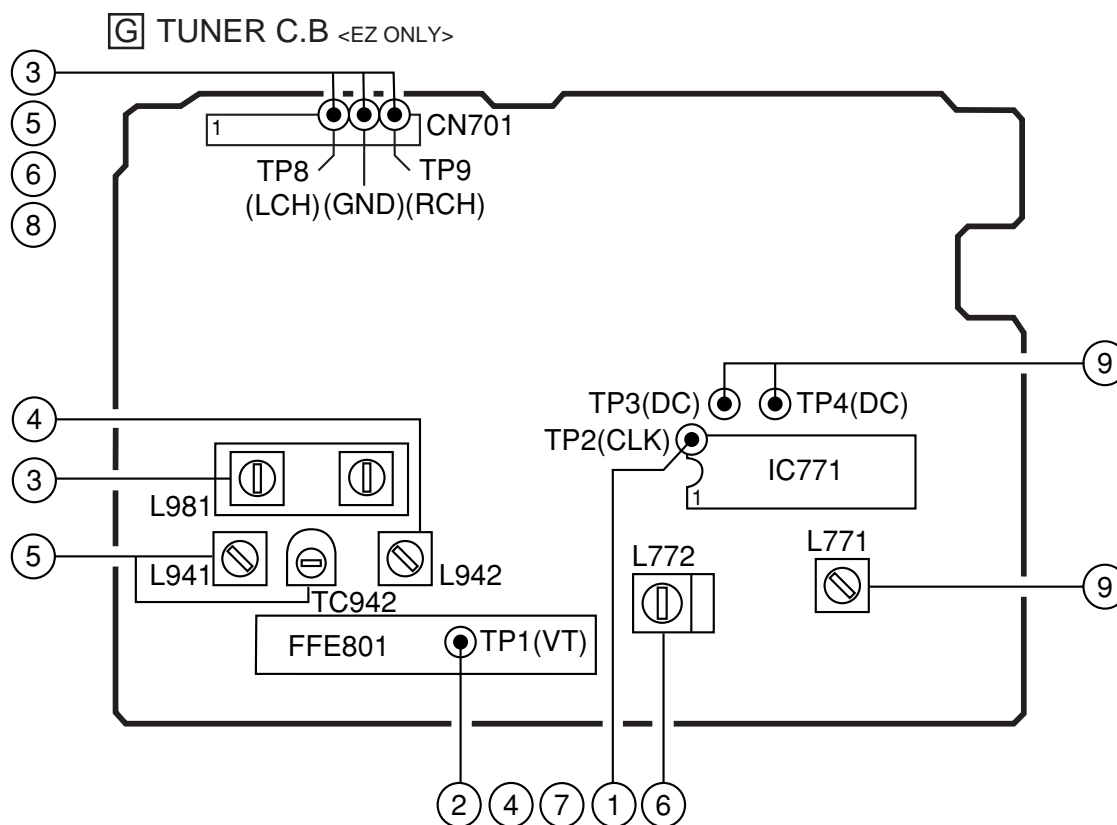
IC, CXA1553P



ATT: ATTENUATOR  
SC: SIDE CHAIN  
DET: DETECTOR



## ADJUSTMENT (TUNER / DECK / MAIN)

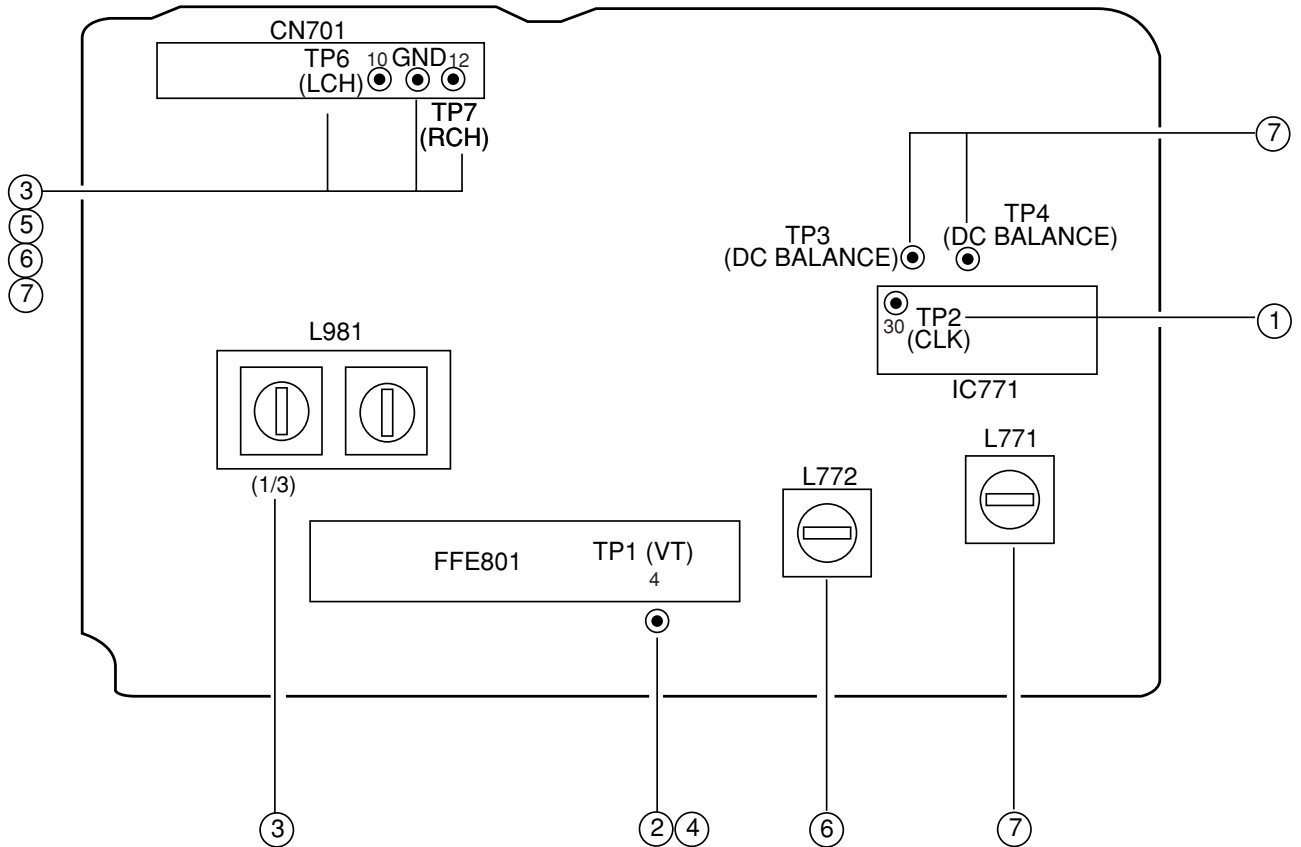


### < TUNER SECTION >

1. Clock Frequency Check
  - Settings : • Test point : TP2 (CLK)
  - Method : Set to MW 1602kHz and check that the test point is  $2052\text{kHz} \pm 45\text{Hz}$ .
2. MW VT Check
  - Settings : • Test point : TP1 (VT)
  - Method : Set to MW 1602kHz and check that the test point is less than 8.0V. Then set to MW 531kHz and check that the test point is more than 0.6V.
3. MW Tracking Adjustment
  - Settings : • Test point : TP8 (Lch), TP9 (Rch)
  - Adjustment location : L981 (1/3)
  - Method : Set to MW 999kHz and adjust L981 (1/3) so that the test point becomes maximum.
4. LW VT Adjustment
  - Settings : • Test point : TP1 (VT)
  - Adjustment location : L942
  - Method : Set to LW 144kHz and adjust L942 so that the test point becomes  $1.3\text{V} \pm 0.05\text{V}$ . Then set to LW 290kHz and check that the test point is less than 8.0V.
5. LW Tracking Adjustment
  - Settings : • Test point : TP8 (Lch), TP9 (Rch)
  - Adjustment location :
    - L941 ..... 144kHz
    - TC942 ..... 290kHz
  - Method : Set up TC942 to center before adjustment. The level at 144kHz is adjusted to maximum by L941. Then the level at 290kHz is adjusted to maximum by TC942.6.
6. AM IF Adjustment
  - Settings : • Test point : TP8 (Lch), TP9 (Rch)
  - Adjustment location :
    - L772 ..... 450kHz
7. FM VT Check
  - Settings : • Test point : TP1 (VT)
  - Method : Set to FM 108.0MHz and check that the test point is less than 8.0V. Then set to FM 87.5 MHz and check that the test point is more than 0.5V.
8. FM Tracking Check
  - Settings : • Test point : TP8 (Lch), TP9 (Rch)
  - Method : Set to FM 98.0MHz and check that the test point is less than 13dB $\mu$ V.
9. DC Balance / Mono Distortion Adjustment
  - Settings : • Test point : TP3, TP4 (DC balance)
  - TP8 (Lch), TP9 (Rch) (Distortion)
  - Adjustment location : L771
  - Input level : 60dB $\mu$ V
  - Method : Set to FM 98.0MHz and adjust L771 so that the voltage between TP3 and TP4 becomes  $0\text{V} \pm 0.04\text{V}$ . Next, check that the distortion is less than 1.3%.

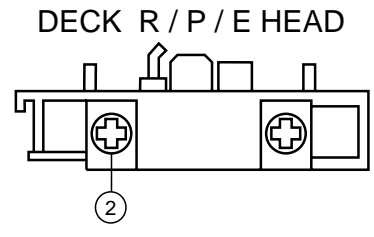
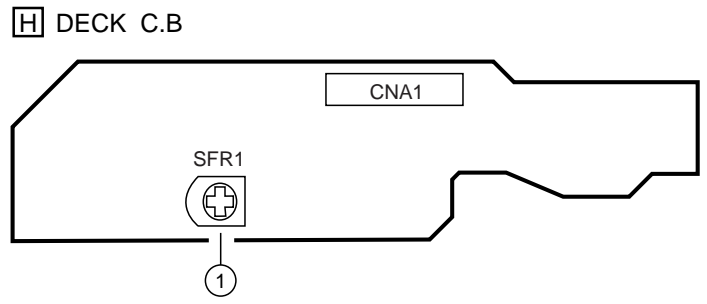
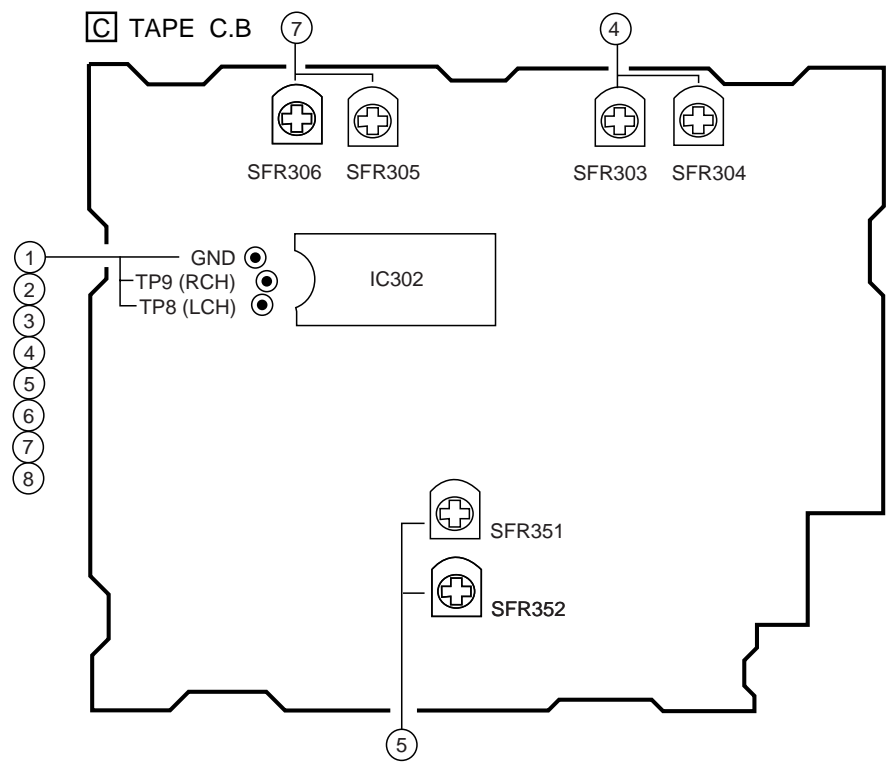
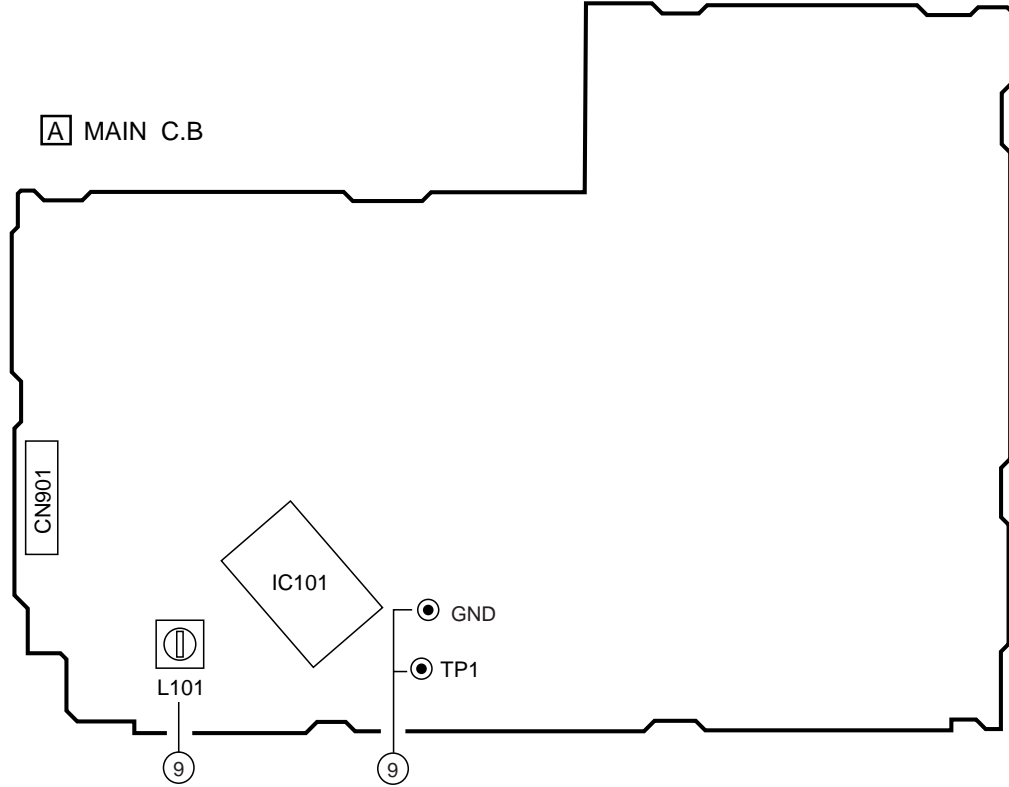


**G** TUNER C.B <U ONLY>



< 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 and 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 : TP6 (Lch), TP7 (Rch)  
 • Adjustment location :  
 L981 (1/3) ..... 1000kHz  
 Method : Set to AM 1000kHz and adjust L981 (1/3) so that the test point is maximum.
4. FM VT Check  
 Settings : • Test point : TP1 (VT)  
 Method : Set to FM 108.0MHz and check that the test point is less than 8.0V.  
 Set to FM 87.5MHz and check that the test point is more than 0.5V.
5. FM Tracking Check  
 Settings : • Test point : TP6 (Lch), TP7 (Rch)  
 Method : Set to FM 98.0MHz and check that the test point is less than 9.0dB $\mu$ V.
6. AM IF Adjustment  
 Settings : • Test point : TP6 (Lch), TP7 (Rch)  
 • Adjustment location :  
 L772 ..... 450kHz
7. DC Balance / Mono Distortion Adjustment  
 Settings : • Test point : TP3, TP4 (DC Balance)  
 TP6 (Lch), TP7 (Rch) (Distortion)  
 • Adjustment location : L771  
 • Input level : 60dB $\mu$ V  
 Method : Set to FM 98.0MHz and adjust L771 so that the voltage between TP3 and TP4 becomes 0V  $\pm$  0.04V.  
 Next, check that the distortion is less than 1.3%



< DECK SECTION >

1. Tape Speed Adjustment  
Settings : • Test tape : TTA-100  
• Test point : TP8 (Lch), TP9 (Rch)  
• Adjustment location : SFR1  
Method : Play back (FWD) the test tape and adjust SFR1 so that the frequency counter reads 3000Hz  $\pm$  5Hz and  $\pm$  45Hz (REV) with respect to forward speed.
2. Head Azimuth Adjustment  
Settings : • Test tape : TTA-300  
• Test point : TP8 (Lch), TP9 (Rch)  
• Adjustment location : Head azimuth adjustment screw  
Method : Play back (FWD) the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on REV play mode.
3. PB Frequency Response Check  
Settings : • Test tape : TTA-300  
• Test point : TP8 (Lch), TP9 (Rch)  
Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal with respect to that of the 315Hz signal is 0dB  $\pm$  2dB.
4. PB Sensitivity Adjustment  
Settings : • Test tape : TTA-200  
• Test point : TP8 (Lch), TP9 (Rch)  
• Adjustment location : SFR303 (Lch)  
SFR304 (Rch)  
Method : Play back the test tape and adjust SFRs so that the output level of the test point is 245mV.
5. REC/PB Frequency Response Adjustment  
Settings : • Test tape : TTA-602  
• Test point : TP8 (Lch), TP9 (Rch)  
• Input signal : 1kHz / 10kHz (LINE IN)  
• Adjustment location : SFR351 (Lch)  
SFR352 (Rch)  
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 0dB (17mV). Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output of the 10kHz signals becomes 0dB  $\pm$  0.5dB with respect to that of the 1kHz signal.
6. REC/PB Frequency Response Check  
Settings : • Test tape : TTA-615  
• Test point : TP8 (Lch), TP9 (Rch)  
• Input signal : 1kHz / 10kHz (LINE IN)  
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 0dB (17mV). Record and play back the 1kHz and 10kHz signals and check that the output of the 10kHz signals is 0dB  $\pm$  2dB with respect to that of the 1kHz signal.
7. REC/PB Sensitivity Adjustment  
Settings : • Test tape : TTA-602  
• Test point : TP8 (Lch), TP9 (Rch)  
• Input signal : 1kHz (LINE IN)  
• Adjustment location : SFR305 (Lch)  
SFR306 (Rch)  
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at TP8, TP9 becomes 0dB (170mV). Record and play back the 1kHz signals and adjust SFRs so that the output becomes 0dB  $\pm$  0.5dB.
8. REC/PB Sensitivity Check  
Settings : • Test tape : TTA-615  
• Test point : TP8 (Lch), TP9 (Rch)  
• Input signal : 1kHz (LINE IN)  
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at TP8, TP9 becomes 0dB (170mV). Record and play back the 1kHz signals and check that the output is 0dB  $\pm$  1.5dB.

< MAIN SECTION >

9.  $\mu$ -CON OSC Adjustment  
Settings : • Test point : TP1 and GND  
• Adjustment location : L101  
Method : Insert AC plug with pressing of DISPLAY key. Adjust L101 so that the frequency across the test point is 97.258Hz  $\pm$  0.098Hz.

## IC DESCRIPTION

IC, LC876580W-5N98

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{I-STEREO}}$ (TU)	I	Tuner stereo detection input.
2	I-TUDO (TU)	I	Connect to tuner PLL IC, LC72131D Pin 6 (DO).
3	I-RSDATA (TU)	I	RDS data input. (EZ only)
4	O-ARDY (MD)	O	Serial data for MD unit control reception / transmission ready output. (Not used)
5	O-STB (M)	O	Main shift register: latch output.
6	O-CLK	O	Front shift register BU4094BCF (reversal) and tuner PLL IC, LC72131D combination clock output.
7	O-DATA	O	Front shift register BU4094BCF (reversal) and tuner PLL IC, LC72131D combination data output.
8	O-VOLCTL	O	Connect to Function VOL IC, M62495FP pin 13 (CONT).
9	I-TMBASE	I	Reference clock input. Connect to LC72131D Pin 7 (T-BASE).
10	$\overline{\text{O-CLK SHIFT}}$	O	Clock shift control output.
11	$\overline{\text{I-RESET}}$	I	MICON reset input.
12	I-ACOFF	I	Hold status detection input.
13	I-TU SIG / I-MS (TU / TP)	I	AD for RDS signal level input. (EZ only) / Tape music sensor input. (Not used)
14	VSS 1	-	GND.
15	CF 1	-	Connect to 9.43MHz crystal oscillation.
16	CF 2	-	Connect to 9.43MHz crystal oscillation.
17	VDD 1	-	MICON power supply (+5V).
18	I-LEVEL	I	Level meter input (AD).
19	I-KEY1	I	Key 1: AD input.
20	I-KEY0	I	Key 0: AD input.
21	I-MODE SW (TP)	I	Deck mechanical status detection input (AD).
22	O-STB (F)	O	Front shift register BU4094BCF latch reversal output.
23	I-JOG1	I	AD input from multi jog rotary encoder output A/B.
24	O-BBEB	O	BBE control reversal output (B).
25	O-CE (TU)	O	Tuner PLL IC, LC72131D chip enable output.
26	O-BBEA	O	BBE control reversal output (A).
27	I-RDS CLK (TU)	I	RDS clock input. (EZ only)
28	O-LMUTE	O	Line mute output. (Not used)
29	I-REM	I	Remote controller input.
30 ~ 45	NC	-	Not connected.
46	VDD3	-	MICON power supply (+5V).
47	$\overline{\text{I-CLS}}$ (MD)	I	MD unit close detection SW input / Close at L. (Connected to GND through a resistor)
48 ~ 57	NC	-	Not connected.
58	$\overline{\text{I-SWCLS}}$ (TP)	I	Deck mechanical status detection input (SWCLS).
59	$\overline{\text{I-SWOPN}}$ (TP)	I	Deck mechanical status detection input (SWOPN).
60	I-AUTO (TP)	I	Deck mechanical status detection input (AUTO).
61	I-CAM (TP)	I	Deck mechanical status detection input (CAM).

Pin No.	Pin Name	I/O	Description
62	$\overline{\text{MD}}$ / TAPE	I	Initial matrix input (L: MD / H: TAPE).
63	RDS	I	Initial matrix input (H: RDS) (EZ only) / Connect to GND through a resistor. (U only).
64	$\overline{\text{BBE}}$	I	Initial matrix input (L: BBE).
65	$\overline{\text{DOLBY}}$	I	Initial matrix input (L: DOLBY).
66	AM10K	I	Initial matrix input (H: 10K STEP / L: 9K STEP).
67	FM WIDE&AMST	I	Initial matrix input (H: FM WIDE & AM STEREO).
68	LW	I	Initial matrix input (H: LW) (EZ only) / Connect to GND through a resistor. (U only)
69	SW	I	Initial matrix input (H: SW). Connect to GND through a resistor.
70	OIRT	I	Initial matrix input (H: OIRT). Connect to GND through a resistor.
71	I-CDSRQ (CD)	I	CD data transmission request signal input.
72	VDD4	-	MICON power supply (+5V).
73	O-CDON (CD)	O	CD power supply control output. (Not used)
74	O-D MS CD (CD)	O	Transmission output to CD MICON.
75	O-CS (CD)	O	Data transmission request output to CD MICON.
76	O-SCK (CD)	O	Data reception and transmission clock output to CD MICON.
77	O-SLP (CD)	O	Sleep output to CD MICON.
78	$\overline{\text{O-RST}}$ (CD)	O	Reset output to CD MICON.
79	I-SWCD	I	CD disc detection switch (H: active).
80	I-D CD MS (CD)	I	Transmission data from CD MICON.
81	O-QSURR	O	Q-Surround IC control output.
82	O-TUON (TU)	O	Tuner power supply switch output.
83	O-MOTOR (TP)	O	Deck mechanical motor control output.
84	O-SWSCAN	O	Tuner test mode TP (used for coil adjustment point).
85	O-SREQ (MD)	O	Serial data for MD unit control transmission request. (Not used)
86	O-MD REC	O	Output H at MD REC.
87	O-P.ON	O	Power on output.
88	$\overline{\text{O-RST}}$ (MD)	O	MD unit reset signal output. (Not used)
89	VSS2	-	GND.
90	VDD2	-	MICON power supply (+5V).
91	O-OE (FL)	O	Output function output to FL driver.
92	O-LAT (FL)	O	Latch output to FL driver.
93	O-MUTE	O	Main mute output.
94	$\overline{\text{O-PL}}$ (TP)	O	Deck mechanical plunger control output.
95	I-SI (FL)	I	Serial data input to FL driver.
96	O-MREQ (MD)	O	Serial data for MD unit control transmission request output. (Not used)
97	O-CLK (FL)	O	Clock output to FL driver.
98	O-SIN (MD)	O	Serial data for MD unit control output. (Not used)
99	I-SOUL (MD)	I	Serial data for MD unit control input. Connected to GND through a resistor.
100	I-ACLK (MD)	I	Serial data for MD unit control input. Connected to GND through a resistor.

## CD TEST MODE

### 1. How to activate CD Test Mode

Insert the AC plug while pressing the “Enter” button. FL display is fully illuminated and test mode will be activated. Insert the test disc and operate the test mode following the control method as shown below.  
 Note: If no CD was inserted, it displays “No Disc” and cannot be operated.

### 2. How to cancel CD Test Mode

Either one of the following operations will cancel the CD test mode.

- Disconnect the AC plug.
- Press “Function” button.
- Press “Power” button.
- Press “Band” button.

### 3. CD Test Mode functions

When test mode is activated, the following mode functions can be used by pressing the operation keys.

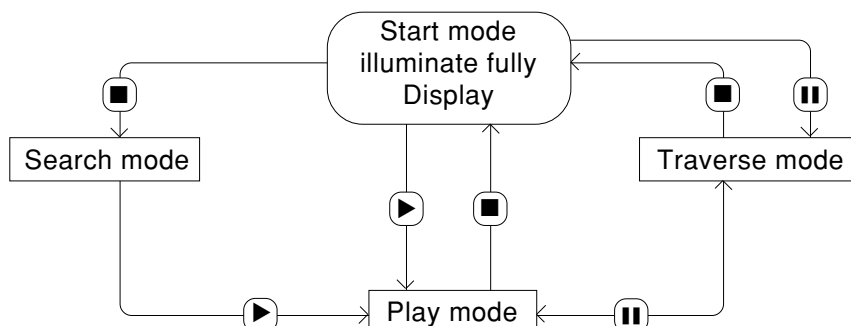
Mode	Function	FL Display	Operation	Content
Start Mode	Button	Fully illuminate	<ul style="list-style-type: none"> <li>• Initialization</li> </ul>	
Sled Mode	◀◀ ▶▶	CD TEST	<ul style="list-style-type: none"> <li>• Shift to the external circumference of Pick-Up. * Note 1</li> <li>• Shift to the internal circumference of Pick-Up. (Normal operation during CD PLAY)</li> </ul>	<ul style="list-style-type: none"> <li>• SLED SERVO</li> <li>• SLED Operation Check</li> </ul>
Search Mode	■	CD	<ul style="list-style-type: none"> <li>• LASER DIODE illuminated all the time (CD block power ON)</li> <li>• Continuous Focus Search *Note 2 (Pickup lense repeat full swing)</li> </ul>	<ul style="list-style-type: none"> <li>• APC circuit check</li> <li>• Laser current measurement</li> <li>• Focus search waveform check</li> <li>• Focus error waveform check (In Search Mode, FOK/FZC is not checked)</li> </ul>
Play Mode	▶	1Tr.0:01	<ul style="list-style-type: none"> <li>• Normal Playback</li> <li>• When TOC READ is unavailable Continue focus search *Note 2</li> <li>• Continue spindle motor kick spin</li> </ul>	<ul style="list-style-type: none"> <li>• FOCUS SERVO/TRACKING SERVO</li> <li>• CLV SERVO/SLED SERVO</li> <li>• FOK check</li> <li>• RF waveform check</li> </ul>
Traverse Mode		1Tr.0:01	<ul style="list-style-type: none"> <li>• Tracking servo OFF/ON</li> <li>• Repeat OFF/ON every time [  ] button is pressed</li> </ul>	<ul style="list-style-type: none"> <li>• TRACKING SERVO OFF</li> <li>• Tracking Balance Check</li> </ul>

\* Note 1 : When pressing the ◀◀ or ▶▶ keys, take care to avoid damage to the gears. Because the sled motor is activated when the ◀◀ or ▶▶ keys are pressed, even when the pick-up is at outermost or innermost track. The sled operation is not as normal and moves outermost track with ◀◀ button and innermost track with ▶▶ button

\* Note 2 : There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these case, the power supply should be switched off for an hour until heat has been reduced and then re-start.

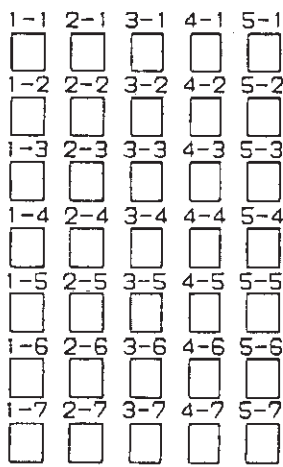
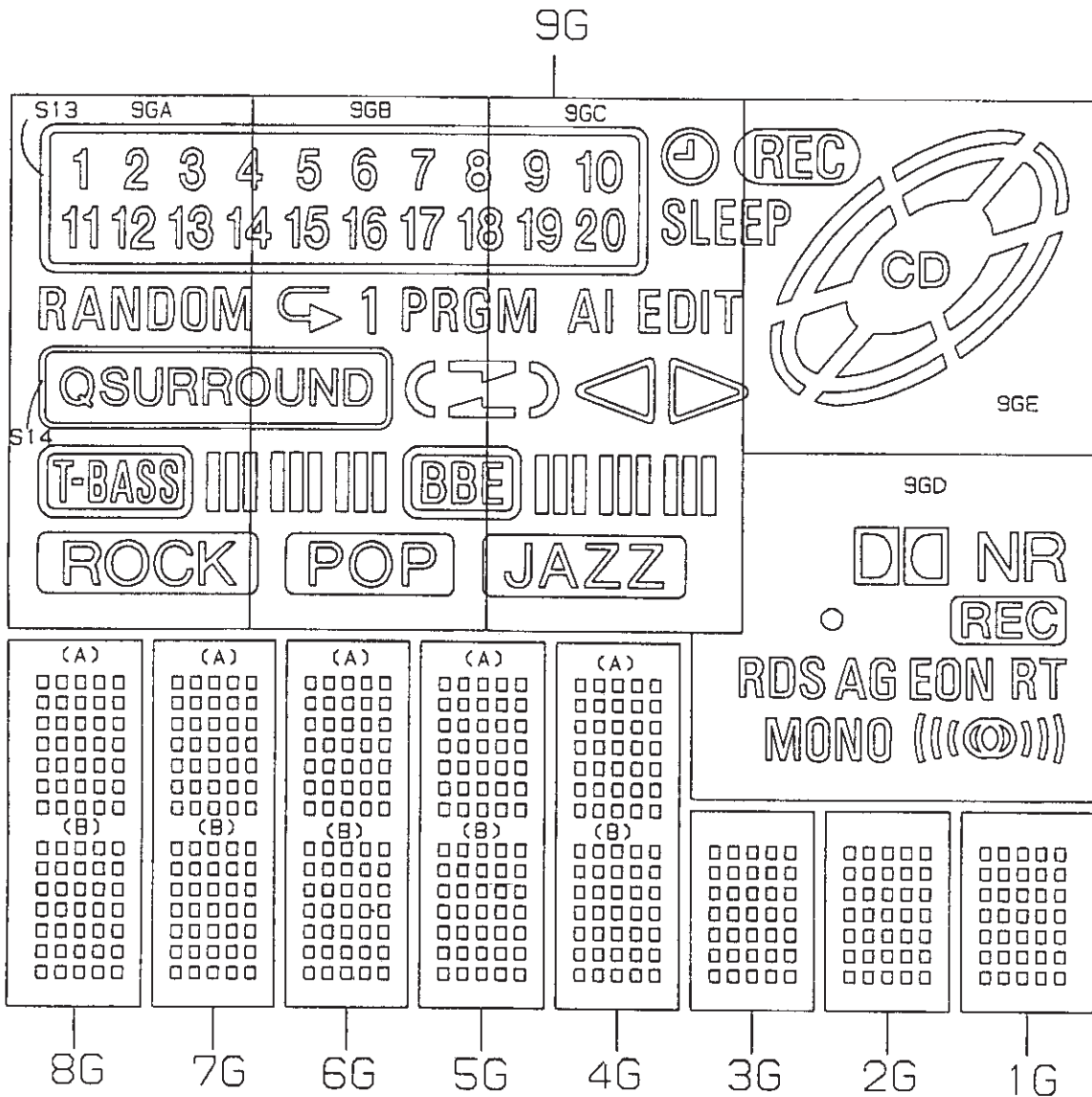
### 4. The Operation Outline

This operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration

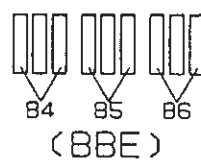


FL (9-ST-19GONK) GRID ASSIGNMENT AND ANODE CONNECTION

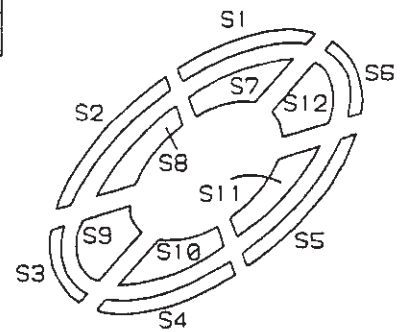
GRID ASSIGNMENT



(8G~1G)



(9G)



# ANODE CONNECTION

	1G	2G	3G	4G	5G	6G	7G	8G	9G(A~E)
P1	-	-	-	1-1A	1-1A	1-1A	1-1A	1-1A	ROCK
P2	-	-	-	2-1A	2-1A	2-1A	2-1A	2-1A	POP
P3	-	-	-	3-1A	3-1A	3-1A	3-1A	3-1A	JAZZ
P4	-	-	-	4-1A	4-1A	4-1A	4-1A	4-1A	1
P5	-	-	-	5-1A	5-1A	5-1A	5-1A	5-1A	11
P6	-	-	-	1-2A	1-2A	1-2A	1-2A	1-2A	2
P7	-	-	-	2-2A	2-2A	2-2A	2-2A	2-2A	12
P8	-	-	-	3-2A	3-2A	3-2A	3-2A	3-2A	3
P9	-	-	-	4-2A	4-2A	4-2A	4-2A	4-2A	13
P10	-	-	-	5-2A	5-2A	5-2A	5-2A	5-2A	4
P11	-	-	-	1-3A	1-3A	1-3A	1-3A	1-3A	14
P12	-	-	-	2-3A	2-3A	2-3A	2-3A	2-3A	5
P13	-	-	-	3-3A	3-3A	3-3A	3-3A	3-3A	15
P14	-	-	-	4-3A	4-3A	4-3A	4-3A	4-3A	S13
P15	-	-	-	5-3A	5-3A	5-3A	5-3A	5-3A	6
P16	-	-	-	1-4A	1-4A	1-4A	1-4A	1-4A	16
P17	-	-	-	2-4A	2-4A	2-4A	2-4A	2-4A	7
P18	-	-	-	3-4A	3-4A	3-4A	3-4A	3-4A	17
P19	-	-	-	4-4A	4-4A	4-4A	4-4A	4-4A	8
P20	-	-	-	5-4A	5-4A	5-4A	5-4A	5-4A	18
P21	-	-	-	1-5A	1-5A	1-5A	1-5A	1-5A	9
P22	-	-	-	2-5A	2-5A	2-5A	2-5A	2-5A	19
P23	-	-	-	3-5A	3-5A	3-5A	3-5A	3-5A	10
P24	-	-	-	4-5A	4-5A	4-5A	4-5A	4-5A	20
P25	-	-	-	5-5A	5-5A	5-5A	5-5A	5-5A	RANDOM
P26	-	-	-	1-6A	1-6A	1-6A	1-6A	1-6A	↩
P27	-	-	-	2-6A	2-6A	2-6A	2-6A	2-6A	1
P28	-	-	-	3-6A	3-6A	3-6A	3-6A	3-6A	PRGM
P29	-	-	-	4-6A	4-6A	4-6A	4-6A	4-6A	T-BASS
P30	-	-	-	5-6A	5-6A	5-6A	5-6A	5-6A	B1
P31	-	-	-	1-7A	1-7A	1-7A	1-7A	1-7A	B2
P32	-	-	-	2-7A	2-7A	2-7A	2-7A	2-7A	B3
P33	-	-	-	3-7A	3-7A	3-7A	3-7A	3-7A	BBE
P34	-	-	-	4-7A	4-7A	4-7A	4-7A	4-7A	B4
P35	-	-	-	5-7A	5-7A	5-7A	5-7A	5-7A	B5



	1G	2G	3G	4G	5G	6G	7G	8G	9G(A~E)
P36	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	1-1B	B6
P37	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	2-1B	S14
P38	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	3-1B	QSURROUND
P39	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	4-1B	AI
P40	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	5-1B	EDIT
P41	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	1-2B	⌂
P42	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	2-2B	Σ
P43	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	3-2B	)
P44	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	4-2B	◁
P45	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	5-2B	▷
P46	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	1-3B	MONO
P47	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	2-3B	( ⊙ )
P48	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	3-3B	RDS
P49	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	4-3B	AG
P50	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	5-3B	EON
P51	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	1-4B	RT
P52	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	2-4B	⊙
P53	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	3-4B	SLEEP
P54	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	4-4B	(REC)
P55	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	5-4B	○
P56	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	1-5B	⊙
P57	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	2-5B	(REC)
P58	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	3-5B	NR
P59	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	4-5B	S1
P60	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	5-5B	S7
P61	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	1-6B	S2
P62	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	2-6B	S8
P63	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	3-6B	S3
P64	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	4-6B	S9
P65	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	5-6B	S4
P66	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	1-7B	S10
P67	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	2-7B	S5
P68	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	3-7B	S11
P69	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	4-7B	S6
P70	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	5-7B	S12
P71	-	-	-	-	-	-	-	-	CD



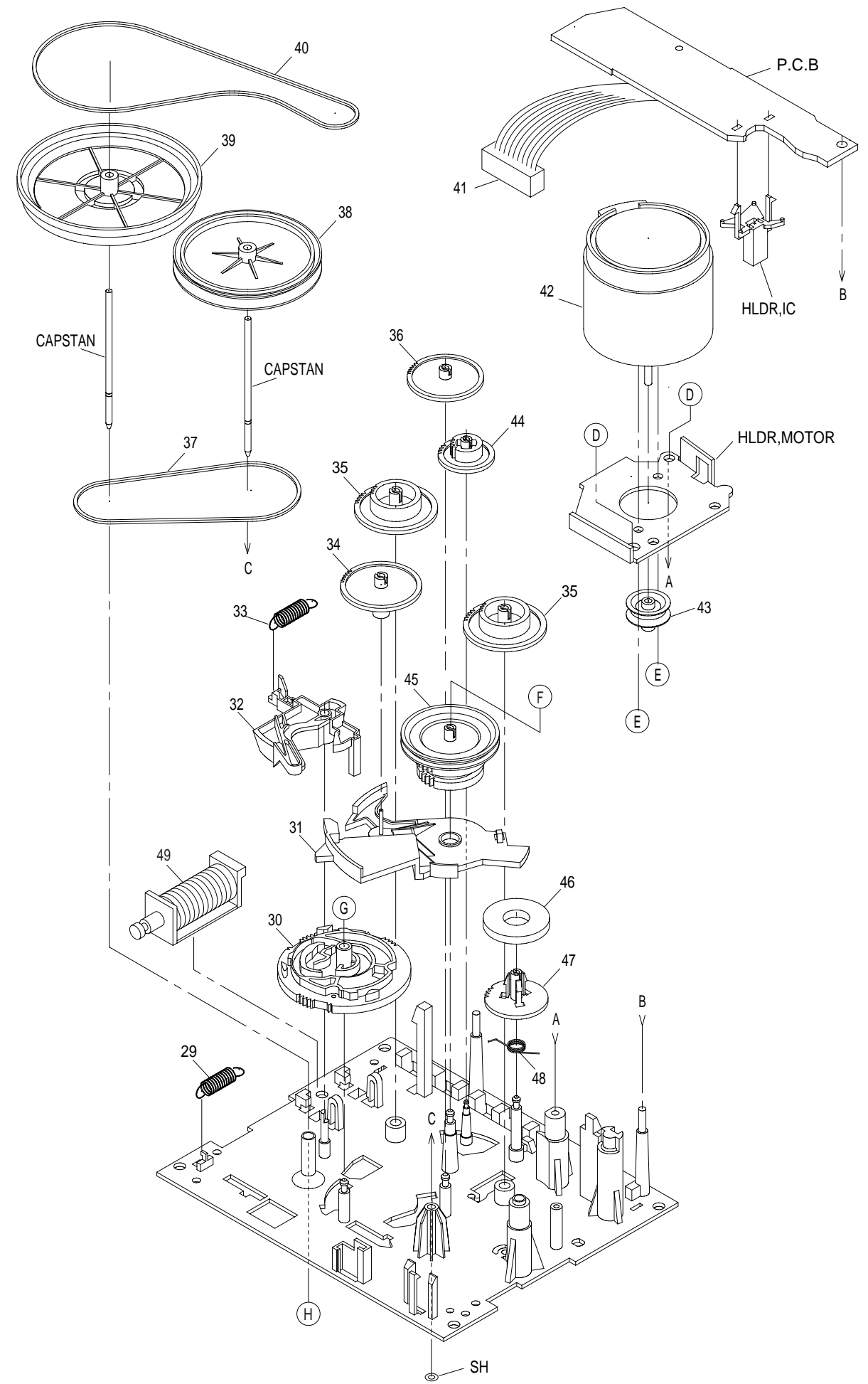
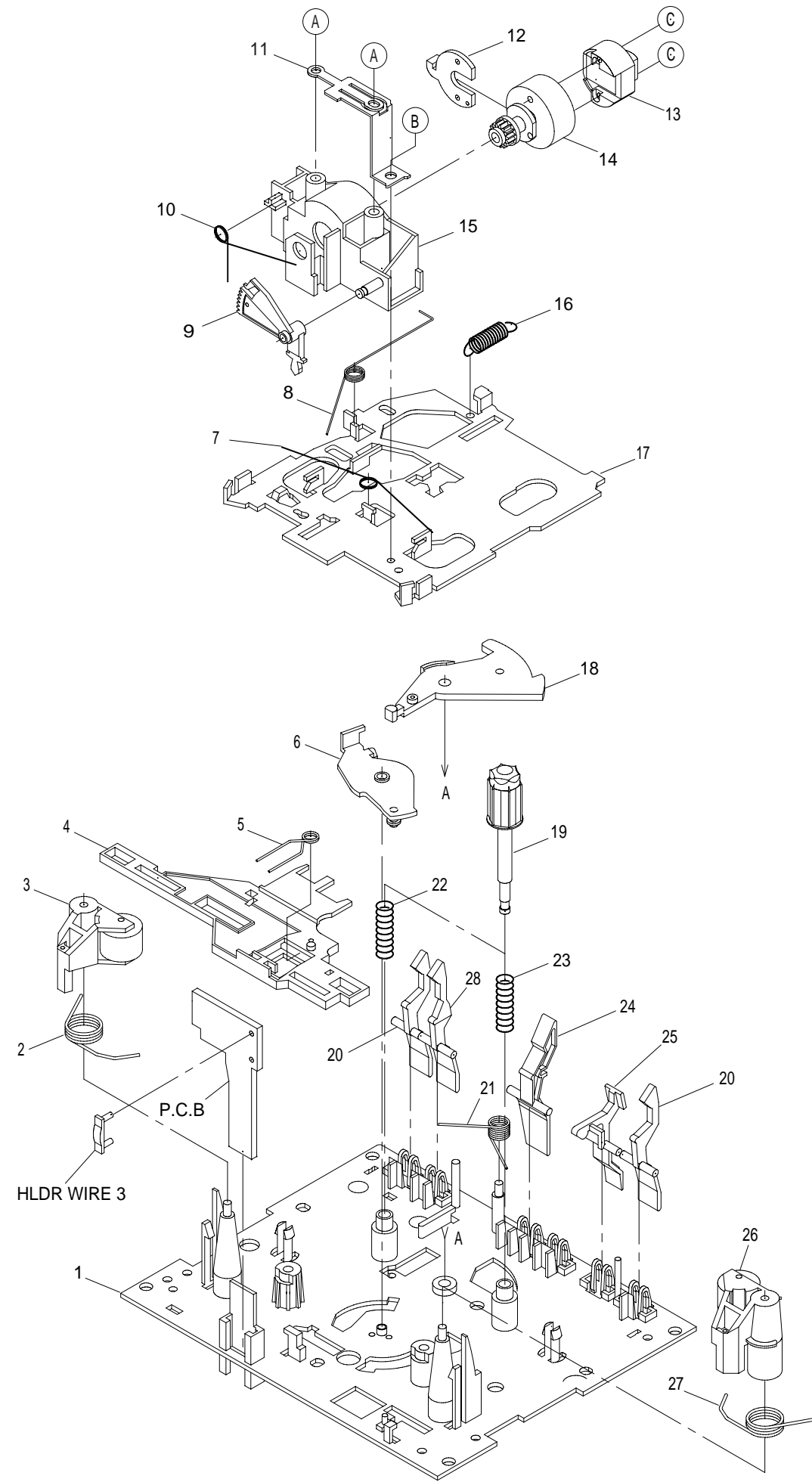
# MECHANICAL PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CJ5-016-010		KNOB,RTRY JOG	48	8A-CL5-005-010		CABI,REAR EZ<EZ>
2	8A-CJ5-217-010		PLATE, JOG	48	8A-CL5-030-010		CABI,REAR(B) U<U>
3	8A-CJ5-017-010		REFLECTOR, JOG	49	8Z-CL1-663-010		FAN,MF40D-12-200MM
4	8A-CL5-037-010		PANEL, FR CASS EZ<EZ>	50	8A-CJ5-622-010		PT,ACJ-5 EZ<EZ>
4	8A-CL5-023-010		PANEL,FR CASS(B)<U>	50	8A-CJ5-621-010		PT,ACJ-5 U<U>
5	8A-CJ5-019-010		LENS, SENSOR	51	8A-CJ5-219-010		HLDR,TR B
6	8A-CJ5-007-010		WINDOW, DISPLAY<U>	52	8A-CJ5-206-010		HLDR,CD B
6	8A-CJ5-033-010		WINDOW, DISPLAY EZ<EZ>	53	8A-CJ5-205-010		HLDR,CD A
7	8A-CL5-006-010		CABI,FR EZ<EZ>	54	8A-CJ5-005-010		PANEL,SIDE R<EZ>
7	8A-CL5-021-010		CABI,FR(B) U<U>	54	8A-CL5-029-010		PANEL,SIDE R(B) U<U>
8	8A-CJ5-012-010		KEY,ENTER	55	8A-CJ5-213-010		HLDR,MECHA CD
9	8A-CL5-046-010		DUST COVER, CD FELT<U>	56	87-A80-092-010		AC CORD ASSY,E BLK SUN FAI<EZ>
9	8A-CJ5-023-010		DUST COVER, CD FELT<EZ>	56	87-A80-110-010		AC CORD ASSY,U SPT-2W<U>
10	8A-CJ5-018-010		REFLECTOR, CD	57	87-085-185-010		BUSHING, AC CORD (E)<EZ>
11	8A-CJ5-215-010		GUIDE,LED CD	57	87-085-189-010		BUSHING, CORD (U)<U>
12	8A-CL5-025-010		KEY,SKIP CASS	58	87-064-185-010		HLDR,WIRE
13	8A-CL5-009-010		KEY,PLAY CASS	59	8A-CJ5-204-010		HLDR,ECO
14	8A-CJ5-013-010		KEY,EJECT CD	60	8Z-NB8-240-010		COVER, PL
15	8A-CL5-305-010		PLATE,BOX LOCK	61	8Z-CE3-206-010		CUSH,PL 9.2-4.2-5
16	8A-CL5-326-010		SPR-E,OPEN	62	8A-CJ5-209-010		GUIDE,FL
17	8A-CJ5-014-010		BTN,OPEN	63	8A-CL5-311-010		LEVER,EJECT
18	8A-CL5-312-010		HLDR,BUTTON	64	87-NF8-220-010		DMPR,150
19	8A-CJ5-009-010		KEY,POWER	65	88-805-051-420		CONN ASSY,5P 140
20	8A-CJ5-015-010		REFLECTOR,POWER	66	88-805-040-820		CONN ASSY,4P 80
21	8A-CL5-302-010		LEVER,POP-UP	A	87-265-544-310		V+2-2.2 NI
22	8A-CL5-323-010		SPR-P,LOCK	B	87-352-509-310		VT2+1.4-4
23	8A-CL5-324-010		PLATE,LOCK	C	87-067-579-010		TAPPING SCREW, BVT2+3-8
24	8A-CL5-307-010		BOX,CASS<EZ>	D	87-067-421-010		VTT+2-4
24	8A-CL5-328-010		BOX,CASS(B)<U>	E	88-AR1-217-010		S-SCREW,BFT2+3-8
25	8A-CL5-321-010		SPR-P,CAS PUSH R	F	87-067-688-010		BVTT+3-6
26	8A-CL5-315-010		SPR-E,POP UP	G	87-591-094-010		QIT+3-6 GOLD
27	8A-CL5-301-010		GEAR,POP-UP2	H	87-NF4-224-010		S-SCREW,IT3B+3-8CU
28	8A-CL5-317-010		GEAR,DUMP	I	88-ZG5-302-010		S-SCREW,8ZG-5+2-4W/O
29	8A-CL5-316-010		SPR-T,CASS	J	8A-CL5-327-010		S-SCREW,2.6-11
30	8A-CL5-306-010		PLATE,ASSY POP-UP	K	87-067-584-010		BVT2+3-3-6W/O SLOT
31	8A-CL5-040-010		LID,CASS<EZ>	L	87-078-191-010		S-SCREW,IT+4-10
31	8A-CL5-024-010		LID,CASS(B)<U>	M	87-751-098-410		VT2+3-14W/O SLOT
32	8A-CL5-201-010		HLDR,FR	N	87-067-660-010		BVT2+3-8W/O SLOT BLK
33	8A-CL5-202-010		HLDR,REAR	O	87-591-094-410		TAPPING SCREW, QIT+3-6
34	8A-CL5-625-010		CONN ASSY,8P -RPB	P	87-067-641-010		UTT2+3-8W/O SLOT BLK
35	8A-CL5-002-010		CABI, TOP<EZ>	Q	87-067-868-010		V+1.7-4 HL BLK
35	8A-CL5-022-010		CABI, TOP(B) U<U>	R	87-067-703-010		BVT2+3-10W/O SLOT
36	8A-CL5-313-010		SPR-T,BOX LOCK	S	87-067-579-080		BVT2+3-8W/O SLOT
37	8A-CL5-308-010		LEVER,BOX LOCK	T	87-067-767-010		BVTT+2.6-6
38	8A-CL5-309-010		PLATE,GUIDE	U	82-ZM3-220-010		S-SCREW,SHILD PLATE
39	8A-CL5-322-010		SHAFT,TURN	V	87-351-547-310		VT2+2-3 BLK
40	8A-CL5-310-010		LEVER,TURN				
41	8A-CL5-325-010		SPR-C,TURN				
42	87-067-729-010		PW 1.3-4.0-0.25 C-SLT				
43	8A-CL5-627-010		CABLE,FFC9P-1.0 220				
44	8A-CL5-628-010		CABLE,FFC14P-1.0 160				
45	8A-CJ5-004-010		PANEL,SIDE L<EZ>				
45	8A-CL5-028-010		PANEL,SIDE L(B) U<U>				
46	8A-CL5-626-010		CABLE,FFC15P-1.0 220				
47	8A-CJ5-634-010		CONN ASSY,2P SHLD				

## 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		

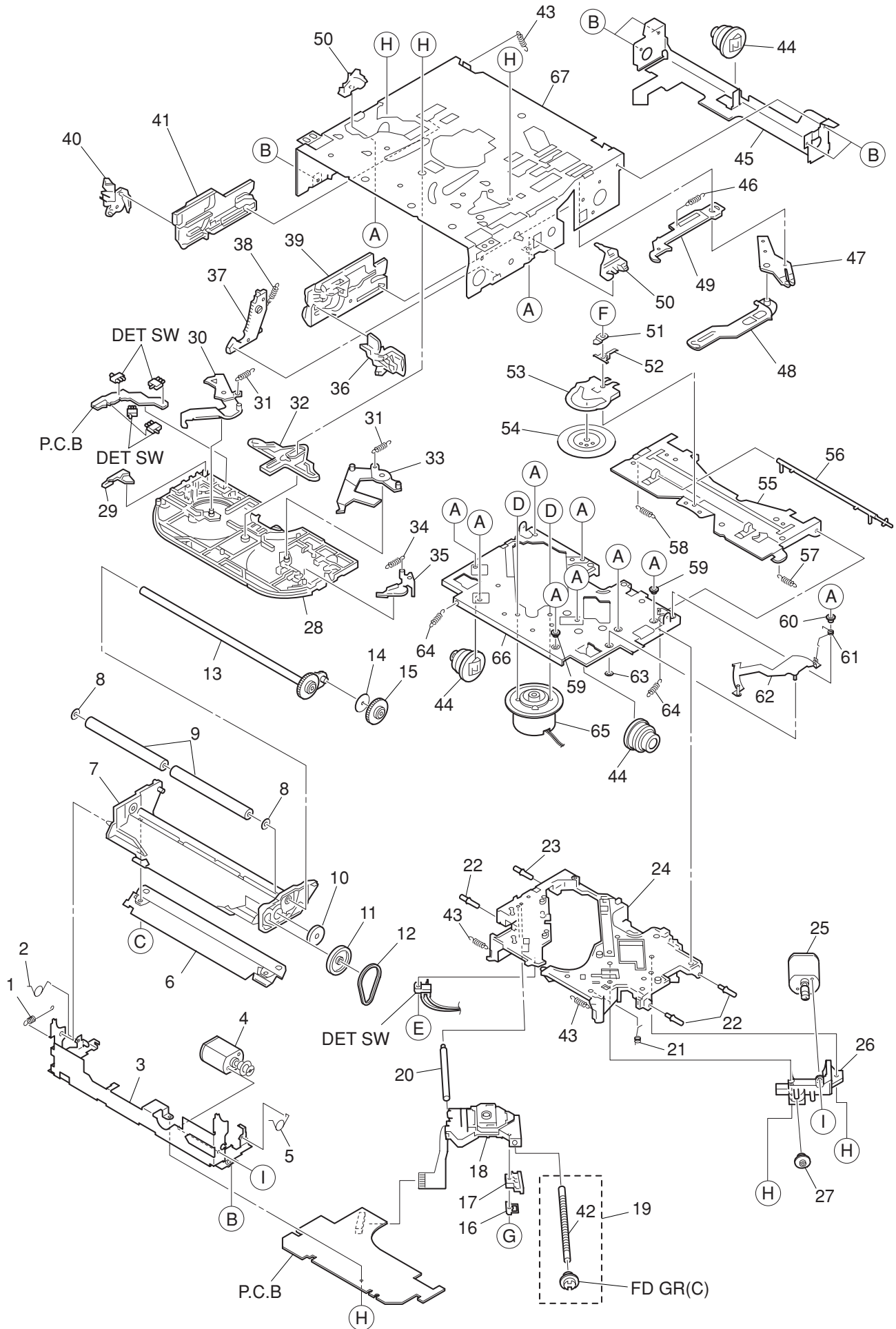
TAPE MECHANISM EXPLODED VIEW 1 / 1



# TAPE MECHANISM PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM1-327-310		CHAS ASSY, RM	31	82-ZM1-224-410		LVR, FR
2	82-ZM1-258-210		SPR-T, PINCH L	32	82-ZM1-227-310		LVR, TRIG
3	82-ZM1-341-210		LVR ASSY, PINCH L2	33	82-ZM1-305-210		SPR-E, TRIG 2
4	82-ZM1-266-310		LVR, DIR	34	82-ZM1-225-210		GEAR, FR
5	82-ZM1-214-010		SPR-T, DIR	35	82-ZM1-216-510		GEAR, REEL
6	82-ZM1-333-210		PLATE, LINK2	36	82-ZM1-226-010		GEAR, REW
7	82-ZM1-269-210		SPR-T, BRG	37	82-ZM1-338-110		BELT, FR 4
8	82-ZM1-219-110		SPR-T, LINK	38	82-ZM1-348-110		FLY-WHL, L W
9	82-ZM1-210-110		GEAR, H T	39	82-ZM1-349-110		FLY-WHL, R W
10	82-ZM3-353-010		SPR-T, HEAD 2	40	82-ZM1-354-010		BELT, SBU MAIN2 EPDM
11	82-ZM1-298-010		SPR-P EARTH	41	82-ZM1-636-010		CONN ASSY, 9P
12	82-ZM1-314-110		PLATE, HEAD	42	87-045-347-010		MOT, SHU2L 70
13	87-A91-176-010		HEAD, RPH HADKH56	43	82-ZM1-247-210		PULLEY, MOTOR
14	82-ZM1-208-310		HLDL, HEAD	44	82-ZM1-223-010		GEAR, PLAY
15	82-ZM1-207-910		GUIDE, TAPE	45	82-ZM3-333-310		SLIP DISK ASSY 2
16	82-ZM1-218-010		SPR-E, HB	46	82-ZM3-616-010		RING MAGNET 4
17	82-ZM1-206-910		CHAS, HEAD	47	82-ZM1-220-210		GEAR, IDLER
18	82-ZM1-222-310		LVR, PLAY( *)	48	82-ZM1-322-010		SPR-T, FR 60
19	82-ZM1-217-410		REEL TABLE	49	82-ZM1-635-010		SOL ASSY, 23
20	82-ZM1-240-110		LVR, REC( *)	A	82-ZM1-283-310		S-SCREW, AZIMUTH
21	82-ZM1-257-010		SPR-T, CAS	B	82-ZM1-315-010		S-SCREW GUIDE TAPE
22	82-ZM1-285-410		SPR-C, BT L	C	80-ZM6-207-010		V+1.6-7
23	82-ZM1-244-510		SPR-C, BT	D	87-741-073-410		UT2+2.6-6 GLD
24	82-ZM1-242-010		LVR, CAS	E	87-251-070-410		U+2.6-3
25	82-ZM1-243-010		LVR, STOP	F	82-ZM3-334-010		PW 2.16-6-0.4
26	82-ZM1-344-210		LVR ASSY, PINCH R2	G	87-B10-008-010		W-P, 2.08-8-0.4-SLIP
27	82-ZM1-259-210		SPR-T, PINCH R	H	80-ZM6-243-010		SH 1.75-3.6-0.5 SLT
28	82-ZM1-241-310		LVR, MC				
29	82-ZM1-255-310		SPR-E, LVR DIR				
30	82-ZM1-221-310		GEAR, CAM( *)				

CD MECHANISM EXPLODED VIEW 1 / 1



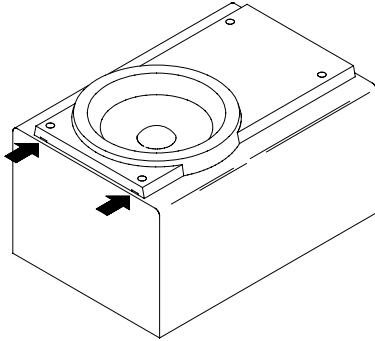
# CD MECHANISM PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	S3-031-110-030		EARTH SPR	41	S3-031-010-500		FIX PL(L)Z
2	S3-031-110-180		L.P SPRING(L)	42	S3-031-050-310		FD SCREW(M)
3	S3-031-110-010		FRONT BRKT	43	S3-031-010-520		HUNG UP SPRING(A)
4	S3-031-113-010		LDG MOTOR ASSY	44	S3-031-050-240		DAMPER(J)
5	S3-031-110-190		L.P SPRING(R)	45	S3-031-010-020		REAR D BRKT
6	S3-031-110-050		SUPPORT PL	46	S3-031-010-150		TRIG PL SPRING
7	S3-031-110-080		GR MT BLK	47	S3-031-010-160		TRIG ARM
8	S9-W03-302-760		NW BLUE 2.9-5-0.3	48	S3-031-010-120		TRIG LVR
9	S3-031-110-360		LDG ROLLER(P)	49	S3-031-010-140		TRIG PL
10	S3-031-110-100		LDG GR(3)	50	S3-031-010-030		DAMPER PIN
11	S3-031-110-090		LDG GR(2)	51	S3-031-050-360		STOPPER SPR
12	S3-031-110-290		LDG BELT	52	S3-031-050-190		8CM STOPPER SPR PL
13	S3-031-113-020		LDG RLR SFT ASSY	53	S3-031-050-230		CLAMPER PLATE
14	S9-W07-250-300		LUMIL AR W 2.3-9.8-0.25	54	S3-031-050-150		CLAMPER
15	S3-031-110-120		LDG GR(5)	55	S3-031-050-740		CLP ARM(A)
16	S3-031-050-300		NUT PUSH SPR PL(M)	56	S3-031-050-410		8CM STOPPER(M)
17	S3-031-050-290		PU M NUI(M)	57	S3-031-050-140		CLP ARM SPRING
18	S6-904-160-010		PICK-UP VED0375-TN	58	S3-031-050-250		CLP ARM SPR(L)
19	S3-031-053-040		FEED SCREW(M)ASSY	59	S3-031-050-700		D.S ARM COLLAR
20	S3-031-050-320		PU SHAFT(M)	60	S3-031-050-720		SP COLLAR
21	S3-031-050-330		THRUST SPR(M)	61	S3-031-050-710		D.S ARM SPR
22	S3-031-050-210		LOCK PIN	62	S3-031-055-010		DISC SUPPORT ARM ASSY
23	S3-031-050-220		LOCK PIN BL	63	S9-W02-500-900		PW CUT 2.1-4-0.5
24	S3-031-050-760		F.M. BASE(A)	64	S3-031-010-530		HUNG DOWN SPRING(A)
25	S3-031-053-010		FEED MOTOR ASSY	65	S3-031-053-050		SPINDLE MOTOR(M)ASSY
26	S3-031-050-280		FD GR BLK(M)	66	S3-031-050-730		T.T.BASE(A)
27	S3-030-050-100		PU GEAR(B)	67	S3-031-010-010		FRAME
28	S3-031-010-570		UPPER PL(A)	A	87-841-034-410		CAMERA B TAPPING SCREW M2-5
29	S3-031-110-240		SW ACTR	B	87-741-033-410		CAMERA SCREW TS.G M2-4
30	S3-031-010-090		SEL ARM (L)	C	S9-C04-205-030		CAMERA S TAPPING SCREW M2-5
31	S3-031-010-110		S ARM SPRING	D	87-267-525-310		CAMERA SCREW M1.7-2.2
32	S3-031-010-080		SEL STOP PL	E	87-263-036-010		CAMERA TAPPING SCREW B 3 M2-8
33	S3-031-010-100		SEL ARM (R)	F	S9-C42-202-010		CAMERA TAPPING SCREW S 3 M2-2
34	S3-031-010-250		S.L ARM SPRING	G	S9-C45-175-030		CAMERA TAPPING SCREW P3 M1.7-5
35	S3-031-010-240		S.L ARM	H	87-351-549-310		CAMERA TAPPING SCREW B 3 M2-4
36	S3-031-010-580		FIX ARM(R)A	I	S9-P02-200-310		TAMS SCREW M2-3
37	S3-031-010-380		LDG GR(6)B				
38	S3-031-010-220		LDG GR(6)SPRING				
39	S3-031-010-370		FIX PL(R)B				
40	S3-031-010-340		FIX ARM(L)B				

# SPEAKER DISASSEMBLY INSTRUCTIONS

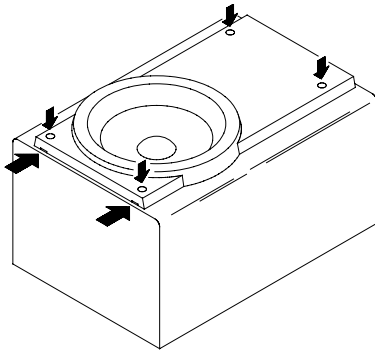
## Type.1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



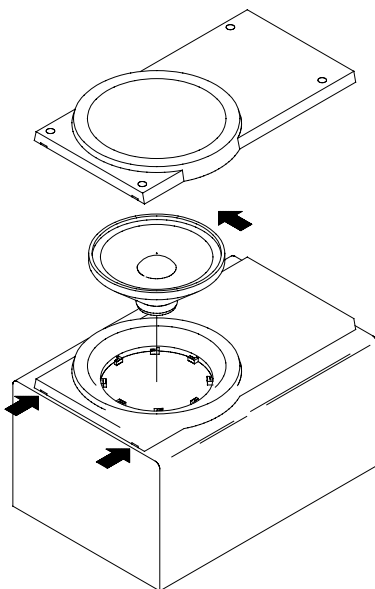
## Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

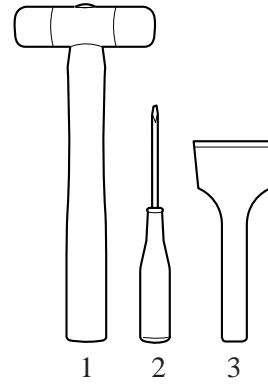


## Type.3

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Turn the speaker unit to counter-clockwise direction while inserting a flat-bladed screwdriver into one of the hollows around speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction until "click" sound comes out.



## Type.4



## TOOLS

- 1 Plastic head hammer
- 2 1 flat head screwdriver
- 3 Cut chisel

## How to Remove the PANEL, FR

1. Insert the (1) flat head screwdriver tip into the gap between the PANEL, FR and the PANEL, SPKR. Tap the head of the (1) flat head screwdriver with the plastic hammer head, and create the clearance as shown in Fig-1.
2. Insert the cut chisel in the clearance, and tap the head of the cut chisel with plastic hammer as shown in Fig-2, to remove the PANEL, FR.
3. Place the speaker horizontally. Tap head of the cut chisel with plastic hammer as shown in Fig-3, and remove the PANEL, FR completely.

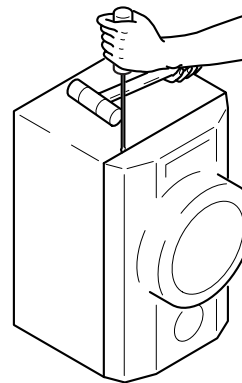


Fig-1

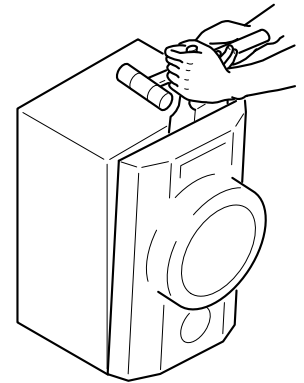


Fig-2

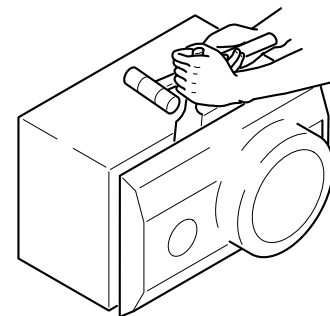


Fig-3

## How to Attach the PANEL, FR

Attach the PANEL, FR to the PANEL, SPKR. Tap the four corners of the PANEL, FR with the plastic hammer to fit the PANEL, FR into the PANEL, SPKR completely.



## SPEAKER PARTS LIST <SX-MS7>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CJ5-422-010		GRILLE,FRAME ASSY Y<EZ>
1	8A-CL5-404-010		GRILLE,FRAME ASSY B<U>
2	8A-CJ5-409-010		FASTENER
3	8A-CJ5-405-010		PANEL,SP<EZ>
3	8A-CL5-408-010		PANEL,SP B<U>
4	8A-CJ5-417-010		SPKR, TW 25
5	8A-CJ5-411-010		SPKR, W 87S<EZ>
5	8A-CL5-406-010		SPKR, W 87SI<U>
6	8A-CJ5-403-010		PANEL,FR<EZ>
6	8A-CL5-403-010		PANEL,FR B<U>
7	8Z-SSM-005-010		BOSS,CATCHER

## ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CL5-913-010		IB,U(ESF)M<U>
1	8A-CL5-916-010		IB,EZ(9L)M<EZ>
2	8A-CL5-950-010		RC-AAT03<EZ>
2	8A-CL5-954-010		RC UNIT,RC-ATT03(B)<U>
3	87-006-225-010		ANT,LOOP ANT NC2
4	87-A90-118-010		ANT,WIRE FM(Z)<EZ>
4	87-043-115-010		ANT,FEEDER FM<U>

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