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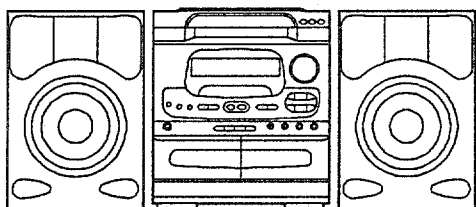


CX - N5100

CX - N5200

CX - N5250

SX - N5200



COMPACT DISC STEREO SYSTEM

- BASIC TAPE MECHANISM : 2ZM - 3 PR1
- BASIC CD MECHANISM : KSM - 2101ABM

- TYPE U

[REVISION PUBLISHING]

SERVICE MANUAL

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SPECIFICATIONS

TUNER/AMPLIFIER

<FM section>

Frequency range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	1.3 μ V (75 ohms) 13.2 dBf
Alternate channel selectivity	50 dB ($\pm$ 400 kHz)
Signal-to-noise ratio	STEREO: 70 dB MONO: 76 dB
Harmonic distortion	0.3 % (MONO), 1 kHz 0.5 % (STEREO, L-R), 1 kHz
Frequency response	30 Hz to 15 kHz (+0.5 dB, -3 dB)
Stereo separation	33 dB at 1 kHz
Antenna	75 ohms (unbalanced)

<AM section>

Frequency range	AM 530 (531) kHz to 1710 (1602) kHz
Usable sensitivity	350 μ V/m
Selectivity	22 dB (9 kHz)
Signal-to-noise ratio	53 dB (100 dB input)
Antenna	Loop antenna

<Timer section>

Program timer	On-timer, free setting
Sleep timer	Setting in 10-minute increments, 240 minutes maximum

<Amplifier section>

Power output	FTC RULE 40 watts per channel, Min. RMS at 6 ohms, from 65 Hz to 15 kHz, with no more than 1 % Total Harmonic Distortion
Harmonic distortion	0.05 % (15 W, 1 kHz, 6 ohms)
Input terminal	VIDEO/AUX: 150 mV (adjustable) MIC: 1.8 mV/10 k Ω
Output terminal	SUPER WOOFER: 1.55 V

CASSETTE DECK/COMPACT DISC PLAYER

<Cassette deck section>

Track format	4 tracks, 2 channels
Frequency response	CrO ₂ tape: 50 - 16000 Hz Normal tape: 50 - 15000 Hz
Signal-to-noise ratio	60 dB (DOLBY NR ON, CrO ₂ tape peak level)
Tape speed	4.8 cm/sec. (1 ⁷ / ₈ ips)
Recording system	AC bias
Erase system	AC erase
Motor	DC servo motor $\times$ 1
Heads	Playback head $\times$ 1 (deck 1) Recording/playback/erase head $\times$ 1 (deck 2)

<CD player section>

Disc	Compact disc
Scanning method	Non-contact optical scanner (semiconductor laser)
Laser	Semiconductor laser (λ = 780 nm)
Rotation speed	Approx. 500 rpm - 200 rpm (CLV)
Error correction	Cross Interleave, Reed Solomon code
No. of channels	2 channels
D-A conversion	16-bit linear
Wow/flutter	Unmeasurable
Signal-to-noise ratio	90 dB (1 kHz, 0 dB)
Harmonic distortion	0.05% (1 kHz, 0 dB)

SPEAKER SYSTEM

(These values are for one speaker.)

Cabinet type	3 way, bass reflex (magnetism sealed type)
Speaker	130 mm (5 ¹ / ₈ in.) cone type woofer 50 mm (2 in.) cone type tweeter 20 mm (1 ³ / ₁₆ in.) ceramic type super tweeter
Impedance	6 ohms
Music power	50 W
Output sound pressure level	88 dB/W/m
Dimensions (W $\times$ H $\times$ D)	180 $\times$ 302 $\times$ 230 mm (7 ¹ / ₈ $\times$ 12 $\times$ 9 ¹ / ₈ in.)
Weight	2.8 kg (6.2 lbs.)

COMMON SECTION

Power requirements	NSX-5100/NSX-5200: AC 120 V, 60 Hz NSX-5250: AC 120 V/220-240 V, switchable 60 Hz
Power consumption (System total)	105 W
Dimensions (W $\times$ H $\times$ D)	Main unit: 260 $\times$ 305 $\times$ 340 mm (10 ¹ / ₄ $\times$ 12 ¹ / ₈ $\times$ 13 ¹ / ₂ in.) System: 620 $\times$ 305 $\times$ 340 mm (24 ¹ / ₂ $\times$ 12 ¹ / ₈ $\times$ 13 ¹ / ₂ in.)
Weight	Main unit: 7.6 kg (16.7 lbs.) System: 13.2 kg (29 lbs.)

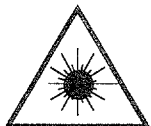
- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.
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PROTECTION 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.



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

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylit-tävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstråling, 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

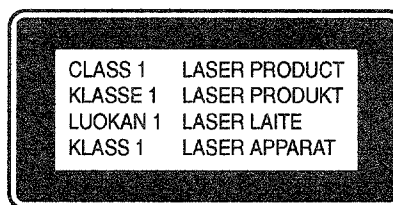
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

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.

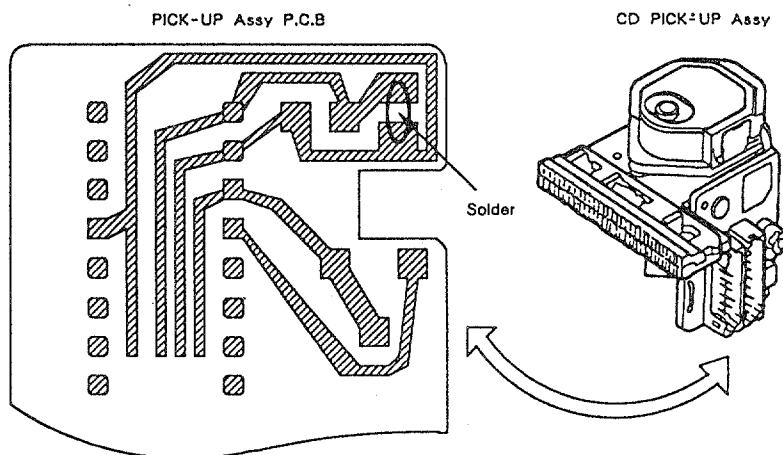
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



Precaution to replace Optical block (KSS - 210A)

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

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



ELECTRICAL MAIN PARTS LIST

DESCRIPTION で判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カナ NO.	DESCRIPTION	REF. NO	PART NO.	カナ NO.	DESCRIPTION
IC							
	87-017-745-010	IC, CXA1782BQ			87-020-125-080	C-DIODE, 1SS181	
	87-020-454-010	IC, DM6851			87-020-465-080	DIODE, 1SS133	
	87-017-486-080	IC, BA6397FP			87-017-174-080	ZENER, HZS11A3L	
	87-017-586-010	IC, CXD 2518Q			87-017-147-080	ZENER, HZS33-2	
	87-001-196-080	IC, ICP-N10			87-001-731-080	ZENER, HZS6C2L	
△							
	87-017-194-010	IC, PLT104			87-017-091-080	ZENER, HZS5C1	
	83-NF5-646-010	IC, LC866432V-5506			87-020-331-080	C-DIODE, DAN202K	
	87-017-585-080	IC, NJM4580E			87-001-290-080	ZENER, HZS6B1L	
	87-017-373-010	IC, NJH32H380A			87-020-330-080	C-DIODE, DAP202K	
	87-001-582-010	IC, STK4152-2			87-001-559-080	DIODE, 1SS131 (T-72)	
	87-017-738-010	IC, NJM2068LD			87-017-083-080	ZENER, HZS4C2	
	87-001-982-010	IC, TA7291S		MAIN C.B			
	87-017-674-010	IC, XR1090		C101	87-016-055-090	CAP, E 3300-42 HI-R	
	87-002-727-010	IC, NJM4558L		C102	87-016-055-090	CAP, E 3300-42 HI-R	
	87-017-375-080	IC, TC4094BF		C103	87-010-390-090	CAP, E 3300-25 SME	
				C104	87-010-235-080	CAP, E 470-16 SME	
	87-001-874-010	IC, HA12134A		C105	87-010-381-080	CAP, E 330-16 SME	
	87-017-673-010	IC, BA3837					
	87-017-449-010	IC, XR-1071CP (5100)		C106	87-010-430-080	CAP, E 100-63	
	87-001-607-080	IC, NJM4558M		C107	87-010-260-080	CAP, E 47/25 SME	
	87-017-374-010	IC, TC4094BP		C108	87-010-382-080	CAP, E 22-25 SME	
				C109	87-010-263-080	CAP, E 100-10	
	87-002-247-010	IC, BU4052B		C112	87-010-237-080	CAP, E 1000-16	
	87-017-448-010	IC, GD4052B					
	87-002-272-080	IC, TC4052 BF		C113	87-010-403-080	CAP, E 3.3-50 SME	
	87-001-376-010	IC, LC7218		C115	87-016-247-080	C-CAP, 0.1-50 F	
	87-017-714-010	IC, LA1836		C116	87-012-140-080	C-CAP, S 470P-50 CH	
				C118	87-016-247-080	C-CAP, 0.1-50 F	
	87-002-872-080	IC, MC14053 BF		C119	87-018-205-080	CAP, TC-U 0.022-25 F	
	87-017-309-010	IC, M65830P					
TRANSISTOR				C120	87-018-205-080	CAP, TC-U 0.022-25 F	
	89-110-154-080	TR, 2SA1015Y		C121	87-018-209-080	CAP, TC-U 0.1-50 F	
	87-026-463-080	TR, 2SA933S (RS)		C152	87-010-374-080	CAP, E 47-10	
	89-113-187-080	TR, 2SA1318TU		C213	87-010-404-080	CAP, E 4.7-50 SME	
	87-026-233-080	C-TR, DTA114TK		C214	87-010-404-080	CAP, E 4.7-50 SME	
	87-026-211-080	C-TR, DTA144EK T147					
				C215	87-010-182-080	C-CAP, S 2200P-50 B	
	89-213-702-010	TR, 2SB1370E		C216	87-010-182-080	C-CAP, S 2200P-50 B	
	87-026-609-080	TR, KTA1266GR		C217	87-010-404-080	CAP, E 4.7-50 SME	
	87-026-610-080	TR, KTC3198GR		C218	87-010-404-080	CAP, E 4.7-50 SME	
	89-327-125-080	C-TR, 2SC2712GR		C219	87-010-185-080	C-CAP, S 3900P-50 B	
	89-332-665-080	TR, 2SC3266GR					
				C220	87-010-185-080	C-CAP, S 3900P-50 B	
	89-111-625-080	C-TR, 2SA1162GR		C221	87-010-545-080	CAP, E 0.22-50 SME	
	89-333-266-080	C-TR, 2SC3326B		C222	87-010-545-080	CAP, E 0.22-50 SME	
	87-026-232-080	C-TR, DTA144WK		C223	87-010-260-080	CAP, E 47-25 SME	
	87-026-210-080	C-TR, DTC144EK T147		C224	87-010-260-080	CAP, E 47-25 SME	
	89-213-293-080	TR, 2SB1329R					
				C225	87-010-260-080	CAP, E 47-25 SME	
	89-318-154-080	TR, 2SC1815Y		C226	87-010-260-080	CAP, E 47-25 SME	
	89-333-317-080	TR, 2SC3331T		C227	87-012-368-080	C-CAP, S 0.1-50F	
	87-026-213-080	C-TR, DTC114YK		C228	87-012-368-080	C-CAP, S 0.1-50F	
	87-026-226-080	C-TR, DTA143EK		C229	87-012-361-080	C-CAP, S 0.056-25 Y	
	89-503-655-680	FET, 2SK365GR, BL					
				C230	87-012-361-080	C-CAP, S 0.056-25 Y	
	87-026-224-080	C-TR, DTC143XK		C236	87-010-408-080	CAP, E 47-50 SME	
	89-109-521-080	TR, 2SA952K		C243	87-010-154-080	C-CAP, S 10P-50 CH	
	89-112-965-080	TR, 2SA1296GR		C244	87-010-154-080	C-CAP, S 10P-50 CH	
	89-406-555-080	TR, 2SD655E		C245	87-010-194-080	C-CAP, S 0.047-25 F	
	89-502-464-080	FET, 2SK246Y					
				C250	87-010-196-080	C-CAP, S 0.1-25 F	
	87-026-214-080	TR, DTA114YS		C303	87-012-155-080	C-CAP, S 180P-50 CH	
	89-327-143-080	C-TR, 2SC2714 (O)		C304	87-012-155-080	C-CAP, S 180P-50 CH	
	89-503-025-080	C-FET, 2SK302 GR		C305	87-010-189-080	C-CAP, S 8200P-50 B	
	89-505-434-580	C-FET, 2SK543 (4/5)		C306	87-010-189-080	C-CAP, S 8200P-50 B	
DIODE							
	87-002-564-080	DIODE, 1SS133 RA		C309	87-010-197-080	C-CAP, S 0.01-25 B	
	87-017-447-010	DIODE, GBU4DL		C310	87-010-197-080	C-CAP, S 0.01-25 B	
	87-002-608-080	DIODE, DSF10TC		C311	87-010-213-080	C-CAP, S 0.015-25 B	
	87-017-011-080	DIODE, LT IN4003L		C312	87-010-213-080	C-CAP, S 0.015-25 B	
	87-020-691-080	DIODE, 1SS132 T-72		C313	87-010-197-080	C-CAP, S 0.1-25 B	
	87-020-027-080	C-DIODE, 1SS184		C351	87-012-154-080	C-CAP, S 150P-50 CH	
				C352	87-012-154-080	C-CAP, S 150P-50 CH	
				C353	87-012-145-080	C-CAP, S 270P-50 CH	
				C354	87-012-145-080	C-CAP, S 270P-50 CH	
				C355	87-012-154-080	C-CAP, S 150P-50 CH	

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C356	87-012-154-080	C-CAP, S	150P-50 CH
C357	87-010-189-080	C-CAP, S	8200P-50 B
C358	87-010-189-080	C-CAP, S	8200P-50 B
C361	87-010-197-080	C-CAP, S	0.01-25 B
C362	87-010-197-080	C-CAP, S	0.01-25 B
C363	87-010-197-080	C-CAP, S	0.01-25 B
C364	87-010-197-080	C-CAP, S	0.01-25 B
C401	87-010-402-080	CAP, E	2.2-50 SME
C402	87-010-402-080	CAP, E	2.2-50 SME
C405	87-010-197-080	C-CAP, S	0.01-25 B
C406	87-010-197-080	C-CAP, S	0.01-25 B
C409	87-010-181-080	C-CAP, S	1800P-50 B
C410	87-010-181-080	C-CAP, S	1800P-50 B
C411	87-010-188-080	C-CAP, S	6800P-50 B
C412	87-010-188-080	C-CAP, S	6800P-50 B
C415	87-012-154-080	C-CAP, S	150P-50 CH
C416	87-012-154-080	C-CAP, S	150P-50 CH
C451	87-012-156-080	C-CAP, S	220P-50 CH
C452	87-012-156-080	C-CAP, S	220P-50 CH
C453	87-010-178-080	C-CAP, S	1000P-50 B
C456	87-010-260-080	CAP, E	47-25 SME
C457	87-010-197-080	C-CAP, S	0.01-25 B
C458	87-010-183-080	C-CAP, S	2700P-50 B
C459	87-010-183-080	C-CAP, S	2700P-50 B
C460	87-010-183-080	C-CAP, S	2700P-50 B
C470	87-010-196-080	C-CAP, S	0.1-25 F
C501	87-010-196-080	C-CAP, S	0.1-25 F
C502	87-010-196-080	C-CAP, S	0.1-25 F
C503	87-012-155-080	C-CAP, S	180P-50 CH
C504	87-012-155-080	C-CAP, S	180P-50 CH
C507	87-010-178-080	C-CAP, S	1000P-50 B
C508	87-010-178-080	C-CAP, S	1000P-50 B
C509	87-010-371-080	CAP, E	470-6.3
C515	87-010-545-080	CAP, E	0.22-50 SME
C516	87-010-545-080	CAP, E	0.22-50 SME
C517	87-012-142-080	C-CAP, S	0.33-16 F
C518	87-012-142-080	C-CAP, S	0.33-16 F
C519	87-010-196-080	C-CAP, S	0.1-25 F
C521	87-010-197-080	C-CAP, S	0.01-25 B
C522	87-010-318-080	C-CAP, S	47P-50 CH
C523	87-010-197-080	C-CAP, S	0.01-25 B
C524	87-010-402-080	CAP, E	2.2-50 SME
C530	87-010-194-080	C-CAP, S	0.047-25 F
C531	87-010-545-080	CAP, E	0.22-50 SME
C532	87-010-382-080	CAP, E	22-25 SME
C533	87-010-404-080	CAP, E	4.7-50 SME
C534	87-010-404-080	CAP, E	4.7-50 SME
C535	87-010-404-080	CAP, E	4.7-50 SME
C536	87-010-404-080	CAP, E	4.7-50 SME
C537	87-010-196-080	C-CAP, S	0.1-25 F
C538	87-010-196-080	C-CAP, S	0.1-25 F
C539	87-010-405-080	CAP, E	10-50 SME
C540	87-010-260-080	CAP, E	47-25 SME
C541	87-010-196-080	C-CAP, S	0.1-25 F
C543	87-010-546-080	CAP, E	0.33-50 SME
C544	87-010-546-080	CAP, E	0.33-50 SME
C545	87-010-400-080	CAP, E	0.47-50 SME
C546	87-010-400-080	CAP, E	0.47-50 SME
C547	87-012-365-080	C-CAP, S	0.027-25 BK
C548	87-012-365-080	C-CAP, S	0.027-25 BK
C549	87-012-142-080	C-CAP, S	0.33-16 F
C550	87-016-081-080	C-CAP, S	0.1-16 RK
C551	87-016-081-080	C-CAP, S	0.1-16 RK
C601	87-010-401-080	CAP, E	1-50 SME(5100)
C602	87-010-405-080	CAP, E	10-50 SME(5100)
C603	87-010-101-080	CAP, E	220-16 SME(5100)
C605	87-015-627-080	C-CAP, 1000P-50 B	K(5100)
C606	87-015-627-080	C-CAP, 1000P-50 B	K(5100)
C607	87-010-404-080	CAP, E	4.7-50 SME(5100)
C608	87-010-404-080	CAP, E	4.7-50 SME(5100)

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C609	87-010-404-080	CAP, E	4.7-50 SME(5100)
C610	87-010-404-080	CAP, E	4.7-50 SME(5100)
C611	87-010-177-080	C-CAP, S	820P-50 SL(5100)
C612	87-010-177-080	C-CAP, S	820P-50 SL(5100)
C613	87-010-404-080	CAP, E	4.7-50 SME(5100)
C614	87-010-404-080	CAP, E	4.7-50 SME(5100)
C615	87-010-400-080	CAP, E	0.47-50 SME(5100)
C616	87-010-400-080	CAP, E	0.47-50 SME(5100)
C617	87-010-197-080	C-CAP, S	0.01-25 B(5100)
C618	87-010-197-080	C-CAP, S	0.01-25 B(5100)
C619	87-010-184-080	C-CAP, S	3300P-50 B(5100)
C620	87-010-184-080	C-CAP, S	3300P-50 B(5100)
C621	87-012-155-080	C-CAP, S	180P-50 CH(5100)
C622	87-012-155-080	C-CAP, S	180P-50 CH(5100)
C623	87-010-405-080	CAP, E	10-50 SME(5100)
C624	87-010-405-080	CAP, E	10-50 SME(5100)
C630	87-010-405-080	CAP, E	10-50 SME(5100)
C631	87-010-401-080	CAP, E	1-50 SME(5100)
C640	87-010-196-080	C-CAP, S	0.1-25 F
C641	87-010-196-080	C-CAP, S	0.1-25 F
C645	87-012-142-080	C-CAP, S	0.33-16 F
C646	87-012-142-080	C-CAP, S	0.33-16 F
C647	87-012-142-080	C-CAP, S	0.33-16 F
C648	87-012-142-080	C-CAP, S	0.33-16 F
C701	87-010-381-080	CAP, E	330-16 SME
C702	87-010-404-080	CAP, E	4.7-50 SME
C703	87-010-197-080	C-CAP, S	0.01-25 B
C704	87-010-197-080	C-CAP, S	0.01-25 B
C711	87-010-263-080	CAP, E	100-10
C712	87-010-196-080	C-CAP, S	0.1-25 F
C722	87-010-312-080	C-CAP, S	15P-50 CH
C723	87-010-178-080	C-CAP, S	1000P-50 B
C724	87-010-178-080	C-CAP, S	1000P-50 B
C725	87-010-178-080	C-CAP, S	1000P-50 B
C726	87-010-178-080	C-CAP, S	1000P-50 B
C727	87-010-194-080	C-CAP, S	0.047-25 F
C728	87-010-248-080	CAP, E	220-10 SME
C732	87-010-197-080	C-CAP, S	0.01-25 B
C771	87-010-405-080	CAP, E	10-50 SME
C772	87-010-194-080	C-CAP, S	0.047-25 F
C773	87-010-196-080	C-CAP, S	0.1-25 F
C774	87-010-263-080	CAP, E	100-10
C775	87-010-405-080	CAP, E	10-50 SME
C776	87-010-197-080	C-CAP, S	0.01-25 B
C777	87-010-400-080	CAP, E	0.47-50 SME
C778	87-010-401-080	CAP, E	1-50 SME
C779	87-010-401-080	CAP, E	1-50 SME
C780	87-010-197-080	C-CAP, S	0.01-25 B
C781	87-010-405-080	CAP, E	10-50 SME
C782	87-010-405-080	CAP, E	10-50 SME
C787	87-010-184-080	C-CAP, S	3300P-50 B
C788	87-010-184-080	C-CAP, S	3300P-50 B
C789	87-010-179-080	C-CAP, S	1200P-50 B
C790	87-010-179-080	C-CAP, S	1200P-50 B
C791	87-010-401-080	CAP, E	1-50 SME
C792	87-010-180-080	C-CAP, S	1500P-50 B
C793	87-010-189-080	C-CAP, S	8200P-50 B
C794	87-010-408-080	CAP, E	47-50 SME
C795	87-010-194-080	C-CAP, S	0.047-25 F
C796	87-010-403-080	CAP, E	3.3-50 SME
C797	87-010-405-080	CAP, E	10-50 SME
C798	87-010-196-080	C-CAP, S	0.1-25 F
C802	87-010-154-080	C-CAP, S	10P-50 CH
C804	87-010-151-080	C-CAP, S	7P-50 CH
C805	87-010-150-080	C-CAP, S	6P-50 CH
C806	87-010-145-080	C-CAP, S	1P-50 CH
C807	87-010-154-080	C-CAP, S	10P-50 CH
C808	87-010-322-080	C-CAP, S	100P-50 CH
C809	87-010-197-080	C-CAP, S	0.01-25 B
C810	87-010-197-080	C-CAP, S	0.01-25 B

REF. NO	PART NO.	カリ NO.	DESCRIPTION
C811	87-010-149-080		C-CAP, S 5P-50 CH
C812	87-010-313-080		C-CAP, S 18P-50 CH
C813	87-010-197-080		C-CAP, S 0.01-25 B
C814	87-010-197-080		C-CAP, S 0.01-25 B
C816	87-010-197-080		C-CAP, S 0.01-25 B
C817	87-010-197-080		C-CAP, S 0.01-25 B
C818	87-010-197-080		C-CAP, S 0.01-25 B
C819	87-010-197-080		C-CAP, S 0.01-25 B
C820	87-010-260-080		CAP, E 47-25 SME
C821	87-010-197-080		C-CAP, S 0.01-25 B
C822	87-015-819-080		CHIP CAP 0.01
C823	87-010-197-080		C-CAP, S 0.01-25 B
C830	87-010-197-080		C-CAP, S 0.01-25 B
C831	87-010-154-080		C-CAP, S 10P-50 CH
C835	87-010-154-080		C-CAP, S 10P-50 CH
C836	87-010-312-080		C-CAP, S 15P-50 CH
C837	87-010-312-080		C-CAP, S 15P-50 CH
C840	87-010-197-080		C-CAP, S 0.01-25 B
C843	87-010-146-080		C-CAP, S 2P-50 CH
C944	87-010-311-080		C-CAP, S 12P-50 CH
C946	87-010-401-080		CAP, E 1-50 SME
C947	87-010-197-080		C-CAP, S 0.01-25 B
C948	87-010-401-080		CAP, E 1-50 SME
C950	87-010-322-080		C-CAP, S 100P-50 CH
C981	87-018-134-080		CAP, TC-U 0.01-16 Y
C983	87-010-544-080		CAP, E 0.1-50
C984	87-010-196-080		C-CAP, S 0.1-25 F
C985	87-010-196-080		C-CAP, S 0.1-25 F
C987	87-010-197-080		C-CAP, S 0.01-25 B
C988	87-010-196-080		C-CAP, S 0.1-25 F
C990	87-010-197-080		C-CAP, S 0.01-25 B
CF801	87-008-261-010		FLTR, SFE10.7MA5-A
CF802	87-008-261-010		FLTR, SFE10.7MA5-A
D801	87-002-730-080		VARI-CAP SVC203SPA
D802	87-002-730-080		VARI-CAP SVC203SPA
D803	87-002-730-080		VARI-CAP SVC203SPA
J250	87-049-855-010		JACK, 6.3 W/S
J253	87-099-475-010		JACK, PIN 3P BLK W/E
J254	87-033-226-010		TERMINAL, SP 4P (JT)
J652	80-MT3-616-010		JACK, PIN 2P
J801	82-NF5-621-010		ANT TERM JBT 0222
L401	87-003-131-080		COIL, 10MH J
L402	87-003-131-080		COIL, 10MH J
L403	87-005-525-080		COIL, 22MH-J
L404	87-005-525-080		COIL, 22MH-J
L451	82-NV3-610-010		COIL, OSC BIAS 85K
L701	81-631-643-010		COIL, 1 POLE MPX
L702	81-631-643-010		COIL, 1 POLE MPX
L741	87-006-253-010		COIL, FM DET N
L742	81-NT1-659-010		FLTR, CFAZ-450 2NT
L770	87-003-102-080		COIL, 10UH
L771	87-003-098-080		COIL, 2.2UH
L801	87-006-249-010		COIL, ANT FM3/4TS, L4
L802	87-006-254-010		COIL, ANT FM2-3/4TS, S
L803	87-006-244-010		COIL, RF FM 3-1/2T, L4
L804	87-006-250-010		COIL, RF FM 3-1/2TS, L4
L805	87-003-098-080		COIL, 2.2UH
L806	87-008-427-010		COIL, FMIFT (4T)
L807	87-006-205-010		COIL, OSC FM (7K)
L832	87-003-098-080		COIL, 2.2UH
L981	82-NT3-632-010		AM PACK 1, SAG
R105	87-022-050-080		RES, METAL 1W-0.22J
R106	87-022-050-080		RES, METAL 1W-0.22J
RY101	87-045-361-010		RELAY, DH12D2-OS(M)-2
SFR301	87-024-349-080		SFR, 1K DIA6 H
SFR302	87-024-349-080		SFR, 1K DIA6 H
SFR351	87-024-349-080		SFR, 1K DIA6 H
SFR352	87-024-349-080		SFR, 1K DIA6 H
SFR401	87-024-349-080		SFR, 1K DIA6 H
SFR402	87-024-349-080		SFR, 1K DIA6 H

REF. NO	PART NO.	カリ NO.	DESCRIPTION
SFR451	87-024-356-080		SFR, 47K DIA6 H
SFR452	87-024-356-080		SFR, 47K DIA6 H
SFR722	87-024-171-080		SFR, 4.7K DIA6 V
SFR771	87-024-173-080		SFR, 22K DIA6 V
TC701	87-011-221-080		TRIMER 30P VCT51
TC801	87-011-219-080		CAP TRIMMER 10P VCT
TC802	87-011-219-080		CAP TRIMMER 10P VCT
VR651	83-NF5-639-010		VR, 50KBX2 RK14K12A0
W101	81-MX4-647-010		F-CABEL, 7P-2.5
X703	84-508-618-010		V1B, CER CSB 456 F/5
X721	87-030-163-010		V1B, XTAL 7.2MHZ(NDK)
FRONT C. B			
C201	87-010-404-040		CAP, E 4.7-50 SME
C202	87-010-404-040		CAP, E 4.7-50 SME
C203	87-010-408-040		CAP, E 47-50 SME
C204	87-010-401-040		CAP, E 1-50 SME
C205	87-010-263-040		CAP, E 100-10
C206	87-010-248-040		CAP, E 220-10
C207	87-010-401-040		CAP, E 1-50 SME
C208	87-010-805-080		C-CAP, S 1-16 F
C210	87-010-146-080		C-CAP, S 2P-50 CH
C212	87-010-405-040		CAP, E 10-50 SME
C213	87-010-196-080		C-CAP, S 0.1-25 F
C214	87-010-196-080		C-CAP, S 0.1-25 F
C215	87-010-196-080		C-CAP, S 0.1-25 F
C242	87-012-140-080		C-CAP, S 470P-50 CH
C352	87-010-197-080		C-CAP, S 0.01-25 B
C381	87-010-196-080		C-CAP, S 0.1-25 F
C382	87-010-196-080		C-CAP, S 0.1-25 F
C383	87-010-196-080		C-CAP, S 0.1-25 F
C389	87-010-150-080		C-CAP, S 6P-50 CH
C401	87-010-196-080		C-CAP, S 0.1-25 F
C501	87-010-384-040		CAP, E 100-25 SME
C604	87-010-183-080		C-CAP, S 2700P-50 B
C606	87-010-401-040		CAP, E 1-50 SME
C607	87-012-140-080		C-CAP, S 470P-50 CH
C608	87-010-405-040		CAP, E 10-50 SME
C609	87-010-196-080		C-CAP, S 0.1-25 F
C610	87-012-145-080		C-CAP, S 270P-50CH
C613	87-010-805-080		C-CAP, S 1-16 F
C624	87-010-183-080		C-CAP, S 2700P-50 B
C626	87-010-401-040		CAP, E 1-50 SME
C627	87-012-140-080		C-CAP, S 470P-50 CH
C630	87-010-405-040		CAP, E 10-50 SME
C640	87-010-405-040		CAP, E 10-50 SME
C645	87-010-263-040		CAP, E 100-10
C646	87-010-196-080		C-CAP, S 0.1-25 F
C650	87-010-260-040		CAP, E 47-25 SME
C701	87-010-175-080		C-CAP, S 560P-50 SL
C702	87-010-175-080		C-CAP, S 560P-50 SL
C703	87-010-154-080		C-CAP, S 10P-50 CH
C704	87-010-154-080		C-CAP, S 10P-50 CH
C705	87-012-154-080		C-CAP, S 150P-50 CH
C706	87-012-154-080		C-CAP, S 150P-50 CH
C707	87-010-220-080		C-CAP, S 0.018-25 B
C708	87-010-220-080		C-CAP, S 0.018-25 B
C709	87-010-186-080		C-CAP, S 4700P-50 B
C710	87-010-186-080		C-CAP, S 4700P-50 B
C711	87-012-140-080		C-CAP, S 470P-50 CH
C712	87-012-140-080		C-CAP, S 470P-50 CH
C713	87-010-213-080		C-CAP, S 0.015-25 B
C714	87-010-213-080		C-CAP, S 0.015-25 B
C715	87-010-318-080		C-CAP, S 47P-50 CH
C716	87-010-318-080		C-CAP, S 47P-50 CH
C717	87-010-178-080		C-CAP, S 1000P-50 B
C718	87-010-178-080		C-CAP, S 1000P-50 B
C719	87-010-176-080		C-CAP, S 680P-50 SL

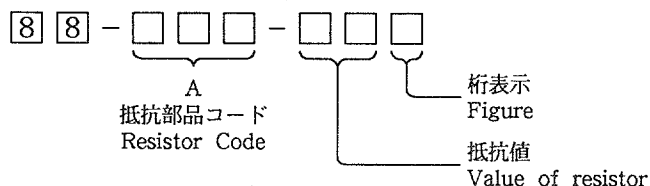
REF. NO	PART NO.	カンリ NO.	DESCRIPTION	REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C720	87-010-176-080		C-CAP, S 680P-50 SL	C8	87-010-403-080		CAP, E 3.3-50 SME
C721	87-010-402-040		CAP, E 2.2-50 SME	C9	87-010-382-080		CAP, E 22-25 SME
C722	87-010-402-040		CAP, E 2.2-50 SME	C10	87-010-260-080		CAP, E 47-25 SME
C729	87-010-263-040		CAP, E 100-10	C11	87-010-197-080		C-CAP, S 0.01-25 B
C730	87-010-384-040		CAP, E 100-25 SME	C12	87-010-193-080		C-CAP, S 0.033-25 F
FL101	83-NF5-630-010		FIL, BJ238GK	C13	87-010-197-080		C-CAP, S 0.01-25 B
FT101	83-NF5-632-010		CABLE FFC, 6P-1.25	C14	87-010-193-080		C-CAP, S 0.033-25 F
FT102	82-NF5-651-010		CABLE FFC, 14P-1.25	C15	87-010-182-080		C-CAP, S 2200P-50 B
J601	82-NF7-630-010		JACK, 3.5 MO	C21	87-010-198-080		C-CAP, S 0.022-25 B
J621	82-NF7-630-010		JACK, 3.5 MO	C22	87-010-196-080		C-CAP, S 0.1-25 F
L349	87-003-149-080		COIL, 47UH	C23	87-010-263-080		CAP, E 100-10
LED401	87-017-784-080		LED, SEL1550CM TP8	C24	87-010-178-080		C-CAP, S 1000P-50 B
LED402	87-017-784-080		LED, SEL1550CM TP8	C25	87-010-197-080		C-CAP, S 0.01-25 B
LED403	87-017-784-080		LED, SEL1550CM TP8	C26	87-010-260-080		CAP, E 47-25 SME
LED404	87-017-784-080		LED, SEL1550CM TP8	C27	87-010-196-080		C-CAP, S 0.1-25 F
LED405	87-017-784-080		LED, SEL1550CM TP8	C28	87-010-263-080		CAP, E 100-10
LED406	87-017-784-080		LED, SEL1550CM TP8	C29	87-010-197-080		C-CAP, S 0.01-25 B
LED407	87-017-731-080		LED, SEL1510CM2	C30	87-010-196-080		C-CAP, S 0.1-25 F
LED408	87-017-731-080		LED, SEL1510CM2	C31	87-010-193-080		C-CAP, S 0.033-25 F
LED409	87-017-785-080		LED, SEL4214S	C33	87-010-196-080		C-CAP, S 0.1-25 F
LED410	87-017-731-080		LED, SEL1510CM2	C34	87-010-197-080		C-CAP, S 0.01-25 B
LED411	87-017-731-080		LED, SEL1510CM2	C35	87-010-381-080		CAP, E 330-16 SME
LED412	87-017-731-080		LED, SEL1510CM2	C36	87-010-196-080		C-CAP, S 0.1-25 F
LED413	87-017-731-080		LED, SEL1510CM2	C37	87-010-260-080		CAP, E 47-25 SME
LED414	87-017-731-080		LED, SEL1510CM2	C38	87-010-197-080		C-CAP, S 0.01-25 B
LED420	87-017-785-080		LED, SEL4214S	C39	87-010-260-080		CAP, E 47-25 SME
LED421	87-017-731-080		LED, SEL1510CM2	C40	87-010-197-080		C-CAP, S 0.01-25 B
LED422	87-017-785-080		LED, SEL4214S	C41	87-010-146-080		C-CAP, S 2P-50 CH
LED423	87-017-785-080		LED, SEL4214S	C42	87-010-154-080		C-CAP, S 10P-50 CH
S301	87-036-215-080		SW, TACT EVQ21404M	C45	87-010-196-080		C-CAP, S 0.1-25 F
S302	87-036-215-080		SW, TACT EVQ21404M	C101	87-010-194-080		C-CAP, S 0.047-25 F
S303	87-036-215-080		SW, TACT EVQ21404M	C102	87-010-180-080		C-CAP, S 1500P-50 B
S304	87-036-215-080		SW, TACT EVQ21404M	C103	87-010-263-080		CAP, E 100-10
S305	87-036-215-080		SW, TACT EVQ21404M	C104	87-010-197-080		C-CAP, S 0.01-25 B
S306	87-036-215-080		SW, TACT EVQ21404M	C105	87-010-186-080		C-CAP, S 4700P-50 B
S307	87-036-215-080		SW, TACT EVQ21404M	C106	87-012-156-080		C-CAP, S 220P-50 CH
S308	87-036-215-080		SW, TACT EVQ21404M	C107	87-010-197-080		C-CAP, S 0.01-25 B
S321	87-036-215-080		SW, TACT EVQ21404M	C108	87-010-400-080		CAP, E 0.47-50 SME
S322	87-036-215-080		SW, TACT EVQ21404M	C112	87-010-154-080		C-CAP, S 10P-50 CH
S323	87-036-215-080		SW, TACT EVQ21404M	C113	87-010-154-080		C-CAP, S 10P-50 CH
S324	87-036-215-080		SW, TACT EVQ21404M	C114	87-010-314-080		C-CAP, S 22P-50 CH
S325	87-036-215-080		SW, TACT EVQ21404M	C115	87-010-404-080		CAP, E 4.7-50 SME
S326	87-036-215-080		SW, TACT EVQ21404M	C116	87-010-263-080		CAP, E 100-10
S327	87-036-215-080		SW, TACT EVQ21404M	C117	87-010-194-080		C-CAP, S 0.047-25 F
S328	87-036-215-080		SW, TACT EVQ21404M	C118	87-010-154-080		C-CAP, S 10P-50 CH
S329	87-036-215-080		SW, TACT EVQ21404M	C120	87-010-263-080		CAP, E 100-10
S330	87-036-215-080		SW, TACT EVQ21404M	C121	87-010-197-080		C-CAP, S 0.01-25 B
S331	87-036-215-080		SW, TACT EVQ21404M	C122	87-010-196-080		C-CAP, S 0.1-25 F
S332	87-036-215-080		SW, TACT EVQ21404M	C201	87-012-153-080		C-CAP, S 120P-50 CH
S341	87-036-215-080		SW, TACT EVQ21404M	C202	87-012-153-080		C-CAP, S 120P-50 CH
S342	87-036-215-080		SW, TACT EVQ21404M	C203	87-012-153-080		C-CAP, S 120P-50 CH
S343	87-036-215-080		SW, TACT EVQ21404M	C204	87-012-153-080		C-CAP, S 120P-50 CH
S344	87-036-215-080		SW, TACT EVQ21404M	C205	87-012-153-080		C-CAP, S 120P-50 CH
S345	87-036-215-080		SW, TACT EVQ21404M	C206	87-012-153-080		C-CAP, S 120P-50 CH
S346	87-036-215-080		SW, TACT EVQ21404M	C207	87-012-153-080		C-CAP, S 120P-50 CH
S347	87-036-215-080		SW, TACT EVQ21404M	C208	87-012-153-080		C-CAP, S 120P-50 CH
S348	87-036-215-080		SW, TACT EVQ21404M (5100)	C209	87-012-153-080		C-CAP, S 120P-50 CH
VR601	82-NK7-616-010		VR, 10KB RK11K1130	C210	87-012-153-080		C-CAP, S 120P-50 CH
VR602	82-NK7-615-010		VR, 10KA RK11K1130	C211	87-010-401-080		CAP, E 1-50 SME
X201	87-030-345-080		VIB, CER CST 5.76MCW	C212	87-010-401-080		CAP, E 1-50 SME
3CD C.B				C213	87-010-186-080		C-CAP, S 4700P-50 B
C1	87-010-188-080		C-CAP, S 6800P-50 B	C214	87-010-186-080		C-CAP, S 4700P-50 B
C2	87-010-196-080		C-CAP, S 0.1-25 F	C231	87-010-263-080		CAP, E 100-10
C3	87-010-196-080		C-CAP, S 0.1-25 F	C232	87-010-263-080		CAP, E 100-10
C4	87-010-196-080		C-CAP, S 0.1-25 F	C301	87-010-178-080		C-CAP, S 1000P-50 B
C5	87-010-404-080		CAP, E 4.7-50 SME	C304	87-010-197-080		C-CAP, S 0.01-25 B
C6	87-010-213-080		C-CAP, S 0.015-25 B	C305	87-010-260-080		CAP, E 47-25 SME
C7	87-010-197-080		C-CAP, S 0.01-25 B	C306	87-010-198-080		C-CAP, S 0.022-25 B
				C307	87-010-178-080		C-CAP, S 1000P-50 B
				C308	87-010-178-080		C-CAP, S 1000P-50 B

REF. NO	PART NO.	カンリ NO.	DESCRIPTION	REF. NO	PART NO.	カンリ NO.	DESCRIPTION
L1	87-003-295-080		COIL, 10UH	LED417	87-002-787-080		LED, SEL 6215S RED
M301	87-045-305-010		MOTOR, RF-500TB	S349	87-036-215-080		SW, TACT EVQ21404M
SFR1	87-024-176-080		SFR, 100K DIA6 V	S350	87-036-215-080		SW, TACT EVQ21404M
SFR2	87-024-173-080		SFR 22K DIA6 V	S351	87-036-215-080		SW, TACT EVQ21404M
SFR3	87-024-176-080		SFR, 100K DIA6 V	S352	87-036-215-080		SW, TACT EVQ21404M
W301	83-NF5-631-010		F-CABLE, 6-2.0 300	S353	87-036-215-080		SW, TACT EVQ21404M
W501	83-NF5-644-010		F-CABLE, 2-2.0-230				
X101	87-030-227-080		VIB, XTAL 33.8688MHZ				
ECHO/DSP C. B				SNSR C. B			
C901	87-010-248-040		CAP, E 220-10 SME	PH401	87-026-573-010		P-SNSR, GP1S53V
C902	87-010-384-040		CAP, E 100-25 SME				
C903	87-010-186-080		C-CAP, S 4700P-50 B	MOTOR-1 C. B			
C904	87-010-322-080		C-CAP, S 100P-50 CH	M302	87-045-305-010		MOTOR, RF-500TB
C905	87-010-401-040		CAP, E 1-50 SME				
C906	87-010-187-080		C-CAP, S 5600P-50 B	U/D SW C. B			
C907	87-010-193-080		C-CAP, S 0.033-25 F	SW601	87-036-271-010		SW, LVR 1-2-2 (*)
C908	87-010-544-040		CAP, E 0.1-50 SME				
C909	87-010-188-080		C-CAP, S 6800P-50 B	OPEN SW C. B			
C910	87-012-365-080		C-CAP, S 0.027-25V BK	SW602	87-036-271-010		SW, LVR 1-2-2 (*)
C911	87-010-263-040		CAP, E 100-10				
C912	87-010-196-080		C-CAP, S 0.1-25 F	CLOSE SW C. B			
C913	87-010-316-080		C-CAP, S 33P-50 CH	SW701	87-036-109-010		SW, PUSH SPPB 61
C914	87-010-177-080		C-CAP, S 820P-50 SL				
C915	87-010-316-080		C-CAP, S 33P-50 CH	LED C. B			
C916	87-010-177-080		C-CAP, S 820P-50 SL	LED902	87-017-806-010		LED, SEL1810DM
C917	87-010-179-080		C-CAP, S 1200P-50 B	LED902	87-017-806-010		LED, SEL1810DM
C918	87-010-196-080		C-CAP, S 0.1-25 F	LED903	87-017-350-080		LED, SEL1550CM
C919	87-010-260-040		CAP, E 47-25 SME	LED903	87-017-350-080		LED, SEL1550CM
C920	87-010-400-040		CAP, E 0.47-50	LED904	87-017-350-080		LED, SEL1550CM
C921	87-010-400-040		CAP, E 0.47-50	LED904	87-017-350-080		LED, SEL1550CM
C922	87-010-196-080		C-CAP, S 0.1-25 F	LED905	87-017-806-010		LED, SEL1810DM
C923	87-010-187-080		C-CAP, S 5600P-50 B	LED905	87-017-806-010		LED, SEL1810DM
C924	87-010-179-080		C-CAP, S 1200P-50 B				
C925	87-010-198-080		C-CAP, S 0.022-25 B	MOTOR-2 C. B			
C926	87-010-196-080		C-CAP, S 0.1-25 F	M2	9X-262-513-210		SLED MOTOR
C927	87-010-181-080		C-CAP, S 1800P-50 B	S4	91-572-085-110		LEAF SW
C928	87-010-181-080		C-CAP, S 1800P-50 B				
C929	87-010-382-040		CAP, E 22-25 SME	AC2 C. B			
C941	87-010-197-080		C-CAP, S 0.01-25 B	△PT1	83-NF5-606-010		PT, 3NF-5 HE
C942	87-010-197-080		C-CAP, S 0.01-25 B	R101	87-022-537-080		RES, NF 0.68-1/2W J
C960	87-010-260-040		CAP, E 47-25 SME	R102	87-022-537-080		RES, NF 0.68-1/2W J
L901	87-005-490-080		COIL, 270UH J FLR50				
MVR C. B				DECK-1 C. B			
C735	87-010-402-040		CAP, E 2.2-50 SME	SOL1	82-ZM1-618-310		SOL ASSY, 27
C736	87-010-402-040		CAP, E 2.2-50 SME	SW4	87-036-110-010		SW, PUSH SPPB 62
C738	87-010-370-040		CAP, E 330-6.3 SME	SW5	87-036-110-010		SW, PUSH SPPB 62
C741	87-010-192-080		C-CAP, S 0.022-50 F	SW6	87-036-110-010		SW, PUSH SPPB 62
C745	87-016-073-080		CAP, E 1-50 FX				
C746	87-016-073-080		CAP, E 1-50 FX	DECK-2 C. B			
C747	87-010-401-040		CAP, E 1-50 SME	SFR1	87-024-170-080		SFR, 3.3K DIA6 V
C748	87-010-401-040		CAP, E 1-50 SME	SOL2	82-ZM1-618-310		SOL ASSY, 27
C750	87-010-384-040		CAP, E 100-25 SME	SW2	87-036-110-010		SW, PUSH SPPB 62
C751	87-010-401-040		CAP, E 1-50 SME	SW3	87-036-110-010		SW, PUSH SPPB 62
C752	87-010-401-040		CAP, E 1-50 SME	SW4	87-036-110-010		SW, PUSH SPPB 62
C757	87-010-401-040		CAP, E 1-50 SME	SW5	87-036-110-010		SW, PUSH SPPB 62
C773	87-010-400-040		CAP, E 0.47-50 SME	SW6	87-036-110-010		SW, PUSH SPPB 62
C777	87-010-403-040		CAP, E 3.3-50 SME				
C778	87-010-403-040		CAP, E 3.3-50 SME	RELAY-1 C. B			
C797	87-010-401-040		CAP, E 1-50 SME				
MVR741	81-MT3-630-010		VOL, 50KBX2 (M)				
KEY C. B							
C351	87-010-197-080		C-CAP, S 0.01-25 B				
LED415	87-002-787-080		LED, SEL 6215S RED				
LED416	87-002-787-080		LED, SEL 6215S RED				

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
RELAY-2	C. B		
AC1	C. B		
△	87-033-147-010		CLAMP, FUSE<5250>
△	82-304-743-010		TERMINAL, 1P
△ F101	87-035-415-010		FUSE, T2. 5A 250V UL<5250>
△ SW101	87-036-235-010		SW, SLIDE ESD269<5250>

○ 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

Wattage 容量	Type 種類	Tolerance 許容誤差	Symbol 記号	Dimensions／寸法 (mm)				Resistor Code : A
				Form/外形	L	W	t	抵抗コード : A
1/32W	1608	± 5 %	CJ		1.6	0.8	0.35	108
1/10W	2125	± 5 %	CJ		2	1.25	1.45	118
1/8W	3126	± 5 %	CJ		3.2	1.6	0.5 ~0.7	128

TRANSISTOR ILLUSTRATION



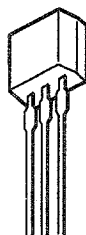
ECB

2SA952 2SC3266
2SA1015 2SC3331
2SA1296 2SD655
2SA1318 KTA1266
2SC1815 KTC3198



SGD

2SK246



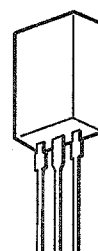
ECB

2SA933S
DTA114YS



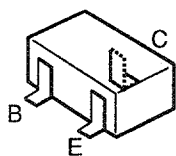
DGS

2SK365



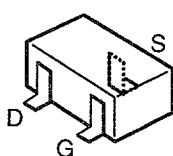
BCE

2SB1329R



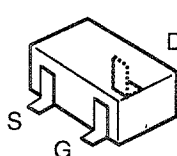
BCE

2SA1162 DTA144EK
2SC2712 DTA144WK
2SC2714 DTC114YK
2SC3326 DTC143XK
DTA114TK DTC144EK
DTA143EK



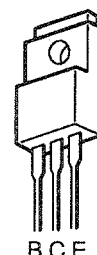
DGS

2SK302



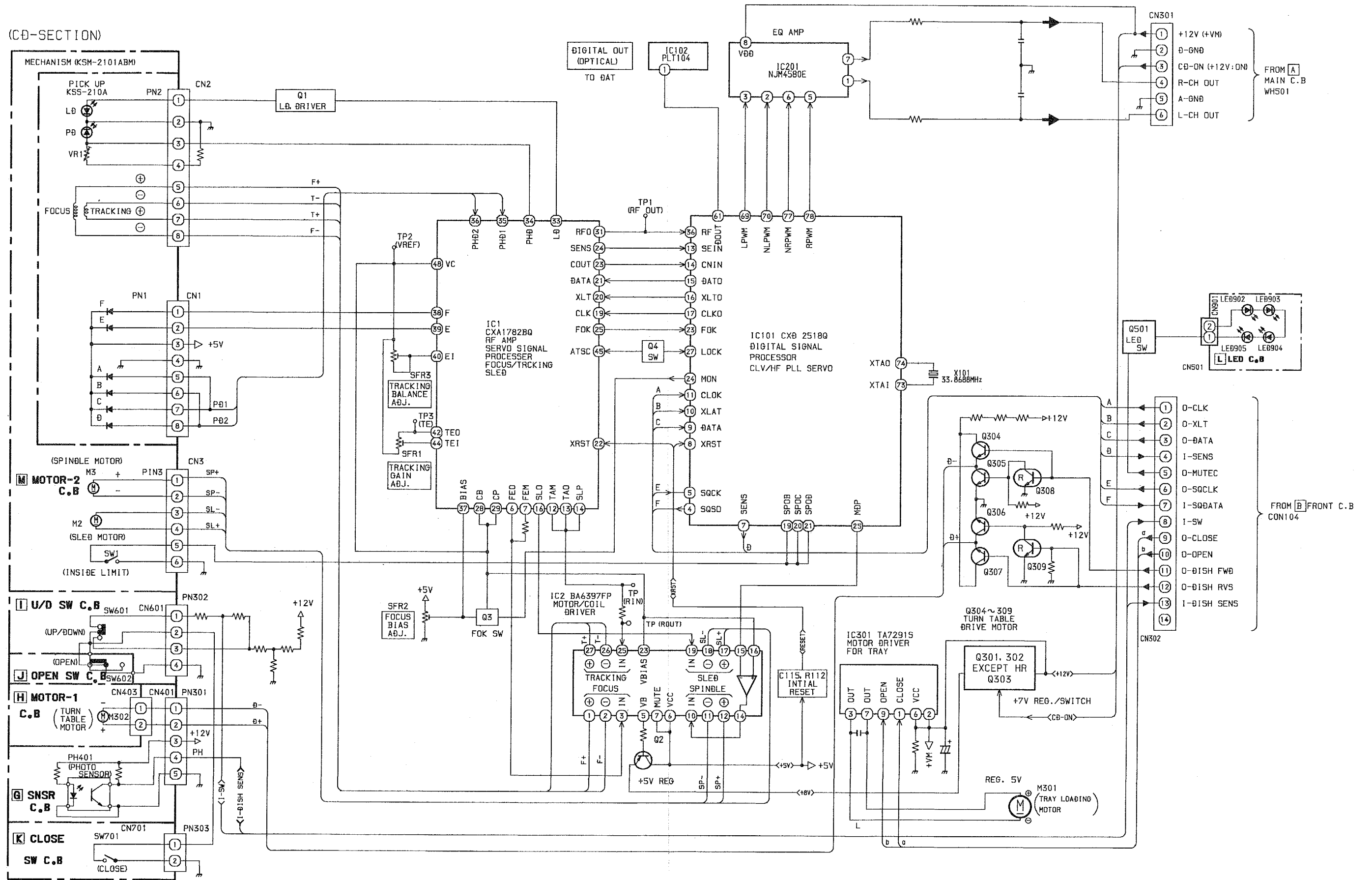
SGD

2SK543

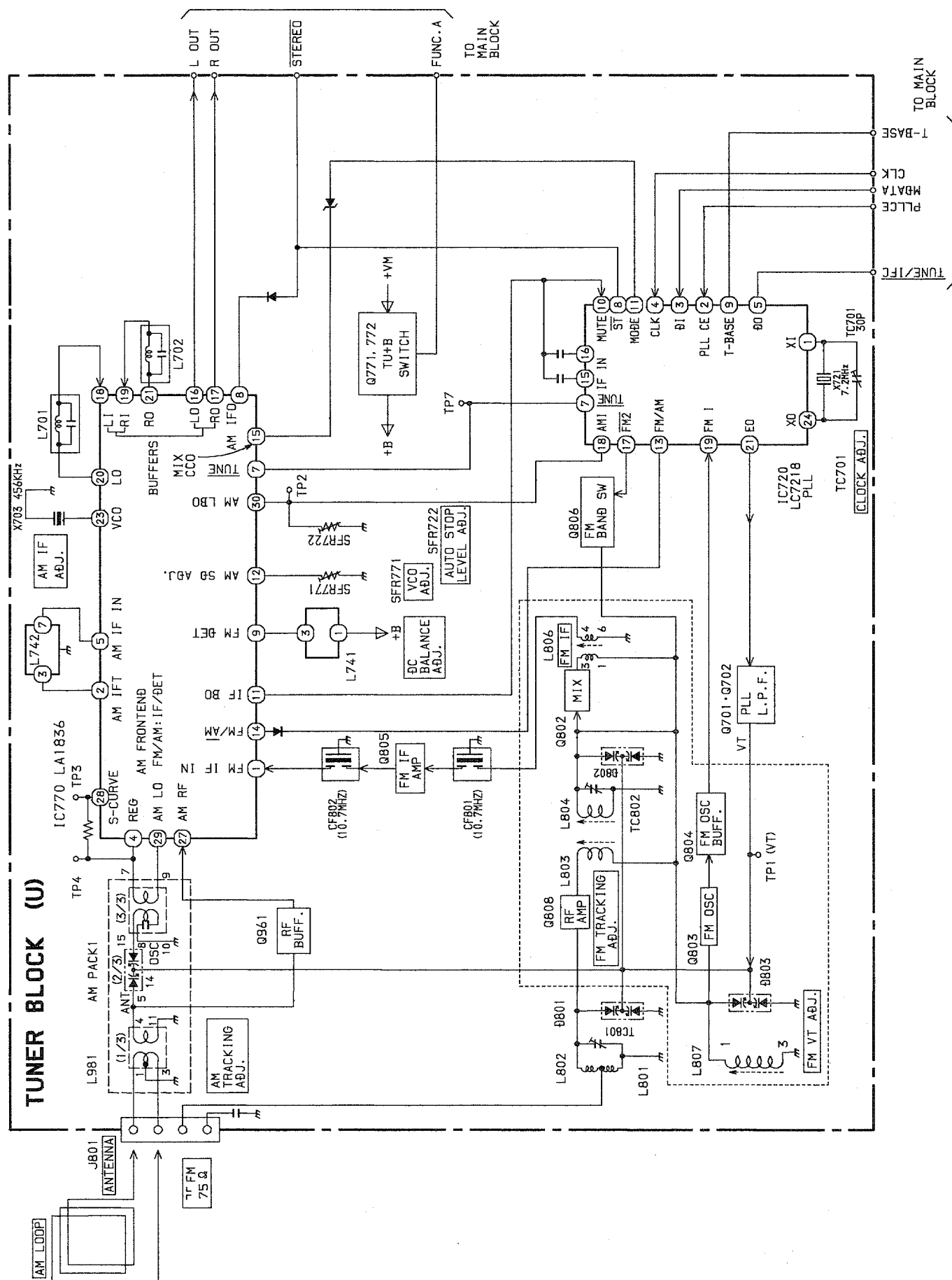


BCE

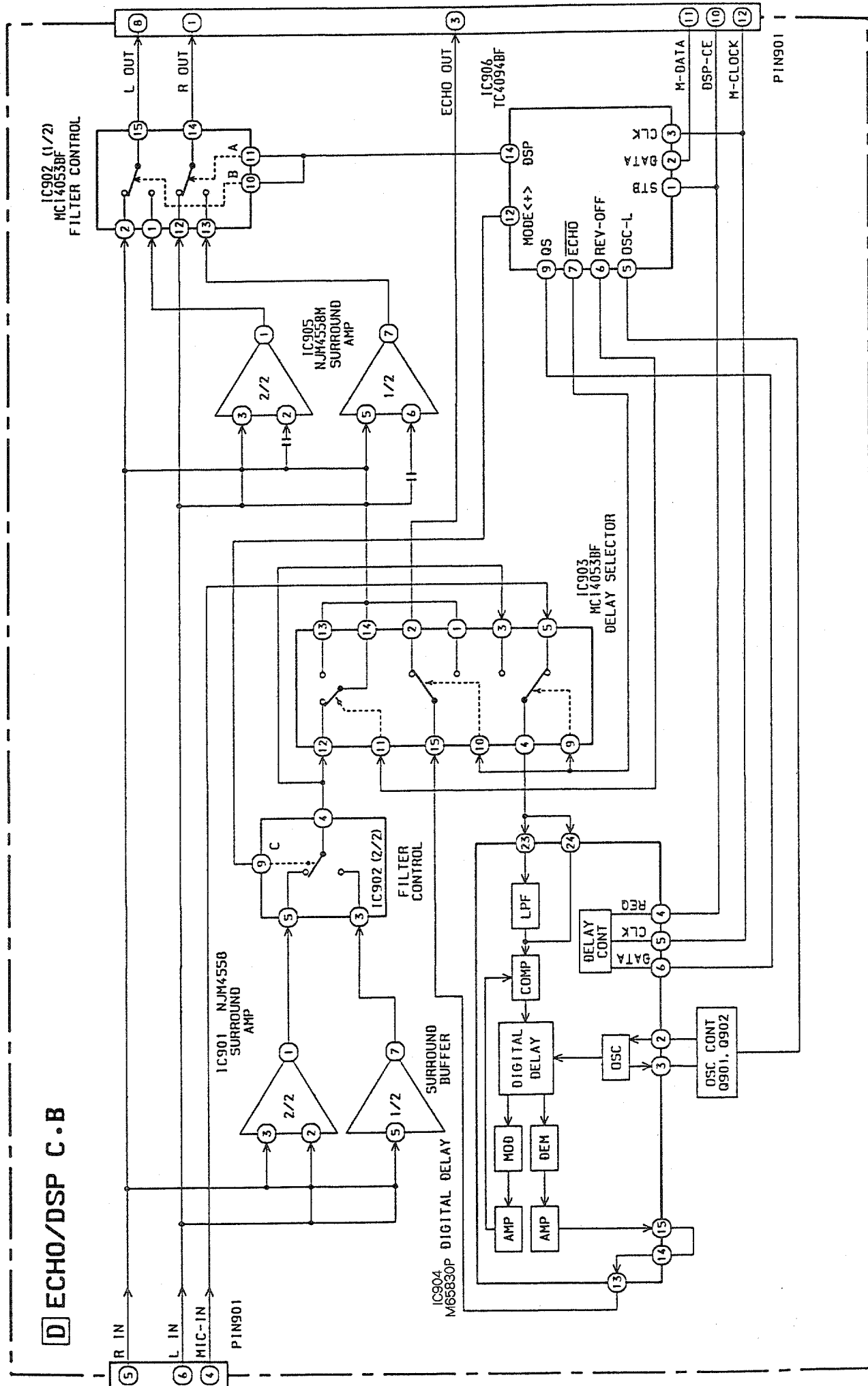
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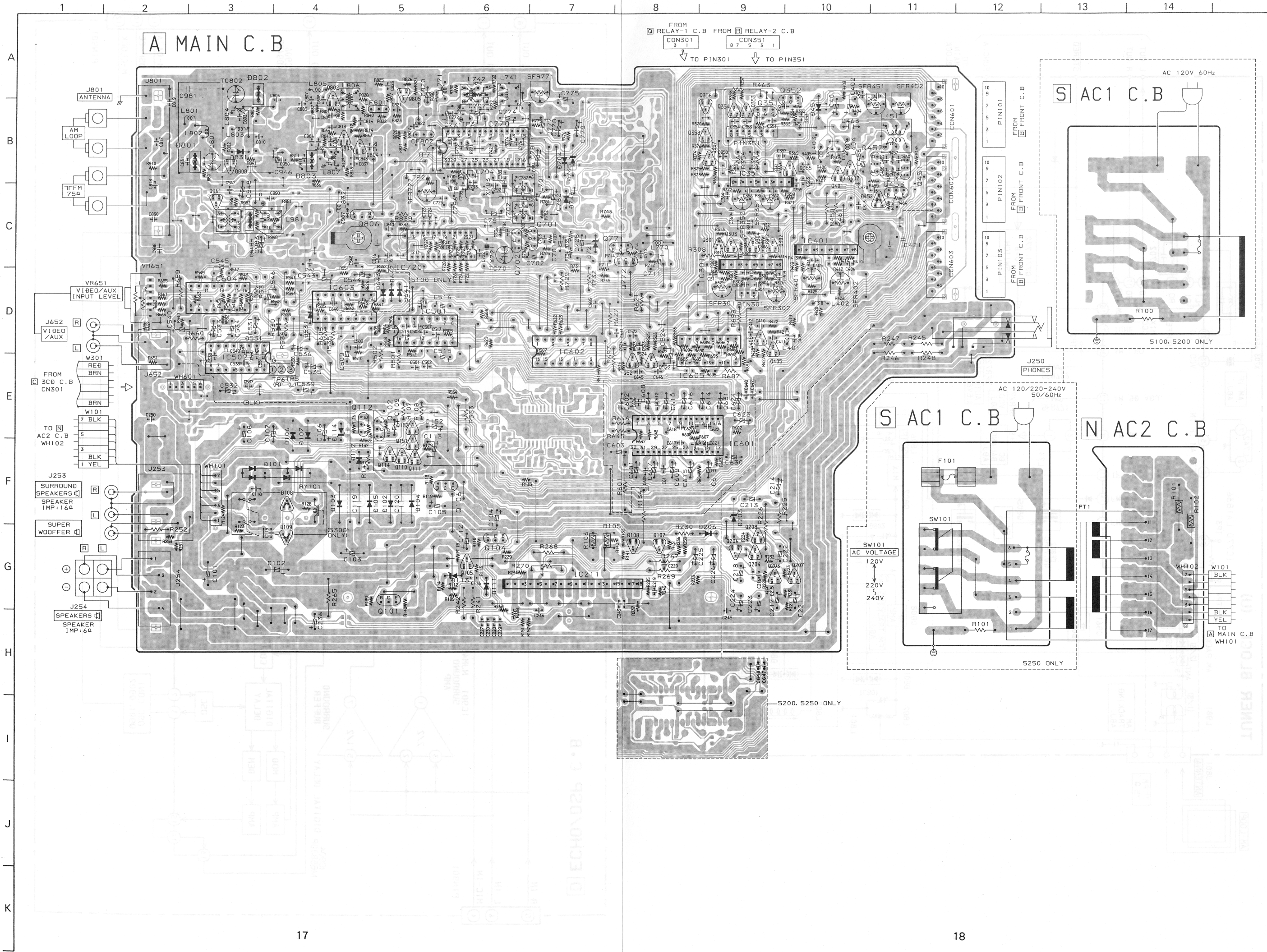


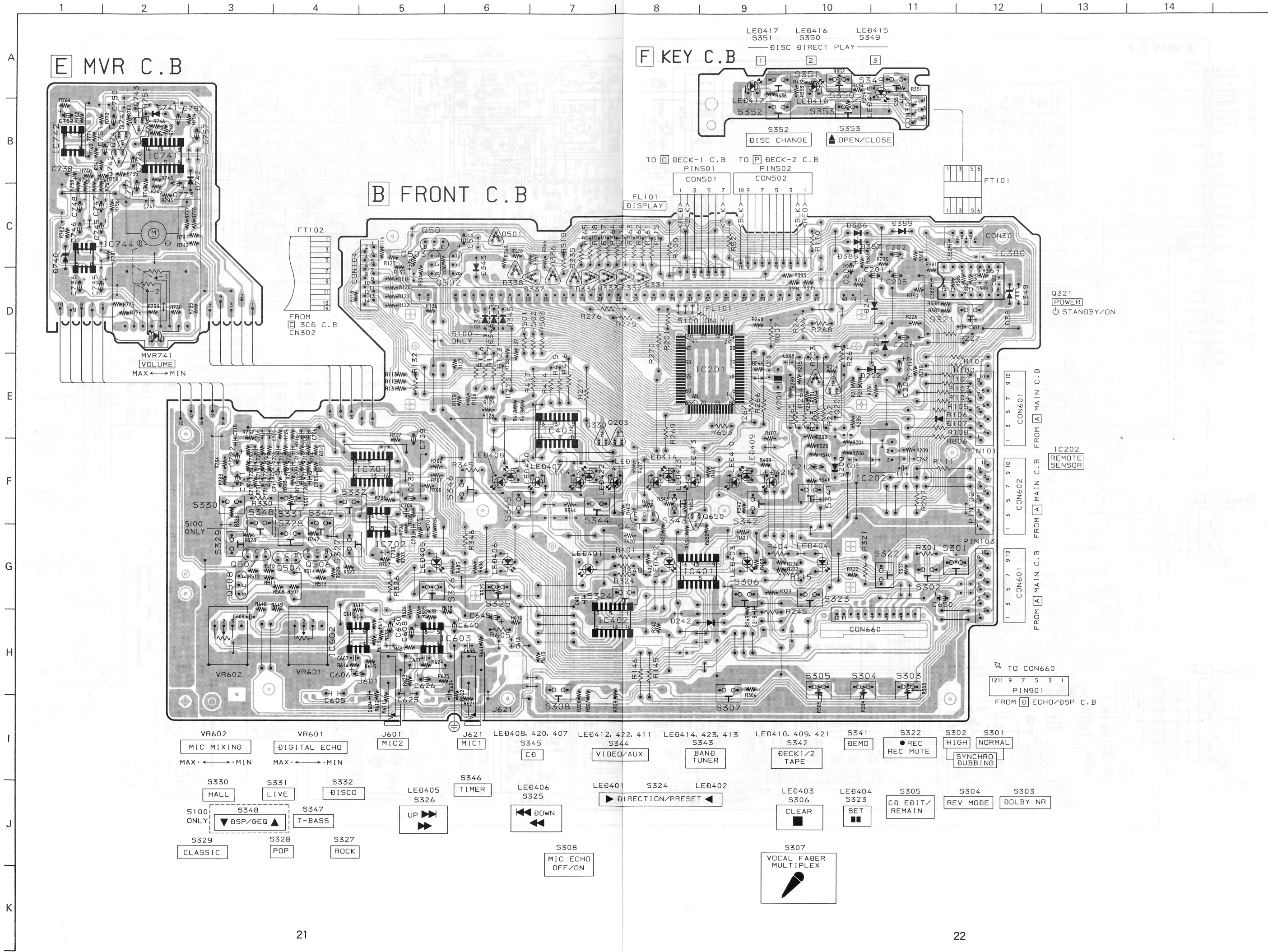
BLOCK DIAGRAM - 3 (TUNER)



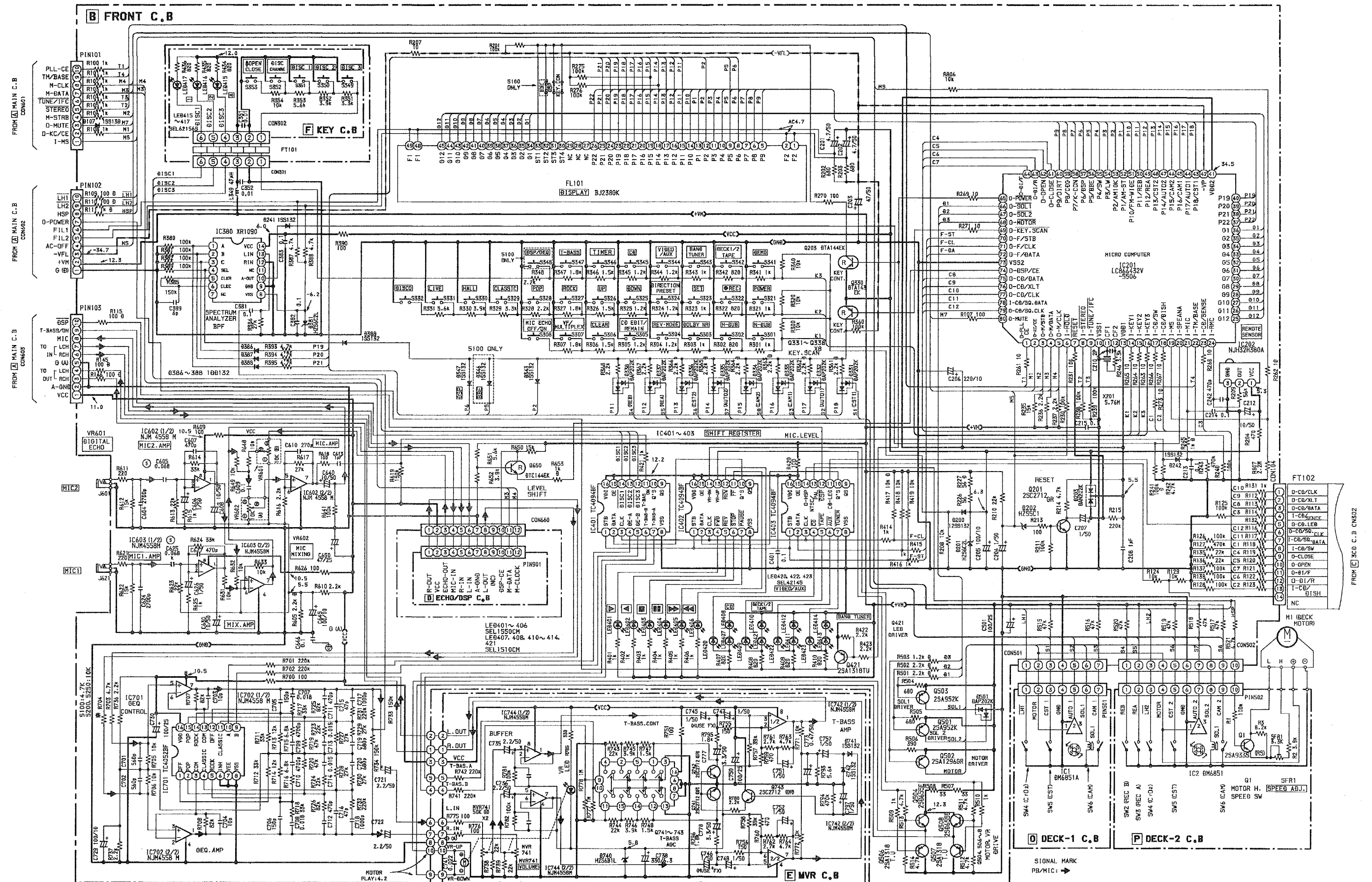
BLOCK DIAGRAM - 4 (ECHO/DSP)

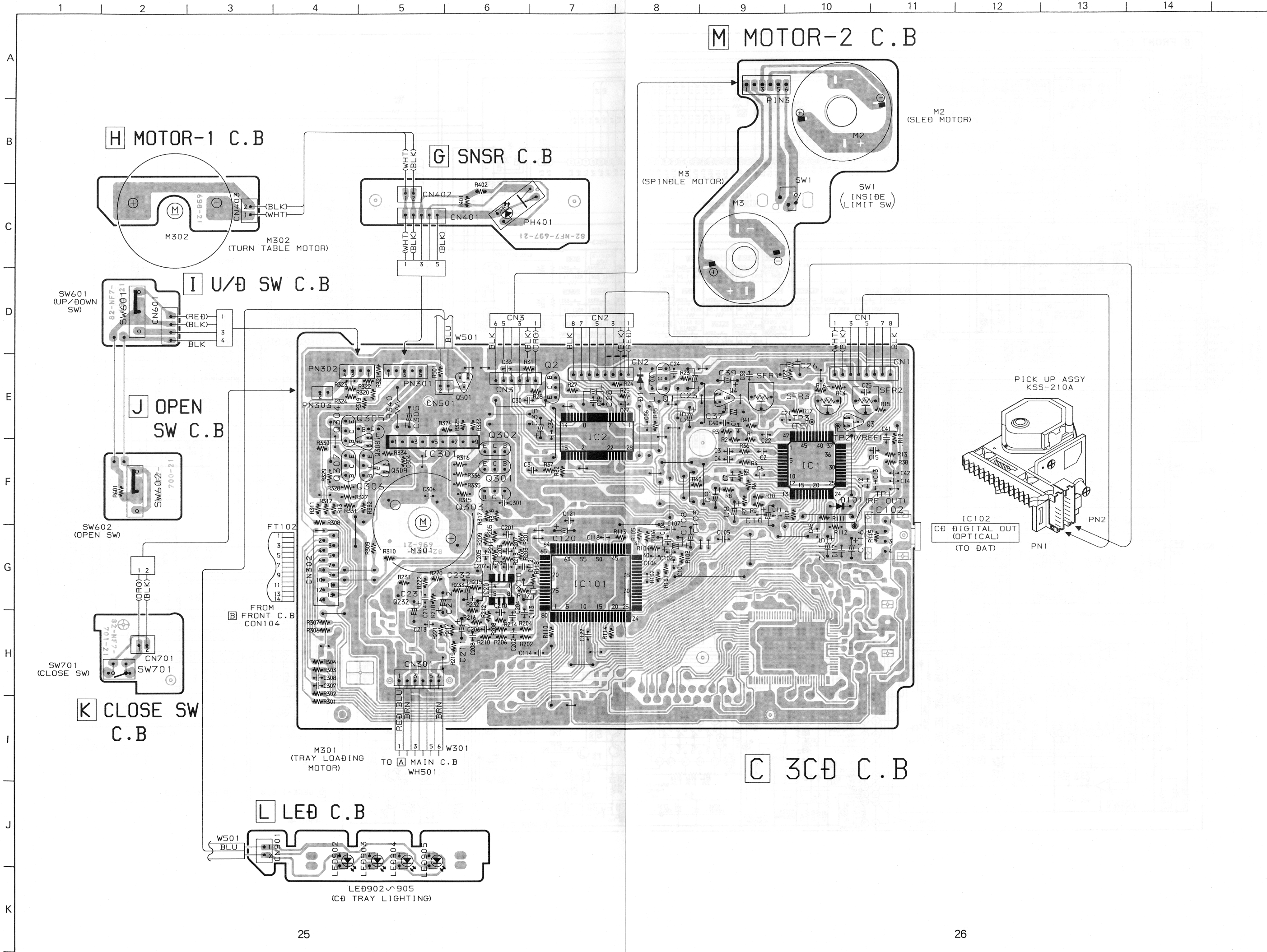






SCHEMATIC DIAGRAM - 2 (FRONT)

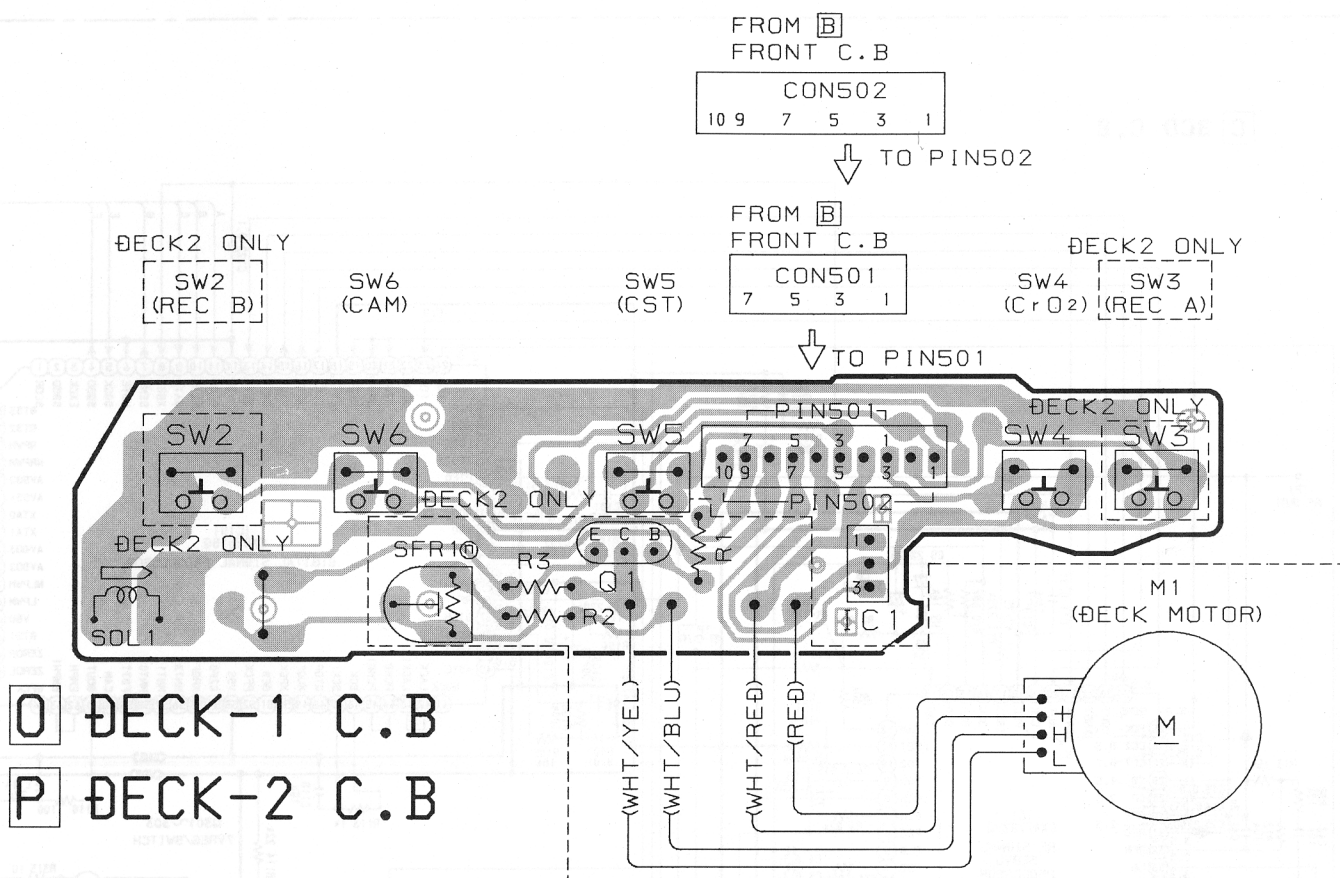
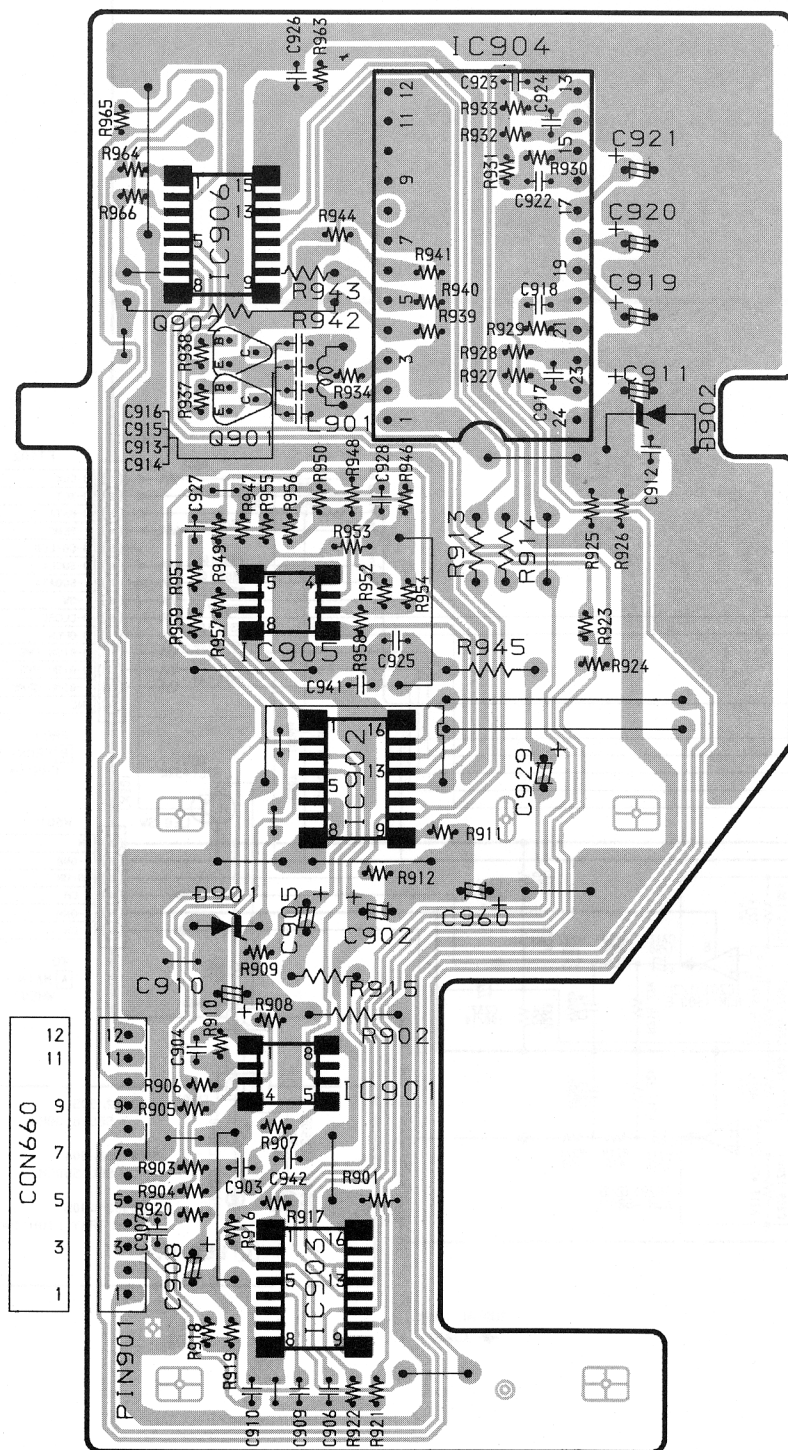




1 2 3 4 5 6 7 8 9 10 11 12 13 14

A
B
C
D
E
F
G
H
I
J
K

D ECHO/DSP C.B

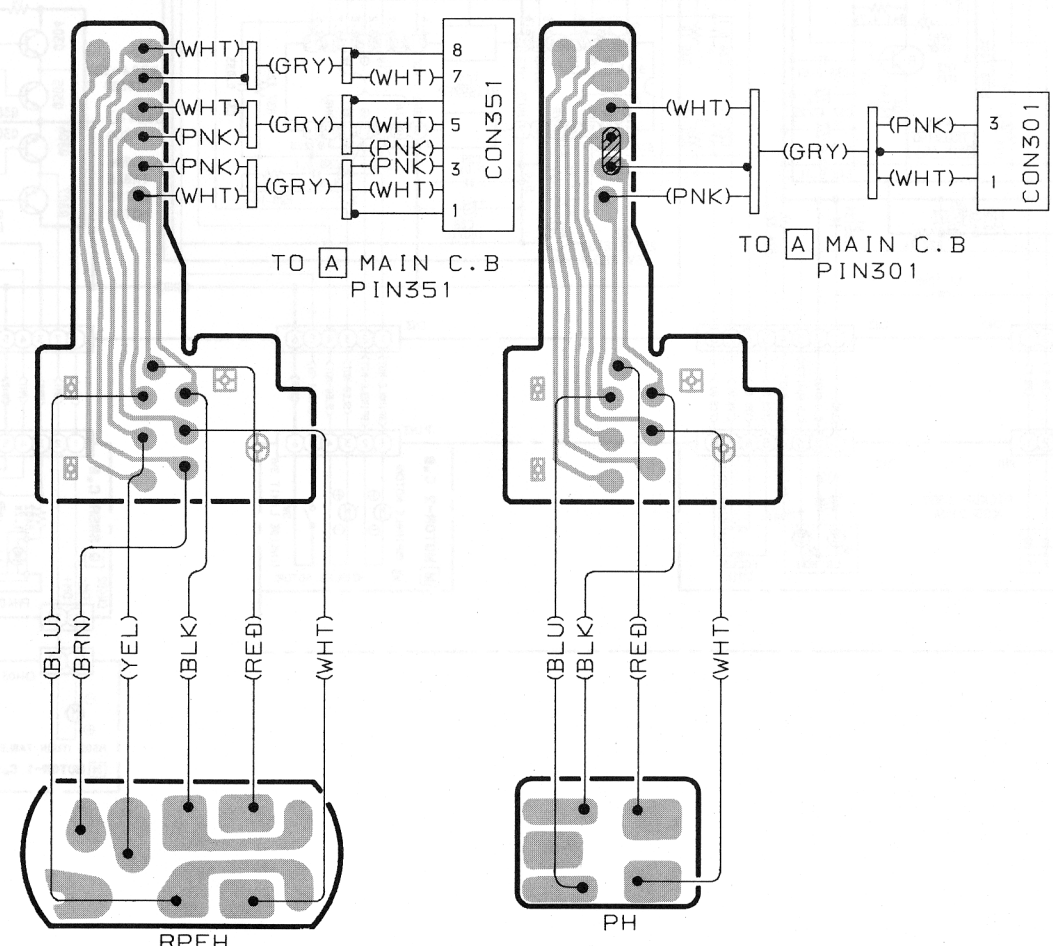


O DECK-1 C.B

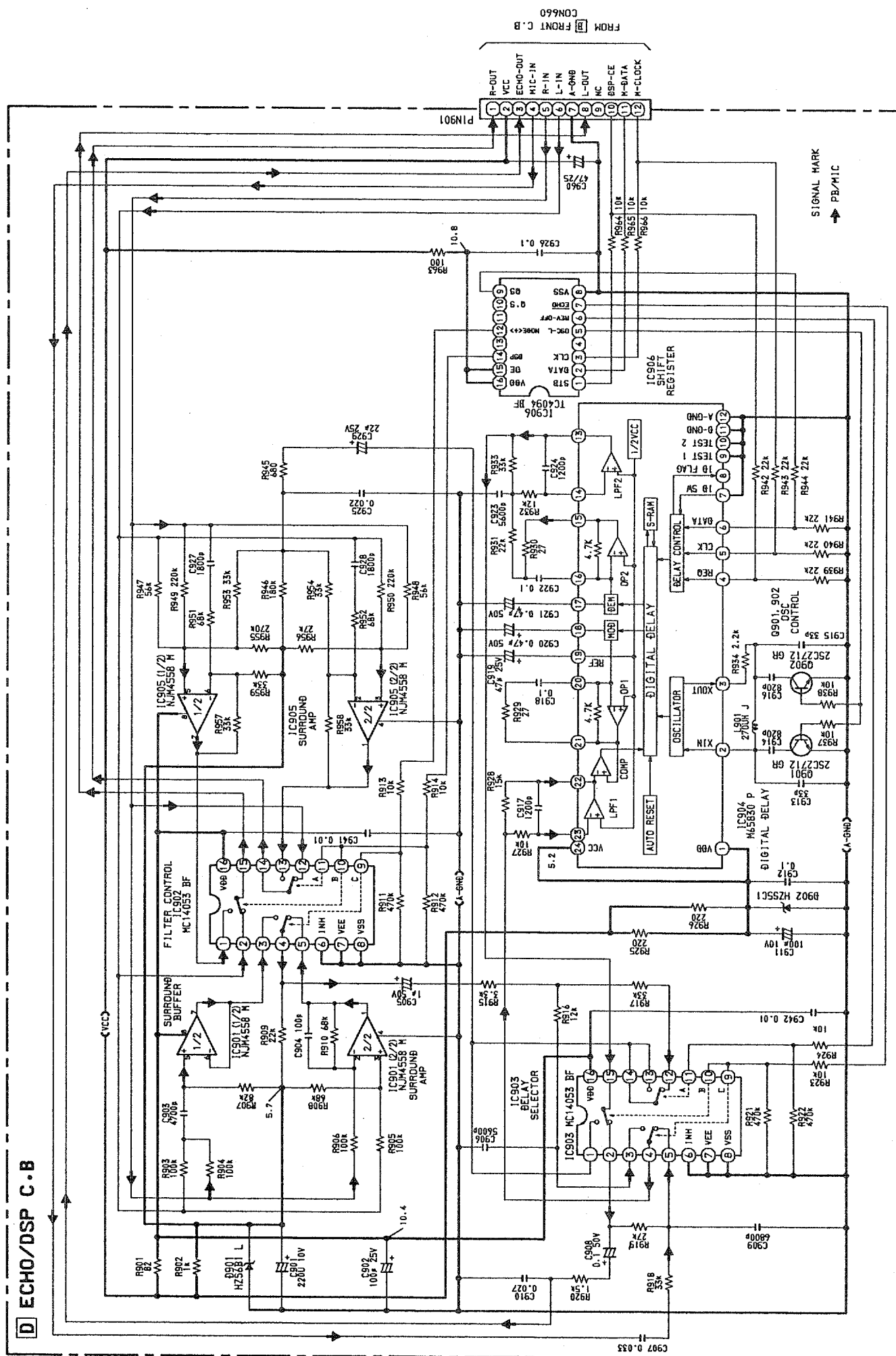
P DECK-2 C.B

R RELAY-2 C.B

Q RELAY-1 C.B



D ECHO/DSP C.B



IC DESCRIPTION

LC866432V - 5506

Pin No.	Pin Name	I/O	Description
1	O-PLL CE	O	PLL IC chip enable.
2	O-KC/CE	O	Key control IC M65840 data latched strobe output.
3	O-M/STB	O	Main shift register (IC602, 603) data latch strobe output.
4	O-M/DATA	O	Main shift register (IC602, 603), PLL/key control/DSP related data output.
5	O-M/CLK	O	Main shift register (IC602, 603), PLL/key control/DSP related clock output.
6	I-HOLD	I	Power failure detected input. L to stop clock and maintain memory.
7	RESET	I	Reset input.
8	I-STEREO	I	Tuner stereo detected input.
9	I-TUNE/IFC	I	Tuner SD detected input. IF count serial data input.
10	VSS1	—	GND.
11, 12	CF1, 2	—	5.76MHz oscillator circuit.
13	VDD1	—	Power supply input.
14~16	I-KEY1~3	I	Key input. (A/D)
17	I-CD/SW	I	CD mechanical switch A/D converter input.
18	I-CD/DISH	I	CD turntable photo sensor A/D converter input.
19	I-MS	I	Deck music sensor signal input.
20	I-SPEANA	I	A/D input for spectrum analyzer display.
21	I-MIC	I	Microphone input for auto VF display.
22	I-TM BASE	I	Reference clock input for timer watch.
23	I-CD/SENSE	I	CD IC control SENS input.
24	I-RMC	I	System remote control signal input.
25~36	G12~G1	O	FL grid output G12~G1.
37	P22	O	FL segment output P22.
38	P21/O-SPEANA A	O	FL segment output P21, spectrum analyzer band switch output (A).
39	P20/O-SPEANA B	O	FL segment output P20, spectrum analyzer band switch output (B).
40	P19/O-SPEANA C	O	FL segment output P19, spectrum analyzer band switch output (C).
41	VDD2	—	Power supply input.
42	-VP	—	Power supply input (-34.5V) for FL display.
43	P18/CST1	I/O	FL segment output P18, DECK1 cassette detect switch data input.
44	P17/AUTO1	I/O	FL segment output P17, DECK1 auto stop signal input.
45	P16/CAM1	I/O	FL segment output P16, DECK1 cam switch data input.
46	P15/CSM2	I/O	FL segment output P15, DECK2 cam switch data input.
47	P14/AUTO2	I/O	FL segment output P14, DECK2 auto stop data input.
48	P13/CST2	I/O	FL segment output P13, DECK2 cassette detect switch data input.
49	P12/REA2	I/O	FL segment output P12, DECK2 side-A record OK switch data input.
50	P11/REB2	I/O	FL segment output P11, DECK2 side-B record OK switch data input.
51	P10/FM-WIDE	I/O	FL segment output P10, FM wide mode data input to diode.
52	P1/AM-ST	I/O	FL segment output P1, AM stereo mode data input to diode.
53	P2/AM10K	I/O	FL segment output P2, AM 10kHz step data input to diode.

Pin No.	Pin Name	I/O	Description
54	P3/LW	I/O	FL segment output P3, LW mode data input to diode.
55	P4/SW	I/O	FL segment output P4, SW mode data input to diode.
56	P5/BBE	I/O	FL segment output P5, BBE mode data input to diode.
57	P6/DSP	I/O	FL segment output P6, DSP data input to diode.
58	P7/K-CON	I/O	FL segment output P7, key control data input to diode.
59	P8/CDG	I/O	FL segment output P8, CDG data input to diode.
60	P9/OIRT	O	FL segment output P9.
61	O-CLOSE	O	CD tray close data output.
62	O-OPEN	O	CD tray open data output.
63	O-DI/R	O	CD turntable reverse rotation output.
64	O-DI/F	O	CD turntable forward rotation output.
65	O-POWER	O	System power supply ON/OFF output.
66	O-SOL1	O	DECK1 solenoid output.
67	O-SOL2	O	DECK2 solenoid output.
68	O-MOTOR	O	DECK motor output.
69	O-KEY. SCAN	O	Switch scan timing output.
70	O-F/STB	O	Front shift register (IC401~403), data latch strobe output.
71	O-F/CLK	O	Front shift register (IC401~403), data transfer clock output.
72	O-F/DATA	O	Front shift register (IC401~403), data output.
73	VSS2	—	GND.
74	O-DSP/CE	O	DSP related data latch strobe output.
75	O-CD/DATA	O	CD IC control data output.
76	O-CD/XLT	O	CD IC control data latch output.
77	O-CD/CLK	O	CD IC control data transfer clock output.
78	I-CD/SQ. DATA	O	CD SUB-Q data input.
79	O-CD/SQ. CLK	O	Clock output for CD SUB-Q input data.
80	O-MUTE	O	System mute output.

CXD2518Q

Pin No.	Pin Name	I/O	Description
1	SCOR	O	1H when the subcode sync S0 or S1 is detected.
2	SBSO	O	SUBP~W serial output.
3	EXCK	I	Clock input for SBSO read out.
4	SQSO	O	SUBQ 80-bit serial output.
5	SQCK	I	Clock input for SQSO read out.
6	MUTE	I	H to mute. L to cancel. Connected to GND.
7	SENS	O	SENS signal output to CPU (IC201).
8	XRST	I	System reset. L to reset.
9	DATA	I	Serial data input from CPU (IC201).
10	XLAT	I	Latch input from CPU (IC201). Latching serial data at fall down.
11	CLOCK	I	Clock input from CPU (IC201) to transfer serial data.
12	VSS	—	GND.
13	SEIN	I	SENS input from SSP (CXA1782BQ).
14	CNIN	I	Numbers of track jump are counted and input.
15	DATO	O	Serial data output to SSP (CXA1782BQ).
16	XLTO	O	Serial data latched output to SSP (CXA1782BQ). Latched at fall down edge.
17	CLKO	O	Clock input from SSP (CXA1782BQ) to transfer serial data.
18	TEST2	I	TEST. (Connected to +5V)
19~21	SPOB~D	I	Input from INSIDE LIMIT switch (SW1).
22	XLON	O	LC7870E mute control output.
23	FOK	I	Focus OK input pin. Used for SENS output and servo auto sequencer.
24	MON	O	Spindle motor ON/OFF control output.
25	MDP	O	Spindle motor servo control output.
26	MDS	O	Spindle motor servo control output. (Not used)
27	LOCK	O	GFS is sampled by 460Hz. H output when GFS is H. L output when GFS is L for 8 consecutive times.
28	TEST1	I	TEST. (Connected to GND)
29	FILO	O	Filter output to master PLL. (slave=digital PLL)
30	FILI	I	Filter input to master PLL.
31	PCO	O	Charge-pump output to master PLL.
32	VDD	—	Power supply input. (+5V)
33	AVSS1	—	GND.
34	CLTV	I	VCO control voltage input to master PLL.
35	AVDD1	—	Power supply input. (+5V)
36	RF	I	EFM signal input.
37	BIAS	I	Constant current input to asymmetry correction circuit.
38	ASYI	I	Compare voltage input to asymmetry correction circuit.
39	ASYO	O	EFM full swing output. (L=VSS, H=VDD)
40	ASYE	I	L: asymmetry correction OFF. H: asymmetry correction ON (connected to +5V)
41	WDCK	O	D/A interface, word clock (2Fs) for 48-bit slot. (Not used)
42	LRCK	O	D/A interface, LR clock (Fs) for 48-bit slot.

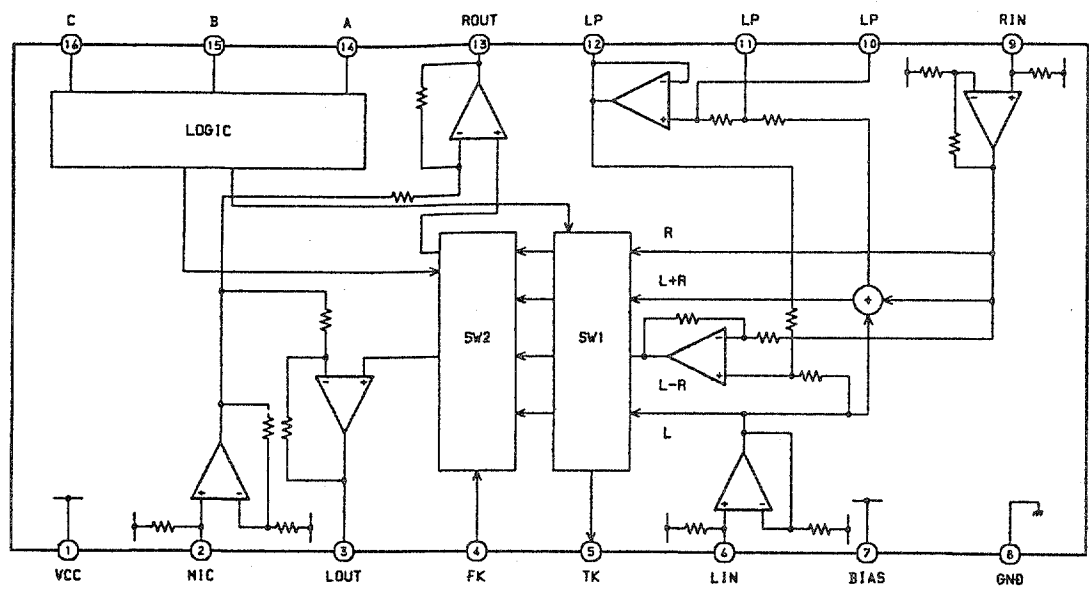
Pin No.	Pin Name	I/O	Description
43	LRCKI	I	LR clock input to DAC. (48-bit slot)
44	PCMD	O	D/A interface, serial data. (2's complement, MSB first)
45	PCMDI	I	Audio data input to DAC. (48-bit slot)
46	BCK	O	D/A interface, bit clock.
47	BCKI	I	Bit clock input to DAC. (48-bit slot)
48	GTOP	O	GTOP output. (Not used)
49	XUGF	O	XUFG output. (Not used)
50	XPCK	O	XPLCK output. (Not used)
51	GFS	O	GFS output. (Not used)
52	RFCK	O	RFCK output. (Not used)
53	VSS	—	GND.
54	C2PO	O	C2PO output. (Not used)
55	XROF	O	XRAOF output. (Not used)
56	MNT3	O	MNT3 output. (Not used)
57	MNT1	O	MNT1 output. (Not used)
58	MNT0	O	MNT0 output. (Not used)
59	FSTT	O	Pins-73 and -74 divided-by 2/3 output. (Not used)
60	C4M	O	4.2336MHz output. (Not used)
61	DOUT	O	Digital Out connector output signal.
62	EMPH	O	H when the playback disc has emphasis. L when it does not.
63	EMPHI	I	DAC emphasis ON/OFF. H when ON. L when OFF
64	WFCK	O	WFCK (WRITE FRAME CLOCK) output.
65	ZEROL	O	No sound data detection output. H (L-ch) when no sound data is detected. (Not used)
66	ZEROR	O	No sound data detection output. H (R-ch) when no sound data is detected. (Not used)
67	DTSI	I	TEST for DAC. (Connected to GND)
68	VDD	—	Power supply input. (+5V)
69	LPWM	O	L-ch PWM output. (normal polarity)
70	NLPWM	O	L-ch PWM output. (reversed polarity)
71	AVDD2	—	Power supply input to L-ch PWM driver. (Connected to +5V)
72	AVDD3	—	Power supply input to X'tal. (Connected to +5V)
73	XTAI	I	X'tal input to 33.8688MHz oscillator circuit.
74	XTAO	O	33.8688MHz X'tal oscillator circuit output.
75	AVSS1	—	Power supply input to X'tal. (Connected GND)
76	AVSS2	—	Power supply input to PWM driver. (Connected to GND)
77	NRPWM	O	R-ch PWM output. (reversed phase)
78	RPWM	O	R-ch PWM output. (normal phase)
79	DTS2	I	TEST-2 for DAC. (Connected GND)
80	DTS3	I	TEST-3 for DAC. (Connected GND)

IC,CXA1782BQ

Pin No.	Pin Name	I/O	Description
1	FEO	O	Focus error amplifier output pin. This pin is connected to the FZC comparator input internally.
2	FEI	I	Focus error input pin.
3	FDFCT	I	Capacitor connection pin for time constant used when there is defect.
4	FGD	I	Corrects the focus servo high frequency gain.
5	FLB	I	This is a pin where the time constant is externally connected to raise the low frequency gain of the focus servo.
6	FEO	O	Focus drive output.
7	FEM	I	Focus amplifier inverted input pin.
8	SRCH	I	This is a pin where the time constant is externally connected to generate the focus search waveform.
9	TGU	I	This is a pin where the selection time constant is externally connected to set the tracking servo the high frequency gain.
10	TG2	I	This is a pin where the selection time constant is externally connected to set the tracking high frequency gain.
11	FSET	I	Pin for setting peak of the phase compensator of the focus tracking.
12	TAM	I	Tracking amplifier inverted input pin.
13	TAO	O	Tracking drive output.
14	SLP	I	Sled amplifier non-inverted input pin.
15	SLM	I	Sled amplifier inverted input pin.
16	SLO	O	Sled drive output.
17	ISSET	I	The current which determines height of the focus search, track jump and sled kick is input.
18	VCC	—	+ 5 V power supply pin.
19	CLK	I	Serial data transfer clock input from CPU (CXD2518Q).
20	XLT	I	Latch input from CPU (CXD2518Q).
21	DATA	I	Serial data input from CPU (CXD2518Q).
22	XRST	I	Reset input pin. Reset at L.
23	COUT	O	Signal output to count the number of tracks.
24	SENS	O	FZC, DFCT, TZC, Gain or BAL is output depending on the command from CPU (CXD2518Q).
25	FOK	O	Output pin of the focus OK comparator.
26	CC2	O	Input pin where the DEFECT bottom hold output is capacitance coupled.
27	CC1	I	DEFECT bottom hold output pin.
28	CB	I	This is a pin where the DEFECT bottom hold capacitor is connected.
29	CP	I	This is a pin where the MIRR hold capacitor is connected and MIRR comparator non-inverted signal is input.
30	RFI	I	Input pin where the RF summing amplifier output is capacitance coupled.
31	RFO	O	RF summing amplifier output pin. (TP1)
32	RFM	I	RF summing amplifier inverted input pin. Gain of RF amplifier is determined by the resistor connected between RFO and this pin.
33	LD	O	APC amplifier output pin.

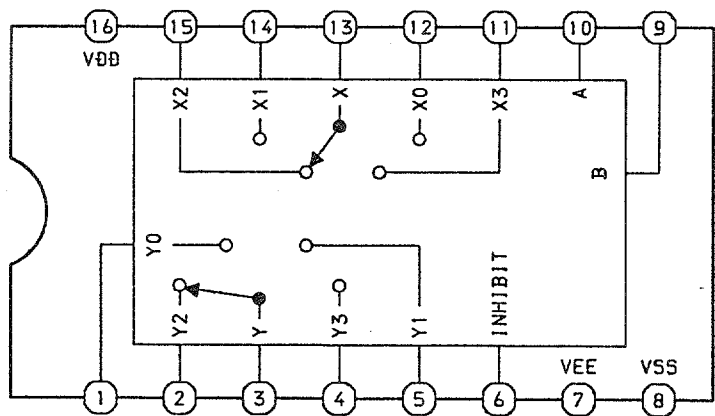
Pin No.	Pin Name	I/O	Description
34	PHD	I	APC amplifier input pin.
35~36	PHD1~2	I	RF I-V amplifier inverted input pin. These pins are connected to the A+C and B+D pins of the optical pickup.
37	BIAS	I	Bias adjustment pin of the non-inverted side of the focus error amplifier.
38~39	F~E	I	F and E IV amplifier non-inverted input pins. These pins are connected to the F and E of the optical pickup.
40	EI	—	Gain adjustment pin of the I-V amplifier E.
41	VEE	—	GND connection pin
42	TEO	O	Tracking error amplifier output pin. E-F signal is output.
43	LPFI	I	BAL adjustment comparator input pin. Not used.
44	TEI	I	Tracking error input pin.
45	ATSC	I	Window comparator input pin for detecting ATSC.
46	TZC	I	Tracking zero-cross comparator input pin.
47	TDFCT	I	Capacitor connection pin for the time constant used when there is defect.
48	VC	O	DC voltage output pin of VREF. (VDD/2)

IC BLOCK DIAGRAM
IC,BA3837



IC,TC4052

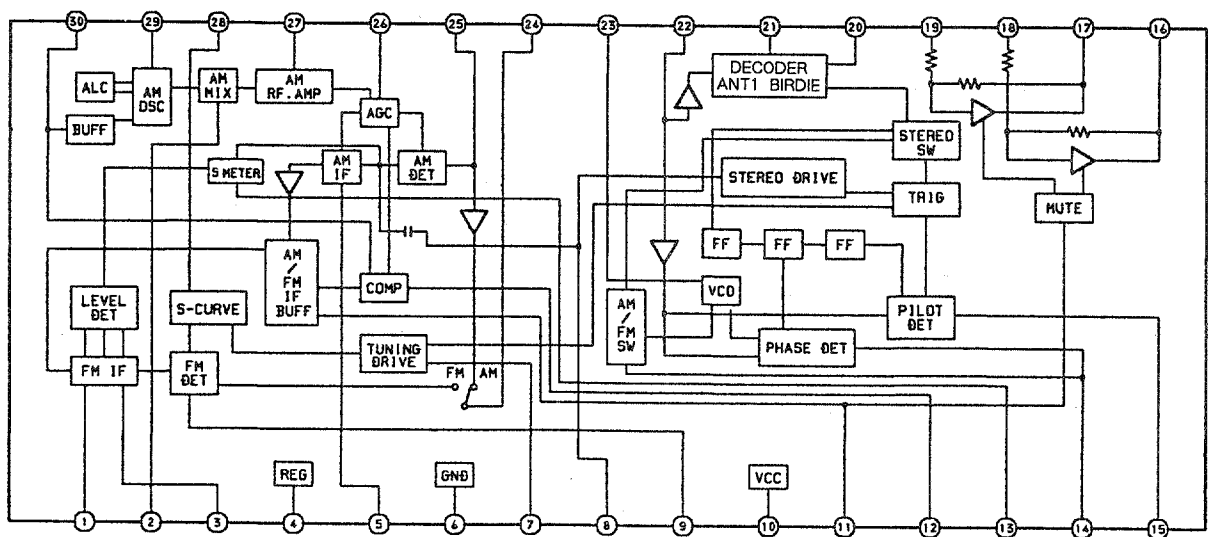
TRUTH TABLE



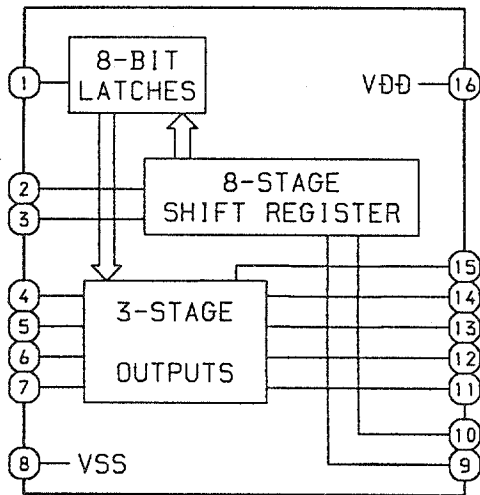
CONTROL INPUTS			ON SWITCH	
INHIBIT	B	A	Y0	X0
L	L	L	Y0	X0
L	L	H	Y1	X1
L	H	L	Y2	X2
L	H	H	Y3	X3
H	X	X	—	—

L: LOW LEVEL
H: HIGH LEVEL
X: IRRELEVANT

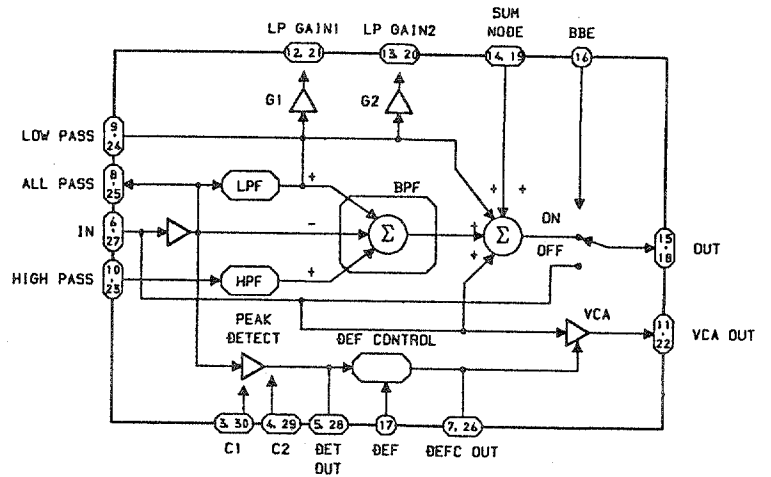
IC,LA1836



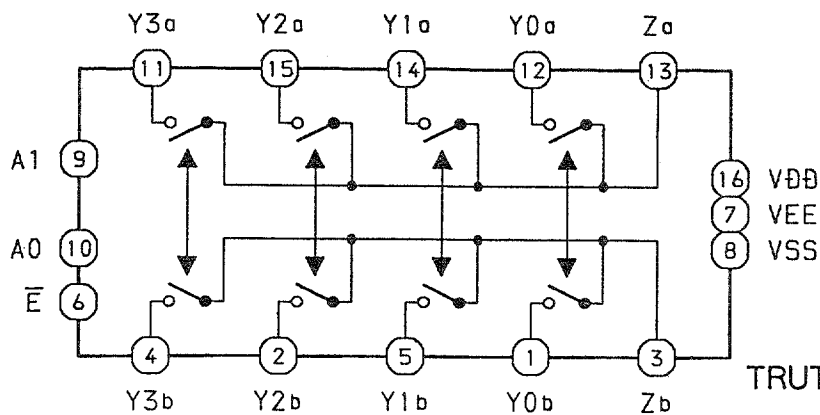
IC,TC4094BP



IC,XR - 1071CP



IC,GD4052



TRUTH TABLE

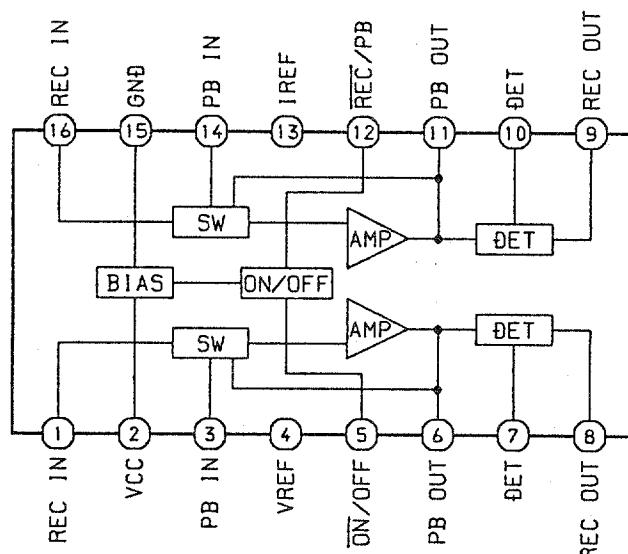
INPUTS			CHANNELS			
E	A1	A0	Y0-Z	Y1-Z	Y2-Z	Y3-Z
L	L	L	ON	OFF	OFF	OFF
L	L	H	OFF	ON	OFF	OFF
L	H	L	OFF	OFF	ON	OFF
L	H	H	OFF	OFF	OFF	ON
H	X	X	OFF	OFF	OFF	OFF

PIN NAMES

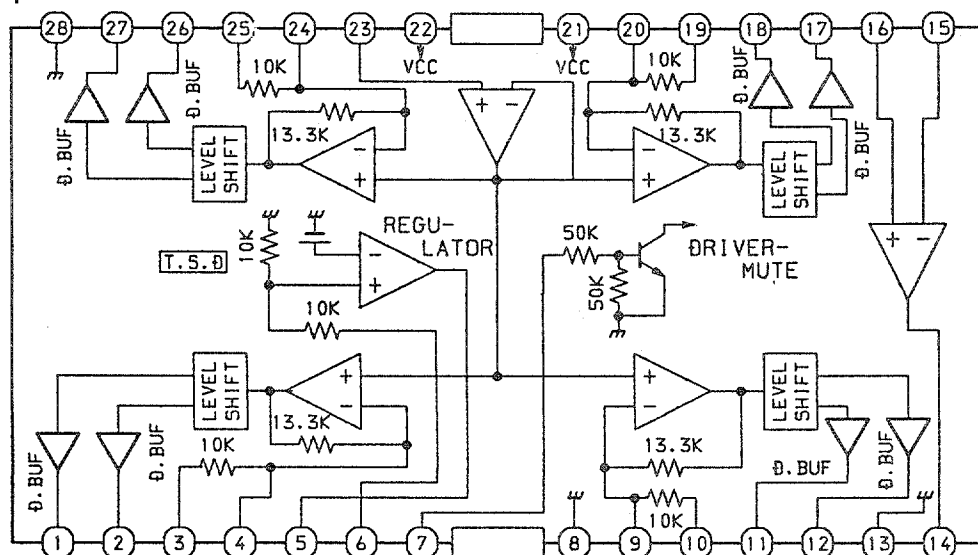
Y0a - Y3a Independent Inputs/Outputs
Y0b - Y3b Independent Inputs/Outputs
A1, A1 Address Inputs
E Enable Input (Active LOW)
Za, Zb Common Input/Output

L:LOW Level, H:HIGH Level, X:Don't care

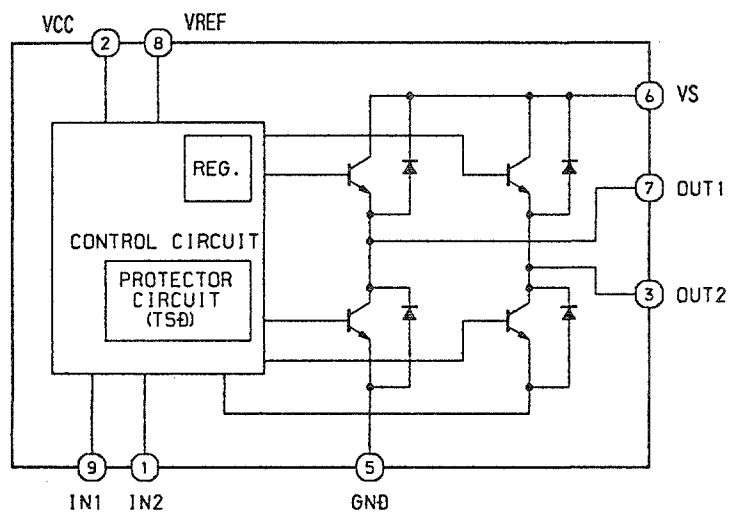
IC,HA12134A



IC, BA6397FP



IC, TA7291

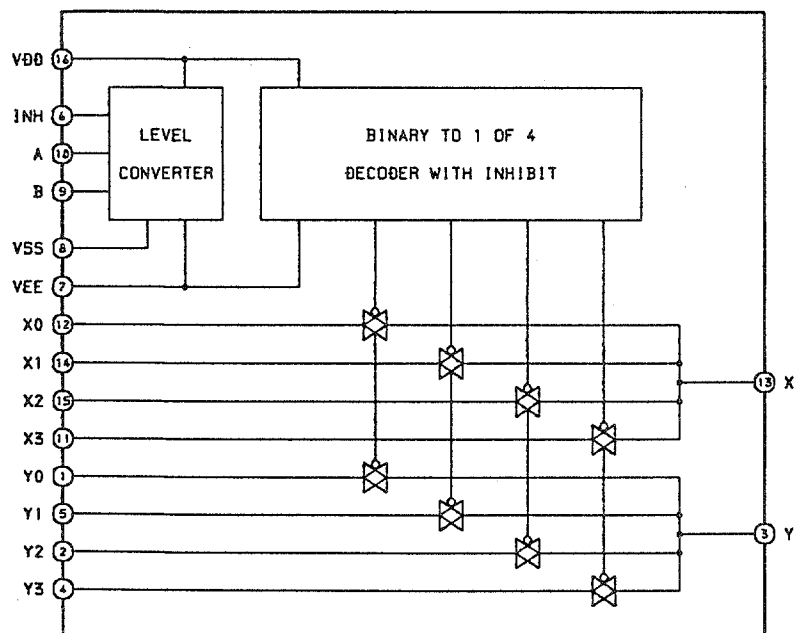


TRUTH TABLE

INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW
0	1	L	H	CCW
1	1	L	L	BRAKE

∞ : HI IMPEDANCE
NOTE : INPUT "H" ACTIVE

IC, BU4052B

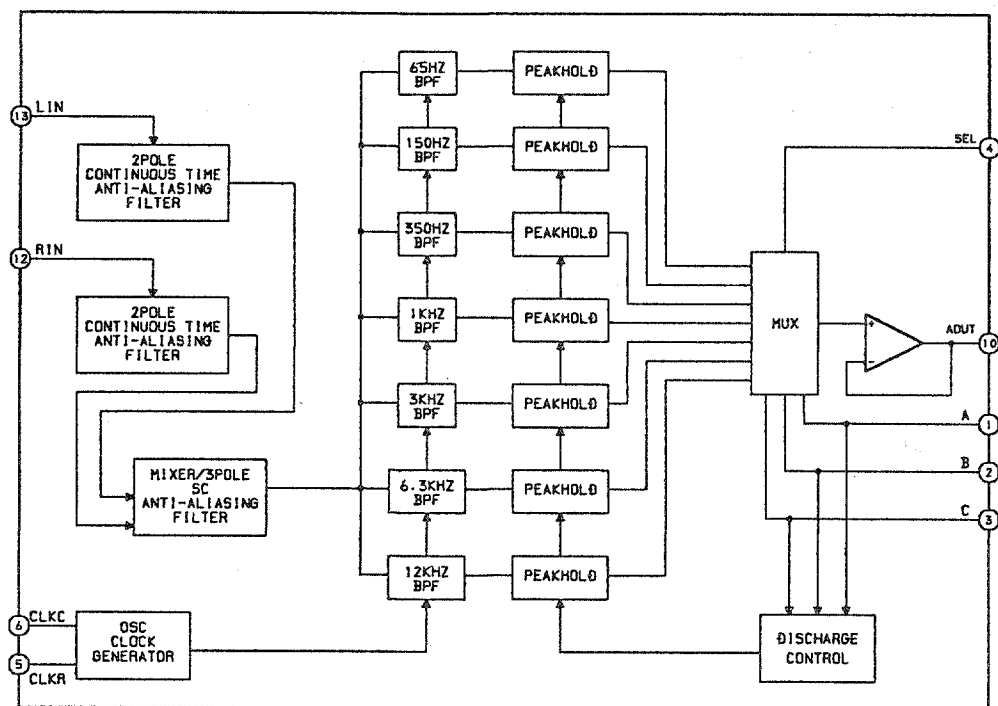


TRUTH TABLE

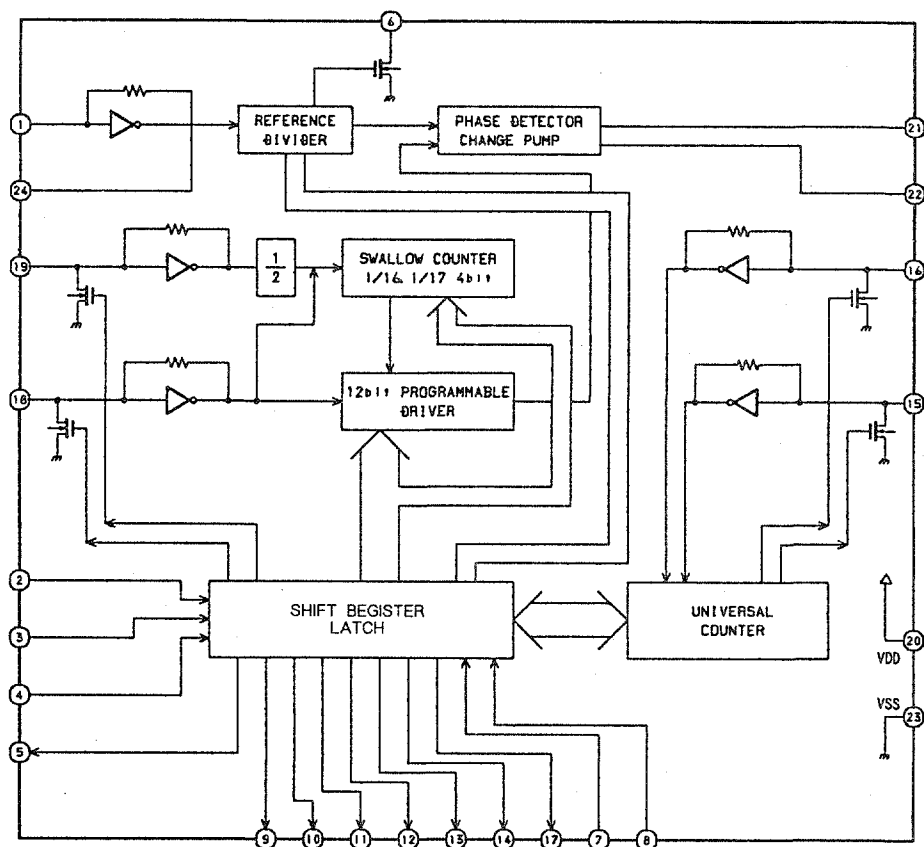
INHIBIT	A	B	ON SWITCH
L	L	L	X0 Y0
L	H	L	X1 Y1
L	L	H	X2 Y2
L	H	H	X3 Y3
H	X	X	NONE

X: DON'T CARE.

IC,XR1090

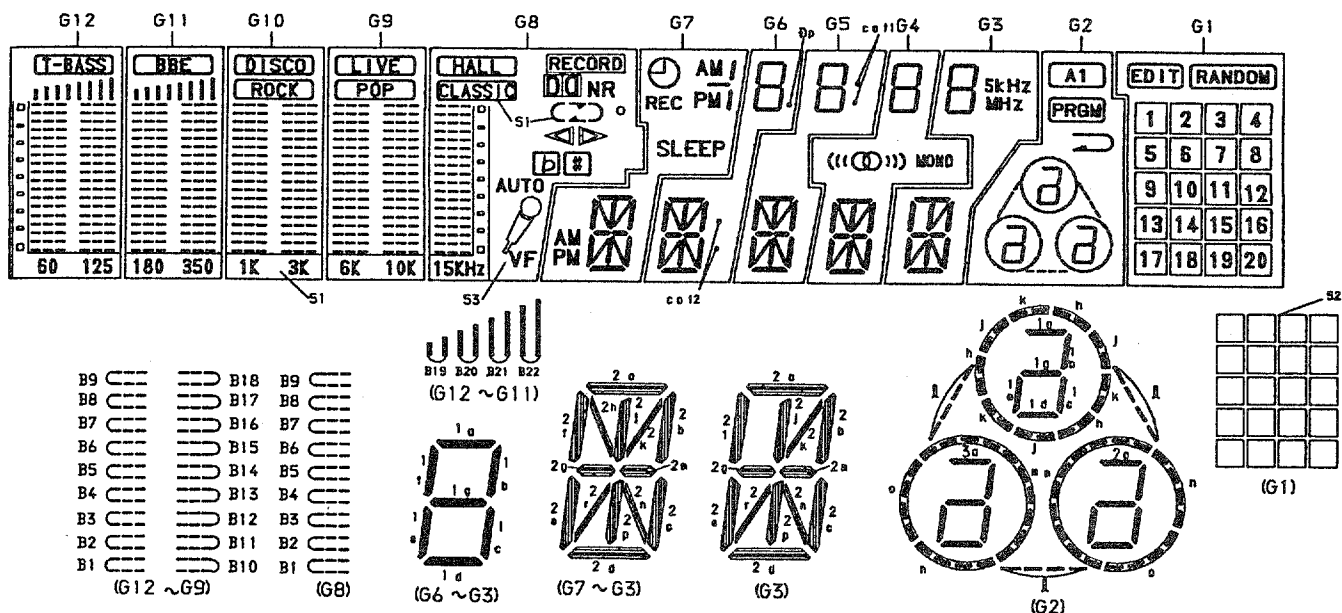


IC,LC7218



FL (BJ238GK) GRID ASSIGNMENT/ANODE CONNECTION

GRID ASSIGNMENT

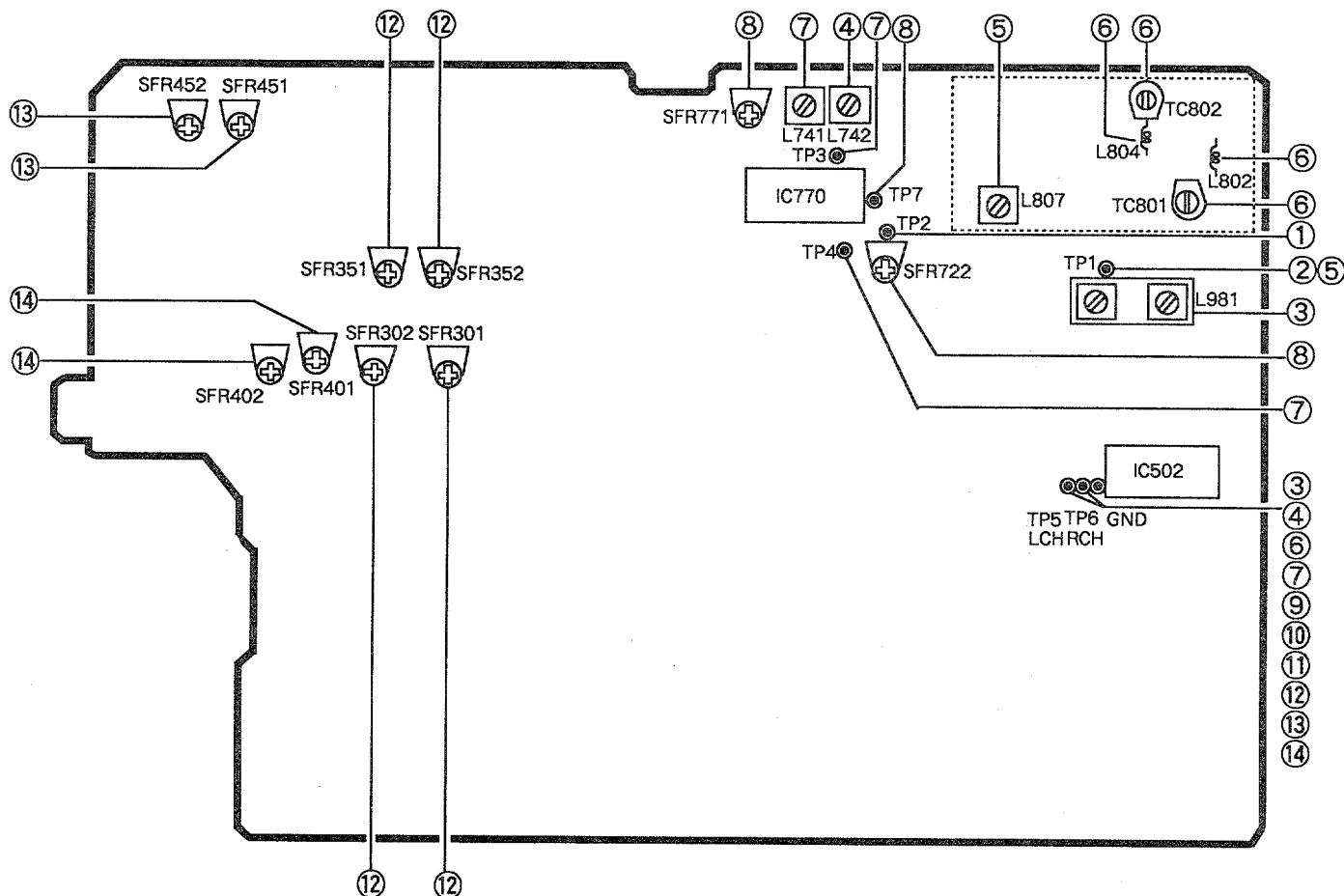


ANODE CONNECTION

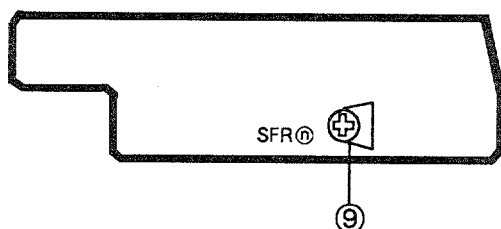
	G12	G11	G10	G9	G8	G7	G6	G5	G4	G3	G2	G1
P1	B10	B10	B10	B10	S3	2d	2d	2d	2d	2d	n	20
P2	B1	B1	B1	B1	B1	2j, 2p	2j, 2p	2j, 2p	2j, 2p	2j, 2p	o	19
P3	B11	B11	B11	B11	AUTO	2n	2n	2n	2n	2n	3e	18
P4	B2	B2	B2	B2	B2	2r	2r	2r	2r	2r	3c	17
P5	B12	B12	B12	B12	(b)	2c	2c	2c	2c	2c	3o, 3d, 3g	16
P6	B3	B3	B3	B3	B3	2e	2e	2e	2e	2e	3b	15
P7	B13	B13	B13	B13	(#)	2m	2m	2m	2m	2m	2e	14
P8	B4	B4	B4	B4	B4	2g	2g	2g	2g	2g	2c	13
P9	B5	B5	B5	B5	B5	2f	2f	2f	2f	2f	2a, 2d, 2g	12
P10	B15	B15	B15	B15	▷	2b	2b	2b	2b	2b	l	11
P11	B6	B6	B6	B6	B6	2k	2k	2k	2k	2k	j	10
P12	B16	B16	B16	B16	◁	2h	2h	2h	2h	2h	h	9
P13	B7	B7	B7	B7	B7	2a	2a	2a	2a	2a	k	8
P14	B14	B14	B14	B14	∪	PM (DOWN)	col 2	col 1 (UP)	MONO	KHz	2b	7
P15	B17	B17	B17	B17	∩	AM (DOWN)	∅p	col 1 (DOWN)	((((∅)))	5	1e	6
P16	B8	B8	B8	B8	B8	SLEEP	1d	1d	1d	1d	1o, 1d, 1g	5
P17	B18	B18	B18	B18	o	REC	1e	1e	1e	1e	1c	4
P18	B9	B9	B9	B9	B9	PM (UP)	1c	1c	1c	1c	1b	3
P19	B19 (T-BASS)	B19 (BBE)	ROCK	POP	DO NR	AM (UP)	1g	1g	1g	1g	m	2
P20	B20	B20	DISCO	LIVE	RECORD	—	1f	1f	1f	1f	A1	1
P21	B21	B21	—	—	CLASSIC	/	1b	1b	1b	1b	EDIT	—
P22	B22	B22	—	—	HALL	⌚	1a	1a	1a	1a	PRGM	RANDOM
ST1	S1 T-BASS	S1	S1 ROCK	S1 POP	S1	—	—	—	—	—	—	52
ST2	—	BBE	—	—	—	—	—	—	—	—	—	—
ST3	—	—	DISCO	LIVE	HALL	—	—	—	—	—	—	—
ST4	—	—	—	—	b #	—	—	—	—	—	—	—

ELECTRICAL ADJUSTMENT

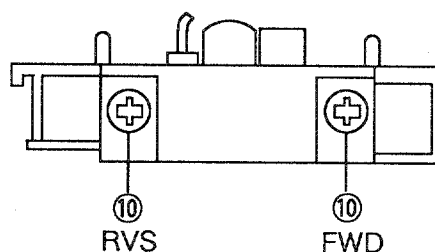
A MAIN C.B



P DECK2 C.B



DECK1 P, DECK2 R/P/E HEAD



① TUNER SECTION

1. Clock Frequency Adjustment

Settings : • Test point : TP2 (CLK IC770 pin30)

• Adjustment location : TC701

Method : Set to AM 1710kHz and adjust TC701 so that the test point becomes $2160\text{kHz} \pm 0.01\text{kHz}$.

2. AM VT Check

Settings : • Test point : TP1 (VT)

Method : Set to AM 1710kHz and check that the test point is $6.5 \pm 1.0\text{V}$.

3. AM Tracking Adjustment

Settings : • Test point : TP5, TP6

• Adjustment location : L981

Method : Set to AM 1000kHz and adjust L981 that the test point becomes maximum.

4. AM IF Adjustment

Settings : • Test point : TP5, TP6

L742 450kHz

5. FM VT Adjustment

Settings : • Test point : TP1 (VT)
• Adjustment location : L807

Method : Set to FM 87.5MHz and adjust L807 so that the test point becomes $1.7V \pm 0.05V$.

6. FM Tracking Adjustment

Settings : • Test point : TP5,TP6
TC801,TC802 108MHz
L802,L804 87.5MHz

7. DC Balance/MONO Distortion Adjustment

Settings : • Test point : TP3,TP4 (DC balance)
TP5,TP6 (Distortion)
• Adjustment location : L741
• Input level : 54dB
Method : Set to FM 98.0MHz and adjust L741 so that the voltage between TP3 and TP4 becomes $0V \pm 0.04V$.
Next check that the distortion becomes less than 1.3%.

8. Auto stop Level Adjustment

FM

Settings : • Test point : TP7
• Adjustment location : SFR722
• Input level : 18dB
Method : Set to FM 98.0MHz and adjust voltage low (about 0.01V) by SFR722. After that voltage high (about 7.0V) out by 2dB down.

AM

Settings : • Test point : TP7
• Adjustment location : SFR771
• Input level : 55dB
Method : Set to AM 1000kHz and adjust voltage low (about 0.01V) by SFR771. After that voltage high (about 7.0V) out by 2dB down.

TAPE SECTION

9. Tape Speed Adjustment

Settings : • Test tape : TTA-100
• Test point : TP5,TP6
• Adjustment location : SFR@
Method : Play back the test tape DECK II and adjust SFR@ so that the frequency counter reads $3000Hz \pm 5Hz$.

10. Head Azimuth Adjustment

Settings : • Test tape : TTA-310
• Test point : TP5,TP6
• Adjustment location : Head azimuth adjustment screw

Method : Play back the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on each FWD PLAY and REV PLAY mode.

11. PB Frequency Response Check

Settings : • Test tape : TTA-310
• Test point : TP5,TP6
Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal is with respect to that of the 315Hz signal is $\pm 2dB$.

12. PB Sensitivity Adjustment

Settings : • Test tape : TTA-200
• Test point : TP5,TP6
• Adjustment location :
(I DECK) SFR301 (Lch)
SFR302 (Rch)
(II DECK) SFR351 (Lch)
SFR352 (Rch)
Method : Play back the test tape and adjust SFRs so that the output level of the test point is 300mV.

13. REC/PB Frequency Response Adjustment

Settings : • Test tape : TTA-601
• Test point : TP5,TP6
• Input signal : 1kHz/10kHz (LINE IN)
• Adjustment location : SFR451 (Lch)
SFR452 (Rch)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP5,TP6 is 21mV. Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output of the 10kHz signal is $0dB \sim +0.5dB$ with respect to that of the 1kHz signal.

14. REC/PB Sensitivity Adjustment

Settings : • Test tape : TTA-601
(TTA-600)
• Test point : TP5,TP6
• Input signal : 1kHz (LINE IN)
• Adjustment location : SFR401 (Lch)
SFR402 (Rch)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP5,TP6 is 21mV. Record and play back the 1kHz signal and adjust SFRs so that the output is $21mV \pm 0.5dB$.

PRACTICAL SERVICE FIGURE

TUNER SECTION

< FM SECTION >

IHF Sensitivity : 4dB $\pm$ 6dB (87.5MHz)
(THD 3%) 2dB $\pm$ 6dB (98.0MHz)
2dB $\pm$ 6dB (108.0MHz)
S/N 50dB Quieting sensitivity :
32dB $\pm$ 5dB
(87.5/98.0/108.0MHz)
Signal to noise ratio : More than 64dB (98.0MHz)
Distortion : Less than 1.2% (98.0MHz)
Stereo separation : More than 25dB (98.0MHz)
Intermediate frequency : 10.7MHz

< AM SECTION >

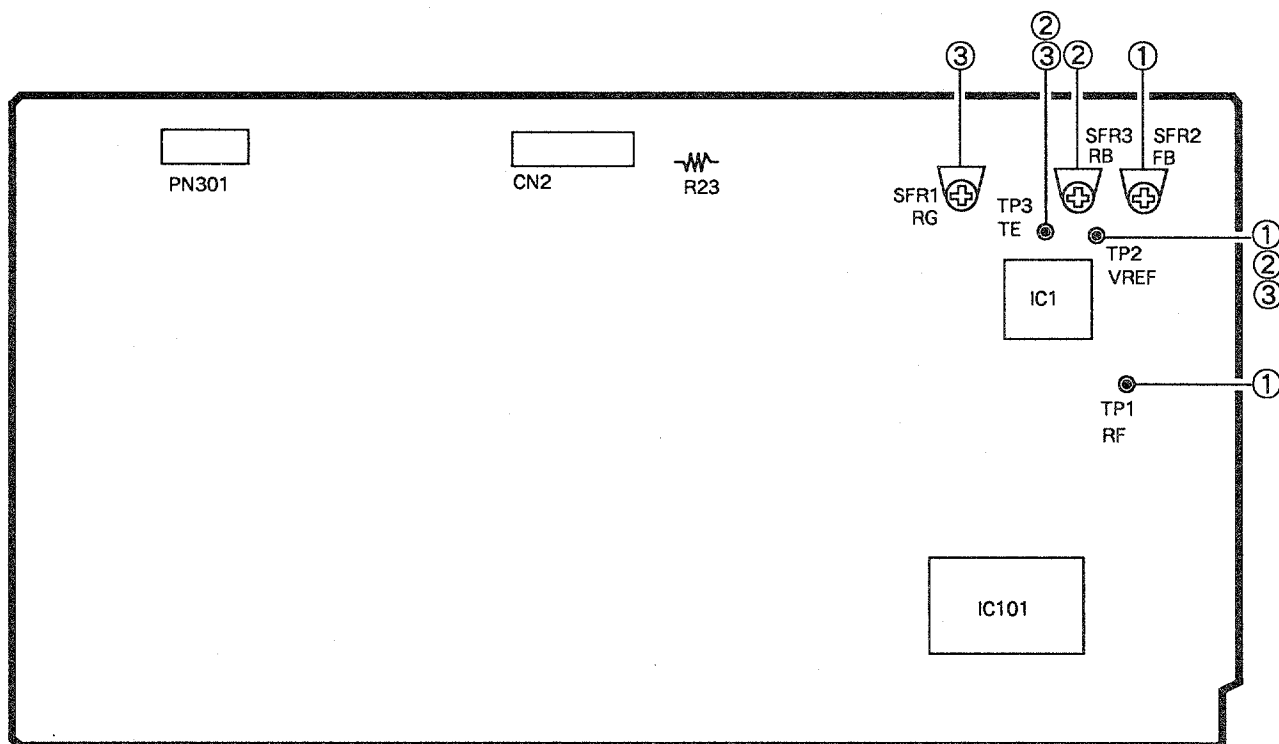
Sensitivity : 55dB $\pm$ 7dB (603kHz)
(S/N 20dB) 53dB $\pm$ 6dB (999kHz)
53dB $\pm$ 6dB (1404kHz)
Distortion : Less than 1.5% (999kHz)
Stereo separation : More than 12dB (999kHz)
Intermediate frequency : 450kHz

TAPE SECTION

Tape speed : 3000Hz $\pm$ 1.5%
Wow & flutter : Less than 0.4% (R.M.S)
Take-up torque : 30~55g-cm (FWD, REV)
F.F torque : 75~180g-cm
Rew torque : 75~180g-cm
Back tension : 2~7g-cm
PB Output level : 2.8V $\pm$ 1.5dB (SP OUT)
REC/PB Output level : 2.0V $\pm$ 2.0dB (SP OUT)
Distortion (REC/PB) : Less than 2% (NORM)
Noise level (PB) : Less than 200mV (DOLBY B
NR OFF NORM, Vol MAX.)
Noise level (REC/PB) : Less than 35mV (DOLBY B NR
OFF NORM, SP OUT, 2V)
Crosstalk : More than 60dB (1kHz, 0VU)
Erasing ratio : More than 60dB (125Hz)
Channel separation : More than 40dB (1kHz, 0VU)
REC bias frequency : 85kHz
Test tape : NORMAL TTA - 601/600

ADJUSTMENT

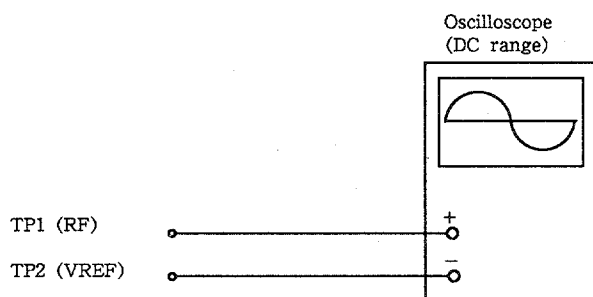
C 3CD C.B



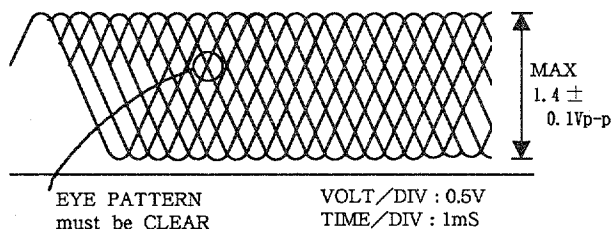
Note: Connect a probe (10:1) of the oscilloscope or the frequency counter to a test point.

1. Focus Bias Adjustment

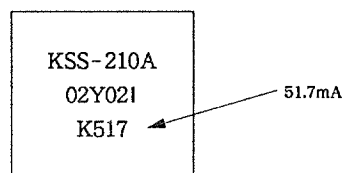
Make the focus bias adjustment when replacing and repairing the optical block.



- 1) Connect an oscilloscope to the test points TP1 (RF) and TP2 (VREF).
- 2) Turn on the power switch.
- 3) Insert test disc TCD-782 (YEDS-18) and play back the second composition.
- 4) Adjust SFR2 so that RF signal of the test point TP1 (RF) is MAX and CLEARREST.

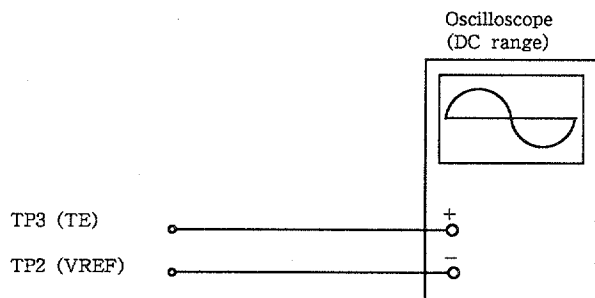


Note: The current of the laser signal can be checked with the voltages on both sides of R23 (10 Ω). The difference for the specified value shown on the level must be within ± 6.0mA.

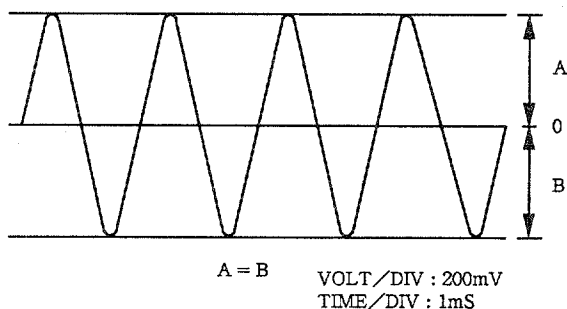


$$\text{Laser current } I_{op} = \frac{\text{Voltage across R23}}{10 \Omega}$$

2. TRACKING Balance Adjustment



- 1) Connect an oscilloscope to the test points TP3 (TE) and TP2 (VREF).
- 2) Turn on the power switch.
- 3) Insert test disc TCD-782 (YEDS-18) and press the PLAY button.
- 4) Connect the intermediate point of SFR1 to TP2 (VREF).
- 5) Adjust SFR3 so that the waveform on the oscilloscope is vertically symmetrical as shown in the figure below.
- 6) After the adjustment is completed, remove the connected lead wires from the terminals.



3. TRACKING Gain Adjustment

A servo analyzer is necessary in order to perform this adjustment exactly. However, this gain has margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when 2-axis device operates. However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise increases when the 2-axis device operates.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.

When gain adjustment is off, the symptoms below appear.

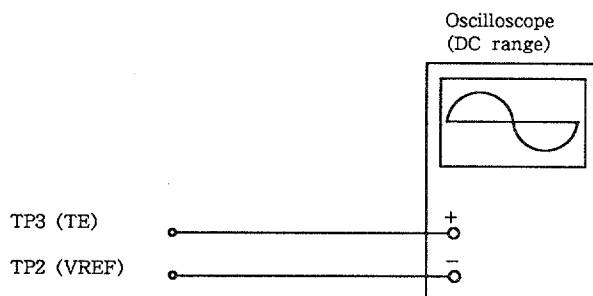
Symptoms \ Gain	(Focus)	Tracking
● The time until music starts becomes longer for STOP → ▶PLAY or automatic selection (⏮▶ buttons pressed.) (Normally takes about 2 seconds.)	low	low or high
● Music does not start and disc continues to rotate for STOP → ▶PLAY or automatic selection (⏮▶ buttons pressed.)	—	low
● Disc stops to rotate shortly after STOP → ▶PLAY.	low or high	—
● Sound is interrupted during PLAY. Or time counter display stops.	—	low
● More noises during the 2-axis device operation.	high	high

The following is simple adjustment method.

— Simple adjustment —

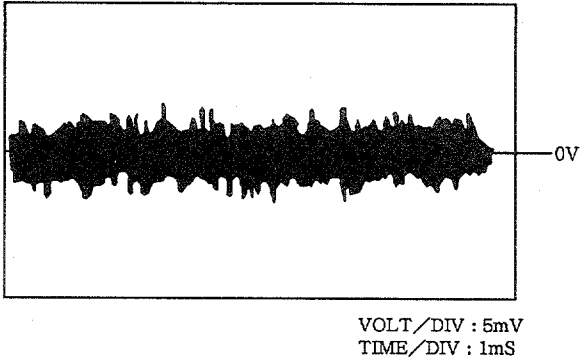
Note : Since exact adjustment cannot be performed, remember the positions of the controls before the performing the adjustment. If the positions after the simple adjustment are only a little different, return the controls to the original position.

Procedure

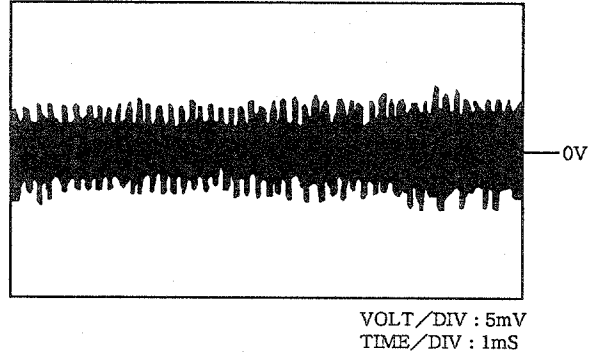


- 1) Keep the set horizontal. (If the set is not kept horizontally, this adjustment cannot be performed due to the gravity against the 2-axis device.)
- 2) Insert test disc TCD-782 (YEDS-18) and play back the second composition.
- 3) Connect an oscilloscope to TP3 (TE) of the 3CD C.B

- 4) Adjust SFR1 so that the waveform appears as shown in the figure below.(tracking gain adjustment)



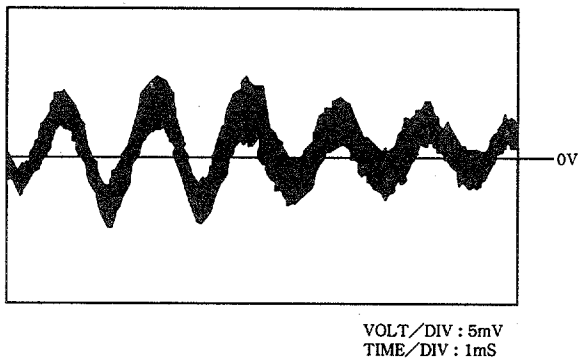
High tracking gain
(The frequency of the fundamental wave is higher than in low gain.)



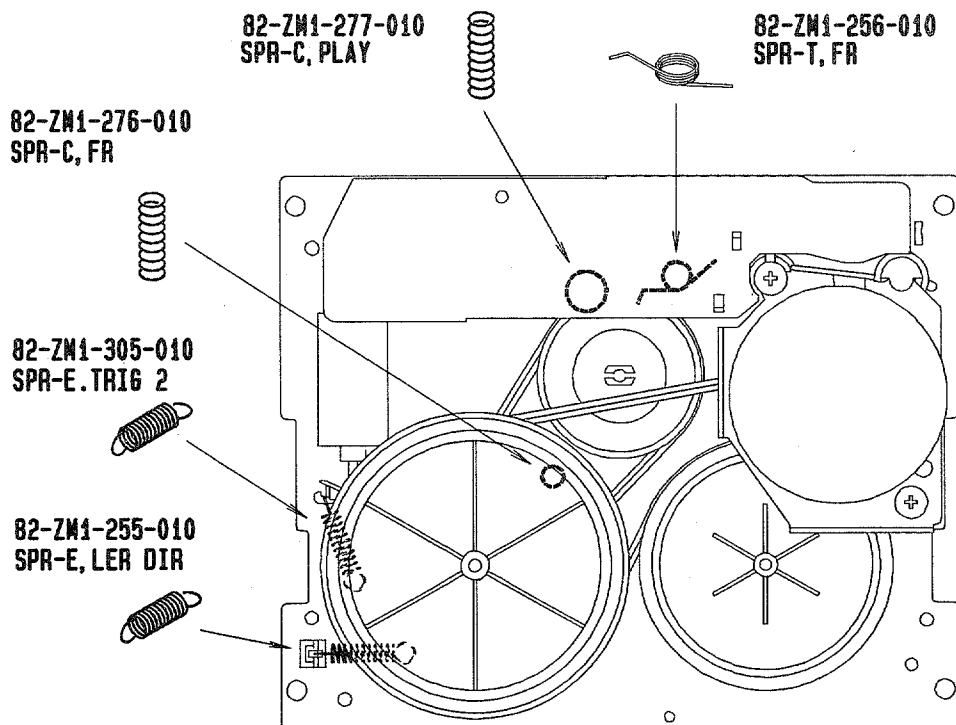
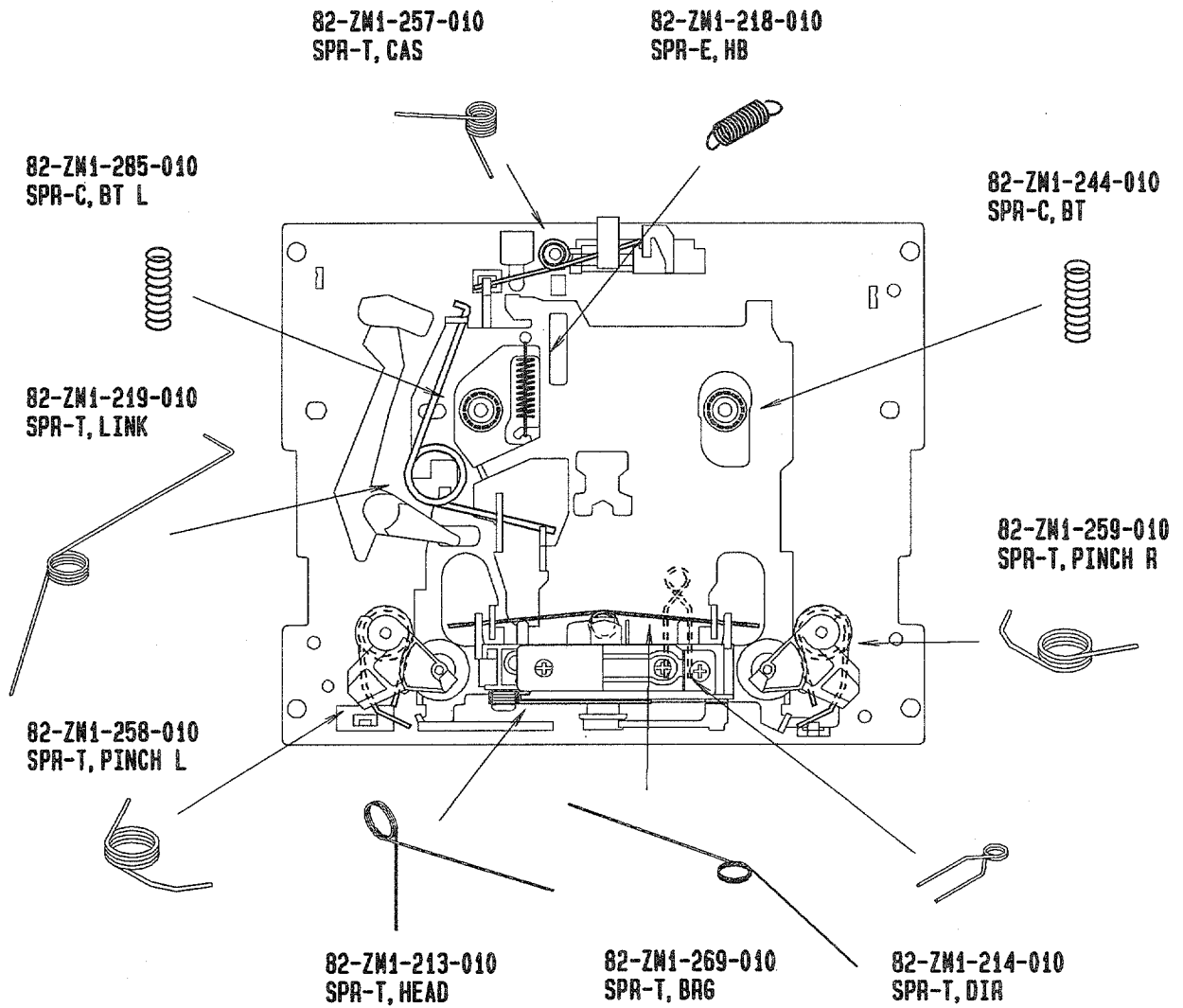
● Incorrect example

Low tracking gain

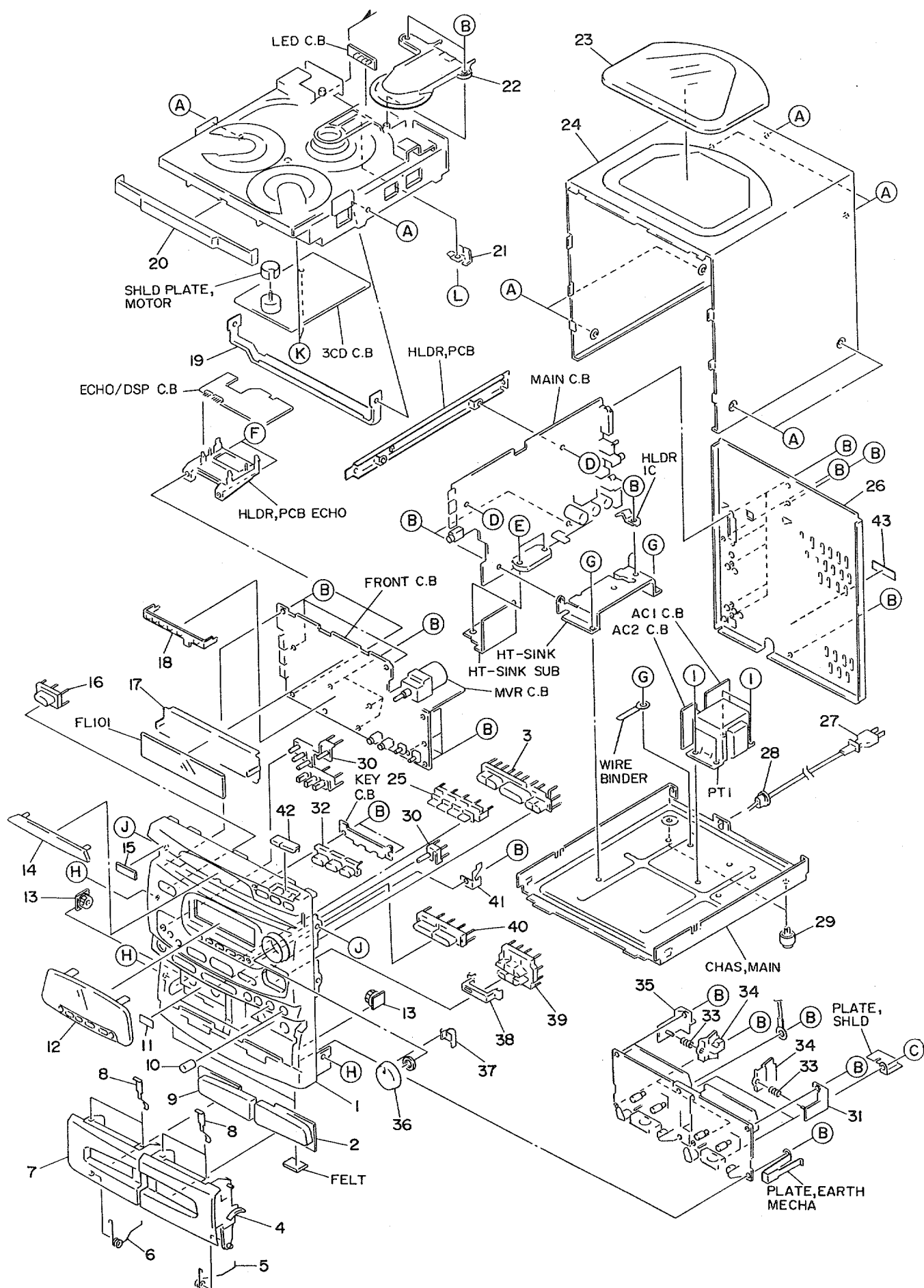
(The fundamental wave appears as compared with the waveform adjusted)



SPRING APPLICATION POSITION



MECHANICAL EXPLODED VIEW 1/2

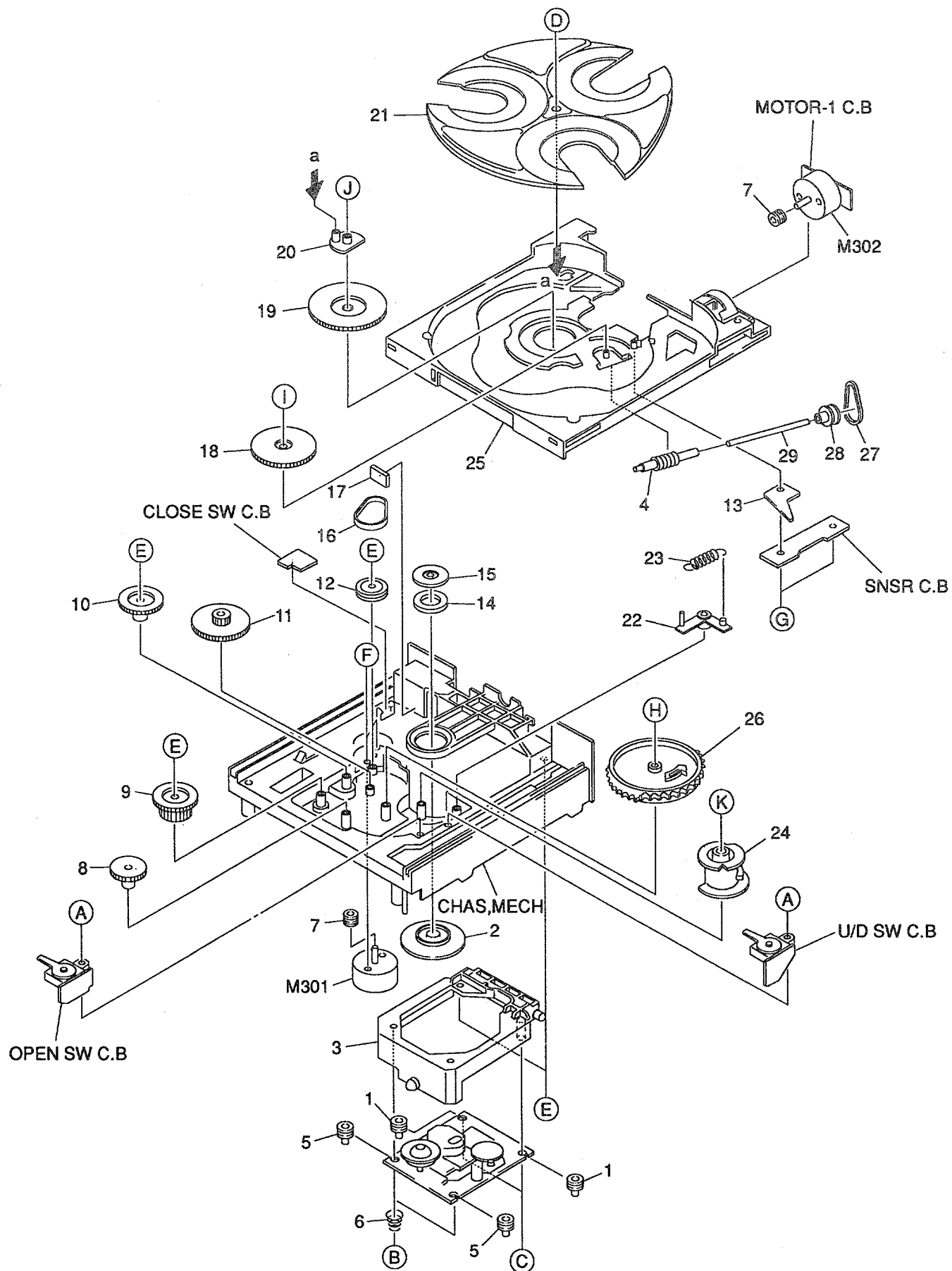


MECHANICAL PARTS LIST 1/2

DESCRIPTION で判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カリ NO.	DESCRIPTION	REF. NO	PART NO.	カリ NO.	DESCRIPTION
1	83-NFF-011-010		CAB, FR U<5100U>	32	83-NF5-029-110		KEY, DISC
1	83-NFF-038-010		CAB, FR U 5200<5200U>	33	82-NF5-228-010		SPR-C, LOCK
1	83-NFF-054-010		CAB, FR U 5250<5250U>	34	82-NF5-229-010		PLATE, LOCK
2	83-NF5-007-110		WINDOW, CASS 2	35	82-NF5-226-010		HLD, LOCK 1N
3	83-NF5-012-110		KEY, PLAY	36	83-NF5-009-010		KNOB, VOL
4	83-NF5-004-010		BOX, CASS 2	37	83-NF5-010-010		IND, VOL
5	82-NF5-219-010		SPR-T, EJECT 2 (SIN)	38	83-NF5-030-010		PANEL, GEQ<5100U>
6	82-NF5-218-010		SPR-T, EJECT 1 (SIN)	38	83-NFF-005-010		PANEL, GEQ D<5250U, 5200U>
7	83-NF5-003-010		BOX, CASS 1	39	83-NF5-026-010		KEY, GEQ<5100U>
8	80-CD3-218-110		SPR-P CASS	39	83-NFF-006-010		KEY, GEQ D<5250U, 5200U>
9	83-NF5-006-110		WINDOW, CASS 1	40	83-NFF-007-110		KEY, ECHO
10	83-NF5-020-010		KNOB, MIC	41	83-NF5-207-010		HLD, FFC
11	81-532-080-010		LBL, CASS-COMPT	42	83-NF5-024-010		KEY, OPEN
12	83-NFF-020-010		WINDOW, DISPLAY	43	84-711-909-010		LBL, DATE
13	87-063-165-010		OIL-DMFR 150	A	87-067-641-010		UTT+3-8(W/O SLOT)BL
14	83-NF5-022-010		WINDOW, CD	B	87-067-703-010		BVT+3-10 (W/O SLOT)
15	82-NE6-067-010		BADGE, AIWA 30N	C	87-571-032-410		VIT+2-3
16	83-NF5-013-010		KEY, POWER	D	87-067-633-010		BVT+3-8 W CONVEX
17	83-NF5-202-010		GUIDE, FL	E	87-067-698-010		BVT+3-18(W/O, SLOT)
18	83-NF5-206-010		GUIDE, LED	F	87-067-758-010		BVT+3-12 W/O SLOT
19	82-NF5-217-210		HLD, BOTTOM	G	87-067-688-010		BVTT+3-6
20	83-NFF-024-010		PANEL, TRAY E	H	87-591-094-410		QIT+3-6
21	83-NF5-034-010		IND, CD 2	I	87-078-083-010		BVTT SEMS+4-8SW
22	83-NF5-023-010		IND, CD	J	87-721-097-410		QT2+3-12 GLD
23	83-NF5-021-010		WINDOW, TOP	K	87-067-579-010		BVT+3-8W/O SLOT
24	83-NF5-033-010		CAB, STEEL HR	L	87-741-094-410		UT2+3-6
25	83-NF5-014-110		KEY ASSY, FUN				
26	83-NFF-042-010		PANEL, REAR UB5200<5200U>				
26	83-NFF-012-010		PANEL, REAR UBNM<5100U>				
26	83-NFF-041-010		PANEL, REAR UBNM 5250<5250U>				
27	87-050-053-010		AC CORD ASSY, U-Z				
28	87-085-189-010		BUSHING, CORD U				
29	87-085-221-010		FOOT, H13.5				
30	83-NF5-025-010		KEY, REC				
31	82-NF5-227-010		HLD, LOCK 2N				

MECHANICAL EXPLODED VIEW 2/2

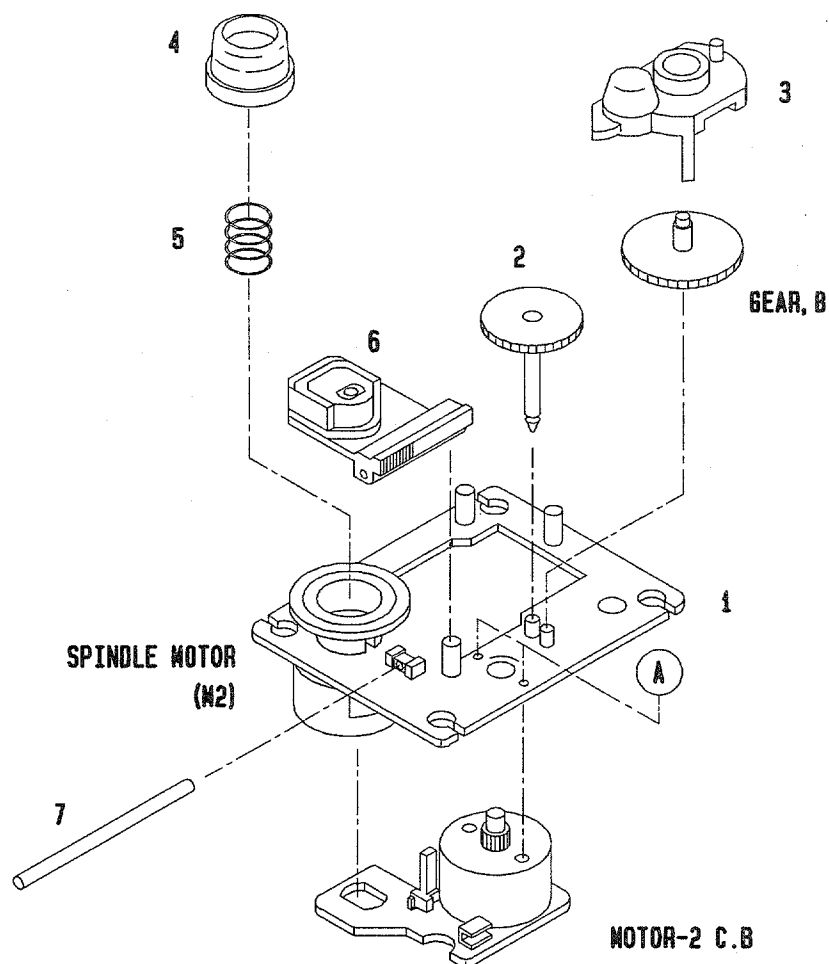


MECHANICAL PARTS LIST 2/2

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カリ NO.	DESCRIPTION	REF. NO	PART NO.	カリ NO.	DESCRIPTION
1	80-CD3-214-010		CUSH CD A	25	81-ZG1-024-010		TRAY, NO3 3NF-5
2	81-ZG1-277-010		HLDR, MAGNET N	26	81-ZG1-015-010		GEAR, TRAY CAM BLU
3	81-ZG1-253-510		HLDR, MECH MK2	27	81-ZG1-233-110		BELT, TT
4	81-ZG1-276-110		WORM GEAR, TT NO2	28	81-ZG1-236-010		PULLY, TT MO
5	81-ZG1-230-010		G-CUSH, MECH	29	81-ZG1-260-010		SHAFT, WORM S
6	81-ZG1-231-110		SPR-C, MECH	A	81-653-215-010		SPECIAL SCREW VT2
7	81-ZG1-212-010		PULLY, LOAD MO	B	81-ZG1-254-010		S-SCREW, MECH HLDR
8	81-ZG1-250-010		GEAR, TRAY RELAY MK2	C	81-ZG1-271-010		S-SCREW, MECH REAR
9	81-ZG1-019-010		GEAR, TRAY B YEL	D	81-ZG1-239-010		S-SCREW, TT
10	81-ZG1-018-010		GEAR, TRAY A YEL	E	87-067-945-110		VFT2+3-12(F10)
11	81-ZG1-017-010		GEAR, RELAY RED	F	87-251-071-410		U+2.6-4
12	81-ZG1-014-010		PULLY, RELAY YEL	G	87-067-579-010		BVT2+3-8W/O SLOT
13	81-ZG1-240-010		SPR-P, WORM	H	81-ZG1-264-010		S-SCREW, CAM
14	87-036-326-010		MAGNET, CLAMPER 93	I	87-761-095-410		VFT2+3-8
15	81-ZG1-285-010		PLATE, MAGNET N	J	87-078-029-010		VFT2+3-13(F8)
16	81-ZG1-232-010		BELT, TRAY	K	87-078-061-010		VFT2+3-20D1A10, GLD
17	81-ZG1-238-110		CUSH, TRAY IN				
18	81-ZG1-222-010		WORM WHEEL, TT				
19	81-ZG1-202-010		GEAR MAIN				
20	81-ZG1-252-010		LEVER, TT MK2				
21	81-ZG1-008-210		TURNTABLE, NO2<5100U, 5250U>				
21	81-ZG1-010-210		TURNTABLE, NO3<5200U>				
22	81-ZG1-020-010		PLATE, CAM BGE				
23	81-ZG1-262-010		SPR-E, CAM S				
24	81-ZG1-016-010		GEAR, MECH CAM BGE				

CD MECHANISM EXPLODED VIEW 1/1

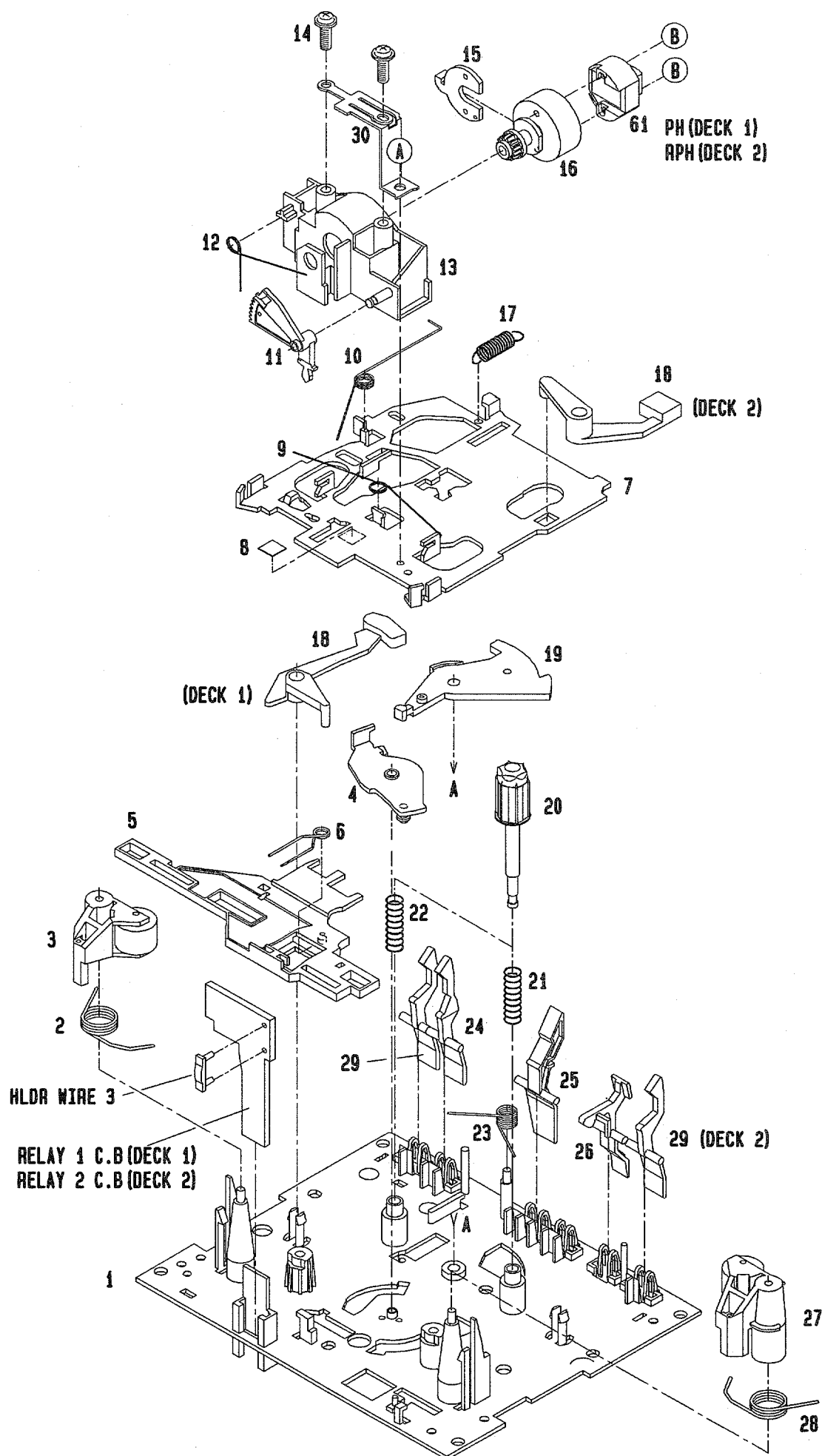


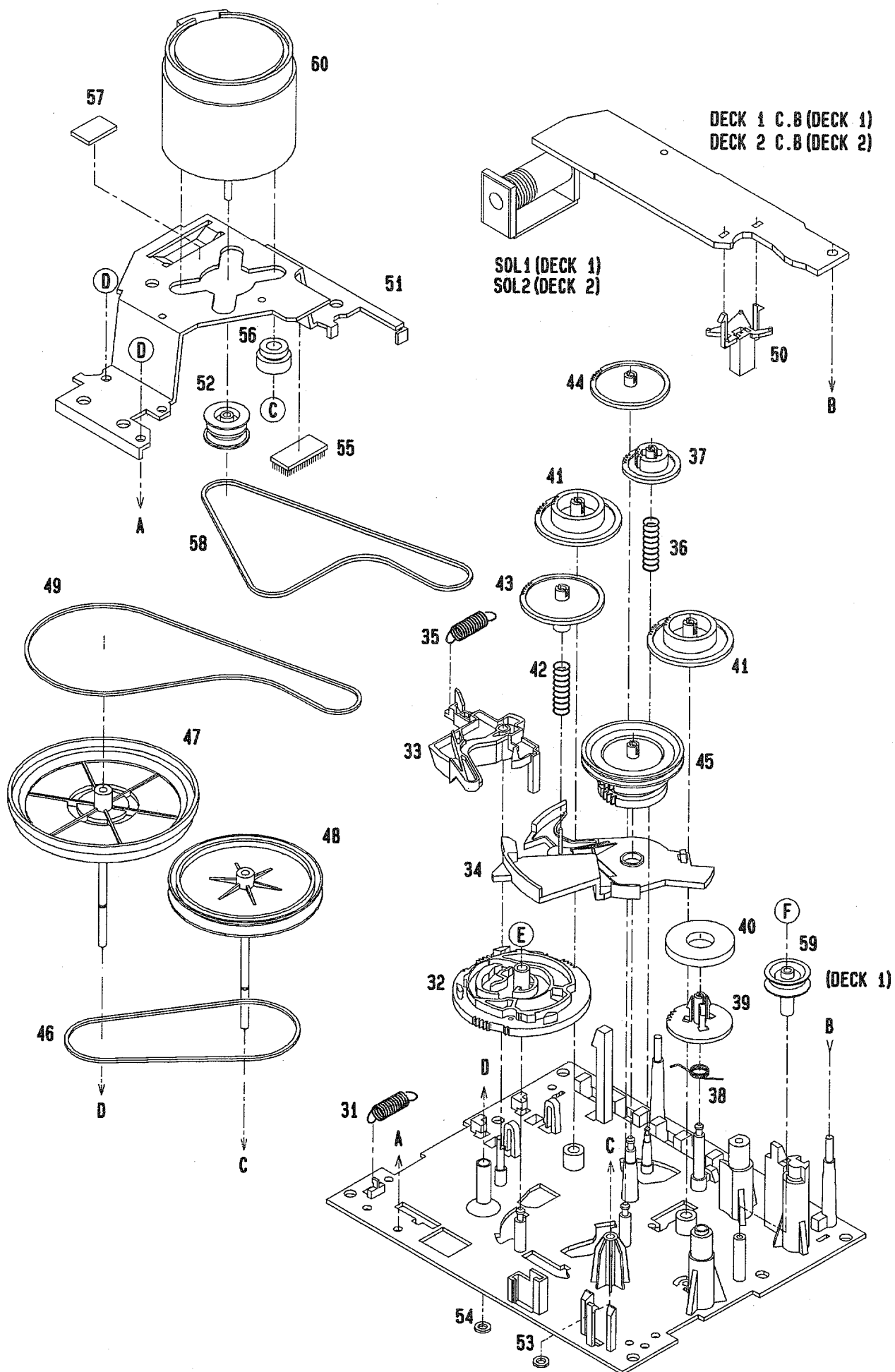
CD MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カソリ NO.	DESCRIPTION	REF. NO	PART NO.	カソリ NO.	DESCRIPTION
1	9X-262-513-310		T. T CHASS ASSY W/MOTOR	6	98-848-127-110		OPTICAL PICK UP KSS-210A
2	92-625-188-020		GEAR (A)	7	94-917-565-010		SHAFT SLED
3	92-625-544-010		COVER	A	87-261-032-210		V+2-3
4	92-625-187-010		RING CENTER				
5	92-625-191-010		SPRING COMPRESSION				

TAPE MECHANISM EXPLODED VIEW 1/1





TAPE MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カンリ NO.	DESCRIPTION	REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	82-ZM3-214-110		CHAS ASSY, P (DECK 1)	39	82-ZM1-220-210		GEAR, IDLER
1	82-ZM1-299-010		CHAS ASSY, R (DECK 2)	40	80-ZM6-217-010		RING MAGNET 2
2	82-ZM1-258-010		SPR-T, PINCH L	41	82-ZM1-216-210		GEAR, REEL
3	82-ZM1-248-110		LVR ASSY, PINCH L	42	82-ZM1-276-010		SPR-C, FR
4	82-ZM1-295-210		PLATE ASSY, LINK	43	82-ZM1-225-010		GEAR, FR
5	82-ZM1-266-010		LVR, DIR	44	82-ZM1-226-010		GEAR, REW
6	82-ZM1-214-010		SPR-T, DIR	45	82-ZM1-228-210		SLIP DISK ASSY
7	82-ZM1-206-210		CHAS, HEAD	46	82-ZM1-261-110		BELT, FR
8	87-078-014-010		SH, 5-5-0.05	47	82-ZM1-237-210		FLY-WHL ASSY, R (DECK 2)
9	82-ZM1-269-010		SPR-T, BRG	47	82-ZM3-209-110		FLY-WHL ASSY, R2 (DECK 1)
10	82-ZM1-219-010		SPR-T, LINK	48	82-ZM1-234-110		FLY-WHL ASSY, L (DECK 2)
11	82-ZM1-210-010		GEAR, H T	48	82-ZM3-207-210		FLY-WHL ASSY, L2 (DECK 1)
12	82-ZM1-213-010		SPR-T, HEAD	49	82-ZM3-206-010		BELT, R
13	82-ZM1-207-010		GUIDE, TAPE	50	82-ZM1-245-210		HLDR, IC
14	82-ZM1-283-210		S-SCREW, AZIMUTH	51	82-ZM3-201-010		HLDR, MC
15	82-ZM1-209-010		PLATE, HEAD	52	82-ZM3-202-010		PULLEY, MOT 2M
16	82-ZM1-208-010		HLDR, HEAD	53	82-ZM1-288-010		SH, 1.63-3.2-0.5 SLT
17	82-ZM1-218-010		SPR-E, HB	54	80-ZM6-243-010		SH, 1.75-3.6-0.5 SLT
18	82-ZM1-263-110		LVR, EJECT L (DECK 1)	55	80-ZM6-230-010		SH, BELT
18	82-ZM1-264-010		LVR, EJECT R (DECK 2)	56	86-575-242-010		CUSH-G, DIA3.7-9-3.2
19	82-ZM1-222-010		LVR, PLAY	57	86-575-361-010		CUSH-G, 6-8-0.8
20	82-ZM1-217-110		REEL TABLE	58	82-ZM3-205-010		BELT, L
21	82-ZM1-244-110		SPR-C, BT	59	82-ZM3-204-010		PULLEY, COUPLER (DECK 1)
22	82-ZM1-285-110		SPR-C, BT L	60	87-045-347-010		MOT, SHU2L 70(M1)
23	82-ZM1-257-010		SPR-T, CAS	61	87-046-355-010		HEAD, PH HADKH2529B (PH)
24	82-ZM1-241-110		LVR, MC	61	87-046-356-010		HEAD, RPH HADKH5581B (RPH)
25	82-ZM1-242-010		LVR, CAS	A	87-585-036-410		UIT+2-8
26	82-ZM1-243-010		LVR, STOP	B	80-ZM6-207-010		V+1.6-7
27	82-ZM1-253-110		LVR ASSY, PINCH R	C	82-ZM1-309-010		S-SCRW, MOTOR
28	82-ZM1-259-010		SPR-T, PINCH R	D	87-067-178-010		VTT+2.6-3
29	82-ZM1-240-110		LVR, REC (DECK 2)	E	87-067-932-010		PW, 2.15-6.8-0.5 SLT
30	82-ZM1-298-010		SPR-P, EARTH	F	87-067-972-010		PW, 1.05-3-0.25 SLT
31	82-ZM1-255-110		SPR-E, LVR DIR				
32	82-ZM1-221-110		GEAR, CAM				
33	82-ZM1-227-110		LVR, TRIG				
34	82-ZM1-224-110		LVR, FR				
35	82-ZM1-305-010		SPR-E, TRIG 2				
36	82-ZM1-277-010		SPR-C, PLAY				
37	82-ZM1-223-010		GEAR, PLAY				
38	82-ZM1-256-110		SPR-T, FR				

■ SPEAKER LIST

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
 If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
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SX-N5200

1	83-NSF-009-010		PANEL FR L B
2	83-NSF-008-010		PANEL FR R B
3	83-NSF-011-010		GRILL FRAME ASSY L
4	83-NSF-010-010		GRILL FRAME ASSY R
5	83-NSF-610-010		SPEAKER WOOFER U
6	82-NS5-604-010		SPEAKER TWEETER
7	82-MSE-610-010		CERAMIC
8	83-096-614-010		SPEAKER CORD
9	83-NSF-013-010		DIAPHRAGM

■ ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は“REFERENCE NAME LIST”を参照してください。
 If can't understand for Description please kindly refer to “REFERENCE NAME LIST”.

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	83-NFF-906-010		IB, U(S)
2	83-NFF-605-010		RC, RC-TN520EX<5100>
2	83-NFF-621-010		RC, RC-TN5200EXU<5200, 5250>
3	87-006-225-010		AM LOOP ANT NC2
4	87-043-115-010		ANT, FEEDER FM

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER
サージサプレッサー	SERGESUPPRESSOR
セラコン	CAP, CERA

サービス技術ニュース	
番号	連絡内容
G - -	
G - -	
G - -	

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MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTORL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOADING MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL
シャフト	ARM, SHAFT
シャフト	GUIDE, SHAFT
ストラップ	STRAP
トナベ	S-SCRW
ピン	HINGE
ピンビス	S-SCRW
ビスネート	SCRW, SERRART

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Tokyo Japan