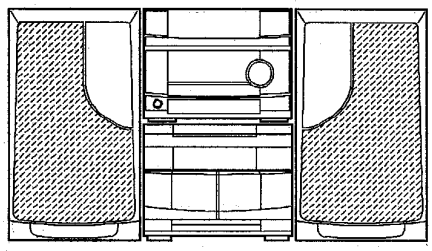
aiwa

aiwa SERVICE

NSX-H9
NSX-M9

SERVICE MANUAL



COMPACT DISC STEREO
CASSETTE RECEIVER

- BASIC TAPE MECHANISM: 2ZM-3MK2 PR2N
- BASIC CD MECHANISM: 4ZG-1WRNM
- TYPE.EZ

- If requiring information about the CD mechanism, see Service Manual of 4ZG-1WR. (S/M Code No. 09-965-128-10T)

SYSTEM	AMPLIFIER	CASSETTE DECK CD PLAYER	REMOTE CONTROLLER	SPEAKERS
NSX-H9	RX-NH9	FD-NH9	RC-T501	SX-ANH9
NSX-M9	RX-NM9	FD-NH9	RC-T501	SX-NM9

S/M Code No. 09-968-157-70T

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SPECIFICATIONS

STEREO RECEIVER RX-NH9/NM9

FM tuner section

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	16.8 dBf
Antenna terminals	75 ohms (unbalanced)

MW tuner section

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

LW tuner section

Tuning range	144 kHz to 290 kHz
Usable sensitivity	1400 µV/m
Antenna	Loop antenna

Amplifier section

Power output*	Rated: 100 W + 100 W (6 ohms, T.H.D. 1 %, 1 kHz/DIN 45500) Reference: 120 W + 120 W (6 ohms, T.H.D. 10 %, 1 kHz/DIN 45324) DIN MUSIC POWER 210 W + 210 W
	**without connecting to the SURROUND SPEAKERS*
Total harmonic distortion	0.1 % (60 W, 1 kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO 1/MD IN: 200mV (adjustable) VIDEO 2/AUX IN: 200 mV (adjustable) MIC 1, MIC 2: 1 mV (10 kohms)
Outputs	REC OUT: 200 mV SUPER WOOFER: 2.6 V SPEAKERS: accept speakers of 6 ohms or more SURROUND SPEAKERS: accept speakers of 16 ohms or more PHONES (stereo jack): accepts headphones of 32 ohms or more

General

Power requirements	230 V AC, 50 Hz
Power consumption	500 W (system 520 W)
Dimensions of main unit (W × H × D)	260 × 198 × 333.5 mm
Weight of main unit	5.8 kg

COMPACT DISC/STEREO CASSETTE DECK FD-NH9

Cassette deck section

Track format	4 tracks, 2 channels stereo
Frequency response	Metal tape: 50 Hz – 17000 Hz CrO_2 tape: 50 Hz – 16000 Hz Normal tape: 50 Hz – 15000 Hz
Signal-to-noise ratio	75 dB (Dolby C NR ON, Metal tape peak level)
Recording system	AC bias
Heads	Deck 1: Playback head × 1 Deck 2: Recording/playback/erase head × 1

Compact disc player section

Laser	Semiconductor laser (λ = 780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.03 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

General

Dimensions (W × H × D)	260 × 203 × 321.5 mm
Weight	3.9 kg

SPEAKER SYSTEM SX-ANH9

Cabinet type	4 way, bass reflex with surround speaker (magnetic sealed type)
Speakers	Woofer: 140 mm cone type Mid-range: 80 mm cone type Tweeter: 50 mm cone type Super tweeter: 20 mm ceramic type Surround speaker: 80 mm cone type
Impedance	Front speaker: 6 ohms Surround speaker: 16 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W × H × D)	250 × 405 × 286 mm
Weight	5 kg

SPEAKER SYSTEM SX-NM9

Cabinet type	2 way, bass reflex (magnetic shielded type)
Speakers	Woofer: 160 mm cone type Tweeter: 25 mm cone type
Impedance	6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W × H × D)	240 × 396 × 255 mm
Weight	5.5 kg

- Design and specifications are subject to change without notice.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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  Under license from BBE Sound,Inc.

MODEL NO.

RX-NH9/NM9

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.	カンリ NO.	DESCRIPTION
IC			
	87-A20-069-049		C-IC,BA3842F
	87-A20-067-040		C-IC,M65849FP
	87-A20-191-019		IC,STK-419-140A
	87-017-888-089		IC,NJM4558MD
	87-017-915-089		IC,BU4094BCF
	87-017-804-019		IC,BU4052BC
	87-A20-083-019		IC,BA3835S
	87-A20-107-019		IC,BA3836
	87-017-914-019		IC,BU4094 BC
	87-A20-056-019		IC,BA3880S
	87-070-127-119		IC,LC72131D
	87-017-714-119		IC,LA1836L
	86-NT1-619-010		IC,LC 866440W-5B44
	87-070-083-019		IC,GP1U281X
	87-A20-105-040		C-IC,BU1921FS
	87-001-792-080		C-IC,NJM2100M
TRANSISTOR			
	89-213-702-019		TR,2SB1370E
	89-109-352-089		TR,2SA 935 Q
	87-026-610-089		TR, KTC3198GR
	89-332-665-089		TR,2SC3266GR
	89-337-221-389		C-TR,2SC3722K
	89-324-122-089		C-TR,2SC 2412R
	89-110-372-089		C-TR,2SA1037 R
	89-110-373-089		C-TR,2SA1037 S
	87-026-210-089		C-TR,DTC144EK T147
	89-421-141-289		C-TR,2SD2114K,UV
	87-026-609-089		TR, KTA1266GR
	89-109-373-089		TR,2SA1037S
	89-112-965-089		TR,2SA1296GR
	87-026-228-089		C-TR DTA124EK
	89-113-187-089		TR,2SA1318TU
	87-A30-047-080		TR,CSD655E
	89-333-266-089		C-TR,2SC3326B
	87-026-214-089		TR,DTA114YS
	89-327-125-089		C-TR,2SC2712GR
	89-327-143-089		C-TR,2SC2714 (O)
	87-026-226-089		C-TR,DTA143EK
	87-026-211-089		C-TR,DTA144EK T147
	87-026-213-089		C-TR,DTC114YK
	89-421-143-089		C-TR,2SD2114KW
	89-505-434-589		C-FET,2SK543(4/5)
	87-026-269-089		TR,DTA114ES
DIODE			
	87-A40-116-069		DIODE,RS403L-B-D-51
	87-A40-115-069		DIODE,SA D102
	87-070-274-089		DIODE,1N4003 SEM
	87-020-027-089		C-DIODE,1SS184
	87-020-125-089		C-DIODE,1SS181
	87-020-465-089		DIODE,1SS133
	87-017-174-089		ZENER,HZS11A3L
	87-017-146-089		ZENER,HZS30-2
	87-001-290-089		ZENER,HZS5C1
	87-017-148-089		ZENER,HZS6A1L
	87-001-731-089		ZENER HZS6C2L
	87-001-911-089		ZENER,UTZJ4.7A (TAPG)

REF. NO.	PART NO.	カンリ NO.	DESCRIPTION
MAIN C.B			
C101	87-016-657-099		CAP,E 3300-71
C102	87-016-657-099		CAP,E 3300-71
C104	87-010-235-089		CAP,E 470-16 SME
C105	87-010-235-089		CAP,E 470-16 SME
C106	87-016-285-089		CAP,E 47-100 SME
C107	87-010-407-089		CAP,E 33-50 SME
C108	87-010-407-089		CAP,E 33-50 SME
C109	87-010-263-089		CAP,E 100-10 SME 5X11
C112	87-010-382-089		CAP,E 22-25 SME
C113	87-010-403-089		CAP,E 3.3-50 SME
C116	87-012-140-089		C-CAP,S 470P-50 CH
C121	87-012-368-089		C-CAP,S 0.1-50 F
C122	87-012-368-089		C-CAP,S 0.1-50 F
C123	87-012-368-089		C-CAP,S 0.1-50 F
C124	87-012-368-089		C-CAP,S 0.1-50 F
C125	87-010-263-089		CAP,E 100-10 SME 5X11
C126	87-010-189-089		C-CAP,S 8200P-50 B
C127	87-010-189-089		C-CAP,S 8200P-50 B
C131	87-010-186-089		C-CAP,S 4700P-50 B
C132	87-010-186-089		C-CAP,S 4700P-50 B
C152	87-010-260-089		CAP,E 47-25 SME
C163	87-018-212-080		CAP,TC U 0.022-50 Z F SA
C164	87-018-212-080		CAP,TC U 0.022-50 Z F SA
C165	87-010-197-089		C-CAP,S 0.01-25 B
C166	87-010-197-089		C-CAP,S 0.01-25 B
C171	87-016-658-090		CAP,E 4700-35 SMG
C172	87-016-658-090		CAP,E 4700-35 SMG
C173	87-012-368-089		C-CAP S 0.1-50F
C174	87-012-368-089		C-CAP S 0.1-50F
C175	87-012-368-089		C-CAP S 0.1-50F
C176	87-012-368-089		C-CAP S 0.1-50F
C220	87-010-194-089		C-CAP,S 0.047-25 F
C221	87-010-545-089		CAP,E 0.22-50 SME
C222	87-010-545-089		CAP,E 0.22-50 SME
C225	87-012-157-089		C-CAP,S 330P-50 CH
C226	87-012-157-089		C-CAP,S 330P-50 CH
C227	87-010-402-089		CAP,E 2.2-50 SME
C228	87-010-402-089		CAP,E 2.2-50 SME
C229	87-010-403-080		CAP,E 3.3-50 SME
C230	87-010-403-080		CAP,E 3.3-50 SME
C231	87-018-099-089		CAP,TC-U 3.9P-50 CH
C232	87-018-099-089		CAP,TC-U 3.9P-50 CH
C233	87-010-196-089		C-CAP,S 0.1-25 F
C234	87-010-196-089		C-CAP,S 0.1-25 F
C235	87-010-196-089		C-CAP,S 0.1-25 F
C236	87-010-196-089		C-CAP,S 0.1-25 F
C240	87-010-197-089		C-CAP,S 0.01-25 B
C245	87-012-368-089		C-CAP,S 0.1-50 F
C500	87-010-405-089		CAP,E 10-50 SME
C501	87-010-213-089		C-CAP,S 0.015-25 B
C502	87-010-213-089		C-CAP,S 0.015-25 B
C505	87-010-544-080		CAP,E 0.1-50 SME
C506	87-010-544-080		CAP,E 0.1-50 SME
C507	87-010-196-089		C-CAP,S 0.1-25 F
C508	87-010-196-089		C-CAP,S 0.1-25 F
C530	87-010-197-089		C-CAP,S 0.01-25 B
C531	87-010-183-089		C-CAP,S 2700P-50 B
C532	87-010-194-089		C-CAP,S 0.047-25 F
C533	87-010-196-089		C-CAP,S 0.1-25 F
C534	87-010-263-089		CAP,E 100-10 SME 5X11

REF. NO.	PART NO.	カンリ NO.	DESCRIPTION
C535	87-010-404-089		CAP,E 4.7-50 SME
C536	87-010-404-089		CAP,E 4.7-50 SME
C537	87-010-545-089		CAP,E 0.22-50 SME
C539	87-010-194-089		C-CAP,S 0.047-25 F
C540	87-010-384-089		CAP,E 100-25 SME
C541	87-010-404-089		CAP,E 4.7-50 SME
C542	87-010-404-089		CAP,E 4.7-50 SME
C560	87-012-156-089		C-CAP,S 220P-50 CH
C561	87-012-156-089		C-CAP,S 220P-50 CH
C562	87-012-156-089		C-CAP,S 220P-50 CH
C563	87-012-142-089		C-CAP,S 0.33-16 F
C564	87-010-196-089		C-CAP,S 0.1-25 F
C565	87-018-209-089		CAP,TC-U 0.1-50 F
C566	87-010-196-089		C-CAP,S 0.1-25 F
C601	87-010-184-089		C-CAP,S 3300P-50 B
C602	87-010-184-089		C-CAP,S 3300P-50 B
C603	87-010-405-089		CAP,E 10-50 SME
C604	87-010-405-089		CAP,E 10-50 SME
C605	87-010-260-089		CAP,E 47-25 SME
C606	87-010-101-089		CAP,E 220-16 SME
C607	87-010-188-089		C-CAP,S 6800P-50 B
C608	87-010-188-089		C-CAP,S 6800P-50 B
C609	87-018-127-089		CAP,TC-U 470P-50 B
C610	87-018-127-089		CAP,TC-U 470P-50 B
C611	87-010-197-089		C-CAP,S 0.01-25 B
C612	87-010-197-089		C-CAP,S 0.01-25 B
C613	87-010-195-089		C-CAP,S 0.068-25 F
C614	87-010-195-089		C-CAP,S 0.068-25 F
C615	87-010-404-089		CAP,E 4.7-50 SME
C616	87-010-404-089		CAP,E 4.7-50 SME
C617	87-010-404-089		CAP,E 4.7-50 SME
C618	87-010-404-089		CAP,E 4.7-50 SME
C701	87-010-381-089		CAP,E 330-16 SME
C702	87-010-404-089		CAP,E 4.7-50 SME
C703	87-010-197-089		C-CAP,S 0.01-25 B
C704	87-010-197-089		C-CAP,S 0.01-25 B
C711	87-010-263-089		CAP,E 100-10 SME 5X11
C712	87-010-196-089		C-CAP,S 0.1-25 F
C715	87-010-197-089		C-CAP,S 0.01-25 B
C716	87-010-197-089		C-CAP,S 0.01-25 B
C722	87-010-152-089		C-CAP,S 8P-50 CH
C723	87-010-178-089		C-CAP,S 1000P-50 B
C725	87-010-178-089		C-CAP,S 1000P-50 B
C727	87-010-196-089		C-CAP,S 0.1-25 F
C728	87-010-248-089		CAP,E 220-10 SME
C760	87-010-197-089		C-CAP,S 0.01-25 B
C761	87-010-196-089		C-CAP,S 0.1-25 F
C770	87-010-405-089		CAP,E 10-50 SME
C771	87-010-405-089		CAP,E 10-50 SME
C772	87-010-194-089		C-CAP,S 0.047-25 F
C773	87-010-196-089		C-CAP,S 0.1-25 F
C774	87-010-263-089		CAP,E 100-10 SME 5X11
C775	87-010-405-089		CAP,E 10-50 SME
C776	87-010-197-089		C-CAP,S 0.01-25 B
C777	87-010-400-089		CAP,E 0.47-50 SME
C778	87-010-401-089		CAP,E 1-50 SME
C779	87-010-401-089		CAP,E 1-50 SME
C780	87-010-197-089		C-CAP,S 0.01-25 B
C781	87-010-405-089		CAP,E 10-50 SME
C782	87-010-405-089		CAP,E 10-50 SME
C787	87-010-184-089		C-CAP,S 3300P-50 B
C788	87-010-184-089		C-CAP,S 3300P-50 B
C789	87-010-179-089		C-CAP,S 1200P-50 B
C790	87-010-179-089		C-CAP,S 1200P-50 B
C791	87-010-401-089		CAP,E 1-50 SME
C792	87-010-182-080		C-CAP,S 2200P-50 K B
C793	87-010-189-089		C-CAP,S 8200P-50 B
C794	87-010-408-089		CAP,E 47-50 SME
C795	87-010-194-089		C-CAP,S 0.047-25 F
C796	87-010-403-089		CAP,E 3.3-50 SME
C801	87-018-134-089		CAP,TC-U0.01-16 Y
C802	87-018-134-089		CAP,TC-U0.01-16 Y

REF. NO.	PART NO.	カンリ NO.	DESCRIPTION
C814	87-010-197-089		C-CAP,S 0.01-25 B
C815	87-018-134-089		CAP,TC-U 0.01-16 Y
C816	87-018-134-089		CAP,TC-U 0.01-16 Y
C817	87-010-197-089		C-CAP,S 0.01-25 B
C818	87-010-197-089		C-CAP,S 0.01-25 B
C819	87-010-197-089		C-CAP,S 0.01-25 B
C820	87-010-408-089		CAP,E 47-50 SME
C821	87-010-197-089		C-CAP,S 0.01-25 B
C822	87-010-197-089		C-CAP,S 0.01-25 B
C823	87-010-197-089		C-CAP,S 0.01-25 B
C828	87-010-196-089		C-CAP,S 0.1-25 F
C829	87-010-196-089		C-CAP,S 0.1-25 F
C860	87-010-248-080		CAP,E 220-10 SME
C861	87-010-196-080		C-CAP,S 0.1-25 Z F
C862	87-010-182-080		C-CAP,S 2200P-50 K B
C863	87-018-131-080		CAP,TC U 1000P-50 K B UP050
C864	87-010-315-080		C-CAP,S 27P-50 J CH
C865	87-010-315-080		C-CAP,S 27P-50 J CH
C866	87-010-196-080		C-CAP,S 0.1-25 Z F
C867	87-018-127-080		CAP,TC U 470P-50 K B UP050
C868	87-010-405-080		CAP,E 10-50 SME
C869	87-010-197-080		C-CAP,S 0.01-25 K B
C871	87-010-805-080		C-CAP,S 1-16 Z F
C872	87-010-197-080		C-CAP,S 0.01-25 K B
C940	87-010-197-089		C-CAP,S 0.01-25 B
C942	87-010-150-080		C-CAP,S 6P-50 D CH
C946	87-010-401-089		CAP,E 1-50 SME
C949	87-014-049-080		CAP,PP 470P-100 J
C952	87-010-197-089		C-CAP,S 0.01-25 B
C957	87-010-315-080		C-CAP,S 27P-50 J CH
C958	87-010-197-080		C-CAP,S 0.01-25 K B
C960	87-010-196-089		C-CAP,S 0.1-25 F
CF801	87-008-423-080		FLTR, SFE10.7MS3GH-A-TF21
CF802	82-785-747-080		CF,MS2 GHY,R
EMI901	87-008-372-080		FLTR,EMIBL01 RN1
FFE801	A8-6ZA-191-030		6ZA-1 FEENM
J252	87-A60-020-019		JACK,6.3 BLK W/SW
J253	87-099-802-019		JACK,PIN 3P BRW
J254	87-033-240-019		TERMINAL,SP 4P32SV1-05
J801	87-033-241-010		TERMINAL,ANT AJ-2039
L101	87-003-383-019		COIL,1UH-S
L102	87-003-383-019		COIL,1UH-S
L701	87-003-293-019		COIL,TRAP MPX
L702	87-003-293-019		COIL,TRAP MPX
L741	87-A50-015-019		COIL,FM DET(TOK)
L742	87-A90-051-019		FLTR,CFAZ-450(TOK)
L770	87-003-102-089		COIL,10UH
L832	87-003-098-089		COIL,2.2UH
L850	87-003-098-089		COIL,2.2UH
L941	87-A50-020-010		COIL,ANT LW (COI)
L942	87-A50-019-010		COIL,OSC LW (COI)
L981	86-NF4-665-019		AM PACK 1(TOK)
⚠PR106	87-026-689-080		PROTECTOR,1A 491SERIES 60V
R105	87-022-600-089		RES,M/F 0.1-2W J
R106	87-022-600-089		RES,M/F 0.1-2W J
RY101	87-045-389-019		RELAY,OSA-SS-212DM5
RY102	87-045-382-019		RELAY,OUAZ-SH-112L
SFR722	87-024-432-080		SFR,4.7K H RH063MC
TC701	87-011-253-089		TRIMER,30P LAR
TC942	87-011-253-089		TRIMER,30P LAR
W304	86-NT2-655-010		CORD,FG15P
X703	84-508-618-019		VIB,CER CSB 456 F15
X721	87-030-372-019		VIB,XTAL 7.2MHZ
X850	89-KT1-608-010		X,TAL 4.332MHZ

FRONT C.B

C101	87-010-401-049		CAP,E 1-50 SME
C102	87-010-401-049		CAP,E 1-50 SME
C103	87-010-182-089		C-CAP,S 2200P-50 B
C104	87-010-182-089		C-CAP,S 2200P-50 B
C105	87-010-545-049		CAP E 0.22-50 SME

REF. NO.	PART NO.	カンリ NO.	DESCRIPTION
C106	87-010-545-049		CAP E 0.22-50 SME
C107	87-010-993-089		C-CAP,S 0.056-25 B
C108	87-010-993-089		C-CAP,S 0.056-25 B
C109	87-012-393-089		C-CAP,S 0.22-16,R,X
C110	87-012-393-089		C-CAP,S 0.22-16,R,X
C111	87-010-401-049		CAP,E 1-50 SME
C112	87-010-260-049		CAP,E 47-25 SME
C113	87-010-405-049		CAP,E 10-50 SME
C114	87-010-406-049		CAP,E 22-50 SME
C115	87-010-196-089		C-CAP,S 0.1-25 F
C401	87-010-196-089		C-CAP,S 0.1-25 F
C402	87-010-196-089		C-CAP,S 0.1-25 F
C450	87-010-112-049		CAP,E 100-16
C470	87-010-112-049		CAP,E 100-16
C501	87-010-322-089		C-CAP,S 100P-50 CH
C502	87-010-196-089		C-CAP,S 0.1-25 F
C503	87-010-196-089		C-CAP,S 0.1-25 F
C504	87-010-196-089		C-CAP,S 0.1-25 F
C505	87-010-196-089		C-CAP,S 0.1-25 F
C506	87-010-196-089		C-CAP,S 0.1-25 F
C601	87-010-196-089		C-CAP,S 0.1-25 F
C602	87-010-545-049		CAP E 0.22-50 SME
C603	87-010-321-089		C-CAP,S 82P-50 CH
C604	87-010-196-089		C-CAP,S 0.1-25 F
C605	87-010-196-089		C-CAP,S 0.1-25 F
C608	87-010-177-089		C-CAP,S 820P-50 SL
C609	87-016-251-049		CAP,E220-16 SMG
C610	87-010-405-049		CAP,E 10-50 SME
C611	87-010-405-049		CAP,E 10-50 SME
C612	87-010-406-049		CAP,E 22-50 SME
C613	87-010-401-049		CAP,E 1-50 SME
C615	87-010-186-089		C-CAP,S 4700P-50 B
C801	87-010-555-049		CAP,E 100-10 GAS
C802	87-010-074-080		CAP,E 4.7-35 5L
C803	87-010-494-049		CAP,E 1-50 GAS
C804	87-A10-189-049		CAP,E 220-10
C805	87-010-196-089		C-CAP,S 0.1-25 F
C806	87-010-196-089		C-CAP,S 0.1-25 F
C821	87-010-312-089		C-CAP,S 15P-50 CH
C822	87-010-180-089		C-CAP,S 1500P-50 B
C823	87-010-498-049		CAP,E 10-16 GAS
C824	87-010-302-080		C-CAP,S 270P-50 CH
C825	87-010-322-089		C-CAP,S 100P-50 CH
C901	87-010-405-049		CAP,E 10-50 SME
C902	87-010-405-049		CAP,E 10-50 SME
C903	87-010-408-049		CAP-E 47-50 SME
FC001	88-904-201-219		FF-CABLE 4P 1.25
FL801	86-NT1-636-019		FL,BJ451GK
J601	87-A60-284-019		JACK,3.5 MO(MSC)
J602	87-A60-284-019		JACK,3.5 MO(MSC)
L801	87-005-165-089		COIL,1uH MLAL03
L820	87-A50-052-019		COIL,CLOCK 5.76MHZ T1
LED401	87-070-199-089		LED,SLP738F-81-S-T1
LED402	87-070-199-089		LED,SLP738F-81-S-T1
LED403	87-070-199-089		LED,SLP738F-81-S-T1
LED404	87-070-199-089		LED,SLP738F-81-S-T1
LED405	87-070-199-089		LED,SLP738F-81-S-T1
LED406	87-070-199-089		LED,SLP738F-81-S-T1
LED407	87-070-199-089		LED,SLP738F-81-S-T1
LED408	87-070-199-089		LED,SLP738F-81-S-T1
LED409	87-070-199-089		LED,SLP738F-81-S-T1
LED410	87-070-199-089		LED,SLP738F-81-S-T1
LED411	87-070-201-089		LED,SLP9118C-51-S-T1
LED412	87-070-201-089		LED,SLP9118C-51-S-T1
LED413	87-070-201-089		LED,SLP9118C-51-S-T1
LED414	87-070-201-089		LED,SLP9118C-51-S-T1
LED415	87-070-201-089		LED,SLP9118C-51-S-T1
LED421	87-070-198-089		LED,SLP736A-81-S-T1
LED422	87-070-198-089		LED,SLP736A-81-S-T1
LED423	87-070-198-089		LED,SLP736A-81-S-T1
LED424	87-070-198-089		LED,SLP736A-81-S-T1
LED425	87-070-198-089		LED,SLP736A-81-S-T1

REF. NO.	PART NO.	カンリ NO.	DESCRIPTION
LED431	87-070-198-089		LED,SLP736A-81-S-T1
LED432	87-070-198-089		LED,SLP736A-81-S-T1
LED433	87-070-198-089		LED,SLP736A-81-S-T1
LED434	87-070-198-089		LED,SLP736A-81-S-T1
LED435	87-070-198-089		LED,SLP736A-81-S-T1
LED436	87-A40-188-089		LED,SLZ736A-17-S-T2
LED437	87-A40-188-089		LED,SLZ736A-17-S-T2
S920	87-A90-095-089		SW,TACT EVQ11G04M
S921	87-A90-095-089		SW,TACT EVQ11G04M
S922	87-A90-095-089		SW,TACT EVQ11G04M
S923	87-A90-095-089		SW,TACT EVQ11G04M
S924	87-A90-095-089		SW,TACT EVQ11G04M
S925	87-A90-095-089		SW,TACT EVQ11G04M
S926	87-A90-095-089		SW,TACT EVQ11G04M
S927	87-A90-095-089		SW,TACT EVQ11G04M
S928	87-A90-095-089		SW,TACT EVQ11G04M
S929	87-A90-095-089		SW,TACT EVQ11G04M
S930	87-A90-095-089		SW,TACT EVQ11G04M
S931	87-A90-095-089		SW,TACT EVQ11G04M
S932	87-A90-095-089		SW,TACT EVQ11G04M
S933	87-A90-095-089		SW,TACT EVQ11G04M
S934	87-A90-095-089		SW,TACT EVQ11G04M
S935	87-A90-095-089		SW,TACT EVQ11G04M
S936	87-A90-095-089		SW,TACT EVQ11G04M
VR101	83-SP2-612-019		VR,10KB SQ11
VR601	87-A90-124-019		VR,RTRY 10KA L20
MVR C.B			
C201	87-010-545-040		CAP,E 0.22-50 SME
C202	87-010-545-040		CAP,E 0.22-50 SME
C203	87-010-404-089		CAP,E 4.7-50 SME
C204	87-010-404-089		CAP,E 4.7-50 SME
C205	87-010-263-089		CAP,E 100-10 SME 5X11
C206	87-010-263-089		CAP,E 100-10 SME 5X11
C207	87-010-318-089		C-CAP,S 47P-50 CH
C208	87-010-318-089		C-CAP,S 47P-50 CH
C209	87-012-358-089		C-CAP,S 0.47-10 FZ
C210	87-010-197-089		C-CAP,S 0.01-25 B
C211	87-010-179-089		C-CAP,S 1200P-50 B
C212	87-010-196-089		C-CAP,S 0.1-25 F
C215	87-010-196-089		C-CAP,S 0.1-25 F
C216	87-010-187-089		C-CAP,S 5600P-50 B
C217	87-010-182-089		C-CAP,S 2200P-50 B
C218	87-012-393-089		C-CAP,S 0.22-16,R,K
C219	87-010-194-089		C-CAP,S 0.047-25 F
C220	87-010-182-089		C-CAP,S 2200P-50 B
C221	87-010-196-089		C-CAP,S 0.1-25 F
C222	87-010-179-089		C-CAP,S 1200P-50 B
C223	87-010-177-089		C-CAP,S 820P-50 SL
C280	87-010-196-089		C-CAP,S 0.1-25 F
C285	87-010-263-089		CAP,E 100-10 SME 5X11
C286	87-010-384-089		CAP,E 100-25 SME
C287	87-010-322-080		C-CAP,S 100P-50 J CH
C288	87-010-322-080		C-CAP,S 100P-50 J CH
C301	87-010-402-049		CAP,E 2.2-50 SME
C302	87-010-402-049		CAP,E 2.2-50 SME
C303	87-010-404-049		CAP,E 4.7-50 SME
C304	87-010-404-049		CAP,E 4.7-50 SME
L201	87-005-481-089		COIL,47UH J FLR50
MVR281	86-NT1-633-019		VR,MOT 50KBX2 -L20
R264	88-121-102-089		RES,1K-1/8W J
R265	88-121-102-089		RES,1K-1/8W J
TRAY C.B			
S937	87-A90-095-089		SW,TACT EVQ11G04M
S938	87-A90-095-089		SW,TACT EVQ11G04M
S939	87-A90-095-089		SW,TACT EVQ11G04M
S940	87-A90-095-089		SW,TACT EVQ11G04M
S941	87-A90-095-089		SW,TACT EVQ11G04M
S942	87-A90-095-089		SW,TACT EVQ11G04M

REF. NO.	PART NO.	カンリ NO.	DESCRIPTION
S945	87-036-110-019		SW,PUSH SPPB 62
S946	87-A90-095-089		SW,TACT EVQ11G04M
S947	87-A90-095-089		SW,TACT EVQ11G04M
S948	87-A90-095-089		SW,TACT EVQ11G04M
S949	87-A90-095-089		SW,TACT EVQ11G04M
S950	87-A90-095-089		SW,TACT EVQ11G04M
S951	87-A90-095-089		SW,TACT EVQ11G04M
S952	87-A90-095-089		SW,TACT EVQ11G04M
S953	87-A90-095-089		SW,TACT EVQ11G04M
S954	87-A90-095-089		SW,TACT EVQ11G04M
S955	87-036-110-019		SW,PUSH SPPB 62

AC-2 C.B

⚠PR101	87-A90-195-089		PROTECTOR 7A125V491
⚠PR102	87-A90-195-089		PROTECTOR 7A125V491

AC-1 C.B

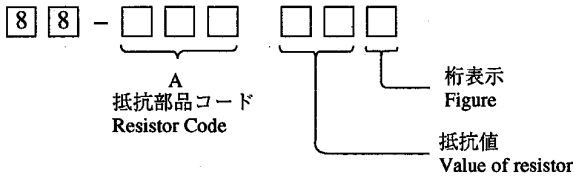
⚠	87-033-213-089		CLAMP FUSE SMK
⚠	82-304-743-019		TERMINAL 1P
⚠F101	87-035-191-010		FUSE,3.15A 250V T 218
⚠PT103	86-NT1-608-019		PT,6NT1-E

MOTOR C.B

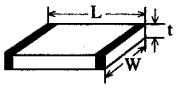
C970	87-010-263-089		CAP,E 100-10 SME 5X11
C971	87-010-263-089		CAP,E 100-10 SME 5X11
M971	87-045-383-010		MOT,M9I T2

○ チップ抵抗部品コード／CHIP RESISTOR PART CODE

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

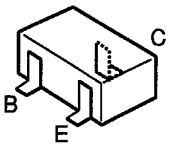


チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード ：A Resistor Code: A
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

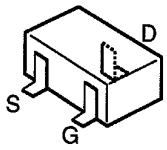
2SA1296
2SA1318
2SC3266
2SD655
KTA1266
KTC3198



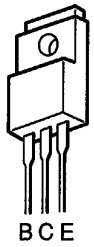
2SA1037
2SC2412
2SC2712
2SC2714
2SC3326
2SC3722
2SD2114
DTA124EK
DTA143EK
DTA144EK
DTC144EK

DTA114YS

2SA935

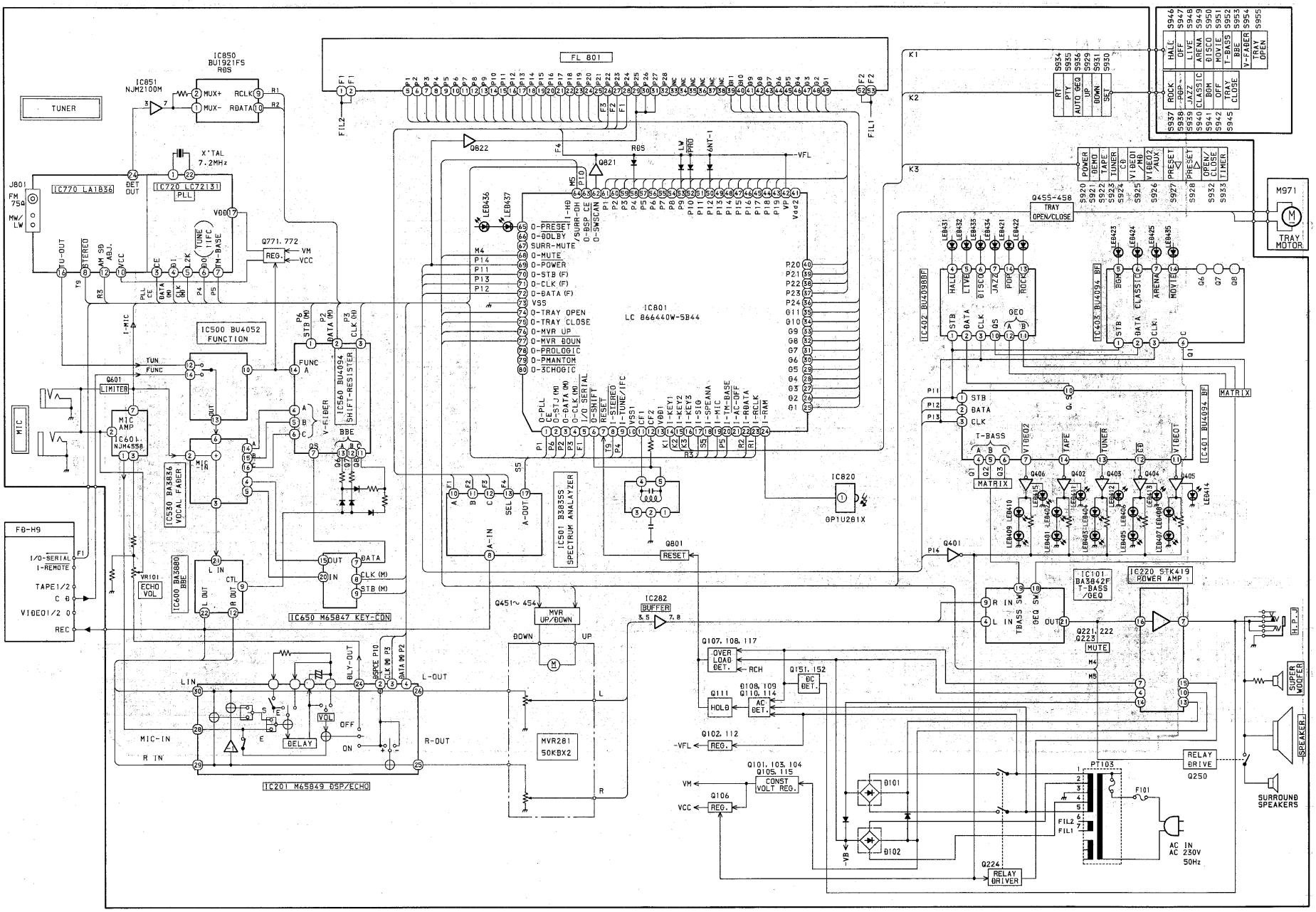


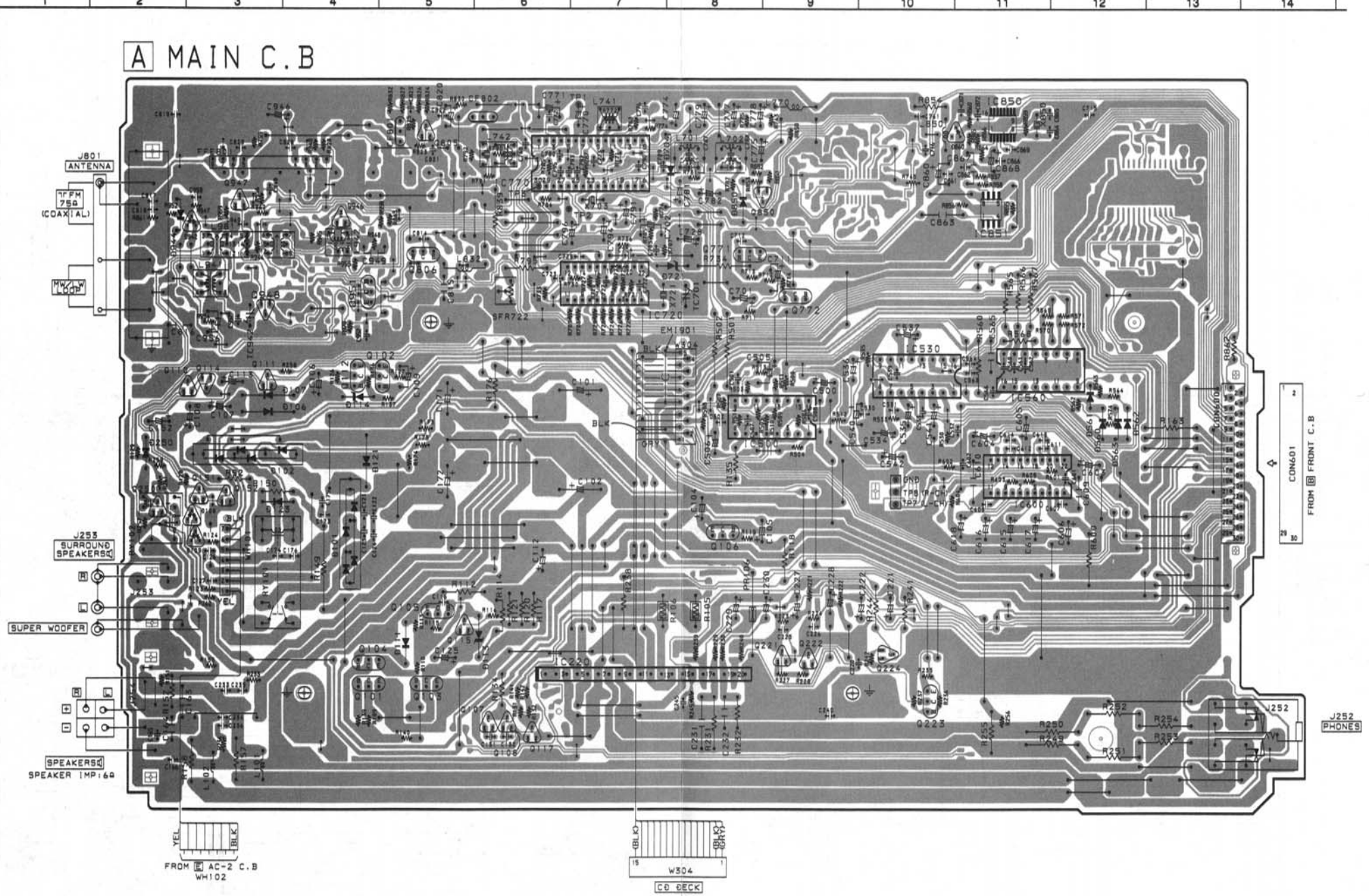
2SK543



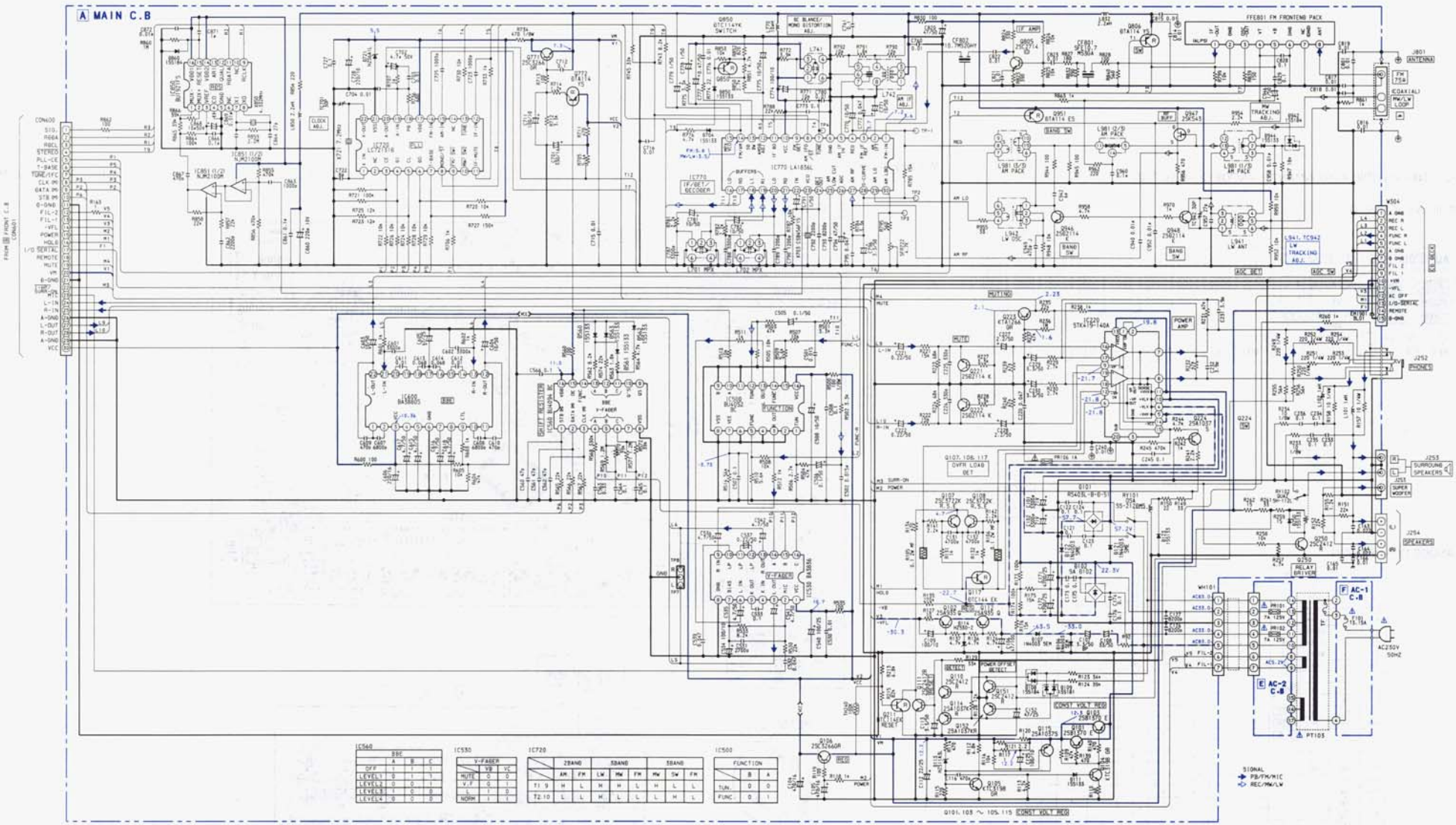
2SB1370

BLOCK DIAGRAM




A MAIN C.B
J801 ANTENNA
75Ω (COAXIAL)
LOOP
J253 SURROUND SPEAKERS
SUPER WOOFER
SPEAKERS
SPEAKER IMP:6Ω
FROM E AC-2 C.B WH102
YEL
BLK
W304
CD DECK
CON601
FROM B FRONT C.B
J252 PHONES

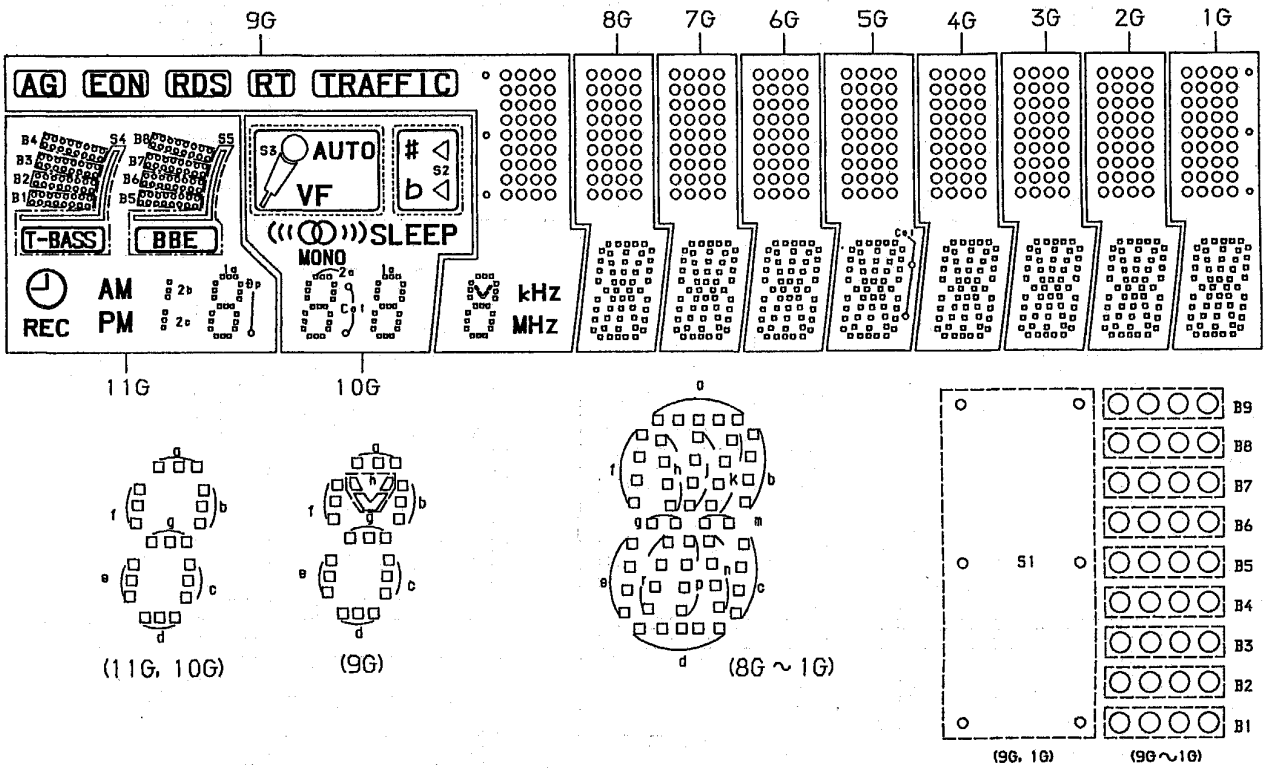
SCHEMATIC DIAGRAM-1 (MAIN)



13 14 15

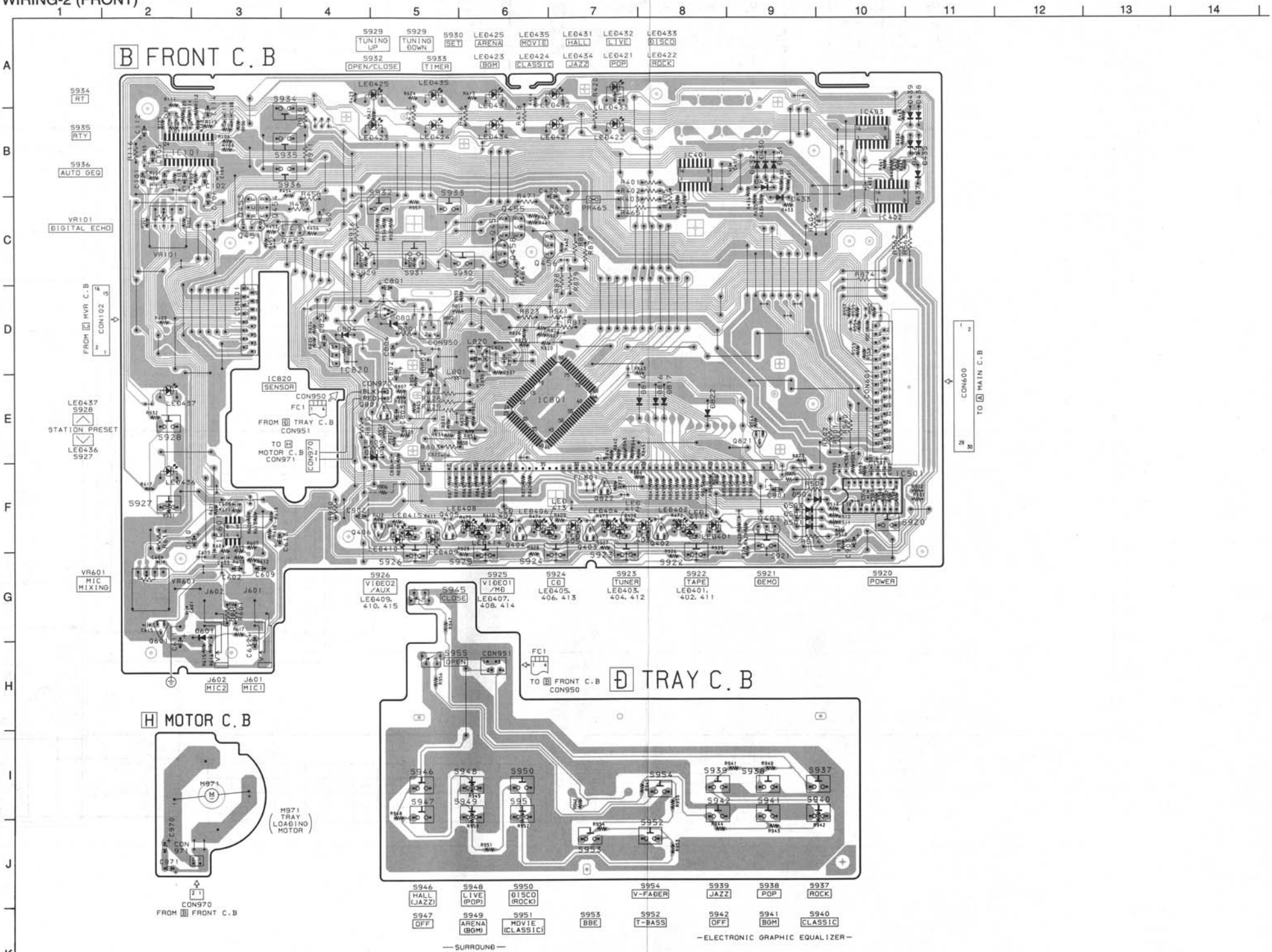
FL (BJ451GK) GRID ASSIGNMENT / ANODE CONNECTION

GRID ASSIGNMENT

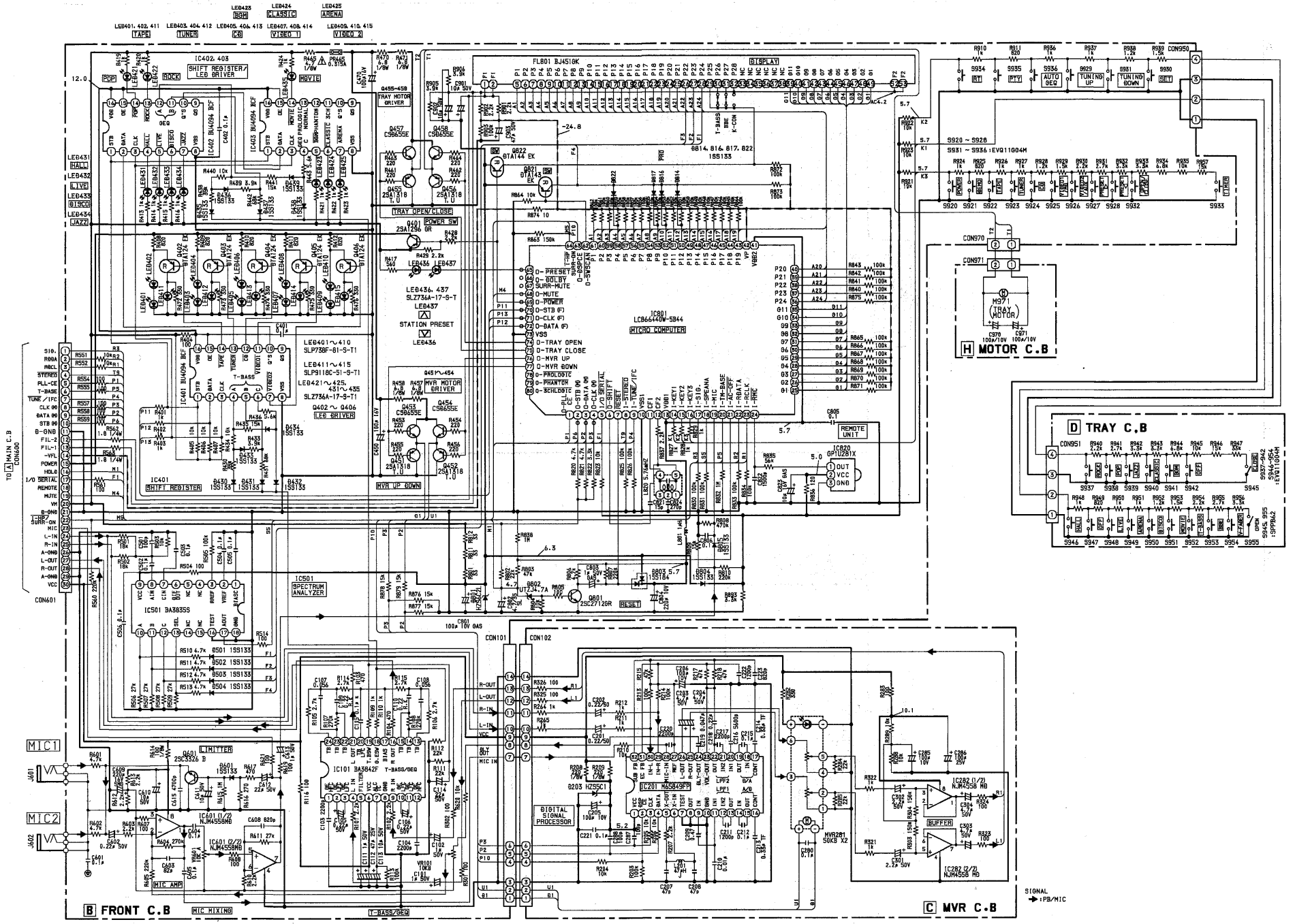


ANODE CONNECTION

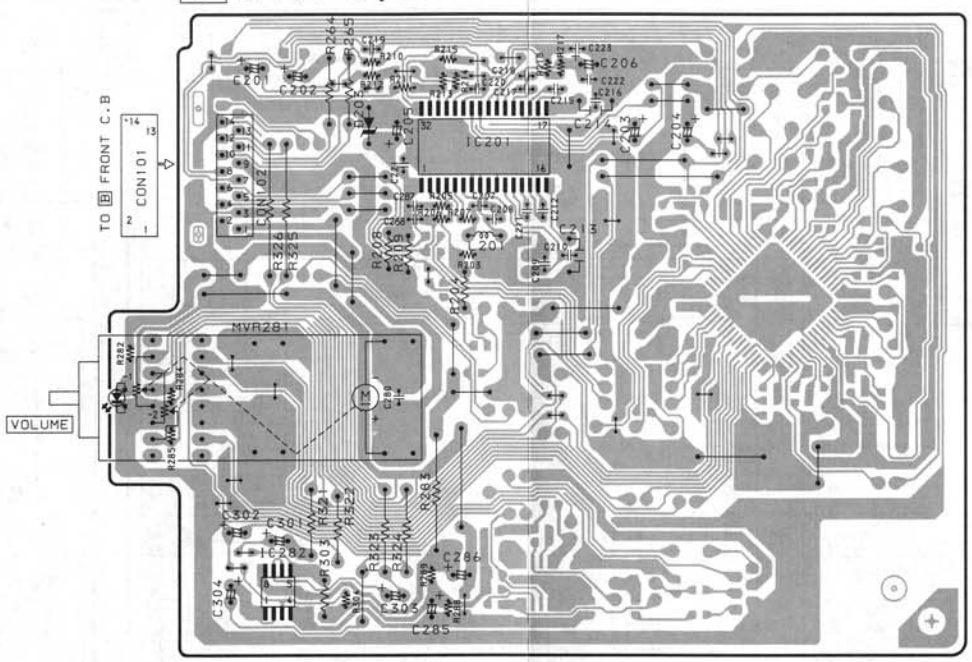
	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	2b, 2c	S3	B9	B9	B9	B9	B9	B9	B9	B9	B9
P2	1a	AUTO	B8	B8	B8	B8	B8	B8	B8	B8	B8
P3	1b	◁(High)	B7	B7	B7	B7	B7	B7	B7	B7	B7
P4	1f	◁ (Low)	B6	B6	B6	B6	B6	B6	B6	B6	B6
P5	1g	((◎))	B5	B5	B5	B5	B5	B5	B5	B5	B5
P6	1c	SLEEP	B4	B4	B4	B4	B4	B4	B4	B4	B4
P7	1e	MONO	B3	B3	B3	B3	B3	B3	B3	B3	B3
P8	1d	○	B2	B2	B2	B2	B2	B2	B2	B2	B2
P9	–	2a	B1	B1	B1	B1	B1	B1	B1	B1	B1
P10	–	2b	TRAFFIC	a	a	a	a	a	a	a	a
P11	B8	2f	R T	h	h	h	h	h	h	h	h
P12	B7	2g	RDS	j	j	j	j	j	j	j	j
P13	B6	2c	EON	k	k	k	k	k	k	k	k
P14	B5	2e	A G	b	b	b	b	b	b	b	b
P15	B4	2d	h	f	f	f	f	f	f	f	f
P16	B3	1a	a	m	m	m	m	m	m	m	m
P17	B2	1b	b	g	g	g	g	g	g	g	g
P18	B1	1f	f	c	c	c	c	c	c	c	c
P19	AM	1g	g	e	e	e	e	e	e	e	e
P20	PM	1c	c	r	r	r	r	r	r	r	r
P21	◎	1e	e	p	p	p	p	p	p	p	p
P22	REC	1d	d	n	n	n	n	n	n	n	n
P23	–	Col (Low)	KHz	d	d	d	d	d	d	d	d
P24	Dp	Col (High)	MHz	–	–	–	col	–	–	–	–
P25	–	–	S1	–	–	–	–	–	–	–	S1
P26	S4	–	–	–	–	–	–	–	–	–	–
P27	S5	–	–	–	–	–	–	–	–	–	–
P28	–	S2	–	–	–	–	–	–	–	–	–


B FRONT C.B
S929 TUNING UP
S929 TUNING DOWN
S930 SET
LED425 ARENA
LED435 MOVIE
LED431 HALL
LED432 LIVE
LED433 DISCO
S932 OPEN/CLOSE
S933 TIMER
LED423 BGM
LED424 CLASSIC
LED434 JAZZ
LED421 POP
LED422 ROCK
S934 RT
S935 RTY
S936 AUTO GEQ
VR101 DIGITAL ECHO
FROM G MVR C.B CON102
LED437 S928 STATION PRESET
LED436 S927
VR601 MIC MIXING
J602 MIC2
J601 MIC1
IC820 SENSOR
CON950
FC1
FROM D TRAY C.B CON951
TO H MOTOR C.B CON971
CON970
IC801
CON600
TO A MAIN C.B
S926 VIDEO2 /AUX LED409, 410, 415
S965 CLOSE
S925 VIDEO1 /MD LED407, 408, 414
S924 CD LED405, 406, 413
S923 TUNER LED403, 404, 412
S922 TAPE LED401, 402, 411
S921 DEMO
S920 POWER
S955 OPEN
CON951
FC1
TO B FRONT C.B CON950
D TRAY C.B
H MOTOR C.B
M971 TRAY LOADING MOTOR
CON970
FROM B FRONT C.B
S946 HALL (JAZZ)
S948 LIVE (POP)
S950 DISCO (ROCK)
S954 V-FADER
S939 JAZZ
S938 POP
S937 ROCK
S947 OFF
S949 ARENA (BGM)
S951 MOVIE (CLASSIC)
S953 BBE
S952 T-BASS
S942 OFF
S941 BGM
S940 CLASSIC
— SURROUND —
— ELECTRONIC GRAPHIC EQUALIZER —

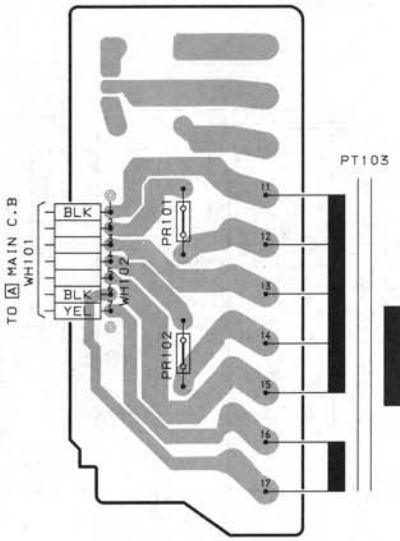
SCHEMATIC DIAGRAM-2 (FRONT)



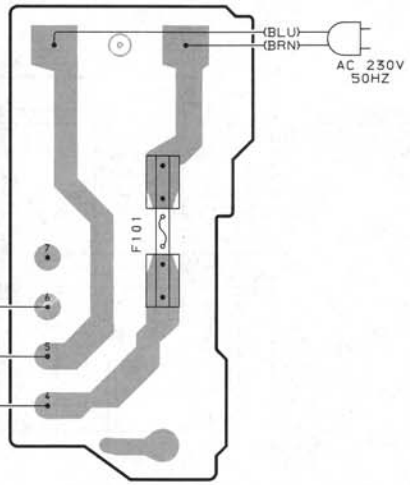
C MVR C.B



E AC-2 C.B



F AC-1 C.B



IC DESCRIPTION

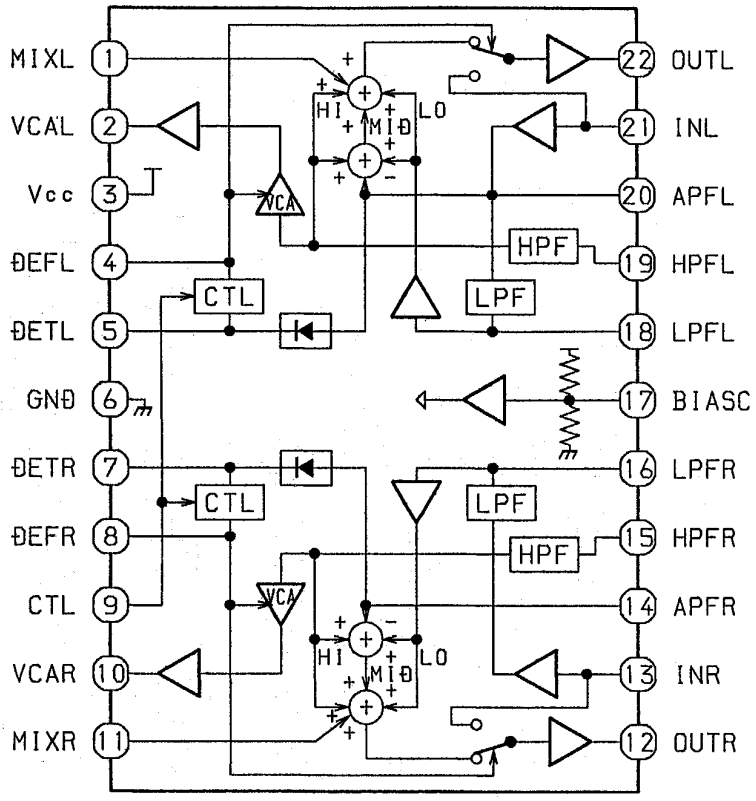
IC, LC866440W-5B44

Pin No.	Pin Name	I/O	Description
1	O-PLLCE	O	PLL IC chip enable output.
2	O-STB(M)	O	Main shift register,data latch strobe output.
3	O-DATA(M)	O	Main shift register/PLL/DSP related,data output.
4	O-CLK(M)	O	Main shift register/PLL/DSP related,data transfer clock output.
5	I/O SERIAL	I/O	FD microprocessor,I/O serial.
6	O-SHIFT	O	Microprocessor clock shift output during tuner reception.
7	RESET	I	Reset input(Reset at "L").
8	I-STEREO	I	Tuner stereo sensing input.
9	I-TUNE/IFC	I	Tuner,SD sensing input/IF count serial data input.
10	VSS 1	-	GND.
11	CF 1	-	5.76 MHz oscillator.
12	CF 2	-	5.76 MHz oscillator.
13	VDD 1	-	Power supply input.
14~16	I-KEY 1~3	I	Key 1~Key 3 A/D input.
17	I-SIG	I	Signal level A/D input for RDS.(Not used)
18	I-SPEANA	I	Spectrum analyzer level A/D input.
19	I-MIC	I	Mic level A/D input for auto vocal fader.
20	I-TMBASE	I	Reference clock input for watch(Automatically supporting 8/50/60 Hz).
21	I-AC OFF	I	Power failure sensing input(Hold at"L").
22	I-RDATA	I	Data input for RDS.
23	I-RCLK	I	Clock input for RDS.
24	I-RMC	I	System remote control input(active Low).
25~35	G1~G11	O	FL grid output(G1~G11).
36~40	P24~P20	O	FL segment output(P24~P20).
41	VDD 2	-	Poewr supply input.
42	VP	-	Power supply for display.
43~48	P19~P14	O	FL segment output(P19~P14).
49	P13	O	FL segment output/Diode input supporting OIRT.
50	P12	O	FL segment output/Diode input supporting.
51	P11	O	FL segment output/Diode input supporting NTSC.
52	P10	O	FL segment output/Diode input supporting PRO.
53	P9	O	FL segment output/Diode input supporting LW.
54	P8	O	FL segment output/Diode input supporting SW.
55	P7	O	FL segment output/Diode input supporting AM 10K.
56	P6	O	FL segment output/Diode input supporting AM STEREO.
57	P5	O	FL segment output/Diode input supporting FM JPN.
58	P4	O	FL segment output/Diode input supporting RDS.
59	P3	I/O	FL segment output/Diode input supporting BBE.
60	P2	I/O	FL segment output/Diode input supporting DSP.
61	P1	I/O	FL segment output/Diode input supporting K-CON.
62	O-SWSCAN	O	CD turntable reverse direction rotation output/SW scan(timing output).

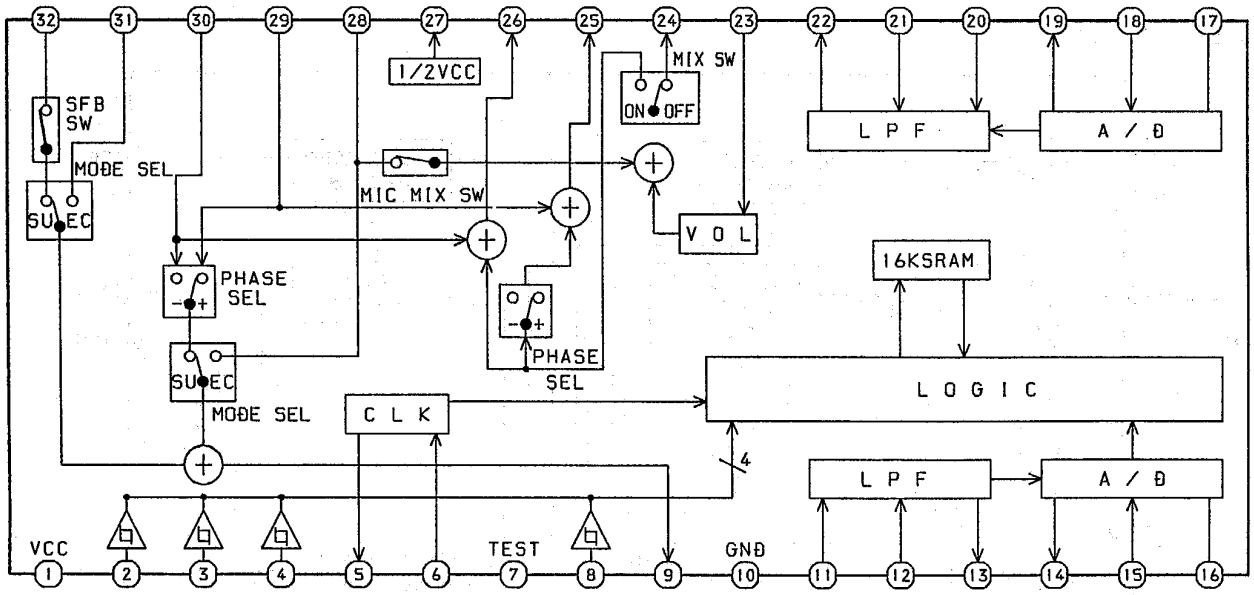
63	O-DSP CE	O	CD turntable forward direction rotation output/DSP chip enable.
64	SUR ON	O	SUR ON(output at"H").
65	O-$\overline{\text{PRESET LED}}$	O	Preset.
66~67	NC	-	Not used.
68	O-MUTE	O	System Mute ON/OFF output.
69	O-$\overline{\text{POWER}}$	O	System power supply ON/OFF output.
70	O-STB(F)	O	Front shift register,data latch strobe output.
71	O-CLK(F)	O	Front shift register,data clock output.
72	O-DATA(F)	O	Front shift register,data output.
73	VSS	-	GND.
74	O-TRAY OP	O	CD tray open output.
75	O-TRAY CL	O	CD tray close output.
76	O-VR UP	O	Vol up output.
77	O-VR DN	O	Vol down output.
78~80	NC	-	Not used.

IC BLOCK DIAGRAM

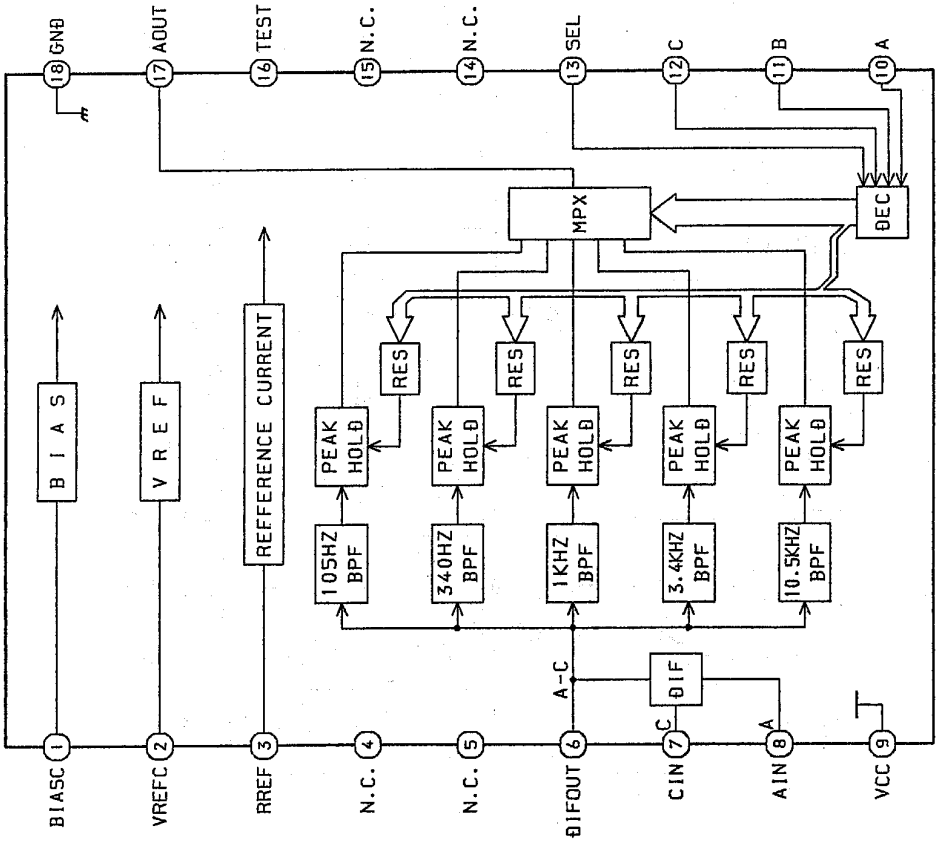
IC, BA3880S



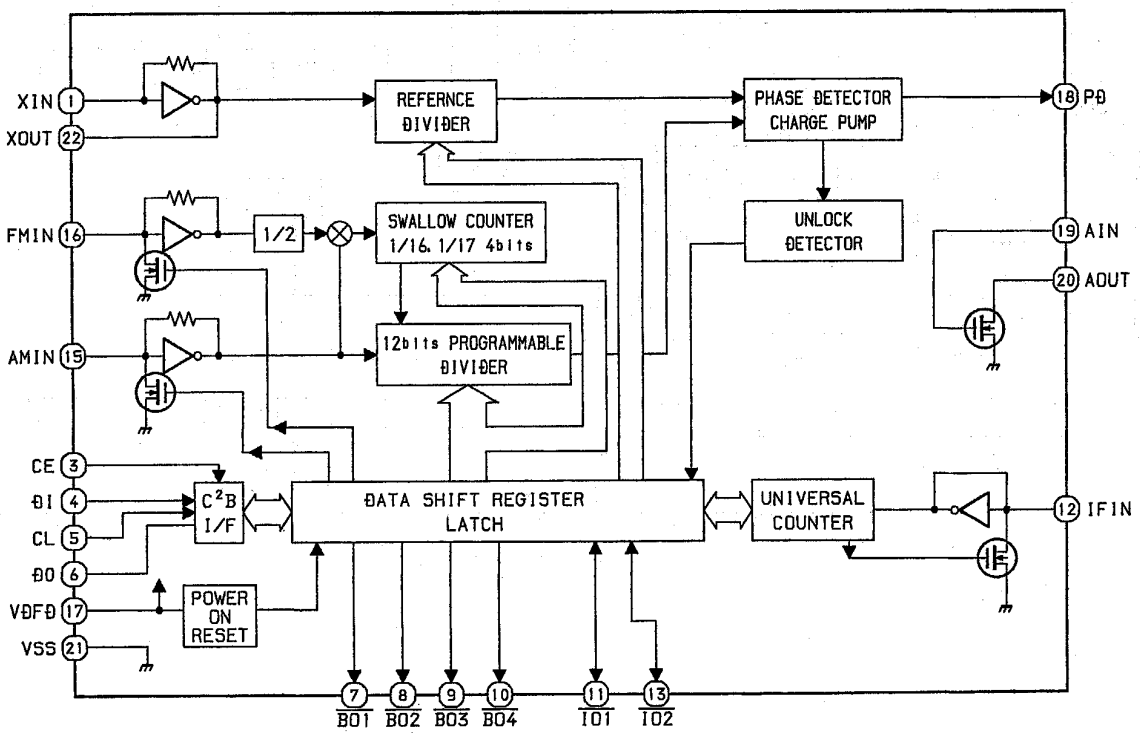
IC, M65849FP



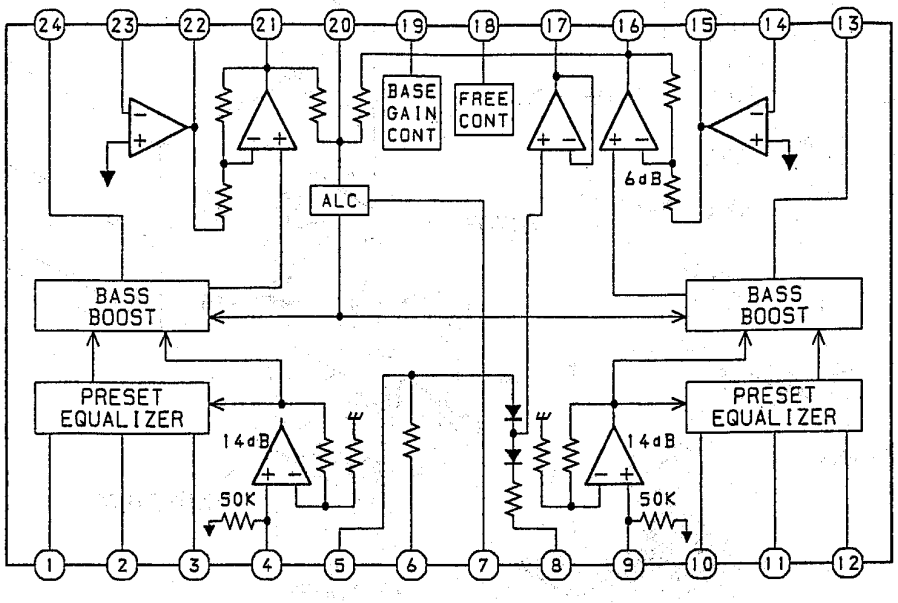
IC, BA3835S



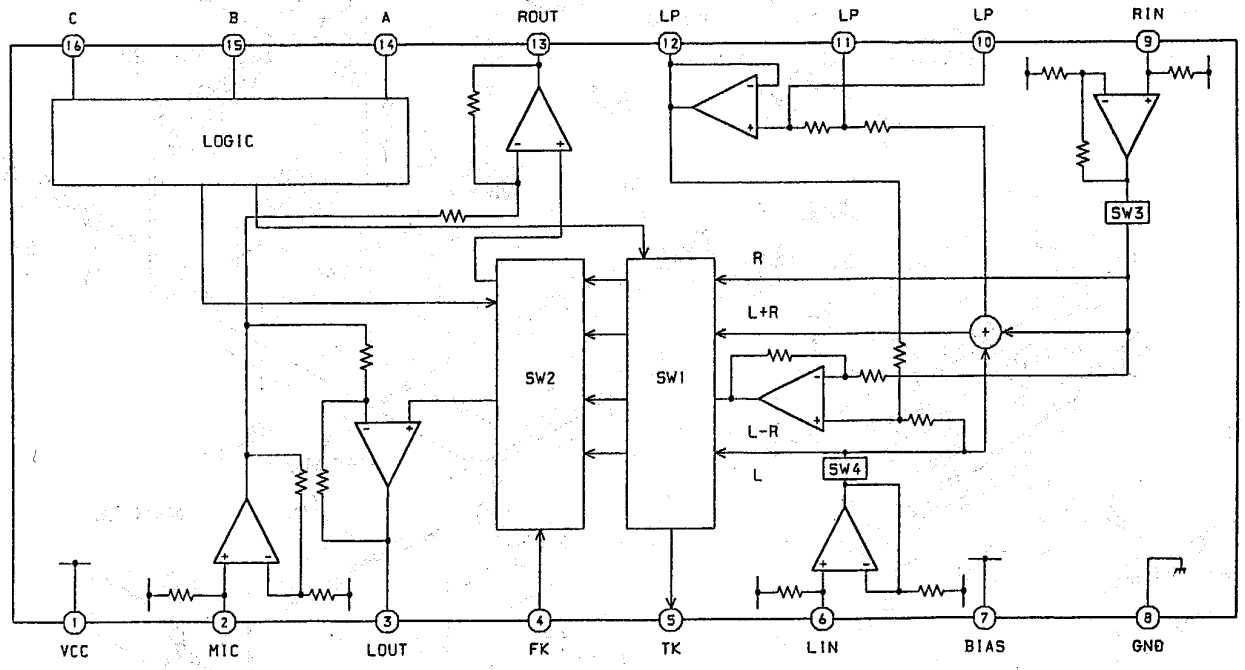
IC, LC72131D

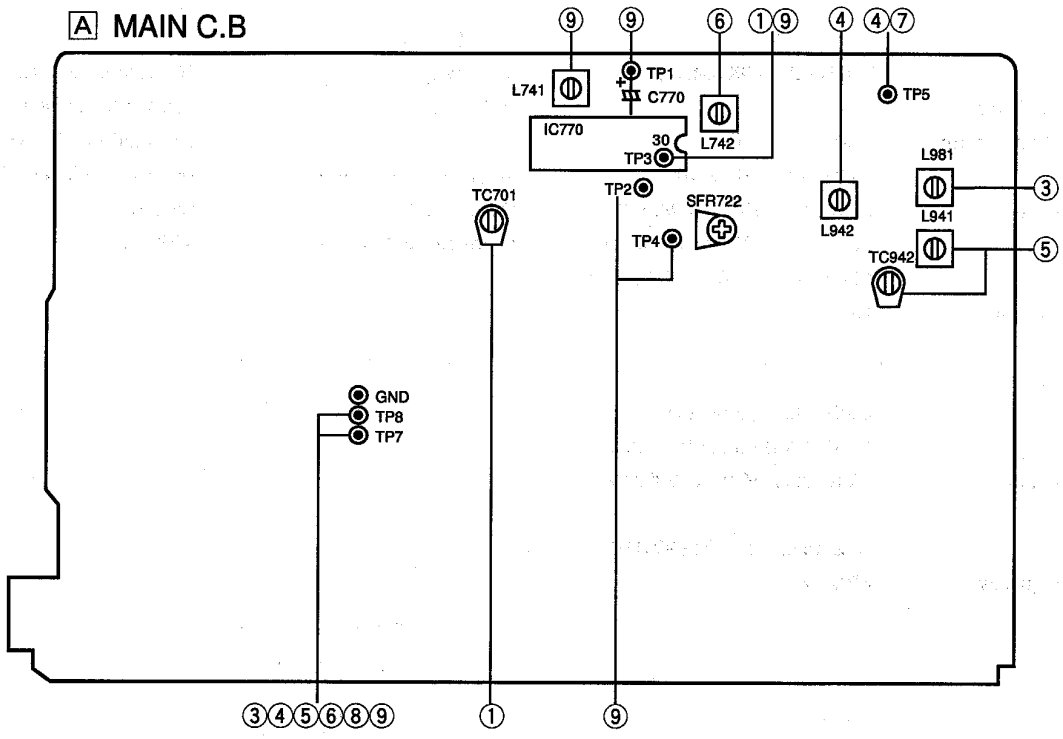


IC, BA3842F



IC, BA3836





TUNER SECTION

1. Clock Frequency Adjustment
   Setting: • Test point : TP3(CLK)
   • Adjustment location : TC701
   Method: Set to MW 1602kHz and adjust TC701 so that the test point becomes 2052kHz ± 0.01kHz.

2. MW VT Check
   Setting: • Test point : TP5
   Method: Set to MW 1602kHz and check the test point is 6.0 ± 1.0V.

3. MW Tracking Adjustment
   Settings: • Test point : TP7(Lch), TP8(Rch)
   • Adjustment location : L981
   Method: Set to MW 999kHz and adjust L981 so that the test point becomes maximum.

4. LW VT Adjustment
   Settings: • Test point : TP5
   • Adjustment location : L981
   Method: Set to LW 144kHz and adjust L942 so that the test point becomes 1.3± 0.05V.

5. LW Tracking Adjustment
   Settings: • Test point : TP7(Lch), TP8(Rch)
   • Adjustment location :
   L941 ..... 144kHz
   TC942 ..... 290kHz
   Method: Set up TC942 to center before adjustment. The level at 144kHz is adjusted to MAX by L941. Then the level at 290kHz is adjusted to MAX by TC942.

6. AM IF Adjustment
   Setting: • Test point : TP7(Lch), TP8(Rch)
   L742 ..... 450kHz

7. FM VT Check
   Setting: • Test point : TP5
   Method: Set to FM 87.5MHz and check that the test point is more than 1.5V.
   Then set to FM 108MHz and check that the test point is less than 8.2V.

8. FM Tracking Check
   Setting: • Test point : TP7(Lch), TP8(Rch)
   Method: Check that the test point is 3 ~ 12dB and distortion is less than 3% at FM98.0MHz.

9. DC Balance / MONO Distortion Adjustment
   Settings: • Test point : TP1, TP2 (DC Balance)
   TP7(Lch), TP8(Rch) (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 ± 0.04V.
   Next check that the distortion is less than 1.3%.

PRACTICAL SERVICE FIGURE

TUNER SECTION

<FM SECTION>

IHF Sensitivity:	7dB±6dB (at 98.0MHz)
(DIN Filter at S/N 26dB)	
S/N 50dB Quieting sensitivity:	Less than 42dB
(S/N 46dB)	(at 87.5/98.0/108.0MHz)
Signal to noise ratio:	More than 65dB (at 98.0MHz)
Distortion:	Less than 1.2% (at 980.MHz)
Stereo separation:	More than 20dB (at 98.0MHz)
Intermediate frequency:	10.7MHz

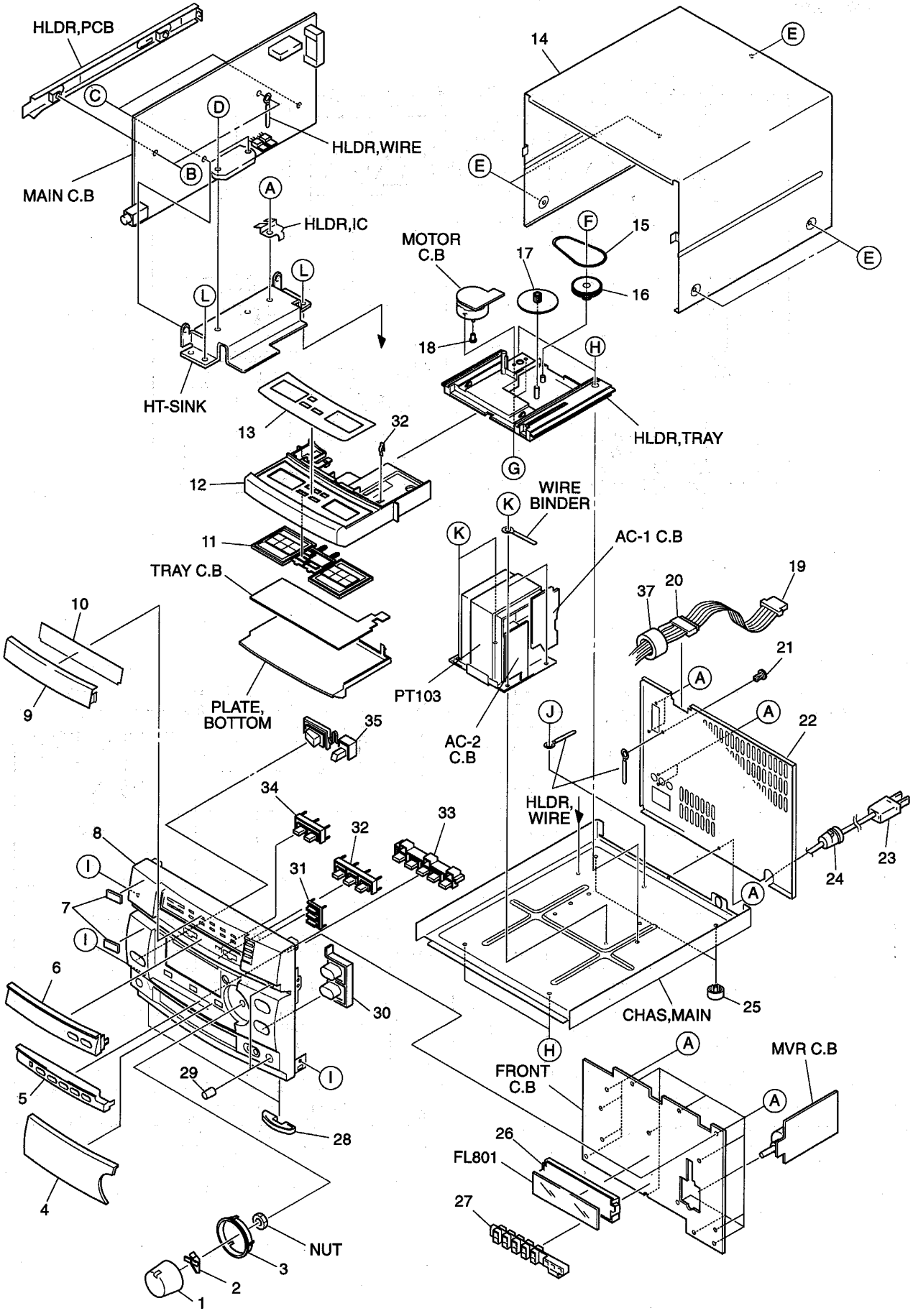
<MW SECTION>

Sensitivity:	46dB~58dB (at 603kHz)
(S/N 20dB)	46dB~58dB (at 999/1401kHz)
Signal to noise ratio:	More than 36dB (at 999kHz)
(Input 100dB)	
Distortion:	Less than 1.5% (at 999kHz)
Intermediate frequency:	450kHz

<LW SECTION>

Sensitivity:	66dB±5dB (at 144kHz)
(S/N 20dB)	63dB±5dB (at 188kHz)
	62dB±5dB (at 290kHz)
Signal to noise ratio:	More than 32dB (at 198kHz)
Distortion:	Less than 1.5% (at 198kHz)
Intermediate frequency:	450kHz

MECHANICAL EXPLODED VIEW 1 / 1



MECHANICAL 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
1	86-NT1-021-019		KNOB,RTRY VOL
2	86-NT1-022-019		REFLECTOR,VOL
3	86-NT1-026-019		RING,VOL
4	86-NT1-037-010		WINDOW,DISPLAY RDS
5	86-NT1-006-019		PANEL,FUN
6	86-NT1-005-019		PANEL,GEQ
7	82-NE8-032-019		BADGE AIWA 27.5
8	86-NT1-032-019		CABI,FR EZ<NH9>
8	86-NT1-033-019		CABI,FR<NM9>
9	86-NT1-027-019		WINDOW,GEQ
10	86-NT1-025-019		PLATE,GEQ
11	86-NT1-013-019		KEY,GEQ
12	86-NT1-004-019		TRAY,CONTROL
13	86-NT1-024-119		PLATE,TRAY
14	86-NT1-003-019		CABI,STEEL
15	80-VW1-217-010		BELT,SQ 1.5
16	82-NT1-205-11K		PULLEY,LOADING
17	82-NT1-204-01K		GEAR,LOADING
18	80-VW1-204-010		PULLEY,MOTOR
19	86-NT2-655-119		CORD FG 15P
20	89-VT5-202-010		BUSHING,CORD
21	87-084-077-019		NYLON RIVET DIA3.5-4.5
22	86-NT1-047-019		PANEL,REAR EZBNM<NH9>
22	86-NT1-049-019		PANEL,REAR<NM9>
⚠ 23	87-050-079-019		AC-CORD ASSY,E
24	87-085-185-019		BUSHING,AC CORD E
25	87-085-213-019		FOOT, H12.5
26	86-NT1-203-019		GUIDE,FL
27	86-NT1-202-019		GUIDE,LED
28	85-NC1-019-019		RING,FOOT
29	86-NT1-023-019		KNOB,RTRY MIC
30	86-NT1-009-019		KEY,UP/DOWN
31	86-NT1-011-019		KEY,RDS
32	86-NT1-012-019		KEY,SET
33	86-NT1-020-019		KEY,ASSY FUN
34	86-NT1-030-019		KEY,TIMER
35	86-NT1-008-019		KEY,POWER
36	81-MT3-211-019		LEVER,OPEN
37	87-003-317-010		F-BEAD,15-25-15 E2515MRT
A	87-067-703-019		BVT2+3-10 (W/O SLOT)
B	87-078-084-019		BVTT+3-6 W,CONVEX
C	87-067-633-019		BVT2+3-8 W/CONVEX
D	87-067-581-019		BVT2+3-15 W/O SLOT
E	87-067-641-019		UTT2+3-8 W/O SLOT BLK
F	87-861-095-419		VFT2+3-8 SLOT
G	87-261-073-419		V+2.6-6
H	87-067-584-019		BVT2+3-6 W/O SLOT
I	87-591-094-419		QIT + 3 - 6 GOLD
J	87-571-092-419		VIT+3-4
K	87-078-019-019		S-SCREW,IT+4-6
L	87-067-688-019		BVTT +3-6

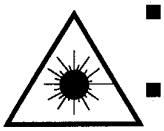
MODEL NO.

FD-NH9

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 expo-sure to beam.
- Advarsel: Usynlig laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainit-ulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylit-tävälle näkymättömälle lasersäteilylle.

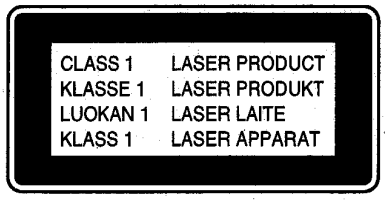
VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radi-ation exposure.

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

ADVARSEL!
Usynlig laserståling ved åbning, når sikkerhedsafbrydereer 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.

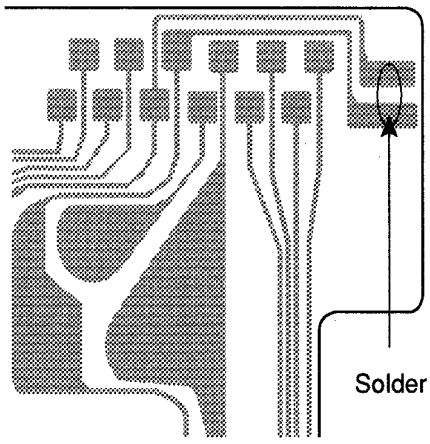


Precaution to replace Optical block
(KSS-213B)

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 the right figure.

PICK-UP Assy P.C.B



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.	カンリ NO.	DESCRIPTION
IC			
	87-020-454-010		IC,DN 6851
	87-017-022-089		IC,NJM2068M-D(T1)
	87-017-917-089		IC,BU4066BCF
	87-001-607-089		IC,NJM4558M
	87-002-272-089		IC,TC4052 BF
	87-001-985-010		IC,HA12142NT
	87-020-784-089		IC,TC4053BF
	87-017-888-089		IC,NJM4558MD
	87-017-745-019		IC,CXA1782BQ
	87-070-305-019		IC,BA6897S
	87-001-982-019		IC,TA7291S
	87-070-294-019		IC,CXD2508AQ
	86-NV1-610-010		IC,LC866424V-5A61
	87-017-375-089		IC,TC4094BF
TRANSISTOR			
	87-026-463-080		TR,2SA933S
	87-026-218-089		TR,DTC144ES
	87-026-448-089		TR,2SC1740SS
	87-026-463-089		TR,2SA933SRS
	87-026-219-089		TR,DTA144ES
	89-503-685-089		C-FET,2SK368GR
	89-113-625-089		C-TR 2SA 1362 GR(TAPG)
	87-026-210-089		C-TR,DTC144EK T147
	89-327-125-089		C-TR,2SC2712GR
	89-320-011-089		TR,2SC2001K
	89-109-521-089		TR,2SA952K
	89-318-155-089		TR,2SC1815GR
	89-333-317-889		TR,2SC3331 TU
	89-333-266-089		C-TR,2SC3326B
	87-026-233-089		C-TR,DTA114TK
	87-026-211-089		C-TR,DTA144EK T147
	89-110-373-089		C-TR,2SA1037S
	87-026-239-089		C-TR,DTC114TK
	89-113-187-089		TR,2SA1318TU
	89-421-722-389		TR,2SD2172 V/W
	87-026-223-089		C-TR,DTC143TK
	87-026-608-089		C-TR,DTC 123 JK
	87-A30-039-089		C-TR,2SD1383K
	89-112-965-089		TR,2SA1296GR
	87-026-228-089		C-TR DTA124EK
DIODE			
	87-020-465-089		DIODE,1SS133
	87-001-290-089		ZENER,HZS6B1L
	87-017-121-089		ZENER,HZS11A1
	87-020-123-089		DIODE DS446-AT (TA)
	87-001-731-089		ZENER HZS6C2L
	87-020-331-089		C-DIODE,DAN202K
	87-017-091-089		ZENER,HZS5C1
	87-020-339-089		C-DIODE,1SS226
	87-017-097-089		ZENER,HZS6B1
	87-020-330-089		C-DIODE,DAP202K
MAIN C.B			
C101	87-012-158-089		C-CAP,S 390P-50 CH
C102	87-012-158-089		C-CAP,S 390P-50 CH
C103	87-010-318-089		C-CAP,S 47P-50 CH
C104	87-010-318-089		C-CAP,S 47P-50 CH
C105	87-010-193-089		C-CAP,S 0.033-25 F
C106	87-010-193-089		C-CAP,S 0.033-25 F
C109	87-012-154-089		C-CAP,S 150P-50 CH
C110	87-012-154-089		C-CAP,S 150P-50 CH
C111	87-010-197-089		C-CAP,S 0.01-25 B
C112	87-010-197-089		C-CAP,S 0.01-25 B
C113	87-010-196-089		C-CAP,S 0.1-25 F
C151	87-012-158-089		C-CAP,S 390P-50 CH
C152	87-012-158-089		C-CAP,S 390P-50 CH
C153	87-010-322-089		C-CAP,S 100P-50 CH
C154	87-010-322-089		C-CAP,S 100P-50 CH
C155	87-010-197-089		C-CAP,S 0.01-25 B
C156	87-010-197-089		C-CAP,S 0.01-25 B
C157	87-012-156-089		C-CAP,S 220P-50 CH
C158	87-012-156-089		C-CAP,S 220P-50 CH
C159	87-010-318-089		C-CAP,S 47P-50 CH
C160	87-010-318-089		C-CAP,S 47P-50 CH
C181	87-016-492-089		C-CAP,S 0.33-16 FZ
C182	87-016-492-089		C-CAP,S 0.33-16 FZ
C183	87-010-197-089		C-CAP,S 0.01-25 B
C184	87-010-318-089		C-CAP,S 47P-50 CH
C185	87-010-197-089		C-CAP,S 0.01-25 B
C186	87-010-402-089		CAP,E 2.2-50 SME
C187	87-010-184-089		C-CAP,S 3300P-50 B
C205	87-010-426-089		C-CAP,S 0.012-25 B
C206	87-010-426-089		C-CAP,S 0.012-25 B
C303	87-010-183-089		C-CAP,S 2700P-50 B
C304	87-010-183-089		C-CAP,S 2700P-50 B
C305	87-010-404-089		CAP,E 4.7-50 SME
C306	87-010-404-089		CAP,E 4.7-50 SME
C323	87-012-157-089		C-CAP,S 330P-50 CH
C324	87-012-157-089		C-CAP,S 330P-50 CH
C341	87-010-196-089		C-CAP,S 0.1-25 F
C342	87-010-196-089		C-CAP,S 0.1-25 F
C343	87-010-196-089		C-CAP,S 0.1-25 F
C345	87-010-404-089		CAP,E 4.7-50 SME
C346	87-010-404-089		CAP,E 4.7-50 SME
C347	87-010-404-089		CAP,E 4.7-50 SME
C348	87-010-404-089		CAP,E 4.7-50 SME
C361	87-010-400-089		CAP,E 0.47-50 SME
C362	87-010-400-089		CAP,E 0.47-50 SME
C363	87-010-400-089		CAP,E 0.47-50 SME
C364	87-010-400-089		CAP,E 0.47-50 SME
C365	87-010-182-089		C-CAP,S 2200P-50 B
C366	87-010-182-089		C-CAP,S 2200P-50 B
C367	87-010-182-089		C-CAP,S 2200P-50 B
C368	87-010-182-089		C-CAP,S 2200P-50 B
C369	87-010-182-089		C-CAP,S 2200P-50 B
C370	87-010-182-089		C-CAP,S 2200P-50 B
C371	87-010-196-089		C-CAP,S 0.1-25 F
C372	87-010-196-089		C-CAP,S 0.1-25 F
C373	87-010-196-089		C-CAP,S 0.1-25 F
C374	87-010-196-089		C-CAP,S 0.1-25 F
C375	87-010-402-089		CAP,E 2.2-50 SME
C376	87-010-402-089		CAP,E 2.2-50 SME
C377	87-010-247-089		CAP,E 100-50 SME
C378	87-010-401-089		CAP,E 1-50 SME
C379	87-010-406-089		CAP,E 22-50 SME
C381	87-010-402-089		CAP,E 2.2-50 SME
C382	87-010-402-089		CAP,E 2.2-50 SME
C401	87-012-156-089		C-CAP,S 220P-50 CH
C402	87-012-156-089		C-CAP,S 220P-50 CH
C403	87-014-059-089		CAP,PP 1200P-100 J
C405	87-010-263-089		CAP,E 100-10 SME 5X11
C409	87-010-402-089		CAP,E 2.2-50 SME
C410	87-010-405-089		CAP,E 10-50 SME
C411	87-010-178-089		C-CAP,S 1000P-50 B
C412	87-010-221-089		CAP,E 470-10 11L
C414	87-010-196-089		C-CAP,S 0.1-25 F
C451	87-010-237-089		CAP,E 1000-16
C452	87-010-101-089		CAP,E 220-16 SME
C453	87-010-404-089		CAP,E 4.7-50 SME
C454	87-010-248-049		CAP,E 220-10 SME
C455	87-010-401-089		CAP,E 1-50 SME
C456	87-010-401-089		CAP,E 1-50 SME
C457	87-010-263-089		CAP,E 100-10 SME 5X11
C458	87-010-381-089		CAP,E 330-16 SME

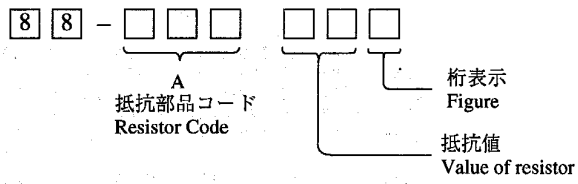
REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C459	87-010-196-089		C-CAP,S 0.1-25 F
C481	87-010-406-089		CAP,E 22-50 SME
C482	87-010-406-089		CAP,E 22-50 SME
C483	87-010-263-089		CAP,E 100-10 SME 5X11
C484	87-010-408-089		CAP,E 47-50 SME
C485	87-010-221-089		CAP,E 470-10 11L
C486	87-010-221-089		CAP,E 470-10 11L
C501	87-010-405-089		CAP,E 10-50 SME
C502	87-010-198-089		C-CAP,S 0.022-25 B
C503	87-010-196-089		C-CAP,S 0.1-25 F
C504	87-010-196-089		C-CAP,S 0.1-25 F
C505	87-010-196-089		C-CAP,S 0.1-25 F
C506	87-018-209-089		CAP,TC-U 0.1-50 F
C516	87-010-381-089		CAP,E 330-16 SME
C517	87-010-404-089		CAP,E 4.7-50 SME
C518	87-010-404-089		CAP,E 4.7-50 SME
C519	87-010-405-089		CAP,E 10-50 SME
C520	87-010-405-089		CAP,E 10-50 SME
C521	87-012-154-089		C-CAP,S 150P-50 CH
C522	87-012-154-089		C-CAP,S 150P-50 CH
C523	87-010-405-089		CAP,E 10-50 SME
C524	87-010-316-089		C-CAP,S 33P-50 CH
C525	87-012-154-089		C-CAP,S 150P-50 CH
C526	87-012-154-089		C-CAP,S 150P-50 CH
C527	87-010-387-089		CAP,ELECT 470-25V
C528	87-010-384-089		CAP,E 100-25 SME
C529	87-010-374-089		CAP,E 47-10 11L
C530	87-010-316-089		C-CAP,S 33P-50 CH
C531	87-010-316-089		C-CAP,S 33P-50 CH
C533	87-012-157-089		C-CAP,S 330P-50 CH
C534	87-012-157-089		C-CAP,S 330P-50 CH
C535	87-012-154-089		C-CAP,S 150P-50 CH
C536	87-012-154-089		C-CAP,S 150P-50 CH
C601	87-010-182-089		C-CAP,S 2200P-50 B
C602	87-010-196-089		C-CAP,S 0.1-25 F
C603	87-010-196-089		C-CAP,S 0.1-25 F
C604	87-010-196-089		C-CAP,S 0.1-25 F
C605	87-010-404-089		CAP,E 4.7-50 SME
C606	87-010-193-089		C-CAP,S 0.033-25 F
C607	87-010-197-089		C-CAP,S 0.01-25 B
C608	87-010-402-089		CAP,E 2.2-50 SME
C609	87-010-265-089		CAP,E 33-16 SME
C610	87-010-213-089		C-CAP,S 0.015-25 B
C611	87-010-197-089		C-CAP,S 0.01-25 B
C612	87-010-263-089		CAP,E 100-10 SME 5X11
C613	87-018-134-089		CAP,TC-U 0.01-16 Y
C614	87-010-193-089		C-CAP,S 0.033-25 F
C615	87-010-197-089		C-CAP,S 0.01-25 B
C616	87-010-193-089		C-CAP,S 0.033-25 F
C617	87-010-197-089		C-CAP,S 0.01-25 B
C618	87-010-146-089		C-CAP,S 2P-50 CH
C619	87-010-154-089		C-CAP,S 10P-50 CH
C620	87-010-263-089		CAP,E 100-10 SME 5X11
C621	87-010-178-089		C-CAP,S 1000P-50 B
C622	87-010-198-089		C-CAP,S 0.022-25 B
C623	87-010-196-089		C-CAP,S 0.1-25 F
C624	87-010-197-089		C-CAP,S 0.01-25 B
C625	87-010-263-089		CAP,E 100-10 SME 5X11
C626	87-010-248-089		CAP,E 220-10 SME
C627	87-010-197-089		C-CAP,S 0.01-25 B
C628	87-010-260-089		CAP,E 47-25 SME
C629	87-010-196-089		C-CAP,S 0.1-25 F
C640	87-010-196-089		C-CAP,S 0.1-25 F
C641	87-010-221-089		CAP,E 470-10 11L
C642	87-010-196-089		C-CAP,S 0.1-25 F
C643	87-010-197-089		C-CAP,S 0.01-25 B
C644	87-010-263-089		CAP,E 100-10 SME 5X11
C645	87-010-221-089		CAP,E 470-10 11L
C646	87-010-197-089		C-CAP,S 0.01-25 B
C647	87-010-196-089		C-CAP,S 0.1-25 F
C648	87-010-196-089		C-CAP,S 0.1-25 F
C649	87-010-193-089		C-CAP,S 0.033-25 F
C661	87-010-196-089		C-CAP,S 0.1-25 F
C662	87-010-260-089		CAP,E 47-25 SME
C681	87-010-197-089		C-CAP,S 0.01-25 B
C692	87-010-381-089		CAP,E 330-16 SME
C693	87-010-196-089		C-CAP,S 0.1-25 F
C701	87-010-194-089		C-CAP,S 0.047-25 F
C702	87-010-188-089		C-CAP,S 6800P-50 B
C703	87-010-186-089		C-CAP,S 4700P-50 B
C704	87-012-156-089		C-CAP,S 220P-50 CH
C705	87-010-404-089		CAP,E 4.7-50 SME
C706	87-010-263-089		CAP,E 100-10 SME 5X11
C707	87-010-197-089		C-CAP,S 0.01-25 B
C708	87-010-400-089		CAP,E 0.47-50 SME
C709	87-010-197-089		C-CAP,S 0.01-25 B
C711	87-010-196-089		C-CAP,S 0.1-25 F
C713	87-010-263-089		CAP,E 100-10 SME 5X11
C714	87-010-197-089		C-CAP,S 0.01-25 B
C715	87-010-318-089		C-CAP,S 47P-50 CH
C716	87-010-318-089		C-CAP,S 47P-50 CH
C717	87-018-134-089		CAP,TC-U 0.01-16 Y
C741	87-012-153-089		C-CAP,S 120P-50 CH
C742	87-012-153-089		C-CAP,S 120P-50 CH
C743	87-010-321-089		C-CAP,S 82P-50 CH
C744	87-010-321-089		C-CAP,S 82P-50 CH
C745	87-010-321-089		C-CAP,S 82P-50 CH
C746	87-010-321-089		C-CAP,S 82P-50 CH
C747	87-012-153-089		C-CAP,S 120P-50 CH
C748	87-012-153-089		C-CAP,S 120P-50 CH
C749	87-012-153-089		C-CAP,S 120P-50 CH
C750	87-012-153-089		C-CAP,S 120P-50 CH
C751	87-010-401-089		CAP,E 1-50 SME
C752	87-010-401-089		CAP,E 1-50 SME
C753	87-010-186-089		C-CAP,S 4700P-50 B
C754	87-010-186-089		C-CAP,S 4700P-50 B
C755	87-010-221-089		CAP,E 470-10 11L
C756	87-010-263-089		CAP,E 100-10 SME 5X11
C771	87-018-119-089		CAP,TC-U 100P-50 B
C772	87-018-119-089		CAP,TC-U 100P-50 B
C773	87-010-318-089		C-CAP,S 47P-50 CH
C774	87-018-131-089		CAP,TC-U 1000P-50 B
C775	87-018-209-089		CAP,TC-U 0.1-50 F<YU>
C791	87-010-263-089		CAP,E 100-10 SME 5X11
C792	87-010-197-089		C-CAP,S 0.01-25 B
C901	87-018-149-089		CAP,TC-U 15P-50 CH
C902	87-012-155-089		C-CAP,S 180P-50 CH
C941	87-010-196-089		C-CAP,S 0.1-25 F
C942	87-010-196-089		C-CAP,S 0.1-25 F
C943	87-010-384-089		CAP,E 100-25 SME
C944	87-010-322-089		C-CAP,S 100P-50 CH
C945	87-010-322-089		C-CAP,S 100P-50 CH
C946	87-010-322-089		C-CAP,S 100P-50 CH
CON903	86-NV1-613-019		CONN ASSY,4P CST
CON910	87-009-065-019		CONN,15P FG
EMI803	87-008-372-089		FLTR,EMI BL01RN1
FC1	85-NFT-611-119		FF-CABLE,16P-1.0
FC2	88-916-301-119		FF-CABLE,16P 1.25
FC3	88-909-251-119		FF-CABLE,9P 1.25
FC4	88-906-201-119		FF-CABLE,6P 1.25
FC5	84-ZG1-630-019		CABLE FFC 6P-1.25
FL901	86-NV1-619-019		FL,7-ST-27G
J901	81-VP1-635-019		JACK,PIN 3P EARTH
J902	81-VP1-634-019		JACK,PIN 3P
J903	81-VP1-635-019		JACK,PIN 3P EARTH
L301	86-NV1-618-019		COIL,TRAP 108K
L302	86-NV1-618-019		COIL,TRAP 108K
L303	87-003-131-089		COIL,10MH J
L304	87-003-131-089		COIL,10MH J
L305	87-003-123-089		COIL,2.2MH J

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
L306	87-003-123-089		COIL,2.2MH J
L401	86-NV1-617-019		COIL,OSC BIAS 108K
L402	87-005-447-089		COIL,180UH FLR50
L451	87-005-474-089		COIL,12UH J FLR50
L601	87-003-295-089		COIL,10UH
L901	87-A50-052-019		COIL,CLOCK 5.76MHZ T1
LED791	87-A40-123-019		LED,SLZ-8128A-01-B
LED910	87-070-108-019		LED,SLF-301C-37
LED911	87-070-108-019		LED,SLF-301C-37
SFR101	87-024-238-089		SFR,1K DIA6 V TP
SFR102	87-024-238-089		SFR,1K DIA6 V TP
SFR151	87-024-238-089		SFR,1K DIA6 V TP
SFR152	87-024-238-089		SFR,1K DIA6 V TP
SFR301	87-024-271-089		SFR4.7K DIA6 V
SFR302	87-024-271-089		SFR4.7K DIA6 V
SFR401	87-024-275-089		SFR,47K DIA6 V TP
SFR402	87-024-275-089		SFR,47K DIA6 V TP
SFR601	87-024-175-089		SFR,47K DIA6 V
SFR602	87-024-176-089		SFR,100K DIA6 V
SFR603	87-024-176-089		SFR,100K DIA6 V
SW731	87-036-109-019		SW,PUSH SPPB 61
SW732	87-036-109-019		SW,PUSH SPPB 61
VR501	86-NV1-616-019		VR,50KBX2 RK14K12A0L30
VR502	81-MX4-636-019		VR,50KBX2 RK14K12A0L30
X701	87-030-270-089		VIB,XTAL 16.9344MHZ
KEY1 C.B			
FC6	88-909-251-119		FF-CABLE,9P 1.25
LED901	87-001-161-019		LED,SEL 2410 E GR
LED902	87-001-161-019		LED,SEL 2410 E GR
LED903	87-001-161-019		LED,SEL 2410 E GR
LED904	87-001-161-019		LED,SEL 2410 E GR
LED905	87-001-161-019		LED,SEL 2410 E GR
LED906	87-001-161-019		LED,SEL 2410 E GR
S901	87-A90-095-089		SW,TACT EVQ11G04M
S902	87-A90-095-089		SW,TACT EVQ11G04M
S903	87-A90-095-089		SW,TACT EVQ11G04M
S904	87-A90-095-089		SW,TACT EVQ11G04M
S905	87-A90-095-089		SW,TACT EVQ11G04M
S906	87-A90-095-089		SW,TACT EVQ11G04M
S907	87-A90-095-089		SW,TACT EVQ11G04M
S908	87-A90-095-089		SW,TACT EVQ11G04M
S909	87-A90-095-089		SW,TACT EVQ11G04M
S910	87-A90-095-089		SW,TACT EVQ11G04M
KEY2 C.B			
LED907	87-002-817-019		LED,SEL 2215 S RED
LED908	87-002-817-019		LED,SEL 2215 S RED
LED909	87-002-817-019		LED,SEL 2215 S RED
S912	87-A90-095-089		SW,TACT EVQ11G04M
S913	87-A90-095-089		SW,TACT EVQ11G04M
S914	87-A90-095-089		SW,TACT EVQ11G04M
S915	87-A90-095-089		SW,TACT EVQ11G04M
S916	87-A90-095-089		SW,TACT EVQ11G04M

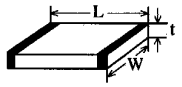
REF. NO	PART NO.	カンリ NO.	DESCRIPTION
LED C.B			
LED701	87-017-806-010		LED,SEL1810DM
LED702	87-017-350-080		LED,SEL1550CM
LED703	87-017-350-080		LED,SEL1550CM
LED704	87-017-806-010		LED,SEL1810DM
VIDE02 C.B			
C1	87-010-112-089		CAP,E 100-16 SME
C2	87-010-405-089		CAP,E 10-50 SME
C3	87-010-405-089		CAP,E 10-50 SME
C4	87-010-405-089		CAP,E 10-50 SME
C5	87-010-405-089		CAP,E 10-50 SME
C6	87-010-112-089		CAP,E 100-16 SME
T-T C.B			
C401	87-018-214-089		CAP TC U 0.1-50 F
FC401	84-ZG1-614-119		CABLE FFC 5P-1.25
M401	87-045-364-019		MOTOR,(BCH3B14)
PS401	87-026-573-019		P-SNSR,GP1S53V
DECK C.B			
	82-ZM1-625-019		RBN-CORD,4P-55
CON501	87-099-756-019		CONN,15P 9604S F
SFR1	87-024-581-010		SFR,3.3K DIA 6H
SOL1	82-ZM1-618-310		SOL ASSY,27
SOL2	82-ZM1-626-010		SOL ASSY,27K
SW1	87-036-378-010		SW,PUSH 1-1-1 SH2
SW2	87-036-378-010		SW,PUSH 1-1-1 SH2
SW3	87-036-378-010		SW,PUSH 1-1-1 SH2
SW4	87-036-378-010		SW,PUSH 1-1-1 SH2
SW5	87-036-378-010		SW,PUSH 1-1-1 SH2
SW6	87-036-378-010		SW,PUSH 1-1-1 SH2
SW7	87-036-378-010		SW,PUSH 1-1-1 SH2
SW8	87-036-378-010		SW,PUSH 1-1-1 SH2
SW9	87-036-378-010		SW,PUSH 1-1-1 SH2
HEAD-1 C.B			
W106	86-NV1-611-019		CONN ASSY,3P DECK1
HEAD-2 C.B			
W105	86-NV1-612-019		CONN ASSY,8P DECK2
DRIVE C.B			
M1	87-045-358-019		MOT,RF-310TA 43
M2	87-045-356-019		MOT,RF-310TA 30
SW1	87-A90-042-019		SW,LEAF MSW 17310 MVPO

○ チップ抵抗部品コード／CHIP RESISTOR PART CODE

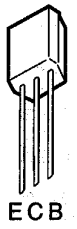
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

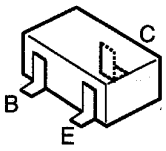
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード ：A Resistor Code: A
				外形／Form	L	W	t	
1／16W	1608	±5%	CJ		1.6	0.8	0.45	108
1／10W	2125	±5%	CJ		2	1.25	0.45	118
1／8W	3216	±5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION



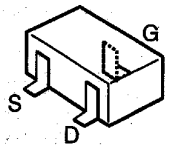
2SA933S
2SC1740S
DTA144ES
DTC144ES

2SA952
2SA1296
2SA1318
2SC1815
2SC2001
2SC3331
2SD2172



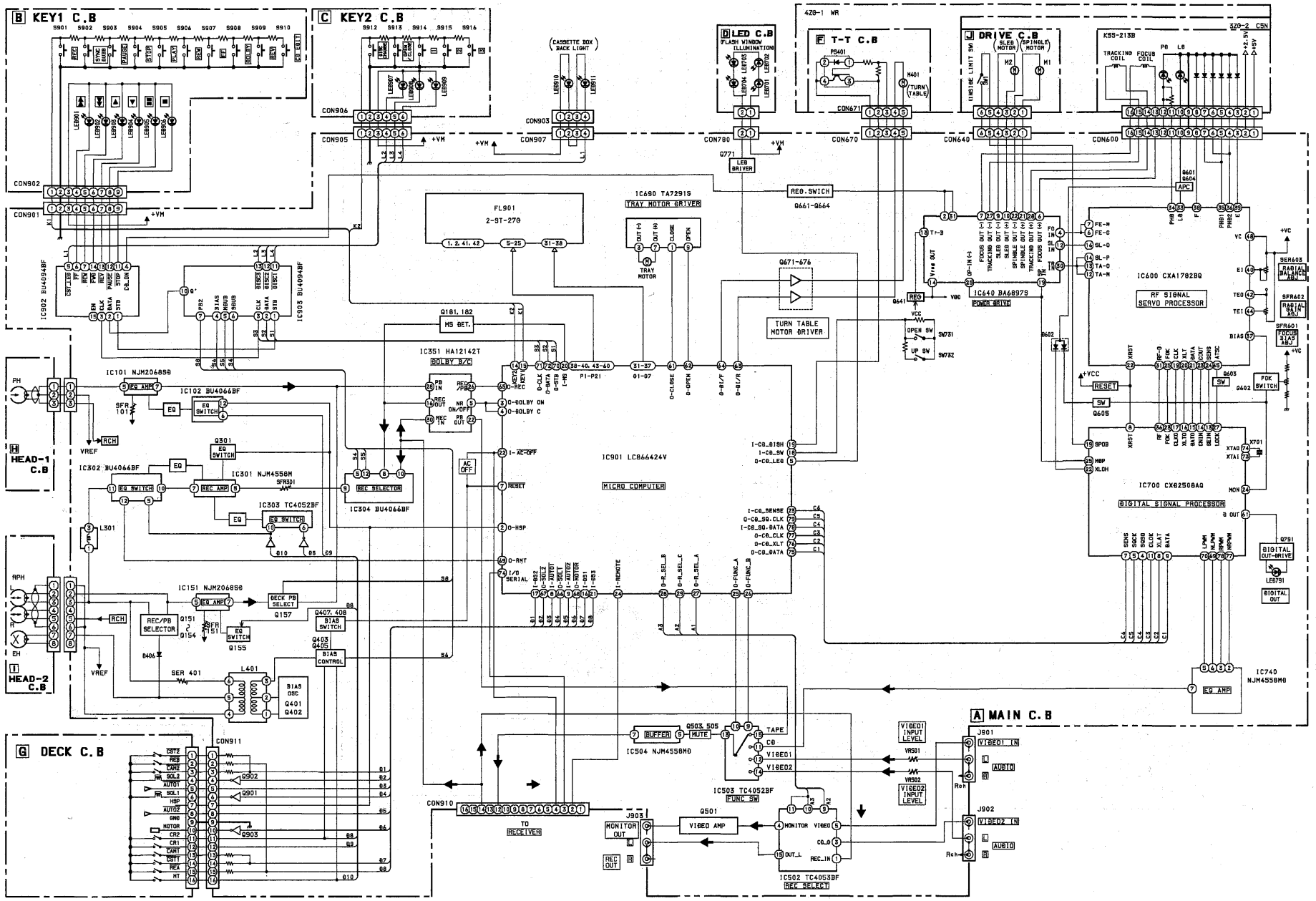
2SA1037
2SA1362
2SC2712
2SC3326
2SD1383
DTA114TK

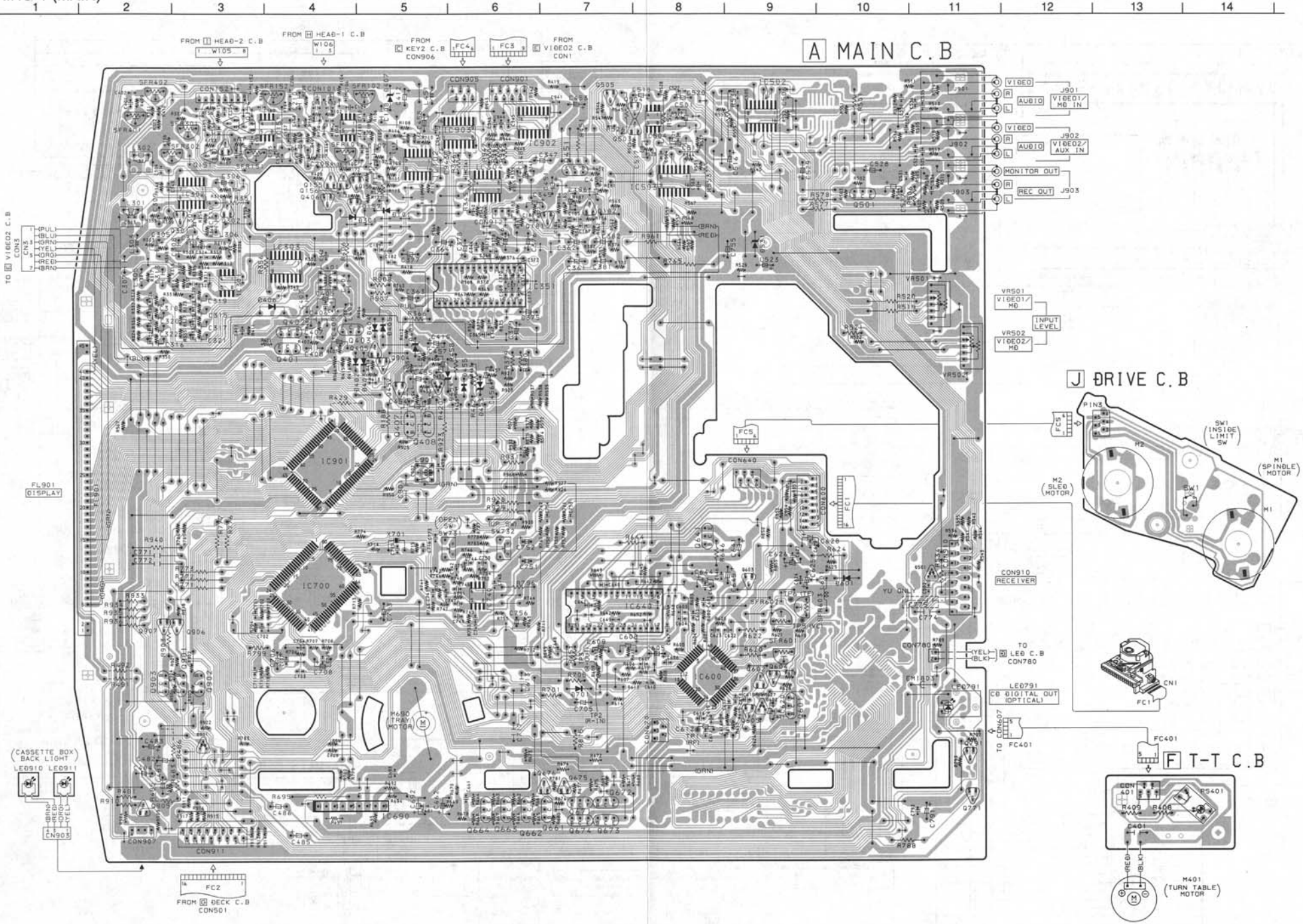
DTA124EK
DTA144EK
DTC114TK
DTC123JK
DTC143TK
DTC144EK



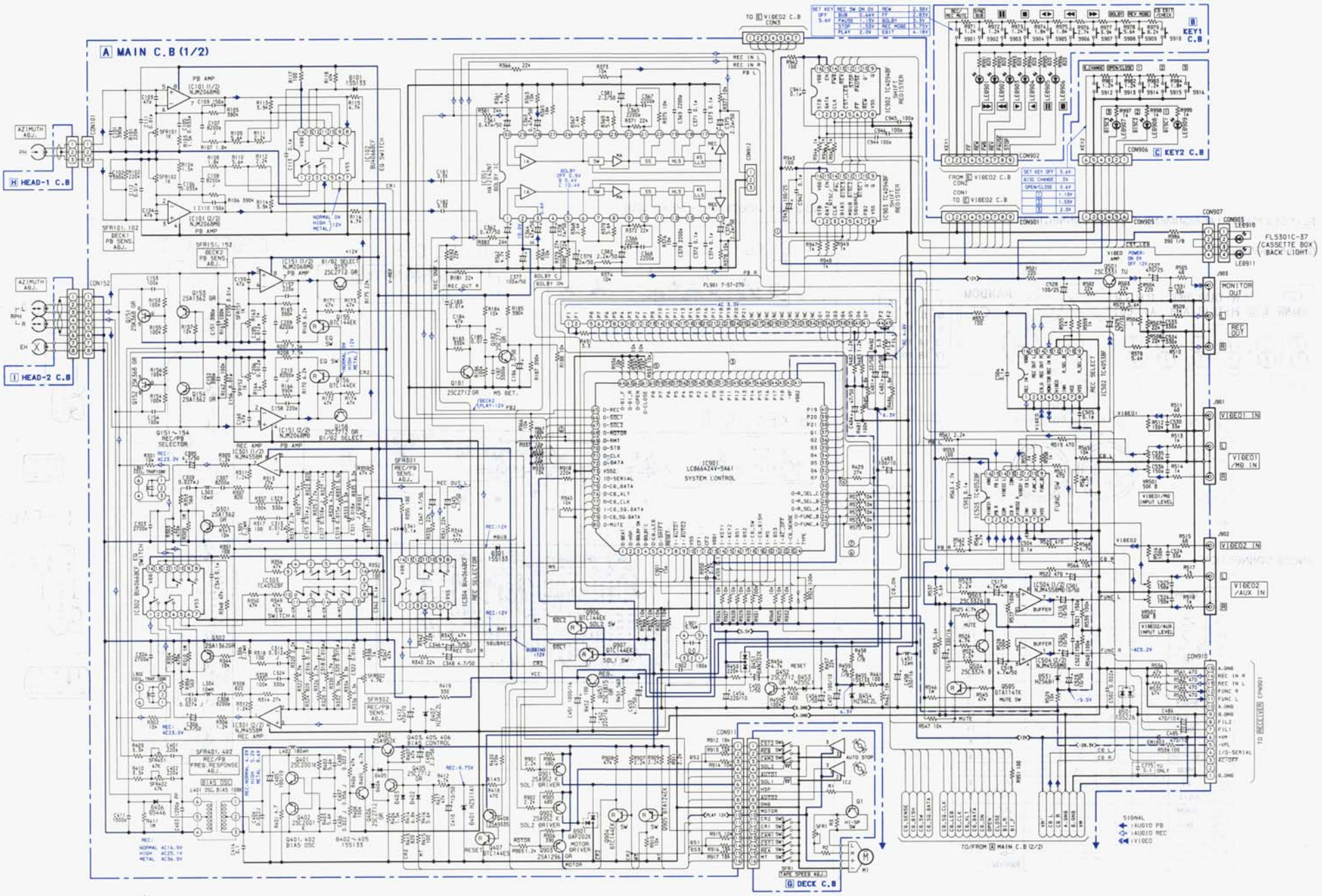
2SK368

BLOCK DIAGRAM




A MAIN C.B
J DRIVE C.B
F T-T C.B
FROM I HEAD-2 C.B
FROM H HEAD-1 C.B
FROM C KEY2 C.B CON906
FROM E VIDEO2 C.B CON1
TO E VIDEO2 C.B CON5
FL901 DISPLAY
(CASSETTE BOX) BACK LIGHT
LED910 LED911
FROM G DECK C.B CON501
VIDEO
AUDIO
J901 VIDEO1/MD IN
J902 VIDEO2/AUX IN
MONITOR OUT
REC OUT
J903
VR501 VIDEO1/MD
VR502 VIDEO2/MD
INPUT LEVEL
SW1 (INSIDE LIMIT SW)
M1 (SPINDLE MOTOR)
M2 (SLED MOTOR)
CON910 RECEIVER
TO LED C.B CON780
LED791
CD DIGITAL OUT (OPTICAL)
TO CON607 FC401
M690 (TRAY MOTOR)
M401 (TURN TABLE) MOTOR
IC901
IC700
IC690
IC902
IC502
IC551
IC600

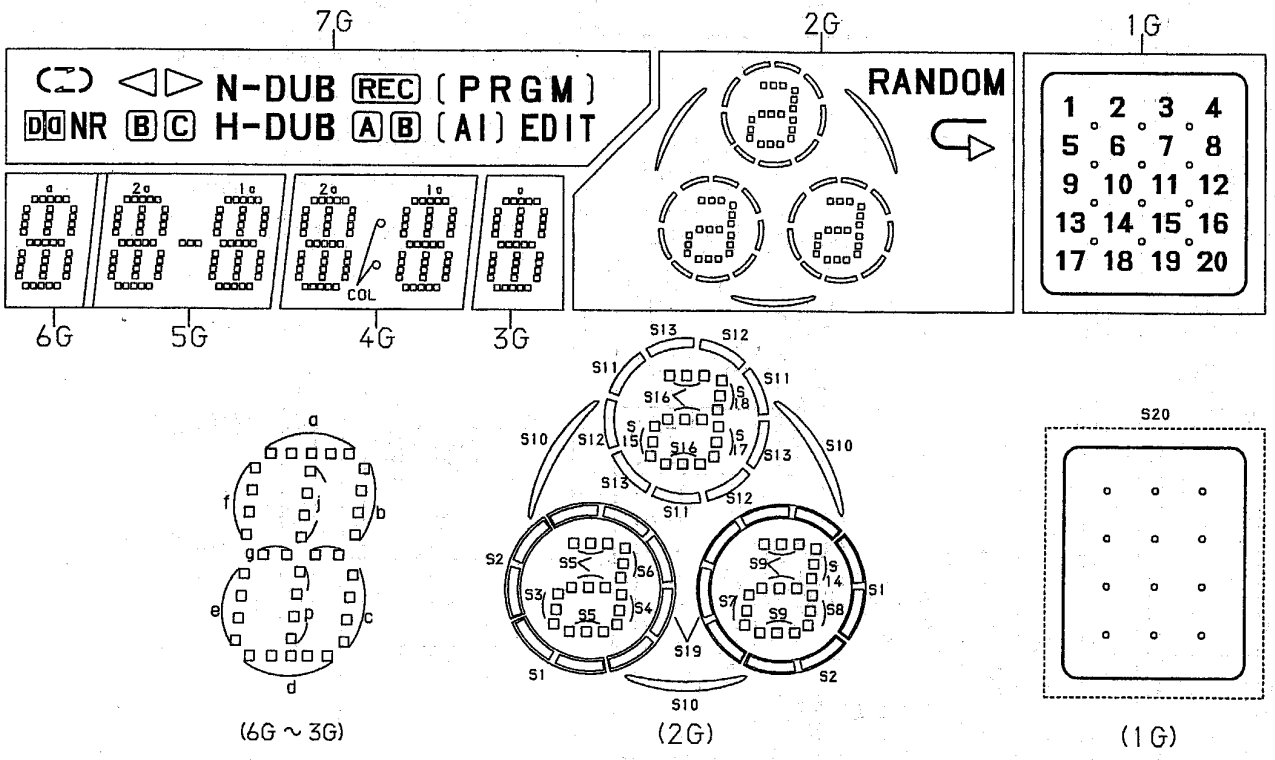
SCHEMATIC DIAGRAM-1 (MAIN 1/2)



41 42 43

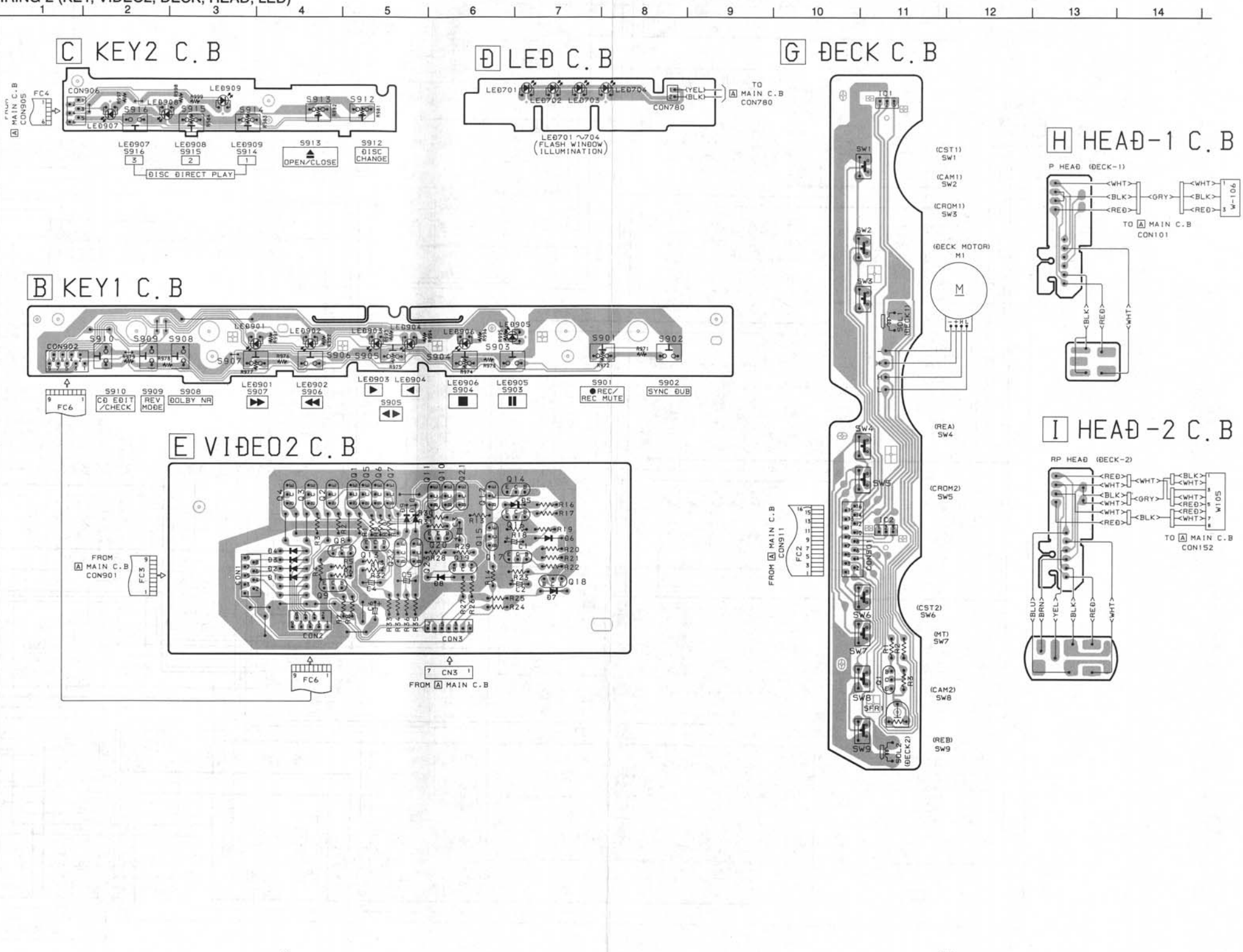
FL (7-ST-27G) GRID ASSIGNMENT / ANODE CONNECTION

GRID ASSIGNMENT

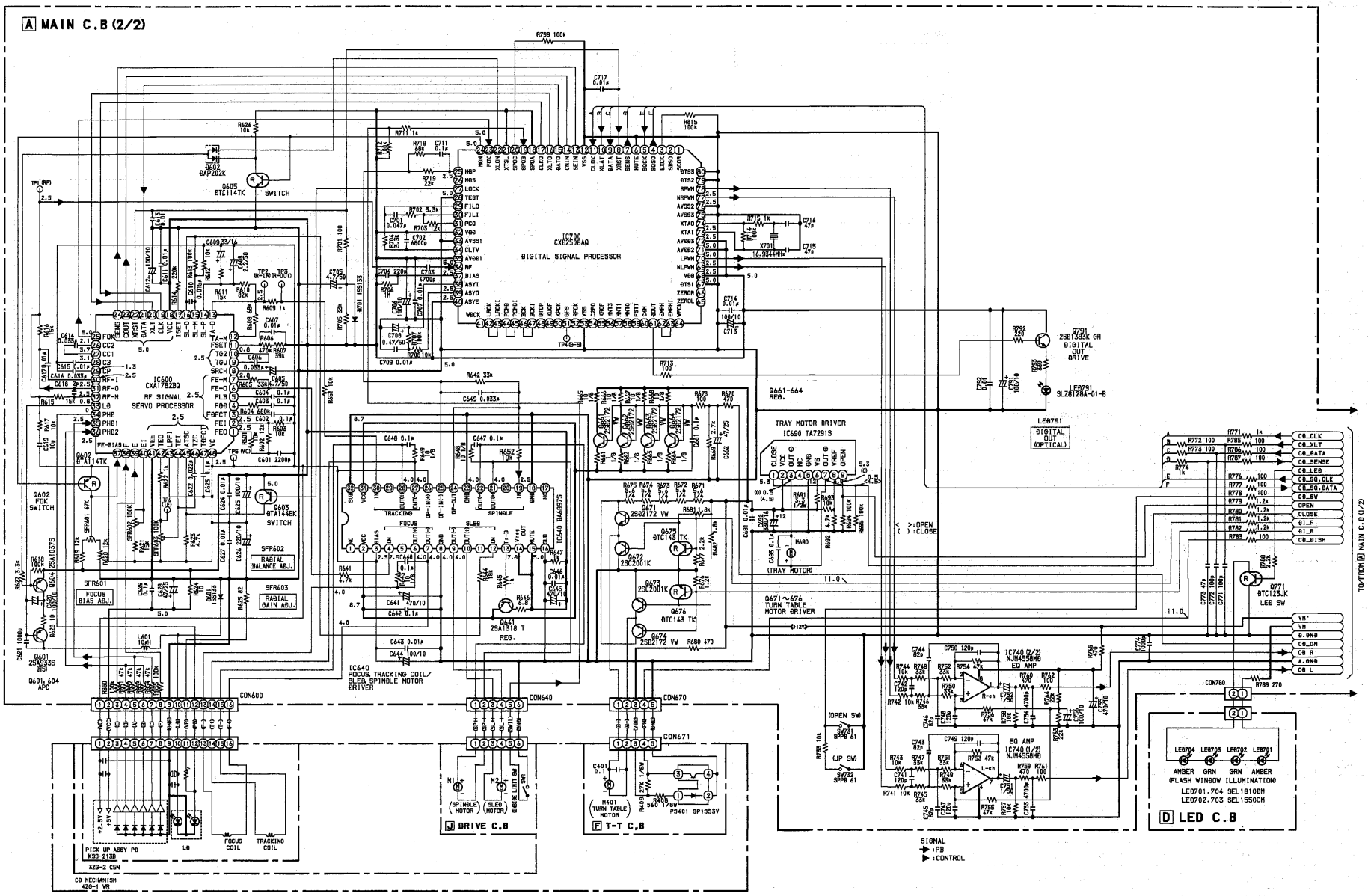


ANODE CONNECTION

	7G	6G	5G	4G	3G	2G	1G
P1	DD NR	d	1d	1d	d	S1	**20**
P2	(	p	1p	1p	p	S2	**19**
P3	⇄	e	1e	1e	e	S3	**18**
P4	)	c	1c	1c	c	S4	**17**
P5	B (LEFT)	g	1g	1g	g	S5	**16**
P6	C	f	1f	1f	f	S6	**15**
P7	◁	b	1b	1b	b	S7	**14**
P8	▷	j	1j	1j	j	S8	**13**
P9	**N-DUB**	a	1a	1a	a	S9	**12**
P10	**H-DUB**	—	2d	2d	—	S10	**11**
P11	REC	—	2p	2p	—	S11	**10**
P12	A	—	2e	2e	—	S12	**9**
P13	B (RIGHT)	—	2c	2c	—	S13	**8**
P14	**PRGM**	—	2g	2g	—	S14	**7**
P15	**AI**	—	2f	2f	—	S15	**6**
P16	**EDIT**	—	2b	2b	—	S16	**5**
P17	**(PRGM)**	—	2j	2j	—	S17	**4**
P18	**(AI)**	—	2a	2a	—	S18	**3**
P19	—	—	□□□	COL (HIGH)	—	S19	**2**
P20	—	—	—	COL (LOW)	—	↻	**1**
P21	—	—	—	—	—	**RANDOM**	S20


C KEY2 C.B
FROM A MAIN C.B CON905
FC4
CON906
LED909
LED908
LED907
S913
S912
S916
S915
S914
LED907
LED908
LED909
S916
S915
S914
S913
S912
OPEN/CLOSE
DISC CHANGE
DISC DIRECT PLAY
Đ LEĐ C.B
LED701
LED702
LED703
LED704
CON780
(YEL)
(BLK)
TO A MAIN C.B CON780
LED701 ~704 (FLASH WINDOW) (ILLUMINATION)
G ĐECK C.B
IC1
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
(CST1) SW1
(CAM1) SW2
(CROM1) SW3
(ĐECK MOTOR) M1
M
SOL1 (ĐECK1)
(REA) SW4
(CROM2) SW5
(CST2) SW6
(MT) SW7
(CAM2) SW8
(REB) SW9
SOL2 (ĐECK2)
FROM A MAIN C.B CON911
FC2
CON901
H HEAĐ-1 C.B
P HEAĐ (ĐECK-1)
<WHT>
<BLK>
<RED>
<GRY>
W106
TO A MAIN C.B CON101
I HEAĐ-2 C.B
RP HEAĐ (ĐECK-2)
<RED>
<WHT>
<BLK>
<GRY>
W105
TO A MAIN C.B CON152
B KEY1 C.B
CON902
S910
S909
S908
S907
S906
S905
S904
S903
S902
S901
LED901
LED902
LED903
LED904
LED906
LED905
FC6
S910 CD EDIT /CHECK
S909 REV MODE
S908 DOLBY NR
S907
S906
S905
S904
S903
S901 ●REC/ REC MUTE
S902 SYNC DUB
E VIĐEO2 C.B
FROM A MAIN C.B CON901
FC3
CON1
CON2
CON3
FC6
CN3
FROM A MAIN C.B

SCHEMATIC DIAGRAM-2 (MAIN 2/2)



IC DESCRIPTION

IC, LC866424V-5A61

Pin No.	Pin Name	I/O	Description
1	O-BEAT	O	REC beat output. (ON/OFF)
2	O-HSP	O	High speed dubbing switch. (HIGH/NORMAL)
3	O-DOLBY/ON	O	DOLBY IC switch output. (DOLBY ON/OFF)
4	O-DOLBY/C	O	DOLBY IC mode switch output. (DOLBY B/C)
5	O-CD/LED	O	Flash window output. (ON/OFF)
6	O-SHIFT	O	Microprocessor clock shift out during tuner reception.
7	RESET	I	Reset input (Reset at "L").
8	I-AUTO 1	I	Deck 1 auto stop input.
9	I-AUTO 2	I	Deck 2 auto stop input.
10	VSS 1	-	GND.
11	CF 1	I	5.76 MHz oscillator.
12	CF 2	O	5.76 MHz oscillator.
13	VDD 1	-	Power supply input.
14	I-KEY 1	I	Key 1 A/D input.
15	I-KEY 2	I	Key 2 A/D input.
16	I-DS 1	I	Deck 1 mechanism switch input.
17	I-DS 2	I	Deck 2 mechanism switch input.
18	I-CD/SW	I	CD mechanism switch A/D input.
19	I-CD/DISH	I	CD turntable photo sensor A/D input.
20	I-MS	I	Deck MS detection A/D input.
21	I-DS 3	I	Deck mechanism switch input (REC enable A/D input).
22	I-AC/OFF	I	HOLD input.
23	I-CD/SENSE	I	CD microprocessor control SENSE input.
24	I-TYPE	I	TYPE select A/D input. (H : DOLBY C / L : DOLBY B)
25~26	O-FUNC/A~B	O	FUNCTION switch output.
27	O-R-SEL/A	O	Video signal switch. (VIDEO 1/2)
28	O-R-SEL/B	O	REC output switch. (ON/MUTE)
29	O-R-SEL/C	O	Monitor output switch. (VIDEO/CDG)
30	-	-	Not used.
31~37	G7~G1	O	FL grid output (G7~G1).
38~40	P21~P19	O	FL segment output P21~P19.
41	VDD2	-	Power supply input.
42	-VP	-	Power supply for FL display .
43~60	P18~P8	O	FL segment output P18~P8.
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-REC	O	Deck REC switch output.
66	O-SOL1	O	Deck 1 plunger ON/OFF output.

FUNCTION switch output.

	AUX1	AUX2	TAPE	CD
A	0	1	0	1
B	0	0	1	1

67	O-$\overline{\text{SOL2}}$	O	Deck 2 plunger $\overline{\text{ON}}$/OFF output.
68	O-$\overline{\text{MOTOR}}$	O	Deck motor $\overline{\text{ON}}$/OFF output.
69	O-RMT	O	REC mute $\overline{\text{ON}}$/OFF output.
70	O-STB	O	Front shift register, data latch strobe output.
71	O-CLK	O	Front shift register, data transfer clock output.
72	O-DATA	O	Front shift register, data output.
73	VSS2	-	GND.
74	I/O/SERIAL	I/O	Command input / output with the CD microprocessor.
75	O-CD/DATA	O	CD microprocessor control data output.
76	O-CD/XLT	O	CD microprocessor control latch output.
77	O-CD/CLK	O	CD microprocessor control clock output.
78	I-CD/SQ,DATA	I	CD SUB-Q data input.
79	O-CD/SQ,DATA	O	CD SUB-Q clock output.
80	O-MUTE	O	System mute ON/$\overline{\text{OFF}}$ output.

IC, CXD2508AQ

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 MAIN CPU.
8	XRST	I	System reset. L to reset.
9	DATA	I	Serial data input from MAIN CPU.
10	XLAT	I	Latch input from MAIN CPU. Latching serial data at fall down.
11	CLOK	I	Clock input from MAIN CPU to transfer serial data.
12	VSS	-	GND.
13	SEIN	I	SENS input from SSP.
14	CNIN	I	Numbers of track jump are counted and input.
15	DATO	O	Serial data output to SSP.
16	XLTO	O	Serial data latched output to SSP. Latched at fall down edge.
17	CLKO	O	Clock input from SSP 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	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.
27	LOCK	O	GFS is sampled by 460Hz. H output when GFS is H. L output when GFS is L for 8 consecutive times.
18	TEST1	I	TEST. (Connected to GND)
19	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	Comparator 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	WCDK	O	D/A interface, word clock (2Fs) for 48-bit slot.

Pin No.	Pin Name	I/O	Description
42	LRCK	O	D/A interface, LR clock (FS) for 48-bit slot.
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	BCK1	I	Bit clock input to DAC. (48-bit slot)
48	GTOP	O	GTOP output.
49	XUGF	O	XUGF output.
50	XPCK	O	XPLCK output.
51	GFS	O	GFS output.
52	RFCK	O	RFCK output.
53	VSS	-	GND.
54	C2PO	O	C2PO output.
55	XROF	O	XRAOF output.
56	MNT3	O	MNT3 output.
57	MNT1	O	MNT1 output.
58	MNT0	O	MNT0 output.
59	FSTT	O	Pins-73 and -74 divided-by 2/3 output.
60	C4M	O	4.2336MHz output.
61	DOUT	O	Digital Out connector output signal.
62	EMPH	O	H when the play back disk 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	Not sound data detection output. H (L-ch) when no sound data is detected.
66	ZEROR	O	Not sound data detection output. H (L-ch) when no sound data is detected.
67	DTSI	I	TEST for DAC. (Connected to GND)
68	VDD	-	Power supply input. (+5V)
69	NLPWM	O	L-ch PWM output. (Reversed polarity)
70	LPWM	O	L-ch PWM output. (Normal 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 to 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 to GND)
80	DTS3	I	TEST-3 for DAC. (Connected to GND)

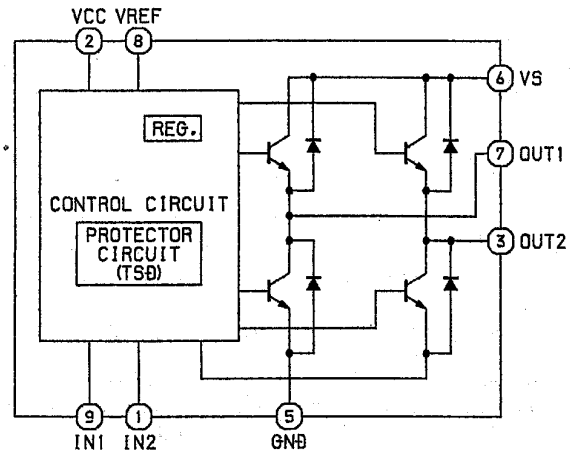
IC, CXA1782BQ

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 drove output.
17	ISET	I	The current which determines height of the focus search, track jump and sled kick is input.
18	VCC	-	+5V power supply pin.
19	CLK	I	Serial data transfer clock input from DSP.
20	XLT	I	Latch input from DSP.
21	DATA	I	Serial data input from DSP.
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 to DSP.
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.

Pin No.	Pin Name	I/O	Description
33	LD	O	APC amplifier output pin.
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.
43	LPFI	I	BAL adjustment comparator input pin.
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, TA7291S

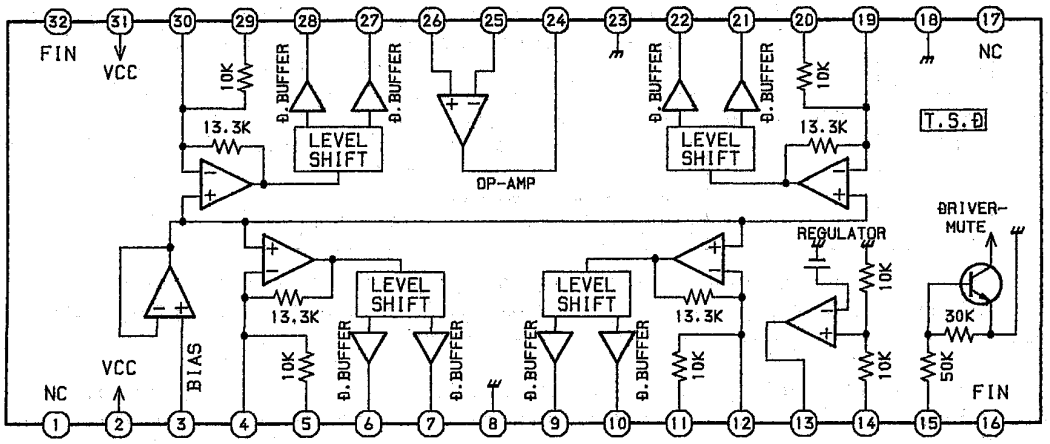


TRUTH TABLE

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

∞ :HIGH IMPEDACE
INPUT IS "H" ACITVE

IC, BA6897S



T.S.D:Thermal shift down circuit
D.BUFFER:Drive Buffer

TEST MODE

1. How to Activate CD Test Mode
   Insert the AC plug while pressing the CD EDIT/CHECK/button. All FL display tubes will light up, and the test mode will be activated.

2. How to cancel CD Test Mode
   Either one of the following operations will cancel the CD test mode.
   • Press the power switch button. • Disconnect the AC plug.

3. CD Test Mode Functions
   When test mode is activated, the following mode functions can be used by pressing the operation keys.

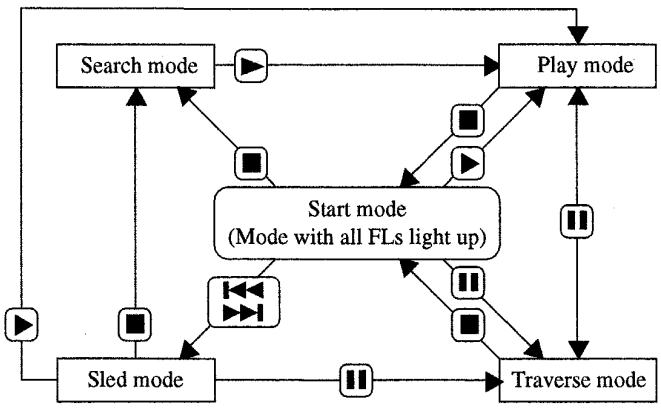
Mode	Operation	FL display	Operation	Contents
Start mode	Test mode activation	All FL light up	• Laser diode illuminated under normal circumstances (CD block power supply ON)	Displays the machine mode that it is a test mode. All FL displays light up
Search mode	■ key	— ——	• Continual focus search * NOTE 1 (The pickup lens repeats the full-swing up-down motion.) * Avoid continual searches that last for more than 10 minutes.	FOCUS SERVO • Laser current measurement (Across R628 resistor) • Check focus search waveform • Check focus error waveform * FOK / FZC are not monitored in the search mode.
Play mode	▶ key	/ —	• Normal playback • Focus search is continued if TOC cannot be read * NOTE 1	FOCUS SERVO / TRACKING SERVO CLV SERVO / SLED SERVO Check FOK / FZC
Traverse mode	❚❚key	/ —	• During normal disc playback Press once; tracking servo OFF Press twice; tracking servo ON * NOTE 2	TRACKING SERVO ON / OFF Tracking balance (traverse) adjustment TP6(SFR602)
Sled mode	⏮ key ⏭	All FL light up	• Pickup moves to the outermost track • Pickup moves to the innermost track * NOTE 3 (During playback, machine operates normally.)	SLED SERVO Check SLED mechanism operation

* NOTE 1: 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 cases, the power supply should be switched off for 10 minutes until heat has been reduced and then re-started.

* NOTE 2: Do not press the ⏮ or ⏭ keys when the machine is in the ❚❚ status is active. If they are pressed, playback will not be possible after the ❚❚ status has been canceled. If the ⏮ or ⏭ keys are pressed in the ❚❚ status, press the ■ key and return to start mode (No. 1).

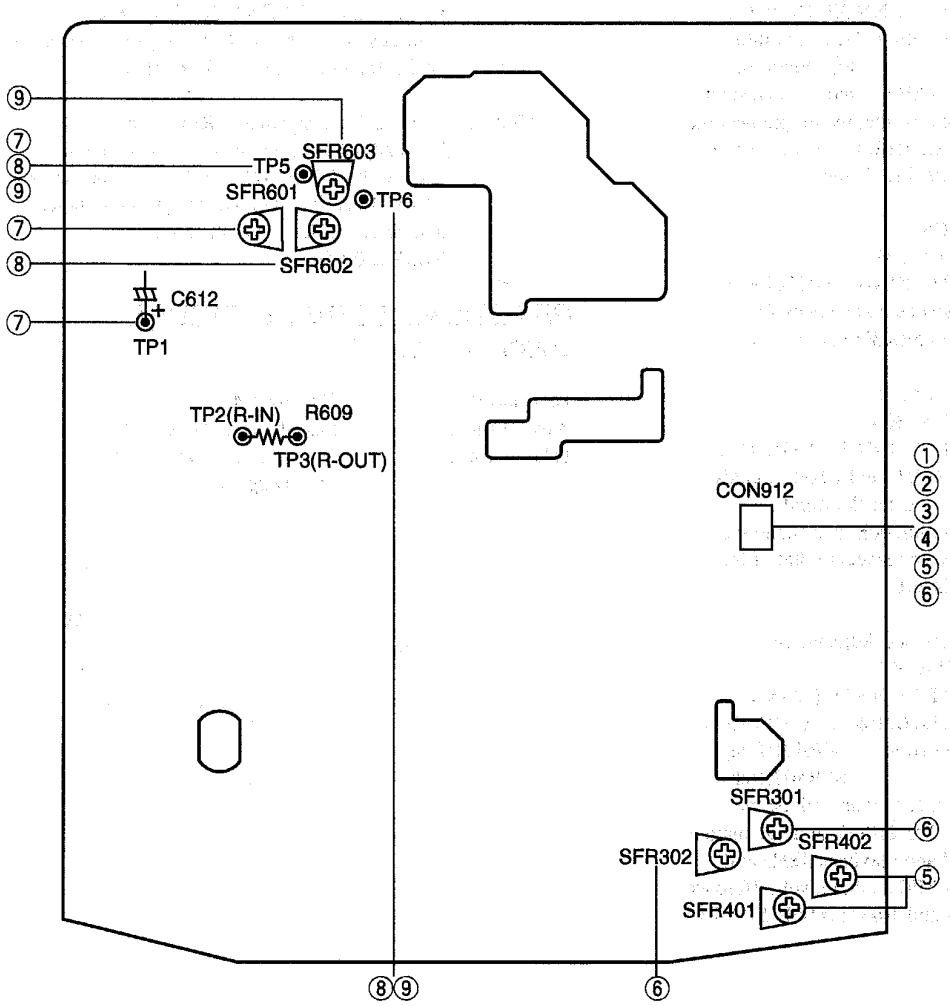
* NOTE 3: When pressing the ⏮ or ⏭ keys, take care to avoid damage to the gears. Because the sled motor is activated when the ⏮ or ⏭ keys are pressed, even when the pick-up is at the outermost or innermost track.

4. Operation Outline
   The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.

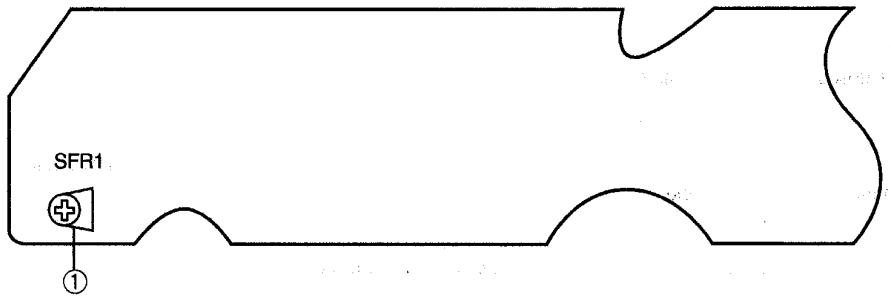


ELECTRICAL ADJUSTMENT

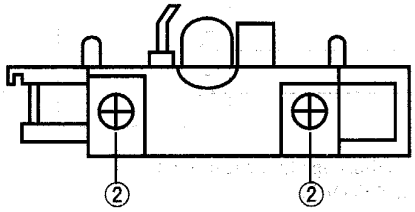
A MAIN C.B



G DECK C.B



DECK R/P E HEAD



< DECK SECTION >

1. Tape Speed Check
   Settings : • Test tape : TTA–100
   • Test point : TP CONN 3P (CON 912)
   • Adjustment location : SFR1
   Method : Play back the test tape and check for 3000Hz ± 5Hz.
   (NOTE) : RVS SIDE SPEED SPECIFICATION
   FWD SIDE SPECIFICATION ±45Hz

2. Head Azimuth Adjustment (DECK 1,2)
   Settings : • Test tape : TTA–300
   • Test point : TP CONN 3P (CON 912)
   • 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.

3.PB Sensitivity Check (DECK 1,2)
   Settings : • Test tape : TTA-200
   • Test point : TP CONN 3P (CON 912)
   Method : Playback the test tape and check for outputlevel becomes 300mV ± 5mV.

4. PB Frequency Response Check
   Settings : • Test tape : TTA–300
   • Test point : TP CONN 3P (CON 912)
   Method : Play back the 315Hz and 10kHz signals of the test tape and check output difference to within 0dB ± 2dB,and the 10kHz signal with respect to that of the 315Hz signal is 2dB.

5. REC / PB Frequency Responce Adjustment
   Settings : • Test tape : TTA-602
   • Test point : TP CONN 3P (CON 912)
   • Input signal :1kHz/10kHz (VIDEO2/AUX IN)
   • Adjustnent location : SFR401(Lch) SFR402(Rch)
   Method : Establish the record mode. Adjust the CON 912 signal to 210mV and attenuate to -20dB. Record and playback 1kHz and 10kHz. Adjust SFR so that level difference between 1kHz and 10kHz is 0dB ± 0.3dB.

6. REC/PB Sensitivity Adjustment (DECK 2)
   Settings : • Test tape : TTA-602
   • Test point : TP CONN 3P (CON 912)
   • Input signal : 1kHz/10kHz (VIDEO2/AUX IN)
   •Adjustment location : SFR301 (Lch) SFR302 (Rch)
   Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP CONN 3P(CON 912) becomes 21mV. Record and playback the 1kHz signal and adjust SFRs so that the output is 21mV ± 0.5dB.

PRACTICAL SERVICE FIGURE

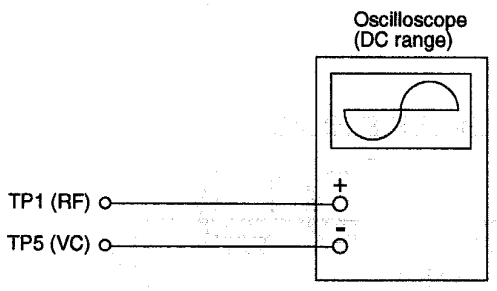
<DECK SECTION>

Tape speed :	3000Hz ± 45Hz
Wow & flutter :	Less than 0.35% (R.M.S)
Take-up torque :	30 ~ 55g-cm (FWD, REV)
F.F & REW torque :	75 ~ 180g-cm
Back tension :	2 ~ 7g-cm (FWD, REV)
Distortion :	Less than 2.0% (PB, AC)
	Less than 3.0% (REC/PB, AC)
Noise level :	Less than 50mV (PB, AC)
	Less than 50mV (REC/PB, AC)
Signal to noise ratio :	More than 40dB (PB, AC)
	More then 38dB (REC/PB, AC)
Erasing ratio :	More than 60dB (at 125Hz)
Test tape :	TTA–602

<CD SECTION>

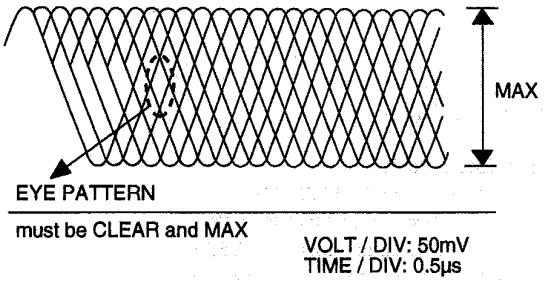
Note :
Connect a probe (10:1) of the osilloscope or the frequency counter to a test point.

7. Focus Bias Adjustment
   Make the focus bias adjustment when replacing and repairing the optical block.



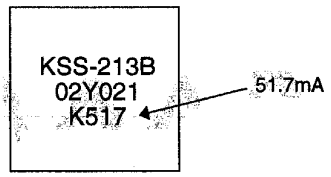
1) Connect an oscilloscope to the test points TP1 (RF) and TP5 (VC).
2) Turn on the power switch.
3) Insert test disc TCD-782 (YEDS-18) and play back the second composition.
4) Adjust SFR601 so that RF signal of the test point TP1 (RF) is MAX and CLEARREST.

RF signal waveform



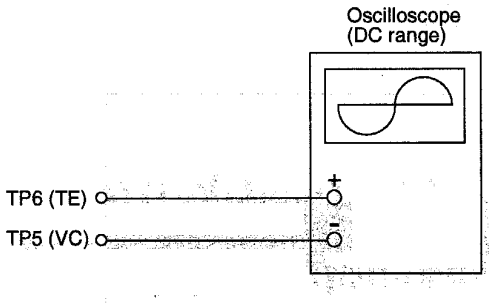
Note:

The current of the laser signal can be checked with the voltages on both sides of R628 (10Ω). The difference for the specified value shown on the level must be within ± 6.0mA.

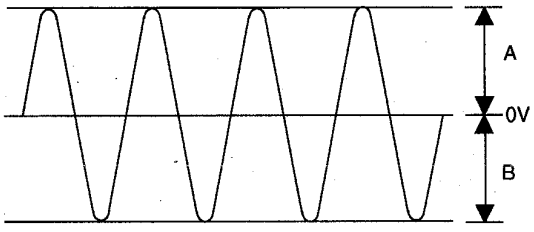


$$\text{Laser current Iop} = \frac{\text{Voltage across R628}}{10}$$

8. Tracking Balance Adjustment



1) Connect an oscilloscope to the test points TP6 (TE) and TP5 (VC).
2) Start the CD test mode.
3) Insert test disc TCD-782 (YEDS-18) and become traverse mode of CD test mode.
4) Adjust SFR602 so that the traverse waveform on the oscilloscope is vertically symmetrical as shown in the figure below.
5) After the adjustment is completed, remove the connected lead wires from the terminals.
6) Cansel the CD test mode.



A=B

VOLT / DIV: 20mV
TIME / DIV: 1mS

9. Tracking Gain Adjustment

A servo analyzer is necessary in order to perform this adjustment exactly. However, this gain has a 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 gains are reciprocate, the adjustment is performed at the point where both gains are satisfied.

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

When the gain adjustment is not satisfied, the symptoms below appear.

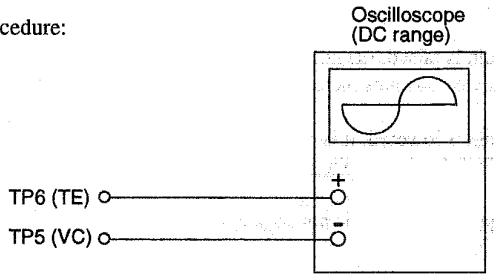
Symptoms \ Gain	(Focus)	Tracking
• The time until music starts becomes longer for STOP → -PLAY or automatic selection (⏮, ⏭ buttons pressed.) (Normally takes about 2 seconds.)	low	low or high
• Music does not start and disc continues to rotate for STOP → -PLAY or automatic selection (⏮, ⏭ buttons pressed.)	–	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 performing the adjustment.
If the positions after the simple adjustment are only a little different, return the controls to the original position.

Procedure:

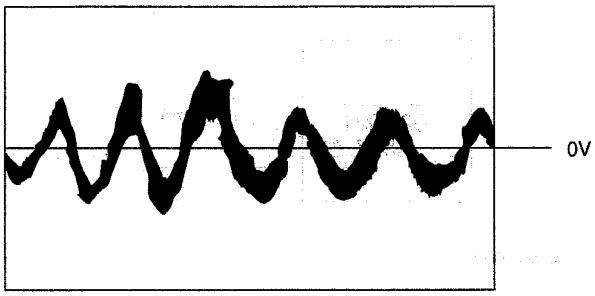


1) Keep the set horizontal. (If the set is not kept horizontally, this adjustment cannot be performed due to the gravity against the 2-axis device.)
2) Insert test disc TCD-782 (YEDS-18) and play back the second composition.
3) Connect an oscilloscope to TP6 (TE) of the MAIN C.B.
4) Adjust SFR603 so that the waveform appears as shown in the figure below. (tracking gain adjustment)

VOLT / DIV: 50mV
TIME / DIV: 1mS

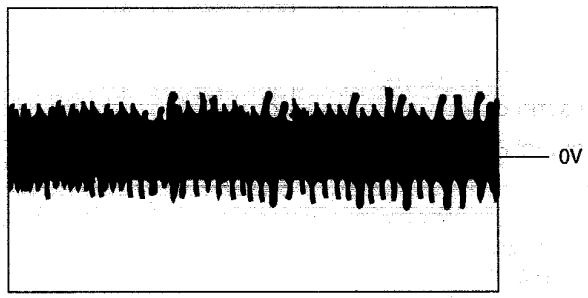
• Incorrect example

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



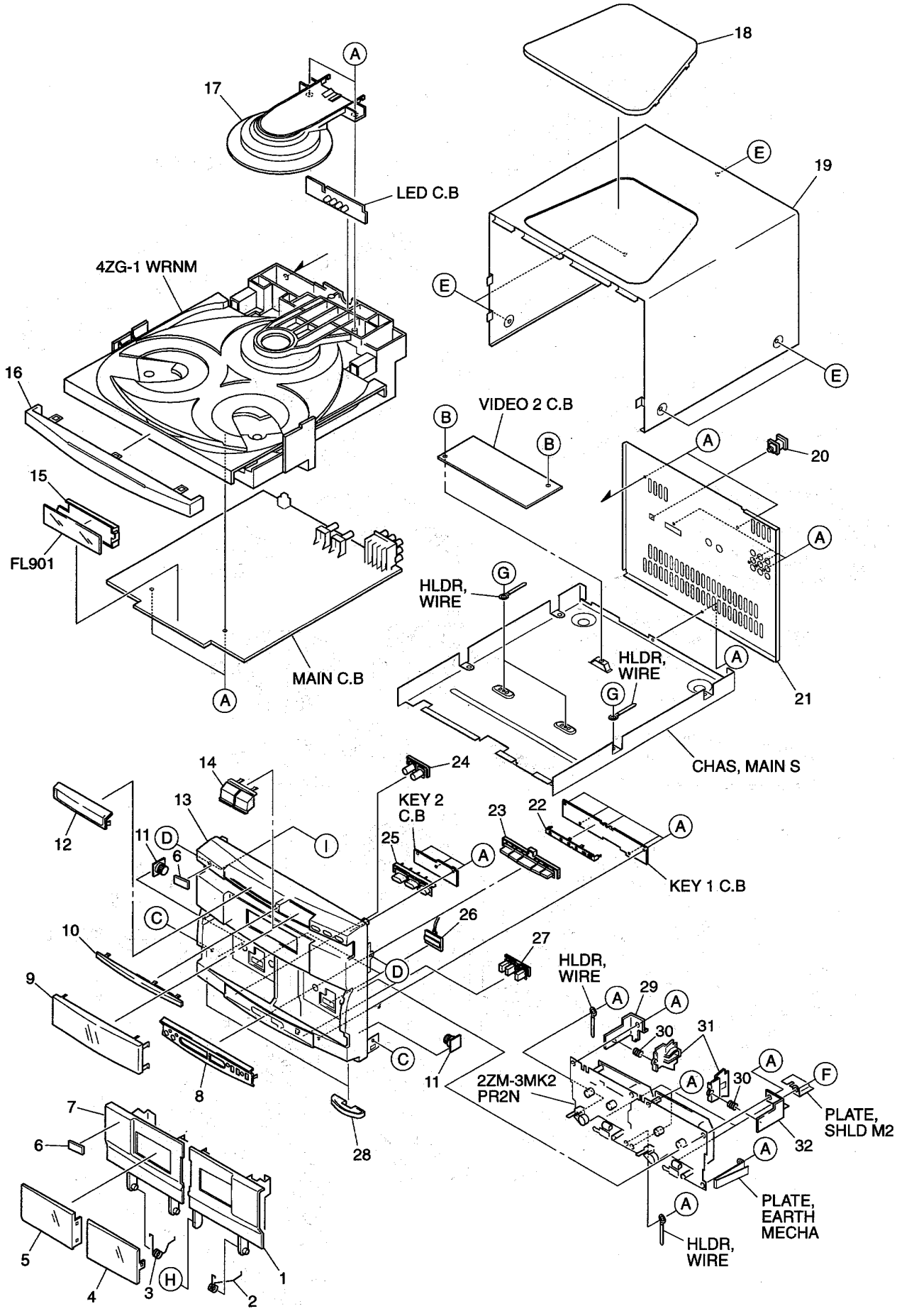
VOLT / DIV: 50mV
TIME / DIV: 1mS

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



VOLT / DIV: 50mV
TIME / DIV: 1mS

MECHANICAL EXPLODED VIEW 1 / 1

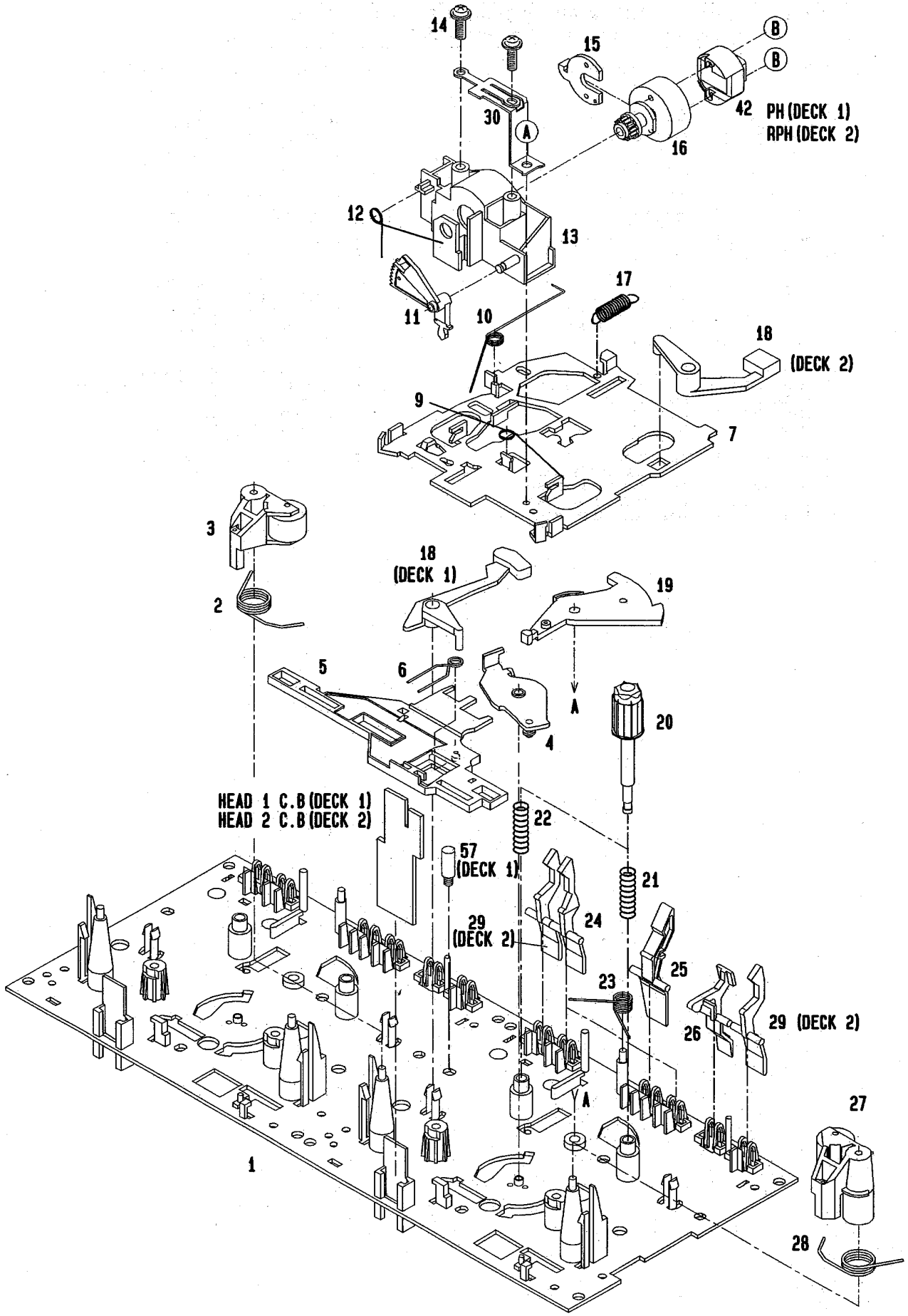


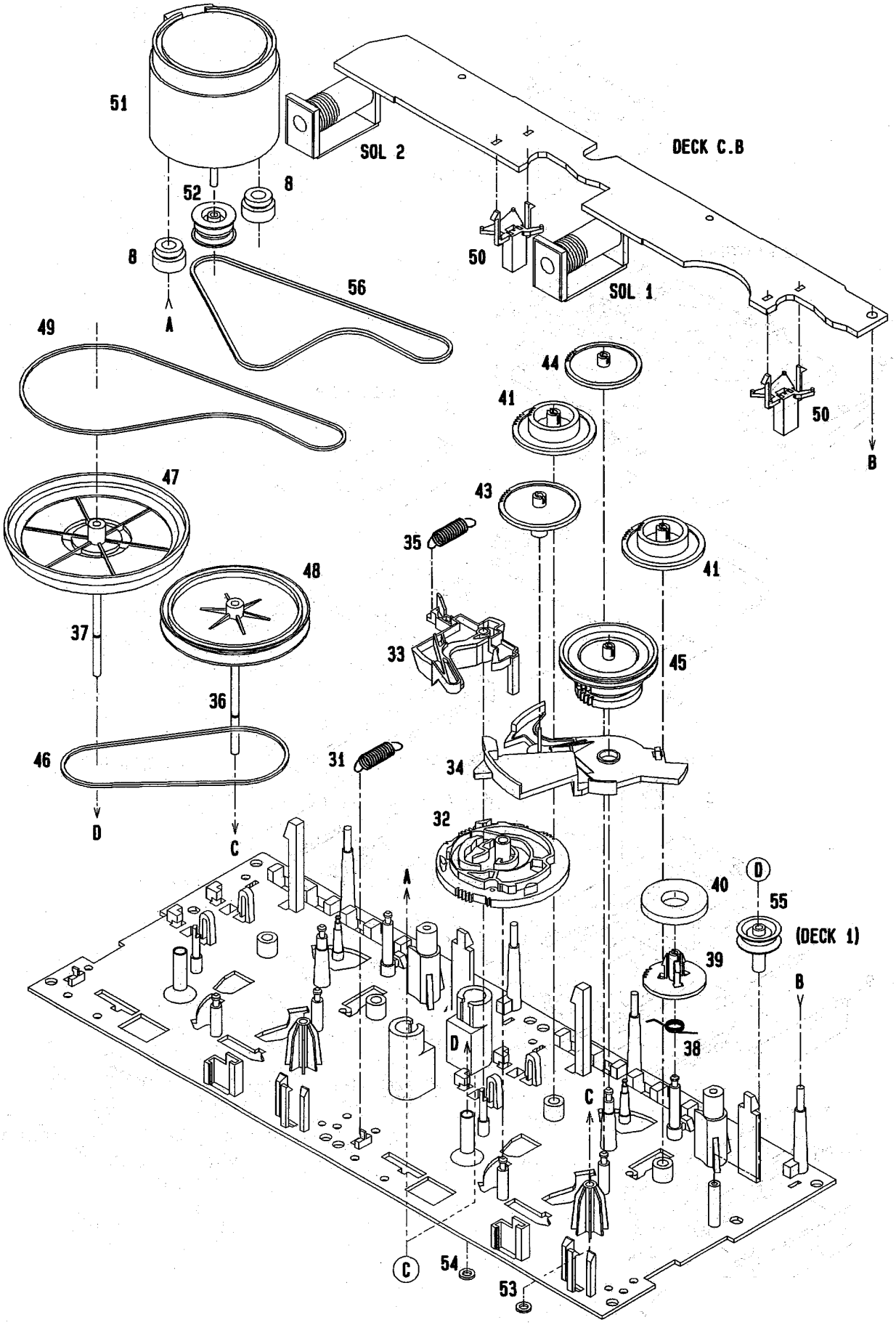
MECHANICAL PARTS LIST 1 ／ 1

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
1	86-NV1-004-019		BOX,CASS 2
2	83-NV4-202-119		SPR-T,EJECT 2
3	83-NV4-201-119		SPR-T,EJECT 1
4	86-NV1-009-019		WINDOW,CASS 2
5	86-NV1-008-019		WINDOW,CASS 1
6	82-NE8-032-019		BADGE AIWA 27.5
7	86-NV1-003-019		BOX,CASS 1
8	86-NV1-015-019		PANEL,CONTROL
9	86-NV1-006-019		WINDOW,DISPLAY
10	86-NV1-016-019		PANEL,CD
11	87-063-165-019		OIL-DMPR 150
12	86-NV1-007-019		WINDOW,CD
13	86-NV1-001-019		CABI,FR<EXCEPT YUSTMN>
13	86-NV1-020-019		CABI,FR U<YUSTMN>
14	86-NV1-011-019		KEY,OPEN
15	86-NV1-201-019		GUIDE,FL
16	86-NV1-005-019		PANEL,TRAY
17	84-ZG1-011-019		REFLECTOR,CD
18	86-NF6-007-019		WINDOW,TOP
19	86-NV1-017-019		CABI,STEEL
20	84-ZG1-245-019		CAP,OPTICAL
21	86-NV1-018-019		PANEL,REAR YBNM<YSTMN>
21	86-NV1-002-019		PANEL,REAR YJBNM<YJSTMN>
21	86-NV1-021-019		PANEL,REAR YLBNM<YLSTMN>
21	86-NV1-019-019		PANEL,REAR YUBNM<YUSTMN>
22	86-NV1-202-019		GUIDE,LED
23	86-NV1-010-019		KEY,PLAY
24	86-NV1-013-019		KEY,REC
25	86-NV1-012-019		KEY,DISC
26	87-070-108-019		LED,SLF-301C-37
27	86-NV1-014-019		KEY,DOLBY
28	85-NC1-019-019		RING,FOOT<YSTMN>
28	85-NC1-019-010		RING,FOOT<EXCEPT YSTMN>
29	82-NF5-226-019		HLDR,LOCK 1N
30	82-NF5-228-019		SPR-C,LOCK
31	82-NF5-229-019		PLATE,LOCK
32	82-NF5-227-019		HLDR,LOCK 2N
A	87-067-703-019		BVT2+3-10 (W/O SLOT)
B	87-067-584-019		BVT2+3-6 W/O SLOT
C	87-591-094-419		QIT + 3 - 6 GOLD
D	87-721-097-419		QT2+3-12 GLD
E	87-067-641-019		UTT2+3-8 W/O SLOT BLK
F	87-571-032-419		VIT+2-3
G	87-571-092-419		VIT+3-4
H	82-NE8-215-019		W,4.2-6.8-0.18
I	85-NF7-599-019		PVC W,3.2-8-0.3

TAPE MECHANISM EXPLODED VIEW 1 / 1



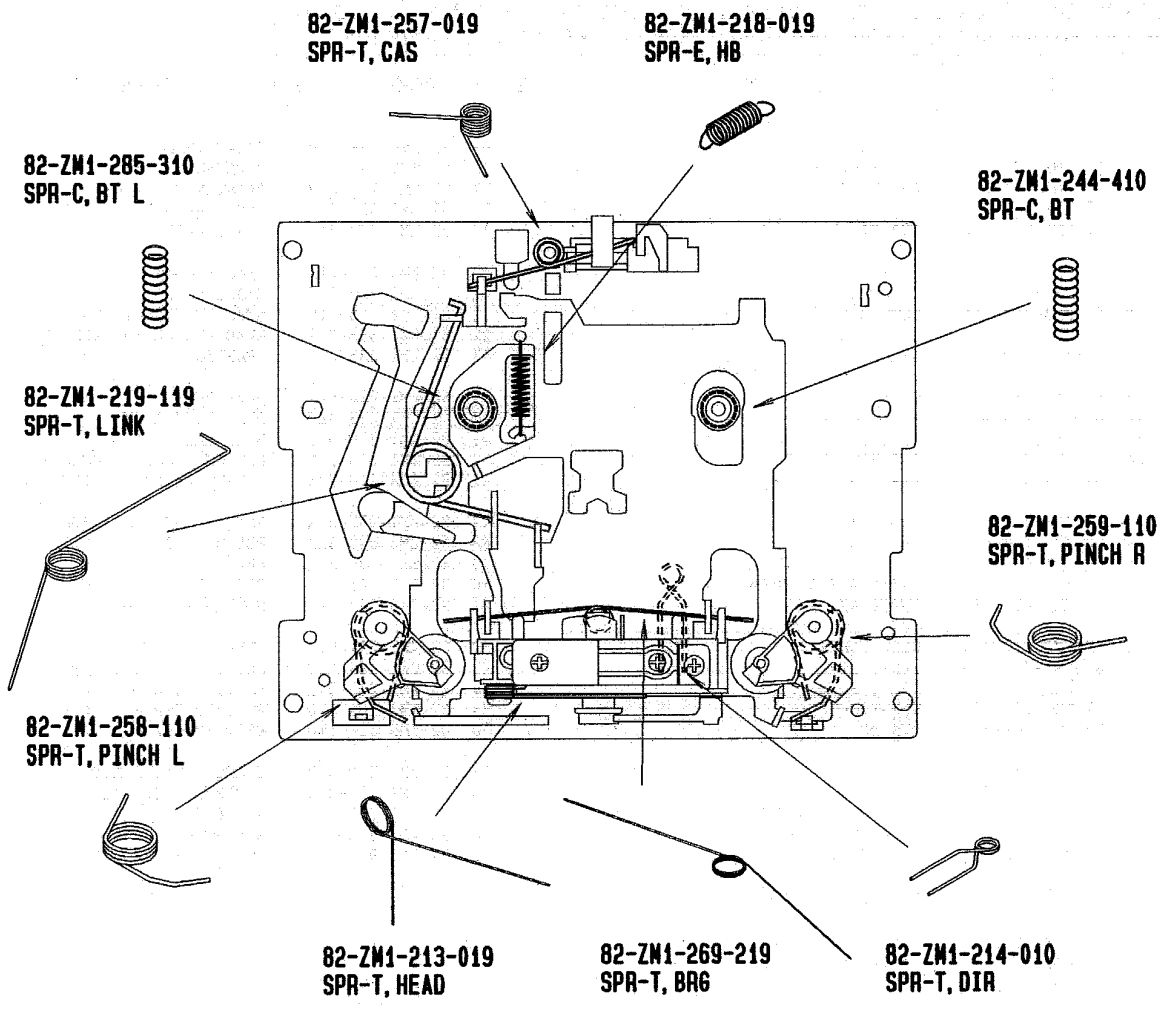

51
SOL 2
DECK C.B
52
8
8
50
SOL 1
56
A
49
44
41
50
B
47
43
35
41
48
37
33
45
36
46
31
34
D
C
32
A
40
D
55
(DECK 1)
39
B
38
D
C
C
54
53

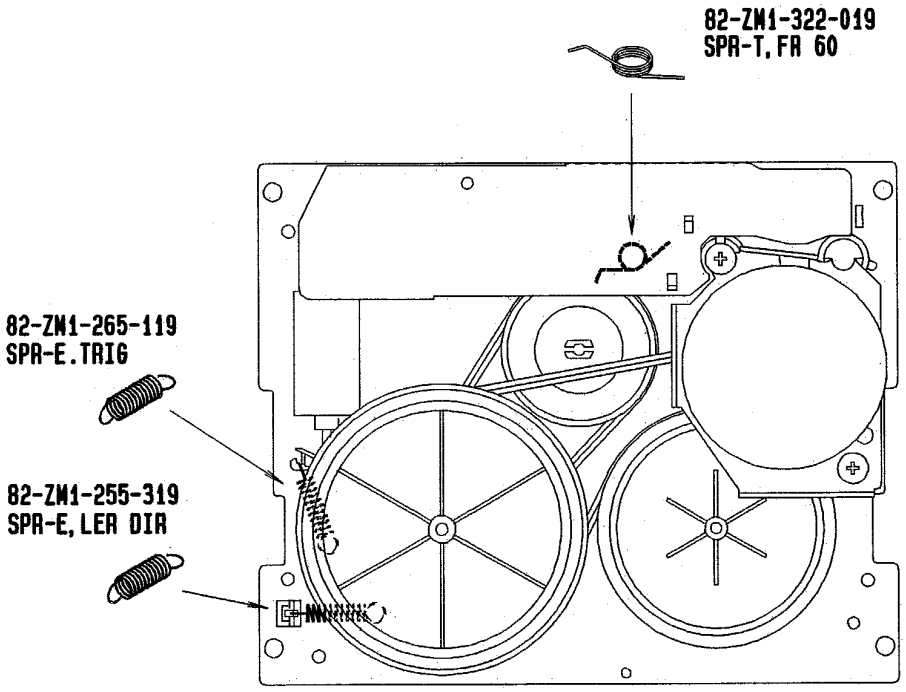
TAPE MECHANISM PARTS LIST 1 ／ 1

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
1	82-ZM3-301-519		CHAS ASSY,M2
2	82-ZM1-258-110		SPR-T,PINCH L
3	82-ZM1-345-019		LVR ASSY,PINCH L W
4	82-ZM1-333-010		PLATE,LINK 2
5	82-ZM1-266-11K		LVR,DIR
6	82-ZM1-214-010		SPR-T,DIR
7	82-ZM1-206-81K		CHAS,HEAD
8	82-ZM3-307-019		CUSH-G,DIA3.7-8-3.2
9	82-ZM1-269-219		SPR-T,BRG
10	82-ZM1-219-119		SPR-T,LINK
11	82-ZM1-210-119		GEAR,H T
12	82-ZM1-213-019		SPR-T,HEAD
13	82-ZM1-207-619		GUIDE,TAPE
14	82-ZM1-283-310		S-SCREW,AZIMUTH
15	82-ZM1-314-119		PLATE,HEAD
16	82-ZM1-208-119		HLDR,HEAD
17	82-ZM1-218-019		SPR-E,HB
18	82-ZM1-263-110		LVR,EJECT L (DECK 1)
18	82-ZM1-264-010		LVR,EJECT R (DECK 2)
19	82-ZM1-222-21K		LVR,PLAY
20	82-ZM1-217-319		REEL TABLE
21	82-ZM1-244-510		SPR-C,BT
22	82-ZM1-285-310		SPR-C,BT L
23	82-ZM1-257-019		SPR-T,CAS
24	82-ZM1-241-319		LVR,MC
25	82-ZM1-242-019		LVR,CAS
26	82-ZM1-243-019		LVR,STOP
27	82-ZM1-346-019		LVR ASSY,PINCH R W
28	82-ZM1-259-110		SPR-T,PINCH R
29	82-ZM1-240-11K		LVR,REC (DECK 2)
30	82-ZM1-298-010		SPR-P,EARTH
31	82-ZM1-255-319		SPR-E,LVR DIR
32	82-ZM3-305-01K		GEAR,CAM M2
33	82-ZM1-227-21K		LVR,TRIG
34	82-ZM3-306-11K		LVR,FR M2
35	82-ZM1-265-119		SPR-E,TRIG
36	82-ZM1-236-019		CAPSTAN N 2-41.5
37	82-ZM1-239-019		CAPSTAN N 2.2-41.7
38	82-ZM1-322-019		SPR-T,FR60
39	82-ZM1-220-219		GEAR,IDLER
40	82-ZM3-616-019		RING MAGNET 4
41	82-ZM1-216-31K		GEAR,REEL
42	87-046-355-019		HEAD,PH HADKH2529B(PH)
42	87-046-356-019		HEAD,RPH HADKH5581B(RPH)
43	82-ZM1-225-21K		GEAR,FR
44	82-ZM1-226-019		GEAR,REW
45	82-ZM1-228-810		SLIP DISK ASSY
46	82-ZM1-338-010		BELT FR4
47	82-ZM1-238-81K		FLY-WHL ASSY,R (DECK 2)
47	82-ZM3-210-71K		FLY-WHL ASSY,R2 (DECK 1)
48	82-ZM1-235-51K		FLY-WHL ASSY,L (DECK 2)
48	82-ZM3-208-61K		FLY-WHL ASSY,L2 (DECK 1)
49	82-ZM3-329-210		BELT,SBU R2
50	82-ZM1-245-210		HLDR,IC
51	87-045-347-019		MOT,SHU2L 70(M1)
52	82-ZM3-221-010		PULLEY,MOT 2M
53	82-ZM1-288-019		SH,1.63-3.2-0.5 SLT
54	80-ZM6-243-019		SH,1.75-3.6-0.5 SLT
55	82-ZM3-304-110		PULLEY,COUPLER (DECK 1)
56	82-ZM3-328-110		BELT,SBU P2
57	82-ZM3-216-019		SHAFT,COUPLER N(DECK 1)
A	82-ZM1-315-010		S-SCREW,GVIDE TAPE
B	80-ZM6-207-019		V+1.6-7
C	82-ZM3-318-019		S-SCRW MOTOR M2
D	87-067-972-019		PW,1.05-3-0.25 SLT

SPRING APPLICATION POSITION

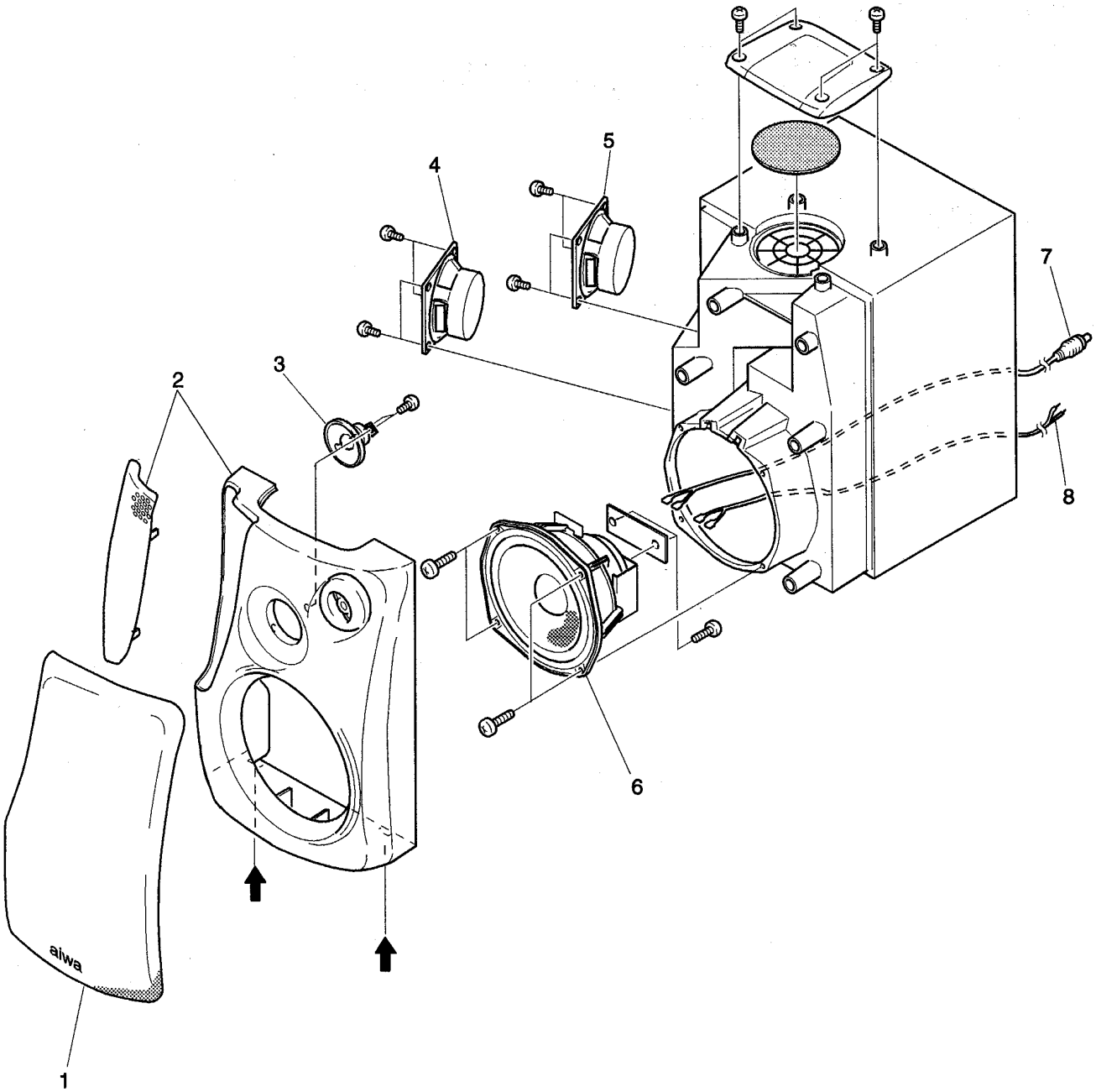




MODEL NO.

SX-ANH9

SPEAKER EXPLODED VIEW 1 / 1



SPEAKER 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
1	86-NS1-010-010		GRILLE FRAME ASSY,R
1	86-NS1-011-010		GRILLE FRAME ASSY,L
2	86-NS1-001-010		PANEL FR,R
2	86-NS1-002-010		PANEL FR,L
3	86-NS1-608-010		SPKR T 50
4	86-NS1-606-010		SPKR S 80
5	86-NS1-604-010		SPKR M 80
6	86-NS1-602-010		SPKR W 140H
7	85-NS6-611-019		SPEAKER CORD Y/B
8	83-NS5-613-019		SPEAKER CORD ASSY

MODEL NO.

SX-NM9

SPEAKER 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
1	86-NSM-004-010		GRILL FRAME ASSY
2	86-096-614-010		SPEAKER CORD
3	86-NSM-602-010		SPEAKER W 160
4	86-MS2-604-010		SPEAKER TW 25

■ 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	86-NT1-904-010		IB,E(EGFSI)M<H9>
1	86-NT1-905-010		IB,E(EGFSI)M NM9<M9>
2	85-NF5-631-010		RC UNIT,RC-T501
3	87-006-225-010		ANT,LOOP ANT NC2
4	87-043-106-010		ANT,FM 1007AWG

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	SERGESUPPRESSOR
セラコン	CAP,CERA

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, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD 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
ジグアーム	ARM,SHAFT
ジグガイド	GUIDE,SHAFT
ストラップ	STRAP
トクナベ	S-SCREW
ヒンジ	HINGE
ヒンジビス	S-SCREW
ビスセレート	SCREW,SERRART

サービス技術ニュース	
番号	連絡内容
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920074, 750038

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Printed in Singapore