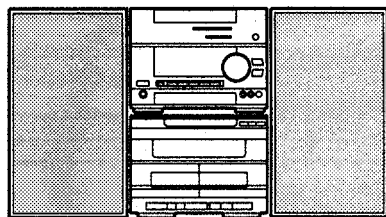




aiwa



XR-H100



CD STEREO SYSTEM

- BASIC TAPE MECHANISM : 2ZM-3MK2 PR2NM
- BASIC CD MECHANISM : 4ZG-1 WRNM
- TYPE: EZ

SYSTEM	AMPLIFIER/ TUNER	CASSETTE DECK/ CD PLAYER	SPEAKER	REMOTE CONTROLLER
XR-H100	RX-NH100	FD-NH100	SX-ANH100	RC-T501

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

SERVICES MANUAL

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SPECIFICATIONS

STEREO RECEIVER RX-NH100

<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 μ V/m
Antenna Loop antenna

<LW Tuner section>

Tuning range 144 kHz to 290 kHz
Usable sensitivity 1400 μ V/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
 200 W + 200 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: 200 mV (adjustable)
 VIDEO 2/AUX IN: 200 mV (adjustable)

Outputs MIC 1, MIC 2: 1 mV (10 kohms)
 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, 50Hz
Power consumption 140 W (System 160 W)
Dimensions of main unit (W x H x D) 260 x 199 x 333 mm
Weight of main unit 6.6 kg

STEREO CASSETTE DECK/COMPACT DISC PLAYER FD-NH100

<Cassette deck section>

Track format 4 tracks, 2 channels stereo
Frequency response Metal tape: 50 Hz - 17000 Hz
 CrO₂ 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: Playhead x 1
 Deck 2: Recording/playback/erase head x 1

<Compact disc player section>

Laser Semiconductor laser ($\lambda = 780$ 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 x H x D) 260 x 204 X 320.2 mm
Weight 4 kg

<SPEAKER SYSTEM SX-ANH100>

Cabinet type 4 way, bass reflex with surround speaker (magnetic shielded 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 x H x D) 250 x 405 x 286 mm
Weight 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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- The word "BBE" and the "BBE symbol" are trademarks of BBE Sound, Inc.
 Under license from BBE Sound, Inc.

MODEL NO.

RX-NH100

ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC							
	87-A40-202-080		ZENER,UZ5.1BSB				
	87-017-481-080		ZENER,UZ5.6BSB				
				MAIN C.B			
	87-NT1-619-010		IC,LC866440W-5E65				
	87-A20-650-010		IC,RPM6938-V11				
	87-017-915-080		IC,BU4094BCF				
	87-A20-056-010		IC,BA3880S				
	87-A20-107-010		IC,BA3836				
	87-A20-083-010		IC,BA3835S	C101	87-016-520-090		CAP,E 3300-65
	87-017-804-010		IC,BU4052BCP	C102	87-016-520-090		CAP,E 3300-65
	87-017-888-080		IC,NJM4558MD	C104	87-010-235-080		CAP,E 470-16 SME
	87-A20-067-040		IC,M65849FP	C105	87-010-235-080		CAP,E 470-16 SME
	87-017-914-010		IC,BU4094 BCP	C106	87-016-285-080		CAP,E 47-100SME
	87-A20-069-040		C-IC,BA3842F	C107	87-010-407-080		CAP, ELECT 33-50V
	87-070-127-110		IC,LC72131 D	C108	87-010-406-080		CAP, ELECT 22-50V
	87-017-714-110		IC,LA1836	C109	87-010-263-080		CAP, ELECT 100-10V
	87-A20-440-040		C-IC,BU1920FS	C112	87-010-382-080		CAP, ELECT 22-25V
				C113	87-010-403-080		CAP, ELECT 3.3-50V
				C116	87-012-140-080		CAP 470P
				C121	87-012-368-080		C-CAP,S 0.1-50 F
				C122	87-012-368-080		C-CAP,S 0.1-50 F
				C123	87-012-368-080		C-CAP,S 0.1-50 F
				C124	87-012-368-080		C-CAP,S 0.1-50 F
				C125	87-010-264-040		CAP,E 100-10 5L
				C126	87-010-189-010		CAP, CHIP S 8200P
				C127	87-010-189-010		CAP, CHIP S 8200P
				C152	87-010-260-080		CAP, ELECT 47-25V
				C163	87-018-212-080		CAP,TC-U 0.022-50 Z F
				C164	87-018-212-080		CAP,TC-U 0.022-50 Z F
				C165	87-010-197-080		C-CAP,S 0.01-25 K B
				C166	87-010-197-080		C-CAP,S 0.01-25 K B
				C171	87-016-658-090		CAP,E 4700-35 SMG
				C172	87-016-658-090		CAP,E 4700-35 SMG
				C173	87-012-368-080		C-CAP,S 0.1-50 F
				C174	87-012-368-080		C-CAP,S 0.1-50 F
				C175	87-012-368-080		C-CAP,S 0.1-50 F
				C176	87-012-368-080		C-CAP,S 0.1-50 F
				C201	87-010-401-080		CAP, ELECT 1-50V
				C202	87-010-401-080		CAP, ELECT 1-50V
				C205	87-010-182-080		C-CAP,S 2200P-50 B
				C207	87-010-404-080		CAP, ELECT 4.7-50V
				C208	87-010-404-080		CAP, ELECT 4.7-50V
				C209	87-010-497-040		CAP,E 4.7-35 GAS
				C210	87-010-497-040		CAP,E 4.7-35 GAS
				C211	87-010-184-080		CHIP CAPACITOR 3300P(K)
				C212	87-010-184-080		CHIP CAPACITOR 3300P(K)
				C213	87-010-260-080		CAP, ELECT 47-25V
				C214	87-010-260-080		CAP, ELECT 47-25V
				C215	87-010-196-080		CHIP CAPACITOR,0.1-25
				C217	87-010-246-080		CAP, ELECT 47-35V
				C225	87-A10-516-080		C-CAP,S 100P-200 CH
				C226	87-A10-516-080		C-CAP,S 100P-200 CH
				C229	87-016-461-080		C-CAP,S 0.47-16 Z F
				C230	87-016-461-080		C-CAP,S 0.47-16 Z F
				C233	87-010-196-080		CHIP CAPACITOR,0.1-25
				C234	87-010-196-080		CHIP CAPACITOR,0.1-25
				C235	87-010-196-080		CHIP CAPACITOR,0.1-25
				C236	87-010-196-080		CHIP CAPACITOR,0.1-25
				C401	87-010-184-080		CHIP CAPACITOR 3300P(K)
				C402	87-010-184-080		CHIP CAPACITOR 3300P(K)
				C403	87-010-405-080		CAP, ELECT 10-50V
				C404	87-010-405-080		CAP, ELECT 10-50V
				C405	87-010-260-080		CAP, ELECT 47-25V
				C406	87-010-101-080		CAP, ELECT 220-16
				C407	87-010-188-080		CAP,CHIP 6800P
				C408	87-010-188-080		CAP,CHIP 6800P
				C409	87-018-127-080		CAP, CER 470P-50V
				C410	87-018-127-080		CAP, CER 470P-50V
TRANSISTOR							
	87-A30-086-070		C-TR,CSD1306E				
	89-213-702-010		TR,2SB1370 (1.8W)				
	89-109-352-080		TR,2SA935Q				
	87-026-610-080		TR,KTC3198GR				
	87-A30-083-080		TR,CSD1489B				
	87-A30-076-080		C-TR,2SC3052F				
	87-A30-075-080		C-TR,2SA1235F				
	89-324-122-080		TR,2SC2412K				
	87-A30-111-080		TR,C2N5401				
	87-A30-097-010		TR,FN 1016				
	87-A30-098-010		TR,FP 1016				
	87-A30-089-010		FET,2SK2723				
	87-026-226-080		CHIP-TR,DTA143EK				
	89-110-372-080		TR,2SA1037Y(140MHZ 200MW)				
	87-026-211-080		TR,DTA144EK				
	87-026-230-080		CHIP-TR,DTA114YK				
	87-026-227-080		C-TR,DTA114EK				
	87-026-235-080		CHIP-TR,DTC114EK				
	87-026-229-080		TR,DTA143XK				
	89-112-965-080		TR,2SA1296 (0.75W)				
	87-026-228-080		TR,DTA124EK				
	89-109-521-080		TR,2SA952 (0.6W)				
	87-A30-047-080		TR,CSD655E				
	87-A30-087-080		C-FET,2SK2158				
	87-026-214-080		TR,DTA114YS (0.3W)				
	89-327-143-080		TR,2SC2714 (0.1W)				
	89-505-434-540		C-FET,2SK543(4/5)				
	87-026-269-080		TR,DTA114ES				
	87-026-213-080		TR,DTC114YK				
DIODE							
	87-A40-116-060		DIODE,RS403L-B-D-51				
	87-A40-115-060		DIODE,RS603M				
	87-070-274-080		DIODE,1N4003 SEM				
	87-A40-270-080		C-DIODE,MC2838				
	87-A40-269-080		C-DIODE,MC2836				
	87-020-027-080		CHIP-DIODE 1SS184				
	87-A40-206-080		ZENER,UZ10BSC				
	87-A40-210-080		ZENER,UZ30BSD				
	87-070-345-080		DIODE,1N4148				
	87-A40-205-080		ZENER,UZ6.2BSC				
	87-017-436-080		ZENER,UZ4.7BSA				
	87-017-437-080		DIODE,1N4148M				
	87-A40-274-010		DIODE,FMB-G16L				

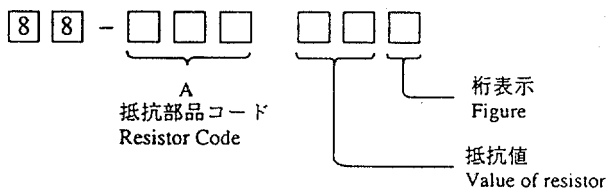
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C411	87-010-197-080		CAP, CHIP 0.01 DM	C793	87-010-189-080		C-CAP,S 8200P-50 B
C412	87-010-197-080		CAP, CHIP 0.01 DM	C794	87-010-408-080		CAP, ELECT 47-50V
C413	87-010-195-080		C-CAP,S 0.068-25 F	C795	87-010-194-080		CAP, CHIP 0.047
C414	87-010-195-080		C-CAP,S 0.068-25 F	C796	87-010-403-080		CAP, ELECT 3.3-50V
C415	87-010-404-080		CAP, ELECT 4.7-50V	C814	87-010-197-080		CAP, CHIP 0.01 DM
C416	87-010-404-080		CAP, ELECT 4.7-50V	C815	87-018-134-080		CAPACITOR,TC-U 0.01-16
C417	87-010-404-080		CAP, ELECT 4.7-50V	C816	87-018-134-080		CAPACITOR,TC-U 0.01-16
C418	87-010-404-080		CAP, ELECT 4.7-50V	C817	87-010-197-080		CAP, CHIP 0.01 DM
C419	87-010-544-080		CAP, ELECT 0.1-50V	C818	87-010-197-080		CAP, CHIP 0.01 DM
C500	87-010-197-080		CAP, CHIP 0.01 DM	C819	87-010-197-080		CAP, CHIP 0.01 DM
C501	87-010-183-080		C-CAP,S 2700P-50 B	C820	87-010-408-080		CAP, ELECT 47-50V
C502	87-010-194-080		CAP, CHIP 0.047	C821	87-010-197-080		CAP, CHIP 0.01 DM
C503	87-010-196-080		CHIP CAPACITOR,0.1-25	C822	87-010-197-080		CAP, CHIP 0.01 DM
C504	87-010-263-080		CAP, ELECT 100-10V	C823	87-010-197-080		CAP, CHIP 0.01 DM
C505	87-010-404-080		CAP, ELECT 4.7-50V	C828	87-010-196-080		CHIP CAPACITOR,0.1-25
C506	87-010-404-080		CAP, ELECT 4.7-50V	C829	87-010-196-080		CHIP CAPACITOR,0.1-25
C507	87-010-545-080		CAP, ELECT 0.22-50V	C860	87-010-405-080		CAP,E 10-50 SME
C509	87-010-194-080		CAP, CHIP 0.047	C861	87-010-196-080		CHIP CAPACITOR,0.1-25
C510	87-010-384-080		CAP, ELECT 100-25V	C862	87-012-156-080		C-CAP,S 220P-50 C H
C511	87-010-404-080		CAP, ELECT 4.7-50V	C863	87-018-123-080		CAP,TC-U 220P-50 K B
C512	87-010-404-080		CAP, ELECT 4.7-50V	C864	87-010-315-080		C-CAP,S 27P-50 C H
C542	87-018-209-080		CAP,TC-U 0.1-50 Z F	C865	87-010-315-080		C-CAP,S 27P-50 C H
C600	87-010-405-080		CAP, ELECT 10-50V	C866	87-010-196-080		CHIP CAPACITOR,0.1-25
C601	87-010-213-080		C-CAP,S 0.015-50 B	C867	87-018-127-080		CAP,TC-U 470P-50 K B
C602	87-010-213-080		C-CAP,S 0.015-50 B	C868	87-010-405-080		CAP,E 10-50 SME
C605	87-010-544-080		CAP, ELECT 0.1-50V	C869	87-010-197-080		C-CAP,S 0.01-25 K B
C606	87-010-544-080		CAP, ELECT 0.1-50V	C872	87-010-196-080		CHIP CAPACITOR,0.1-25
C607	87-010-196-080		CHIP CAPACITOR,0.1-25	C880	87-010-197-080		C-CAP,S 0.01-25 K B
C608	87-010-196-080		CHIP CAPACITOR,0.1-25	C940	87-010-197-080		CAP, CHIP 0.01 DM
C620	87-010-318-080		C-CAP,S 47P-50 CH	C942	87-010-150-080		C-CAP,S 6P-50 D C H
C621	87-010-318-080		C-CAP,S 47P-50 CH	C946	87-010-401-080		CAP, ELECT 1-50V
C622	87-010-318-080		C-CAP,S 47P-50 CH	C949	87-014-049-080		CAP,PP 470P-100 J
C633	87-012-142-080		CHIP, S 0.33-16	C952	87-010-197-080		C-CAP,S 0.01-25 K B
C634	87-010-196-080		CHIP CAPACITOR,0.1-25	C957	87-010-315-080		C-CAP,S 27P-50 C H
C635	87-018-209-080		CAP, CER 0.1-50V	C958	87-010-197-080		C-CAP,S 0.01-25 K B
C636	87-010-196-080		CHIP CAPACITOR,0.1-25	C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C701	87-010-381-080		CAP, ELECT 330-16V	CF801	87-008-423-080		FILTER, SFE10.7MS3GH-A-TF21
C702	87-010-404-080		CAP, ELECT 4.7-50V	CF802	82-785-747-080		CF,MS2 GHY,R
C703	87-010-197-080		CAP, CHIP 0.01 DM	FB143	87-008-372-080		FILTER, EMI BL OIRNI
C704	87-010-197-080		CAP, CHIP 0.01 DM	FFE801	A8-6ZA-191-030		6ZA-1 FEENM
C711	87-010-263-080		CAP, ELECT 100-10V	J252	87-A60-031-010		JACK,6.3 BLK ST W/S
C712	87-010-196-080		CHIP CAPACITOR,0.1-25	J253	87-099-801-010		JACK,PIN 1P BLK
C715	87-010-197-080		CAP, CHIP 0.01 DM	J254	87-033-240-010		TERMINAL,4P HSP-324 V1-05
C716	87-010-197-080		CAP, CHIP 0.01 DM	J801	87-033-241-010		TERMINAL,ANT 2P AJ-2039
C722	87-010-152-080		C-CAP,S 8P-50 CH	L201	87-003-383-010		COIL,LUH-S
C723	87-010-178-080		CHIP CAP 1000P	L202	87-003-383-010		COIL,LUH-S
C725	87-010-178-080		CHIP CAP 1000P	L202	87-003-383-010		COIL,LUH-S
C727	87-010-196-080		CHIP CAPACITOR,0.1-25	L701	87-003-293-010		COIL, TRAP MPX
C728	87-010-248-080		CAP, ELECT 220-10V	L702	87-003-293-010		COIL, TRAP MPX
C760	87-010-197-080		CAP, CHIP 0.01 DM	L741	87-A50-015-010		COIL,FM DET(TOK)
C761	87-010-196-080		CHIP CAPACITOR,0.1-25	L742	87-A90-051-010		FLTR,CFA2-450(TOK)
C770	87-010-405-080		CAP, ELECT 10-50V	L770	87-003-143-080		COIL 4.7 UH
C771	87-010-405-080		CAP, ELECT 10-50V	L832	87-003-098-080		COIL,2.2UH
C772	87-010-194-080		CAP, CHIP 0.047	L850	87-003-098-080		COIL,2.2UH
C773	87-010-196-080		CHIP CAPACITOR,0.1-25	L941	87-A50-020-010		COIL,ANT LW(COI) 252KHZ
C774	87-010-248-080		CAP, ELECT 220-10V	L942	87-A50-019-010		COIL,OSC LW(COI) 856KHZ
C775	87-010-405-080		CAP, ELECT 10-50V	L981	86-NF4-665-010		AM PACK 1(TOK)
C776	87-010-197-080		CAP, CHIP 0.01 DM	LED321	87-070-281-080		LED,SLZ736A-25-S-T1
C777	87-010-400-080		CAP, ELECT 0.47-50V	LED322	87-070-281-080		LED,SLZ736A-25-S-T1
C778	87-010-401-080		CAP, ELECT 1-50V	LED323	87-070-281-080		LED,SLZ736A-25-S-T1
C779	87-010-401-080		CAP, ELECT 1-50V	LED324	87-070-281-080		LED,SLZ736A-25-S-T1
C780	87-010-197-080		CAP, CHIP 0.01 DM	LED325	87-070-281-080		LED,SLZ736A-25-S-T1
C781	87-010-405-080		CAP, ELECT 10-50V	LED331	87-070-281-080		LED,SLZ736A-25-S-T1
C782	87-010-405-080		CAP, ELECT 10-50V	LED332	87-070-281-080		LED,SLZ736A-25-S-T1
C787	87-010-184-080		CHIP CAPACITOR 3300P(K)	LED333	87-070-281-080		LED,SLZ736A-25-S-T1
C788	87-010-184-080		CHIP CAPACITOR 3300P(K)	LED334	87-070-281-080		LED,SLZ736A-25-S-T1
C789	87-010-179-080		CAP,CHIP S B1200P	LED335	87-070-281-080		LED,SLZ736A-25-S-T1
C790	87-010-179-080		CAP,CHIP S B1200P	PR201	87-A90-195-080		PROTECTOR 7A 125V 491
C791	87-010-401-080		CAP, ELECT 1-50V	PR202	87-A90-195-080		PROTECTOR 7A 125 V 491
C792	87-010-182-080		C-CAP,S 2200P-50 K B	R117	87-022-394-080		RES,NF 0.47-1/4WJ

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
R229	87-A00-258-080		RES,M/F 0.22-1W J	EMI201	87-008-372-080		FLTR,EMIBL01
R230	87-A00-258-080		RES,M/F 0.22-1W J	FC001	88-904-201-210		FF-CABLE 4P 1.25
R231	87-A00-258-080		RES,M/F 0.22-1W J	FL201	86-NT1-636-010		FL,BJ451GK
R232	87-A00-258-080		RES,M/F 0.22-1W J	J601	87-A60-284-010		JACK,3.5MO (MSC)
RY101	87-A90-464-010		RELAY, DG12D2-O(M)	J602	87-A60-284-010		JACK,3.5MO (MSC)
SFR722	87-024-432-080		SFR,4.7K RH063EC	L202	87-005-151-080		COIL,2.2UH
TC701	87-011-221-080		CAP, TRIMMER 30P	L220	87-A50-052-010		COIL,CLOCK 5.76MHZ T1
TC942	87-011-221-080		CAP, TRIMMER 30P	L221	87-003-152-080		COIL, 100UH
TH201	87-A90-221-080		C-THMS,100K	LED301	87-A40-316-080		LED,SLR-56PCT31 GRN
TH202	87-A90-221-080		C-THMS,100K	LED302	87-A40-316-080		LED,SLR-56PCT31 GRN
W101	85-NF5-628-010		F-CABLE 7P-2.5	LED303	87-A40-316-080		LED,SLR-56PCT31 GRN
W304	87-NT1-650-010		CORD,FG15P	LED304	87-A40-316-080		LED,SLR-56PCT31 GRN
X703	84-508-618-010		VIBRATER CSB456 F15	LED305	87-A40-316-080		LED,SLR-56PCT31 GRN
X721	87-030-372-010		VIB,XTAL 7.2MHZ	LED306	87-A40-316-080		LED,SLR-56PCT31 GRN
X850	89-KT1-608-010		X'TAL,4.332MHZ	LED307	87-A40-316-080		LED,SLR-56PCT31 GRN
FRONT C.B				LED308	87-A40-316-080		LED,SLR-56PCT31 GRN
C201	87-010-555-040		CAP,E 100-10 GAS	LED309	87-A40-316-080		LED,SLR-56PCT31 GRN
C202	87-010-497-040		CAP,E 4.7-35 GAS	LED310	87-A40-316-080		LED,SLR-56PCT31 GRN
C203	87-010-494-040		CAP,E 1-50 GAS	LED311	87-A40-317-080		LED,SLR-342VCT31 RED
C204	87-A10-189-040		CAP,E 220-10	LED312	87-A40-317-080		LED,SLR-342VCT31 RED
C205	87-010-196-080		CHIP CAPACITOR,0.1-25	LED313	87-A40-317-080		LED,SLR-342VCT31 RED
C206	87-010-196-080		CHIP CAPACITOR,0.1-25	LED314	87-A40-317-080		LED,SLR-342VCT31 RED
C215	87-010-405-040		CAP,E 10-50	LED315	87-A40-317-080		LED,SLR-342VCT31 RED
C216	87-010-405-040		CAP,E 10-50	LED336	87-A40-363-080		LED,SLH-56PCTB7 GRN
C217	87-010-408-040		CAP,E 47-50 SME	LED337	87-A40-363-080		LED,SLH-56PCTB7 GRN
C221	87-010-312-080		C-CAP,S 15P-50 CH	S130	87-A90-095-080		SW,TACT EVQ11G04M
C222	87-010-180-080		C-CER 1500P	S131	87-A90-095-080		SW,TACT EVQ11G04M
C223	87-010-498-040		CAP,E 10-16 GAS	S132	87-A90-095-080		SW,TACT EVQ11G04M
C224	87-012-145-080		CAP, CHIP S 270P CH	S133	87-A90-095-080		SW,TACT EVQ11G04M
C301	87-010-196-080		CHIP CAPACITOR,0.1-25	S134	87-A90-095-080		SW,TACT EVQ11G04M
C302	87-010-196-080		CHIP CAPACITOR,0.1-25	S135	87-A90-095-080		SW,TACT EVQ11G04M
C303	87-010-196-080		CHIP CAPACITOR,0.1-25	S145	87-A90-095-080		SW,TACT EVQ11G04M
C350	87-010-112-040		CAP,E 100-16	S146	87-A90-095-080		SW,TACT EVQ11G04M
C370	87-010-112-040		CAP,E 100-16	S147	87-A90-095-080		SW,TACT EVQ11G04M
C501	87-010-322-080		C-CAP,S 100P-50 CH	S148	87-A90-095-080		SW,TACT EVQ11G04M
C502	87-010-196-080		CHIP CAPACITOR,0.1-25	S149	87-A90-095-080		SW,TACT EVQ11G04M
C503	87-010-196-080		CHIP CAPACITOR,0.1-25	S150	87-A90-095-080		SW,TACT EVQ11G04M
C504	87-010-196-080		CHIP CAPACITOR,0.1-25	S151	87-A90-095-080		SW,TACT EVQ11G04M
C505	87-010-196-080		CHIP CAPACITOR,0.1-25	S152	87-A90-095-080		SW,TACT EVQ11G04M
C506	87-010-196-080		CHIP CAPACITOR,0.1-25	S153	87-A90-095-080		SW,TACT EVQ11G04M
C601	87-010-196-080		CHIP CAPACITOR,0.1-25	S154	87-A90-095-080		SW,TACT EVQ11G04M
C602	87-010-545-040		CAP,E 0.22-50 SME	S155	87-A90-095-080		SW,TACT EVQ11G04M
C603	87-010-321-080		CHIP CAPACITOR,82P(J)	VR601	87-A90-124-010		VR,RTRY 10KA L20
C604	87-010-196-080		CHIP CAPACITOR,0.1-25	VR701	83-SP2-612-010		VR,10KB SQ11
C605	87-010-196-080		CHIP CAPACITOR,0.1-25	MVR C.B			
C608	87-010-177-080		C-CAP,S 820P-50 SL	C616	87-010-400-040		CAP,E 0.47-50 SME
C609	87-016-251-040		CAP,E 220-16 SMG	C617	87-010-400-040		CAP,E 0.47-50 SME
C610	87-010-405-040		CAP,E 10-50	C619	87-010-263-040		CAP,E 100-10 SME
C611	87-010-405-040		CAP,E 10-50	C620	87-010-196-080		C-CAP,S 0.1-25 Z F
C612	87-010-406-040		CAP,E 22-50 SME	C621	87-010-322-080		C-CAP,S 100P-50 J CH
C613	87-010-401-040		CAP,E 1-50 SME	C622	87-010-322-080		C-CAP,S 100P-50 J CH
C615	87-010-186-080		CAP,CHIP 4700P	C623	87-010-318-080		C-CAP,S 47P-50 J CH
C618	87-018-209-080		CAP, CER 0.1-50V	C624	87-010-318-080		C-CAP,S 47P-50 J CH
C701	87-010-401-040		CAP,E 1-50 SME	C625	87-A10-229-080		C-CAP,S 0.68-10 RK
C702	87-010-401-040		CAP,E 1-50 SME	C626	87-010-197-080		C-CAP,S 0.01-25 K B
C703	87-010-182-080		C-CAP,S 2200P-50 B	C627	87-010-179-080		C-CAP,S 1200P-50 K B
C704	87-010-182-080		C-CAP,S 2200P-50 B	C628	87-010-196-080		C-CAP,S 0.1-25 Z F
C705	87-010-545-040		CAP,E 0.22-50 SME	C631	87-010-196-080		C-CAP,S 0.1-25 Z F
C706	87-010-545-040		CAP,E 0.22-50 SME	C632	87-010-187-080		C-CAP,S 5600P-50 K B
C707	87-010-993-080		C-CAP,S 0.056-25 B	C633	87-010-181-080		C-CAP,S 1800P-50 K B
C708	87-010-993-080		C-CAP,S 0.056-25 B	C634	87-012-393-080		C-CAP,S 0.22-16 R K
C709	87-012-393-080		C-CAP,S 0.22-16 R K	C635	87-010-194-080		C-CAP,S 0.047-25 Z F
C710	87-012-393-080		C-CAP,S 0.22-16 R K	C636	87-010-263-040		CAP,E 100-10 SME
C711	87-010-401-040		CAP,E 1-50 SME	C637	87-010-404-040		CAP,E 4.7-50 SME
C712	87-010-260-040		CAP,E 47-25 SME	C638	87-010-404-040		CAP,E 4.7-50 SME
C713	87-010-405-040		CAP,E 10-50	C639	87-010-179-080		C-CAP,S 1200P-50 K B
C714	87-010-552-040		CAP,E 22-16 GAS	C640	87-010-177-080		C-CAP,S 820P-50 J S L
C715	87-016-669-080		C-CAP,S 0.1-25 K B	C641	87-010-182-080		C-CAP,S 2200P-50 K B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C751	87-010-402-040		CAP,E 2.2-50 SME				
C752	87-010-402-040		CAP,E 2.2-50 SME				
C753	87-010-404-040		CAP,E 4.7-50 SME				
C754	87-010-404-040		CAP,E 4.7-50 SME				
C755	87-010-263-040		CAP,E 100-10 SME				
C756	87-010-196-080		C-CAP,S 0.1-25 Z F				
C757	87-010-384-040		CAP,E 100-25 SME				
L601	87-005-481-080		COIL,47UH J FLR50				
VR751	86-NT1-633-010		VR,50KBX2 V-L20				
TRAY C.B				AC2 C.B			
S120	87-A90-095-080		SW,TACT EVQ11G04M	△ PR101	87-A90-195-080		PROTECTOR,7A 125V 491
S121	87-A90-095-080		SW,TACT EVQ11G04M	△ PR102	87-A90-195-080		PROTECTOR,7A 125V 491
S122	87-A90-095-080		SW,TACT EVQ11G04M	△ PR105	87-026-682-080		PROTECTOR,10A 60V491
S123	87-A90-095-080		SW,TACT EVQ11G04M	△ PR106	87-026-682-080		PROTECTOR,10A 60V491
S124	87-A90-095-080		SW,TACT EVQ11G04M				
S125	87-A90-095-080		SW,TACT EVQ11G04M				
S126	87-A90-095-080		SW,TACT EVQ11G04M				
S127	87-A90-095-080		SW,TACT EVQ11G04M				
S128	87-A90-095-080		SW,TACT EVQ11G04M				
S129	87-036-110-010		PUSH SWITCH				
S136	87-A90-095-080		SW,TACT EVQ11G04M				
S137	87-A90-095-080		SW,TACT EVQ11G04M				
S138	87-A90-095-080		SW,TACT EVQ11G04M				
S139	87-A90-095-080		SW,TACT EVQ11G04M				
S140	87-A90-095-080		SW,TACT EVQ11G04M				
S141	87-A90-095-080		SW,TACT EVQ11G04M				
S144	87-036-110-010		PUSH SWITCH				
				AC1 C.B			
				△ F101	87-035-191-010		FUSE,3.15A 250V T218
				△ FC001	87-033-213-080		CLAMP, FUSE
				△ FC002	87-033-213-080		CLAMP, FUSE
				△ PT103	86-NT1-608-010		PT,6NT1-E
				△ T001	87-A60-317-010		TERMINAL, 1P MSC
				△ T002	87-A60-317-010		TERMINAL, 1P MSC
				MOTOR C.B			
				C210	87-010-263-040		CAP,E 100-10
				C211	87-010-263-040		CAP,E 100-10
				M107	87-045-383-010		MOT,M9I50T28-2

○ 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



ECB

2SA1296GR
KTC3198GR



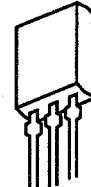
ECB

CSD1489B
2SA952
CSD655E



EBC

C2N5401



ECB

2SA935Q



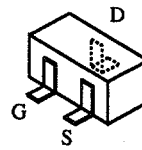
BCE

2SB1370
FN1016
FP1016

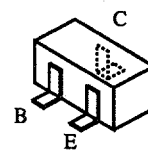


GDS

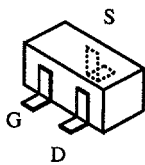
2SK2723



2SK2158



2SA1235F DTA144EK
2SC2714 DTA114YK
2SC3052F DTC114EK
CSD1306E DTA143XK
2SC2412 DTA124EK
DTA143EK DTA114EK
2SA1037 DTC114YK



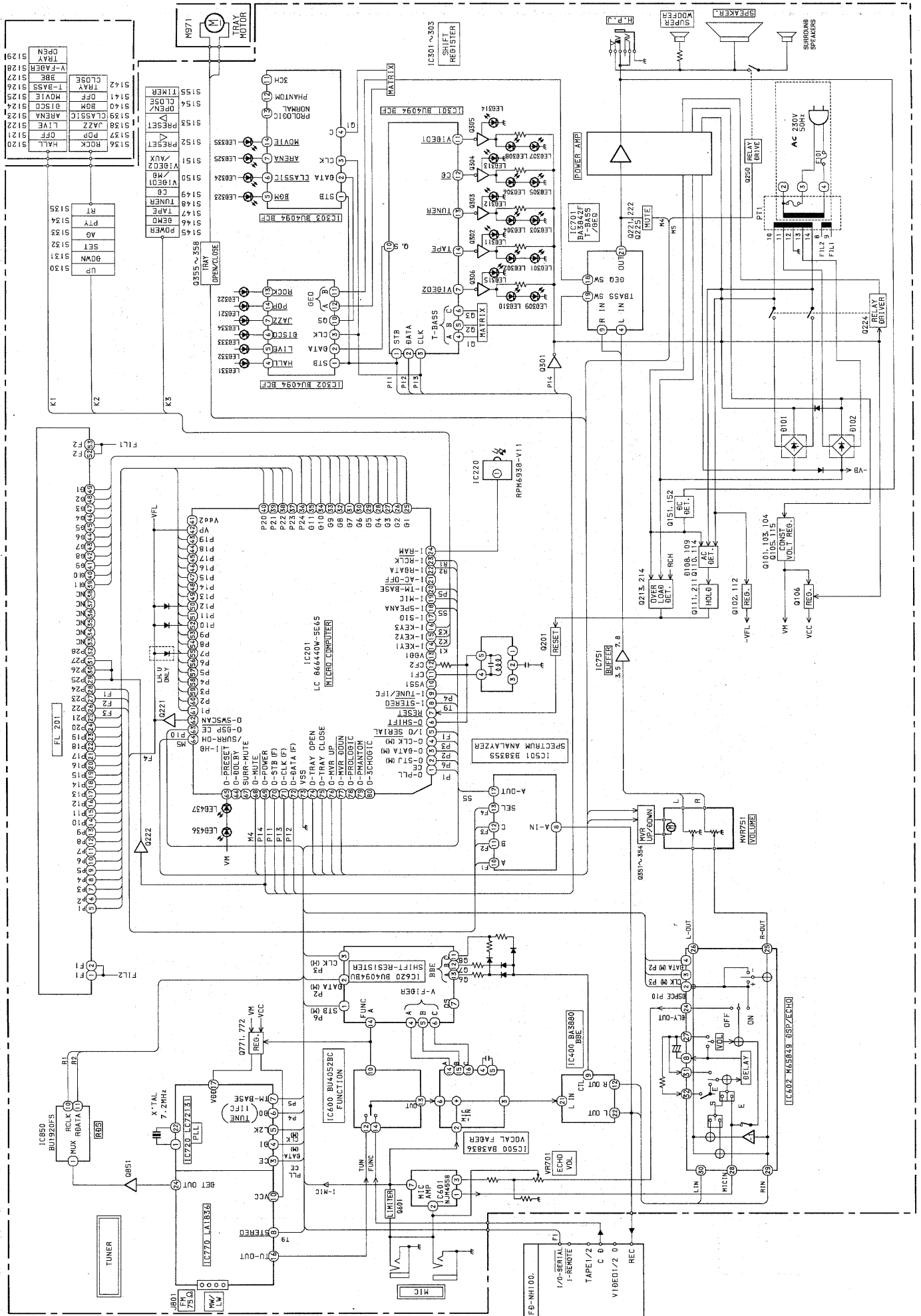
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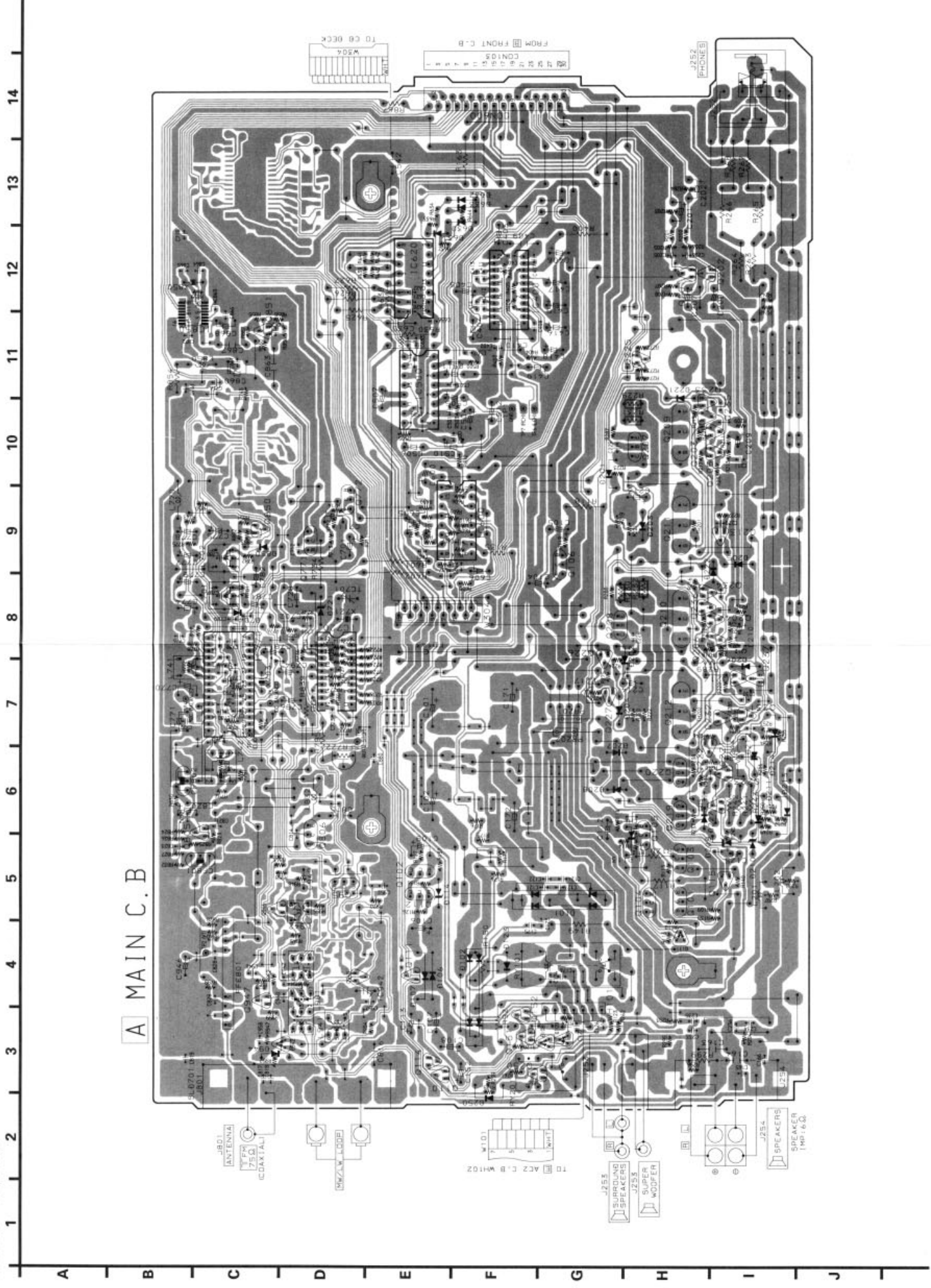


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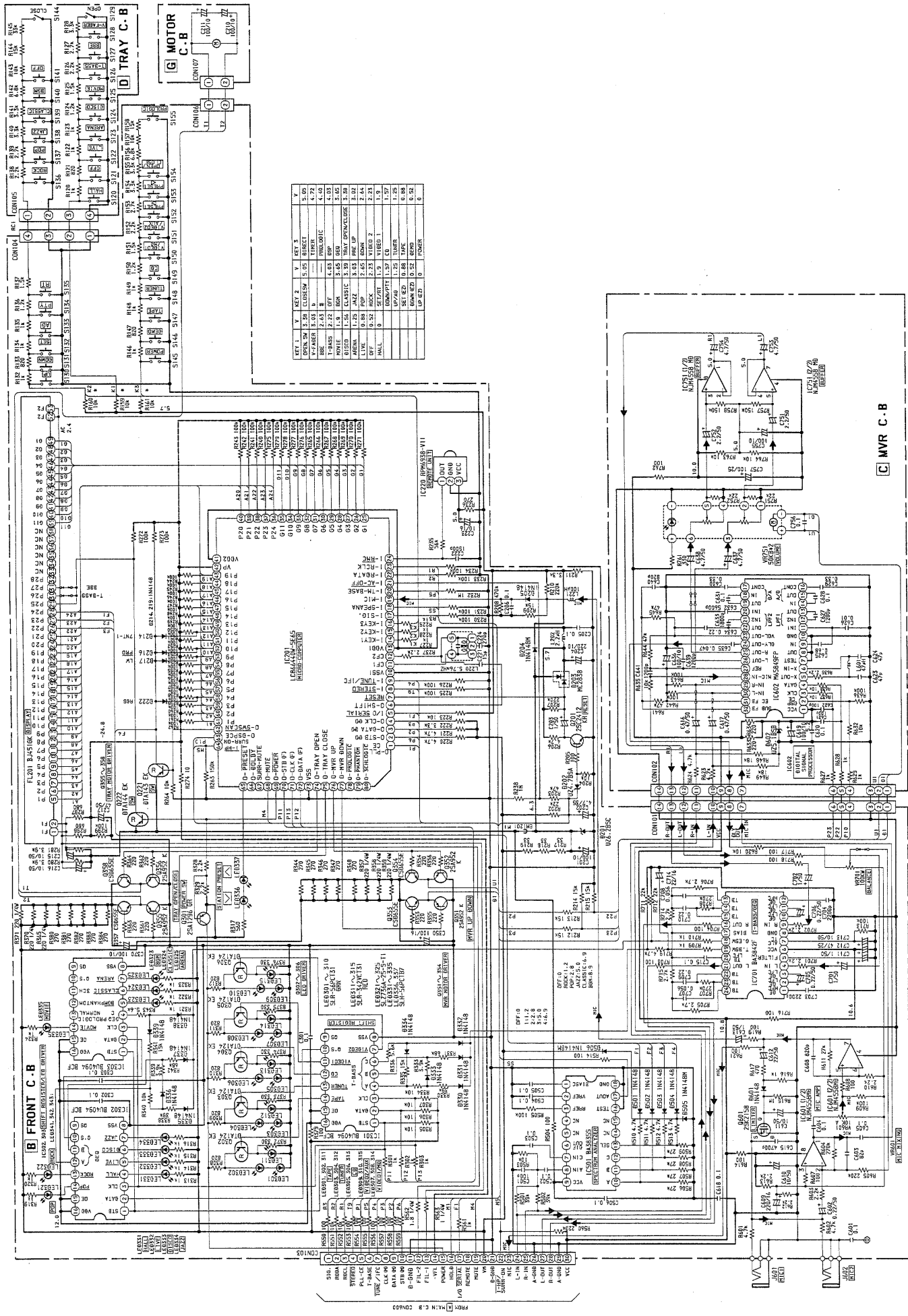
DTA114YS
DTA114ES

BLOCK DIAGRAM

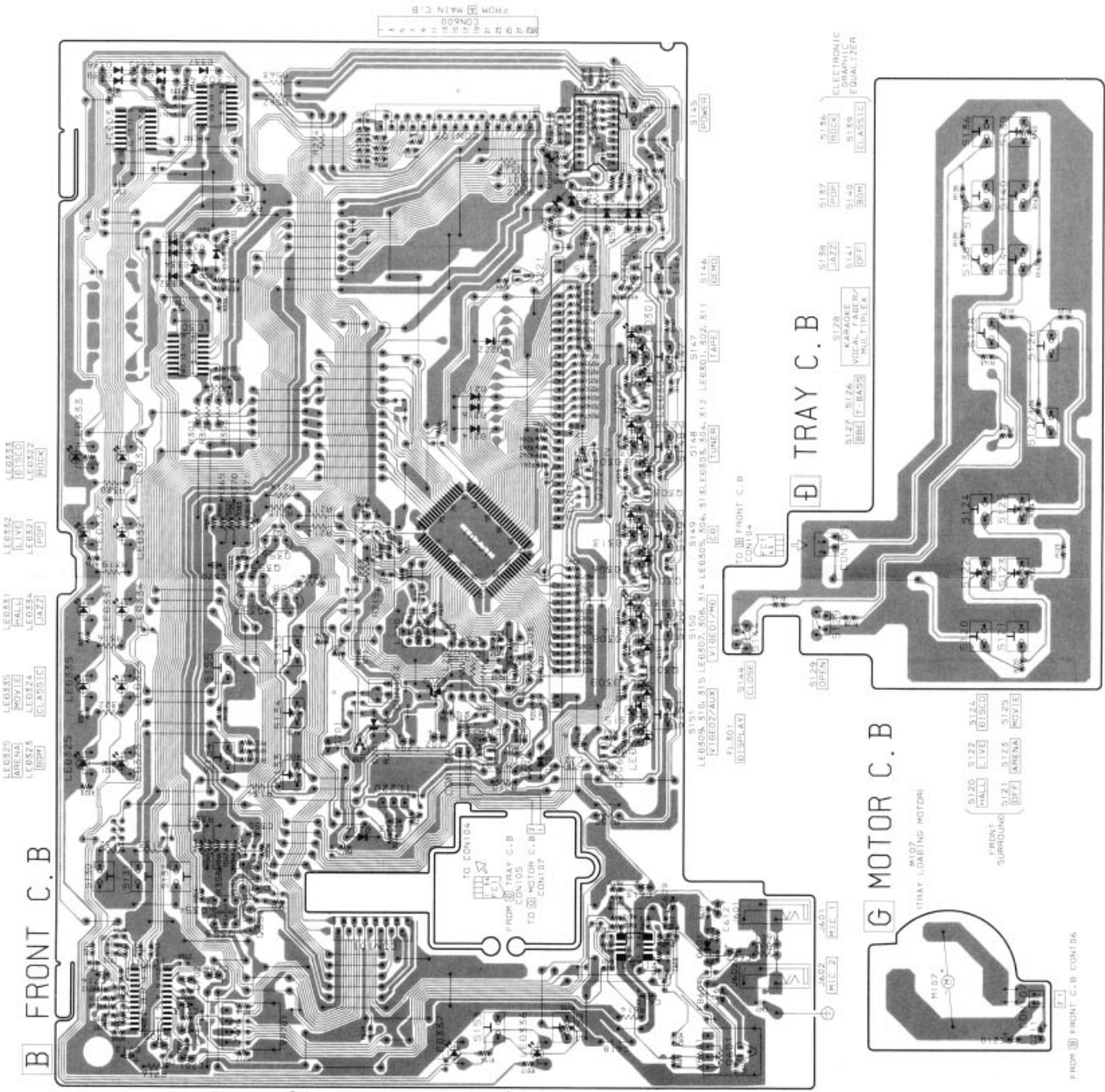




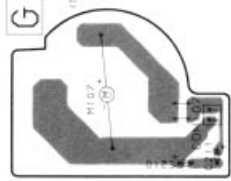
A MAIN C.B.



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

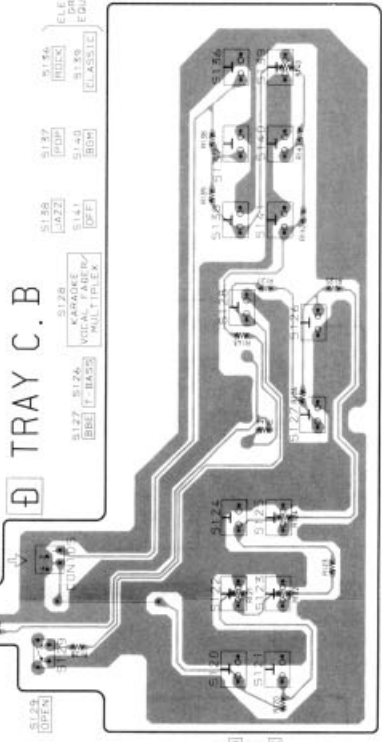


G MOTOR C.B.

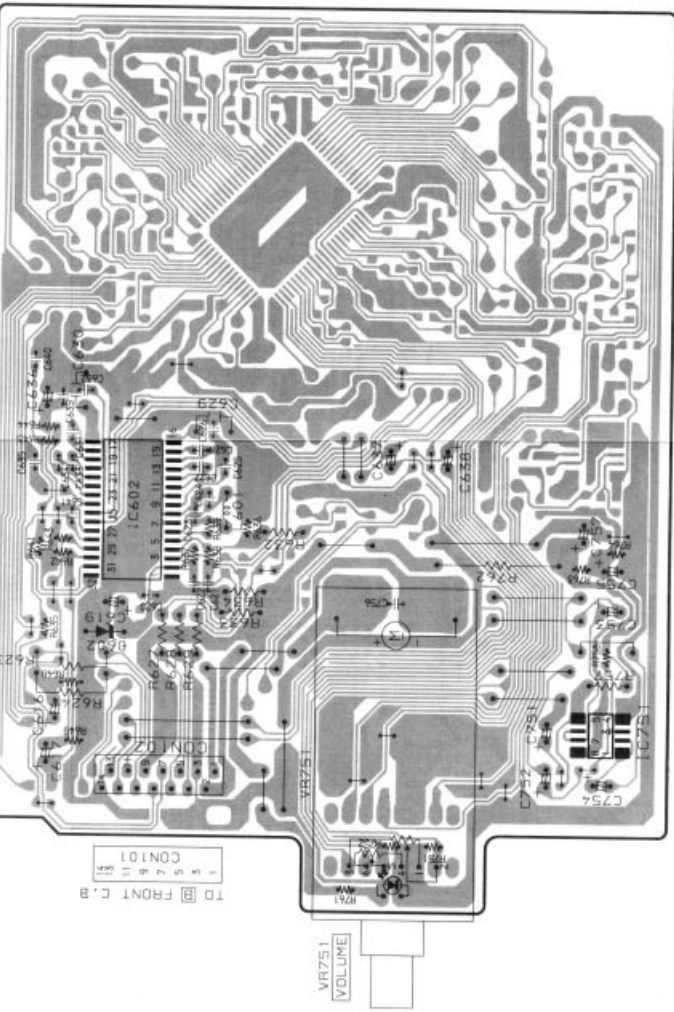


FROM FRONT C.B. CON106

D TRAY C.B.

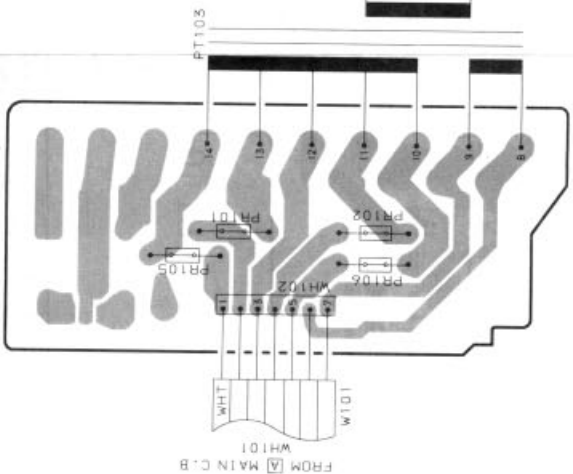


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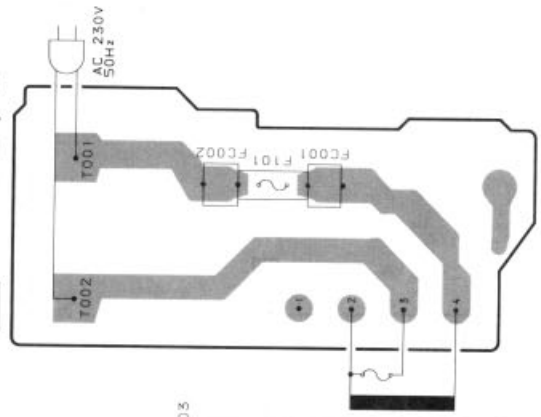


C MVR C. B

E AC2 C. B



F AC1 C. B



IC DESCRIPTION

IC, LC866440W-5E65

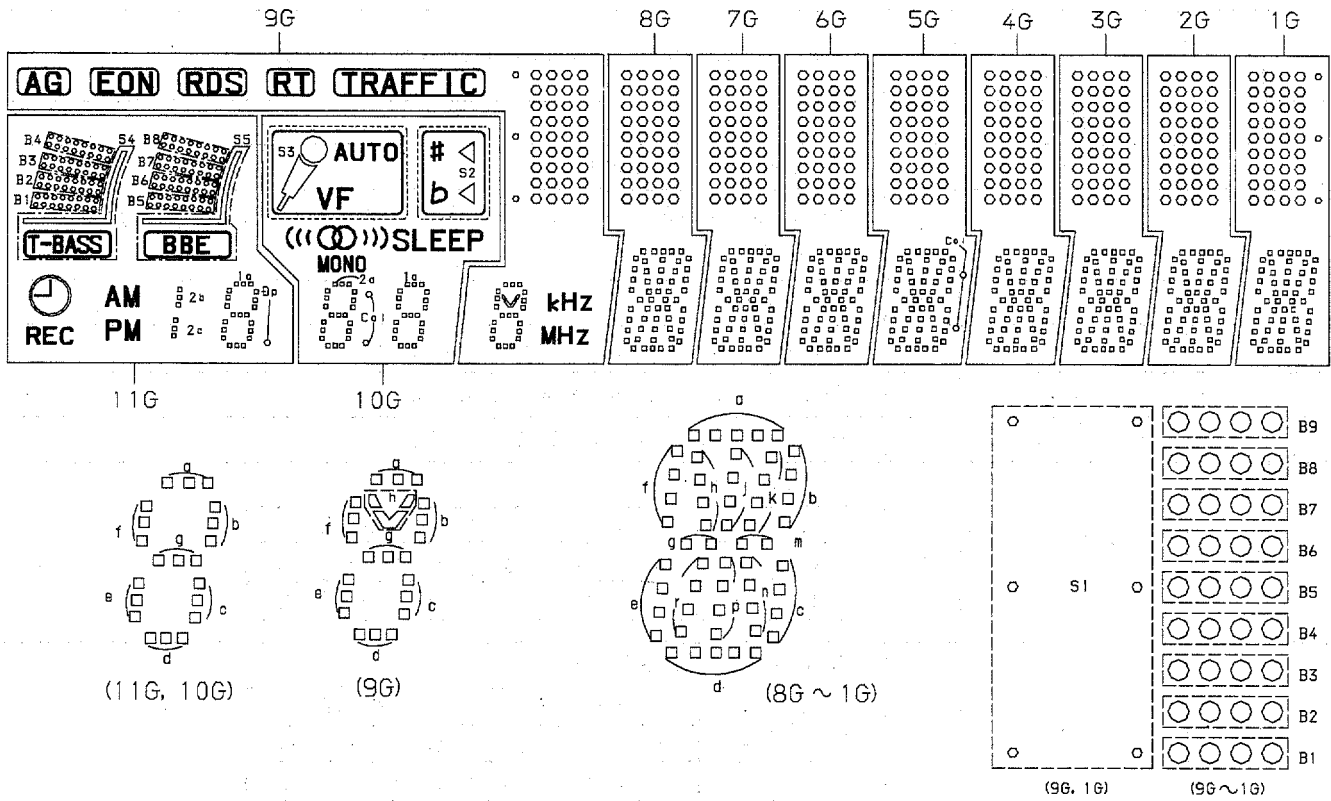
Pin No.	Pin Name	I/O	Description
1	O-PLLCE	O	PLL IC chip enable output.
2	O-STB(M)	O	Main shift register, data latch strobe output.
3	O-DATA(M)	O	Main shift register/PLL/DSP related, data output.
4	O-CLK(M)	O	Main shift register/PLL/DSP related, data transfer clock output.
5	I/O SERIAL	I/O	FD microprocessor, 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	VSS1	-	GND.
11	CF1	-	5.76MHz oscillator.
12	CF2	-	5.76MHz oscillator.
13	VDD1	-	Power supply input.
14~16	I-KEY 1~3	I	Key 1 ~ 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 signal input (active low).
25~35	G1~G11	O	FL grid output G1~G11.
36~40	P24~P20	O	FL segment output P24~P40.
41	VDD2	-	Power supply input.
42	VP	-	Power supply for display.
43~48	P19~P14	O	FL segment output P19~14.
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.

Pin No.	Pin Name	I/O	Description
64	SUR ON	O	SUR ON(output at "H").
65	O-PRESET LED	O	Preset.
66	O-DOLBY	O	Not used.
67	SURR-MUTE	O	Not used.
68	O-MUTE	O	System Mute ON/OFF output.
69	O-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.

Pin No.	Pin Name	I/O	Description																								
1	XIN	I/O	A crystal oscillator (7.2MHz) is connected between these pins.																								
22	XOUT																										
2	NC	-	Not used.																								
3	CE	I	To enable the IC. Active "H".																								
4	DI	I	Digital data input from CPU (LC866440W-5E65) when relevant key is operated. Active "H".																								
5	CLK	I	To clock in the data DI.																								
6	DO	O	Digital data output to CPU (LC866440W-5E65).																								
7	TM-BASE	O	Outputs a reference clock signal (8Hz) for the clock.																								
8	MONO / BEAT	O	Outputs "H" when MONO / BEAT is switched.																								
9	$\overline{\text{FM}} / \text{AM}$	O	Output "L" or "H" as follows: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="2">2 BAND</th> <th colspan="3">3 BAND</th> <th colspan="3">3 BAND</th> </tr> <tr> <th>AM</th> <th>FM</th> <th>LW</th> <th>MW</th> <th>FM</th> <th>MW</th> <th>SW</th> <th>FM</th> </tr> </thead> <tbody> <tr> <td>H</td> <td>L</td> <td>H</td> <td>H</td> <td>L</td> <td>H</td> <td>L</td> <td>L</td> </tr> </tbody> </table>	2 BAND		3 BAND			3 BAND			AM	FM	LW	MW	FM	MW	SW	FM	H	L	H	H	L	H	L	L
2 BAND		3 BAND			3 BAND																						
AM	FM	LW	MW	FM	MW	SW	FM																				
H	L	H	H	L	H	L	L																				
10	$\overline{\text{MW}}$	O	Outputs "L" or "H" as follows: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="2">2 BAND</th> <th colspan="3">3 BAND</th> <th colspan="3">3 BAND</th> </tr> <tr> <th>AM</th> <th>FM</th> <th>LW</th> <th>MW</th> <th>FM</th> <th>MW</th> <th>SW</th> <th>FM</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>L</td> <td>H</td> <td>L</td> <td>L</td> <td>L</td> <td>H</td> <td>L</td> </tr> </tbody> </table>	2 BAND		3 BAND			3 BAND			AM	FM	LW	MW	FM	MW	SW	FM	L	L	H	L	L	L	H	L
2 BAND		3 BAND			3 BAND																						
AM	FM	LW	MW	FM	MW	SW	FM																				
L	L	H	L	L	L	H	L																				
11	IF-MUTE	O	To control internal counter.																								
12	IFIN	I	General purpose counter input.																								
13	$\overline{\text{TUNE}}$	I	Receives "L" when station is tuned.																								
14	NC	-	Not used.																								
15	A MIN	I	Receives the AM local oscillator frequency signal.																								
16	F MIN	I	Receives the FM local oscillator frequency signal.																								
17	VDD	-	Supply power to IC (+5V).																								
18	PD	O	PLL charge pump output.																								
19	AIN	I	The MOS transistor for PLL active low pass filter.																								
20	AOUT	O																									
21	VSS	-	Ground.																								

FL (BJ451GK) GRID ASSIGNMENT AND ANODE CONNECTION

GRID ASSIGNMENT

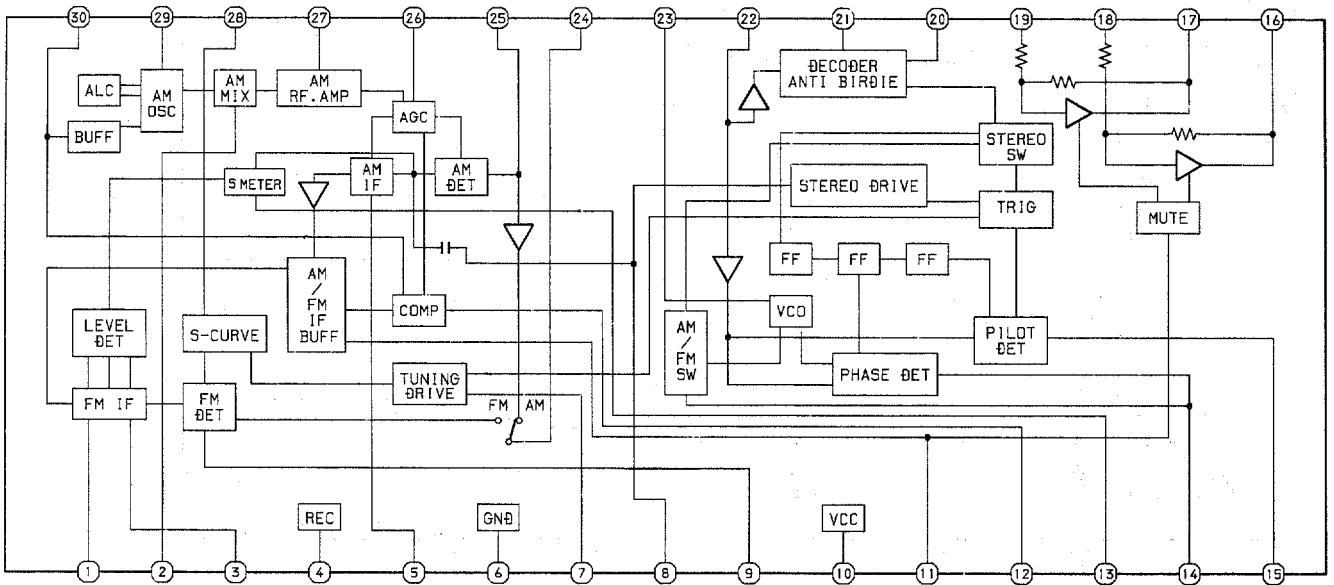


ANODE CONNECTION

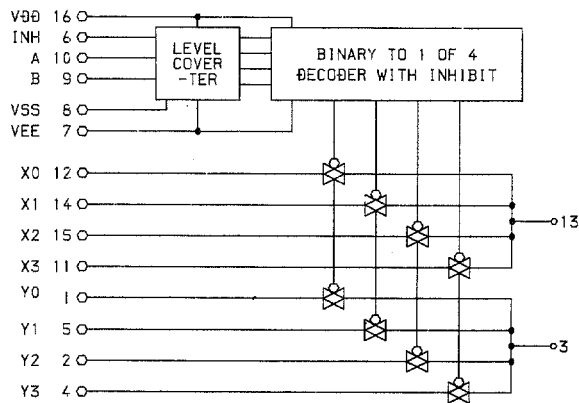
	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	2b, 2c	S3	B9	B9	B9	B9	B9	B9	B9	B9	B9
P2	1c	AUTO	B8	B8	B8	B8	B8	B8	B8	B8	B8
P3	1b	◁(High)	B7	B7	B7	B7	B7	B7	B7	B7	B7
P4	1f	◁(Low)	B6	B6	B6	B6	B6	B6	B6	B6	B6
P5	1g	((()))	B5	B5	B5	B5	B5	B5	B5	B5	B5
P6	1c	SLEEP	B4	B4	B4	B4	B4	B4	B4	B4	B4
P7	1e	MONO	B3	B3	B3	B3	B3	B3	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	RT	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	AG	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	-	Co1 (Low)	KHZ	d	d	d	d	d	d	d	d
P24	Ⓟ	Co1 (High)	MHZ	-	-	-	col	-	-	-	-
P25	-	-	S1	-	-	-	-	-	-	-	S1
P26	S4	-	-	-	-	-	-	-	-	-	-
P27	S5	-	-	-	-	-	-	-	-	-	-
P28	-	S2	-	-	-	-	-	-	-	-	-

IC BLOCK DIAGRAM

IC, LA1836



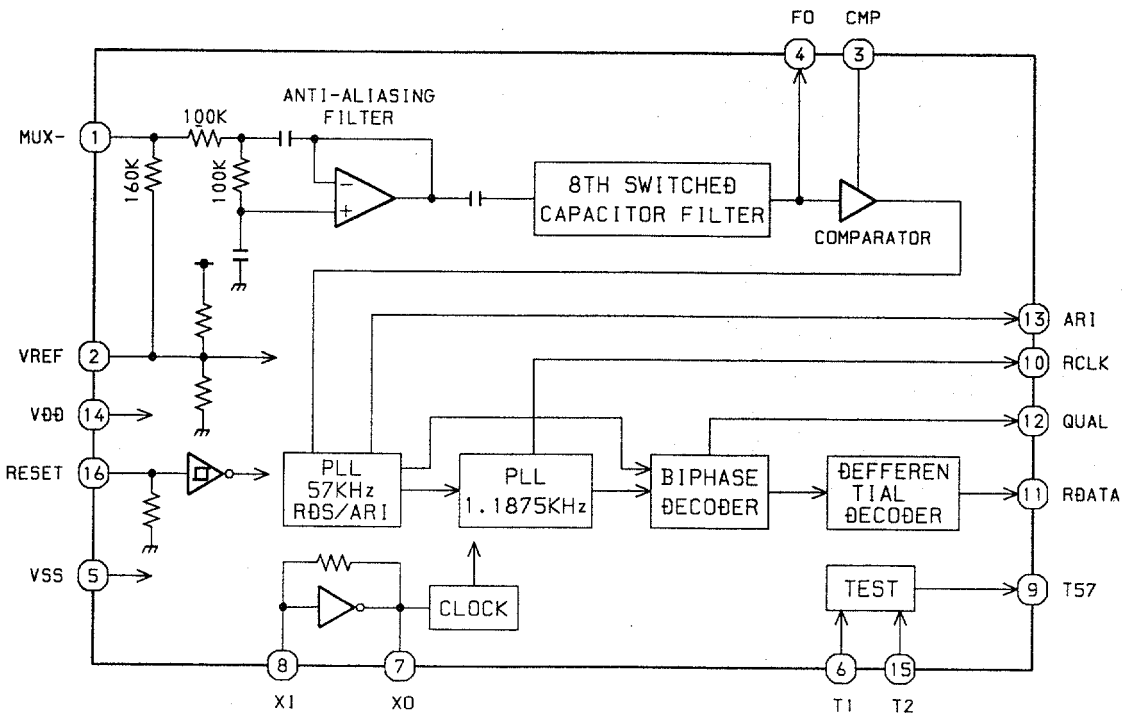
IC, BU4052BCP



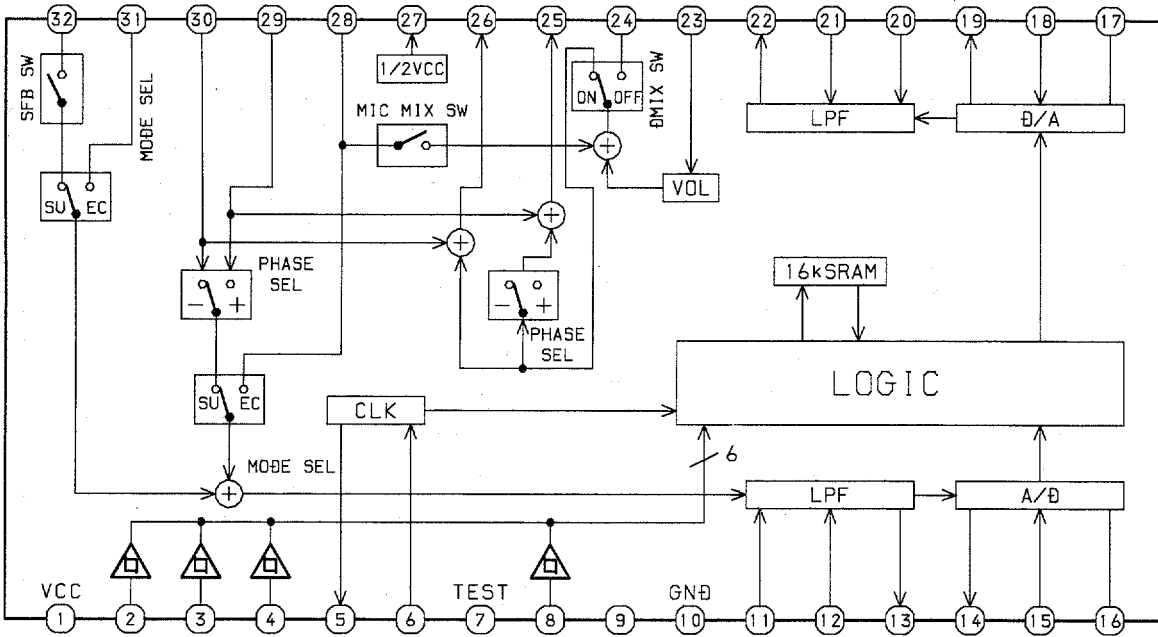
TRUTH TABLE

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

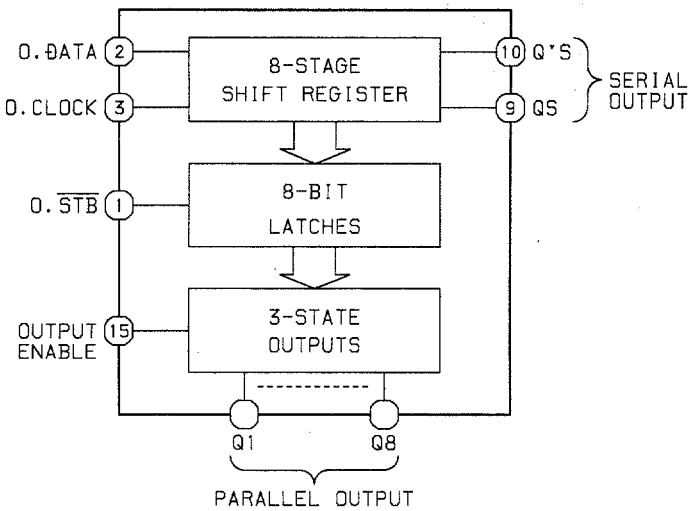
IC, BU1920FS



IC, M65849FP



IC, BU4094BCP / BCF



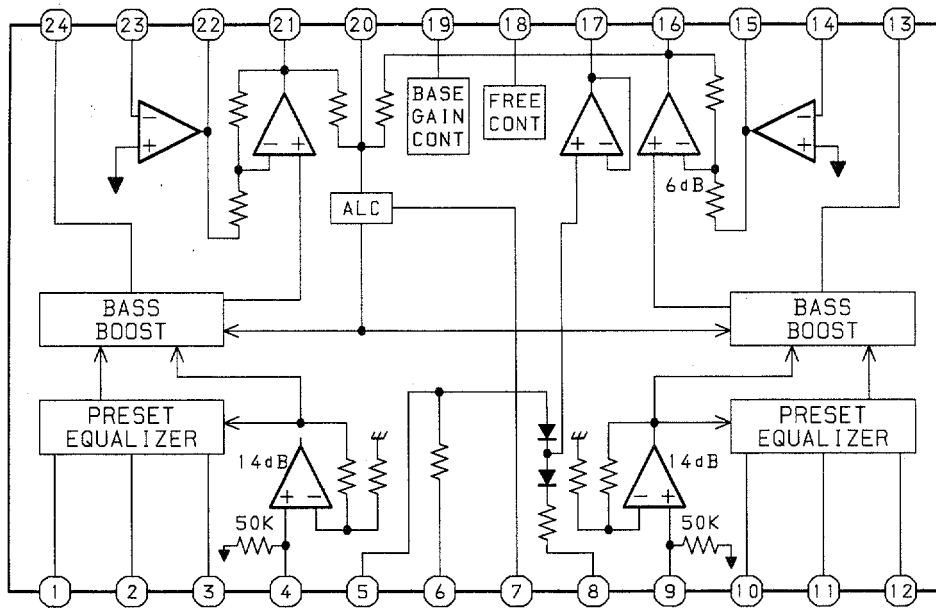
- Q1: 0. DOLBY ON Q5: 0. PLAY
- Q2: 0. DOLBY C Q6: 0. PB2
- Q3: 0. EXT. REC Q7: 0. LED
- Q4: 0. INT. REC Q8: 0. RMT

TRUTH TABLE

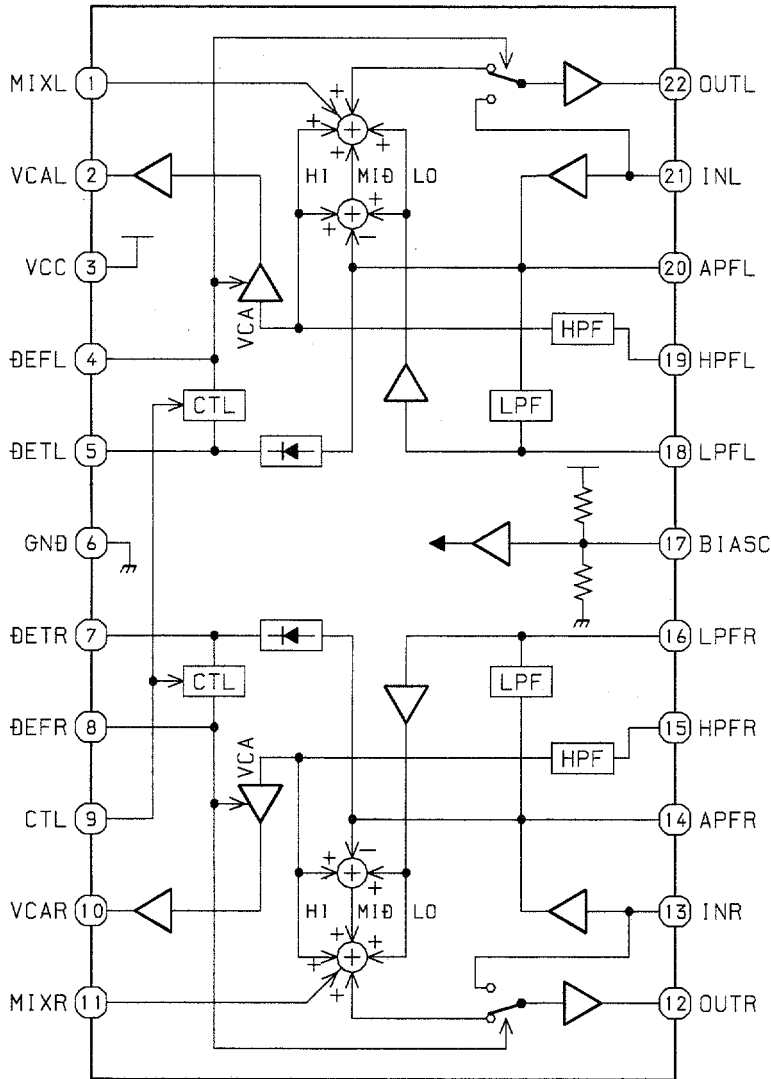
CLOCK	OUTPUT ENABLE	STROBE	DATA	PARALLEL OUTPUTS		SERIAL OUTPUTS	
				Q1	Qn	QS	Q'S
\overline{f}	L	x	x	Z	Z	Q7	NO CHG.
\overline{f}	L	x	x	Z	Z	NO CHG.	QS
\overline{f}	H	L	x	NO CHG.	NO CHG.	Q7	NO CHG.
\overline{f}	H	H	L	L	Qn-1	Q7	NO CHG.
\overline{f}	H	H	H	H	Qn-1	Q7	NO CHG.
\overline{f}	H	x	x	NO CHG.	NO CHG.	NO CHG.	QS

Z = HIGH IMPEDANCE
 x = DON'T CARE

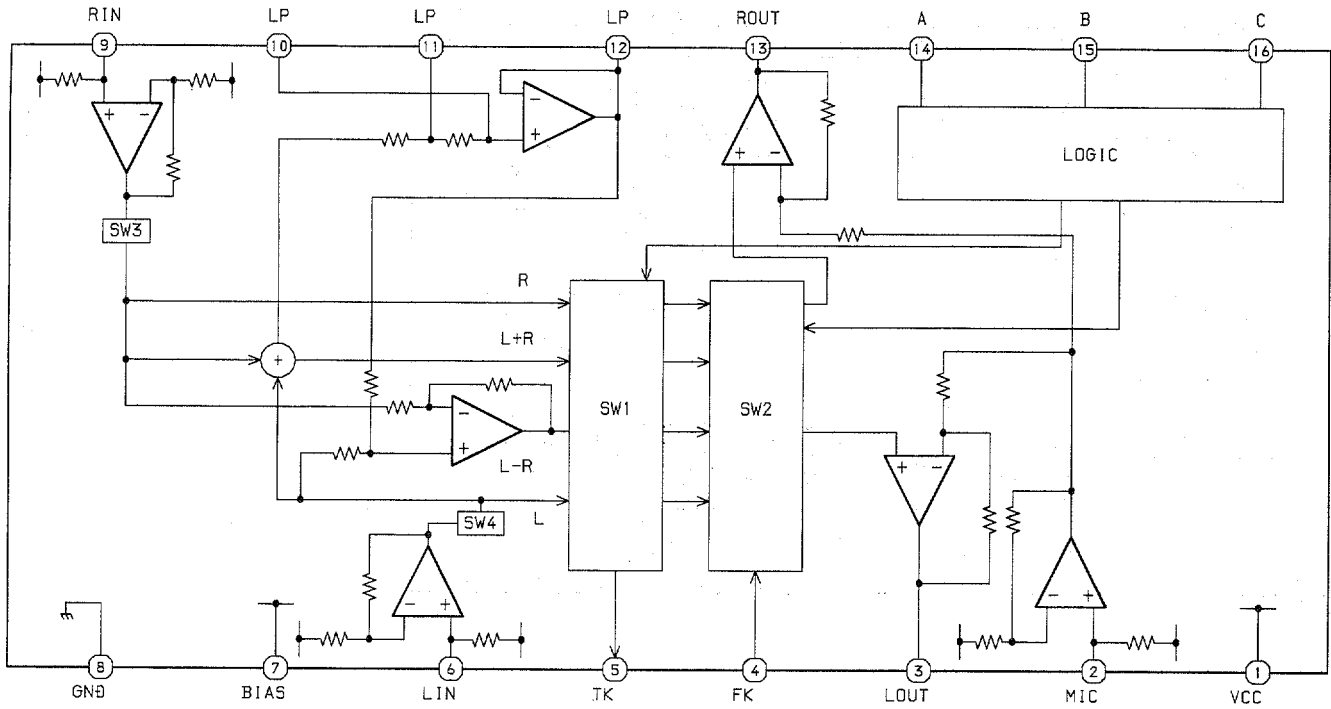
IC, BA3842F



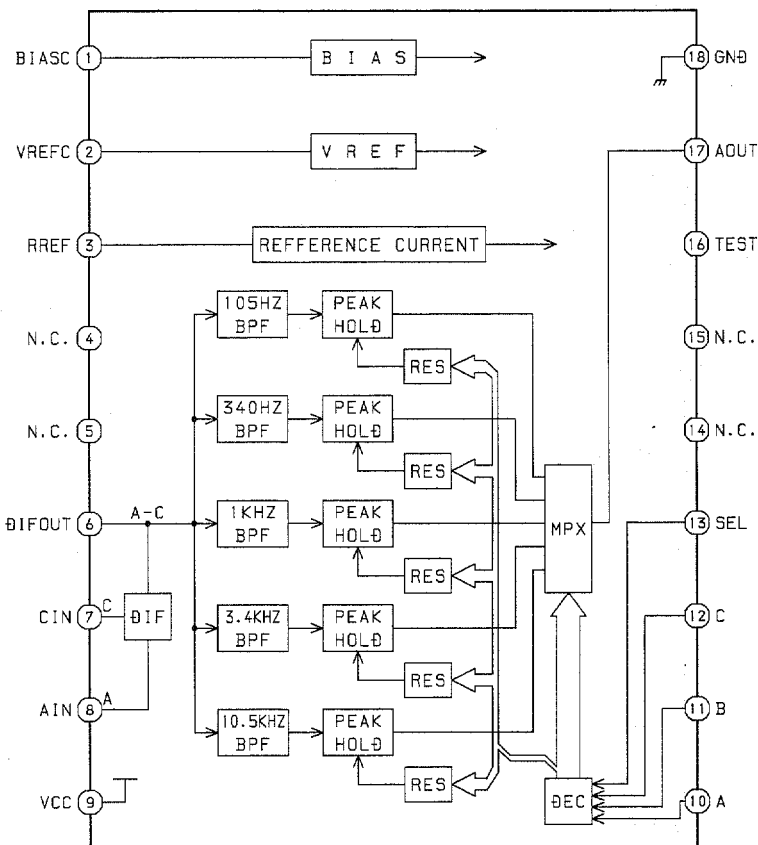
IC, BA3880S



IC, BA3836

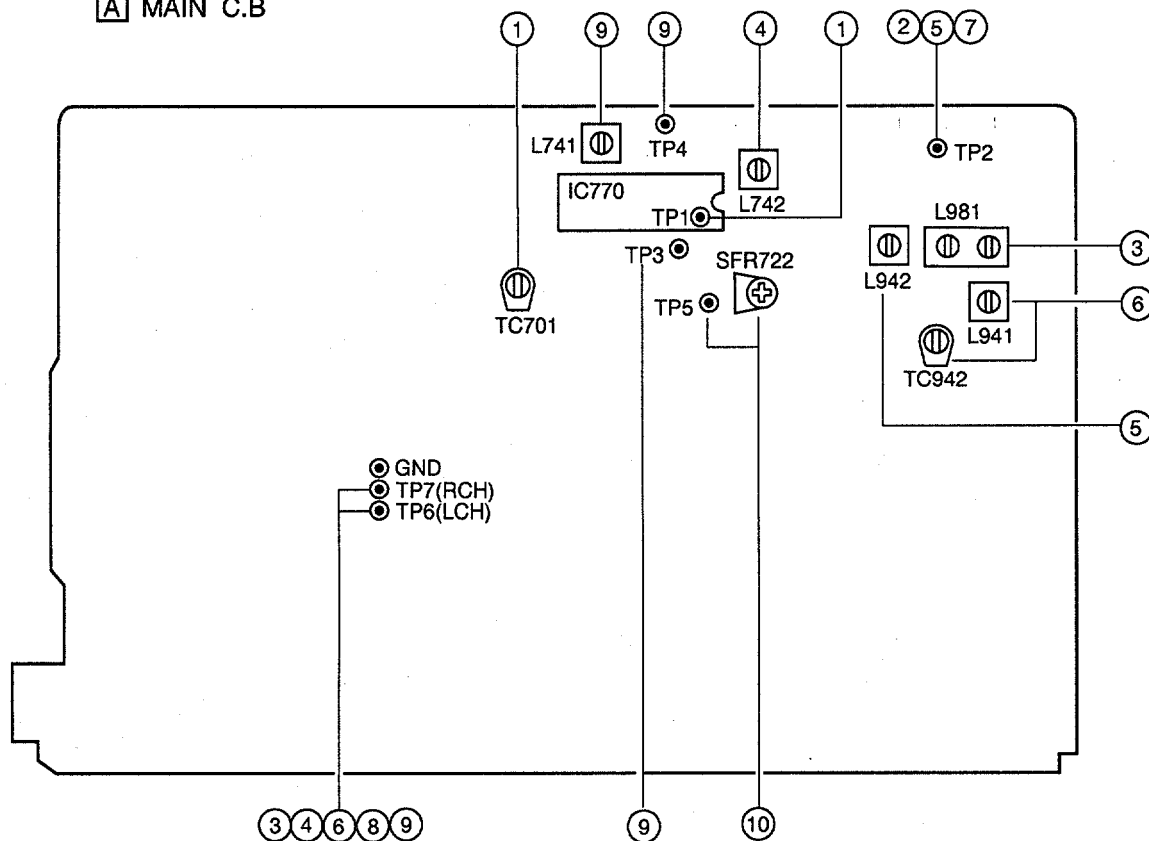


IC, BA3835S



ADJUSTMENT <TUNER>

A MAIN C.B



< TUNER SECTION >

1. Clock Adjustment
 - Settings : • Test point : TP1 (CLK)
 - Adjustment location : TC701
 - Method : Set to MW(AM) 1602kHz and adjust TC701 so that the test point becomes 2052kHz \pm 0.01kHz.
2. MW(AM) VT Check
 - Settings : • Test point : TP2 (VT)
 - Method : Set to MW(AM) 1602kHz and check that the test point is 6.0V \pm 1.0V.
3. MW(AM) Tracking Adjustment
 - Settings : • Test point : TP6(Lch), TP7(Rch)
 - Adjustment location : L981
 - Method : Set to MW(AM) 999kHz and adjust L981 so that the test point becomes maximum.
4. AM IF Adjustment
 - Settings : • Test point : TP6(Lch), TP7(Rch)
 - L742.....450kHz
5. LW VT Adjustment
 - Settings : • Test point : TP2 (VT)
 - Adjustment location : L942
 - Method : Set to LW 144kHz and adjust L942 so that the test point is 1.3V \pm 0.05V.
6. LW Tracking Adjustment
 - Settings : • Test point : TP6(Lch), TP7(Rch)
 - Input level : Adjustable
 - Adjustment location :
 - L941.....144kHz
 - TC942.....290kHz
 - Method : Set up TC942 to center before adjustment. The level at 144kHz is adjust to MAX by L941. Then the level at 290kHz is adjust to MAX by TC942.
7. FM VT Check
 - Settings : • Test point : TP2 (VT)
 - 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
 - Settings : • Test point : TP6(Lch), TP7(Rch)
 - Method : Check that the test point is 3~12dB and distortion is less than 3% at FM 98.0MHz.
9. DC Balance / Mono Distortion Adjustment
 - Settings : • Test point : TP3, TP4 (DC balance)
 - : TP6, TP7 (Mono 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 is less than 1.3%.

PRACTICAL SERVICE FIGURE

10. Auto Stop Level Adjustment

Settings : • Test point : TP5 (Auto Stop)
• Adjustment location : SFR722
• Input level : 54dB

Method : Set to FM 98.0MHz and adjust voltage low
(about 0.1V) by SFR722. After that voltage high
(about 7.0V) by 2.0dB down.

<TUNER SECTION>

<FM SECTION>

IHF Sensitivity :
(THD 3%) 6dB ± 6dB
[at 87.5 / 98.0 / 108.0MHz]

S/N 50dB Quieting sensitivity :
Less than 36dB
[at 87.5 / 98.0 / 108.0MHz]

Signal to noise ratio : More than 66dB [STEREO]
More than 72dB [MONO]
[at 98.0MHz]

Distortion : Less than 1.2% [at 98.0MHz]

Auto stop level : 25dB +10/-5dB [at 98.0MHz]

Stereo separation : More than 20dB [at 98.0MHz]

Intermediate frequency : 10.7MHz

<MW (AM) SECTION>

Sensitivity : Less than 60dB
(S/N 20dB) [at 603kHz]

Less than 58dB
[at 999kHz/1404kHz]

Signal to noise ratio : More than 36dB
[at 999kHz]

Distortion : Less than 1.5%
[at 999kHz]

Auto stop level : Less than 60dB
[at 999kHz]

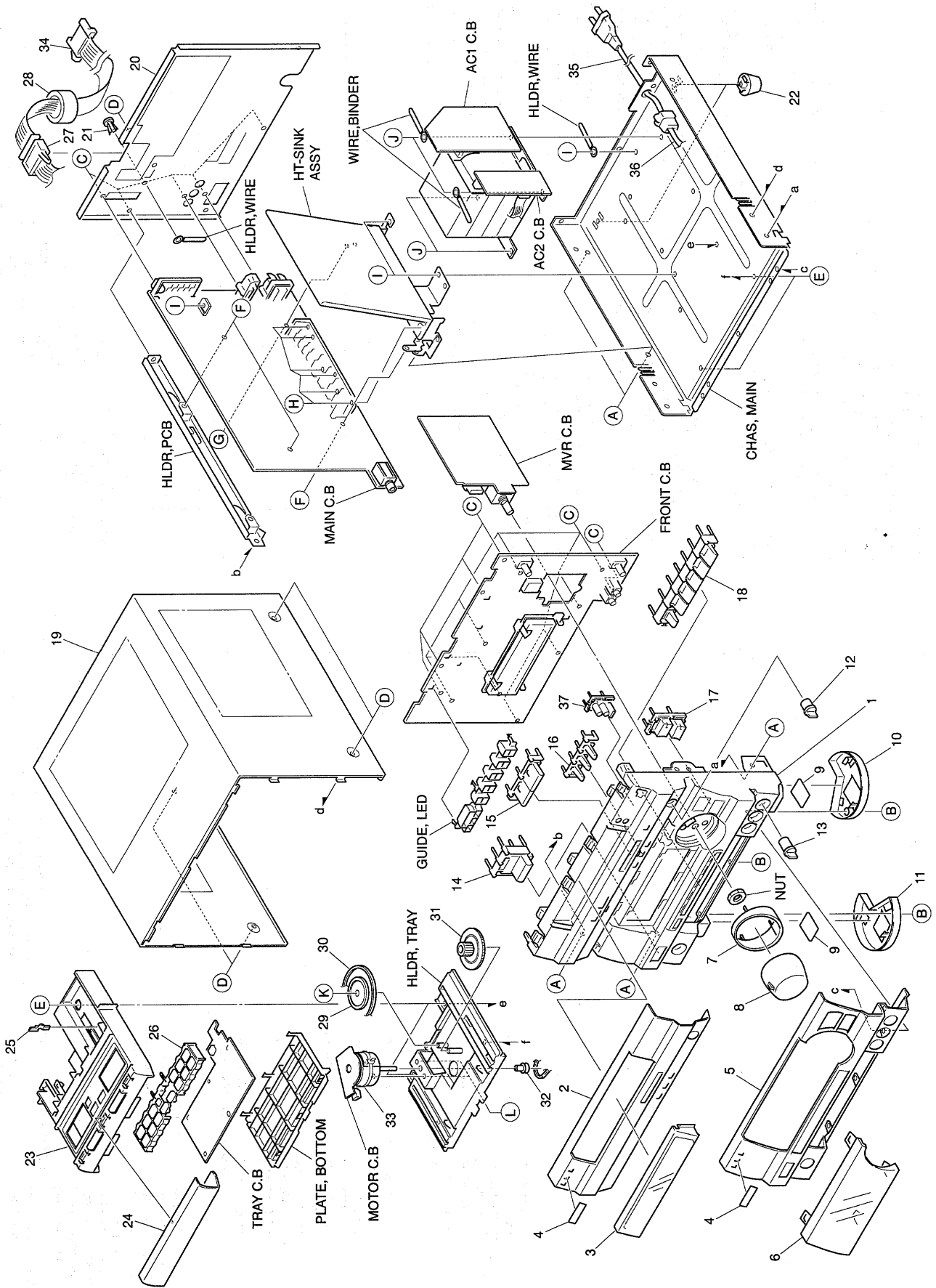
Intermediate frequency : 450kHz

<LW (AM) SECTION>

Sensitivity : Less than 70dB
(S/N 20dB) [at 144kHz]

Less than 66dB
[at 198kHz/290kHz]

Signal to noise ratio : More than 34dB
[at 198kHz]



MECHANICAL PARTS LIST 1 / 1

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-NT1-001-010		CABI,FR	26	87-NT1-014-010		KEY,GEQ
2	87-NT1-004-010		PANEL,FR GEQ E	27	89-VT5-202-010		BUSHING, CORD
3	87-B00-002-010		BADGE,AIWA 30 ABS SIL	28	87-003-317-010		F-BEAD,F0H2515-LG7
4	87-NT1-019-010		WINDOW,GEQ	29	82-NT1-205-110		PULLEY,LOADING(*)
5	87-NT1-002-010		PANEL,FR AMP	30	80-VW1-217-010		BELT,SQ 1.5
6	87-NT1-036-010		WINDOW,DISPLAY RDS	31	82-NT1-204-010		GEAR,LOADING
7	87-NT1-034-010		RING,VOL	32	80-VW1-204-010		PULLEY,MOTOR
8	87-NT1-021-010		KNOB,RTRY VOL	33	87-045-383-010		MOT,M9I50T28-2
9	80-VT1-202-010		FELT,12.5-15.5-2	34	87-NT1-650-010		CORD,FG15P
10	87-NT1-035-010		RING,FOOT R	35	87-085-185-010		BUSHING, AC CORD (E)
11	87-NT1-015-010		RING,FOOT L	△ 36	87-050-079-010		AC-CORD ASSY,E
12	87-NT1-024-010		KNOB,RTRY ECHO	37	87-NT1-009-010		KEY,TUNING
13	87-NT1-023-010		KNOB,RTRY MIC	A	87-591-094-410		TAPPING SCREW, QIT+3-6
14	87-NT1-007-010		KEY,POWER	B	87-067-777-010		BVTT+3-6 W,CONVEX BL
15	87-NT1-011-010		KEY,TIMER	C	87-067-703-010		TAPPING SCREW, BVT2+3-10
16	87-NT1-010-010		KEY,SET	D	87-067-641-010		UTT2+3-8(W/O SLOT)BL
17	87-NT1-037-010		KEY,ASSY UP/ DOWN	E	87-067-584-010		TAPPING SCREW, BVT2+3-6
18	87-NT1-013-010		KEY,FUN	F	87-078-084-010		BVTT+3-6 W,CONVEX
19	87-NT1-043-010		CABI,STEEL	G	87-NF4-224-010		S-SCREW,IT3B+3-8 CU
20	87-NT1-032-010		PANEL,REAR EZSNM	H	87-067-758-010		BVT2+3-12 W/O SLOT
21	87-084-077-010		NYLON RIVET, 3.5-4.5	I	87-067-688-010		BVTT+3-6
22	87-085-213-010		FOOT,H12.5	J	87-078-019-010		S-SCREW,IT+4-6
23	87-NT1-005-010		TRAY,CONTROL	K	87-861-095-410		VFT2+3-8 SLOT
24	87-NT1-006-010		PANEL,TRAY	L	87-261-073-410		V+2.6-6
25	81-MT3-211-010		LEVER,OPEN				

MODEL NO.

FD-NH100

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!

Laitteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylitävälle näkymättömälle lasersäteilylle.

WARNING!

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

CAUTION

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

ATTENTION

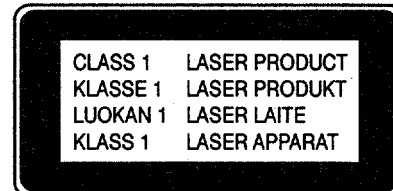
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

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

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

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



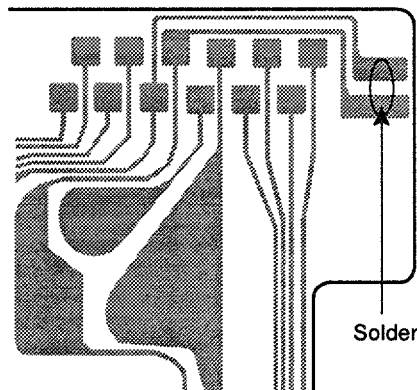
Precaution to replace Optical block

(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 figure right.

PICK-UP Assy P.C.B



ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

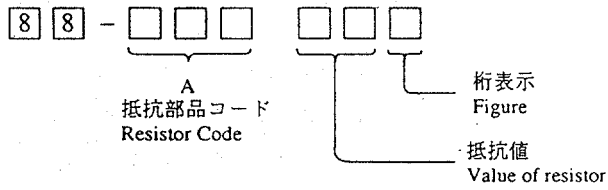
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC				C153	87-010-322-080		C-CAP,S 100P-50 CH
	87-017-022-080		IC,NJM2068M-D(T1)	C154	87-010-322-080		C-CAP,S 100P-50 CH
	87-017-917-080		IC,BU4066BCF	C155	87-010-197-080		CAP, CHIP 0.01 DM
	87-001-607-080		IC,NJM4558M	C156	87-010-197-080		CAP, CHIP 0.01 DM
	87-002-272-080		IC,TC4052BF	C157	87-012-156-080		C-CAP,S 220P-50 CH
	87-001-985-010		IC,HA12142NT				
	87-020-784-080		IC,TC4053BF	C158	87-012-156-080		C-CAP,S 220P-50 CH
	87-017-888-080		IC,NJM4558MD	C159	87-010-318-080		C-CAP,S 47P-50 CH
	87-017-745-010		IC,CXA1782BQ	C160	87-010-318-080		C-CAP,S 47P-50 CH
	87-070-305-010		IC,BA6897S	C181	87-010-805-080		CAP, S 1-16
	87-001-982-010		IC,TA7291S	C182	87-010-805-080		CAP, S 1-16
	87-070-294-010		IC,CXD2508AQ				
	86-NV1-610-110		IC,LC866424V-5B05	C183	87-010-197-080		CAP, CHIP 0.01 DM
	87-017-375-080		IC,TC4094BF	C184	87-010-318-080		C-CAP,S 47P-50 CH
	87-020-454-010		IC,DN6851	C185	87-010-197-080		CAP, CHIP 0.01 DM
				C186	87-010-402-080		CAP, ELECT 2.2-50V
				C187	87-010-184-080		CHIP CAPACITOR 3300P(K)
				C205	87-010-369-080		C-CAP,S 0.033-25 K B
				C206	87-010-369-080		C-CAP,S 0.033-25 K B
TRANSISTOR				C303	87-010-183-080		C-CAP,S 2700P-50 B
	89-503-685-080		C-FET 2SK 368GR	C304	87-010-183-080		C-CAP,S 2700P-50 B
	89-113-625-080		TR,2SA1362GR(120MHZ,0.	C305	87-010-404-080		CAP, ELECT 4.7-50V
	87-026-635-080		C-TR,UN2213				
	89-324-122-080		TR,2SC2412K	C306	87-010-404-080		CAP, ELECT 4.7-50V
	89-320-011-080		TR,2SC2001 (15W)	C323	87-012-157-080		C-CAP,S 330P-50 CH
				C324	87-012-157-080		C-CAP,S 330P-50 CH
	89-109-521-080		TR,2SA952 (0.6W)	C341	87-010-196-080		CHIP CAPACITOR,0.1-25
	87-026-210-080		CHIP-TR,DTC144EK	C342	87-010-196-080		CHIP CAPACITOR,0.1-25
	89-110-373-080		CHIP-TR,2SA1037 S				
	89-318-155-080		TR,2SC1815 (0.4W)	C343	87-010-196-080		CHIP CAPACITOR,0.1-25
	89-332-665-080		TR,2SC3266GR	C345	87-010-404-080		CAP, ELECT 4.7-50V
				C346	87-010-404-080		CAP, ELECT 4.7-50V
	87-A30-047-080		TR,CSD655E	C347	87-010-404-080		CAP, ELECT 4.7-50V
	89-333-266-080		CHIP TR,2SC3326B	C348	87-010-404-080		CAP, ELECT 4.7-50V
	87-026-233-080		TR,DTA114TK-TP				
	87-026-463-080		TR,2SA933S (0.3W)	C361	87-010-400-080		CAP, ELECT 0.47-50V
	87-026-211-080		TR,DTA144EK	C362	87-010-400-080		CAP, ELECT 0.47-50V
				C363	87-010-400-080		CAP, ELECT 0.47-50V
	87-026-239-080		TR,DTC114TK (0.2W)	C364	87-010-400-080		CAP, ELECT 0.47-50V
	87-026-609-080		TR,KTA1266GR	C365	87-010-182-080		C-CAP,S 2200P-50 B
	89-421-722-380		TR,2SD2172V/W				
	87-026-223-080		TR,DTC143TK	C366	87-010-182-080		C-CAP,S 2200P-50 B
	87-026-608-080		C-TR,DTC 123 JK	C367	87-010-182-080		C-CAP,S 2200P-50 B
				C368	87-010-182-080		C-CAP,S 2200P-50 B
	87-A30-039-040		C-TR,2SD1383K	C369	87-010-182-080		C-CAP,S 2200P-50 B
	89-112-965-080		TR,2SA1296 (0.75W)	C370	87-010-182-080		C-CAP,S 2200P-50 B
	87-026-228-080		TR,DTA124EK				
	87-A30-067-080		C-TR,2SA 1298Y	C371	87-010-196-080		CHIP CAPACITOR,0.1-25
				C372	87-010-196-080		CHIP CAPACITOR,0.1-25
				C373	87-010-196-080		CHIP CAPACITOR,0.1-25
				C374	87-010-196-080		CHIP CAPACITOR,0.1-25
				C375	87-010-402-080		CAP, ELECT 2.2-50V
DIODE							
	87-017-437-080		DIODE,1N4148M	C376	87-010-402-080		CAP, ELECT 2.2-50V
	87-017-121-080		ZENER,HZS11A1	C377	87-010-247-080		CAP, ELECT 100-50V
	87-020-123-080		DIODE,DS446 (200MA)	C378	87-010-401-080		CAP, ELECT 1-50V
	87-A40-199-080		ZENER,UZL6H2	C379	87-010-406-080		CAP, ELECT 22-50
	87-020-331-080		CHIP-DIODE,DAN202K	C381	87-010-402-080		CAP, ELECT 2.2-50V
	87-A40-202-080		ZENER,UZ5.1BSB	C382	87-010-402-080		CAP, ELECT 2.2-50V
	87-020-339-080		CHIP DIODE,1SS226	C401	87-012-156-080		C-CAP,S 220P-50 CH
	87-017-097-080		ZENER,HZS6B1	C402	87-012-156-080		C-CAP,S 220P-50 CH
	87-020-330-080		C-DIODE,DAP202K	C403	87-014-059-080		CAP,PP 1200P-100 J
				C405	87-010-263-080		CAP, ELECT 100-10V
				C409	87-010-402-080		CAP, ELECT 2.2-50V
MAIN C.B				C410	87-010-405-080		CAP, ELECT 10-50V
	C101	87-012-158-080	C-CAP,S 390P-50 CH	C411	87-010-178-080		CHIP CAP 1000P
	C102	87-012-158-080	C-CAP,S 390P-50 CH	C412	87-010-221-080		CAP, ELECT 470-10V
	C103	87-010-318-080	C-CAP,S 47P-50 CH	C414	87-010-196-080		CHIP CAPACITOR,0.1-25
	C104	87-010-318-080	C-CAP,S 47P-50 CH				
	C105	87-010-369-080	C-CAP,S 0.033-25 K B				
				C451	87-010-237-080		CAP, ELECT 1000-16V
	C106	87-010-369-080	C-CAP,S 0.033-25 K B	C452	87-010-101-080		CAP, ELECT 220-16
	C109	87-012-154-080	C-CAP,S 150P-50 CH	C453	87-010-404-080		CAP, ELECT 4.7-50V
	C110	87-012-154-080	C-CAP,S 150P-50 CH	C454	87-010-248-080		CAP, ELECT 220-10V
	C111	87-010-197-080	CAP, CHIP 0.01 DM	C455	87-010-401-080		CAP, ELECT 1-50V
	C112	87-010-197-080	CAP, CHIP 0.01 DM				
				C456	87-010-401-080		CAP, ELECT 1-50V
				C457	87-010-263-080		CAP, ELECT 100-10V
	C113	87-010-196-080	CHIP CAPACITOR,0.1-25	C458	87-010-381-080		CAP, ELECT 330-16V
	C151	87-012-156-080	C-CAP,S 220P-50 CH	C459	87-010-196-080		CHIP CAPACITOR,0.1-25
	C152	87-012-156-080	C-CAP,S 220P-50 CH	C481	87-010-406-080		CAP, ELECT 22-50

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C482	87-010-406-080		CAP, ELECT 22-50	C661	87-010-196-080		CHIP CAPACITOR,0.1-25
C483	87-010-263-080		CAP, ELECT 100-10V	C662	87-010-260-080		CAP, ELECT 47-25V
C484	87-010-408-080		CAP, ELECT 47-50V	C681	87-010-197-080		CAP, CHIP 0.01 DM
C485	87-010-221-080		CAP, ELECT 470-10V	C692	87-010-381-080		CAP, ELECT 330-16V
C486	87-010-221-080		CAP, ELECT 470-10V	C693	87-010-196-080		CHIP CAPACITOR,0.1-25
C501	87-010-405-080		CAP, ELECT 10-50V	C701	87-010-194-080		CAP, CHIP 0.047
C502	87-010-198-080		CAP, CHIP 0.022	C702	87-010-188-080		CAP,CHIP 6800P
C503	87-010-196-080		CHIP CAPACITOR,0.1-25	C703	87-010-186-080		CAP,CHIP 4700P
C504	87-010-196-080		CHIP CAPACITOR,0.1-25	C704	87-012-156-080		C-CAP,S 220P-50 CH
C505	87-010-196-080		CHIP CAPACITOR,0.1-25	C705	87-010-404-080		CAP, ELECT 4.7-50V
C506	87-018-209-080		CAP, CER 0.1-50V	C706	87-010-263-080		CAP, ELECT 100-10V
C516	87-010-381-080		CAP, ELECT 330-16V	C707	87-010-197-080		CAP, CHIP 0.01 DM
C517	87-010-404-080		CAP, ELECT 4.7-50V	C708	87-010-400-080		CAP, ELECT 0.47-50V
C518	87-010-404-080		CAP, ELECT 4.7-50V	C709	87-010-197-080		CAP, CHIP 0.01 DM
C519	87-010-405-080		CAP, ELECT 10-50V	C711	87-010-196-080		CHIP CAPACITOR,0.1-25
C520	87-010-405-080		CAP, ELECT 10-50V	C712	87-010-314-080		C-CAP,S 22P-50V
C521	87-012-154-080		C-CAP,S 150P-50 CH	C713	87-010-263-080		CAP, ELECT 100-10V
C522	87-012-154-080		C-CAP,S 150P-50 CH	C714	87-010-197-080		CAP, CHIP 0.01 DM
C523	87-010-405-080		CAP, ELECT 10-50V	C715	87-010-318-080		C-CAP,S 47P-50 CH
C524	87-010-316-080		C-CAP,S 33P-50 CH	C716	87-010-318-080		C-CAP,S 47P-50 CH
C525	87-012-154-080		C-CAP,S 150P-50 CH	C717	87-018-134-080		CAPACITOR,TC-U 0.01-16
C526	87-012-154-080		C-CAP,S 150P-50 CH	C741	87-012-153-080		C-CAP,S 120P-50 CH
C527	87-010-387-080		CAP,E 470-25 SME	C742	87-012-153-080		C-CAP,S 120P-50 CH
C528	87-010-384-080		CAP, ELECT 100-25V	C743	87-010-321-080		CHIP CAPACITOR,82P(J)
C529	87-010-374-080		CAP, ELECT 47-10V	C744	87-010-321-080		CHIP CAPACITOR,82P(J)
C530	87-010-316-080		C-CAP,S 33P-50 CH	C745	87-010-321-080		CHIP CAPACITOR,82P(J)
C531	87-010-316-080		C-CAP,S 33P-50 CH	C746	87-010-321-080		CHIP CAPACITOR,82P(J)
C533	87-012-157-080		C-CAP,S 330P-50 CH	C747	87-012-153-080		C-CAP,S 120P-50 CH
C534	87-012-157-080		C-CAP,S 330P-50 CH	C748	87-012-153-080		C-CAP,S 120P-50 CH
C535	87-012-154-080		C-CAP,S 150P-50 CH	C749	87-012-153-080		C-CAP,S 120P-50 CH
C536	87-012-154-080		C-CAP,S 150P-50 CH	C750	87-012-153-080		C-CAP,S 120P-50 CH
C601	87-010-182-080		C-CAP,S 2200P-50 B	C751	87-010-405-040		CAP,E 10-50
C602	87-010-196-080		CHIP CAPACITOR,0.1-25	C752	87-010-405-040		CAP,E 10-50
C603	87-010-196-080		CHIP CAPACITOR,0.1-25	C753	87-010-186-080		CAP,CHIP 4700P
C604	87-010-196-080		CHIP CAPACITOR,0.1-25	C754	87-010-186-080		CAP,CHIP 4700P
C605	87-010-404-080		CAP, ELECT 4.7-50V	C755	87-010-381-080		CAP, ELECT 330-16V
C606	87-010-193-080		CHIP CAPACITOR,0.033	C756	87-010-263-040		CAP,E 100-10
C607	87-010-197-080		CAP, CHIP 0.01 DM	C771	87-010-322-080		C-CAP,S 100P-50 CH
C608	87-010-402-080		CAP, ELECT 2.2-50V	C772	87-010-322-080		C-CAP,S 100P-50 CH
C609	87-010-265-080		CAP, ELECT 33-16V	C773	87-010-318-080		C-CAP,S 47P-50 CH
C610	87-010-213-080		C-CAP,S 0.015-50 B	C774	87-018-131-080		CAP, CER 1000P-50V
C611	87-010-197-080		CAP, CHIP 0.01 DM	C791	87-010-263-080		CAP, ELECT 100-10V
C612	87-010-263-080		CAP, ELECT 100-10V	C792	87-010-197-080		CAP, CHIP 0.01 DM
C613	87-018-134-080		CAPACITOR,TC-U 0.01-16	C901	87-018-149-080		CAP,TC-U 15P-50 CH
C614	87-010-193-080		CHIP CAPACITOR,0.033	C902	87-012-145-080		CAP, CHIP S 270P CH
C615	87-010-197-080		CAP, CHIP 0.01 DM	C941	87-010-196-080		CHIP CAPACITOR,0.1-25
C616	87-010-193-080		CHIP CAPACITOR,0.033	C942	87-010-196-080		CHIP CAPACITOR,0.1-25
C617	87-010-197-080		CAP, CHIP 0.01 DM	C943	87-010-384-080		CAP, ELECT 100-25V
C618	87-010-146-080		CHIP CAP 2PF	C944	87-010-322-080		C-CAP,S 100P-50 CH
C619	87-010-154-080		CHIP CAP 10P	C945	87-010-322-080		C-CAP,S 100P-50 CH
C620	87-010-263-080		CAP, ELECT 100-10V	C946	87-010-322-080		C-CAP,S 100P-50 CH
C621	87-010-178-080		CHIP CAP 1000P	C947	87-010-322-080		C-CAP,S 100P-50 CH
C622	87-010-198-080		CAP, CHIP 0.022	C948	87-010-322-080		C-CAP,S 100P-50 CH
C623	87-010-196-080		CHIP CAPACITOR,0.1-25	C949	87-010-322-080		C-CAP,S 100P-50 CH
C624	87-010-197-080		CAP, CHIP 0.01 DM	EMI803	87-008-372-080		FILTER, EMI BL OIRNI
C625	87-010-263-080		CAP, ELECT 100-10V	EMI804	87-008-372-080		FILTER, EMI BL OIRNI
C626	87-010-248-080		CAP, ELECT 220-10V	EMI805	87-008-372-080		FILTER, EMI BL OIRNI
C627	87-010-197-080		CAP, CHIP 0.01 DM	EMI807	87-008-372-080		FILTER, EMI BL OIRNI
C628	87-010-260-080		CAP, ELECT 47-25V	FC1	85-NFT-611-110		FF-CABLE 16P-1.0
C629	87-010-196-080		CHIP CAPACITOR,0.1-25	FC2	88-916-301-210		FF-CABLE,16P 1.25
C640	87-010-196-080		CHIP CAPACITOR,0.1-25	FC3	88-909-251-210		FF-CABLE,9P 1.25
C641	87-010-221-080		CAP, ELECT 470-10V	FC4	88-906-201-110		FF-CABLE,6P 1.25
C642	87-010-196-080		CHIP CAPACITOR,0.1-25	FC5	84-ZG1-630-010		CABLE FFC 6P-1.25
C643	87-010-197-080		CAP, CHIP 0.01 DM	FL901	86-NV1-619-010		FL,7-ST-27G
C644	87-010-263-080		CAP, ELECT 100-10V	J901	81-VP1-635-010		JACK,PIN 3P EARTH
C645	87-010-221-080		CAP, ELECT 470-10V	J902	81-VP1-634-010		JACK,PIN 3P
C646	87-010-197-080		CAP, CHIP 0.01 DM	J903	81-VP1-635-010		JACK,PIN 3P EARTH
C647	87-010-196-080		CHIP CAPACITOR,0.1-25	L301	86-NV1-618-010		COIL,TRAP 108K
C648	87-010-196-080		CHIP CAPACITOR,0.1-25	L302	86-NV1-618-010		COIL,TRAP 108K
C649	87-010-193-080		CHIP CAPACITOR,0.033	L303	87-003-131-080		COIL, 10MH

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
L304	87-003-131-080		COIL, 10MH	SFR1	87-024-581-019		SFR, 3.3K DIA 6H
L305	87-003-123-080		COIL, 2.2MH	SOL1	82-ZM1-618-310		SOL ASSY, 27
L306	87-003-123-080		COIL, 2.2MH	SOL2	82-ZM1-618-310		SOL ASSY, 27
L401	86-NV1-617-010		COIL, OSC BIAS 108K	SW1	87-A90-248-019		SW, MICRO ESE11SH2CXQ
L402	87-005-447-080		COIL, 180UH FLR50	SW2	87-A90-248-019		SW, MICRO ESE11SH2CXQ
L451	87-005-474-080		COLL, 12UH J FLR50	SW3	87-A90-248-019		SW, MICRO ESE11SH2CXQ
L601	87-003-102-080		COIL, 10UH	SW4	87-036-110-010		SW, MICRO SPPB62
L901	87-A50-052-010		COIL, CLOCK 5.76MHZ T1	SW5	87-036-110-010		SW, MICRO SPPB62
L902	87-005-165-080		COIL 1UH (H,E)	SW6	87-036-110-010		SW, MICRO SPPB62
LED791	87-A40-123-010		LED, SLZ-8128A-01-B	SW7	87-036-110-010		SW, MICRO SPPB62
LED910	87-070-108-010		LED SLF301C-37	SW8	87-A90-248-019		SW, MICRO ESE11SH2CXQ
LED911	87-070-108-010		LED SLF301C-37	SW9	87-036-110-010		SW, MICRO SPPB62
SFR101	87-024-238-080		SFR, 1K DIA6 V TP	HEAD-1 C.B			
SFR102	87-024-238-080		SFR, 1K DIA6 V TP				
SFR151	87-024-238-080		SFR, 1K DIA6 V TP				
SFR152	87-024-238-080		SFR, 1K DIA6 V TP		85-ZM3-602-010		PWB, FLEX A
SFR301	87-024-271-080		SFR4.7K DIA6 V	HEAD-2 C.B			
SFR302	87-024-271-080		SFR4.7K DIA6 V				
SFR401	87-024-275-080		SFR 47K DIA6V TP		85-ZM3-602-010		PWB, FLEX A
SFR402	87-024-275-080		SFR 47K DIA6V TP	W105	86-NV1-612-010		CONN ASSY, 8P DECK 2
SFR601	87-024-175-080		SEMI-FIXED RESISTOR, 47K	T-T C.B			
SFR602	87-024-176-080		SEMI-FIXED RESISTOR, 100K				
SFR603	87-024-176-080		SEMI-FIXED RESISTOR, 100K				
SW731	87-036-109-010		PUSH SWITCH	C401	87-018-214-089		CAP, TC-U 0.1-50 F
SW732	87-036-109-010		PUSH SWITCH	FC401	84-ZG1-614-119		CABLE FFC 5P-1.25
VR501	86-NV1-616-010		VR, RTRY 50KBX2 H RK14K12A0L30	M401	87-045-364-019		MOTOR, (BCH3B14)
VR502	81-MX4-636-010		VR, 50KBX2 RK14K12A0	PS401	87-026-573-019		P-SNSR, GP1S53V
X701	87-030-270-080		VIB, XTAL 16.9344MHZ	DRIVE C.B			
KEY1 C.B				M1	87-045-358-019		MOT, RF-310TA 43
LED901	87-017-717-010		LED SEL2510C GRN	M2	87-045-356-019		MOT, RF-310TA 30
LED902	87-017-717-010		LED SEL2510C GRN	SW1	87-A90-042-019		SW, LEAF MSW 17310 MVPO
LED903	87-017-717-010		LED SEL2510C GRN				
LED904	87-017-717-010		LED SEL2510C GRN				
LED905	87-017-717-010		LED SEL2510C GRN				
LED906	87-017-717-010		LED SEL2510C GRN				
S901	87-A90-095-080		SW, TACT EVQ11G04M				
S902	87-A90-095-080		SW, TACT EVQ11G04M				
S903	87-A90-095-080		SW, TACT EVQ11G04M				
S904	87-A90-095-080		SW, TACT EVQ11G04M				
S905	87-A90-095-080		SW, TACT EVQ11G04M				
S906	87-A90-095-080		SW, TACT EVQ11G04M				
S907	87-A90-095-080		SW, TACT EVQ11G04M				
S908	87-A90-095-080		SW, TACT EVQ11G04M				
S909	87-A90-095-080		SW, TACT EVQ11G04M				
S910	87-A90-095-080		SW, TACT EVQ11G04M				
KEY2 C.B							
LED907	87-A40-317-080		LED, SLR-342VCT31 RED				
LED908	87-A40-317-080		LED, SLR-342VCT31 RED				
LED909	87-A40-317-080		LED, SLR-342VCT31 RED				
S912	87-A90-095-080		SW, TACT EVQ11G04M				
S913	87-A90-095-080		SW, TACT EVQ11G04M				
S914	87-A90-095-080		SW, TACT EVQ11G04M				
S915	87-A90-095-080		SW, TACT EVQ11G04M				
S916	87-A90-095-080		SW, TACT EVQ11G04M				
LED C.B							
LED701	87-A40-268-080		LED, SLH-56DCT31 ORN				
LED702	87-A40-316-080		LED, SLR-56PCT31 GRN				
LED703	87-A40-316-080		LED, SLR-56PCT31 GRN				
LED704	87-A40-268-080		LED, SLH-56DCT31 ORN				
DECK C.B							
CON501	82-ZM3-601-010		RBN, CORD, 4P-75				
	87-099-879-010		CONN, 16P 6216				

○ 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



E C B

2SC1815
2SC3266
KTA1266GR
2SA1296



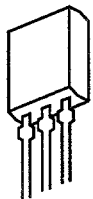
E C B

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2SA952
CSD655E



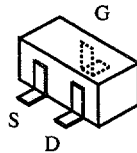
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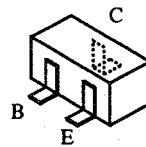


E C B

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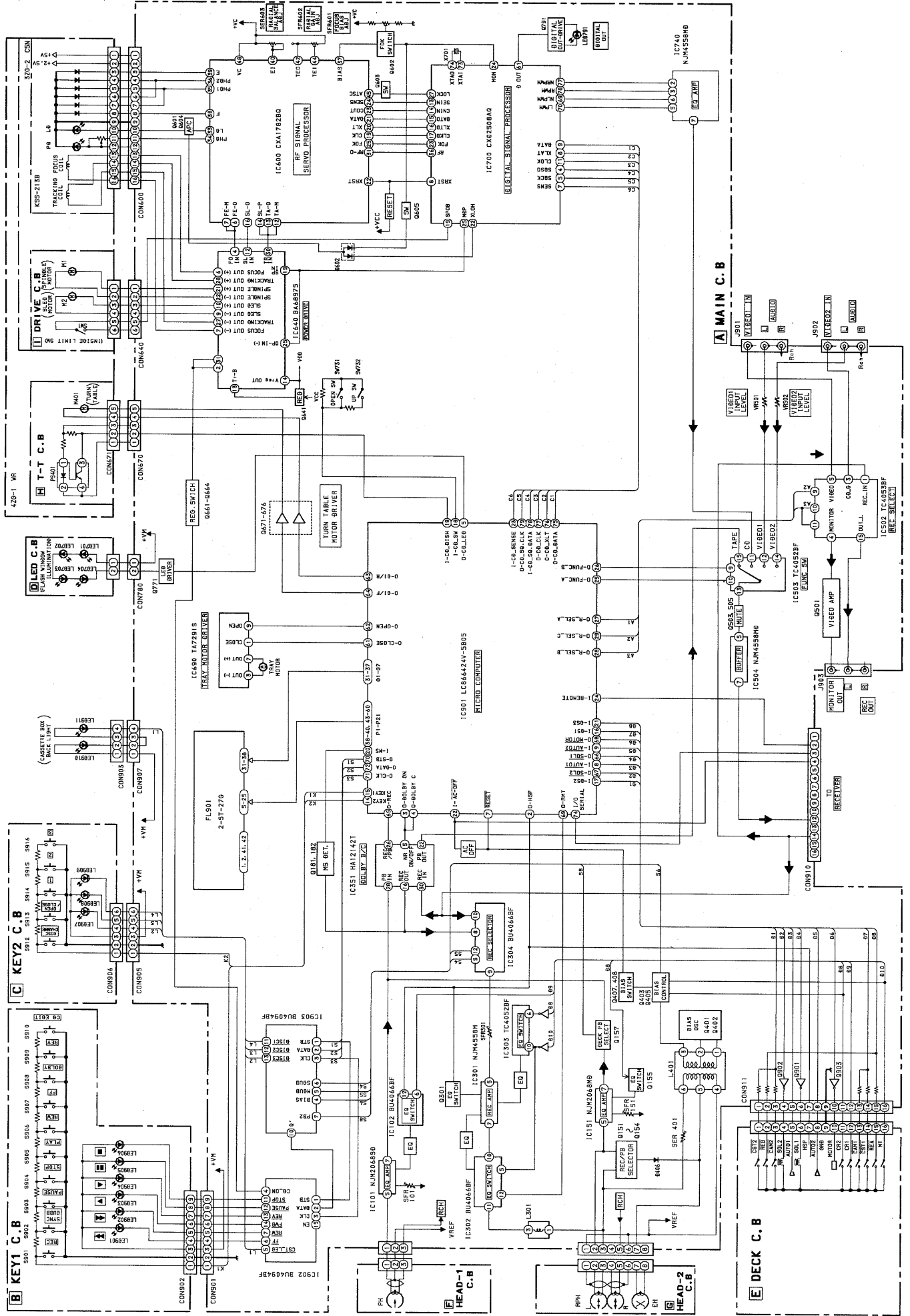


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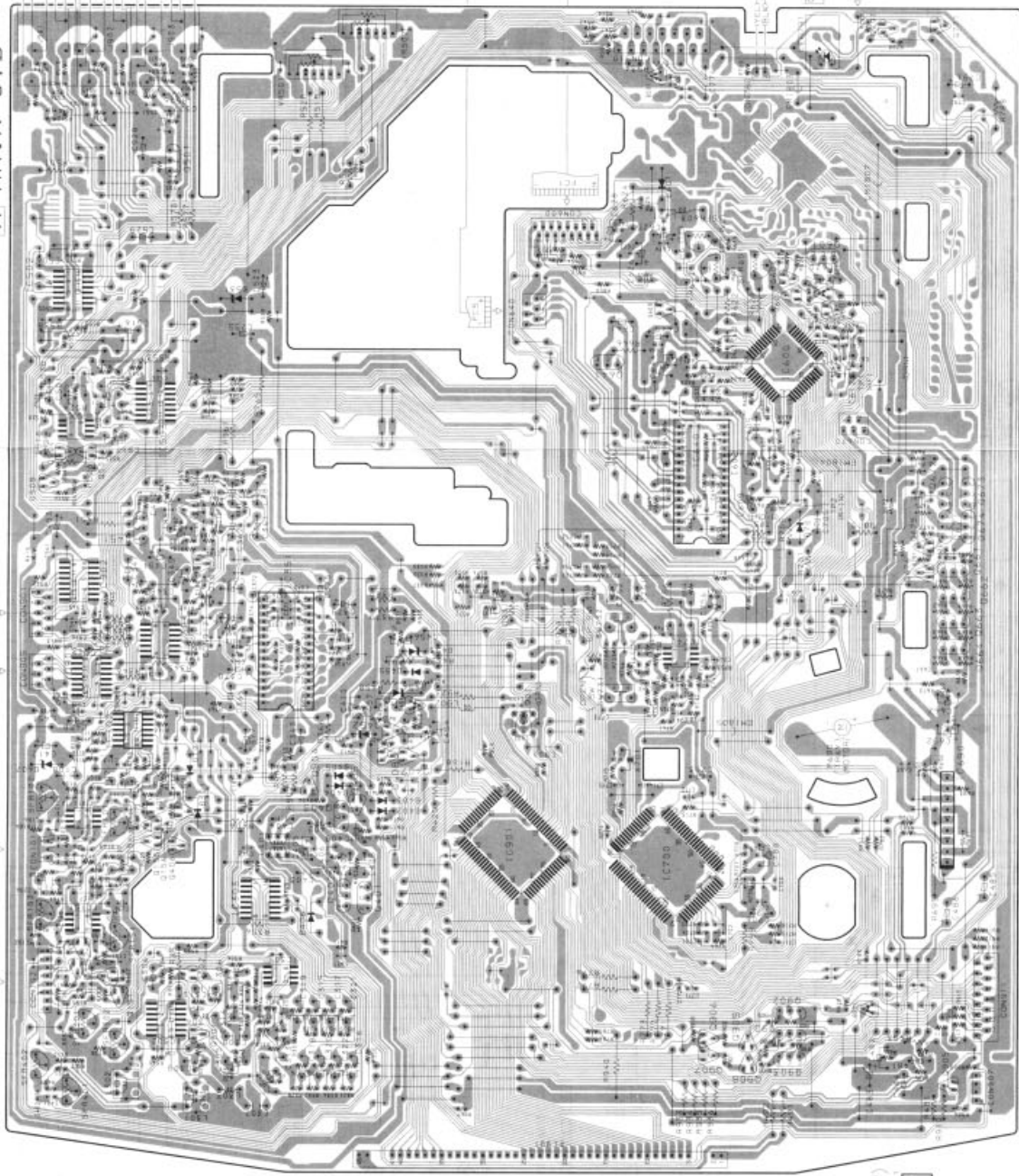
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UN2213 DTC114TK
2SC2412KR DTC143TK
DTC144EK DTC123JK
2SA1037S DTA124EK
2SC3326 2SD1383
DTA114TK 2SA1298

BLOCK DIAGRAM

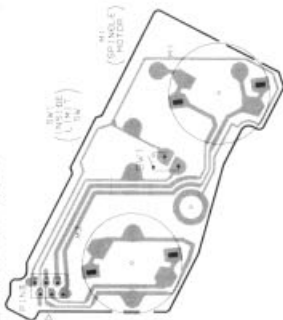


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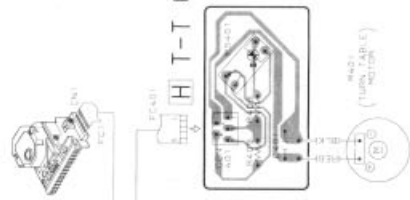
A MAIN C.B



I DRIVE C.B



H T-T C.B



B

C

D

E

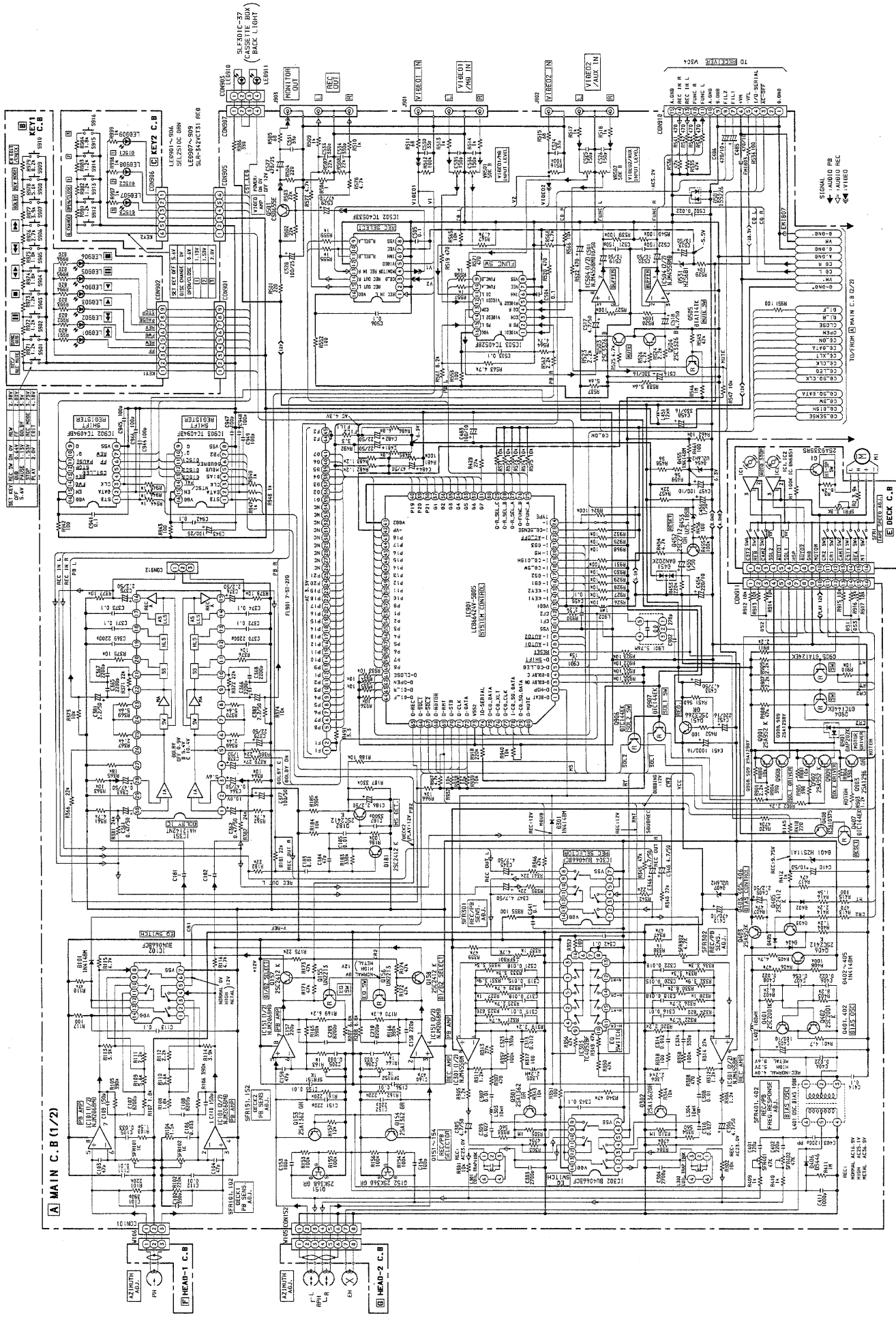
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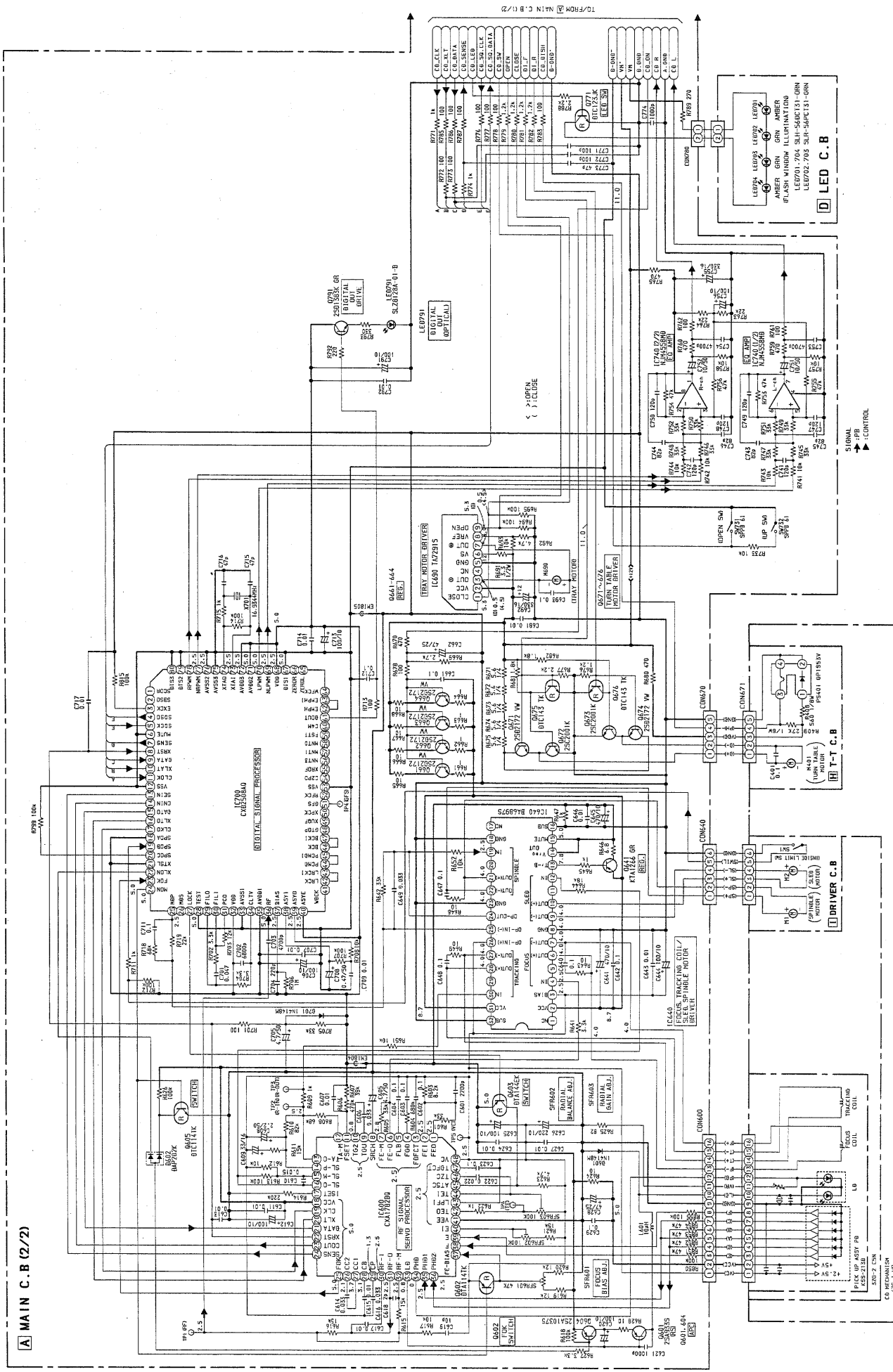
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H

I

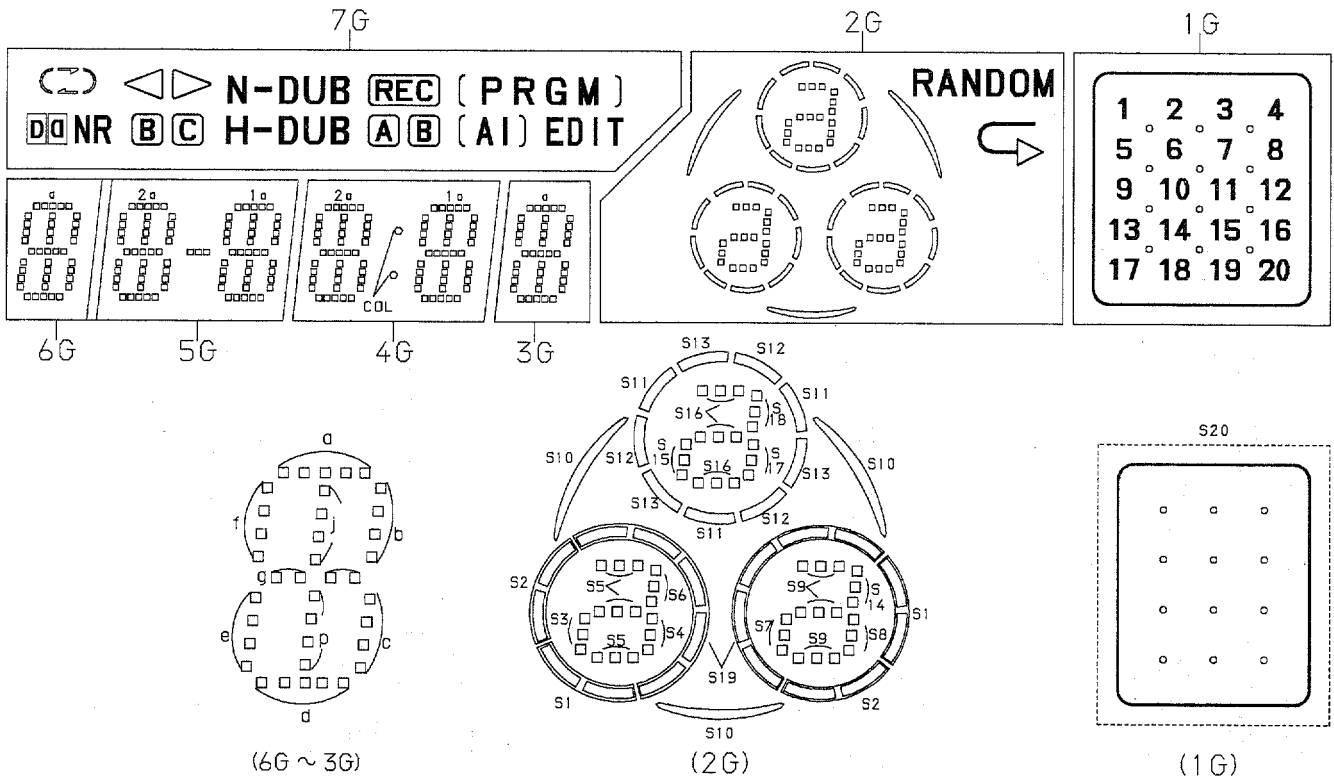
J





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

GRID ASSIGNMENT



ANODE CONNECTION

	7G	6G	5G	4G	3G	2G	1G
P1	NR	d	1d	1d	d	S1	20
P2	C	p	1p	1p	p	S2	19
P3	B	e	1e	1e	e	S3	18
P4	B (LEFT)	c	1c	1c	c	S4	17
P5	C	f	1f	1f	f	S5	16
P6	B (RIGHT)	g	1g	1g	g	S6	15
P7	PRGM	b	1b	1b	b	S7	14
P8	A	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	—	2q	2q	—	S14	7
P15	A	—	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	1
P21	—	—	—	—	—	RANDOM	S20

IC DESCRIPTION

IC, LC866424V-5B05

Pin No.	Pin Name	I/O	Description															
1	O-BEAT	O	REC beat output. (ON/ $\overline{\text{OFF}}$)															
2	O-HSP	O	High speed dubbing switch. (HIGH/ $\overline{\text{NORMAL}}$)															
3	O-DOLBY/ON	O	DOLBY IC switch output. (DOLBY ON/ $\overline{\text{OFF}}$)															
4	O-DOLBY/C	O	DOLBY IC mode switch output. (DOLBY B/ $\overline{\text{C}}$)															
5	O-CD/LED	O	Flash window output. (ON/ $\overline{\text{OFF}}$)															
6	O-SHIFT	O	Microprocessor clock shift out during tuner reception.															
7	$\overline{\text{RESET}}$	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/ $\overline{\text{SW}}$	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- $\overline{\text{AC/OFF}}$	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. <table border="1" style="display: inline-table; vertical-align: middle;"> <thead> <tr> <th></th> <th>AUX1</th> <th>AUX2</th> <th>TAPE</th> <th>CD</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>0</td> <td>1</td> <td>0</td> <td>1</td> </tr> <tr> <td>B</td> <td>0</td> <td>0</td> <td>1</td> <td>1</td> </tr> </tbody> </table>		AUX1	AUX2	TAPE	CD	A	0	1	0	1	B	0	0	1	1
	AUX1	AUX2	TAPE	CD														
A	0	1	0	1														
B	0	0	1	1														
27	O-R-SEL/A	O	Video signal switch. (VIDEO 1/2)															
28	O-R-SEL/B	O	REC output switch. (ON/ $\overline{\text{MUTE}}$)															
29	O-R-SEL/C	O	Monitor output switch. (VIDEO/ $\overline{\text{CDG}}$)															
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- $\overline{\text{SOL1}}$	O	Deck 1 plunger $\overline{\text{ON/OFF}}$ output.															

67	O-SOL2	O	Deck 2 plunger $\overline{\text{ON}}$ /OFF output.
68	O-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.

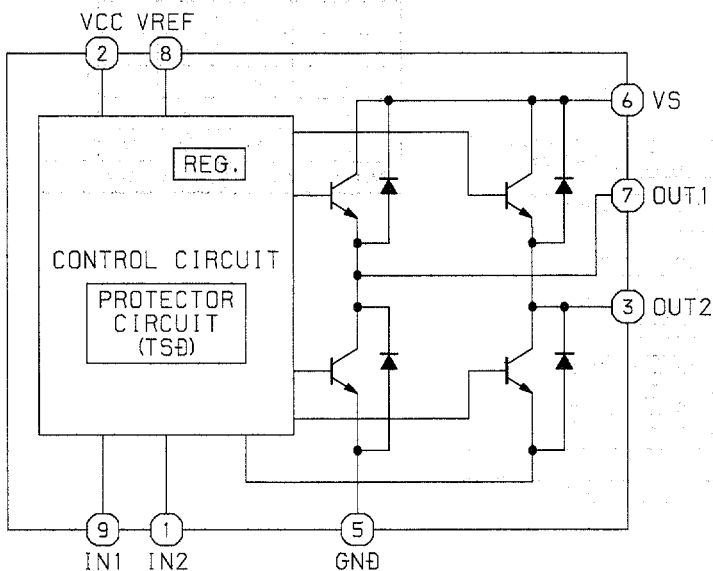
Pin No.	Pin Name	I/O	Description
42	LRCK	O	D/A interface, LR clock (FS) for 48-bit slot.
43	LRCKI	I	LR clock input to DAC. (48-bit slot)
44	PCMD	O	D/A interface, serial data. (2's complement, MSB first)
45	PCMDI	I	Audio data input to DAC. (48-bit slot)
46	BCK	O	D/A interface, bit clock.
47	BCKI	I	Bit 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)

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	This pin is connected to GND via capacitor when high frequency gain of the focus servo is attenuated.
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	ISET	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.
20	XLT	I	Latch input from CPU.
21	DATA	I	Serial data input from CPU.
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.
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. (Eye pattern check point)
32	RFM	I	RF summing amplifier inverted input pin. Gain of RF amplifier is determined by the resistor connected between RFO and this pin.

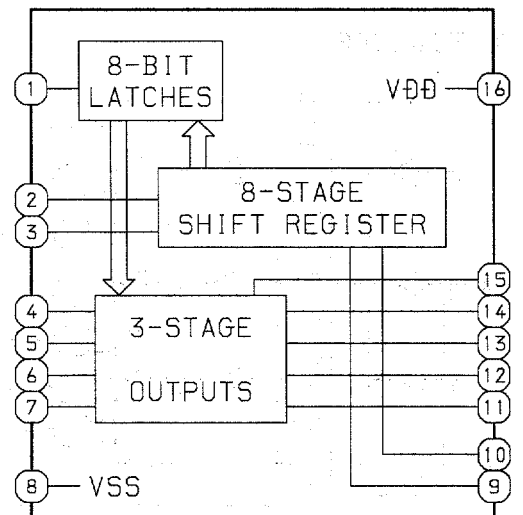
Pin No.	Pin Name	I/O	Description
33	LD	O	APC amplifier output pin.
34	PHD	I	APC amplifier input pin.
35~36	PHD1~2	I	RF I-V amplifier inverted input pin. These pins are connected to the A+C and B+D pins of the optical pickup.
37	FE BIAS	I	Bias adjustment pin of the focus error amplifier.
38~39	F~E	I	F and E I-V 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.
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

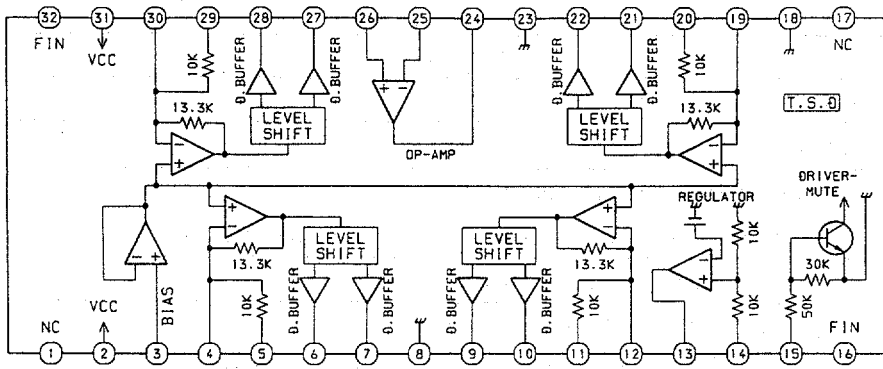
IC, TA7291S



IC, TC4094BF

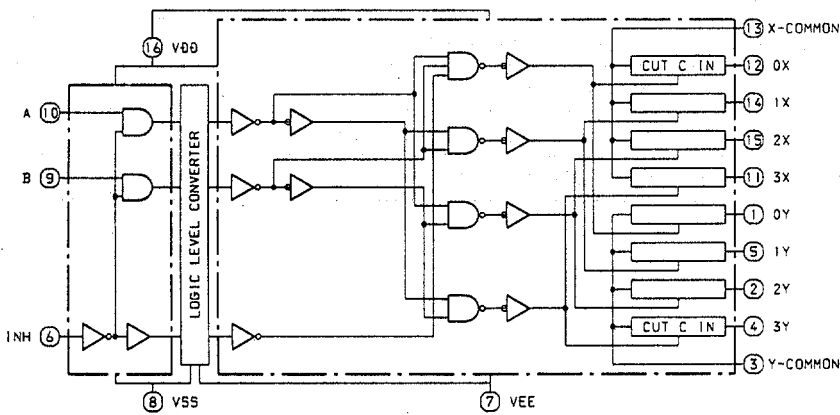


IC, BA6897S



T.S.D: THERMAL SHUT DOWN CIRCUIT
 D.BUFFER: DRIVE BUFFER

IC, TC4052BF

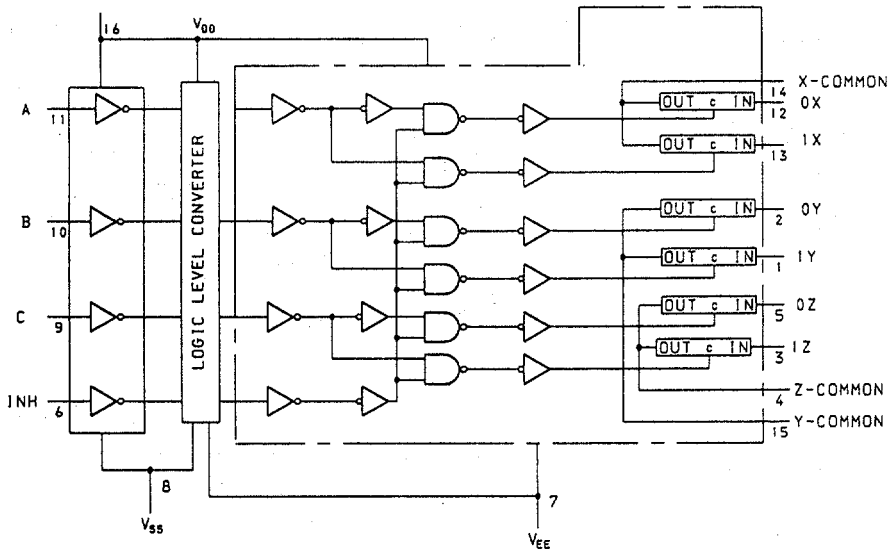


TRUTH TABLE

CONTROL INPUTS			
INHIBIT	C Δ	B	A
L	L	L	L
L	L	L	H
L	L	H	L
L	L	H	H
L	H	L	L
L	H	L	H
L	H	H	L
L	H	H	H
H	*	*	*

*: DON'T CARE Δ : EXPECT TC4052B

IC, TC4053BF



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 ▶▶ 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

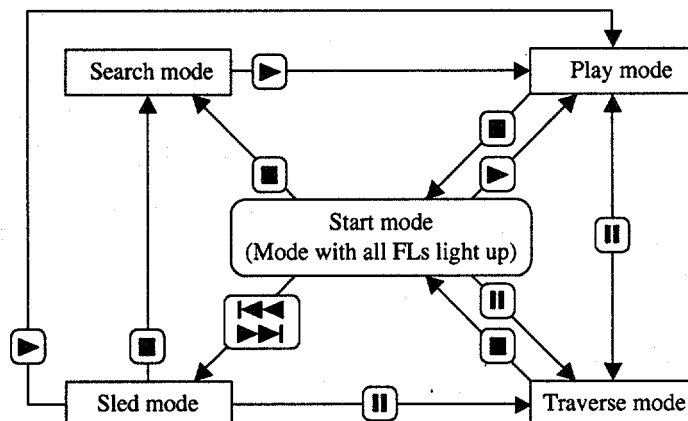
* NOTE 1: There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these cases, the power supply should be switched off for 10 minutes until heat 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.

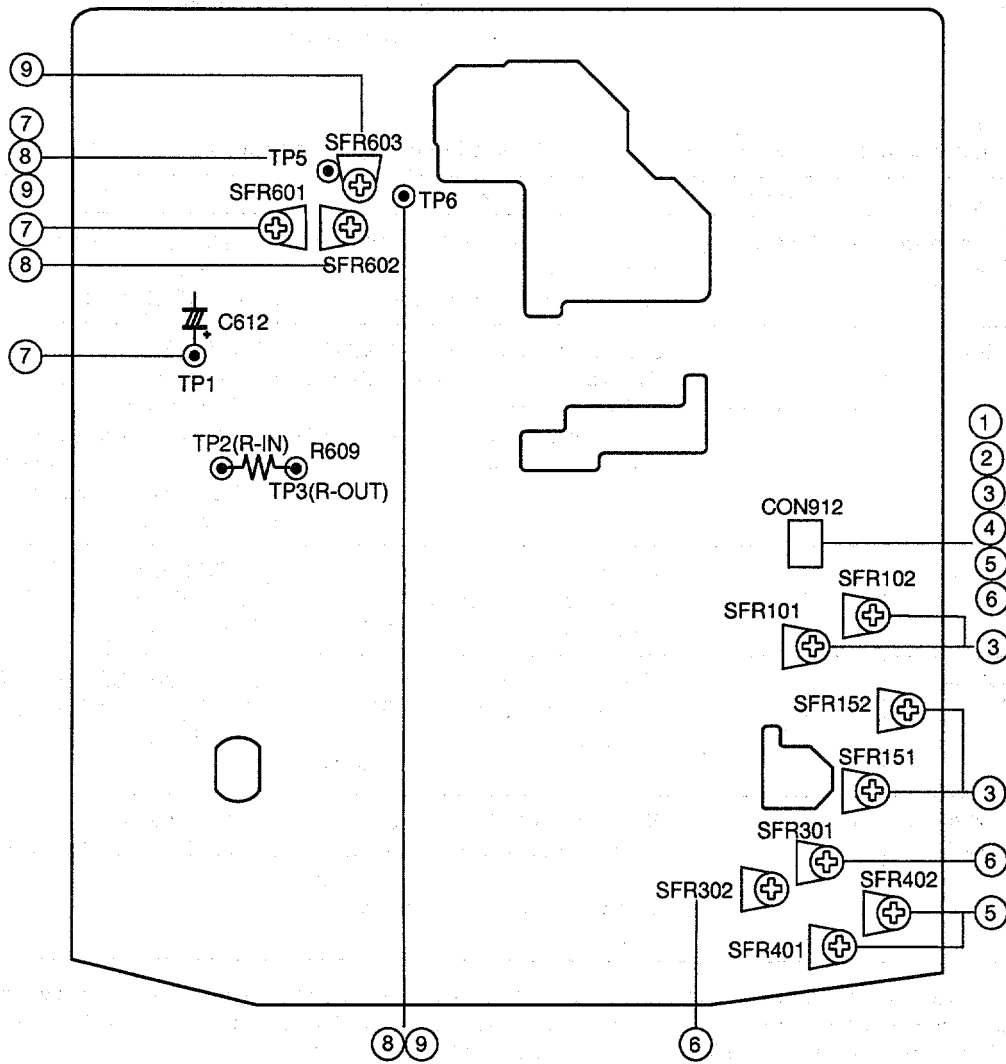
4. Operation Outline

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

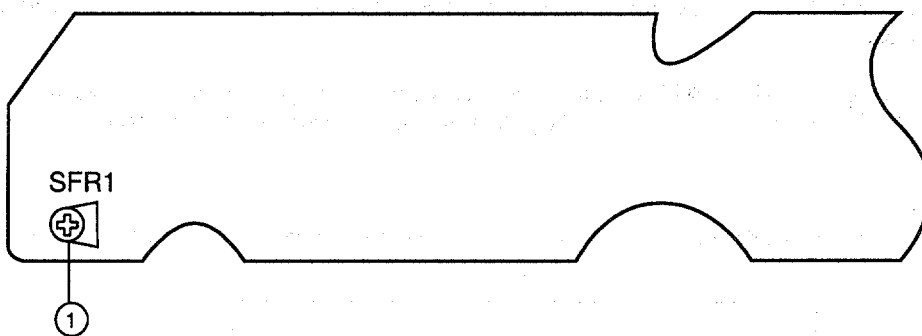


ADJUSTMENT <DECK>

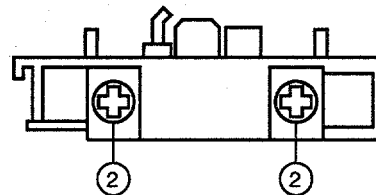
A MAIN C.B



E DECK C.B



DECK R / P E HEAD



< DECK SECTION >

1. Tape Speed Adjustment

- Settings :
- Test tape : TTA-100
 - Test point : TP CONN 3P(CON 912)
 - Adjustment location : SFR1

Method : Play back the test tape and check for $3000\text{Hz} \pm 5\text{Hz}$.

(NOTE) : RVS SIDE SPEED SPECIFICATION FWD
SIDE SPECIFICATION $\pm 45\text{Hz}$.

2. Head Azimuth Adjustment(DECK 1,2)

Settings : • Test tape : TTA-300

 - Test point : TP CONN 3P(CON912)
 - 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 Adjustment (DECK 1,2)

Settings : • Test tape : TTA-300

 - Test point : TP CONN 3P (CON 912)
 - Adjustment location : SFR 101 (Lch,DECK1)
SFR 102 (Rch,DECK1)
SFR 151 (Lch,DECK2)
SFR 152 (Rch,DECK2)

Method : Play back the test tape and adjust SFRs so that the output level becomes $300 \pm 5\text{mV}$

4. PB Frequency Response Check

Settings : • Test tape : TTA-300

 - Test point : TP CONN 3P (CON912)

Method : Play back the 315Hz and 10kHz signals of the test tape and check output difference to within $0\text{dB} \pm 2\text{dB}$, and the 10kHz signal with respect to that of the 315Hz signal is 2dB.

5. REC/PB Frequency Response Adjustment

Settings : • Test tape : TTA-602

 - Test point : TP CONN 3P (CON912)
 - Input signal : 1kHz / 10kHz (VIDEO2/AUX IN)
 - Adjustment 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 $0\text{dB} \pm 0.3\text{dB}$.

6. REC/PB Sensitivity Adjustment(DECK 2)

Settings : • Test tape : TTA-602

 - Test point : TP CONN 3P (CON 912)
 - Input signal : 1kHz (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(CON912) becomes 21mV. Record and play back the 1kHz signals and adjust SFRs that the output is $21\text{mV} \pm 0.3\text{dB}$.

PRACTICAL SERVICE FIGURE

<DECK SECTION>

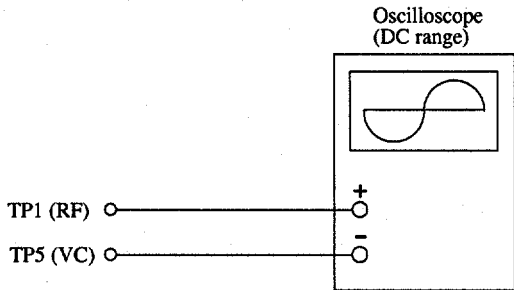
Tape speed :	3000Hz \pm 45Hz
Wow & flutter :	Less than 0.15% (W.R.M.S)
Take-up torque :	30 ~ 55g-cm (FWD REV)
F.F & REW torque :	75 ~ 160g-cm
Back tension :	2 ~ 7g-cm (FWD REV)
Distortion :	Less than 2.0% (REC/PB, AC)
Noise level(PB) :	Less than 1.2 / 0.4 mV (DOLBY OFF LINEAR/WTD,CrO2) Less than 1.8 / 0.6 mV (DOLBY OFF LINEAR/WTD,NORMAL) Less than 0.8 / 0.16 mV (DOLBY B LINEAR/WTD,CrO2) Less than 0.8 / 0.2 mV (DOLBY B LINEAR/WTD,NORMAL) Less than 0.6 / 0.06 mV (DOLBY C LINEAR/WTD,CrO2) Less than 0.6 / 0.08 mV (DOLBY C LINEAR/WTD,NORMAL)
Noise level(REC/PB) :	Less than 1.8 / 1.2 / 1.2 mV (DOLBY OFF LINEAR, NORMAL/CrO2/MT) Less than 0.8 / 0.8 / 0.8 mV (DOLBY B LINEAR, NORMAL/CrO2/MT) Less than 0.6 / 0.6 / 0.6mV (DOLBY C LINEAR, NORMAL/CrO2/MT)
Erasing ratio :	More than 60dB(at 125Hz)
Test tape :	TTA-602(NORMAL) TTA-615(CrO2) TTA-635(MT)

<CD SECTION>

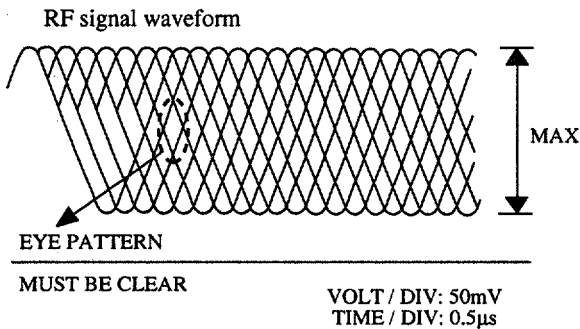
Note : Connect a probe (10:1) of the oscilloscope or the frequency counter to a test point.

7. Focus Bias Adjustment

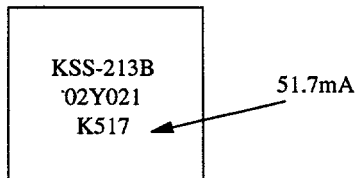
Make the focus bias adjustment when replacing and repairing the optical block.



- 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 the RF signal of the test point TP1 (RF) is MAX and CLEARREST.

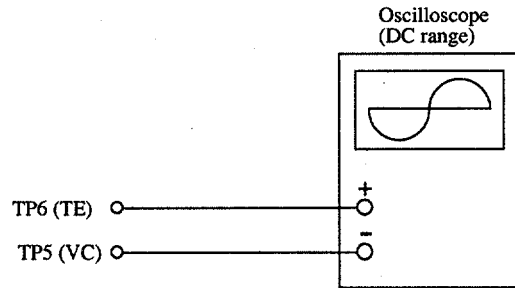


Note : The current of the laser signal can be checked with the voltages on both sides of R628 (10Ω). The difference for the specified value shown on the level must be within ± 6.0mA.

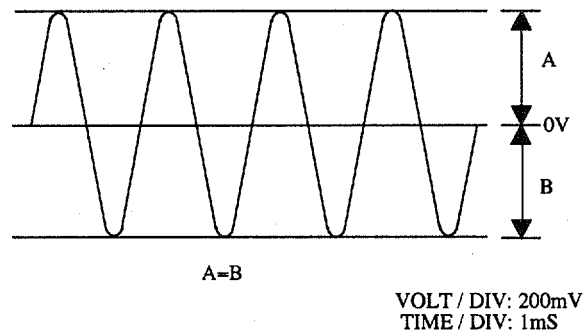


$$\text{Laser current } I_{op} = \frac{\text{Voltage across R628}}{10\Omega}$$

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) Cancel the CD test mode.



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 reciprocal, 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 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

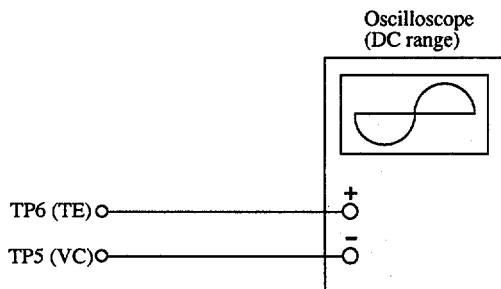
The following is simple adjustment method.

– Simple adjustment –

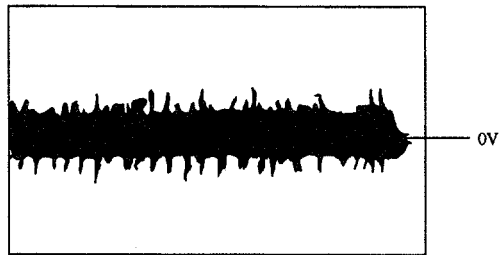
Note : Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment.

If the positions after the simple adjustment are only a little different, return the controls to the original position.

Procedure :



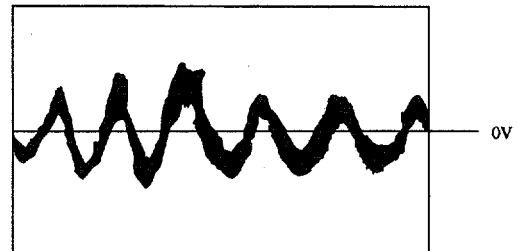
- 1) Keep the set horizontal. (If the set is not kept horizontally, this adjustment cannot be performed due to the gravity against the 2-axis device.)
- 2) Insert test disc TCD-782 (YEDS-18) and play back the second composition.
- 3) Connect an oscilloscope to TP6 (TE) of the 3CD MAIN C.B.
- 4) Adjust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



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

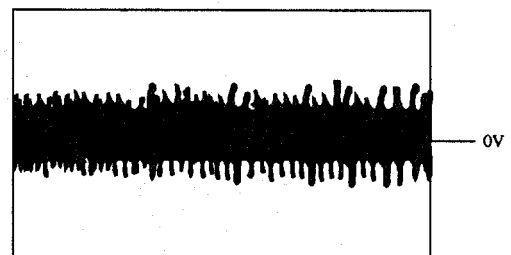
• Incorrect example

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



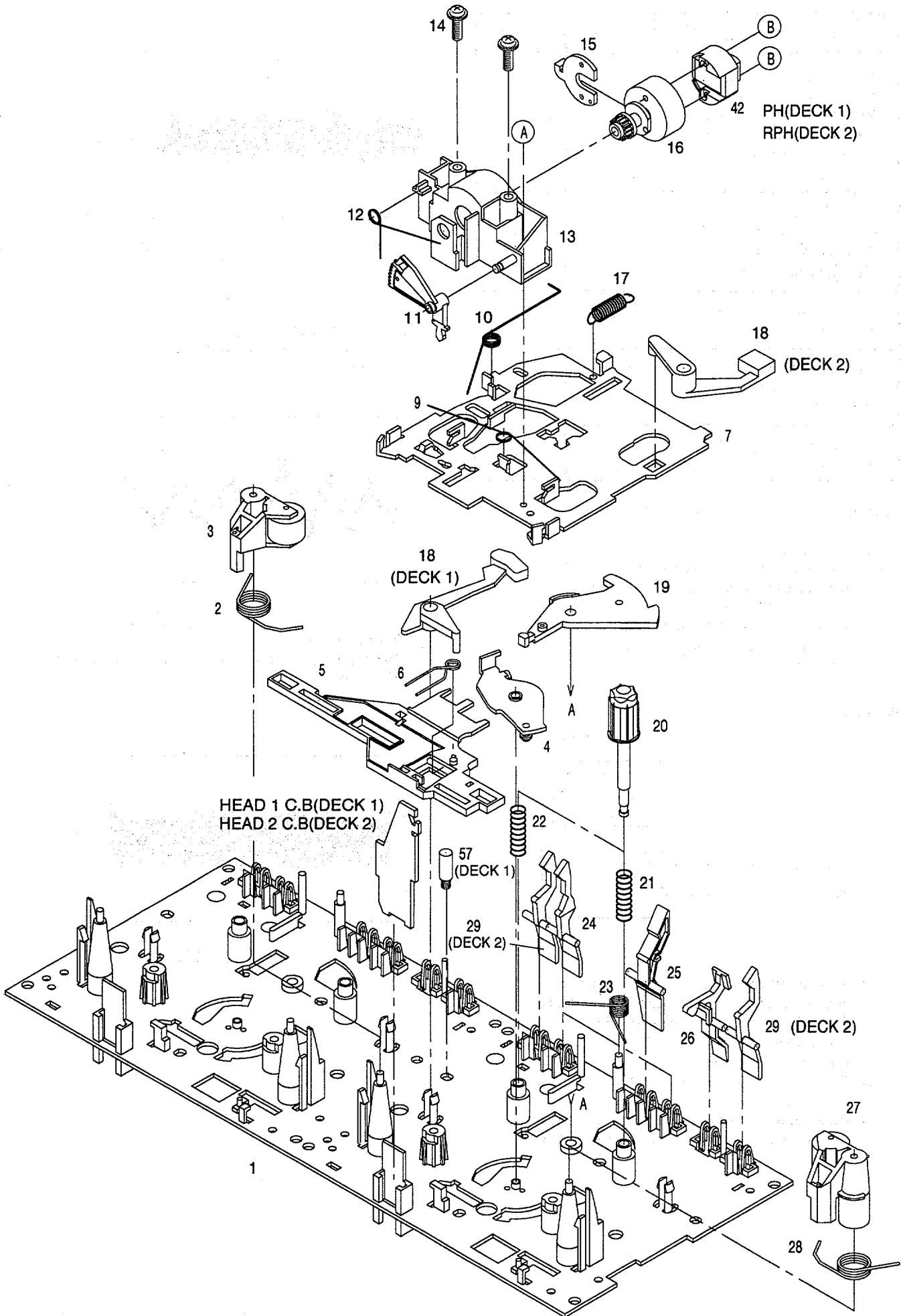
VOLT / DIV: 50mV
TIME / DIV: 1mS

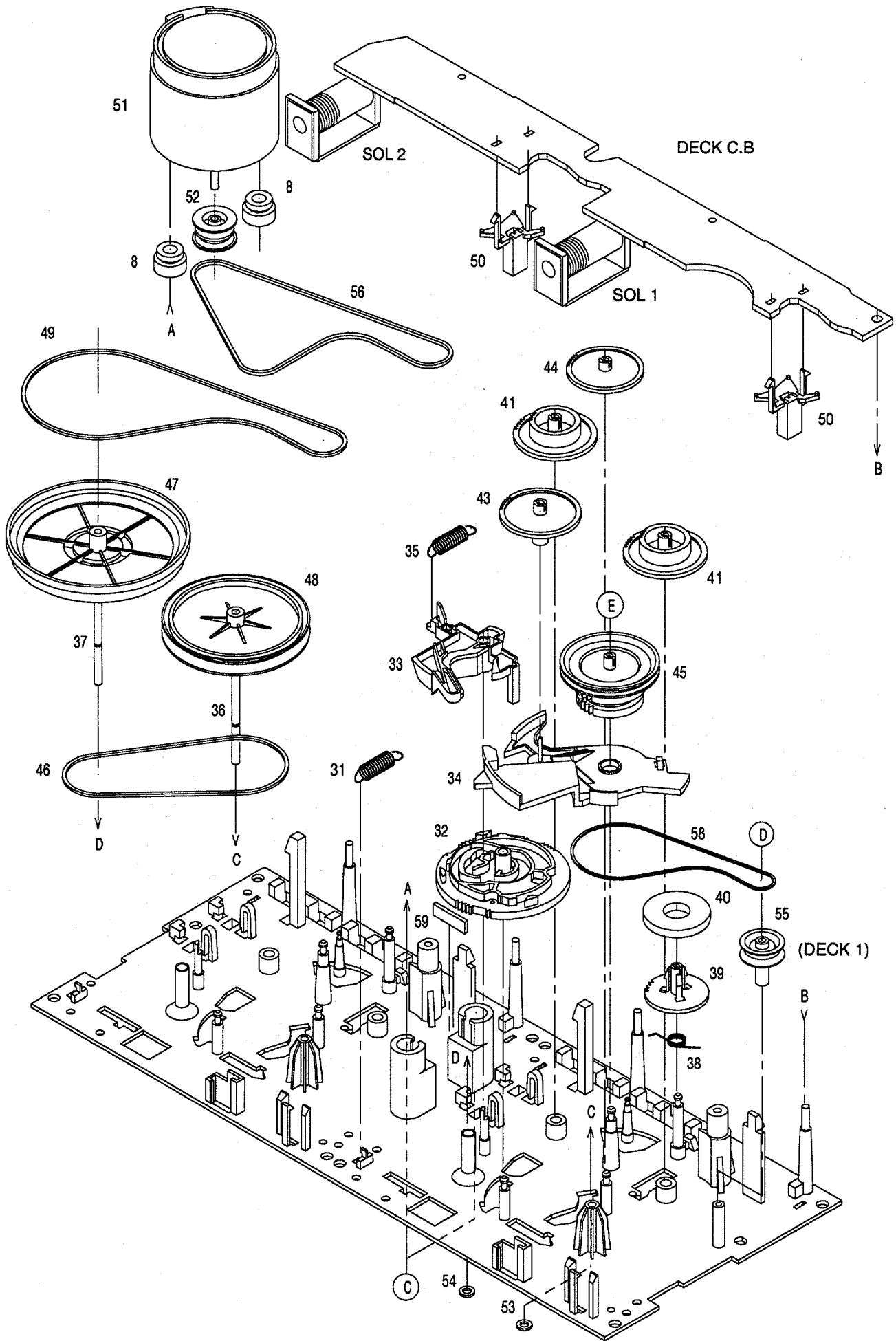
High tracking gain
(The frequency of the fundamental wave is higher than in low gain)



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

TAPE MECHANISM EXPLODED VIEW 1 / 1

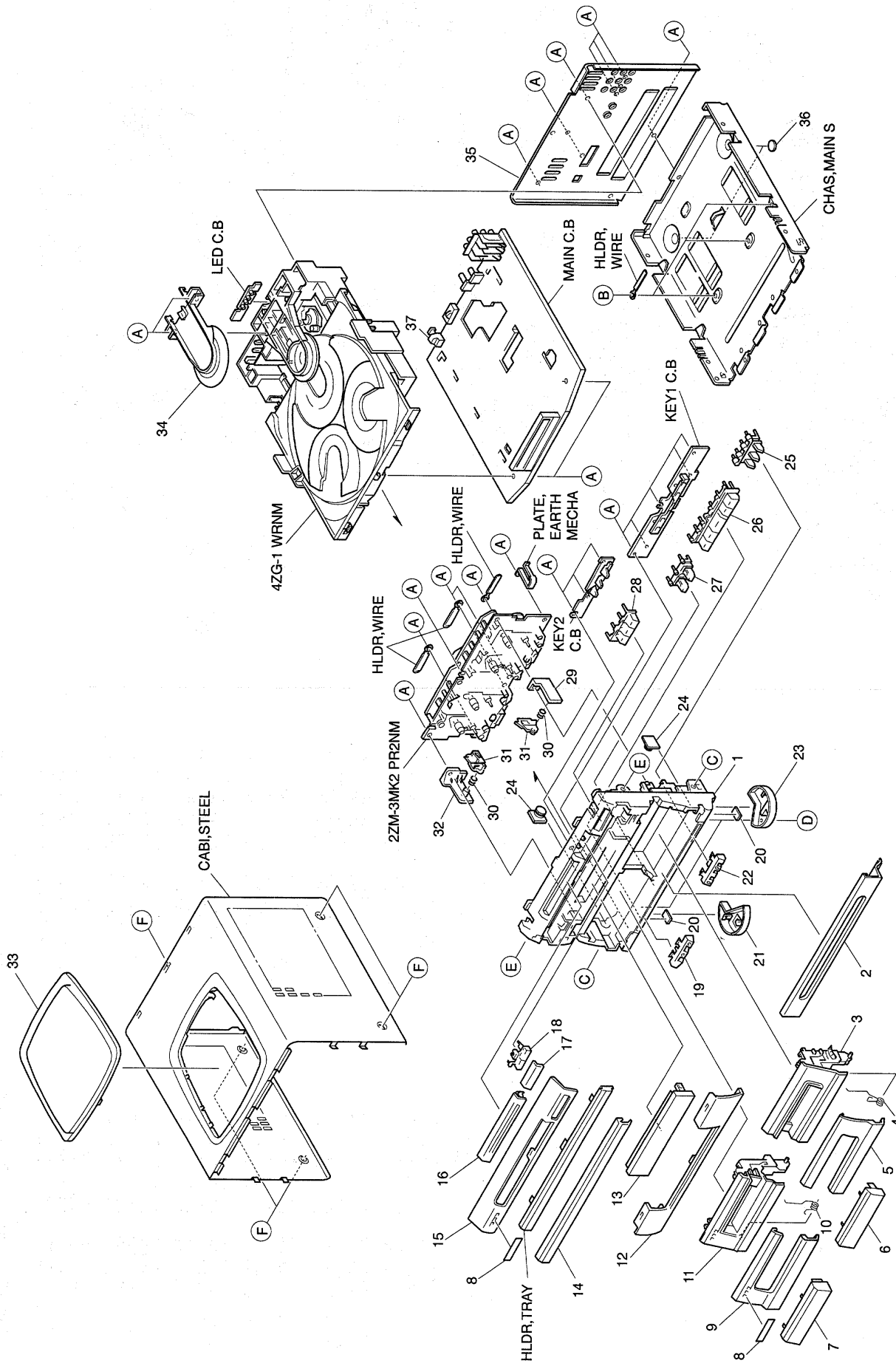




TAPE MECHANISM PARTS LIST 1 / 1

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM3-301-519		CHAS ASSY,M2	36	82-ZM1-236-019		CAPSTAN N 2-41.5
2	82-ZM1-258-110		SPR-T,PINCH L	37	82-ZM1-239-019		CAPSTAN N 2.2-41.7
3	82-ZM1-341-110		LVR ASSY,PINCH L2	38	82-ZM1-322-019		SPR-T,FR60
4	82-ZM1-333-010		PLATE,LINK 2	39	82-ZM1-220-219		GEAR,IDLER
5	82-ZM1-266-11K		LVR,DIR	40	82-ZM3-616-019		RING MAGNET 4
6	82-ZM1-214-010		SPR-T,DIR	41	82-ZM1-216-31K		GEAR,REEL
7	82-ZM1-206-81K		CHAS,HEAD	42	87-A90-319-010		HEAD,PH HADKH2 FPC
8	82-ZM3-307-019		CUSH-G,DIA3.7-8-3.2	42	87-A90-320-010		HEAD,RPH HADKH5 FPC
9	82-ZM1-269-219		SPR-T,BRG	43	82-ZM1-225-21K		GEAR,FR
10	82-ZM1-219-119		SPR-T,LINK	44	82-ZM1-226-019		GEAR,REW
11	82-ZM1-210-119		GEAR,H T	45	82-ZM3-333-310		SLIP DISK ASSY 2
12	82-ZM1-213-019		SPR-T,HEAD	46	82-ZM1-338-010		BELT FR4
13	82-ZM1-207-619		GUIDE,TAPE	47	82-ZM1-349-110		FLY-WHL,R W(DECK 2)
14	86-ZM4-206-010		S-SCREW,AZIMUTH	47	82-ZM3-338-110		FLY-WHL,R3 W(DECK 1)
15	82-ZM1-314-119		PLATE,HEAD	48	82-ZM1-348-010		FLY-WHL,L W(DECK 2)
16	82-ZM1-208-119		HLDR,HEAD	48	82-ZM1-348-010		FLY-WHL,L W(DECK 1)
17	82-ZM1-218-019		SPR-E,HB	49	82-ZM3-329-210		BELT,SBU R2
18	82-ZM1-263-110		LVR,EJECT L (DECK 1)	50	82-ZM1-245-210		HLDR,IC
18	82-ZM1-264-010		LVR,EJECT R (DECK 2)	51	87-045-347-019		MOT,SHU2L 70(M1)
19	82-ZM1-222-21K		LVR,PLAY	52	82-ZM3-221-010		PULLEY,MOT 2M
20	82-ZM1-217-319		REEL TABLE	53	82-ZM1-288-019		SH,1.63-3.2-0.5 SLT
21	82-ZM1-244-510		SPR-C,BT	54	80-ZM6-243-019		SH,1.75-3.6-0.5 SLT
22	82-ZM1-285-310		SPR-C,BT L	55	82-ZM3-335-210		PULLEY,COUPLER M3(DECK 1)
23	82-ZM1-257-019		SPR-T,CAS	56	82-ZM3-337-010		BELT,SBU MOT 2
24	82-ZM1-241-319		LVR,MC	57	82-ZM3-339-010		SHAFT,COUPLER N3(DECK 1)
25	82-ZM1-242-019		LVR,CAS	58	86-ZM1-206-010		BELT,MAIN L
26	82-ZM1-243-019		LVR,STOP	59	82-ZM3-340-010		SH,BELT D2
27	82-ZM1-344-110		LVR ASSY,PINCH R2	A	85-ZM3-202-010		S-SCREW,TG
28	82-ZM1-259-110		SPR-T,PINCH R	B	80-ZM6-207-019		V+1.6-7
29	82-ZM1-240-11K		LVR,REC (DECK 2)	C	82-ZM3-318-019		S-SCRW MOTOR M2
31	82-ZM1-255-319		SPR-E,LVR DIR	D	87-B10-043-010		W-P,0.99-4-0.25 SLT
32	82-ZM3-305-01K		GEAR,CAM M2	E	82-ZM3-334-010		PW,2.16-6-0.4
33	82-ZM1-227-21K		LVR,TRIG				
34	82-ZM3-306-11K		LVR,FR M2				
35	82-ZM1-265-119		SPR-E,TRIG				

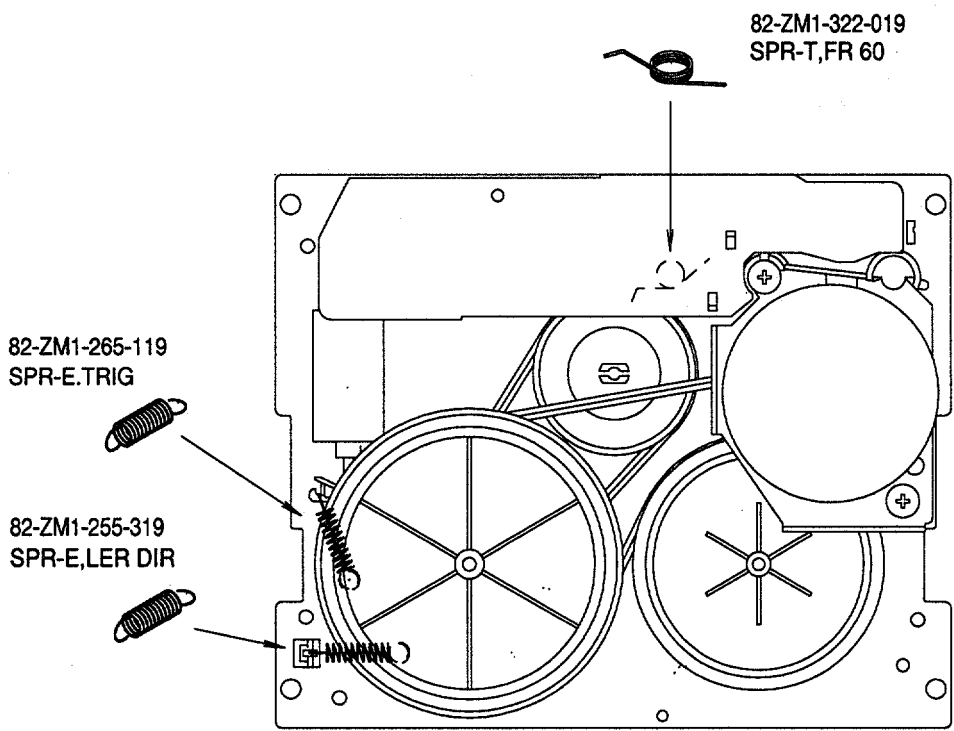
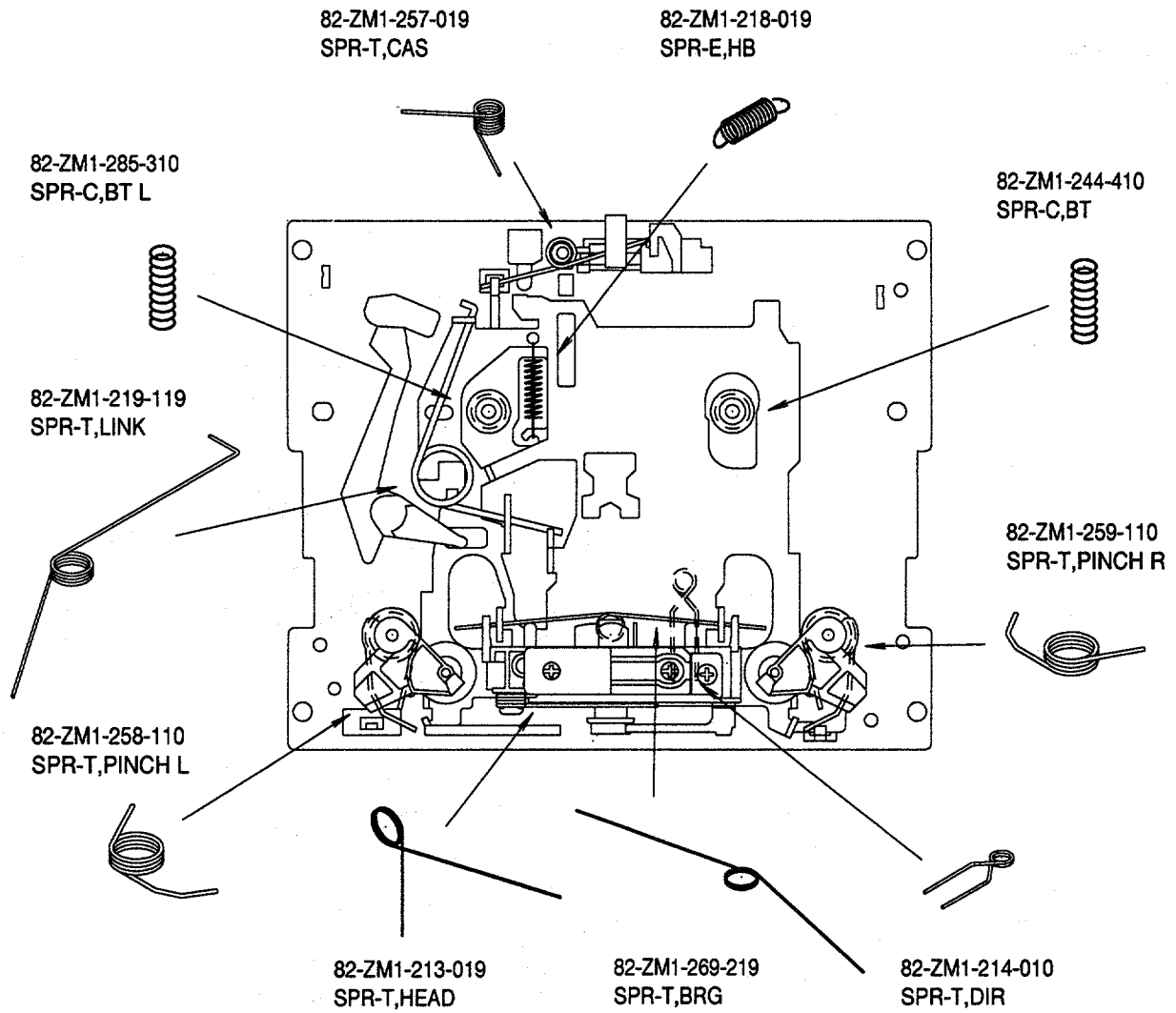


MECHANICAL PARTS LIST 1 / 1

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-NV1-001-010		CABI, FR	26	87-NV1-023-010		KEY, ASSY OPE
2	87-NV1-045-010		PANEL, CONTROL	27	87-NV1-013-010		KEY, REC
3	87-NV1-004-010		BOX, CASS 2	28	87-NV1-012-010		KEY, DISC
4	83-NV4-202-110		SPR-T, EJECT 2	29	87-NF4-217-010		HLDR, LOCK 2
5	87-NV1-044-010		PANEL, CASS 2	30	82-NF5-228-010		SPR-C, LOCK
6	87-NV1-009-010		WINDOW, CASS 2	31	82-NF5-229-010		PLATE, LOCK
7	87-NV1-008-010		WINDOW, CASS 1	32	87-NF4-216-010		HLDR, LOCK 1
8	87-B00-002-010		BADGE, AIWA 30 ABS SIL	33	86-NF6-007-010		WINDOW, TOP
9	87-NV1-043-010		PANEL, CASS 1	34	84-ZG1-011-010		REFLECTOR, CD
10	83-NV4-201-110		SPR-T, EJECT 1	35	87-NV1-002-010		PANEL, REAR YSNM
11	87-NV1-003-010		BOX, CASS 1	36	82-NV1-213-010		FELT, DIA12-2
12	87-NV1-042-010		PANEL, DISPLAY	37	84-ZG1-244-210		CABI, OPTICAL
13	87-NV1-006-010		WINDOW, DISPLAY	A	87-067-703-010		TAPPING SCREW, BVT2+3-10
14	87-NV1-041-010		PANEL, TRAY	B	87-571-092-410		TAPPING SCREW, VIT+3-4
15	87-NV1-040-010		PANEL, CD	C	87-591-094-410		TAPPING SCREW, QIT+3-6
16	87-NV1-007-010		WINDOW, CD	D	87-067-777-010		BVTT+3-6 BLK W/CONVEX
17	87-NV1-046-010		PANEL, OPEN	E	87-721-097-410		QT2+3-12 GLD
18	87-NV1-011-010		KEY, OPEN	F	87-067-641-010		UTT2+3-8(W/O SLOT)BL
19	87-NV1-047-010		PANEL, KEY REC				
20	80-VT1-202-010		FELT, 12.5-15.5-2				
21	87-NT1-015-010		RING, FOOT L				
22	87-NV1-048-010		PANEL, KEY DOLBY				
23	87-NT1-035-010		RING, FOOT R				
24	87-063-165-010		OIL-DMPR 150				
25	87-NV1-014-010		KEY, DOLBY				

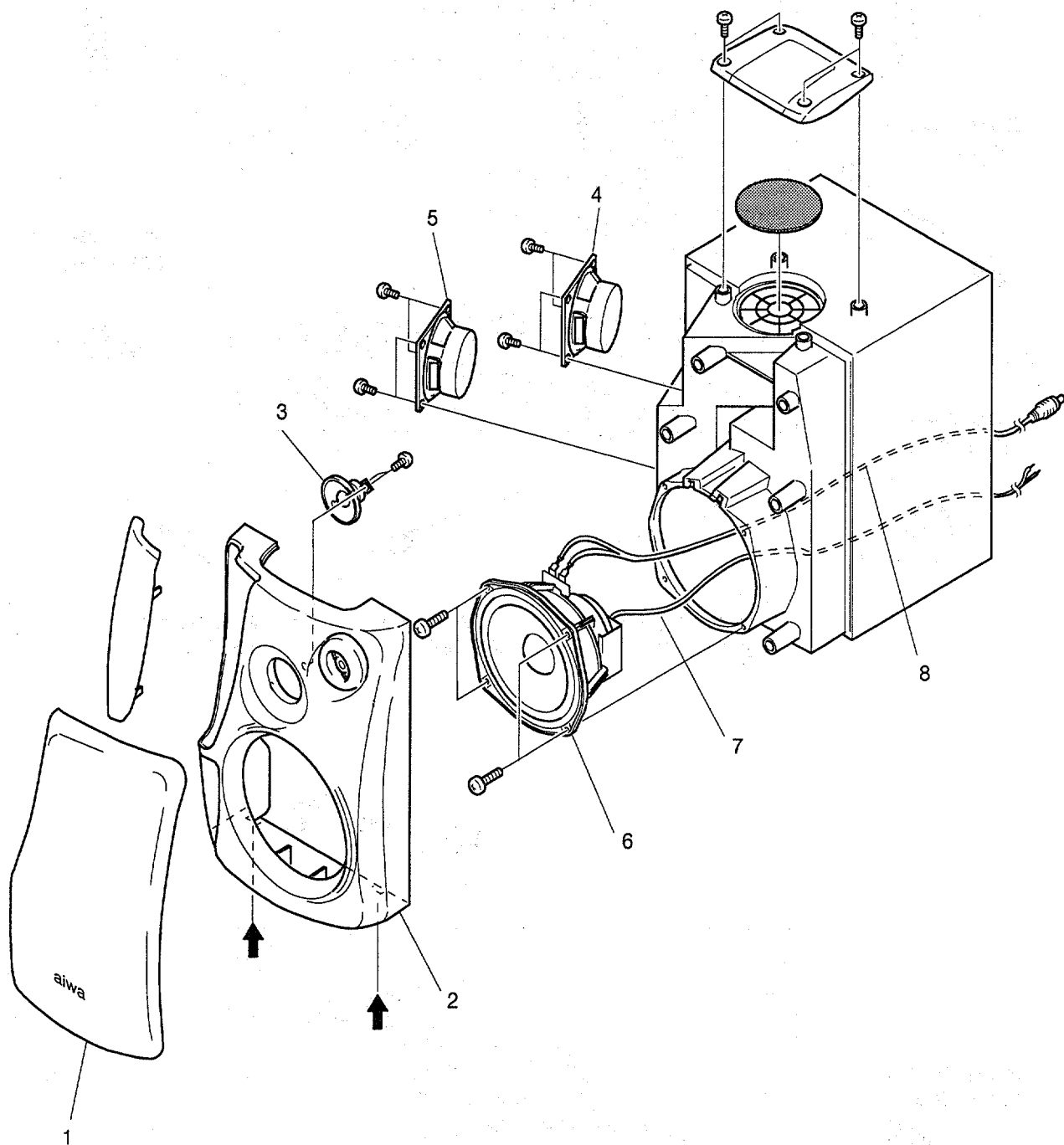
SPRING APPLICATION POSITION



MODEL NO. SX-ANH100

SPEAKER EXPLODED VIEW 1 / 1

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



SPEAKER PARTS LIST 1 / 1 (SX-ANH100)

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-NS1-007-010		GRILLE, FRAME ASSY R	4	86-NS4-606-010		SPKR, F 80
1	87-NS1-009-010		GRILLE, FRAME ASSY L	5	86-NS4-604-010		SPKR, M 80
2	87-NS1-001-010		PANEL, FR ST R	6	86-NS1-602-010		SPKR, W140
2	87-NS1-002-010		PANEL, FR ST L	7	85-NS6-611-019		SPEAKER CORD Y/B
3	86-NS4-608-010		SPKR, T 50	8	83-NS5-613-019		SPEAKER CORD ASSY

ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-NT1-906-010		IB, E(EGFSI)E
2	85-NF5-631-010		RC-T501
3	87-006-225-010		AM LOOP ANT NC2
4	87-043-106-010		WIRE, FM ANT (Z)

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
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

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

サービス技術ニュース	
番号	連絡内容
G-	-
G-	-
G-	-

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