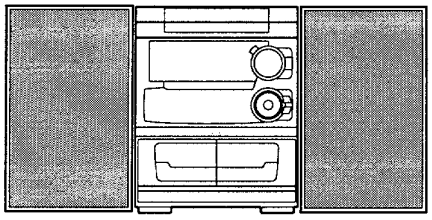
aiwa

aiwa SERVICE

NSX-AV326

SERVICE MANUAL



COMPACT DISC STEREO
CASSETTE RECEIVER

- BASIC TAPE MECHANISM : 2ZM–3MK2 YPR4N
- BASIC CD MECHANISM : 4ZG–1 Z4DSHNC
- TYPE : EZ

SUPPLEMENT

SYSTEM	CD – CASSEIVER	SPEAKER	REMOTE CONTROLLER
NSX–AV326	CX–NAV326	SX–NAV304 SX–R275 SX–C605	RC–8AS04

- This Service Manual contains information about the difference between NSX-AV326(EZ) and NSX-AV320(EZ). If requiring the other information, see Service Manual of NSX-AV320(EZ,K). (S/M Code No. 09-986-273-5FE)

- If requiring information about the CD mechanism, see Service Manual of 4ZG-1, S/M Code No. 09-983-249-3OT.

S/M Code No. 09–988–292–6FE

SPECIFICATIONS

<FM Tuner section>

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

<MW Tuner section>

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

<LW Tuner section>

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

<Amplifier section>

Power output	**Front** Rated: 30 W + 30 W (6 ohms, THD 1%, 1kHz/DIN 45500) Reference: 37 W + 37 W (6 ohms, THD 10%, 1kHz/DIN 45324) DIN MUSIC POWER: 75 W + 75 W **Rear (Surround)** Rated : 10 W + 10 W (8 ohms, THD 1%,1 kHz/DIN 45500) Reference: 12.5 W + 12.5 W (8 ohms,THD 10%, 1kHz/DIN 45324) DIN MUSIC POWER: 42.5 W + 42.5 W **Center** Rated: 20 W (8 ohms,THD 1%, 1 kHz/DIN 45500) Reference: 25 W (8 ohms, THD 10%, 1kHz/DIN 45324) DIN MUSIC POWER: 54 W
Total harmonic distortion	0.1% (15 W, 1kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX : 400 mV
Outputs	SPEAKERS: accept speakers of 6 ohms or more SUPER WOOFER : 1.3V SURROUND SPEAKERS : accept speakers of 8 ohms to 16 ohms CENTER SPEAKER : accept speaker of 8 ohms or more PHONES (stereo jack) : accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	50 Hz - 15000 Hz
Recording system	AC bias
Heads	Deck 1 : Playback head x 1 Deck 2 : Recording/playback/ erase head x 1

<Compact disc player section>

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

<Speaker system SX–NAV304>

Cabinet type	2 way, bass reflex (magnetic shielded type)
Speakers	Woofer : 160 mm cone type Tweeter : 60 mm cone type
Impedance	6 ohms
Output sound pressure level	87 dB/W/m
Dimensions (W x H x D)	235 x 324 x 260 mm
Weight	4.1 kg

<General>

Power requirements	230 V AC, 50Hz
Power consumption	150 W
Dimensions of main unit (W x H x D)	260 x 330 x 346 mm
Weight of main unit	7.5 kg

- Design and specifications are subject to change without notice.
- Manufactured under license from Dolby Laboratories Licensing Corporation.

"DOLBY" and "PRO LOGIC" are trademarks of DolbyLaboratories Licensing Corporation.

ELECTRICAL MAIN PARTS LIST

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	88-NFV-609-010		C-IC,UPD780228-030-3BA
TRANSISTOR			
	87-A30-137-010		TR,2SD2494
	87-A30-138-010		TR,2SB1625
	87-026-463-080		TR,2SA933SRS
DIODE			
	87-A40-269-080		DIODE,MC2826
	87-A40-270-080		C-DIODE,MC2828
	87-020-465-080		C-DIODE,1SS133
MAIN C.B			
C613	87-016-081-080		CHIP CAPACITOR,0.1-16 RK
C614	87-016-081-080		CHIP CAPACITOR,0.1-16 RK
C793	87-010-181-080		C-CAP,S 1800P
FRONT C.B			
CON301	87-099-017-010		CONN,15P 6216 V
LED207	87-070-281-080		LED,SLZ736A-25H-S-T1 P-GRN
LED212	87-070-281-080		LED,SLZ736A-25H-S-T1 P-GRN

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
AC2 C.B			
⚠ PR101	87-A90-195-080		PROTECTOR,7A 491 SERIES 60V
⚠ PR102	87-A90-195-080		PROTECTOR,7A 491 SERIES 60V
DECK C.B			
CON105	87-099-756-019		CONN, 15P 9604 S F
SFR1	87-024-581-019		SFR,3.3K DIA 6H
SOL1	82-ZM1-618-410		SOL ASSY, 27
SOL2	82-ZM1-618-410		SOL ASSY, 27
SW1	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW2	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW3	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW4	87-036-110-010		SW,MICRO SPPB62
SW5	87-036-110-010		SW,MICRO SPPB62
SW6	87-036-110-010		SW,MICRO SPPB62
SW8	87-A90-248-019		SW,MICRO ESE11SH2CXQ
SW9	87-A90-248-019		SW,MICRO ESE11SH2CXQ
W001	82-ZM3-601-019		RBN,CORD,4P-75
HEAD-1 C.B			
HEAD-2 C.B			
CON351	87-NF6-616-010		CONN ASSY,8P-RPB

TRANSISTOR ILLUSTRATION

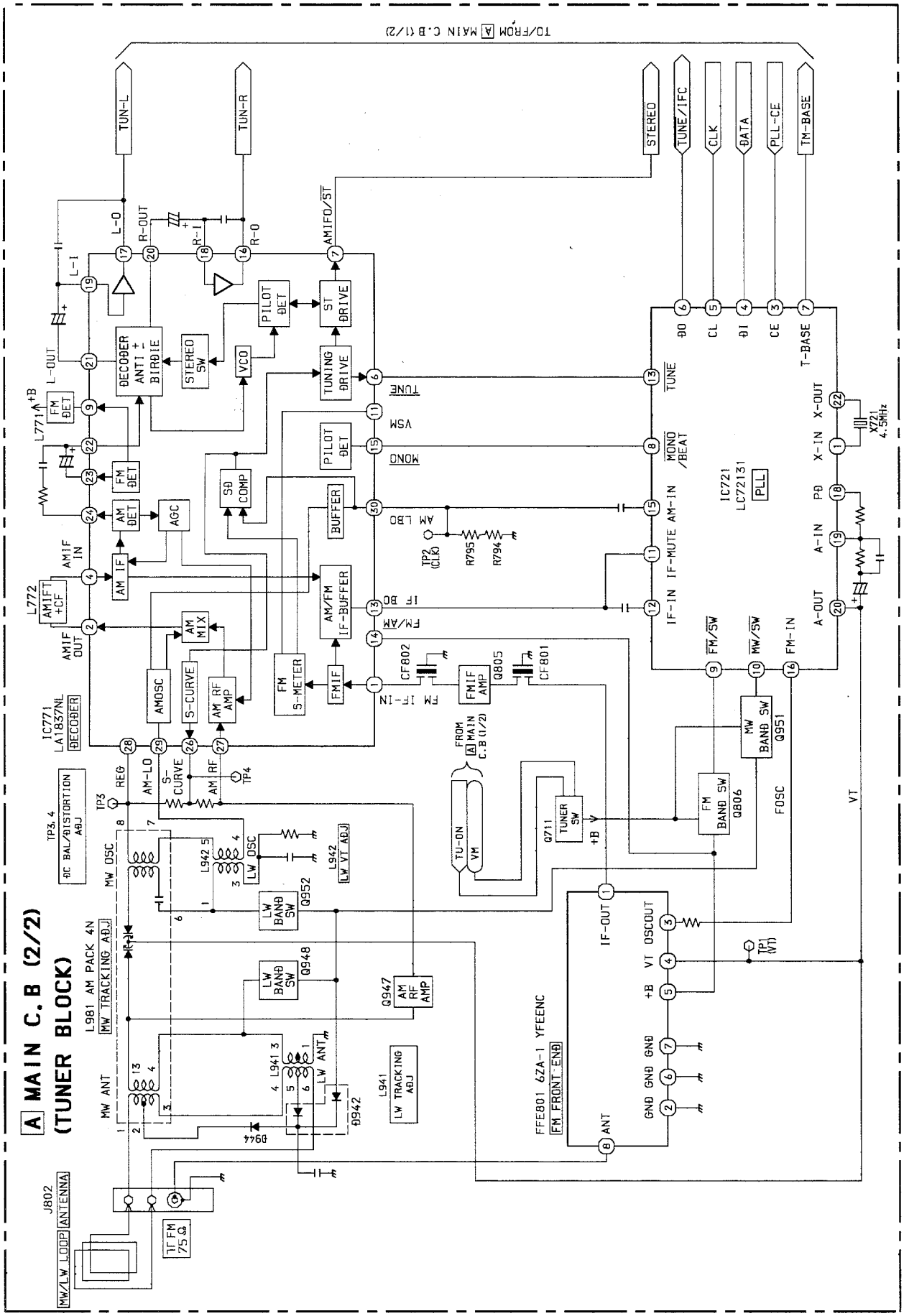
B C E

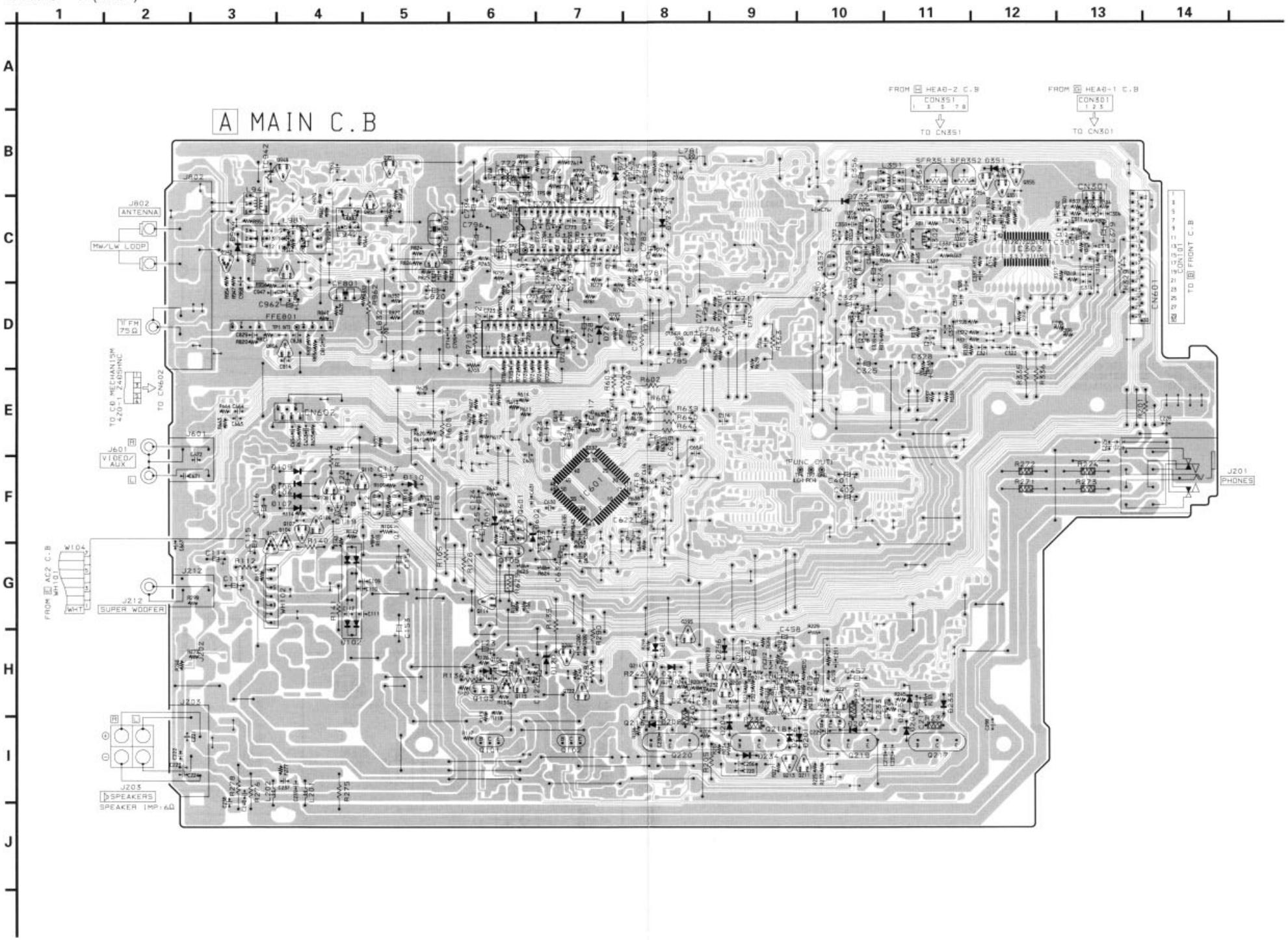
2SD2494
2SB1625

E C B

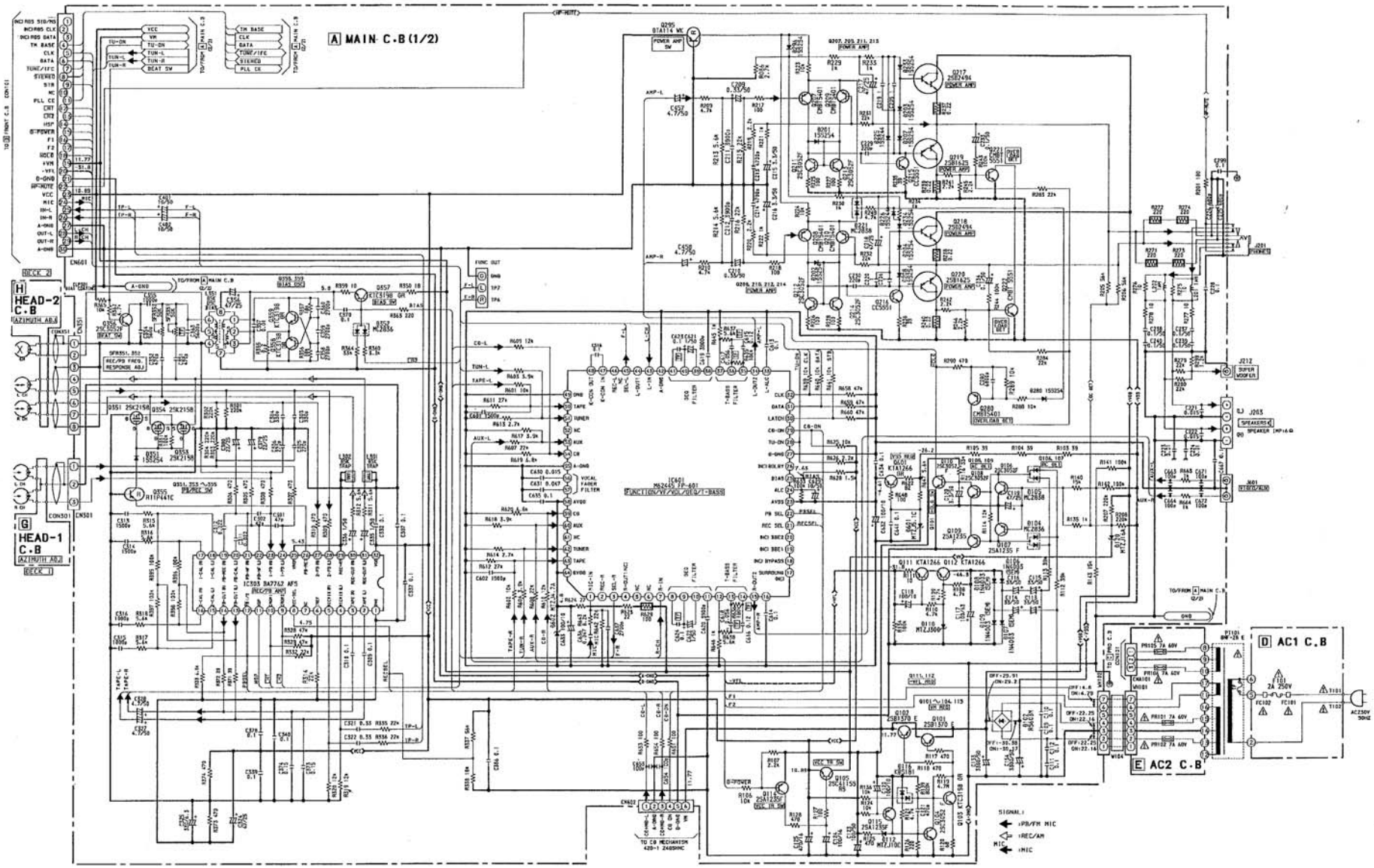
2SA933S

BLOCK DIAGRAM (TUNER)

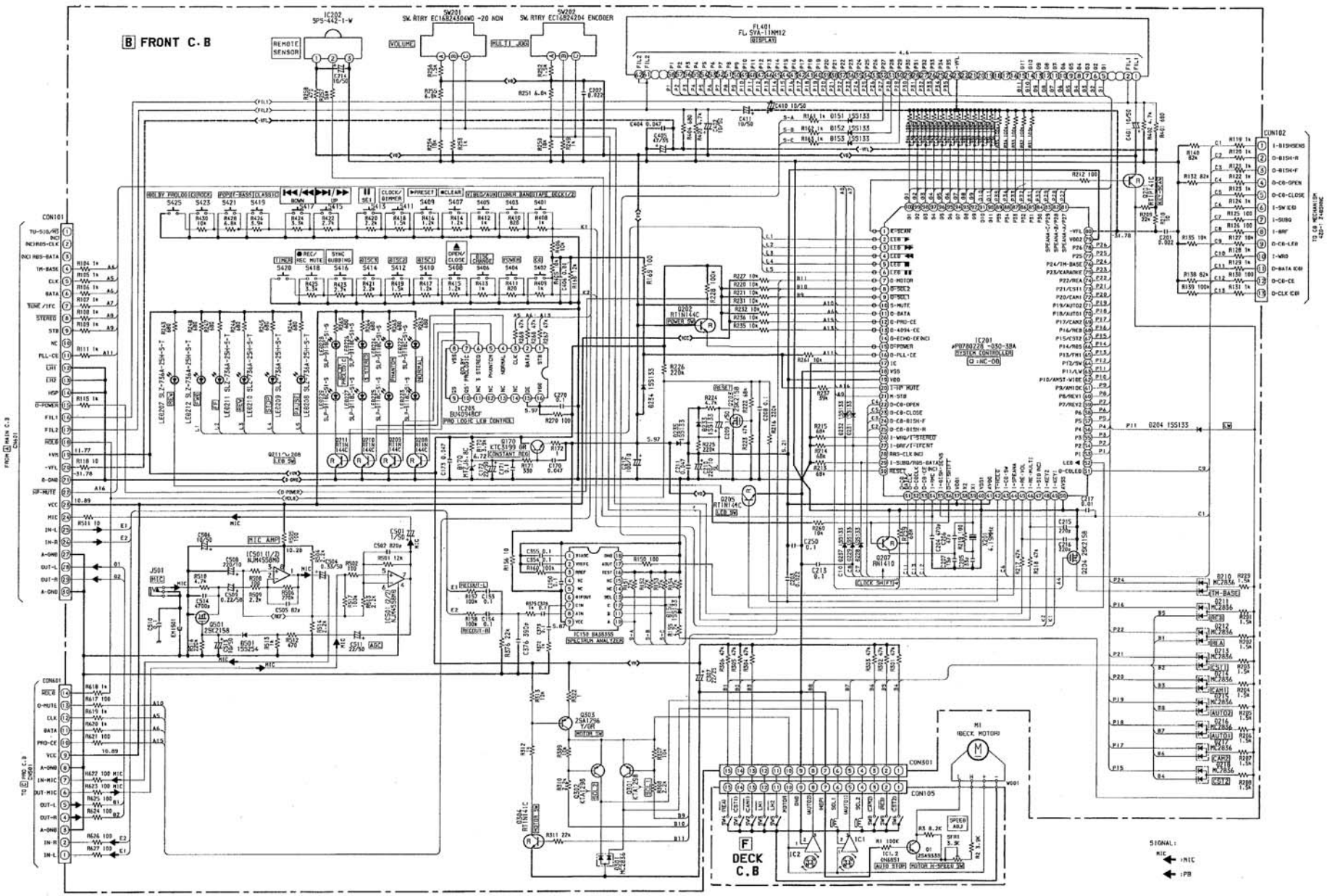


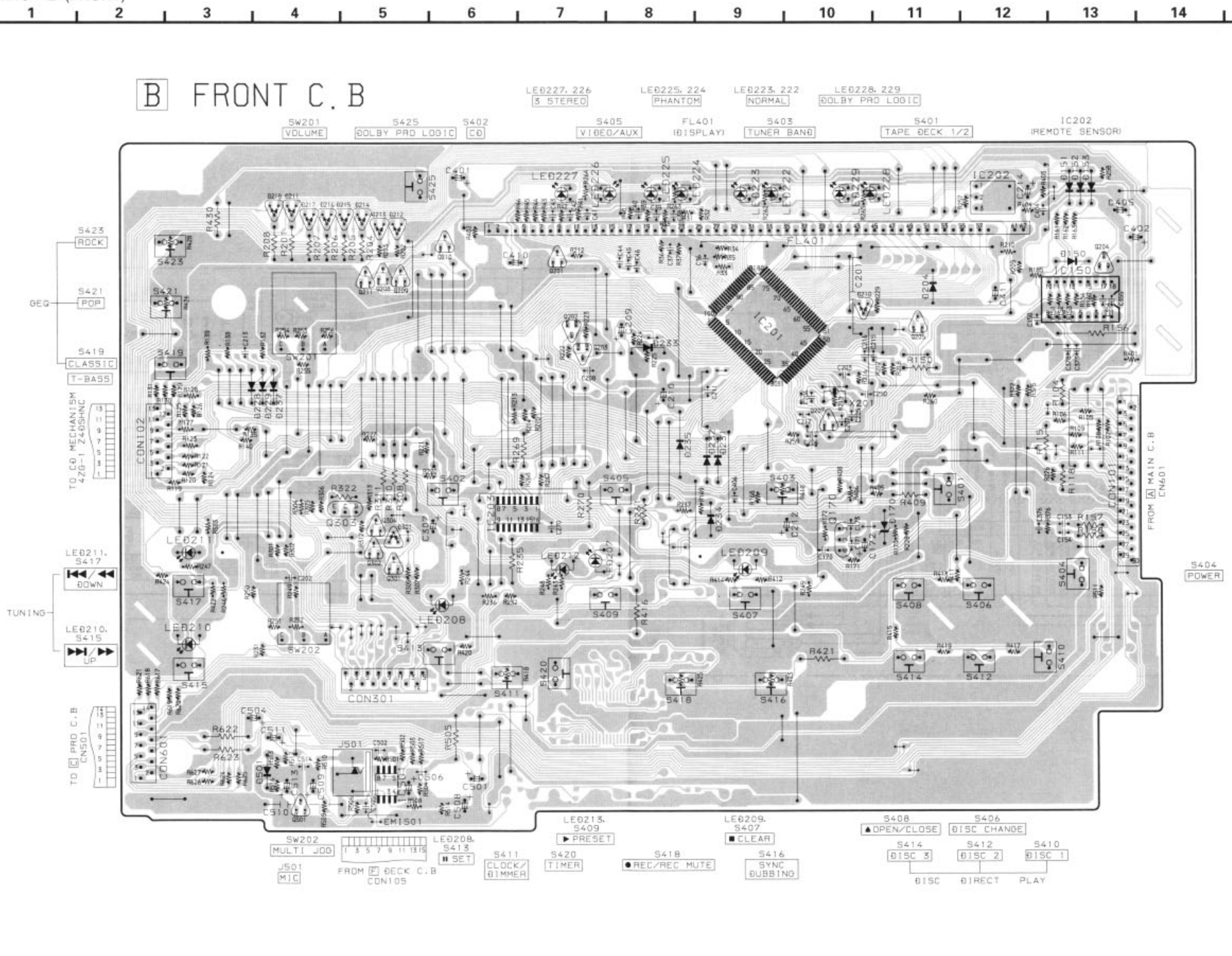

A MAIN C.B
FROM H HEAD-2 C.B
CON351
TO CN351
FROM K HEAD-1 C.B
CON301
TO CN301
J802
ANTENNA
MW/LW LOOP
FM 75Ω
TO CD MECHANISM 420-1 240SHNC
TO CN602
J601
VIDEO/ AUX
FROM AC2 C.B WH101
WHT
J212
SUPER WOOFER
J203
SPEAKERS
SPEAKER IMP:6Ω
TO B FRONT C.B
CON101
J201
PHONES
IC501
IC502
Q219
Q220

SCHEMATIC DIAGRAM – 1 (MAIN 1 / 2)

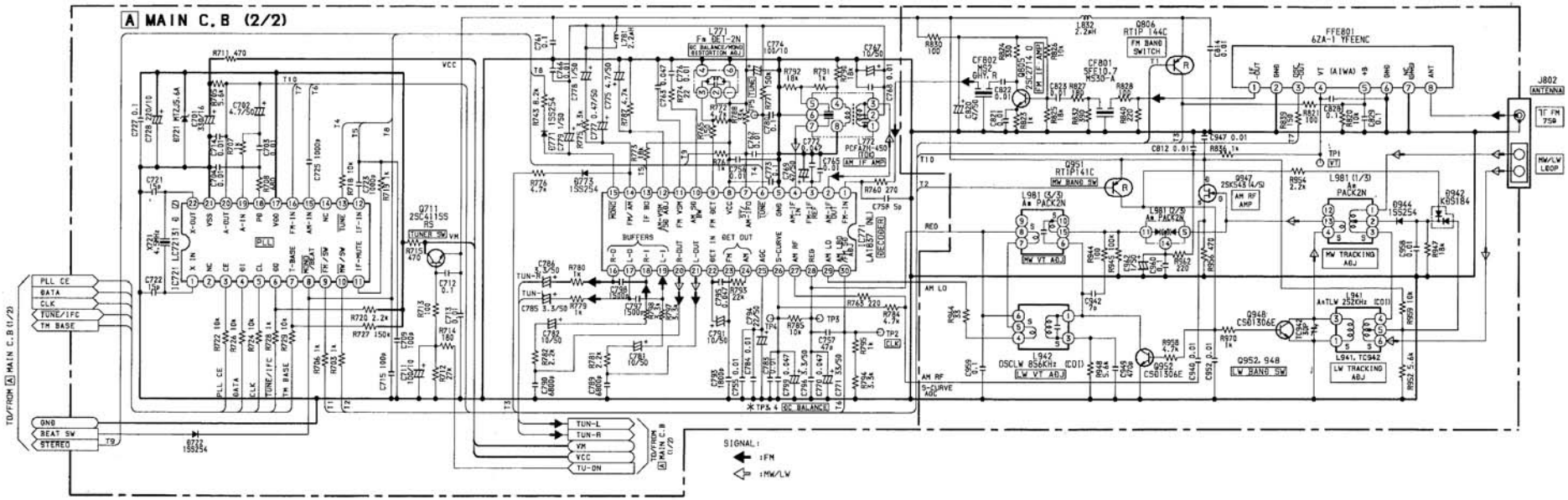


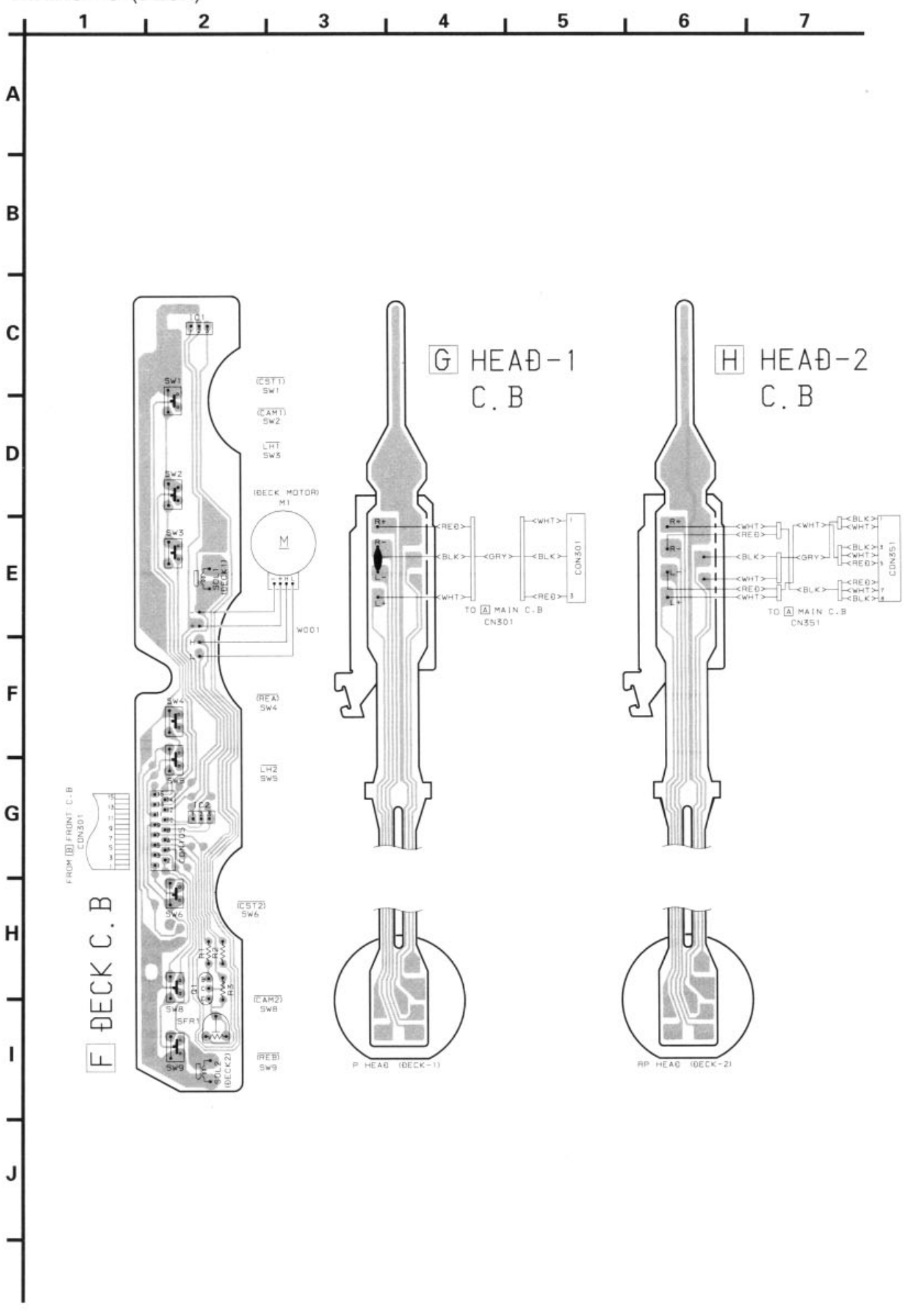
SCHEMATIC DIAGRAM – 2 (FRONT)

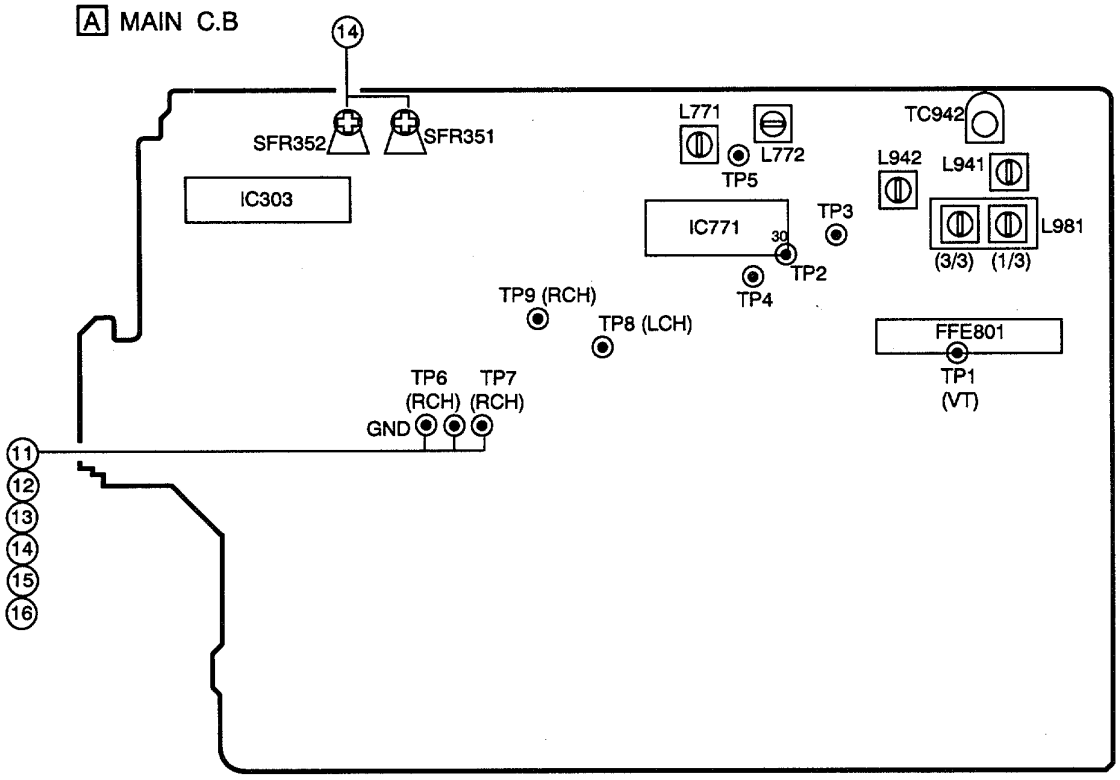


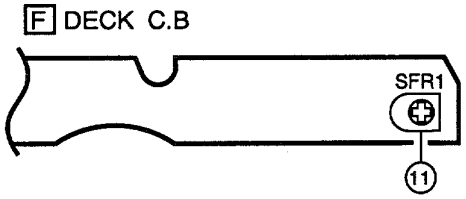

B FRONT C.B
LED227, 226
3 STEREO
LED225, 224
PHANTOM
LED223, 222
NORMAL
LED228, 229
DOLBY PRO LOGIC
SW201
VOLUME
S425
DOLBY PRO LOGIC
S402
CD
S405
VIDEO/AUX
FL401
DISPLAY
S403
TUNER BAND
S401
TAPE DECK 1/2
IC202
REMOTE SENSOR
S423
ROCK
S421
POP
S419
CLASSIC
T-BASS
GEQ
TUNING
LED211, S417
DOWN
LED210, S415
UP
TO CD MECHANISM 42G-I 26DSHC
TO C PRO C.B CN501
FROM A MAIN C.B CN601
S404
POWER
SW202
MULTI JOG
J501
MIC
FROM E DECK C.B CON105
LED208, S413
SET
S411
CLOCK/ DIMMER
S420
TIMER
LED213, S409
PRESET
S418
REC/REC MUTE
LED209, S407
CLEAR
S416
SYNC DUBBING
S408
OPEN/CLOSE
S406
DISC CHANGE
S414
DISC 3
S412
DISC 2
S410
DISC 1
DISC
DIRECT
PLAY

SCHEMATIC DIAGRAM – 3 (MAIN 2 / 2)

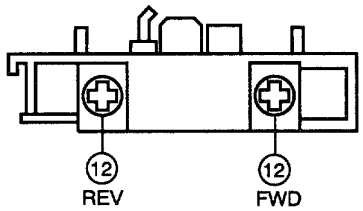



1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
F DECK C.B
G HEAD-1 C.B
H HEAD-2 C.B
(CST1) SW1
(CAM1) SW2
LH1 SW3
(DECK MOTOR) M1
W001
(REA) SW4
LH2 SW5
(CST2) SW6
(CAM2) SW8
(REB) SW9
SFR1
SOL1 (DECK1)
SOL2 (DECK2)
FROM D FRONT C.B CN301
TO A MAIN C.B CN301
TO A MAIN C.B CN351
P HEAD (DECK-1)
RP HEAD (DECK-2)





DECK–1 P,DECK-2R/P/E HEAD



< DECK SECTION >

11. Tape Speed Adjustment
Settings : • Test tape : TTA–100
• Test point : TP6(Lch), TP7(Rch)
• Adjustment location : SFR1
Method : Play back the test tape and adjust SFR1 so that the frequency counter reads 3000Hz ± 5Hz.

12. Head Azimuth Adjustment
Settings : • Test tape : TTA–300
• Test point : TP6(Lch), TP7(Rch)
• Adjustment location : Head azimuth adjustment screw
Method : Play back (FWD) the 10kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on REV PLAY mode.

13. PB Frequency Response Check (DECK 1, DECK 2)
Settings : • Test tape : TTA–330
• Test point :TP6(Lch), TP7(Rch)
Method : Play back the 315Hz and 8kHz signals of the test tape and check that the output ratio of the 8kHz signal with respect to that of the 315Hz signal is within 5dB.

14. REC/PB Frequency Response Adjustment
Settings : • Test tape : TTA–602
• Test point : TP6(Lch), TP7(Rch)
• Input signal : 1kHz / 10kHz (LINE IN)
• Adjustment location : SFR351 (Lch)
SFR352 (Rch)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP6, TP7 becomes -28dBV. Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output of the 10kHz signals becomes 0dB ± 0.5dB with respect to that of the 1kHz signal.

15. PB Sensitivity Check
Settings : • Test tape : TTA–200
• Test point : TP6(Lch), TP7(Rch)
Method : Playback the test tape and check that the output level of the test point is 300mV ± 3dB.

16. REC/PB Sensitivity Check

Settings : • Test tape : TTA–602
• Test point : TP6(Lch), TP7(Rch)
• Input signal : 1kHz (LINE IN)

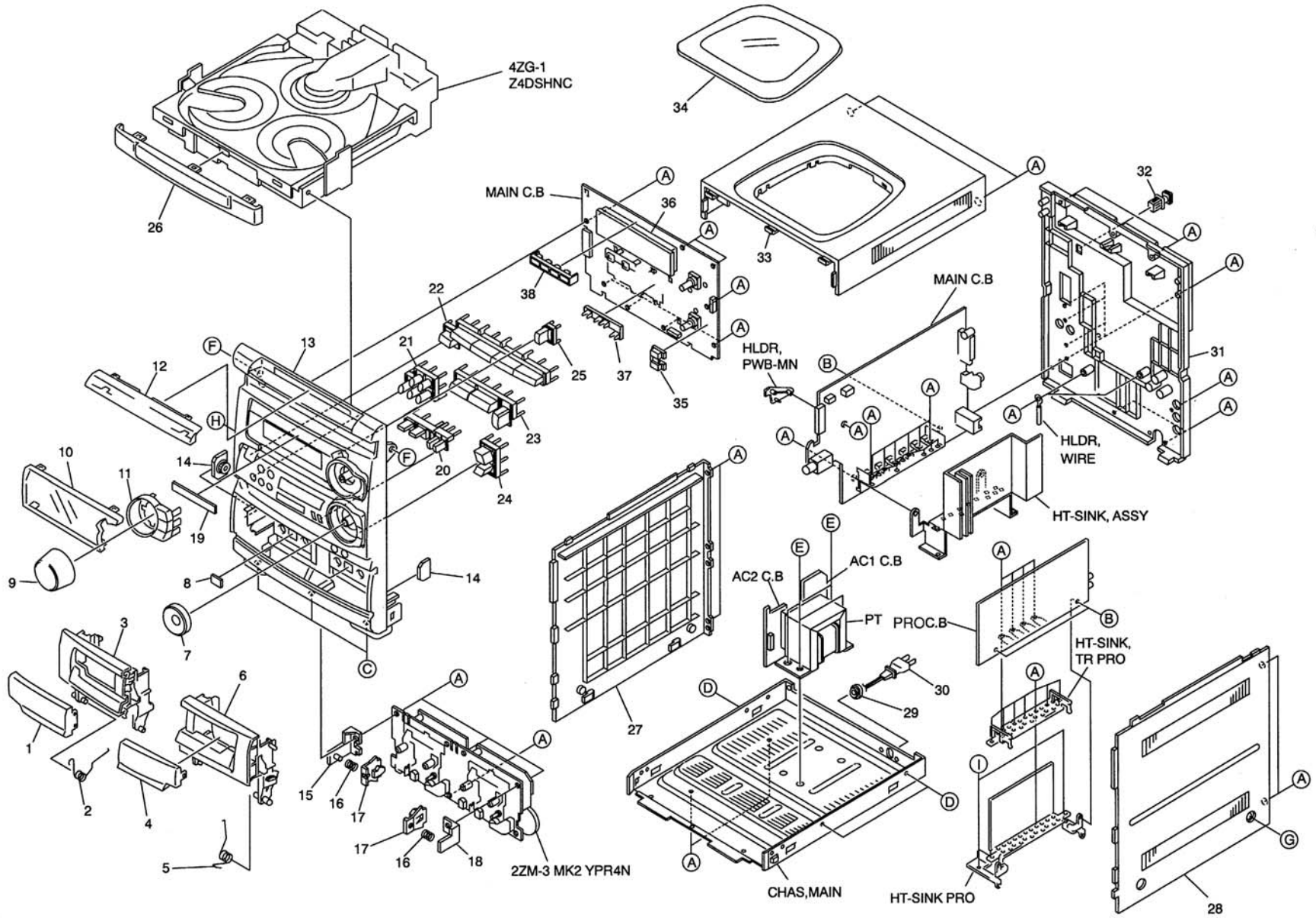
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP6, TP7 becomes -28dBV. Record and play back the 1kHz signals and check that the output is -2 ± 3.0dB.

PRACTICAL SERVICE FIGURE

<DECK SECTION>

Tape speed :	3000Hz ± 45Hz
Wow & flutter :	Less than 0.21% (W.R.M.S)
Take-up torque :	30 ~ 55g-cm (FWD, REV)
F.F torque :	75 ~ 180g-cm
REW torque :	75 ~ 180g-cm
Back tension :	2 ~ 7g-cm (FWD, REV)
PB output level :	2.8V ± 3dB (SP OUT 2V)
REC/PB output level :	-2 ± 3dB (SP OUT 2V,NORM)
Distortion (REC/PB) :	Less than 2.0% (NORM)
Noise level (PB) :	Less than 25mV (NORM, SP OUT 2V)
Noise level (REC/PB) :	Less than 30mV (NORM, SP OUT 2V)
Erasing ratio :	More than 60dB (at 125Hz, +10VU, NORM)
Test tape :	TTA-602 (NORM)

MECHANICAL EXPLODED VIEW 1 / 1

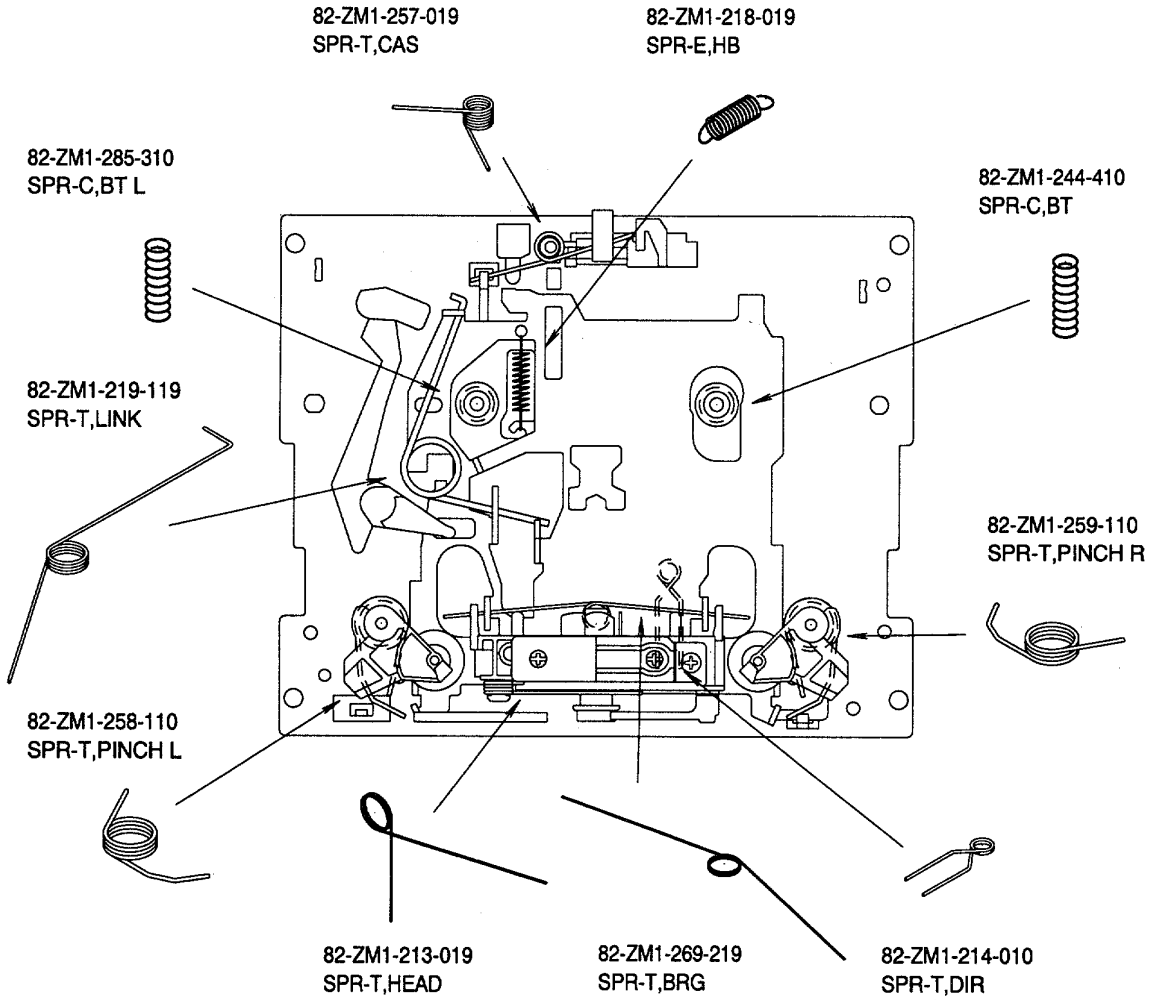


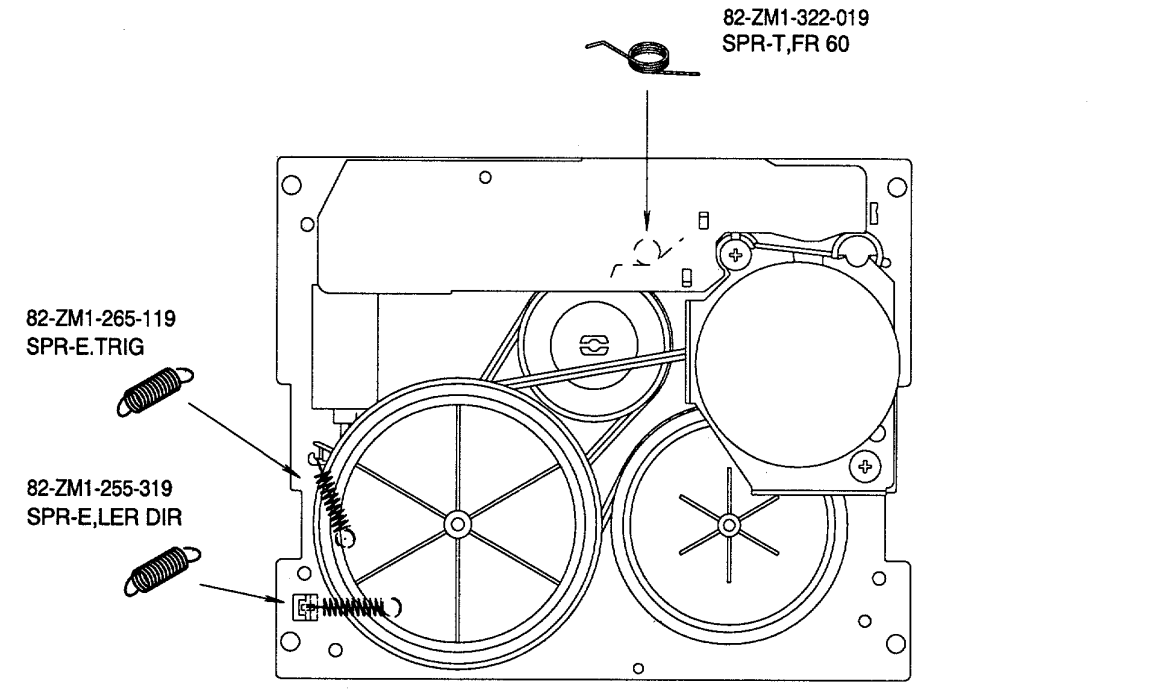
MECHANICAL PARTS LIST 1 / 1

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

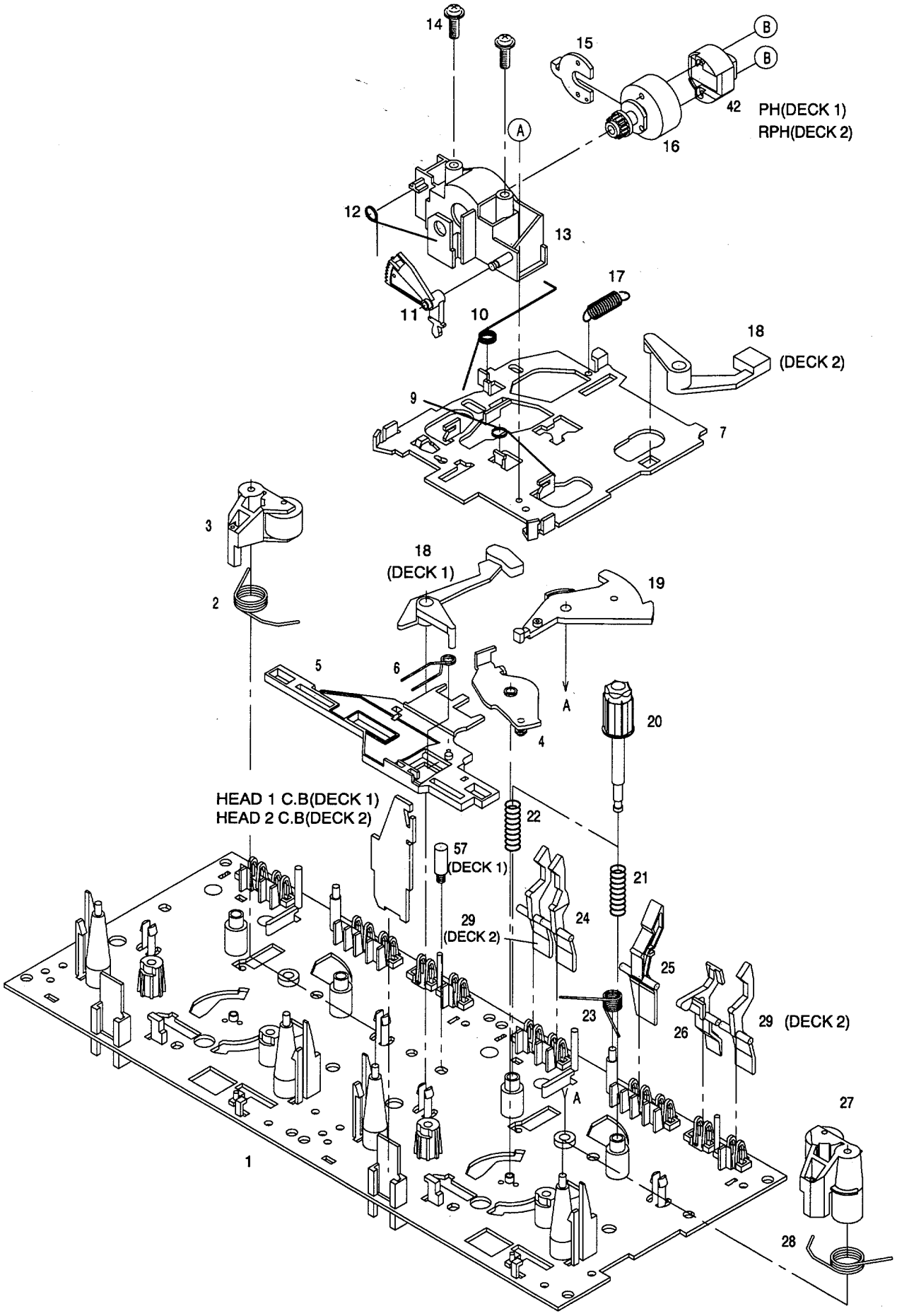
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	87-NB8-012-010		WINDOW,CASS 1
2	82-NF5-218-010		SPR-T,EJECT 1 (SIN)
3	88-NF8-041-010		BOX,CASS 1 REV
4	87-NB8-013-010		WINDOW,CASS 2
5	82-NF5-219-010		SPR-T,EJECT 2 (SIN)
6	88-NF8-042-010		BOX,CASS 2 REV
7	88-NF8-016-010		KNOB,RTRY JOG
8	81-532-080-010		LABEL, CASS. COMPT
9	87-NB8-015-010		KNOB,RTRY VOL
10	88-NFV-015-010		WINDOW,DISPLAY E AV326
11	88-NFV-007-010		KEY,GEQ PRO
12	87-NB8-009-010		WINDOW,CD
13	88-NFV-005-010		CABI,FR E AV326
14	87-NF8-220-010		DMPR,150
15	87-NF4-216-010		HLDR,LOCK 1
16	86-NF9-224-010		SPR-C,LOCK
17	82-NF5-229-010		PLATE,LOCK
18	87-NF4-217-010		HLDR,LOCK 2
19	88-NFV-010-010		PLATE,PRO
20	88-NF8-006-210		KEY,REC
21	88-NF8-014-110		KEY,CD
22	88-NF8-007-010		KEY,FUNCTION
23	88-NF8-019-010		KEY,PLAY 1WAY ASSY
24	88-NF8-013-010		KEY,ASSY FF
25	88-NFV-006-010		KEY,PRO
26	88-NF8-046-010		PANEL,TRAY
27	87-NB8-005-010		PANEL,LEFT
28	88-NF8-047-010		PANEL,RIGHT 2
⚠ 29	87-085-185-010		BUSHING, AC CORD (E)
⚠ 30	87-050-034-010		AC CORD ASSY,E
31	88-NFV-027-010		CABI,REAR EZSTNE AV326
32	84-ZG1-245-210		CAP,OPTICAL
33	87-NF9-055-010		PANEL,TOP
34	86-NFZ-001-010		WINDOW,TOP
35	88-NF8-207-010		GUIDE,FF
36	88-NF8-205-010		GUIDE,FL
37	88-NF8-208-010		GUIDE,PLAY 1WAY
38	88-NFV-201-010		GUIDE,PRO
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-NF4-224-010		S-SCREW,IT3B+3-8 CU
C	87-067-688-010		BVTT+3-6
D	87-721-096-410		QT2+3-10 GLD
E	87-078-019-010		S-SCREW,IT+4-6
F	87-721-097-410		QT2+3-12 GLD
G	87-067-641-010		UTT2+3-8(W/O SLOT)BL
H	87-723-096-410		QT2+3-10W/O SLOT BL
I	87-067-579-010		TAPPING SCREW, BVT2+3-8

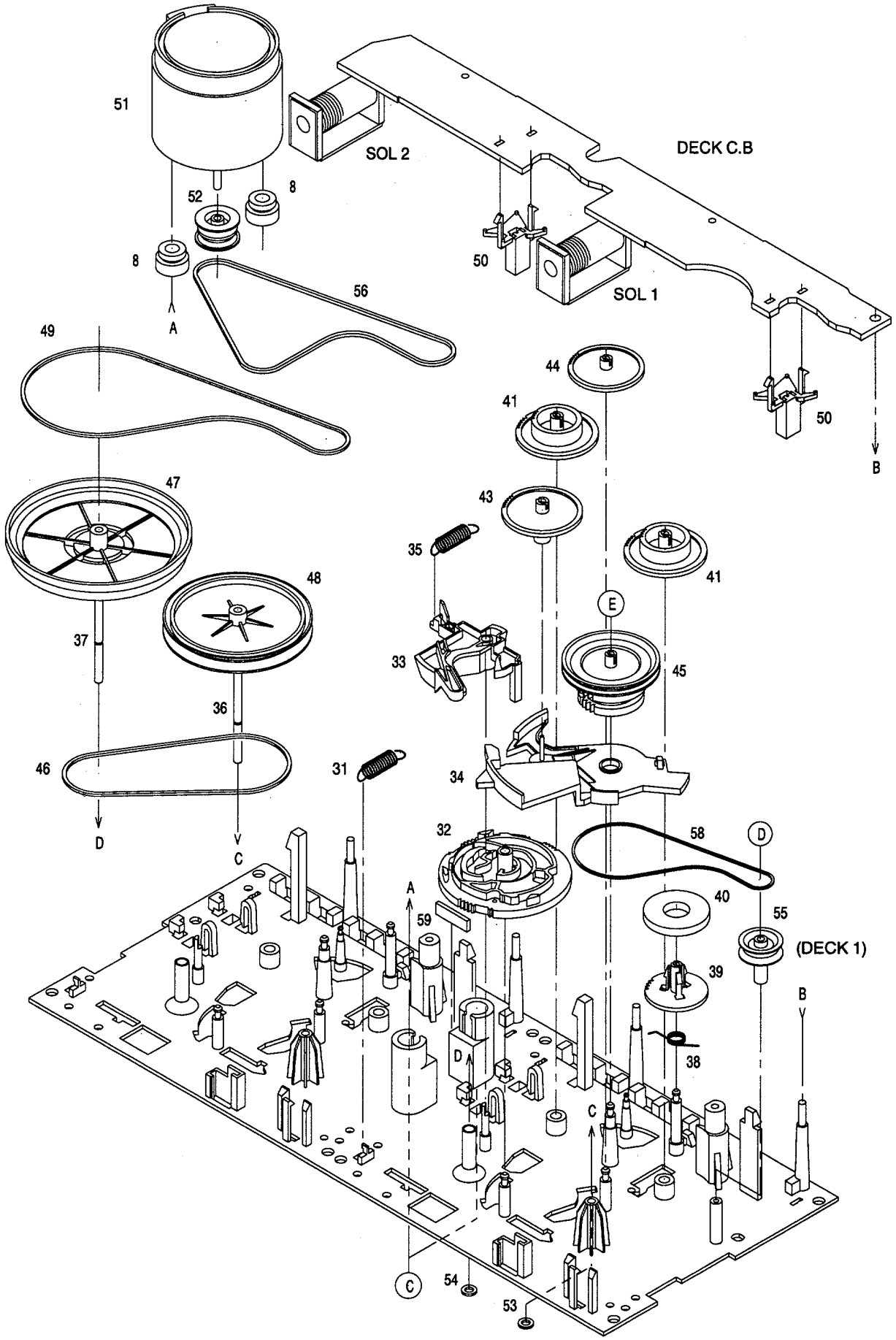
SPRING APPLICATION POSITION





TAPE MECHANISM EXPLODED VIEW 1 / 1




51
SOL 2
DECK C.B
52
8
8
A
56
50
SOL 1
49
44
41
50
B
47
43
35
41
48
E
37
33
45
36
46
31
34
D
C
32
58
D
A
40
55
59
(DECK 1)
39
B
38
D
C
C
54
53

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
1	82-ZM3-301-519		CHAS ASSY,M2
2	82-ZM1-258-110		SPR-T,PINCH L
3	82-ZM1-341-110		LVR ASSY,PINCH L2
4	82-ZM1-333-010		PLATE,LINK 2
5	82-ZM1-266-11K		LVR,DIR
6	82-ZM1-214-010		SPR-T,DIR
7	82-ZM1-206-81K		CHAS,HEAD
8	82-ZM3-307-019		CUSH-G,DIA3.7-8-3.2
9	82-ZM1-269-219		SPR-T,BRG
10	82-ZM1-219-119		SPR-T,LINK
11	82-ZM1-210-119		GEAR,H T
12	82-ZM1-213-019		SPR-T,HEAD
13	82-ZM1-207-619		GUIDE,TAPE
14	86-ZM4-206-010		S-SCREW,AZIMUTH
15	82-ZM1-314-119		PLATE,HEAD
16	82-ZM1-208-119		HLDR,HEAD
17	82-ZM1-218-019		SPR-E,HB
18	82-ZM1-263-110		LVR,EJECT L (DECK 1)
18	82-ZM1-264-010		LVR,EJECT R (DECK 2)
19	82-ZM1-222-21K		LVR,PLAY
20	82-ZM1-217-319		REEL TABLE
21	82-ZM1-244-510		SPR-C,BT
22	82-ZM1-285-310		SPR-C,BT L
23	82-ZM1-257-019		SPR-T,CAS
24	82-ZM1-241-319		LVR,MC
25	82-ZM1-242-019		LVR,CAS
26	82-ZM1-243-019		LVR,STOP
27	82-ZM1-344-110		LVR ASSY,PINCH R2
28	82-ZM1-259-110		SPR-T,PINCH R
29	82-ZM1-240-11K		LVR,REC (DECK 2)
31	82-ZM1-255-319		SPR-E,LVR DIR
32	82-ZM3-305-01K		GEAR,CAM M2
33	82-ZM1-227-21K		LVR,TRIG
34	82-ZM3-306-11K		LVR,FR M2
35	82-ZM1-265-119		SPR-E,TRIG
36	82-ZM1-236-019		CAPSTAN N 2-41.5
37	82-ZM1-239-019		CAPSTAN N 2.2-41.7
38	82-ZM1-322-019		SPR-T,FR60
39	82-ZM1-220-219		GEAR,IDLER
40	82-ZM3-616-019		RING MAGNET 4
41	82-ZM1-216-31K		GEAR,REEL
42	87-A90-319-010		HEAD,PH HADKH2 FPC
42	87-A90-320-010		HEAD,RPH HADKH5 FPC
43	82-ZM1-225-21K		GEAR,FR
44	82-ZM1-226-019		GEAR,REW
45	82-ZM3-333-310		SLIP DISK ASSY 2
46	82-ZM1-338-010		BELT FR4
47	82-ZM1-349-110		FLY-WHL,R W(DECK 2)
47	82-ZM3-338-110		FLY-WHL,R3 W(DECK 1)
48	82-ZM1-348-010		FLY-WHL,L W(DECK 2)
48	82-ZM1-348-010		FLY-WHL,L W(DECK 1)
49	82-ZM3-329-210		BELT,SBU R2
50	82-ZM1-245-210		HLDR,IC
51	87-045-347-019		MOT,SHU2L 70(M1)
52	82-ZM3-221-010		PULLEY,MOT 2M
53	82-ZM1-288-019		SH,1.63-3.2-0.5 SLT
54	80-ZM6-243-019		SH,1.75-3.6-0.5 SLT
55	82-ZM3-335-210		PULLEY,COUPLER M3(DECK 1)
56	82-ZM3-337-010		BELT,SBU MOT 2
57	82-ZM3-339-010		SHAFT,COUPLER N3(DECK 1)
58	86-ZM1-206-010		BELT,MAIN L
59	82-ZM3-340-010		SH,BELT D2
A	85-ZM3-202-010		S-SCREW,TG
B	80-ZM6-207-019		V+1.6-7
C	82-ZM3-318-019		S-SCRW MOTOR M2
D	87-B10-043-010		W-P,0.99-4-0.25 SLT
E	82-ZM3-334-010		PW,2.16-6-0.4

ACCESSORIES / PACKAGE LIST

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	88-NFV-916-010		IB,E(6L)E

サービス技術ニュース	
番号	連絡内容
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G− −	
G− −	

アイワ株式会社
AIWA CO.,LTD.

〒110-8710 東京都台東区池之端1-2-11 ☎03（3827）3111（代表）

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