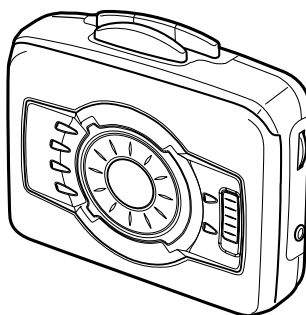




SERVICE MANUAL

STEREO CASSETTE PLAYER

BASIC TAPE MECHANISM : 4ZM-2 P3NC2

- This Service Manual contains information about the difference between HS-AP61(Y) and HS-AP1MK9(Y). If requiring other information, see Service Manual of HS-GS302/HS-AP1MK9(Y), (S/M Code No. 09-002-427-2R1).

SPECIFICATIONS

Maximum output:	4 mW + 4 mW (EIAJ 16 ohm)
Power source:	DC 3 V using two R6 (size AA) batteries
Maximum dimensions:	116.4 (W) x 92 (H) x 35.2 (D) mm (45/8 x 35/8 x 17/16 in.)
Weight	Approx.116.2 g (4 oz) (excluding batteries)

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

ACCESSORIES / PACKAGE LIST

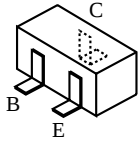
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-HGA-907-010	IB, Y (EGFS1) C-AP61	
2	8A-HGA-908-010	IB, Y (EDPOHCZ) -AP61	
3	84-447-019-310	CLIP, BELT	
4	87-B30-401-010	HEADPHONE, HP-M006 (K2)	

ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A21-638-040	IC,MM1336CF	
	87-017-805-080	IC,AN7375NS	
TRANSISTOR			
	87-026-264-080	C-TR,RN1411	
	89-327-125-080	CHIP TR,2SC2712GR	
DIODE			
	87-020-027-080	CHIP-DIODE 1SS184	
MAIN C.B			
C1	87-010-181-080	CAP,CHIP S 1800P	
C2	87-010-181-080	CAP,CHIP S 1800P	
C3	87-010-178-080	CHIP CAP 1000P	
C4	87-010-178-080	CHIP CAP 1000P	
C5	87-015-676-040	E/CAP 47/6.3	
C6	87-015-676-040	E/CAP 47/6.3	
C7	87-015-676-040	E/CAP 47/6.3	
C8	87-010-196-080	CHIP CAPACITOR,0.1-25	
C9	87-010-213-080	C-CAP,S 0.015-50 B	
C10	87-010-213-080	C-CAP,S 0.015-50 B	
C11	87-010-805-080	C-CAP,S 1-16 ZF	
C12	87-010-194-080	CAP,CHIP 0.047	
C13	87-015-681-040	E/CAP 10-16	
C14	87-010-196-080	CHIP CAPACITOR,0.1-25	
C15	87-010-805-080	C-CAP,S 1-16 ZF	
C16	87-010-805-080	C-CAP,S 1-16 ZF	
C17	87-010-180-080	C-CER 1500P	
C18	87-010-180-080	C-CER 1500P	
C19	87-A10-489-040	CAP,E 220-4 7L SR	
C20	87-A10-489-040	CAP,E 220-4 7L SR	
C21	87-A10-489-040	CAP,E 220-4 7L SR	
C22	87-010-805-080	C-CAP,S 1-16 ZF	
C23	87-010-197-080	CAP, CHIP 0.01 DM	
C24	87-010-197-080	CAP, CHIP 0.01 DM	
C25	87-010-805-080	C-CAP,S 1-16 ZF	
C26	87-010-805-080	C-CAP,S 1-16 ZF	
C51	87-010-178-080	CHIP CAP 1000P	
C52	87-010-196-080	CHIP CAPACITOR,0.1-25	
C53	87-010-805-080	C-CAP,S 1-16 ZF	
C54	87-A10-489-040	CAP,E 220-4 7L SR	
C315	87-015-676-040	E/CAP 47/6.3	
C351	87-016-087-080	C-CAP,S 0.47-16 FZ	

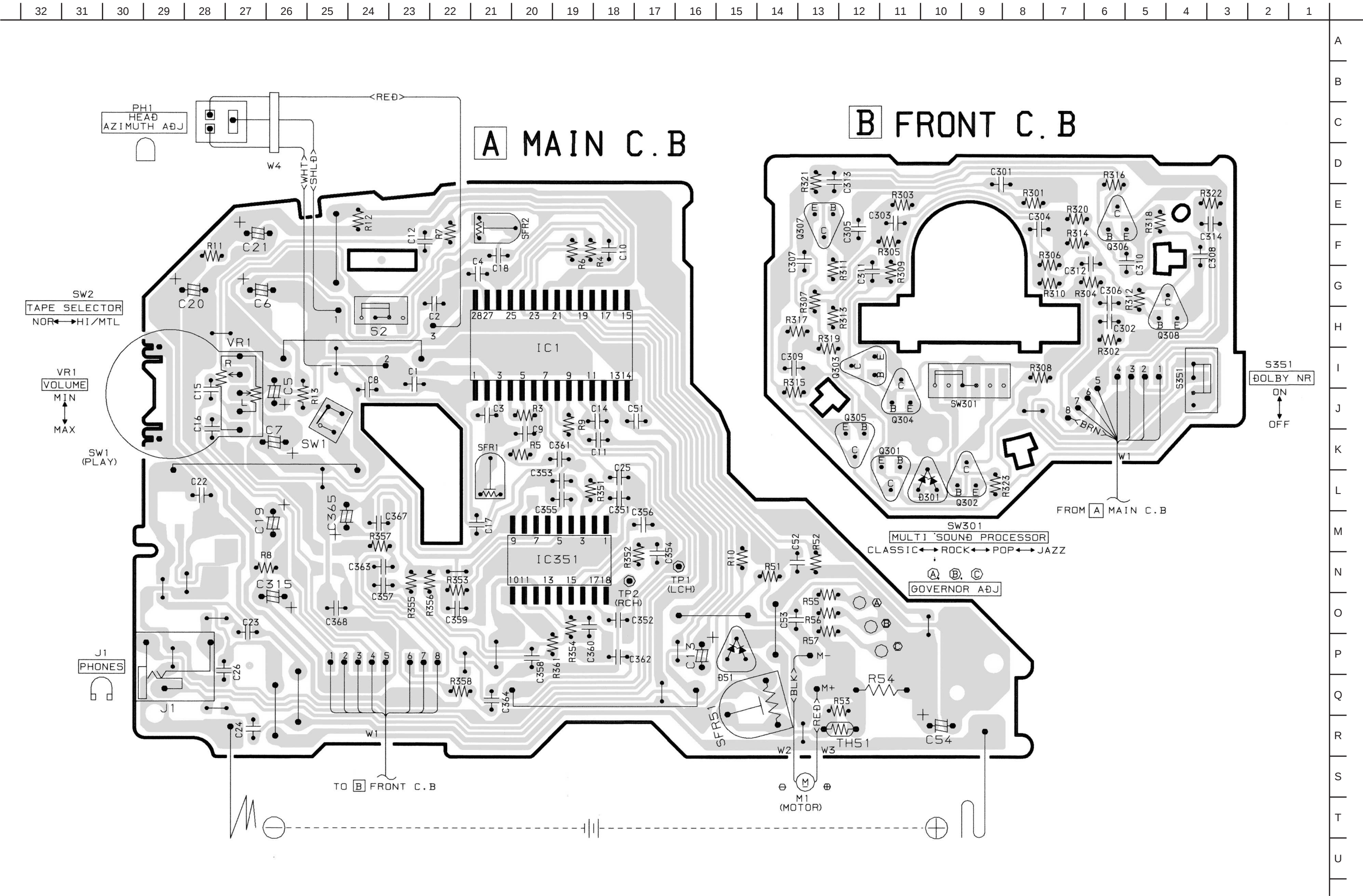
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C352	87-016-087-080		C-CAP,S 0.47-16 FZ
C353	87-010-196-080		CHIP CAPACITOR,0.1-25
C354	87-010-196-080		CHIP CAPACITOR,0.1-25
C355	87-010-186-080		CAP,CHIP 4700P
C356	87-010-186-080		CAP,CHIP 4700P
C357	87-010-193-080		CHIP CAPACITOR,0.033
C358	87-010-193-080		CHIP CAPACITOR,0.033
C359	87-010-186-080		CAP,CHIP 4700P
C360	87-010-186-080		CAP,CHIP 4700P
C361	87-010-805-080		C-CAP,S 1-16 ZF
C362	87-010-805-080		C-CAP,S 1-16 ZF
C363	87-010-805-080		C-CAP,S 1-16 ZF
C364	87-010-805-080		C-CAP,S 1-16 ZF
C365	87-015-676-040		E/CAP 47/6.3
C367	87-010-188-080		CAP,CHIP 6800P
C368	87-010-188-080		CAP,CHIP 6800P
J1	85-HRL-623-010		JACK,3.5 ST BLK
R54	87-022-657-080		RES,K34G 0.68
SFR1	87-A90-789-080		C-SFR,470 RH03AXA12X
SFR2	87-A90-789-080		C-SFR,470 RH03AXA12X
SFR51	87-024-197-010		SEMI-FIXED RESISTOR, 1K
SW1	87-A90-133-110		SW,LEAF LSA1120JAU
S2	87-A90-917-010		C-SW,SL 1-1-2SS350-B12W-C-L
TH51	87-026-256-090		THERMISTOR, HT-100
VR1	87-A91-724-010		VR,RTRY 20KAX2
FRONT C.B			
C301	87-010-184-080		CHIP CAPACITOR 3300P(K)
C302	87-010-184-080		CHIP CAPACITOR 3300P(K)
C303	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C304	87-012-141-080		CHIP-CAPACITOR,0.22-16F
C305	87-010-805-080		C-CAP,S 1-16 ZF
C306	87-010-805-080		C-CAP,S 1-16 ZF
C307	87-010-956-080		CHIP-CAP,S 0.068-25B
C308	87-010-956-080		CHIP-CAP,S 0.068-25B
C309	87-010-188-080		CAP,CHIP 6800P
C310	87-010-188-080		CAP,CHIP 6800P
C311	87-012-365-080		C-CAP,S 0.027-25VBK
C312	87-012-365-080		C-CAP,S 0.027-25VBK
C313	87-010-189-080		C-CAP,S 8200P-50 B
C314	87-010-189-080		C-CAP,S 8200P-50 B
SW301	87-A91-285-110		C-SW,SL 1-1-4SS-350-B14B-C-L
S351	87-A90-917-010		C-SW,SL 1-1-2SS-350-B12W-C-L

TRANSISTOR ILLUSTRATION

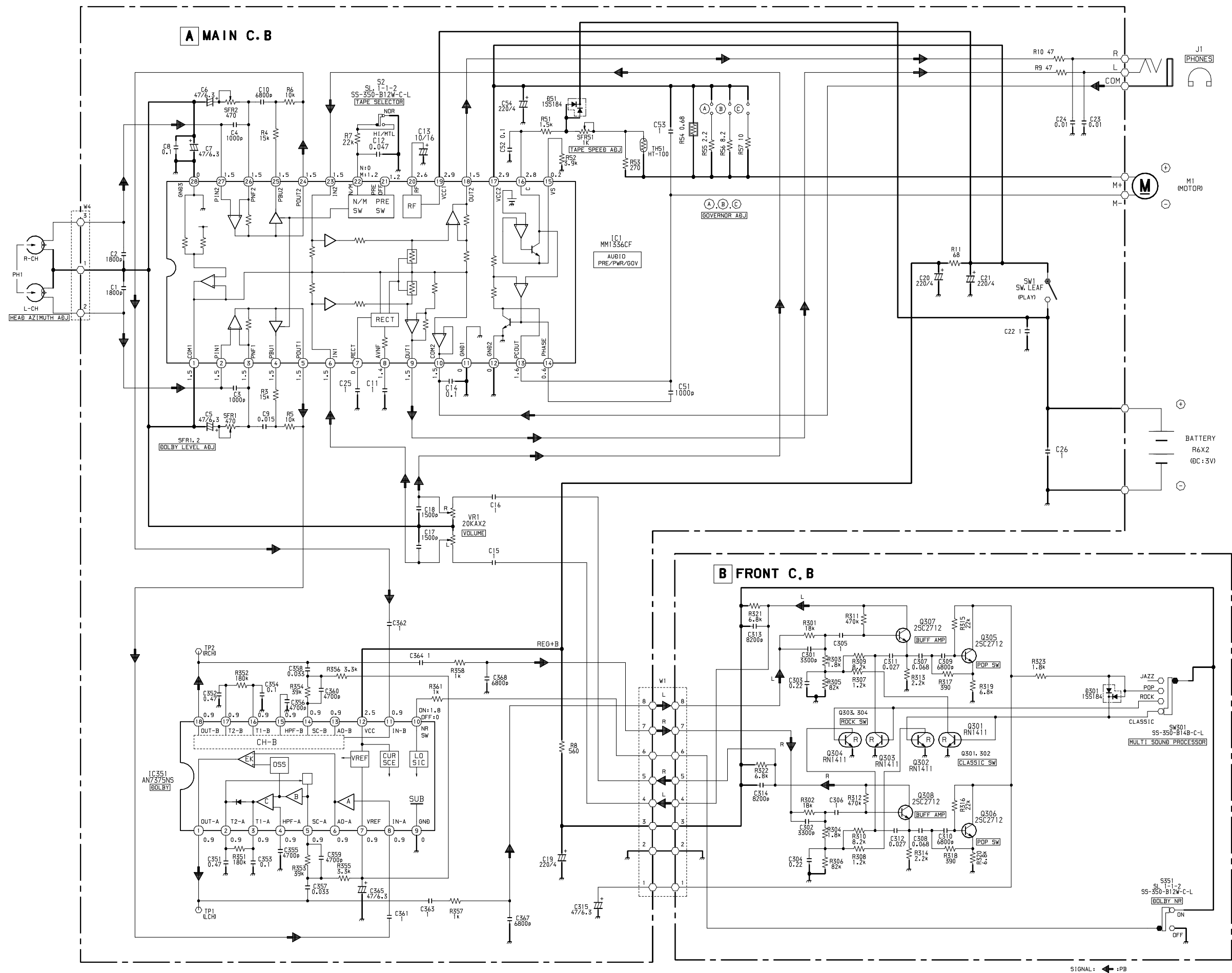


RN1411
2SC2712GR

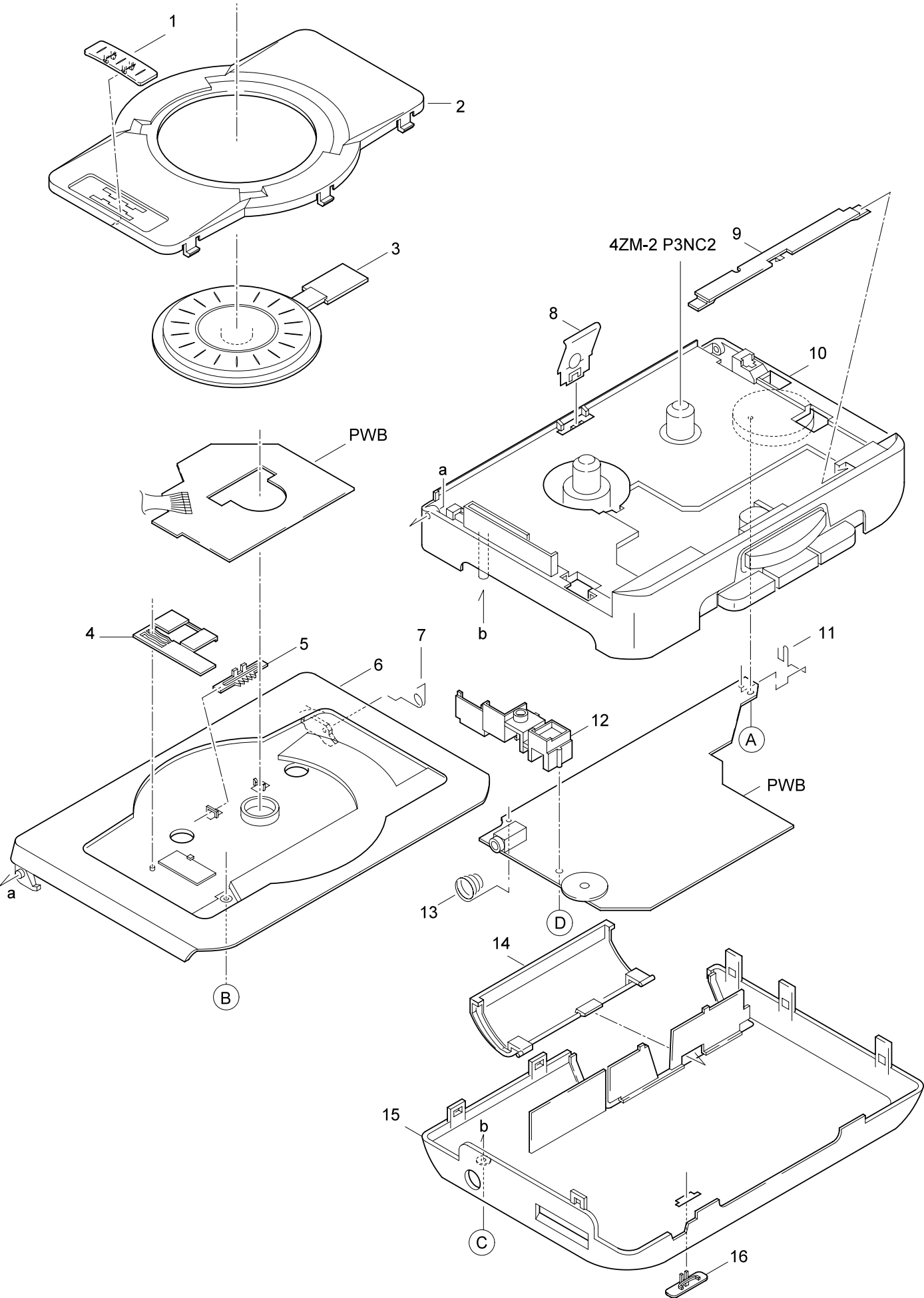
WIRING – 1 (MAIN / FRONT)



SCHEMATIC DIAGRAM (MAIN/FRONT)



MECHANICAL EXPLODED VIEW 1 / 1



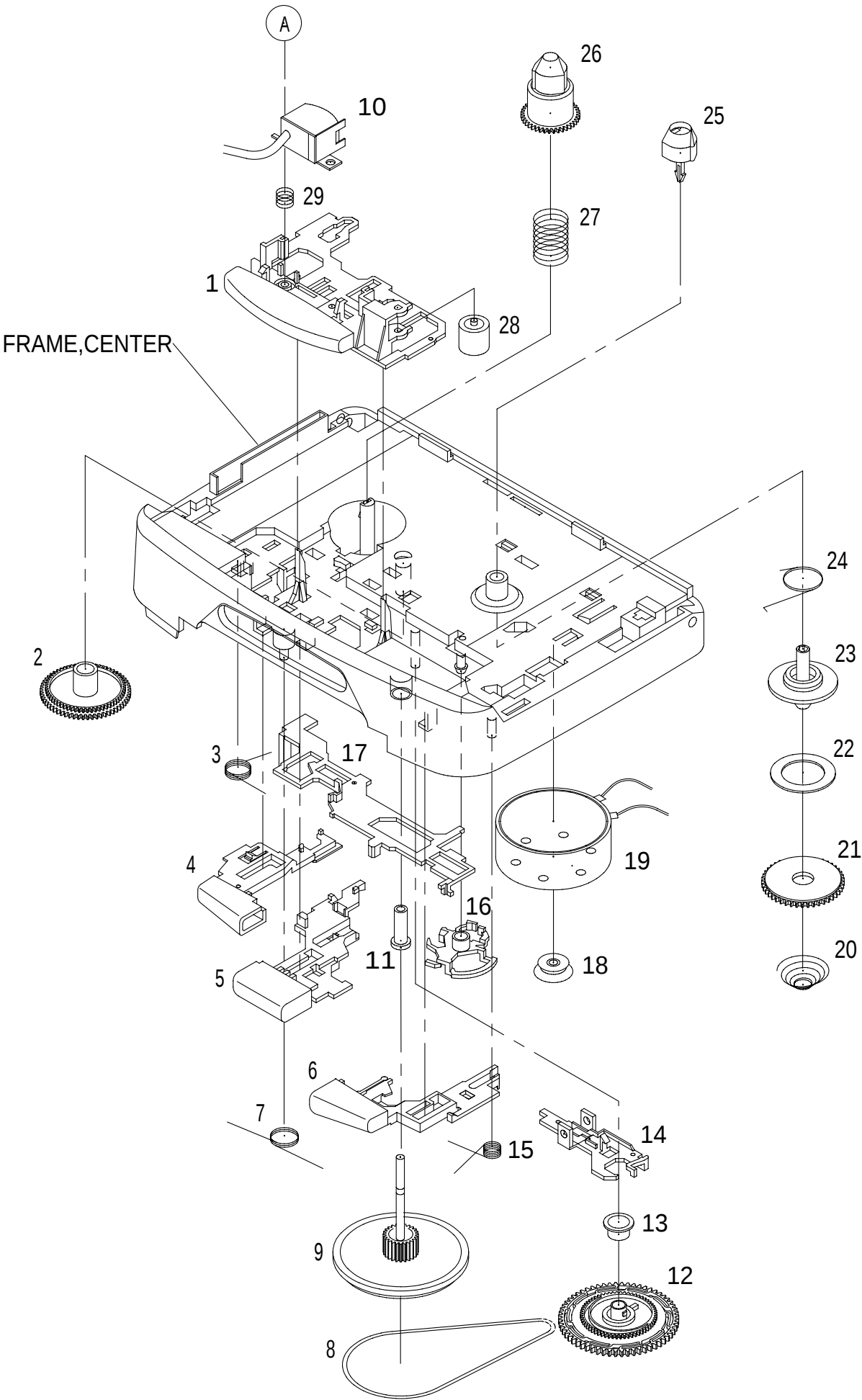
MECHANICAL PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-HGA-005-010		KNOB,SL DOLBY
2	8A-HGA-002-110		PANEL,MSP
3	8A-HGA-003-010		KNOB,RTRY MSP
4	8A-HGA-006-010		PLATE,IND DOLBY
5	8A-HGA-201-010		RACK,MSP
6	8A-HGA-009-010		LID,CASS AP61
7	86-HRM-205-010		SPR-T,CLICK
8	8A-HRL-202-010		SPR-P,CASS
9	87-HRR-206-010		PLATE,HEAD J034
10	88-HRJ-038-010		FRAME,CENTER J034
11	86-HKA-202-010		BAT-CONTACT, (+)
12	8Z-HG8-202-010		HLDR,DC JACK
13	8Z-HG8-203-010		BAT,CONTACT (-)
14	8Z-HG8-018-010		LID,BATT J049N
15	8A-HK9-007-010		CABI,REAR YZ
16	8Z-HGA-013-010		KNOB,SL TAPE J
A	87-264-525-310		SCREW, V+1.7-2.5
B	87-067-732-010		TAPPING SCREW, VT1.4-3
C	87-067-691-010		SCREW VT+1.7-6
D	87-067-384-010		SCREWVT1.4-3.5HL

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue				

MECHANISM EXPLODED VIEW 1 / 1



MECHANISM PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	84-ZM2-012-010		LEVER, PLAY G
2	84-ZM2-211-01K		GEAR, CONNECT
3	84-ZM2-222-010		SPR-T, PLAY
4	84-ZM2-015-010		LEVER, STOP G
5	84-ZM2-014-010		LEVER, REW G
6	84-ZM2-013-010		LEVER, FF G
7	84-ZM2-223-010		SPR-T, REW STOP
8	84-ZM2-232-010		BELT, MAIN
9	09-001-421-010		FLY-WHL, P ASSY
10	87-A90-272-010		HEAD, PH MS25P ETH
11	84-ZM2-220-01K		BRG, P
12	84-ZM2-210-01K		GEAR, AUTO
13	84-ZM2-218-01K		CAP, GEAR AUTO
14	84-ZM2-208-01K		LEVER, SHIFT
15	84-ZM2-224-010		SPR-T, FF LOCK
16	84-ZM2-207-01K		LEVER, AUTO
17	84-ZM2-206-01K		LEVER, LOCK
18	84-ZM2-219-01K		PULLEY, MOTOR
19	87-045-385-010		MOT (BCY3B11)
20	84-ZM2-226-010		SPR-C, CLUTCH
21	84-ZM2-212-01K		GEAR, CLUTCH
22	84-ZM2-231-010		FELT, CLUTCH
23	84-ZM2-217-01K		SHAFT, REEL
24	84-ZM2-225-010		SPR-T, AUTO FIND
25	84-ZM2-216-01K		REEL TABLE, R
26	84-ZM2-215-01K		REEL TABLE, L
27	84-ZM2-228-010		SPR-C, BT
28	84-ZM2-233-110		PINCH ROL ASSY
29	84-ZM2-227-010		SPR-C, AZIMUTH
A	84-ZM2-242-019		S-SCREW, AZIMUTH-2-5.9

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