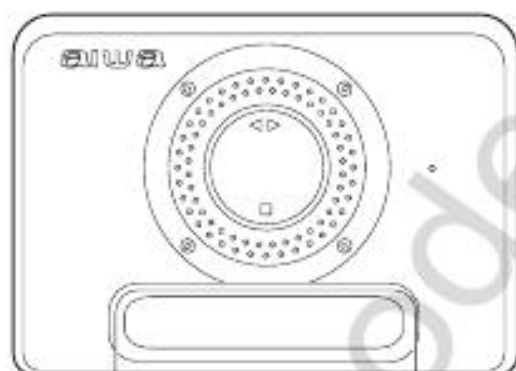




SERVICE MANUAL

STEREO CASSETTE PLAYER

BASIC TAPE MECHANISM : 6ZM-2 P9NF

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual" (S/M Code No. 09-001-410-9T2).

SPECIFICATIONS

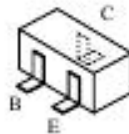
Maximum output:	4 mW + 4 mW (EIAJ/16 ohms)
Load impedance:	16 – 32 ohms
Power source:	DC 1.5 V using an R6 (AA) dry cell battery, AC house current using the optional AC adaptor
Battery life (EIAJ 1 mW output):	Aprox. 30 hours using an LR6 (AA) alkaline battery
Maximum dimensions:	110 (W) x 79.2 (H) x 28.6 (D) mm (4 3/4 x 3 1/8 x 1 1/8 in.)
Weight:	Approx. 132 g (4.6 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.	KANAI NO.	DESCRIPTION
1	82-HED-912-010	IB, YH (ECC) S<YH>	
1	82-HED-915-010	IB, Y (BQFSI) S GMX1000<Y>	
1	82-HED-916-010	IB, Y (BDPHNCS) S GMX1000<Y>	
2	87-B30-253-010	HEADPHONE, HP-M041	
2	82-HK6-952-010	RC, UNIT RC507	

TRANSISTOR ILLUSTRATION



RN1310	2SA1362
RN1311	2SC3326
RN2307	DTA144TU
RN2310	DTC144TU

ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	QTY	DESCRIPTION
IC			
C10	87-A11-174-010	C-1C, FM1101P	
	87-A10-961-040	C-1C, MM1279AY	
	87-A10-785-080	C-1C, 8-911550-OK-11	
	82-HE6-505-010	C-1C, MM6516-99-05-K	
C148	87-016-550-080	C-CAP, 7M 4.7-10	
C149	87-016-266-080	C-CAP, 7M 2.2-6.3 793	
C150	87-016-562-080	C-CAP, 7M 4.7-10	
C151	87-010-788-080	C-CAP, U 0.012-25 B	
C152	87-010-788-080	C-CAP, U 0.012-25 B	
C153	87-A11-055-080	C-CAP, U 1-10 Z F	
C154	87-A11-055-080	C-CAP, U 1-10 Z F	
C155	87-012-289-080	CAP, U 0.01-25	
C156	87-012-289-080	CAP, U 0.01-25	
C157	87-012-289-080	CAP, U 0.01-25	
C158	87-012-289-080	CAP, U 0.01-25	
C159	87-012-289-080	CAP, U 0.01-25	
C160	87-012-289-080	CAP, U 0.01-25	
C161	87-A10-707-080	C-CAP, U 0.470-16 F	
C162	87-A10-707-080	C-CAP, U 0.470-16 F	
C163	87-A10-707-080	C-CAP, U 0.470-16 F	
C164	87-A11-055-080	C-CAP, U 1-10 Z F	
C165	87-A11-055-080	C-CAP, U 1-10 Z F	
C166	87-A11-055-080	C-CAP, U 1-10 Z F	
C167	87-A10-706-080	C-CAP, U 0.680-16 F	
DIODE			
	87-A10-642-040	C-DIODE, 1A6367	
MAIN C.B			
C101	87-012-273-080	C-CAP, U 820P-50 B	
C102	87-012-273-080	C-CAP, U 820P-50 B	
C103	87-012-273-080	C-CAP, U 820P-50 B	
C104	87-012-273-080	C-CAP, U 820P-50 B	
C105	87-012-286-080	C-CAP, 7M 2.2-6.3 793	
C106	87-016-266-080	C-CAP, 7M 2.2-6.3 793	
C107	87-016-114-080	C-CAP, 7M 0.01-25B	
C108	87-016-114-080	C-CAP, 7M 0.01-25B	
C109	87-010-823-080	CHIP CAPACITOR, U 0.033-	
C110	87-010-823-080	CHIP CAPACITOR, U 0.033-	
C111	87-A11-055-080	C-CAP, U 1-10 Z F	
C112	87-A11-055-080	C-CAP, U 1-10 Z F	
C113	87-010-987-080	C-CAP, 8 1500P-50 CH	
C114	87-010-987-080	C-CAP, 8 1500P-50 CH	
C115	87-012-286-080	C-CAP, U 820P-50 B	
C116	87-012-286-080	C-CAP, U 820P-50 B	
C117	87-012-286-080	C-CAP, U 820P-50 B	
C118	87-012-286-080	C-CAP, U 820P-50 B	
C119	87-A10-823-080	C-CAP, U 0.33-6.3 K B	
C120	87-A10-823-080	C-CAP, U 0.33-6.3 K B	
C121	87-A10-827-080	C-CAP, U 0.47-6.3 K B	
C122	87-A10-827-080	C-CAP, U 0.47-6.3 K B	
C123	87-A11-055-080	C-CAP, U 1-10 Z F	
C124	87-A11-055-080	C-CAP, U 1-10 Z F	
C125	87-A11-055-080	C-CAP, U 1-10 Z F	
C126	87-A11-055-080	C-CAP, U 1-10 Z F	
C127	87-012-286-080	C-CAP, U 820P-50 B	
C128	87-012-286-080	C-CAP, U 820P-50 B	
C129	87-012-286-080	C-CAP, U 820P-50 B	
C130	87-A10-023-080	C-CAP, U 0.22-165 F	
C131	87-016-429-080	C-CAP, 8 100P-50B	
C132	87-016-429-080	C-CAP, 8 100P-50B	
C133	87-016-429-080	C-CAP, 8 100P-50B	
C134	87-010-766-080	CAP, TANTAL 10-4	
C135	87-A10-952-080	C-CAP, 7M 22-4 M A MCM	
C136	87-016-662-080	C-CAP, 7M 4.7-10	
C137	87-016-662-080	C-CAP, 7M 4.7-10	
C138	87-A10-023-080	C-CAP, U 0.22-165 F	
C139	87-A10-023-080	C-CAP, U 0.22-165 F	
C140	87-016-662-080	C-CAP, 7M 4.7-10	
C141	87-A10-707-080	C-CAP, U 0.470-16 F	
C142	87-A10-707-080	C-CAP, U 0.470-16 F	
C143	87-A10-707-080	C-CAP, U 0.470-16 F	
C144	87-A11-055-080	C-CAP, U 1-10 Z F	
C145	87-A11-055-080	C-CAP, U 1-10 Z F	
C146	87-A11-055-080	C-CAP, U 1-10 Z F	
C147	87-A10-706-080	C-CAP, U 0.680-16 F	
REF. NO.	PART NO.	QTY	DESCRIPTION
C148	87-016-550-080	C-CAP, 7M 4.7-10	
C149	87-016-266-080	C-CAP, 7M 2.2-6.3 793	
C150	87-016-562-080	C-CAP, 7M 4.7-10	
C151	87-010-788-080	C-CAP, U 0.012-25 B	
C152	87-010-788-080	C-CAP, U 0.012-25 B	
C153	87-A11-055-080	C-CAP, U 1-10 Z F	
C154	87-A11-055-080	C-CAP, U 1-10 Z F	
C155	87-012-289-080	CAP, U 0.01-25	
C156	87-012-289-080	CAP, U 0.01-25	
C157	87-012-289-080	CAP, U 0.01-25	
C158	87-012-289-080	CAP, U 0.01-25	
C159	87-012-289-080	CAP, U 0.01-25	
C160	87-012-289-080	CAP, U 0.01-25	
C161	87-A10-707-080	C-CAP, U 0.470-16 F	
C162	87-A10-023-080	C-CAP, U 0.22-165 F	
C163	87-A10-263-080	C-CAP, U 0.1-16Z F	
C164	87-A11-055-080	C-CAP, 8 4.7-10 Z F	
C165	87-A10-260-080	C-CAP, U 0.1-16 K B	
C166	87-016-746-080	CAP, TANTAL 10-4	
C167	87-016-746-080	CAP, TANTAL 10-4	
C168	87-A10-263-080	C-CAP, U 0.1-16Z F	
C169	87-A10-263-080	C-CAP, U 0.1-16Z F	
C170	87-A11-055-080	C-CAP, U 1-10 Z F	
C171	87-A11-055-080	C-CAP, U 1-10 Z F	
C172	87-A11-055-080	C-CAP, U 1-10 Z F	
C173	87-A11-055-080	C-CAP, U 1-10 Z F	
C174	87-A11-055-080	C-CAP, U 1-10 Z F	
C175	87-A11-055-080	C-CAP, U 1-10 Z F	
C176	87-A11-055-080	C-CAP, U 1-10 Z F	
C177	87-A11-055-080	C-CAP, U 1-10 Z F	
C178	87-A11-055-080	C-CAP, U 1-10 Z F	
C179	87-A11-055-080	C-CAP, U 1-10 Z F	
C180	87-A11-055-080	C-CAP, U 1-10 Z F	
C181	87-A11-055-080	C-CAP, U 1-10 Z F	
C182	87-A11-055-080	C-CAP, U 1-10 Z F	
C183	87-A11-055-080	C-CAP, U 1-10 Z F	
C184	87-A11-055-080	C-CAP, U 1-10 Z F	
C185	87-A11-055-080	C-CAP, U 1-10 Z F	
C186	87-A11-055-080	C-CAP, U 1-10 Z F	
C187	87-A11-055-080	C-CAP, U 1-10 Z F	
C188	87-A11-055-080	C-CAP, U 1-10 Z F	
C189	87-A11-055-080	C-CAP, U 1-10 Z F	
C190	87-A11-055-080	C-CAP, U 1-10 Z F	
C191	87-A11-055-080	C-CAP, U 1-10 Z F	
C192	87-010-822-010	CAP, 8 220-4 M MCM	
C193	87-010-822-010	CAP, 8 220-4 M MCM	
C194	87-010-822-010	CAP, 8 220-4 M MCM	
C195	87-010-822-010	CAP, 8 220-4 M MCM	
C196	87-010-822-010	CAP, 8 220-4 M MCM	
C197	87-010-822-010	CAP, 8 220-4 M MCM	
C198	87-010-822-010	CAP, 8 220-4 M MCM	
C199	87-010-822-010	CAP, 8 220-4 M MCM	
C200	87-010-822-010	CAP, 8 220-4 M MCM	

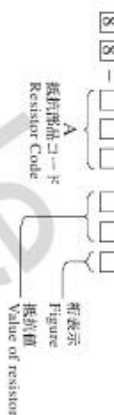
REF. NO. PART NO. QTY DESCRIPTION

HEAD FILE C.B
PRL 87-HE5-508-010 HEAD, ASST 62M-2(MVA)

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

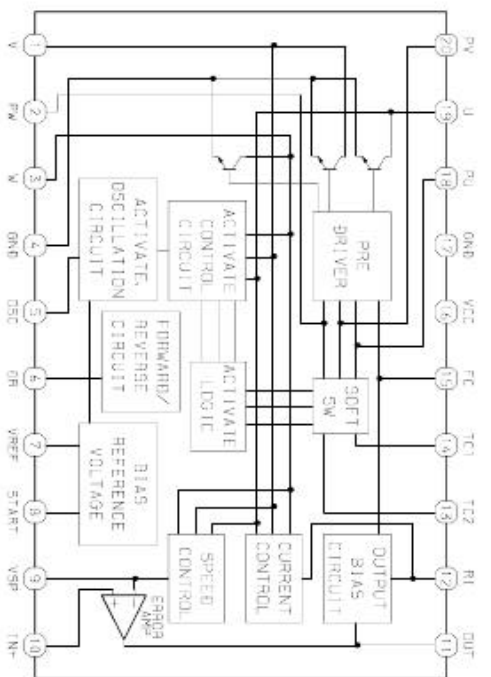
Chip Resistor Part Coding

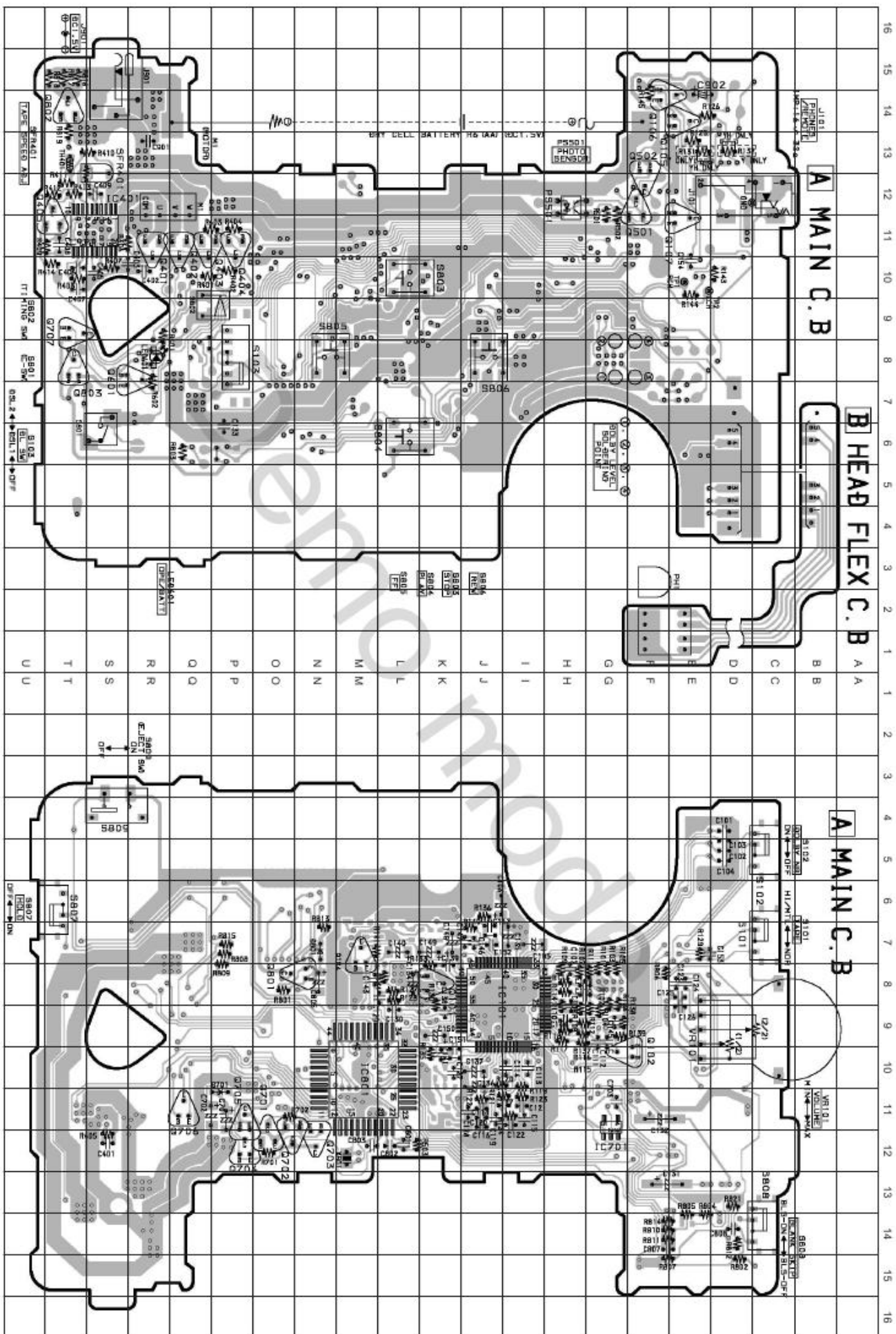


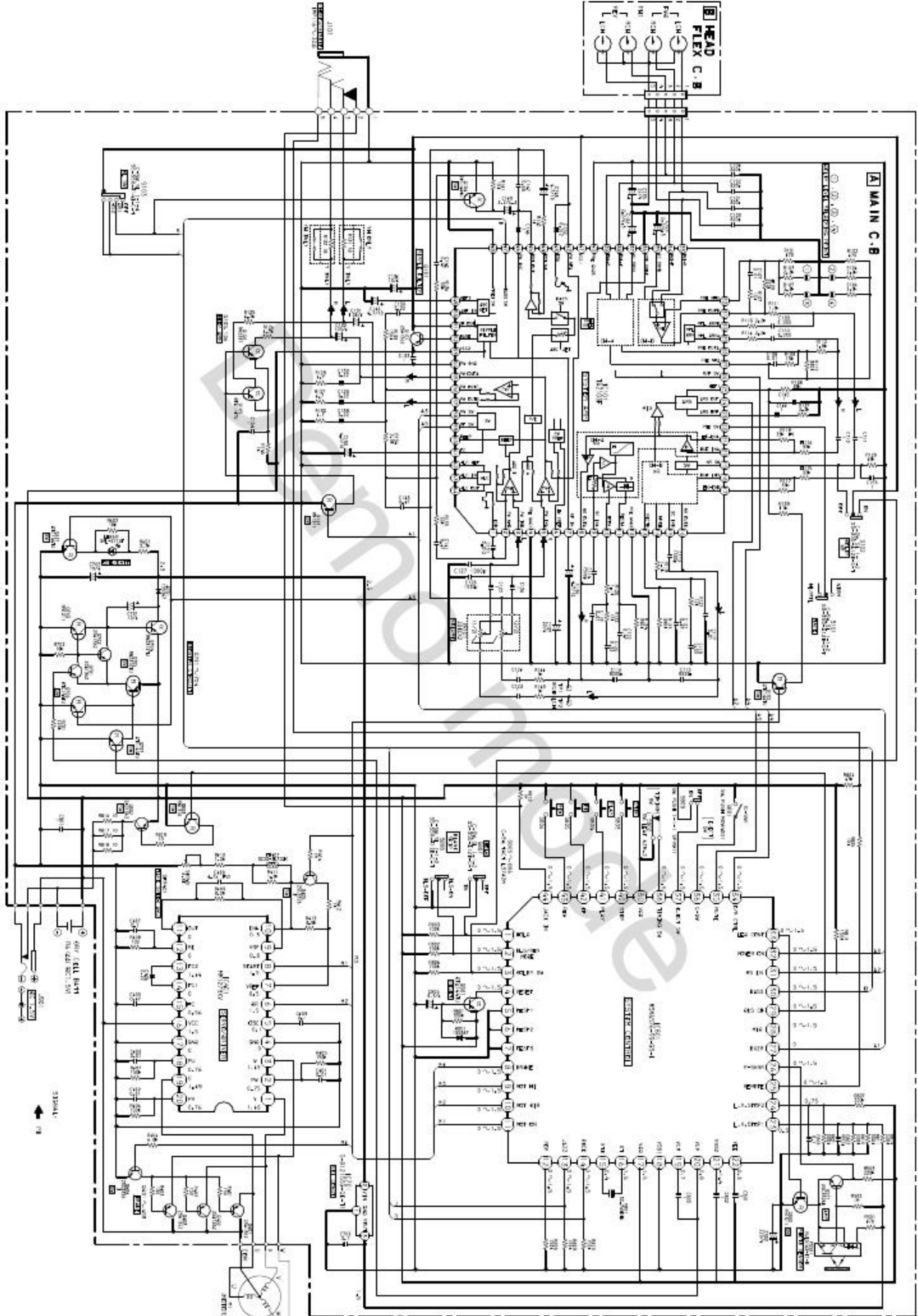
				*Unit: Dimension (mm)			Resistance Code : A
Wattage	Type	Tolerance	Symbol				
1/16W	1005	±5%	CJ	L: 1.6	W: 0.5	t: 0.35	104
1/16W	1608	±5%	CJ	L: 1.6	W: 0.8	t: 0.45	108
1/10W	2125	±5%	CJ	L: 2.1	W: 1.25	t: 0.45	118
1/8W	3216	±5%	CJ	L: 3.2	W: 1.6	t: 0.45	128

IC BLOCK DIAGRAM

IC, MM1279XV





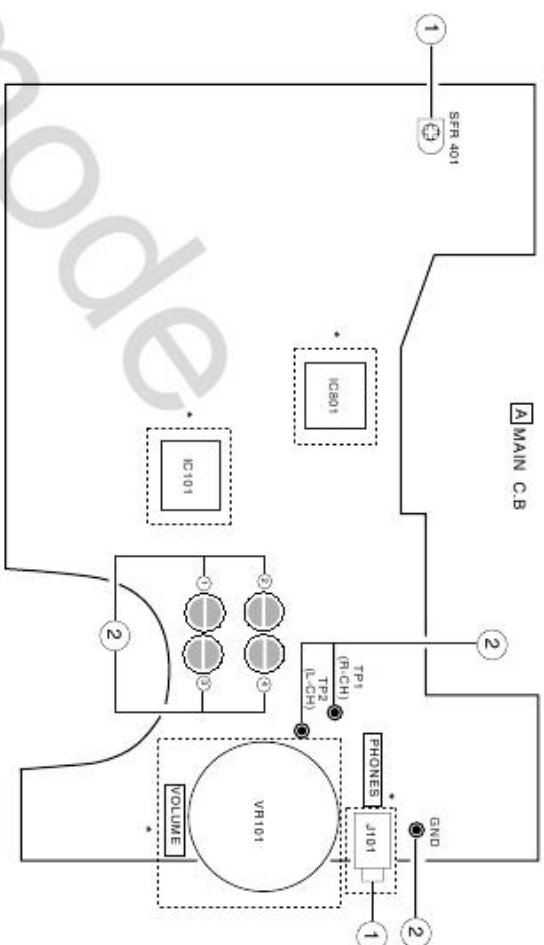


IC DESCRIPTION

IC, MSM6576-99-GS-K

Pin No.	Pin Name	I/O	Description
1	HOLD	I	'H': Normal operation, 'L': Hold key (main unit side).
2	BLSRREV MODE	I	'H': Fastness and BLS ON, 'L': One cycle and BLS OFF.
3	DOLBY SW	I	'H': Dolby ON, 'L': Dolby OFF.
4	RESET	I	Reset input terminal.
5 - 7	TEST1 - TEST3	-	Test terminal (connected to ground).
8	BRAKE	O	'H': Brake ON, 'L': Brake OFF.
9	MOT HI	O	'H': High speed, 'L': Normal speed.
10	MOT DIR	O	'H': Clockwise direction, 'L': Counterclockwise direction.
11	MOT ON	O	'H': Motor ON, 'L': Motor OFF.
12	POP	I	'H': POP ON, 'L': POP OFF.
13	JAZZ	I	'H': JAZZ OFF, 'L': JAZZ ON.
14	ROCK	I	'H': ROCK OFF, 'L': ROCK ON.
15, 16	XTLX, XT	-	Crystal oscillator terminal.
17	VDD	-	Power supply terminal.
18, 21	VSS1, VSS2	-	Ground terminal.
19, 20	WCM, WCP	-	Internal electronic potential generator terminal.
22	VBE	-	Power supply terminal for internal logic.
23	L, V, STOP1	I	Reference input terminal for detection of reduce voltage stop.
24	L, V, STOP2	I	Signal input terminal for detection of reduce voltage stop.
25	REMOTTE	I	Key input (remote controller side).
26	P, SNSR	I	Photo sensor input.
27	BUZZR	O	Alarm sound output.
28	MID	O	'H': When POP mode, 'L': When not POP mode. (Not used)
29	DIS CH	O	'H': When DIS CH, 'L': When normal.
30	BASS	O	'H': When ROCK, JAZZ mode, 'L': When not ROCK, JAZZ mode.
31	MIS IN	I	'H': Exist tune, 'L': Not exist tune.
32	POWER ON	O	'H': Power ON, 'L': Power OFF.
33	LED CNT	O	Photo sensor LED control terminal.
34	F/R CTRL	O	'H': FWD, 'L': REV.
35	MUTE	O	'H': Mute OFF, 'L': Mute ON.
36	C, SW	I	'H': Exist cassette tape, 'L': Not exist.
37	EJECT SW	I	'H': Open cassette cover, 'L': Close cassette cover.
38	TIMING SW	I	'H': PLAY, REC PLAY, 'L': No cassette, STOP, FF, REW.
39	VDD	-	Power supply terminal.
40	STOP	I	Sleep key input (main unit side).
41	PLAY	I	Play key input (main unit side).
42	FF	I	FF key input (main unit side).
43	REW	I	REW key input (main unit side).
44	JACK IN	I	'H': Disable remote controller key input, 'L': Able input.

ADJUSTMENT



Note :
: : On the other side of the components.

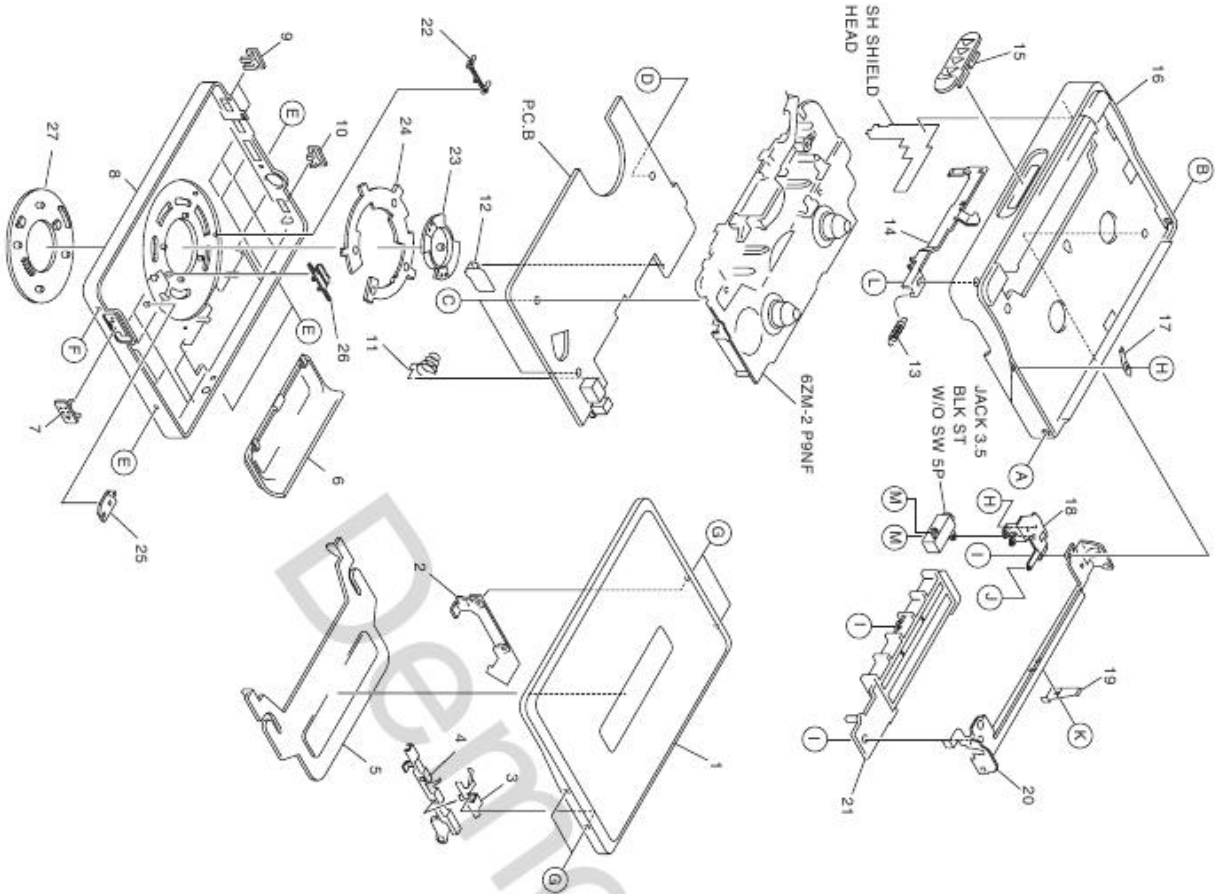
1. Tape Speed Adjustment
Settings :
• Test tape : TTA - 100 (Tape center)
• Adjustment location : SFR401
• Test point :
• Adjustment location : SFR401
• Dolby NR : OFF
• MSP : CL ASSIC
• Direction : FWD
• Volume : NORM
• Tape selector : MAX
• Method : Play back the test tape and adjust SFR401 so that the frequency becomes 3015Hz $\pm$ 10Hz. Then confirm WOW is less than 0.55%.
2. Dolby Level Adjustment
Setting :
• Test tape : TTA - 200
• Test point : TP1 (Rch), TP2 (Lch), GND
• Direction : FWD
• Tape selector : NORM
• Dolby NR : OFF
• Volume : MIN "0"
• Adjustment points : Soldered patterns ① - ⑤

Procedure : Short the patterns via solder as shown in the table so that the Dolby NR level is 24.5mV $\pm$ 1.0dB. Adjust so that the specifications are satisfied in both the forward and reverse directions. Connect 10 μ F /16V coupling capacitors between test points and test equipment (connect the positive terminals to the test points).

SOLDER PATTERN ① - ⑤
STANDARD : 24.5 mV $\pm$ 1.0 dB

	SHORT	OPEN +
Lch	① only	+1dB
	② only	+1.5dB
	① and ②	+2.5dB
Rch	② only	+1dB
	③ only	+1.5dB
	② and ③	+2.5dB

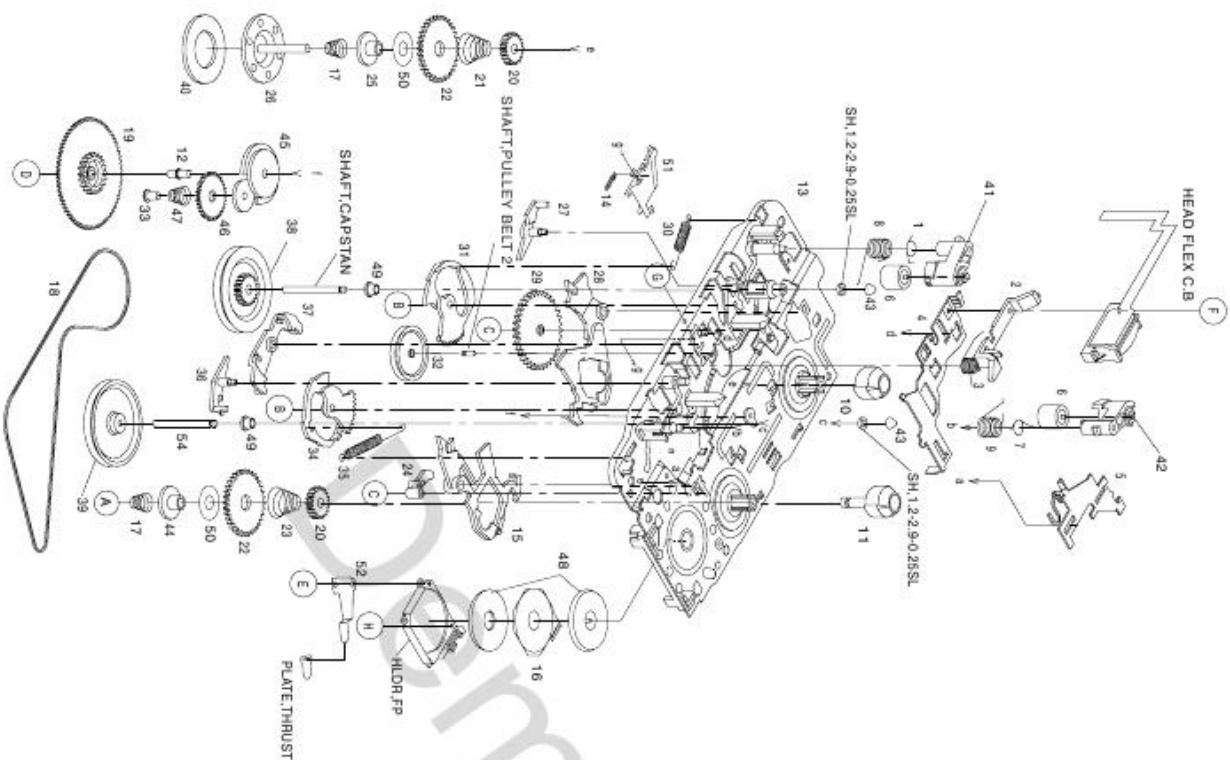
MECHANICAL PARTS LIST 1 / 1



NO.	PARTNO.	NAME	DESCRIPTION	REF NO.	PARTNO.	NAME	DESCRIPTION
1	82-HKS-020-010	LID ASST CAS8	CMX LNK [LM]Y>	21	82-HKS-228-010	BLDG PLATE	
2	82-HKS-001-010	LID ASST CAS8	8-[8]Y-[8]YH>	22	82-HKS-218-010	SPR. CLUTCH	
3	82-HKS-203-010	ELDR. CAS8 L		23	82-HKS-007-010	PRG. CAS8	
4	82-HKS-207-010	SPR. D CLUT		24	82-HKS-229-010	PRG. LMD	
5	82-HKS-202-010	ELDR. CAS8 R		25	82-HKS-009-010	LENS LEO	
6	82-HKS-008-010	WINDOW CAS8 N		26	82-HKS-206-010	GRAB M3P	
7	82-HKS-023-010	LID BATT 407	9-[8]Y-[8]YH>	27	82-HKS-005-010	KEY M3P	
8	82-HKS-018-010	LID BATT 407	9-[8]Y-[8]YH>	28	82-HKS-219-010	ELDR. CLUTCH	
9	82-HKS-011-010	KNOB LFT. HOLD	CMX LNK [LM]Y>	A	87-057-738-010	ELDR. CLUTCH 1-4-1. ELK N	
10	82-HKS-015-010	CABT. BEAR MOX1000	LMK [LM]Y>	B	82-HKS-223-010	5-SCHEM V,1-4-0,7-1 CM W	
11	82-HKS-015-010	CABT. BEAR MOX1000	9-[8]Y>	C	87-078-113-010	5-SCHEM V,1-3,5 HL/8	
12	82-HKS-014-010	CABT. BEAR MOX1000	9-[8]Y>	D	87-057-746-010	SCHEM N,1-4-2,1-30,5 CS	
13	82-HKS-014-010	KNOB. ELK A		E	82-HKS-224-010	5-SCHEM, BEHR-1,4-3 CS	
14	82-HKS-013-010	KNOB. ELK B		F	87-057-235-010	SCHEM VY1,4-1,5 CS	
15	82-HKS-013-010	SPR. C-BATT M		G	87-057-211-010	5-SCHEM V,1-4,2 CS HL	
16	82-HKS-012-010	SPR. C-BATT P		H	87-057-732-010	TRAPING SCHEM, VY1,4-3	
17	82-HKS-025-010	PLATE BATT P		I	87-057-384-010	5-SCHEM VY2,4-3,5 HL	
18	82-HKS-004-010	PLATE. ELCT L		J	82-HKS-228-010	5-SCHEM V,1-4,2 CS	
19	82-HKS-004-010	PLATE. ELCT R		K	87-253-500-010	5-SCHEM V,1-4,1-4 CS	
20	82-HKS-010-010	KNOB LFT. OPEN		L	87-HKS-225-010	5-SCHEM V,1-4-0-6-2-5	
21	82-HKS-010-010	STAKE CENTER<18]Y-[8]YH>		M	87-057-430-010	VY1,4-4,5 ELK	
22	82-HKS-004-010	STAKE CENTER M<[LM]Y>					
23	82-HKS-203-010	ELDR. J ACK UP					
24	82-HKS-205-010	BLDG. JACK					
25	82-HKS-206-010	SPR. D CAS8					
26	82-HKS-001-010	PLATE. HINGE					

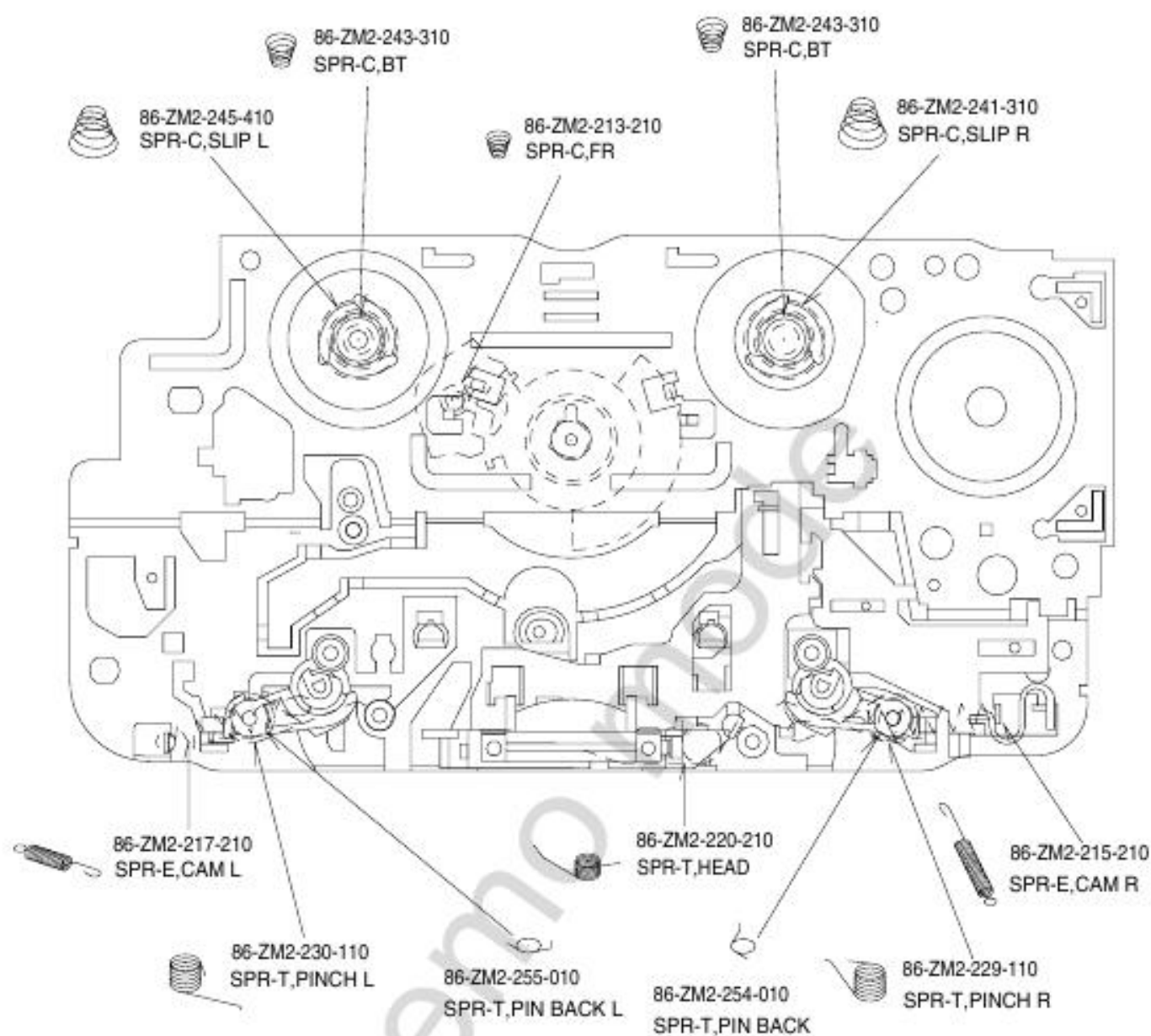
COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Blue
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Violet Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YF	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		



REF. NO.	PART NO.	QTY	NAME	DESCRIPTION	REF. NO.	PART NO.	QTY	NAME	DESCRIPTION
1	86-1M2-155-010		SPR.-P. PIN BACK L		31	86-1M2-216-510		LEVER, CAM L	
2	86-1M2-152-610		GUIDE, TAPES		32	86-1M2-215-010		PULLEY, COUPLER	
3	86-1M2-120-210		SPR.-T. HEAD		33	86-1M2-212-310		SHAFT, P.S.	
4	86-1M2-219-510		LEVER, HEAD		34	86-1M2-214-510		LEVER, CAM R	
5	86-1M2-147-010		LEVER, MS SELECT		35	86-1M2-215-210		SPR.-E, CAM R	
6	86-1M2-128-110		ROLLER ASSEMBLY, PINCH		36	86-1M2-212-410		LEVER, PIN UP R	
7	86-1M2-124-110		SPR.-P. PINCH R		37	86-1M2-218-210		LEVER, HEAD UP	
8	86-1M2-125-110		SPR.-P. PINCH L		38	86-1M2-205-410		PISTON, L	
9	86-1M2-123-110		SPR.-P. PINCH R		39	86-1M2-217-120		PISTON, R	
10	86-1M2-140-110		CAM, REEL		40	86-1M2-215-010		SPR.-AUTO 2	
11	86-1M2-134-110		SHAFT, REEL R		41	86-1M2-215-310		ARM, PINCH L	
12	86-1M2-151-110		SHAFT, GEAR B		42	86-1M2-214-210		ARM, PINCH R	
13	86-1M2-201-810		CHAS. ASSEMBLY, OUT-SELECT		43	86-1M2-281-210		CAM, SHAFT	
14	86-1M2-143-010		SPR.-E, EJECT		44	86-1M2-215-310		CAM, SLIP R	
15	86-1M2-132-110		LEVER, REEL R		45	86-1M2-210-710		LEVER, P.S.	
16	87-286-101-610		COIL, P.S. 7286		46	86-1M2-211-210		GEAR, P.S.	
17	86-1M2-143-110		SPR.-C, BT		47	86-1M2-212-210		SPR.-C, P.S.	
18	86-1M2-121-110		REEL, P.S.		48	86-122-510-010		ARM, T-6 A	
19	86-1M2-123-810		GEAR, P.S.		49	86-122-510-010		GEAR, T-6 B	
20	86-1M2-128-710		GEAR, P.S.		50	86-1M2-213-010		PISTON, N	
21	86-1M2-145-410		SPR.-C, SLIP L		51	86-1M2-342-010		LEVER, ASSEMBLY, EJECT	
22	86-1M2-137-010		GEAR, PLATE		52	86-122-311-010		SPR.-P, 6A, MOTOR	
23	86-1M2-141-110		SPR.-C, SLIP R		A	86-1M2-218-010		W.P.D. 1.56-4-0.2 SLT	
24	86-1M2-172-010		LEVER, SW P 6.4		B	86-1M2-312-010		W.P.D. 0.95-3-0.35	
25	86-1M2-136-510		CAM, SLIP		C	87-057-864-010		PM, 3-0.95-0.4	
26	86-1M2-135-110		SHAFT, REEL L		D	87-057-512-010		PM, 3-1.58-0.25, SLT2	
27	86-1M2-121-110		LEVER, PIN UP L		E	87-057-410-010		W.P.D. 4-5 SLT	
28	86-1M2-123-110		LEVER, REEL L		F	86-1M2-348-010		S-GEAR, 1-4-4.6	
29	86-1M2-208-110		GEAR, A		G	87-251-510-110		GEAR, V-1, 4-1.4 (B)	
30	86-1M2-217-210		SPR.-E, CAM L		H	87-057-812-110		V-1, 4-3 (B)	

SPRING APPLICATION POSITION



Demo mode

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