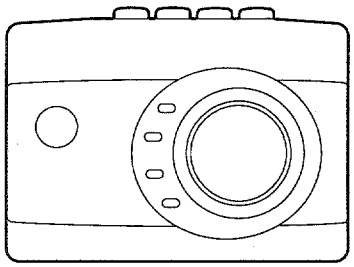
aiwa

aiwa SERVICE

HS-GS282
HS-GS382

SERVICE MANUAL



STEREO CASSETTE PLAYER

• BASIC TAPE MECHANISM: 7ZM–5 P1N • TYPE: Y,YH,YK,YJ(282)

REVISION PUBLISHING

SPECIFICATIONS

Maximum output:	15 mW + 15 mW (EIAJ 16 Ω) 12 mW + 12 mW (EIAJ 32 Ω)
Power source:	DC 3V using two R6 (size AA) batteries AC house current using an optional AC adaptor aiwa AC-300/AC-302<Y,YK> AC house current using an optional AC adaptor aiwa AC-620/AC-302<GS282YJ>
Maximum dimensions (W x H x D):	114 (W) x 86.4 (H) x 32.8 (D) mm ($4^1/_2$ x $3^1/_2$ x $1^5/_{16}$ in.)
Weight:	Approx. 144g (5 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.

•This Service Manual is the "Revision Publishing" and replaces "Simple Manual (HS-GS282)".(S/M Code No. 09-97C-244-4FE)

•This Service Manual is the "Revision Publishing" and replaces "Simple Manual (HS-GS382)".(S/M Code No. 09-97C-244-3FE)

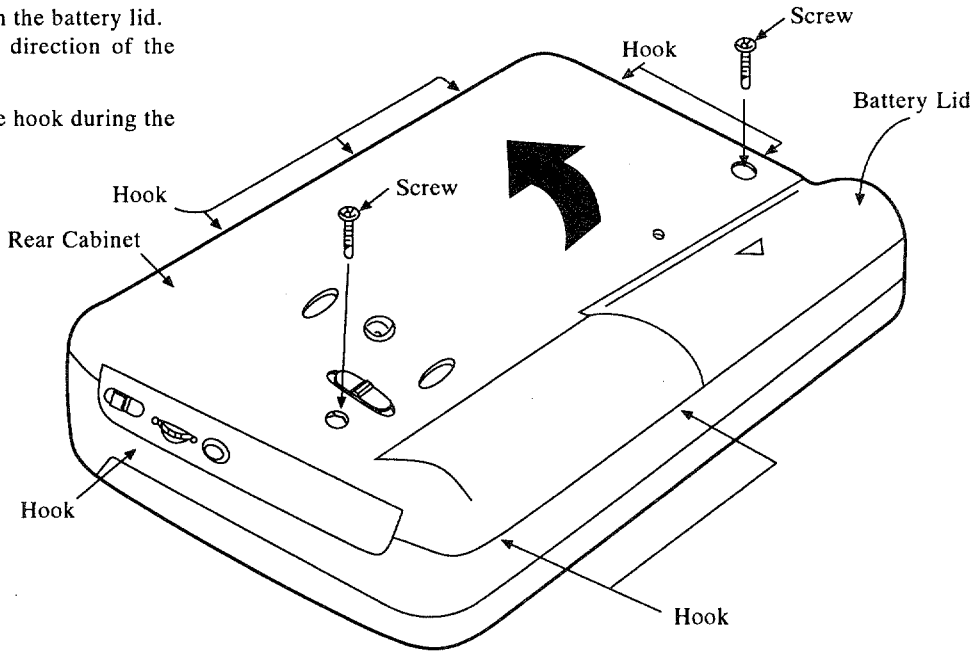
S/M Code No. 09–982–241–3FE

DISASSEMBLY INSTRUCTIONS

1. REAR CABINET REMOVAL

1) Remove the two screws and open the battery lid.
2) Remove the rear cabinet in the direction of the arrow as shown.

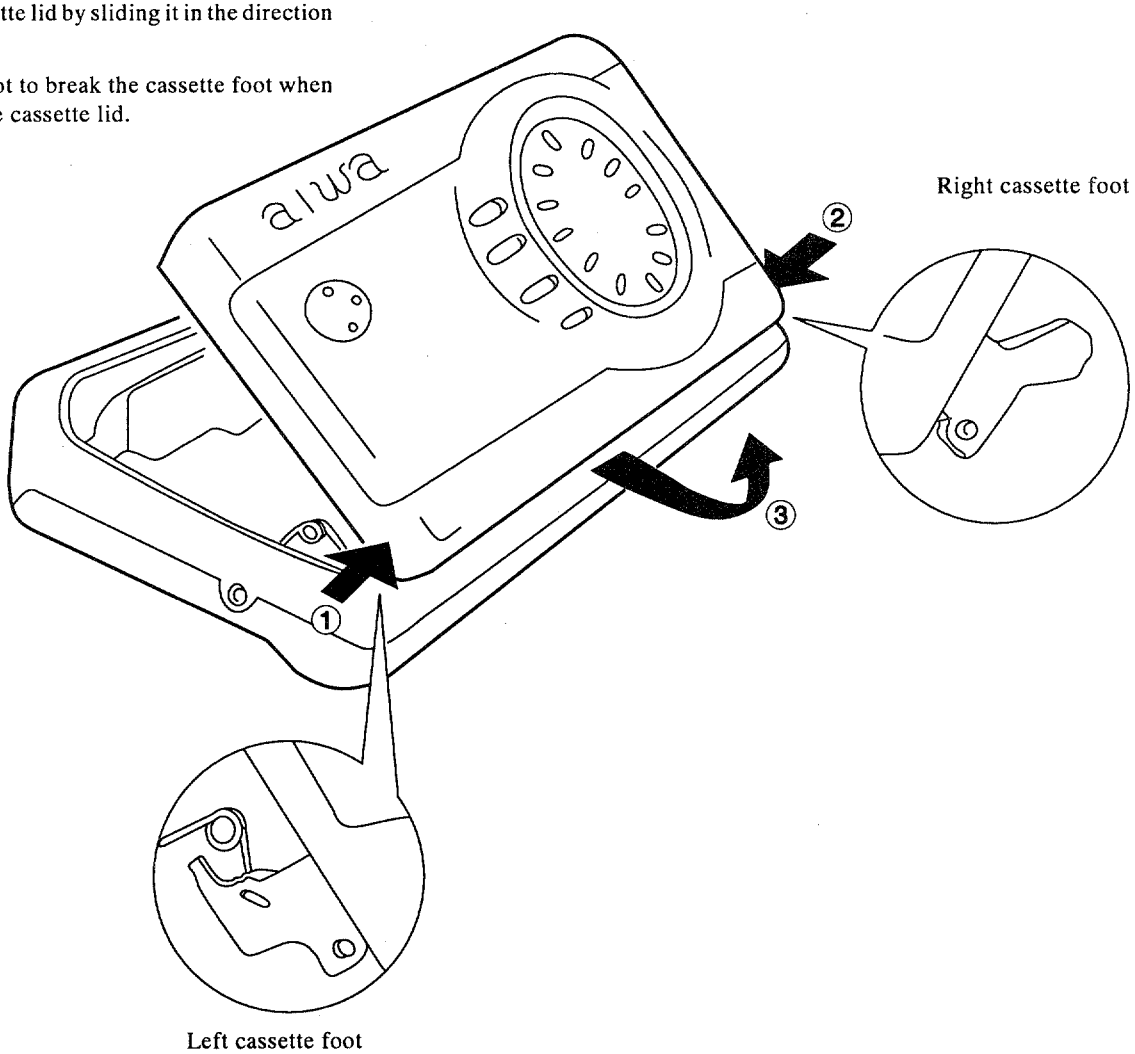
Note : Be careful not to damage the hook during the removal of the rear cabinet.



2. HOW TO REMOVE THE CASSETTE LID

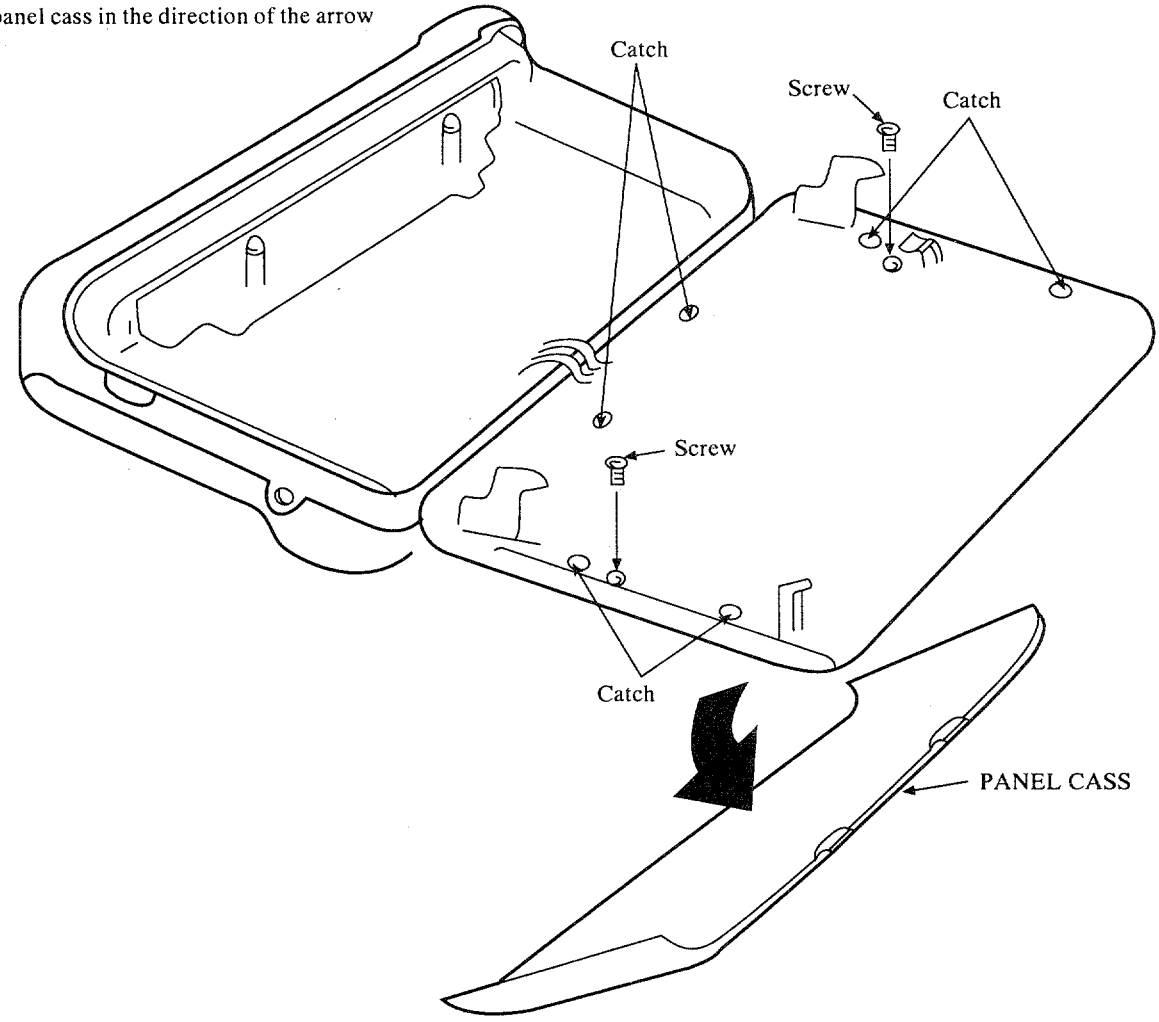
1) Apply a little bit of force in the direction of arrow ① to the cassette lid and pull out the left cassette foot.
2) Repeat the same manner in the direction of arrow ② in order to remove the right cassette foot.
3) Remove the cassette lid by sliding it in the direction of arrow ③.

Note : Be careful not to break the cassette foot when removing the cassette lid.



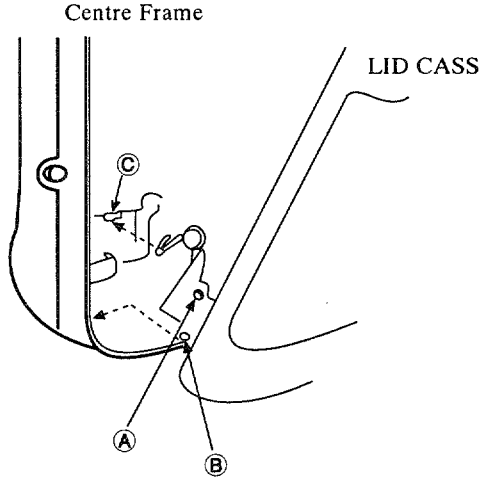
3. HOW TO REMOVE THE PANEL CASS

1) Remove the two screws.
2) Remove the catch.
3) Remove the panel cass in the direction of the arrow as shown.



4. HOW TO REPLACE THE CASSETTE LID SPRING

1) Hook the spring on Ⓐ.
2) Fit the left cassette foot into the center frame (Ⓑ).
3) Hook the other side of the spring on Ⓒ.



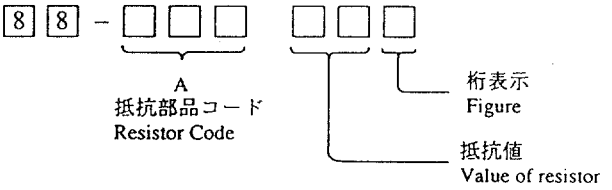
ELECTRICAL MAIN PARTS LIST

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

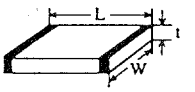
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A20-544-040		IC,MM1376AF<GS382>
	87-A20-532-040		IC,LB1977M
	87-001-875-080		IC,BA1106FS<GS382>
	87-017-906-080		IC,MM1206AFFE
	87-A20-545-040		IC,MM1376BF<GS282>
TRANSISTOR			
	87-026-264-080		C-TR,RN1411
	89-327-125-080		CHIP TR,2SC2712GR
DIODE			
	87-020-027-080		CHIP-DIODE 1SS184
MAIN C.B			
	87-HG6-604-010		F-CABLE,5P (MOTOR)
C1	87-010-503-040		CAP,E 220-4 GAS
C2	87-010-501-040		E/CAP GAS 47-4
C101	87-010-177-080		C-CAP,S 820P-50 SL
C102	87-010-177-080		C-CAP,S 820P-50 SL
C103	87-010-501-040		E/CAP GAS 47-4
C104	87-010-501-040		E/CAP GAS 47-4
C105	87-A10-592-080		C-CAP,S 0.015-50 J B
C106	87-A10-592-080		C-CAP,S 0.015-50 J B
C107	87-016-462-080		C-CAP,S 1-16 F
C108	87-016-462-080		C-CAP,S 1-16 F
C109	87-016-462-080		C-CAP,S 1-16F<GS282>
C109	87-016-461-080		C-CAP,S 0.47-16F<GS382>
C110	87-016-462-080		C-CAP,S 1-16F<GS282>
C110	87-016-461-080		C-CAP,S 0.47-16F<GS382>
C111	87-010-180-080		C-CER 1500P
C112	87-010-180-080		C-CER 1500P
C118	87-A10-264-080		C-CAP,S 0.1-16ZF<YH>
C119	87-010-499-040		CAP,E 22-6.3 GAS
C120	87-010-194-080		CAP, CHIP 0.047
C121	87-010-503-040		CAP,E 220-4 GAS
C122	87-010-197-080		CAP, CHIP 0.01 DM
C123	87-012-158-080		C-CAP,S 390P-50 CH
C124	87-012-158-080		C-CAP,S 390P-50 CH
C125	87-010-197-080		CAP, CHIP 0.01 DM
C151	87-A10-264-080		C-CAP,S 0.1-16ZF<Y,YK>
C152	87-010-499-040		CAP,E 22-6.3 GAS
C202	87-A10-264-080		C-CAP,S 0.1-16ZF
C203	87-016-526-080		C-CAP,S 0.47-16 BK
C204	87-010-992-080		C-CAP,S 0.047-25 B
C205	87-016-669-080		C-CAP,S 0.1-25 K B
C206	87-016-669-080		C-CAP,S 0.1-25 K B
C207	87-016-669-080		C-CAP,S 0.1-25 K B
C208	87-010-503-040		CAP,E 220-4 GAS
C209	87-A10-201-080		C-CAP,S0.33-16 KB
C210	87-A10-264-080		C-CAP,S 0.1-16ZF
C221	87-016-669-080		C-CAP,S 0.1-25 K B
C301	87-010-193-080		CHIP CAPACITOR,0.033<GS382>
C302	87-010-193-080		CHIP CAPACITOR,0.033<GS382>
C303	87-010-186-080		CAP,CHIP 4700P<GS382>
C304	87-010-186-080		CAP,CHIP 4700P<GS382>
C305	87-010-197-080		CAP, CHIP 0.01 DM<GS382>
C306	87-010-197-080		CAP, CHIP 0.01 DM<GS382>
C307	87-010-193-080		CHIP CAPACITOR,0.033<GS382>
C308	87-010-193-080		CHIP CAPACITOR,0.033<GS382>
C309	87-A10-264-080		C-CAP,S 0.1-16ZF<GS382>
C310	87-A10-264-080		C-CAP,S 0.1-16ZF<GS382>
C311	87-016-462-080		C-CAP,S 1-16 F<GS382>
C312	87-016-462-080		C-CAP,S 1-16 F<GS382>
C313	87-010-501-040		E/CAP GAS 47-4<GS382>
C901	87-016-526-080		C-CAP,S 0.47-16 BK
J1	87-A60-122-010		JACK,DC 3.8
J101	85-HRL-623-010		JACK,3.5 ST BLK
R101	87-022-340-080		C-RES,S 470-1/10W F
R102	87-022-340-080		C-RES,S 470-1/10W F
R103	87-022-198-080		C-RES,S680 1/10WF
R104	87-022-198-080		C-RES,S680 1/10WF
S101	87-A90-422-010		SW,SL 2-2-2
S102	87-036-123-010		C-SWITCH SLIDE 1-1-2
SFR201	87-A90-534-010		SFR,30K B VZ066L3
SW1	87-A90-423-010		SW,LEAF
SW151	87-036-145-010		SW,SL1-1-3 SSSS81
SW301	87-036-123-010		C-SWITCH SLIDE 1-1-2
TH201	87-A90-477-080		C-THMS,157-502-53002-TP
VR101	87-024-555-010		VOL 20KAX2 DIA 14
MSP C.B			
	88-HG6-602-010		F-CABLE,8P
C401	87-010-185-080		C-CAP,S 3900P-50 B
C402	87-010-185-080		C-CAP,S 3900P-50 B
C403	87-016-491-080		C-CAP,S 0.22-16 FZ
C404	87-016-491-080		C-CAP,S 0.22-16 FZ
C405	87-016-462-080		C-CAP,S 1-16 F
C406	87-016-462-080		C-CAP,S 1-16 F
C407	87-010-197-080		CAP, CHIP 0.01 DM
C408	87-010-197-080		CAP, CHIP 0.01 DM
C409	87-010-195-080		C-CAP,S 0.068-25 F
C410	87-010-195-080		C-CAP,S 0.068-25 F
C411	87-010-188-080		CAP,CHIP 6800P
C412	87-010-188-080		CAP,CHIP 6800P
C413	87-010-746-080		CAP, TANTAL 10-4
C451	87-A10-264-080		C-CAP,S 0.1-16ZF
C452	89-327-125-080		C-CAP,S 2.27-10 ZF
LED471	87-A90-276-080		C-LED,SML-210MT GRN
LED472	87-A90-277-080		C-LED,SML-210DT ORN
LED473	87-A90-278-080		C-LED,SML-210VT RED
S401	87-036-146-080		C-SLIDE SWITCH 1-1-4
HEAD FLEX C.B			
PH1	87-A90-435-010		HEAD ASSY 7ZM-5

○ チップ抵抗部品コード／CHIP RESISTOR PART CODE

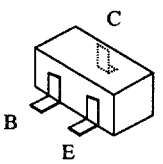
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



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

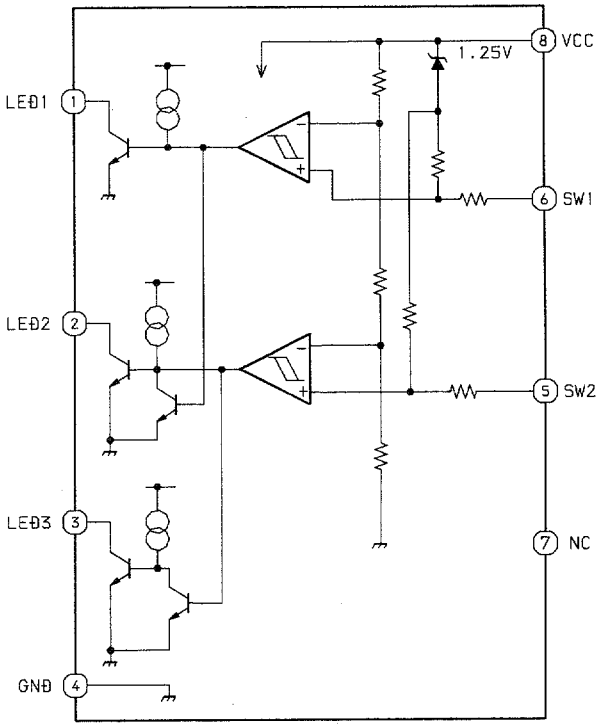
TRANSISTOR ILLUSTRATION



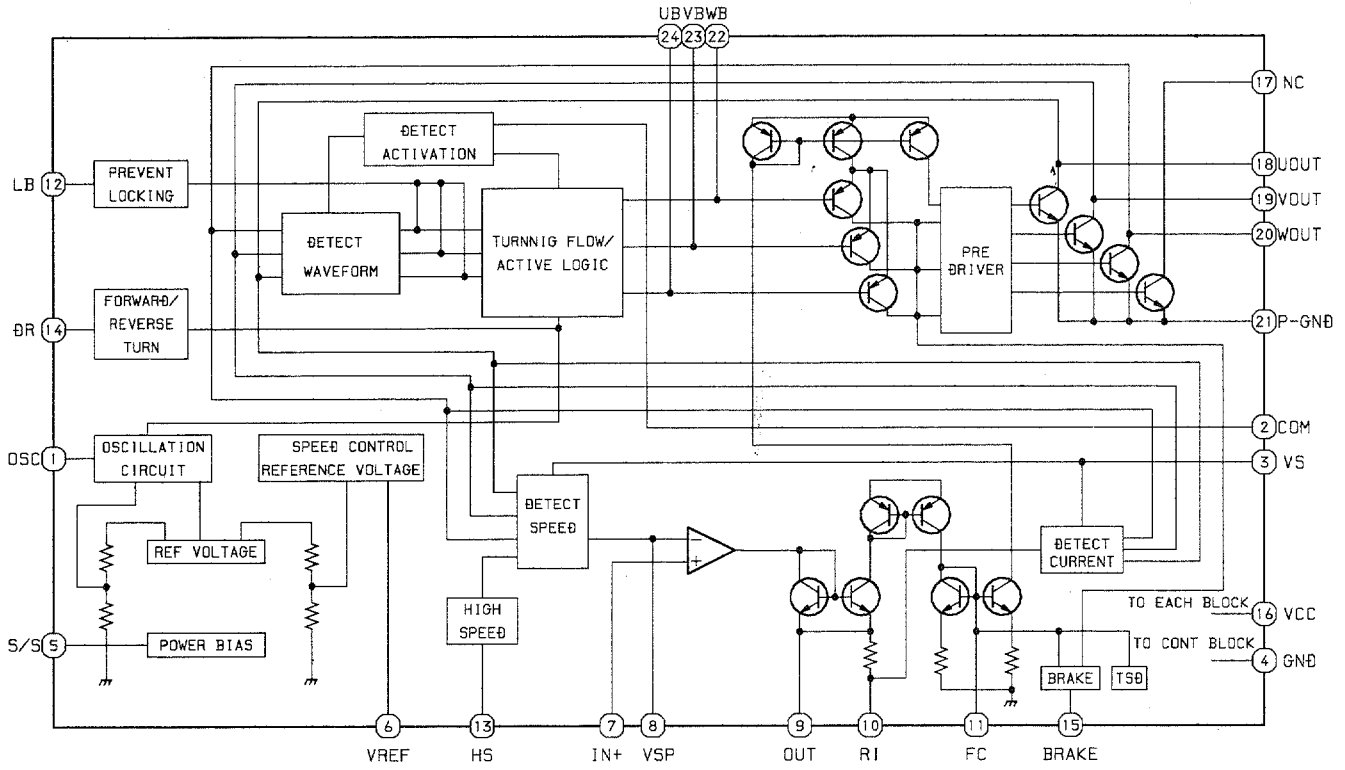
RN1411
2SC2712

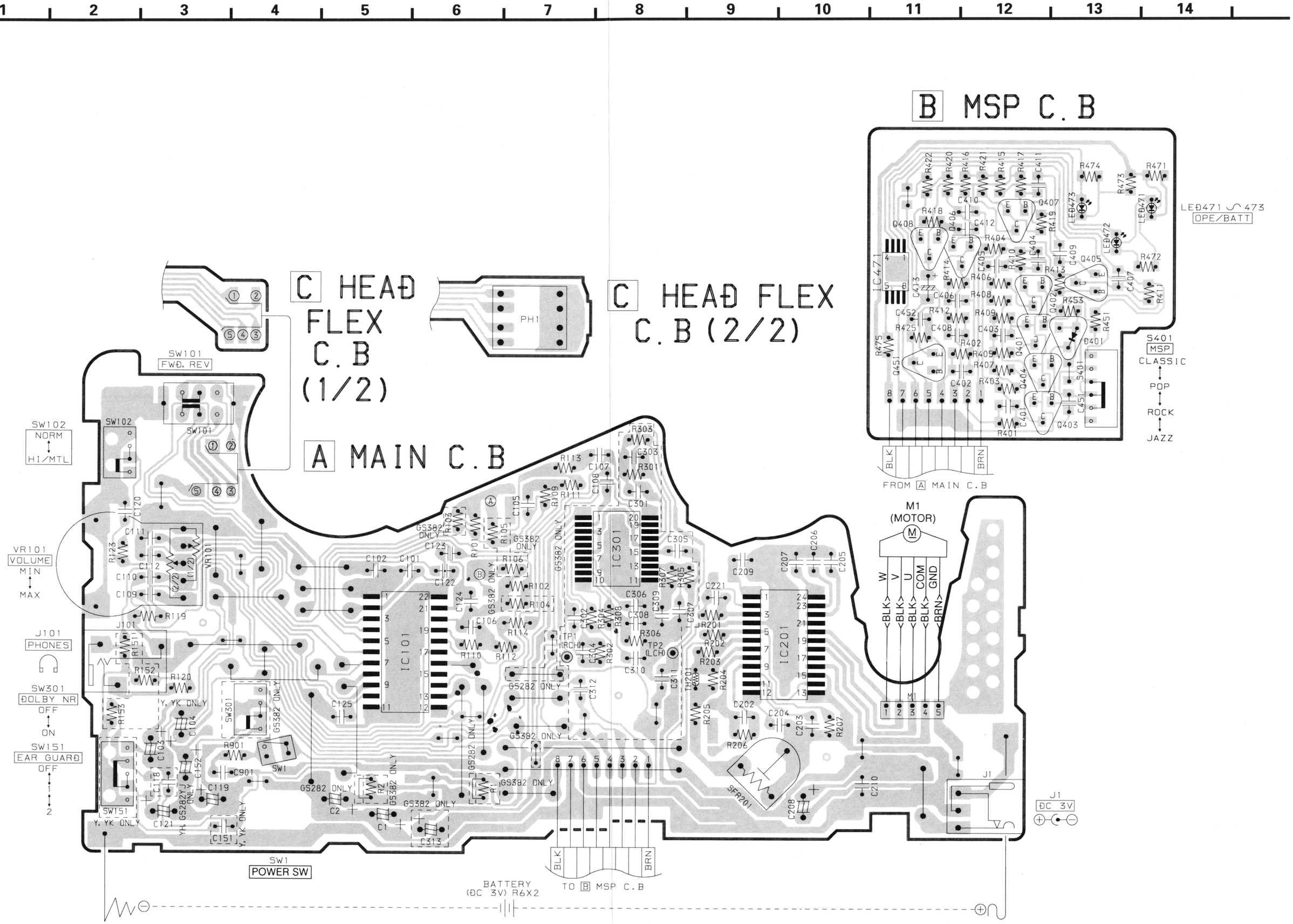
IC BLOCK DIAGRAM

IC, MM1206AFFE

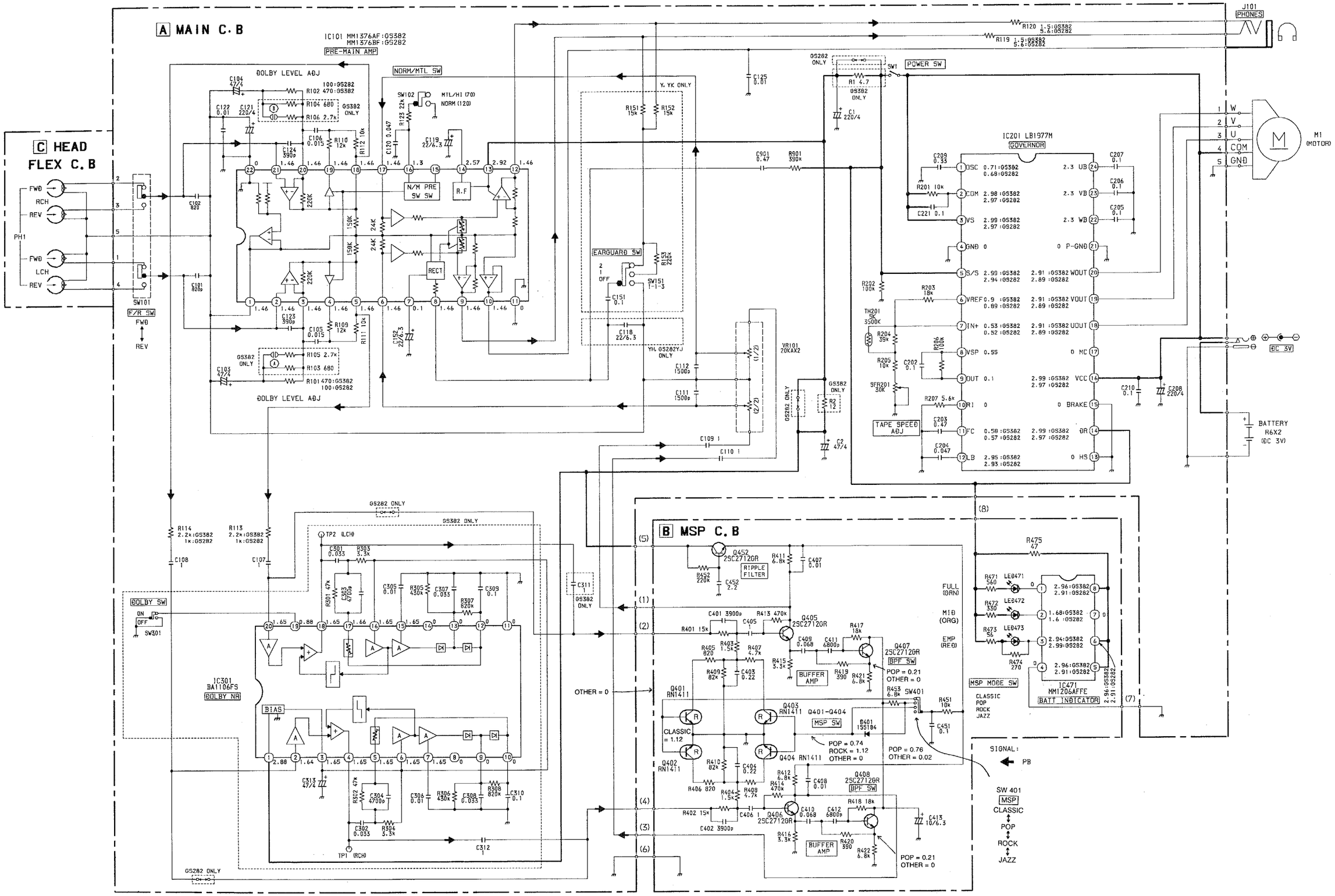


IC, LB1977M

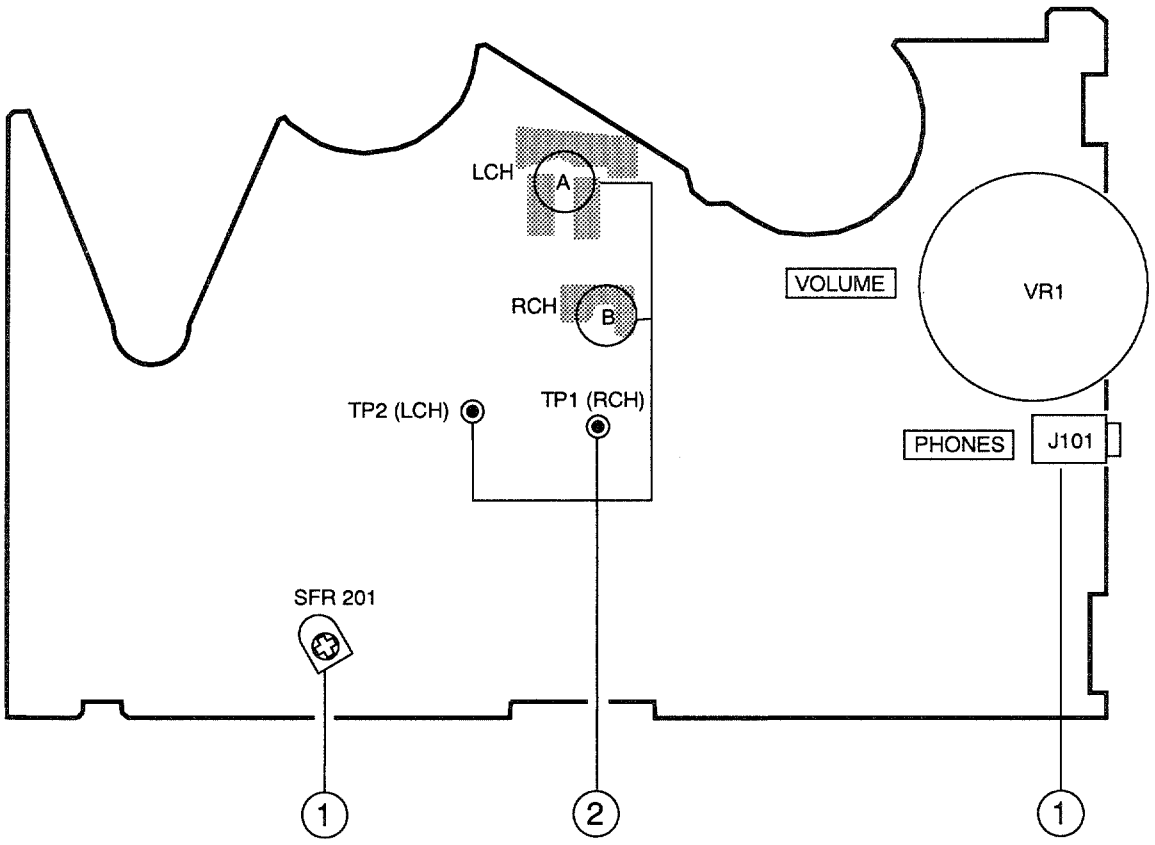



C HEAD FLEX C.B (1/2)
C HEAD FLEX C.B (2/2)
PH1
A MAIN C.B
B MSP C.B
SW101
FWD. REV
SW102
NORM
HI/MTL
VR101
VOLUME
MIN
MAX
J101
PHONES
SW301
DOLBY NR
OFF
ON
SW151
EAR GUARD
OFF
SW1
POWER SW
IC101
IC201
IC301
TP1 (RCH)
TP2 (LCH)
SFR201
TH201
M1
(MOTOR)
W
V
U
COM
GND
S401
MSP
CLASSIC
POP
ROCK
JAZZ
LED471 ∿ 473
OPE/BATT
LED471
LED472
LED473
LC471
J1
DC 3V
BATTERY
(DC 3V) R6X2
TO B MSP C.B
FROM A MAIN C.B
BLK
BRN
Y. YK ONLY
GS282 ONLY
GS382 ONLY

SCHEMATIC DIAGRAM (MAIN / MSP)



[A] MAIN C.B



<TAPE PLAYER SECTION>

1. Tape Speed Adjustment
   Settings : • Test tape : TTA–100
   • Test point : PHONES (J101)
   • Adjustment location : SFR201
   • MSP : CLASSIC
   • DOLBY NR : OFF
   (GS382 ONLY)
   • TAPE SELECTOR : NORM
   • DIRECTION : FWD
   • VOLUME : MAX
   Method : Play back the test tape and adjust SFR201 so that the frequency is 3015Hz±10Hz

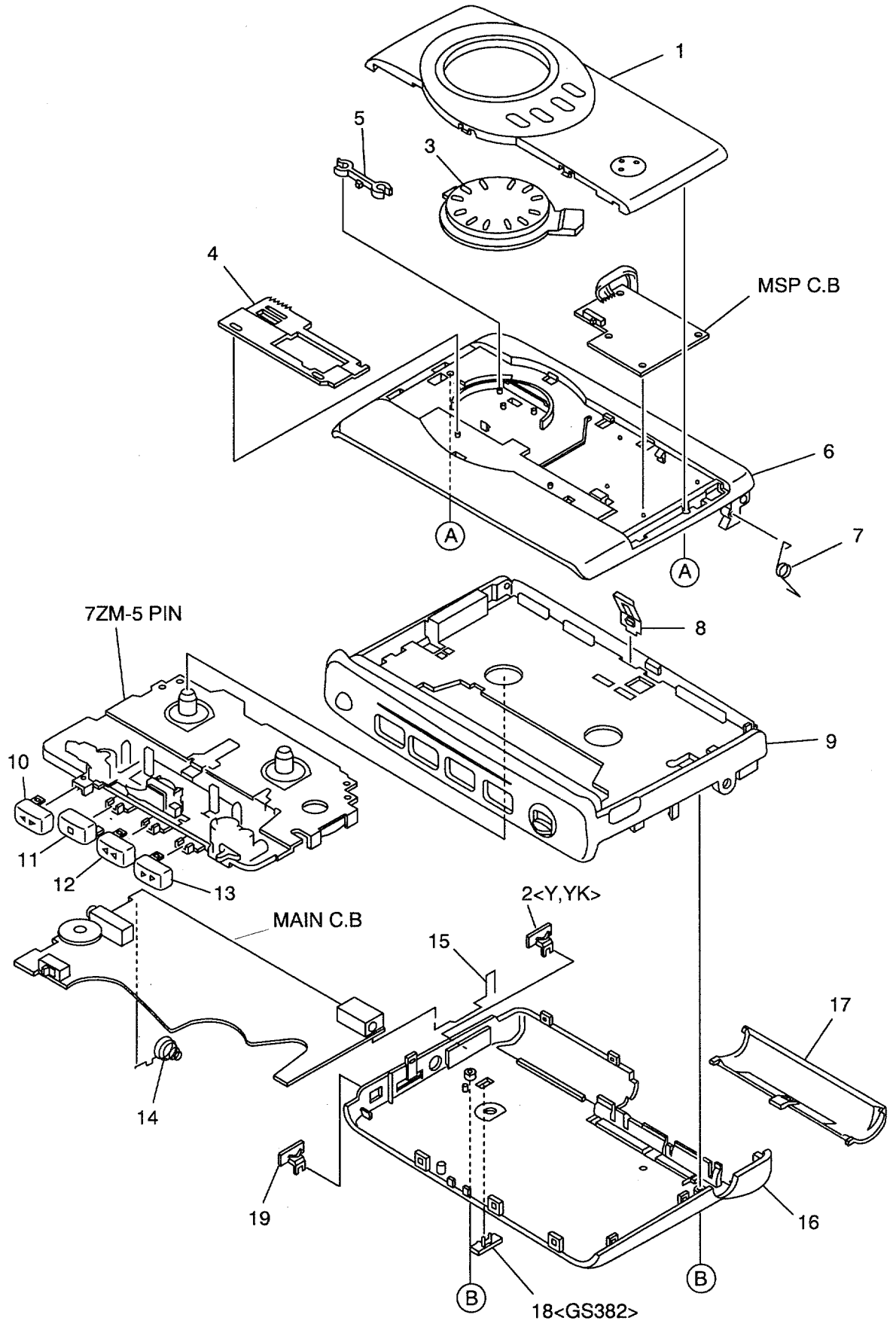
2. Dolby Level Check<GS382 ONLY>
   Settings : • Test tape : TTA–200
   • Test point : TP1 (Rch),TP2(Lch)
   • DOLBY NR : OFF
   • TAPE SELECTOR : NORM
   • DIRECTION : FWD
   • VOLUME : MIN"0"
   Method : Solder two shorting points (Ⓐ(Lch) and Ⓑ(Rch)). Connect a coupling capacitor (10uF / 16V) between the test point and AC Volt meter, check that the voltage is 100 mV±1.0dB.
   • If TP1(Rch) level is higher than the limit, desolder shorting point Ⓑ(Rch).
   • If TP2(Lch) level is higher than the limit, desolder shorting point Ⓐ(Lch).

PRACTICAL SERVICE FIGURE

<TAPE SECTION>

Tape speed :	3015Hz ± 60Hz
Wow & flutter :	Less than 0.5% (RMS)
Take-up torque :	24 ~ 35g-cm (FWD,RVS)
F.F torque :	70 ~ 150g-cm
REW torque :	70 ~ 150g-cm
Back tension :	1.5 ~ 4g-cm (FWD,RVS)
S/N ratio :	More than 42dB (PB, DC)
Distortion :	Less than 3.0% (PB, DC)
Noise level :	Less than 5.0mV (Vol MAX, PB, DC) Less than 0.5mV (Vol MIN, PB, DC)
Frequency response :	63Hz + 2 / – 6dB ~ 8kHz + 4 / – 4dB (NORMAL) 63Hz + 2 / – 6dB ~10kHz + 4 / – 4dB (CrO2,METAL)
Test tape :	TTA– 100 TTA–320(NORMAL)/ TTA–310(CrO2) TTA–200<GS382 ONLY>

MECHANICAL EXPLODED VIEW 1 / 1

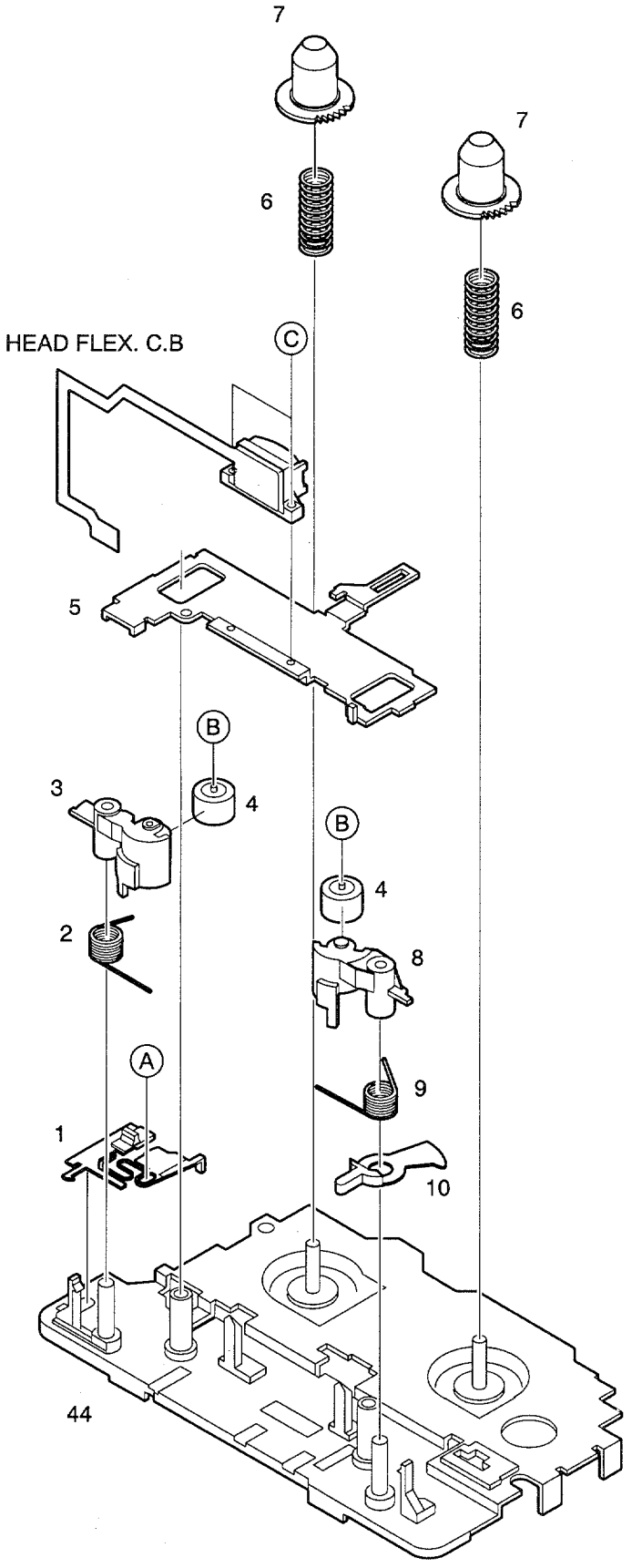


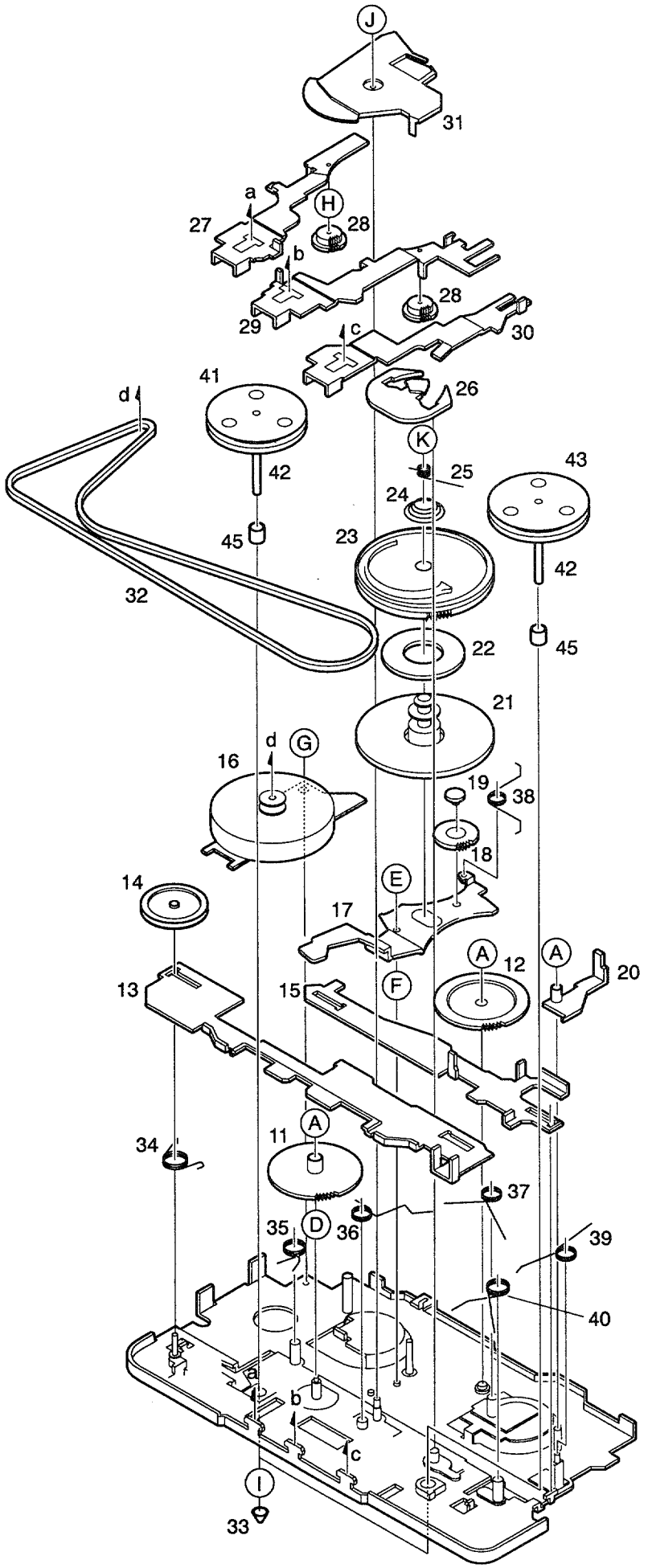
MECHANICAL PARTS LIST 1 / 1

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	88-HG6-006-010		PANEL,MSP<382YH>
1	88-HG7-004-010		PANEL,MSP<282YH,282YJ>
1	88-HG7-001-010		PANEL,MSP EGS<282Y,282YK>
1	88-HG6-002-010		PANEL,MSP EGS<382Y,382YK>
2	88-HG6-013-010		KNOB,SL EGS<282Y,282YK,382Y,382YK>
3	88-HG6-003-010		KNOB,RTRY MSP
4	88-HG6-201-010		RACK,MSP
5	85-HG8-203-010		SPR,CLICK
6	88-HG6-001-010		LID,CASS
7	87-HG6-203-010		SPR-T,CASS
8	87-HG6-204-010		SPR-P,CASS
9	88-HG6-007-010		FRAME,CENTER<282YH,282YJ,382YH>
9	88-HG6-014-010		FRAME,CENTER<282Y,282YK,382Y,382YK>
10	87-HRB-019-010		BTN,PLAY (GRAY)
11	87-HRB-020-010		BTN,STOP (GRAY)
12	87-HRB-026-010		BTN,REW (GRAY)
13	87-HRB-027-010		BTN,FF (GRAY)
14	87-HG6-202-010		BAT-CONTACT,(-)
15	87-HG6-201-010		BAT-CONTACT,(+)
16	88-HG6-004-010		CABI,REAR Y(CE)<382YH>
16	88-HG7-002-010		CABI,REAR Y(CE)<282Y,282YK>
16	88-HG7-005-010		CABI,REAR YH<282YH>
16	88-HG7-003-010		CABI,REAR YJ<282YJ>
16	88-HG6-012-010		CABI,REAR<382Y,382YK>
17	88-HG6-008-010		LID,BAT
18	88-HG6-009-010		KNOB,SL DOL<382YH,382Y,382YK>
19	88-HG6-010-010		KNOB,SL TP
A	87-067-732-010		TAPPING SCREW, VT1.4-3
B	87-067-405-010		SCREW,VP+1.4-6HL

TAPE MECHANISM EXPLODED VIEW 1 / 1




J
31
a
H
27
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c
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d
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K
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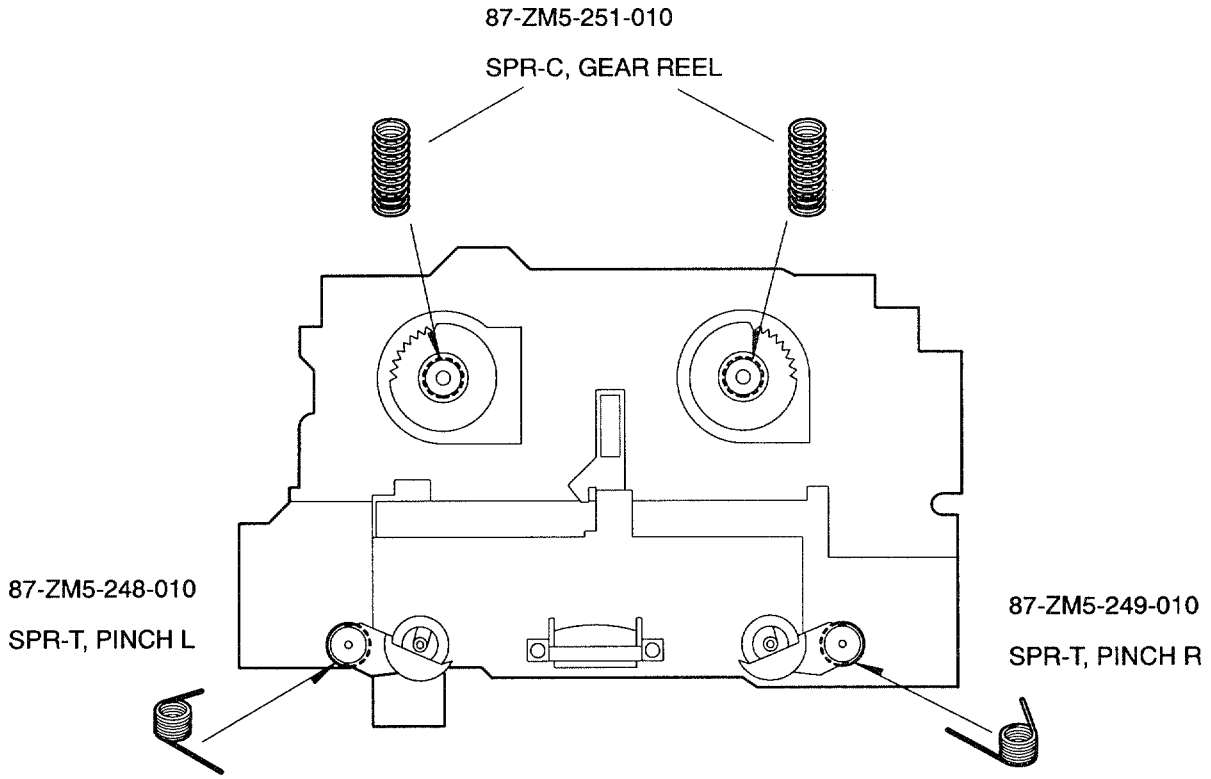
E
17
A
A
12
20
13
15
F
A
34
11
37
35
D
36
39
40
a
b
c
I
33

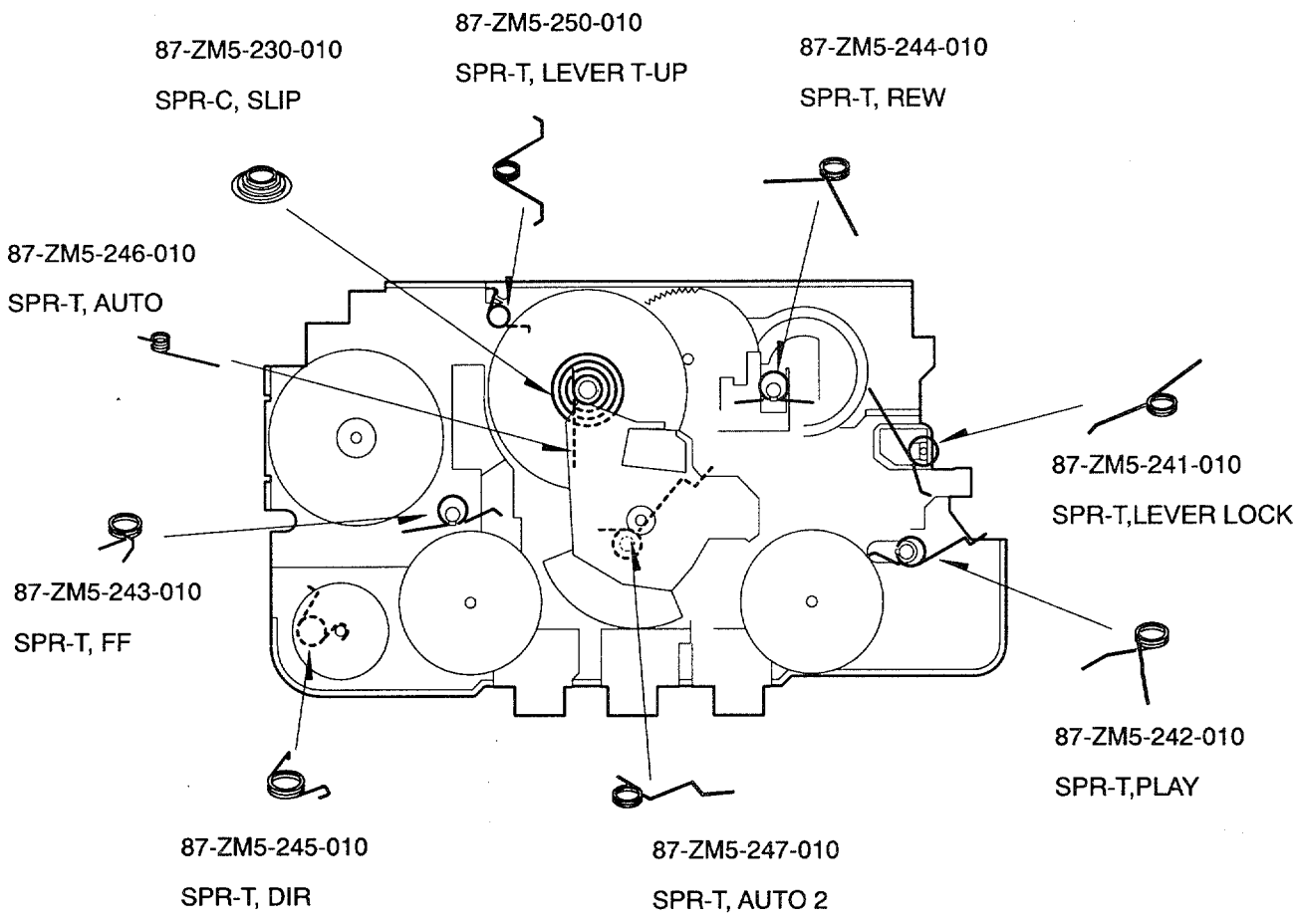
TAPE MECHANISM PARTS LIST 1 / 1

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	87-ZM5-218-010		LEVER,MOD SEL 2
2	87-ZM5-248-010		SPR-T,PINCH L
3	87-ZM5-232-010		ARM,PINCH L
4	87-ZM5-255-010		ROLLER ASSY,PINCH
5	87-ZM5-210-010		LEVER,PLAY
6	87-ZM5-251-010		SPR-C,GEAR REEL
7	87-ZM5-276-010		GEAR,REEL L
8	87-ZM5-233-010		ARM,PINCH R
9	87-ZM5-249-010		SPR-T,PINCH R
10	87-ZM5-219-010		BTN,DIR KNOB
11	87-ZM5-221-010		GEAR,IDL A
12	87-ZM5-222-010		GEAR,IDL B
13	87-ZM5-212-010		LEVER,DIR P
14	85-ZM1-212-010		PULLY PM 2
15	87-ZM5-213-010		LEVER,LOCK
16	M8-6ZS-390-000		ABL-63A
17	87-ZM5-208-010		LEVER ASSY,T-UP
18	87-ZM5-223-010		GEAR,PLAY
19	87-ZM5-259-010		CAP,PLAY
20	87-ZM5-216-010		LEVER,PLAY SW
21	87-ZM5-228-010		GEAR,SLIP B
22	87-ZM5-229-010		FELT,CLUTCH
23	87-ZM5-227-010		GEAR,SLIP A
24	87-ZM5-230-010		SPR-C,SLIP
25	87-ZM5-246-010		SPR-T,AUTO
26	87-ZM5-214-010		LEVER,AUTO
27	87-ZM5-204-010		LEVER ASSY,FF
28	87-ZM5-225-010		GEAR,FF/REW
29	87-ZM5-206-010		LEVER ASSY,REW
30	87-ZM5-211-010		LEVER,STOP
31	87-ZM5-261-010		LEVER,AUTO 2S
32	87-ZM5-253-010		BELT,MAIN
33	87-ZM5-258-010		CAP,CAPSTAN
34	87-ZM5-245-010		SPR-T,DIR
35	87-ZM5-243-010		SPR-T,FF
36	87-ZM5-247-010		SPR-T,AUTO 2
37	87-ZM5-244-010		SPR-T,REW
38	87-ZM5-250-010		SPR-T,LEVER T-UP
39	87-ZM5-241-010		SPR-T,LEVER LOCK
40	87-ZM5-242-010		SPR-T,PLAY
41	87-ZM5-236-010		FLY-WHL,R
42	87-ZM5-237-010		CAPSTAN, 1.8-20.2
43	87-ZM5-235-010		FLY-WHL,L
44	87-ZM5-201-010		CHAS ASSY,OUT-SERT P
45	87-ZM5-260-010		CLR,BEARING
A	87-067-860-010		W-P,0.95-3-0.4
B	87-B10-085-010		W-L,1.31-3-0.2
C	87-ZM5-270-010		S-SCREW,1.4-5-STP
D	87-B10-084-010		W-L,2.2-3.2-0.1
E	87-B10-080-010		W-L,0.97-3-0.35
F	87-B10-086-010		W-L,1.57-2.8-0.1
G	87-ZM5-271-010		S-SCREW,1.4-2.6-STP
H	87-B10-087-010		W-L,1.25-2.26-0.1 SLT
I	87-B10-070-010		W-P,1.55-2.9-0.25 SLIT
J	87-ZM5-083-010		W-L,0.95-2.5-0.3
K	87-B10-083-010		W-L,0.95-2.5-0.3

SPRING APPLICATION POSITION





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-HG6-901-010		IB,EX-EGFSI<GS382Y,YK>
1	88-HG6-902-010		IB,EX-ESC<GS382YH>
1	88-HG7-901-010		IB,EX-EGFSI<282Y,YK>
1	88-HG7-902-010		IB,EX-ESC<GS282YH,YJ>
2	87-080-029-010		CLIP ASSY, BELT
3	87-B30-078-010		HEADPHONE,HP-M006

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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