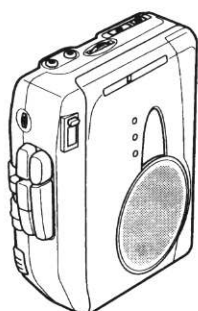


aiwa

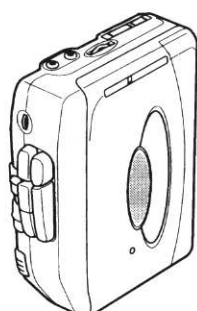


HS-JS175 HS-JS175W HS-JS165 HS-JS165W

HS-JS175 / 175W



HS-JS165 / 165W



STEREO RADIO
CASSETTE RECORDER

• BASIC TAPE MECHANISM: TN-9XR-112

• TYPE: 175:YZ,YL 175W:YU
165:YZ,YJ 165W:YU

REVISION PUBLISHING

This Service Manual is the "Revision Publishing" and replaces "Simple Manual"
(S/M Code No. 09-977-217-40I).

SPECIFICATIONS

<HS-JS165>

Frequency range: <HS-JS165>
FM 87.5 – 108 MHz AM530 – 1605 kHz
<HS-JS165W>
FM 87.5 – 108 MHz AM530 – 1710 kHz

Maximum output: 10 mW + 10 mW (EIAJ 32 ohms)
12 mW + 12 mW (EIAJ 16 ohms)

Power sources: DC 3V using two R6 (size AA) dry cell batteries, AC
house current using an optional AC adaptor AC-620/
AC-300/AC-302

Maximum dimensions:
120.7 (W) × 91.5 (H) × 37.8 (D) mm
(4 ⁷/₈ × 3 ⁵/₈ × 1 ¹/₂ in.)

Weight: Approx. 170 g (6 oz) excluding the batteries

<HS-JS175>

Frequency range: <HS-JS175>
FM 87.5 – 108 MHz AM530 – 1605 kHz
<HS-JS175W>
FM 87.5 – 108 MHz AM530 – 1710 kHz

Speaker: Diameter 36 mm, 4 ohms

Maximum output: 10 mW + 10 mW (EIAJ 32 ohms)
12 mW + 12 mW (EIAJ 16 ohms)
100 mW (EIAJ 4 ohms)

Power sources: DC 3V using two R6 (size AA) dry cell batteries, AC
house current using an optional AC adaptor AC-620/
AC-300/AC-302

Battery life: EIAJ 1mW playback
Using the manganese batteries (R6P), approx. 5 hours
Using the alkaline batteries (LR6), approx. 20 hours
EIAJ 10 mW playback
Using the manganese batteries (R6P), approx. 3 hours
Using the alkaline batteries (LR6), approx. 15 hours
EIAJ recording
Using the manganese batteries (R6P), approx. 4 hours
Using the alkaline batteries (LR6), approx. 18 hours

Maximum dimensions:
120.7 (W) × 91.5 (H) × 39.5 (D) mm
(4 ⁷/₈ × 3 ⁵/₈ × 1 ⁹/₁₆ in.)

Weight: Approx. 180 g (6.3 oz) excluding the batteries

- Design and specifications are subject to change without notice.

ACCESSORIES LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	87-B30-078-010		HEADPHONE SET<YZ,YL,YJ>
1	87-B30-080-010		HP, SET HP-M009(F) STEREO<YU>
2	S0-418-490-000		BELT, CLIP
3	S7-J09-910-200		INSTRUC, BOOK (WYU) <175WYU>
3	S7-J09-910-300		INSTRUCTION BOOK (YL1ST, YZ1ST) <175YZ, 175YL>
3	S7-J10-910-100		INSTRUC, BOOK (HSJS165WYU) <165WYU>
3	S7-J10-910-200		INSTRUCTION BOOK <165YZ, 165YJ>
4	S7-J09-910-400		INSTRUC, BOOK (YZ1ST) <175YZ>
4	S7-J10-910-300		INSTRUC, BOOK (HSJS165YZ)
5	87-041-083-010		MIC, EXT STEREO<175YZ, 175YL175WYU>

ELECTRICAL MAIN PARTS LIST

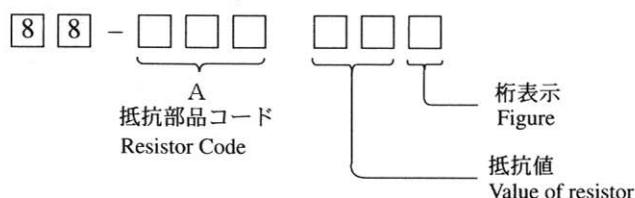
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				C307	87-010-482-010		CAP,E 220-4V
	87-001-379-010		IC,TA8122AF	C308	87-010-482-010		CAP,E 220-4V
	S4-325-000-000		IC,CXA2500	C309	87-010-482-010		CAP,E 220-4V
	87-001-371-080		IC,LA4533M	C310	87-010-115-010		CAP,E 100-4V
	87-017-370-080		IC,MM1038AFF	C311	87-010-401-010		CAP,E 1-50V
	87-002-232-080		IC,NJM2073M<175>	C312	87-010-401-010		CAP,E 1-50V
	87-017-643-080		IC,MM1206XF<175>	C404	87-010-482-010		CAP,E 220-4V
TRANSISTOR				C501	87-010-401-080		CAP,E 0.1-50V<175>
	89-332-654-080		TR,2SC3265Y	C503	87-010-482-010		CAP,E 220-4V<175>
	SA-014-100-000		C-TR,RN1410	C505	87-010-075-040		CAP,E 10-16V<175>
	87-026-268-080		C-TR,RN2411	CF1	S0-004-550-050		CERA,FIL CFAL-455
MAIN C.B				CF2	S0-004-280-000		CER,FILTER TOKO428
	S7-J09-250-000		BATT,CONTACT(+)	CF3	S0-004-280-000		CER,FILTER TOKO428
	S7-J09-260-000		BATT,CONTACT(-)	J201	S0-380-713-500		JACK,HP 3.5MM
BPF1	S1-000-310-010		FILTER BANDPASS GFWB3-1	J301	S0-380-713-500		JACK,HP 3.5MM
C102	87-010-044-080		CAP,E 47-4V	J303	S1-038-040-000		JACK,DC JD3804-PT20
C103	87-016-350-040		CAP,E 470-4V	L1	87-A50-096-010		COIL ANT ASSY 2-8-45
C113	87-010-401-010		CAP,E 1-50V	L2	S0-700-260-050		COIL,FM 7T 2.6MM(GOLD)
C201	87-010-115-010		CAP,E 100-4V	L3	S0-600-250-050		COIL,FM 6T 2.5MM(RED)
C202	87-010-115-010		CAP,E 100-4V	L4	S0-021-600-550		IFT,5PNR-A216HO5.5MM(RED)
C203	87-010-401-080		CAP,E 0.1-50V	L5	S0-499-800-620		IFT,5PLC-4998X 6.2MM
C204	87-010-401-080		CAP,E 0.1-50V	L6	S0-700-500-540		IFT,7005NN-0001GNQ
C209	87-010-482-010		CAP,E 220-4V	L7	87-005-686-010		COIL,15UH
C210	87-010-482-010		CAP,E 220-4V	L251	S0-017-900-550		IFT,5TAN-0179UH
C215	87-010-401-010		CAP,E 1-50V	S1	S2-300-211-000		SW,SLIDE 2P3T
C216	87-010-401-010		CAP,E 1-50V	S2	S2-210-211-000		SW,SLIDE 2P2T
C217	87-010-401-010		CAP,E 1-50V	S3	S2-210-211-000		SW,SLIDE 2P2T
C218	87-010-401-010		CAP,E 1-50V	S4	S2-210-211-000		SW,SLIDE 2P2T
C219	87-010-401-010		CAP,E 1-50V	S5	S2-210-211-000		SW,SLIDE 2P2T
C220	87-010-401-010		CAP,E 1-50V	S6	S1-220-110-000		SW,SLIDE 1P2T
C221	87-010-115-010		CAP,E 100-4V	S7	S4-202-420-010		SW,PUSH 4P2T
C222	87-010-115-010		CAP,E 100-4V	SFR401	S1-020-630-010		SEMI-FIXED 1K
C223	87-010-044-080		CAP,E 47-4V	VC1	S3-221-250-010		PVC,AM/FM
C227	87-010-401-080		CAP,E 0.1-50V	VR301	SA-081-033-000		VR,10KA
C228	87-010-401-080		CAP,E 0.1-50V	LED C.B			
C232	87-010-044-080		CAP,E 47-4V	LED301	87-017-827-080		C-LED SEC1201C<165>
C235	87-016-350-040		CAP,E 470-4V	LED601	87-017-828-080		C-LED,SEC1401C<175>
				LED602	87-017-829-080		C-LED,SEC1901C<175>
				LED603	87-017-827-080		C-LED SEC1201C<175>

○ 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



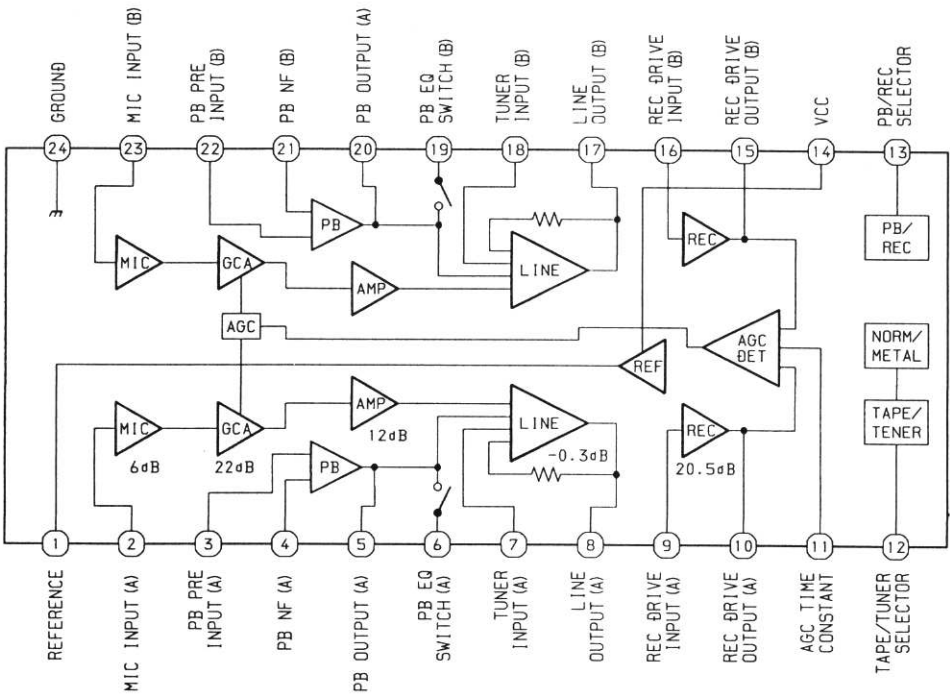
チップ抵抗

Chip resistor

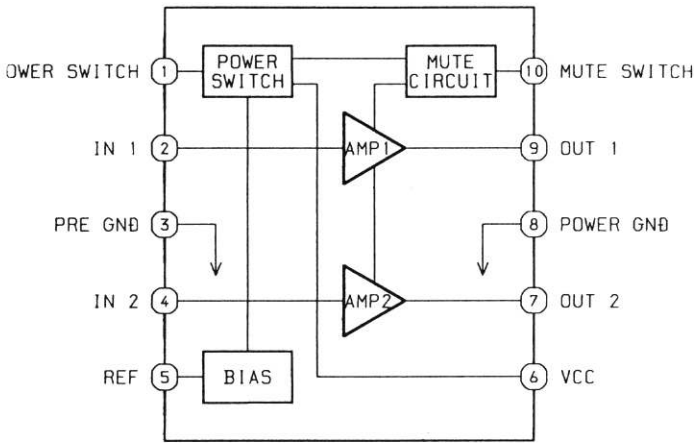
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法 / Dimensions (mm)				抵抗コード : A Resistor Code : A
				外形 / Form	L	W	t	
1/16W	1608	5%	CJ		1.6	0.8	0.45	108
1/10W	2125	5%	CJ		2	1.25	0.45	118
1/8W	3216	5%	CJ		3.2	1.6	0.55	128

IC BLOCK DIAGRAM

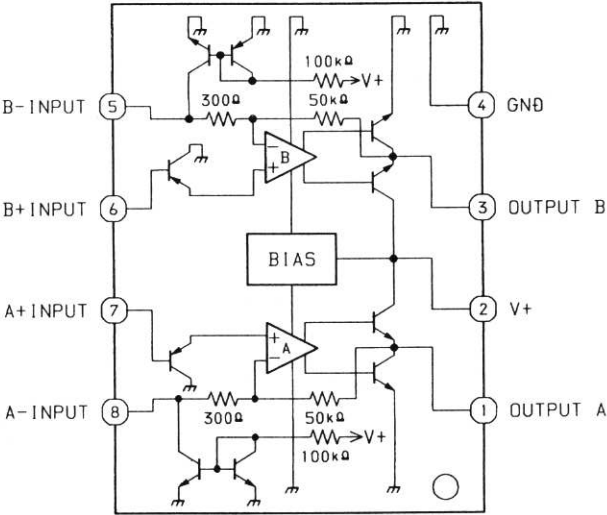
IC, CXA2500



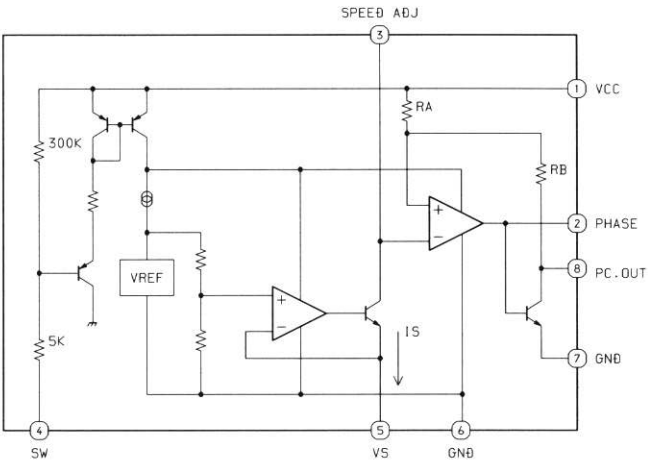
IC, LA4533M



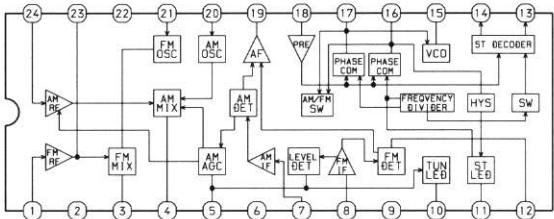
IC, NJM2073M



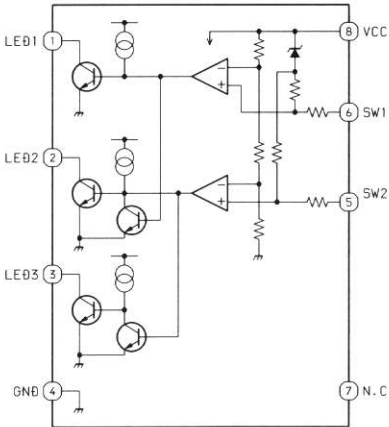
IC, MM1038AFF



IC, TA8122AF



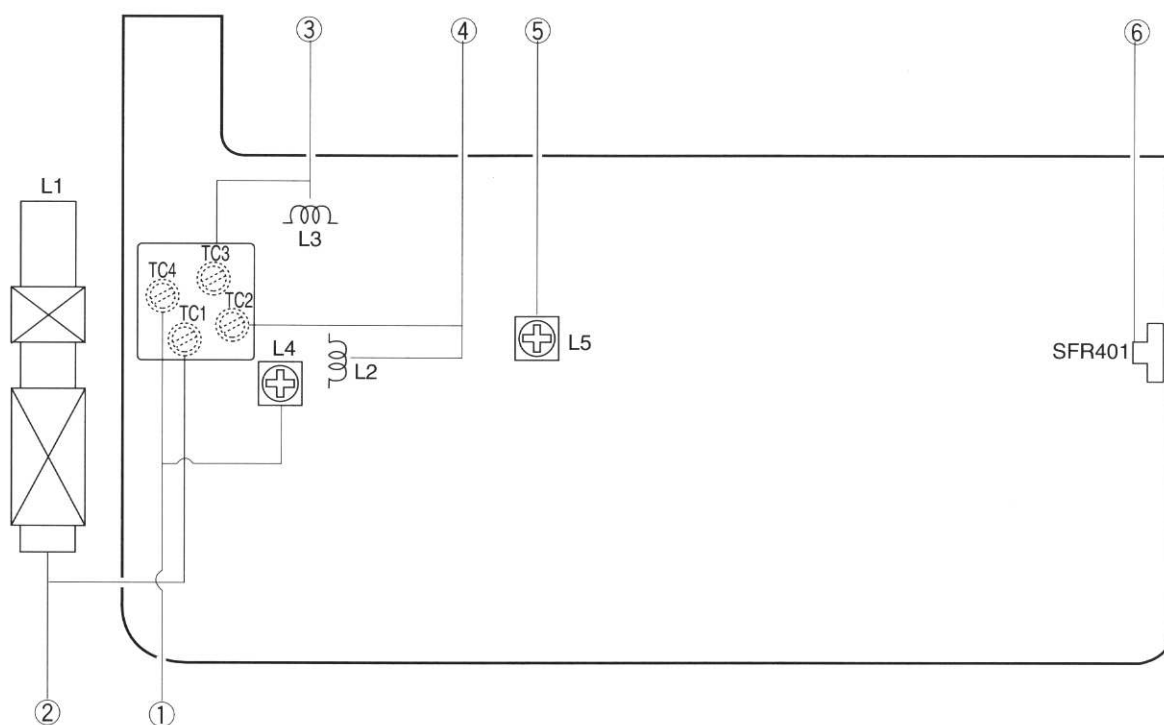
IC, MM1206XF



BATTERY	REMAIN	VOLUME	2.50V	2.25V
LED1	L	H	H	H
LED2	H	L	H	H
LED3	H	H	L	L

ADJUSTMENT

A MAIN C.B



TUNER SECTION

1. AM Freq. Range Adjustment

L4	515 kHz
TC4	1635 kHz

2. AM Tracking Adjustment

L1	630 kHz
TC1	1440 kHz

3. FM Freq. Range Adjustment

L3	87.4 MHz
TC3	108.3 MHz

4. FM Tracking Adjustment

L2	88 MHz
TC2	108 MHz

5. AM IF Adjustment

L5	455 kHz
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TAPE DECK SECTION

6. Tape Speed Adjustment

- Conditions:
- Test tape: TTA-100
 - Test point: J1 (PHONES jack)
 - Adjustment location: SFR401

Method: Playback the test tape and adjust so that the output frequency is 3000 Hz.

PRACTICAL SERVICE FIGURE

TUNER SECTION

<FM SECTION>

Sensitivity: (IHF, THD 3%)	Less than 19 dB (88 MHz) Less than 18 dB (98 MHz) Less than 17 dB (108 MHz)
Intermediate Frequency:	10.7 MHz

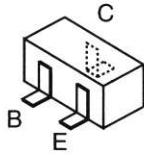
<AM SECTION>

Sensitivity: (S/N 10 dB)	Less than 54 dB (630 kHz) Less than 53 dB (999 kHz) Less than 51 dB (1440 kHz)
Intermediate Frequency:	455 kHz

TAPE SECTION

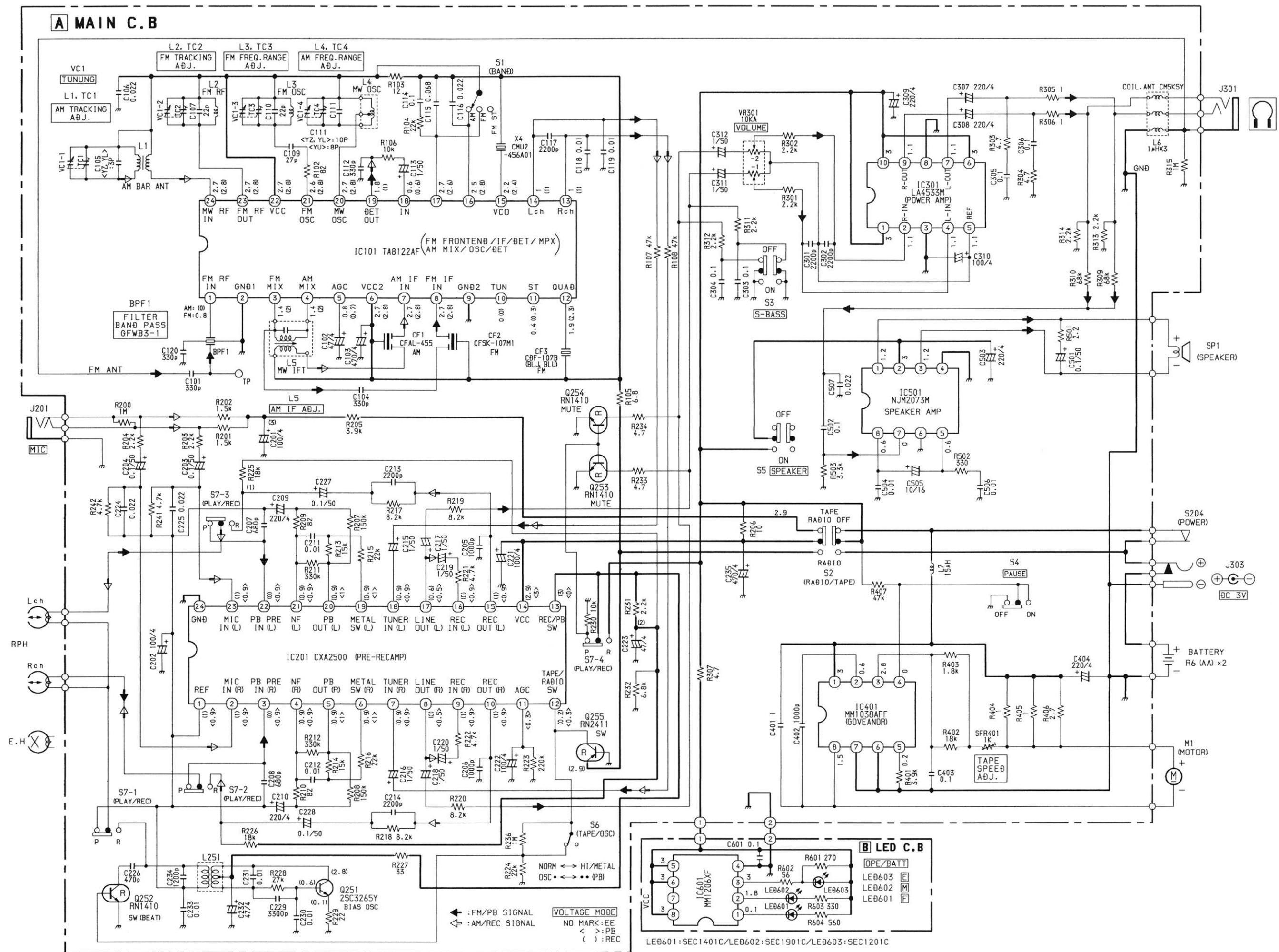
Distortion:	Less than 3.0% (PB)
S/N Ratio:	More than 45 dB (PB, DC)
Nose Level:	Less than 30 mV (PB, DC) Less than 18 mV (PB, AC)
Erasing Ratio:	More than 45 dB
Tape Speed:	3015 Hz + 60 Hz
Wow & Flutter:	Less than 0.55% (RMS)
Take-up Torque:	20 ~ 50 g-cm (FWD)
FF & Rew Torque:	More than 55 g-cm
Test Tape:	TTA-100 NORMAL TTA-602

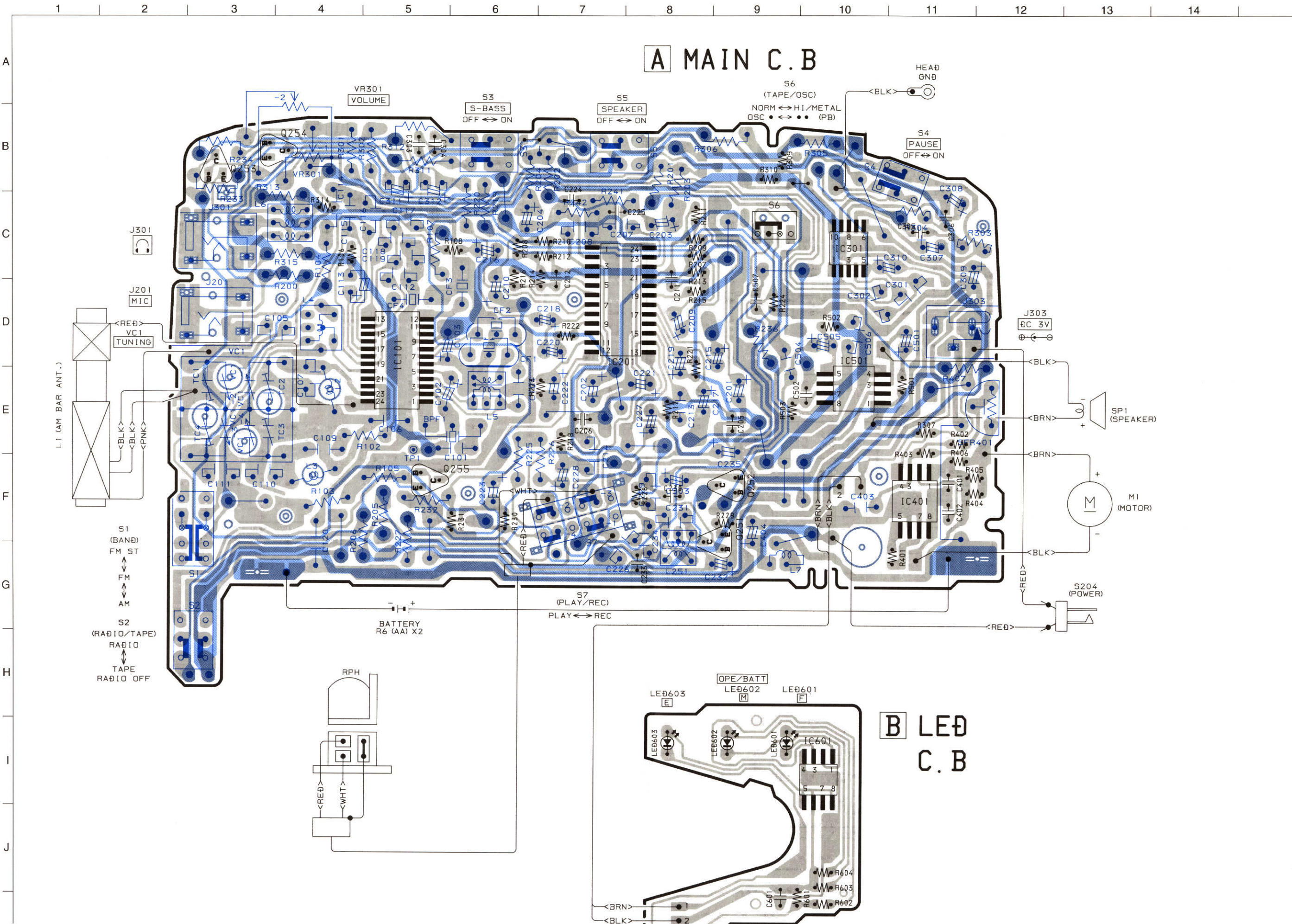
TRANSISTOR ILLUSTRATION

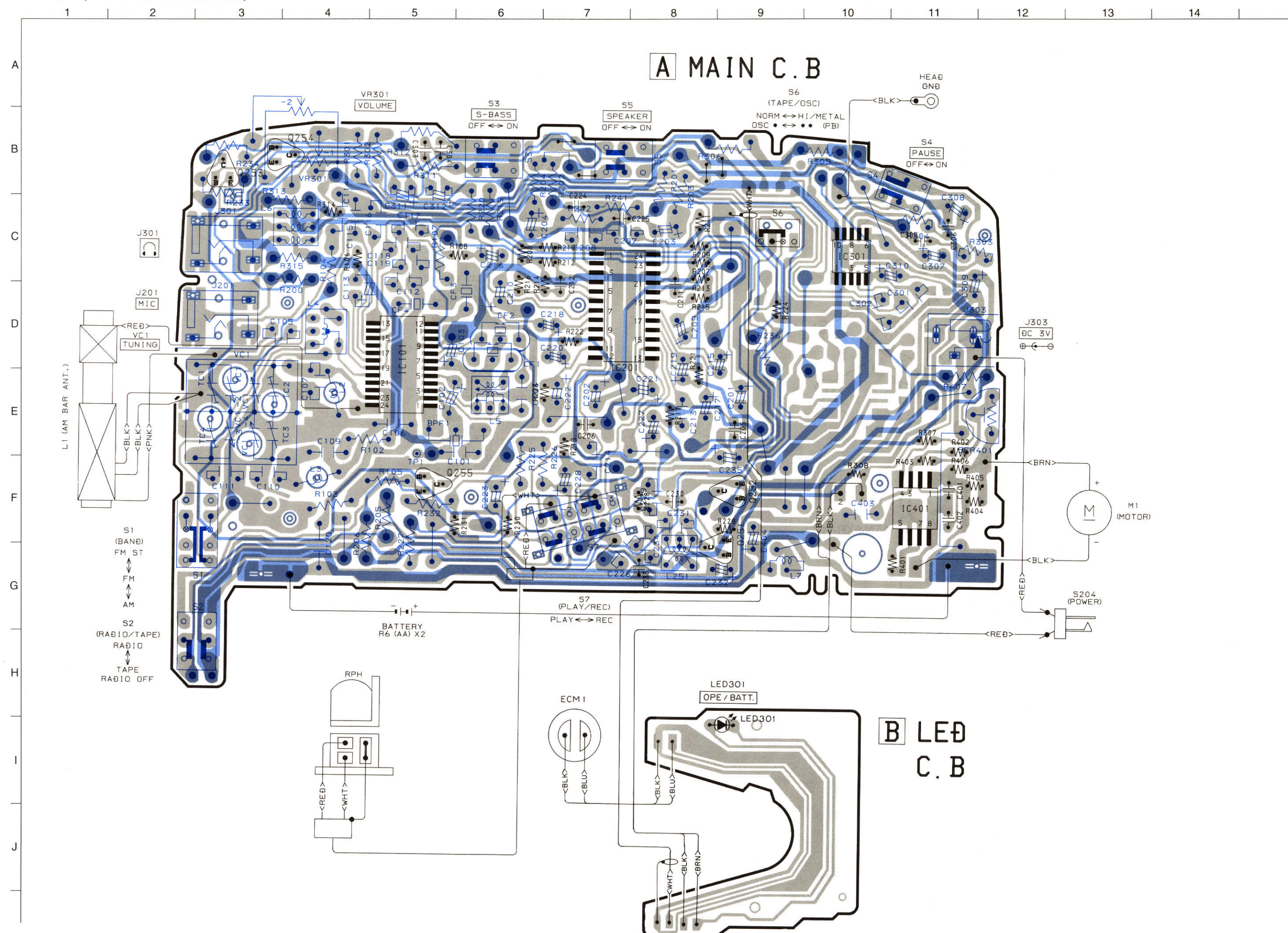


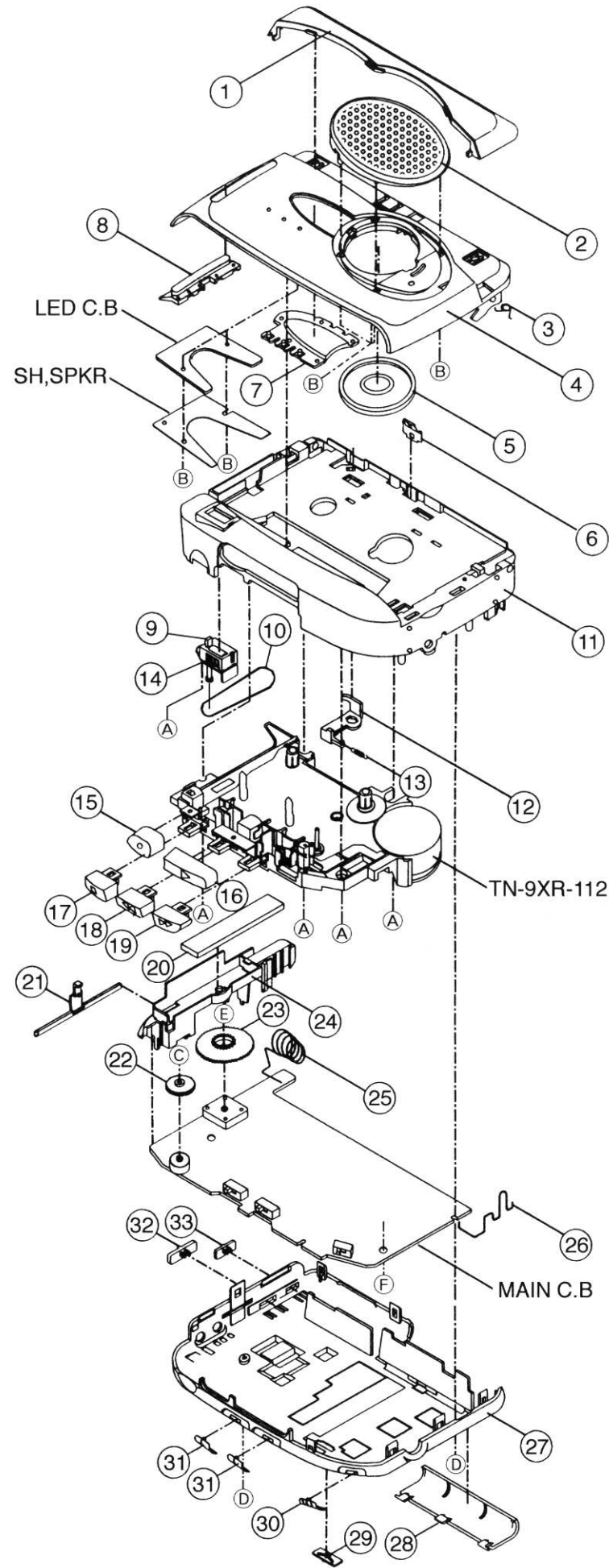
2SC3265
RN1410
RN2411

SCHEMATIC DIAGRAM-1 (MAIN: HS-JS175/175W)





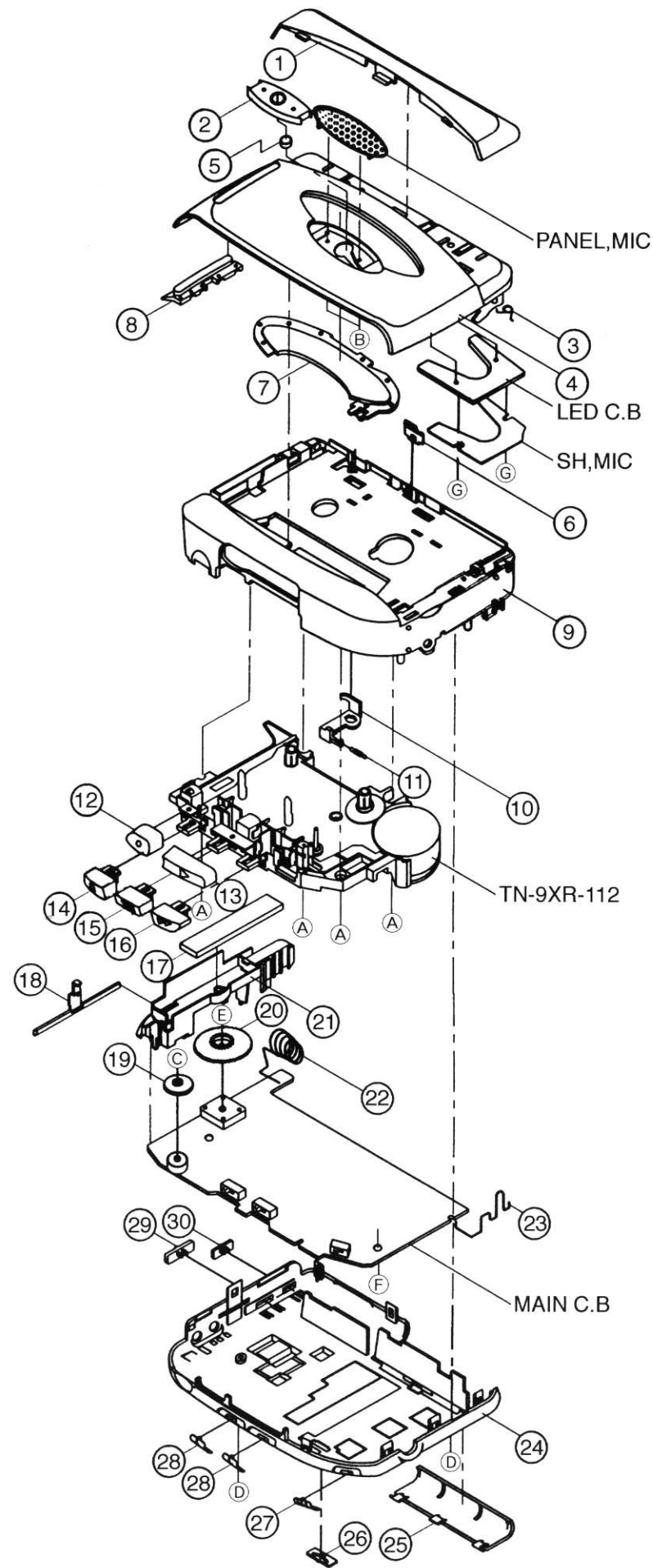




MECHANICAL PARTS LIST 1/1 (HS-JS175 / 175W)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S7-J09-010-200		PANEL, CASS
2	S7-J09-050-010		PANEL, SPEAKER
3	S7-J09-270-000		SPR, CASS
4	S7-J09-020-200		DOOR, CASS (WYU) <YU>
4	S7-J09-020-300		DOOR, CASS (Y) <YZ, YL>
5	S1-440-004-210		SPKR, 4 OHM 0.4W
6	S7-J09-240-000		SPR, CASS PLATE
7	S7-J09-030-000		LENS, DOOR CASS
8	S7-J09-040-000		LENS, DIAL
9	87-040-196-010		COUNTER
10	S7-J09-300-000		BELT, COUNTER
11	S7-J09-060-100		FRAME, CENTER<YZ, YU>
11	S7-J09-060-000		FRAME, CENTER<YL>
12	S7-J09-230-000		LEVER, RECORD
13	S7-J09-280-000		SPR, RECORD
14	S7-J09-320-000		HOLDER COUNTER
15	S7-J09-110-000		KNOB, CASS REC
16	S7-J09-100-000		KNOB, CASS PLAY
17	S7-J09-120-000		KNOB, CASS STOP
18	S7-J09-140-000		KNOB, CASS REW
19	S7-J09-130-000		KNOB, CASS FF
20	87-A50-096-010		COIL ANT ASSY 2-8-45
21	S7-J09-090-000		POINTER DIAL
22	S7-J09-210-000		KNOB, VOLUME
23	S7-J09-170-000		KNOB, TUNING
24	S7-J09-220-000		BRACKET TUNING
25	S7-J09-260-000		BATT, CONTACT (-)
26	S7-J09-250-000		BATT, CONTACT (+)
27	S7-J09-070-000		CAB, REAR
28	S7-J09-080-000		DOOR, BATTERY
29	S7-J09-200-000		KNOB, SLIDE BEAT
30	S7-J09-190-000		KNOB, SLIDE PAUSE
31	S7-J09-180-000		KNOB, SLIDE
32	S7-J09-150-000		KNOB, SLIDE BAND
33	S7-J09-160-000		KNOB, SLIDE POWER
A	87-067-271-010		SCREW, 1.7-4
B	87-352-508-310		SCREW, 1.4-3.5 (BLK)
C	87-264-529-310		SCREW, 1.7-4 (BLK)
D	87-067-769-010		SCREW, 1.7-8
E	87-264-528-310		SCREW, 1.7-3.5
F	87-354-529-310		SCREW, 1.7-4

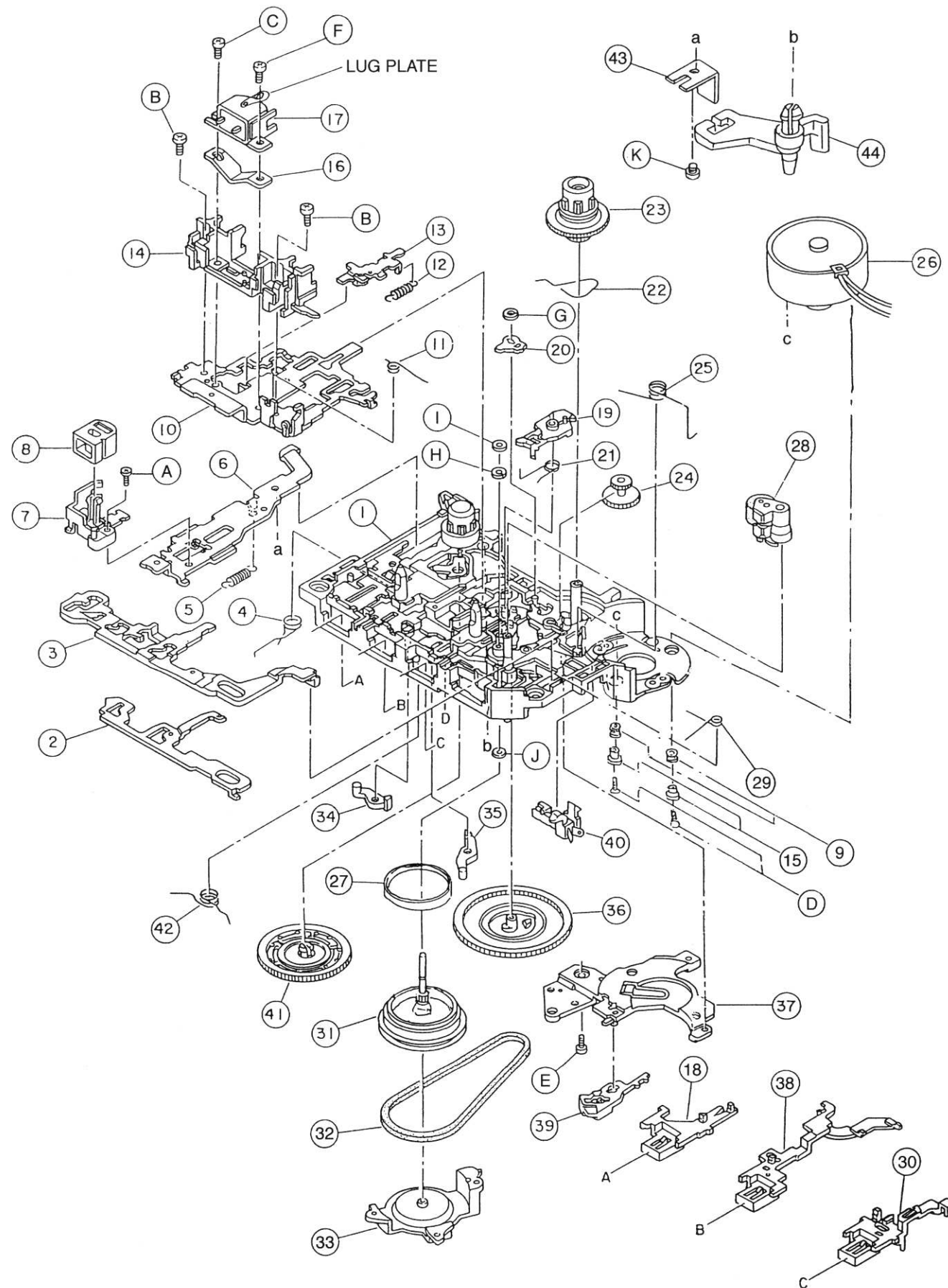


MECHANICAL PARTS LIST 1/1 (HS-JS165 / 165W)

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S7-J10-010-100		PANEL,CASS
2	S7-J10-060-000		HOLDER,MIC
3	S7-J09-270-000		SPR,CASS
4	S7-J10-020-100		DOOR,CASS<YU>
4	S7-J10-020-200		DOOR,CASS<YZ,YJ>
5	82-TP3-609-010		MIC CONDENSER MIC
6	S7-J09-240-000		SPR,CASS PLATE
7	S7-J10-030-000		LENS,DOOR CASS
8	S7-J09-040-000		LENS,DIAL
9	S7-J10-050-100		FRAME,CENTRE
10	S7-J09-230-000		LEVER,RECORD
11	S7-J09-280-000		SPR,RECORD
12	S7-J09-110-000		KNOB,CASS REC
13	S7-J09-100-000		KNOB,CASS PLAY
14	S7-J09-120-000		KNOB,CASS STOP
15	S7-J09-140-000		KNOB,CASS REW
16	S7-J09-130-000		KNOB,CASS FF
17	87-A50-096-010		COIL ANT ASSY 2-8-45
18	S7-J09-090-000		POINTER DIAL
19	S7-J09-210-000		KNOB,VOLUME
20	S7-J09-170-000		KNOB,TUNING
21	S7-J09-220-000		BRACKET TUNING
22	S7-J09-260-000		BATT,CONTACT(-)
23	S7-J09-250-000		BATT,CONTACT(+)
24	S7-J09-070-000		CAB,REAR
25	S7-J09-080-000		DOOR,BATTERY
26	S7-J09-200-000		KNOB,SLIDE BEAT
27	S7-J09-190-000		KNOB,SLIDE PAUSE
28	S7-J09-180-000		KNOB,SLIDE
29	S7-J09-150-000		KNOB,SLIDE BAND
30	S7-J09-160-000		KNOB,SLIDE POWER
A	87-067-271-010		SCREW,1.7-4
B	87-352-508-310		SCREW,1.4-3.5 (BLK)
C	87-264-529-310		SCREW,1.7-4 (BLK)
D	87-067-769-010		SCREW,1.7-8
E	87-264-528-310		SCREW,1.7-3.5
F	87-354-529-310		SCREW,1.7-4
G	87-067-732-010		SCREW,1.4-3

TAPE MECHANISM EXPLODED VIEW 1/1



TAPE MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
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	S1-909-013-040		CHASSIS ASSY	31	S1-909-053-040		FLYWHEEL ASSY
2	S1-909-020-190		FR PLATE	32	S1-909-080-100		MAIN BELT
3	S1-909-020-090		LOCK PLATE	33	S1-909-050-100		FL BRACKET
4	S1-909-020-140		STOP SPRING	34	S1-909-020-150		R/C LEVER(R)
5	S1-909-120-030		REC LEVER SPRING	35	S1-909-020-160		R/C LEVER(F)
6	S1-909-120-070		REC LEVER	36	S1-909-060-120		CAM GEAR
7	S1-909-120-020		MG GUIDE	37	S1-909-020-170		R/C BRACKET
8	S6-207-100-020		HEAD E TC-230AN(SL)	38	S1-909-020-110		RWD LEVER
9	S1-852-140-020		M LUBBER	39	S1-909-020-180		FF STOPPER
10	S1-909-030-050		HEAD PANEL	40	S6-401-011-630		LEAF SW MSW-1541TA
11	S1-909-040-020		P/R SPRING	41	S1-909-077-010		RWD GEAR
12	S1-909-030-080		R/C SPRING	42	S1-909-020-130		FR SPRING
13	S1-909-030-070		R/C PLATE	43	S1-909-120-090		REC SPRING PLATE
14	S1-909-030-060		TAPE GUIDE	44	S1-909-120-100		REC SW LEVER
15	S1-852-140-030		M COLLOR	A	S9-C01-174-030		CAMERA 1.7-4
16	S1-944-030-020		HEAD SPRING PLATE	B	S9-C01-173-530		CAMERA 1.7-3.5
17	S6-202-030-410		RP HEAD MS15R-BA2N1	C	S9-P14-203-310		+/- SCREW M2-3.3
18	S1-909-020-100		STOP LEVER	D	S9-C18-300-100		CAMERA 1.7-3
19	S1-909-110-040		AUTO LEVER	E	S9-P08-173-410		PST 1.7-3.4
20	S1-909-110-020		A PUSH ARM	F	S9-P14-206-320		+/- SCREW M2-3.6
21	S1-909-110-050		M CONTROL SPRING	G	S9-W02-300-100		P WASHER CUT 1.2-3.8-0.3
22	S1-909-060-150		SENSOR SPRING C	H	S9-W08-350-200		LUMILER WASHER CUT 0.98-3-0.3
23	S1-909-063-030		T REEL ASSY	I	S9-W05-200-600		HL WASHER 1.16-3-0.2
24	S1-909-060-130		TAKE UP GEAR	J	S9-W05-200-100		HL WASHER 1.55-3-0.13
25	S1-909-030-090		HP SPRING	K	S9-C16-171-410		CAMERA 1.7-1.4
26	S1-909-083-050		MOTOR ASSY				
27	S1-909-050-130		BRAKE BELT				
28	S1-909-043-020		PINCH ROLLER ASSY				
29	S1-909-020-200		FR PLATE SPRING				
30	S1-909-020-120		FF LEVER				

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
TRIMMER	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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