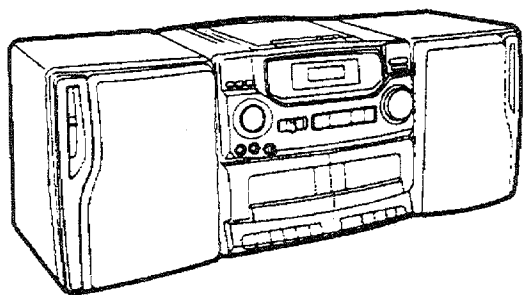


aiwa



CA-DW425 CA-DW420



COMPACT DISC CARRY
COMPONENT SYSTEM

- BASIC CD MECHANISM: KSM-2131BDM
- BASIC TAPE MECHANISM: TN-21ZSW-1694

- TYPE: U(420), LH(425)

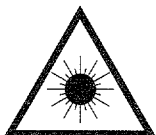
SERVICE MANUAL

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainituilla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylitävälle näkymättömälle lasersäteilylle.

WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

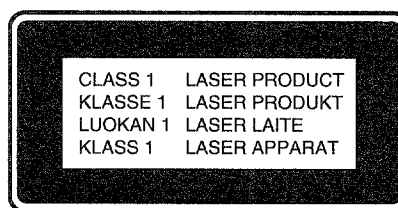
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the rear exterior.

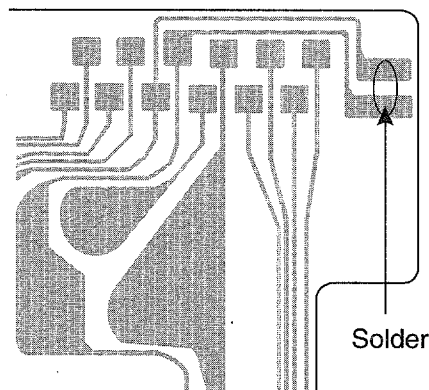


Precaution to replace Optical block

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

- 1) After the connection, remove solder shown in the right figure.

CD PICK-UP ASSY P.C.B.



SPECIFICATION(425)

Tuner section

FM

87.5 - 108.0 MHz
Antenna: Rod antenna

AM

530/531 - 1,710/1,602 kHz
(10/9 kHz step)
Antenna: Ferrite bar antenna

Amplifier section

power output

4W + 4W (4 ohm, EIAJ)

power requirements

DC 12V using eight size D(R20)
batteries
AC 110 - 120 V / 220 - 240 V,
selectable, 50/60 Hz

Power consumption

18W

CD player section

Disc

Compact disc

Scanning method

Non-contact optical laser
(semiconductor laser application)

Laser

Semiconductor laser
 $\lambda = 780 \text{ nm}$

Rotation speed

Approx. 500 - 200rpm/CLV

Error correction

Cross Interleave, Reed Solomon code

Number of channels

2 channels

D/A conversion

1-bit DAC

Cassette deck section

Track format

4 Tracks, 2 channels

Frequency response

Normal tape: 50 - 12,000 Hz(EIAJ)

Recording system

AC bias

Erase system

Magnet erase

Motor

DC motor(1)

Heads

Deck 1
Recording/playback head(1)
Erase head(1)
Deck 2
Playback head(1)

Common section

Dimensions (W x H x D)

624 x 245 x 262 mm($24 \frac{5}{8} \times 9 \frac{3}{4} \times 10 \frac{3}{8}$ in.)

Weight

6.1Kg(13 lbs 7 oz) excluding batteries

Speaker

Cabinet type

2-way bass reflex type

Speaker

100 mm cone type woofer
27 mm ceramic type tweeter

Impedance

4 ohms

Allowable max. input

7W

Dimensions(W x H x D)

185 x 235 x 229 mm($7 \frac{3}{8} \times 9 \frac{3}{8} \times 9 \frac{1}{8}$ in.)

Weight

1.3Kg(2lbs 14 oz.) x 2

• Design and specifications are subject to change without notice.

SPECIFICATION(420)

Tuner section

FM

87.5 - 108.0 MHz
Antenna: Rod antenna

AM

530/531 - 1,710/1,602 kHz
(10/9 kHz step)
Antenna: Ferrite bar antenna

Amplifier section

power output

2W + 2W (8 ohm, EIAJ)

power requirements

DC 12V using eight size D(R20)
batteries
AC 120 V, 60 Hz

Power consumption

18W

CD player section

Disc

Compact disc

Scanning method

Non-contact optical laser
(semiconductor laser application)

Laser

Semiconductor laser
 $\lambda = 780 \text{ nm}$

Rotation speed

Approx. 500 - 200rpm/CLV

Error correction

Cross Interleave, Reed Solomon code

Number of channels

2 channels

D/A conversion

1-bit DAC

Cassette deck section

Track format

4 Tracks, 2 channels

Frequency response

Normal tape: 50 - 12,000 Hz(EIAJ)

Recording system

AC bias

Erase system

Magnet erase

Motor

DC motor(1)

Heads

Deck 1
Recording/playback head(1)
Erase head(1)
Deck 2
Playback head(1)

Common section

Dimensions (W x H x D)

624 x 245 x 262 mm($24 \frac{5}{8} \times 9 \frac{3}{4} \times 10 \frac{3}{8}$ in.)

Weight

6.1Kg(13 lbs 7 oz) excluding batteries

Speaker

Cabinet type

2-way bass reflex type

Speaker

100 mm cone type woofer
27 mm ceramic type tweeter

Impedance

8 ohms

Allowable max. input

5 W

Dimensions(W x H x D)

185 x 235 x 229 mm($7 \frac{3}{8} \times 9 \frac{3}{8} \times 9 \frac{1}{8}$ in.)

Weight

1.3Kg(2lbs 14 oz.) x 2

• Design and specifications are subject to change without notice.

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	87-A20-186-010	IC,LA9241M		C422	87-010-371-080	CAP,E 470-6.3	
	87-A20-187-010	IC,LC78622E		C441	87-010-560-080	CAP,E 10UF-50V	
	87-A20-157-010	IC,TA2092N		C501	87-010-754-040	CAP,E 220UF-10V	
	87-020-501-080	IC,KIA78L05BP		C502	87-015-708-010	CAP,E 22UF-10V	
	87-CT6-601-010	IC,LC587008-1K25		C503	87-010-560-080	CAP,E 10UF-50V	
	SU-SR3-0H0-04A	RMT,SENSOR<425LH>		C504	87-010-560-080	CAP,E 10UF-50V	
	87-020-828-010	IC,BA3416BL		C520	87-015-695-080	CAP,E 1UF-50V	
	87-001-440-080	IC,BA15218N		C521	87-015-695-080	CAP,E 1UF-50V	
	87-017-889-010	IC,NJM4558LD		C522	87-015-695-080	CAP,E 1UF-50V	
	87-001-485-010	IC,TA8207K		C523	87-015-695-080	CAP,E 1UF-50V	
	87-001-132-010	IC,ICP-N38		C524	87-015-695-080	CAP,E 1UF-50V	
	87-017-714-110	IC,LA1836(Z)		C525	87-015-695-080	CAP,E 1UF-50V	
	87-070-127-110	IC,LC72131D(Z)		C526	87-015-695-080	CAP,E 1UF-50V	
				C601	87-010-560-080	CAP,E 10UF-50V	
				C602	87-010-048-010	CAP,E 220UF-25V	
TRANSISTOR	87-026-463-080	TR,2SA933AS(R.S.) TP		C603	87-010-048-010	CAP,E 220UF-25V	
	89-112-965-080	TR,2SA1296(GR) TPE2		C604	87-016-130-080	CAP,E 47UF-25V	
	87-026-291-080	D.TR DTC124XS TP		C605	87-015-698-040	CAP,E 4.7UF-50V	
	87-026-464-080	D.TR DTC114TS TP		C631	87-016-128-080	CAP,E 22UF-25V	
	87-026-486-080	D.TR,DTA144TS		C632	87-016-128-080	CAP,E 22UF-25V	
	87-026-447-080	TR,2SC1740S(RS)TP		C633	87-016-623-080	CAP,E 1000UF-10V	
	87-026-290-080	D.TR,DTA124XS		C634	87-016-623-080	CAP,E 1000UF-10V	
	89-318-154-080	TR,2SC1815(GR)TPE2		C635	87-010-999-080	CAP,E 100UF-10V	
	89-320-011-080	TR,2SC2001K		C636	87-010-999-080	CAP,E 100UF-10V	
	ST-RKT-D13-020	TR,2SD1468		C651	87-010-560-080	CAP,E 10UF-50V	
	89-313-702-010	TR,2SB1370E TP		C721	87-015-663-090	CAP,E 4700UF-25V	
	87-A30-092-080	FET 2SK439(E.F.) TZ		C722	87-010-891-080	CAP,E 47UF-10V	
	89-305-352-380	TR,2SC535(B.C.)		C724	87-010-999-080	CAP,E 100UF-10V	
	89-319-233-080	TR,2SC1923(0)TPE2		C741	87-010-999-080	CAP,E 100UF-10V	
	87-026-214-080	D.TR DTA114YS TP		C743	87-010-221-040	CAP,E 470UF-10V	
DIODE	87-002-822-080	ZE,DI MTZJ2.2A T77		C827	87-010-560-080	CAP,E 10UF-50V	
	SI-N41-48T-P00	DIODE,IN4148 TP		C829	87-010-999-080	CAP,E 100UF-10V	
	SH-Z7B-3LT-E00	ZE,DI HZ7B3L TE		C832	87-010-560-080	CAP,E 10UF-50V	
	87-070-136-080	ZE,DI MTZJ5.1B T77		C834	87-015-694-080	CAP,E 0.47UF-50V	
	S3-FR2-021-000	DIODE,FR202		C835	87-015-695-080	CAP,E 1UF-50V	
	87-027-513-080	ZENER,HZ6B2L		C836	87-015-695-080	CAP,E 1UF-50V	
	87-027-825-080	ZENER,HZ9A3L		C838	87-010-560-080	CAP,E 10UF-50V	
	SS-VC2-51S-PA0	DIODE,SVC251SPA		C842	SC-ESM-GSR-330	CAP,E 0.33UF-50V	
	SK-V15-90N-T00	DIODE,KV1590NT		C843	SC-ESM-GSR-330	CAP,E 0.33UF-50V	
	87-A40-234-08	ZE DI MTZJ5.6A T77		C846	87-016-130-080	CAP,E 47UF-25V	
				C848	87-010-496-040	CAP,E 3.3UF-50V	
				C857	87-015-698-040	CAP,E 4.7UF-50V	
				C858	87-010-112-080	CAP,E 100-16	
				C860	87-010-754-040	CAP,E 220UF-10V	
				C880	87-015-695-080	CAP,E 1UF-50V	
MAIN C.B	C87	87-010-221-040	CAP,E 470UF-10V	C882	87-015-695-080	CAP,E 1UF-50V	
	C305	87-010-891-080	CAP,E 47UF-10V	C1001	87-015-695-080	CAP,E 1UF-50V	
	C306	87-010-891-080	CAP,E 47UF-10V	C1227	87-010-891-080	CAP,E 47UF-10V	
	C307	87-016-128-080	CAP,E 22UF-25V	C1272	87-016-128-080	CAP,E 22UF-25V	
	C308	87-010-560-080	CAP,E 10UF-50V	CF801	SF-F10-6C0-110	CER.FILTER	
	C309	87-015-692-080	CAP,E 0.22UF-50V	CON601	SJ-B04-000-090	SP TERMINAL 4P LEVER	
	C310	87-015-692-080	CAP,E 0.22UF-50V	J401	SJ-J02-030-120	JACK,3.5	
	C311	87-010-754-040	CAP,E 220UF-10V	J601	SJ-J02-030-120	JACK,3.5	
	C312	87-010-891-080	CAP,E 47UF-10V	L330	SL-F00-0B0-230	REC,OSC	
	C315	87-015-695-080	CAP,E 1UF-50V	L401	SL-ACJ-0T2-R20	COIL,2.2UH	
	C316	87-015-695-080	CAP,E 1UF-50V	L601	SL-ACJ-0T2-R20	COIL,2.2UH	
	C317	87-016-128-080	CAP,E 22UF-25V	L602	SL-ACJ-0T2-R20	COIL,2.2UH	
	C318	87-016-128-080	CAP,E 22UF-25V	L805	SL-ACJ-0T2-R20	COIL,2.2UH	
	C319	87-010-560-080	CAP,E 10UF-50V	L806	SL-F70-0F0-39G	IFT,FM<420U>	
	C320	87-010-560-080	CAP,E 10UF-50V	L806	SL-F70-0F0-40G	IFT,FM<425LH>	
	C327	87-015-698-040	CAP,E 4.7UF-50V	L807	SL-ACJ-0T2-R20	COIL,2.2UH	
	C331	87-010-891-080	CAP,E 47UF-10V	L808	SL-B90-100-12G	AM BAR ANT	
	C404	87-015-695-080	CAP,E 1UF-50V	L810	SL-F70-0A0-38L	AM OSC	
	C405	87-015-692-080	CAP,E 0.22UF-50V	L814	SL-F70-0A0-41D	AM IFT W/C.F	
	C407	87-015-695-080	CAP,E 1UF-50V	L815	SL-F70-0F0-40G	COIL,FM DET	
	C408	87-016-128-080	CAP,E 22UF-25V	L1802	SL-ACM-0T0-100	IND FIXED 1UH	
	C421	87-010-371-080	CAP,E 470-6.3	SFR761	SR-P00-0E0-040	POTENTIAL METER 2.2K	
				SFR801	SR-P00-0E0-010	POTENTIAL METER 10K	
				SFR802	SR-P00-0E0-010	POTENTIAL METER 10K	
				SW301	SS-PS1-620-160	SW,SLIDE BACK 6P2T	

SCHEMATIC DIAGRAM-1 (MAIN TUNER SECTION)

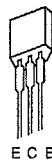
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
SH501	SS-SS1-430-110		SW,SLIDE 4P3T
TC802	SC-W00-0A0-30X		CER,TRIMMER (GREEN)
VR401	SR-Y10-3A0-200		VR,10KA
X801	SP-R45-400-020		CER,RESO CSH455-B<425LH>
X801	SP-R45-400-9X2		CER,RESONATOR<420U>
X802	SP-R45-500-20Z		X'TAL 4.5MHZ
FRONT C.B			
C213	87-010-754-040		CAP,E 220UF-10V
C214	87-010-999-080		CAP,E 100UF-10V<425LH>
C215	87-010-560-080		CAP,E 10UF-50V
C217	87-010-999-080		CAP,E 100UF-10V
C251	87-015-694-080		CAP,E 0.47UF-50V
D	S1-710-242-200		LED,EL523HD<425LH>
D251	SE-L20-4HD-000		LED,EL204HD
D252	SE-L20-4HD-000		LED,EL204HD
D253	SE-L20-4HD-000		LED,EL204HD
D254	SE-L20-4HD-000		LED,EL204HD
D255	SE-L20-4HD-000		LED,EL204HD
D256	SE-L20-4HD-000		LED,EL204HD
LCD201	SV-L0R-YP0-07X		LCD
SW201	SS-TS1-210-17T		TACT SW H=4.3mm<425LH>
SW202	SS-TS1-210-17T		TACT SW H=4.3mm<425LH>
SW203	SS-TS1-210-17T		TACT SW H=4.3mm<425LH>
SW204	SS-TS1-210-17T		TACT SW H=4.3mm<425LH>
SW205	SS-TS1-210-17T		TACT SW H=4.3mm<425LH>
SW206	SS-TS1-210-17T		TACT SW H=4.3mm<425LH>
SW207	SS-TS1-210-17T		TACT SW H=4.3mm<425LH>
SW208	SS-TS1-210-17T		TACT SW H=4.3mm<425LH>
SW209	SS-TS1-210-17T		TACT SW H=4.3mm<425LH>
SW210	SS-TS1-210-17T		TACT SW H=4.3mm<425LH>
VR601	SR-Y50-3A0-190		VR,50KA-2
X201	SP-R32-300-130		X'TAL CD 32.768KHZ
X202	SP-R40-500-21X		CER,RESONATOR 4MHZ
CD MAIN C.B			
C1	87-010-496-040		CAP,E 3.3UF-50V
C3	87-010-999-080		CAP,E 100UF-10V
C4	87-010-754-040		CAP,E 220UF-10V
C6	87-010-891-080		CAP,E 47UF-10V
C9	87-010-999-080		CAP,E 100UF-10V

TRANSISTOR ILLUSTRATION



ECB

2SA1296
2SC535
2SC1740
2SC1815
2SC1923
2SC2001
2SD1468



ECB

2SA933
DTA114YS
DTA124XS
DTA144TS
DTC114TS
DTC124XS



BCE

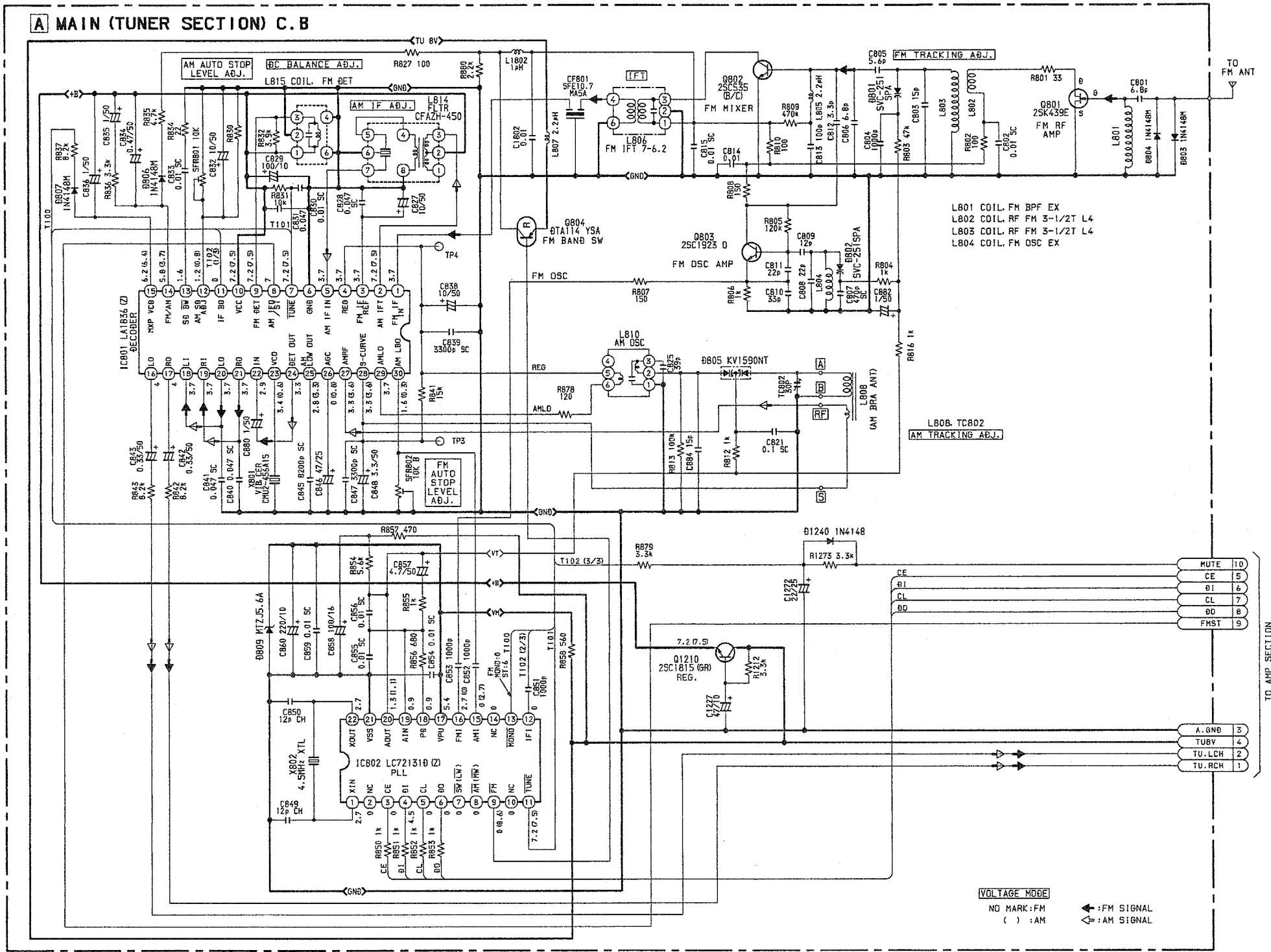
2SB1370

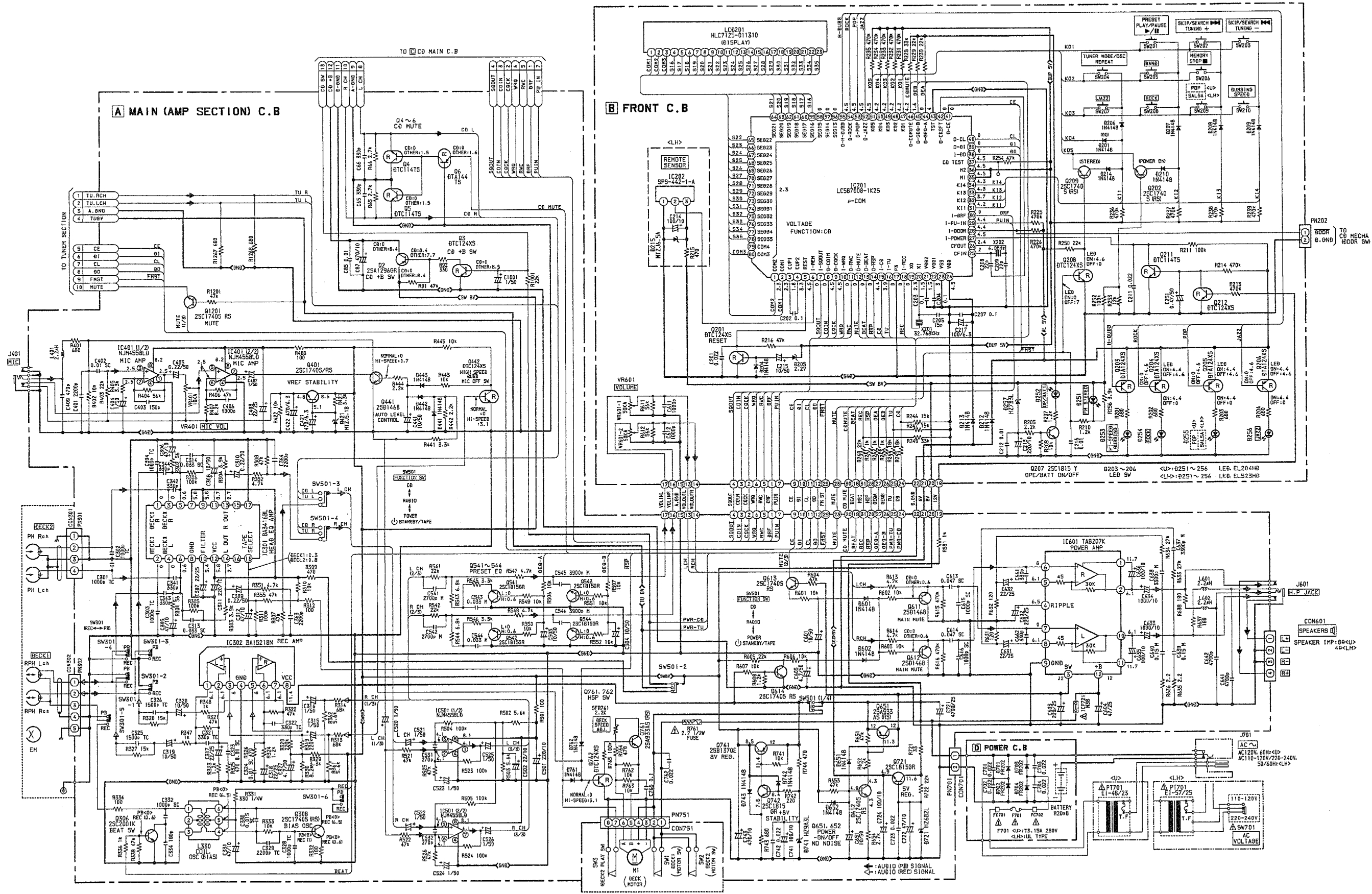


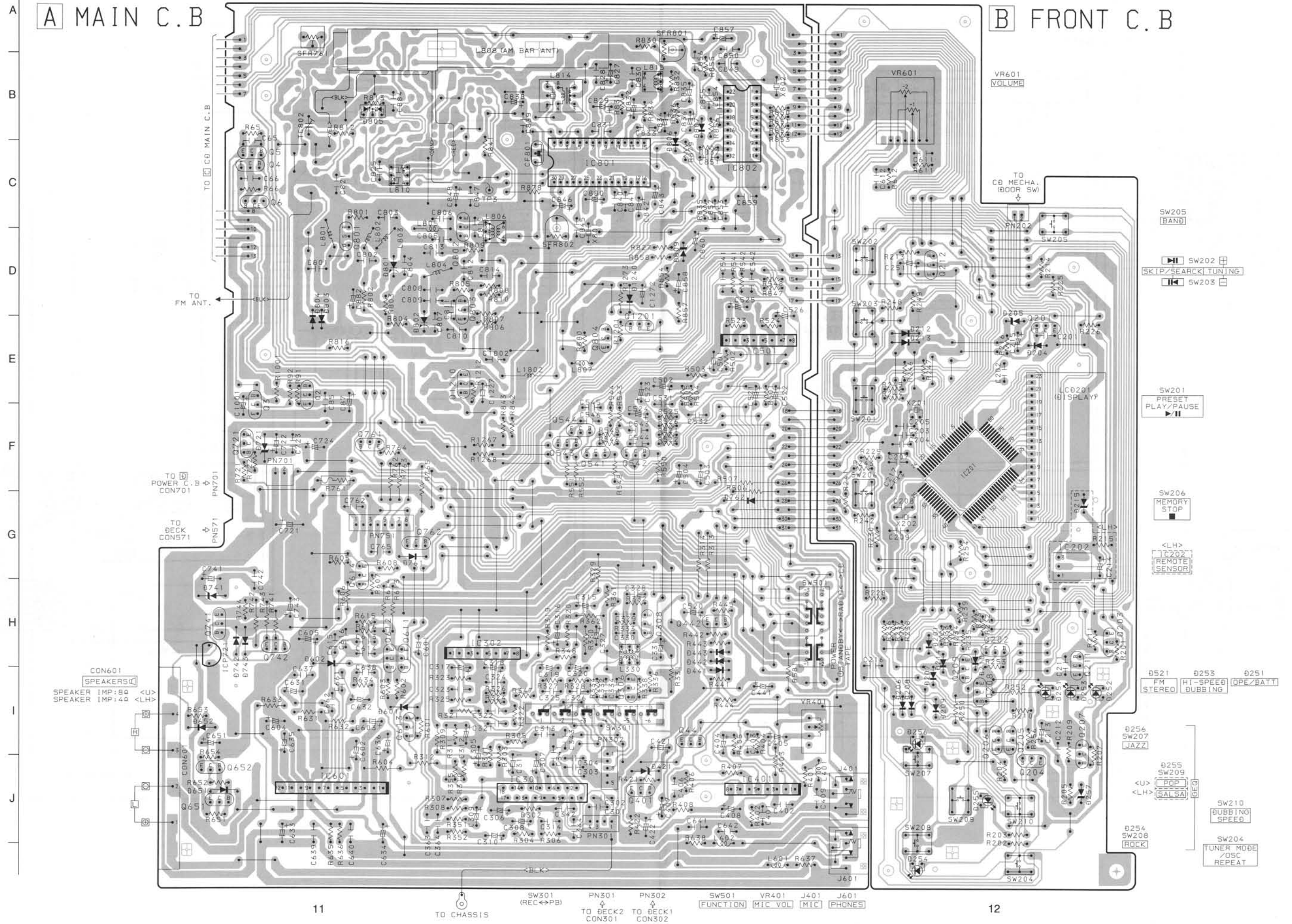
GSD

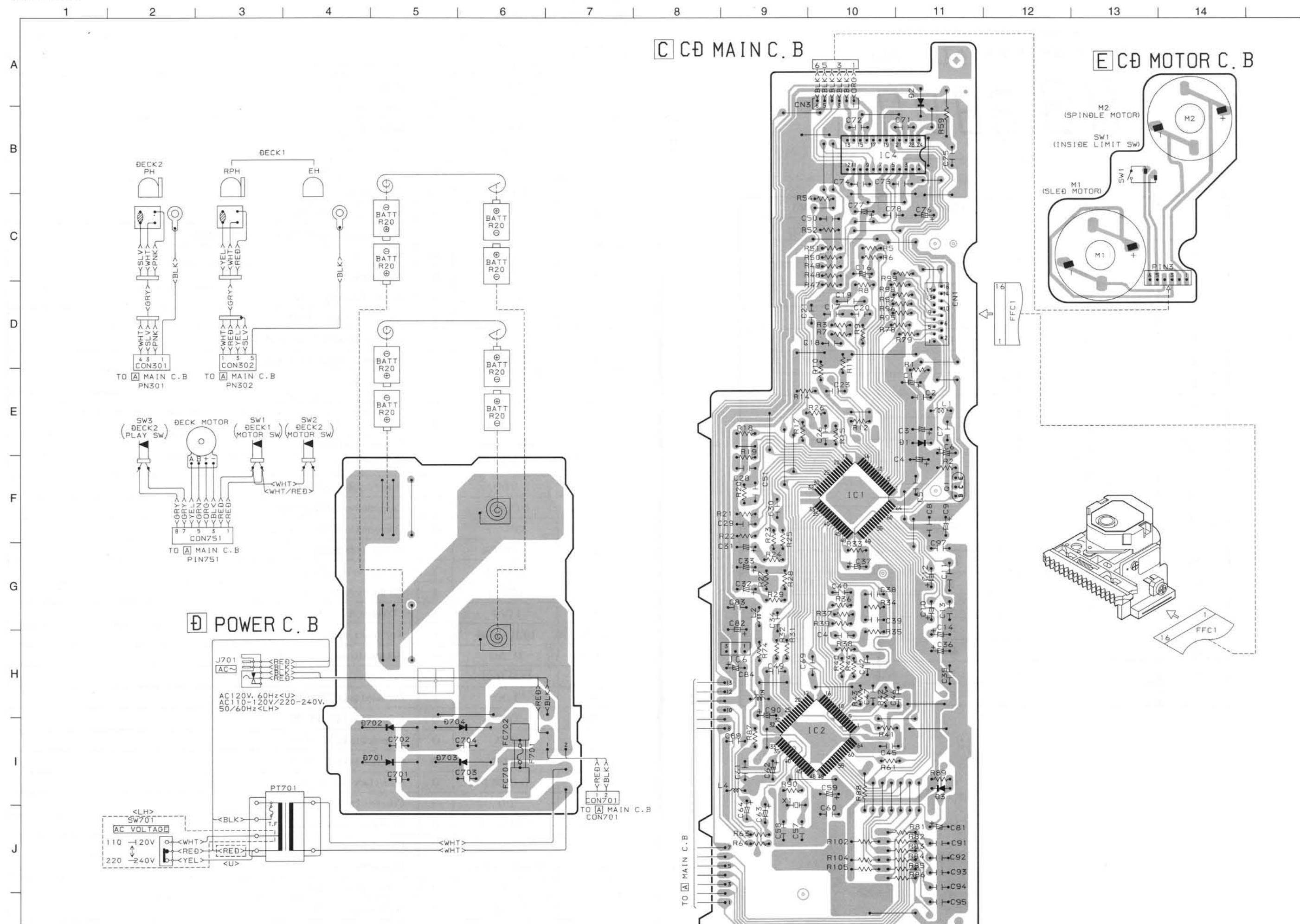
2SK439

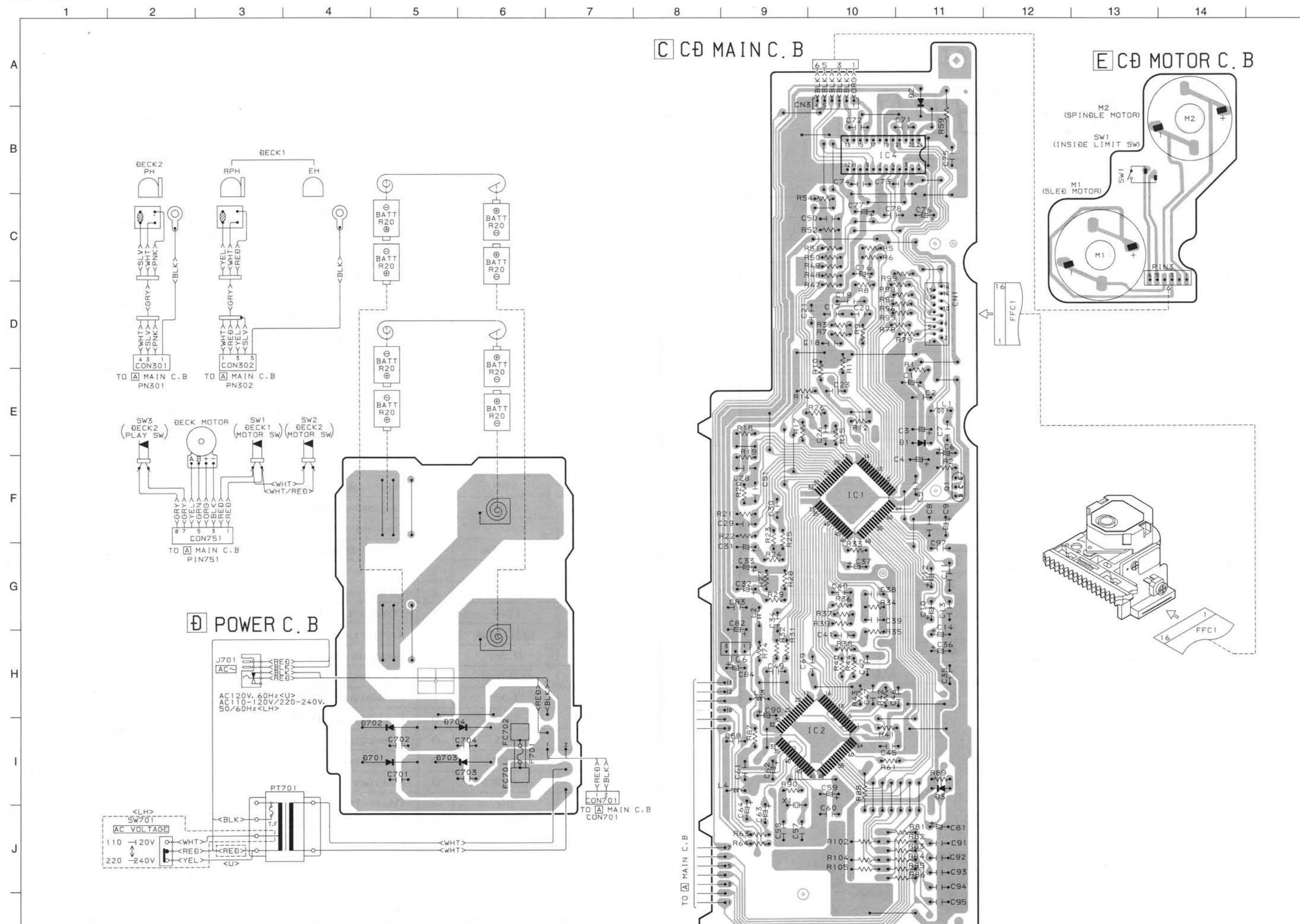
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C10	87-010-999-080		CAP,E 100UF-10V
C12	87-015-695-080		CAP,E 1UF-50V
C14	87-010-560-080		CAP,E 10UF-50V
C16	87-015-692-080		CAP,E 0.22UF-50V
C31	87-015-694-080		CAP,E 0.47UF-50V
C32	87-010-891-080		CAP,E 47UF-10V
C33	87-015-695-080		CAP,E 1UF-50V
C36	87-010-891-080		CAP,E 47UF-10V
C37	87-015-698-040		CAP,E 7UF-50V
C59	87-010-999-080		CAP,E 100UF-10V
C62	87-010-408-040		CAP,E 47UF-50V
C63	87-010-560-080		CAP,E 10UF-50V
C64	87-010-560-080		CAP,E 10UF-50V
C76	87-016-623-080		CAP,E 1000UF-10V
C77	87-010-999-080		CAP,E 100UF-10V
C81	87-015-698-040		CAP,E 4.7UF-50V
C82	87-010-221-040		CAP,E 470UF-10V
C84	87-010-999-080		CAP,E 100UF-10V
C90	87-010-999-080		CAP,E 100UF-10V
C93	SW-C06-001-630		CONN ASSY 6P
FFC1	SW-F16-F55-22S		PFC WIRE 16P<425LH>
FFC1	SW-F16-F05-501		PFC WIRE 16P (1.0mm PITCH)<420U>
L1	87-005-196-080		FIXED IND 10UH
L2	SP-L54-100-000		COIL,TROIDAL (FL5R100)10UH
L3	SP-L54-100-000		COIL,TROIDAL (FL5R100)10UH
L4	SP-L54-100-000		COIL,TROIDAL (FL5R100)10UH
X1	SP-R16-600-120		X'TAL CD 16.93MHZ
POWER C.B			
△	SP-MD4-067-300		SPR-C,BAT (-)
△	SP-MD4-067-200		SPR-C,LINK BAT
△	SP-PC2-083-120		FUSE (UL TRP)<425LH>
△	SP-FA2-003-120		FUSE,T3.15/250V<420U>
△	ST-ML0-100-000		HOLDER FUSE
△	ST-ML0-100-000		HOLDER FUSE
CD MOTOR C.B			



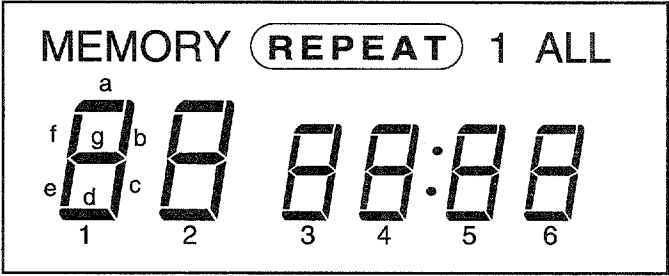








LCD DISPLAY



No.	COM1	COM2	COM3
1			COM3
2		COM2	
3	COM1		
4	1d	1e	1f
5	1c	1g	
6	1b	1a	
7	2d	2e	2f
8	2c	2g	
9	2b	2a	MEMORY
10	3d	3e	3f
11	3c	3g	
12	3b	3a	REPEAT
13	4d	4e	4f
14	4c	4g	
15	4b	4a	1
16	:	ALL	
17	5d	5e	5f
18	5c	5g	
19	5b	5a	
20	6d	6e	6f
21	6c	6g	
22	6b	6a	

IC DESCRIPTION/IC BLOCK DIAGRAM

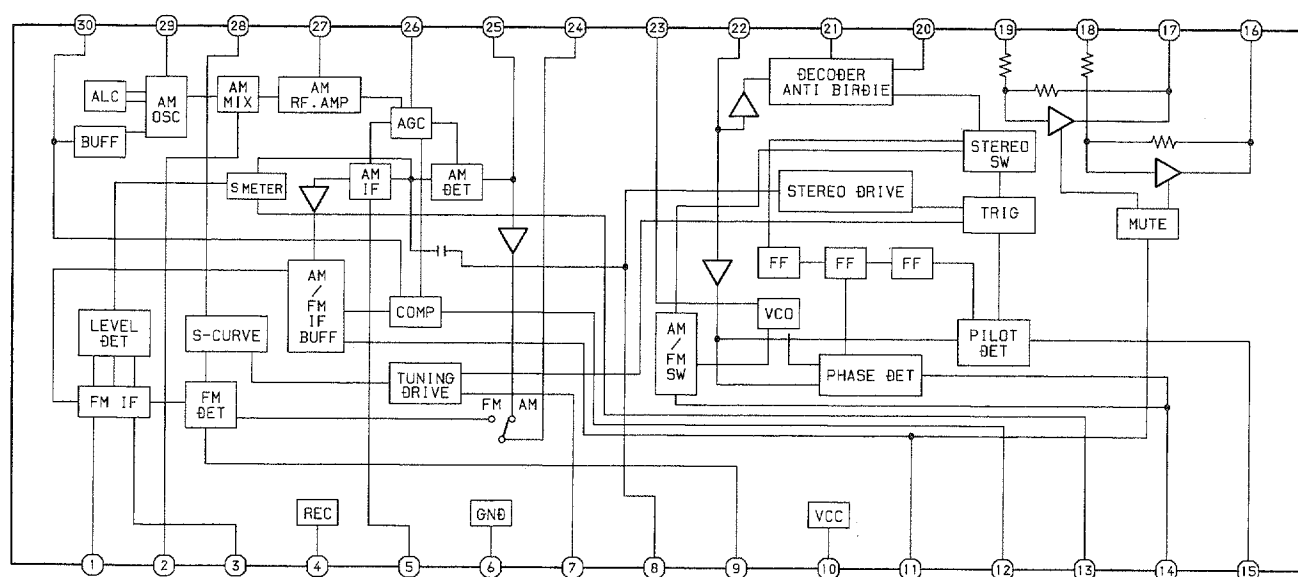
IC, LC587008-1K25

Pin No.	Pin Name	I/O	Description
1,2	COM2,COM1	O	LCD common output.
3,4	I-CPU2,I-CPU1	O	Connect a capacitor of 1/3 bias.
5	I-RES	I	System reset.
6	I-REM	I	Remocon input.
7	I-SQOUT	I	Subcode Q data input.
8	O-COIN	O	DSP command output.
9	O-CQCK	O	Clock output.
10	I-WRQ	I	Subcode Q standby detect.
11	O-RWC	O	DSP command output/subcode Q read selection.
12	O-MUTE	O	Mute output.
13	O-BEAT	O	Beat output.
14	O-HSP	O	Hi-speed dubbing output.
15	I-CD	I	Function CD detect. H=CD
16	I-TU	I	Function TUNER detect. H=TUNER
17	P3	—	Not used. (Connected to GND)
18	I-REC	I	REC H detect.
19	XT OUT	O	Connected to 32KHz X'TAL.
20	XT IN	I	Connected to 32KHz X'TAL.
21,22	VDD2,VDD1	—	Connected to GND.
23	VSS	—	GND.
24	VDD	—	Power supply input. (+5V)
25	CF IN	I	Connected to 4MHz cerarock.
26	CF OUT	O	Connected to 4MHz cerarock.
27	I-POWER	I	HOLD mode detect.
28	$\overline{\text{I-DOOR}}$	I	CD door switch detect.
29	$\overline{\text{I-PU IN}}$	I	CD limit switch detect.
30	I-DRF	I	CD detect rf.
31 - 34	I-KI1 - I-KI4	I	Key matrix input.
35,36	M1,M2	—	Not used.(conncted to VDD)
37	$\overline{\text{I-CD TEST}}$	I	Not used.
38	I-DO	I	Conncted to LC72131 DO.
39	O-DI	O	Conncted to LC72131 DI.
40	O-CL	O	Conncted to LC72131 CL.
41	O-CE	O	Conncted to LC72131 CE.
42	O-CKSFT	O	Main clock shift output.
43	TST	—	Connected to VSS.
44,45	O-GEQ A,B	O	GEQ A,B control output.
46	O-CD MUTE	O	Cd mute output.
47 - 51	O-KO1 - O-KO 5	O	Key matrix output.
52	O-JAZZ	O	Jazz led control output.
53	O-POP	O	Pop led control output.

Pin No.	Pin Name	I/O	Description
54	O-ROCK	O	Rock led control output.
55	O-H-DUBB	O	Hi-speed dubbing output.
56 - 58	SEG13 - SEG15	—	Not used.
59 - 78	SEG16 - SEG35	O	LCD segment output.
79	COM4	—	Not used.
80	COM3	O	LCD common output.

See the CA-DW305/D205(S/M Cord No.09-966-136-001)of the IC BLOCK DIAGRAM /IC DESCRIPTION below.	
CA-DW305/D205	CA-DW425/DW420
LA9240M	LA9241M
LC78622E	LC78622E
TA2092N	TA2092N
TA8127N	TA8127N
BA3416BL	BA3416BL

IC,LA1836

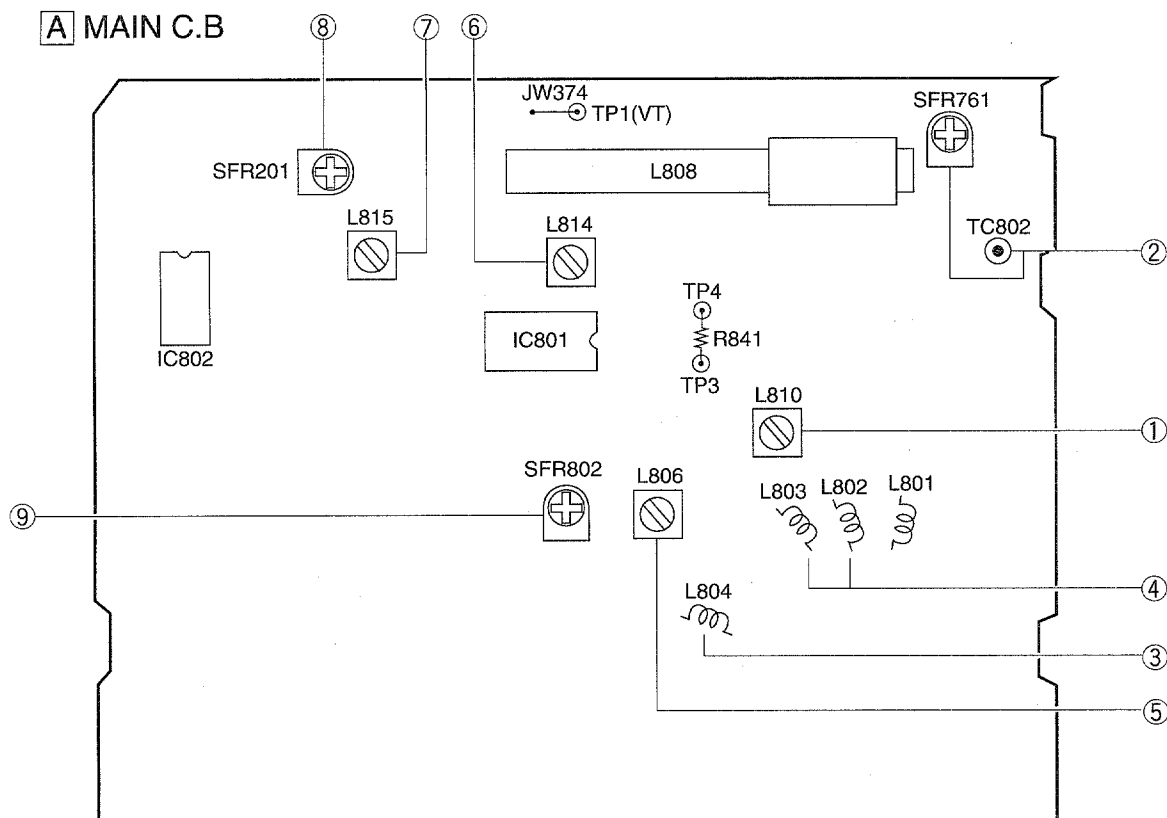


IC, LC72131

Pin No.	Pin Name	I/O	Description																											
1	XI	—	Crystal oscillator (4.5 MHz) is connected to this pin.																											
2	NC	—	Not used.																											
3	CE	I	The terminal which enables this IC. Active H.																											
4	DI	I	Data from the CPU is input when this key is operated. Active H.																											
5	CLK	I	Clock input to data DI.																											
6	DO	O	Digital data output to the CPU.																											
7	SW(LW)	-	Not used.																											
8	AM(MW)	-	Not used.																											
9	FM FM/SW1-	O	H or L is output as follows. <table><tr><td colspan="2">2 BAND</td><td colspan="3">3 BAND</td><td colspan="4">4 BAND</td></tr><tr><td>AM</td><td>FM</td><td>LW</td><td>MW</td><td>FM</td><td>LW</td><td>SW1</td><td>SW2</td><td>FM</td></tr><tr><td>H</td><td>L</td><td>H</td><td>H</td><td>L</td><td>H</td><td>L</td><td>H</td><td>L</td></tr></table>	2 BAND		3 BAND			4 BAND				AM	FM	LW	MW	FM	LW	SW1	SW2	FM	H	L	H	H	L	H	L	H	L
2 BAND		3 BAND			4 BAND																									
AM	FM	LW	MW	FM	LW	SW1	SW2	FM																						
H	L	H	H	L	H	L	H	L																						
10	MW/SW2	O	H or L is output as follows.(Not used.) <table><tr><td colspan="2">2 BAND</td><td colspan="3">3 BAND</td><td colspan="4">4 BAND</td></tr><tr><td>AM</td><td>FM</td><td>LW</td><td>MW</td><td>FM</td><td>LW</td><td>SW1</td><td>SW2</td><td>FM</td></tr><tr><td>H</td><td>L</td><td>H</td><td>L</td><td>L</td><td>H</td><td>H</td><td>L</td><td>L</td></tr></table>	2 BAND		3 BAND			4 BAND				AM	FM	LW	MW	FM	LW	SW1	SW2	FM	H	L	H	L	L	H	H	L	L
2 BAND		3 BAND			4 BAND																									
AM	FM	LW	MW	FM	LW	SW1	SW2	FM																						
H	L	H	L	L	H	H	L	L																						
11	TUNE	I	L is input when tuned to a station.																											
12	IFI	I	IF input.																											
13	MONO	O	L is output when compulsion MONO.																											
14	NC	—	Not used.																											
15	AM-I	I	AM local oscillator frequency signal is input.																											
16	FM-I	I	FM local oscillator frequency signal is input.																											
17	VPU	—	Power supply input to IC (+5 V).																											
18	PD	O	PLL charge-pump output.																											
19	AIN	I	N-channel MOS transistor for PLL active low-pass filter.																											
20	AOUT	O	N-channel MOS transistor for PLL active low-pass filter.																											
21	VSS	—	GND.																											
22	XO	—	Crystal oscillator (4.5 MHz) is connected to this pin.																											

ADJUSTMENT

<TUNER SECTION>



1. AM VT Adjustment

Settings: · Test point: TP1

· Adjustment location: L810

Method: Set to AM 1710 kHz and adjust L810 so that the test point becomes 6.0 ± 0.05 V.

Then set to AM 1710 kHz and check that the test point is 0.9 V or more.

2. AM Tracking Adjustment

L802 600 kHz

TC802 1400 kHz

3. FM VT Adjustment

Settings: · Test point: TP1

· Adjustment location: L804

Method: Set to FM 108.0 MHz and check that the test point is 5.5 ± 0.05 V.

Then set to FM 108.0 MHz and check that the test point is 1.2 V or more.

4. FM Tracking Adjustment

L802, L803 98.0 MHz

5. FM IF Adjustment

L806 10.7 MHz

6. AM IF Adjustment

L814 455 kHz

7. DC Balance Adjustment

Settings: · Test point: TP3, 4

· Adjustment location: L815

Method: Set to FM 98.0 MHz and adjust L815 so that the voltage between TP3 and TP4 becomes 0 ± 0.04 V.

8. AM Auto Stop Adjustment

Settings: · Adjustment location: SFR801

Method: Make setup for AM 1000 kHz. Adjust SFR801 so that the machine performs Auto Stop when 55 ± 5 dB is input.

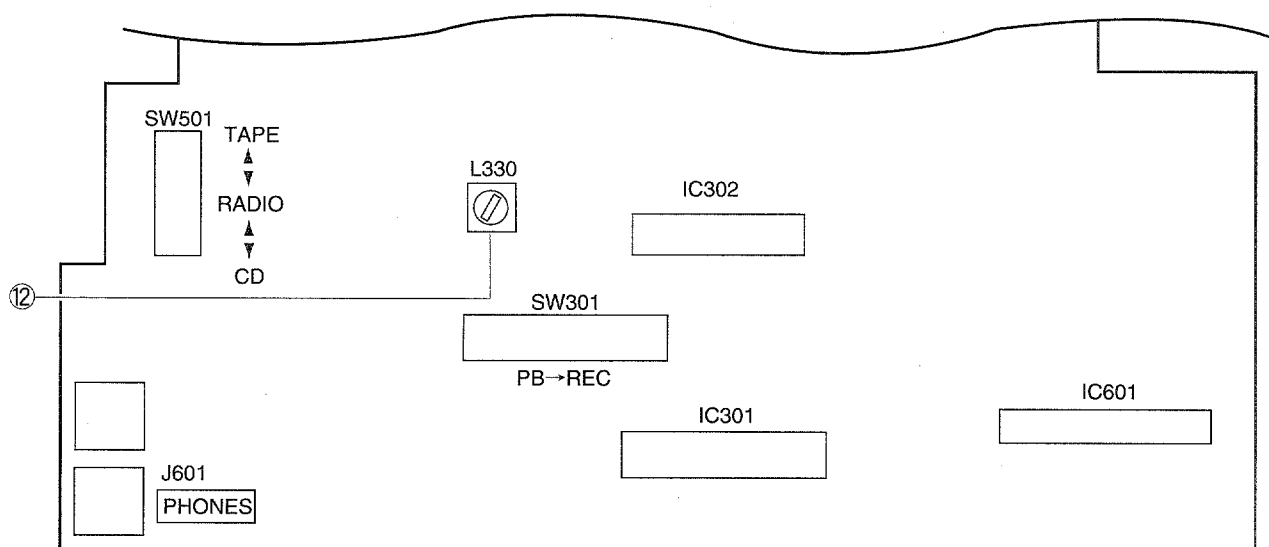
9. FM Auto Stop Adjustment

Settings: · Adjustment location: SFR802

Method: Make setup for FM 98.0 MHz. Adjust SFR802 so that the machine performs Auto Stop when 27 ± 3 dB is input.

<TAPE DECK SECTION>

A MAIN C.B



10. Tape Speed Adjustment

Settings: · Test tape: TTA-100

· Test point: J601 (PHONES Jack)

· Adjustment location: SFR of deck motor

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

11. Azimuth Adjustment

Settings: · Test tape: TTA-320

· Test point: J601 (PHONES Jack)

· Adjustment location: Azimuth adjustment screw

Method: Play back the 8 kHz portion of the test tape and adjust so that the output is maximum.

12. Bias Freq. Adjustment

L330 60 kHz

PRACTICAL SERVICE FIGURE

<RADIO SECTION >

(FM)

Frequency range: 87.0 ~ 108.0 MHz

IHF Sensitivity: 18.0 ± 5.0 dB (at 87.5 MHz)

(Distortion 3%) 16.0 ± 5.0 dB (at 98.0 MHz)

15.0 ± 5.0 dB (at 108.0 MHz)

SN ratio: 70 ± 5 dB (at 98.0 MHz)

Intermediate frequency: 10.7 MHz

Stereo separation: More than 25 dB

(AM)

Frequency range: 530/531 ~ 1710/1602 kHz
(10/9 kHz Step)

Sensitivity: 45 ± 5 dB (at 600 kHz)

44 ± 5 dB (at 1000 kHz)

42 ± 5 dB (at 1400 kHz)

Intermediate frequency: 455 kHz

<TAPE RECORDER SECTION>

Recording bias frequency: 56 ± 5 kHz

Erasing ration (W/FILTER): More than 58 dB

Distortion(T. H. D 10%): Less than 3.0% (PB)

Less than 4.0% (REC/PB)

S/N ratio: More than 40 dB (AC, DC, PB)

More than 40 dB (AC, REC/PB)

Noise (PB): Less than 1.0 mV/1.0 mV

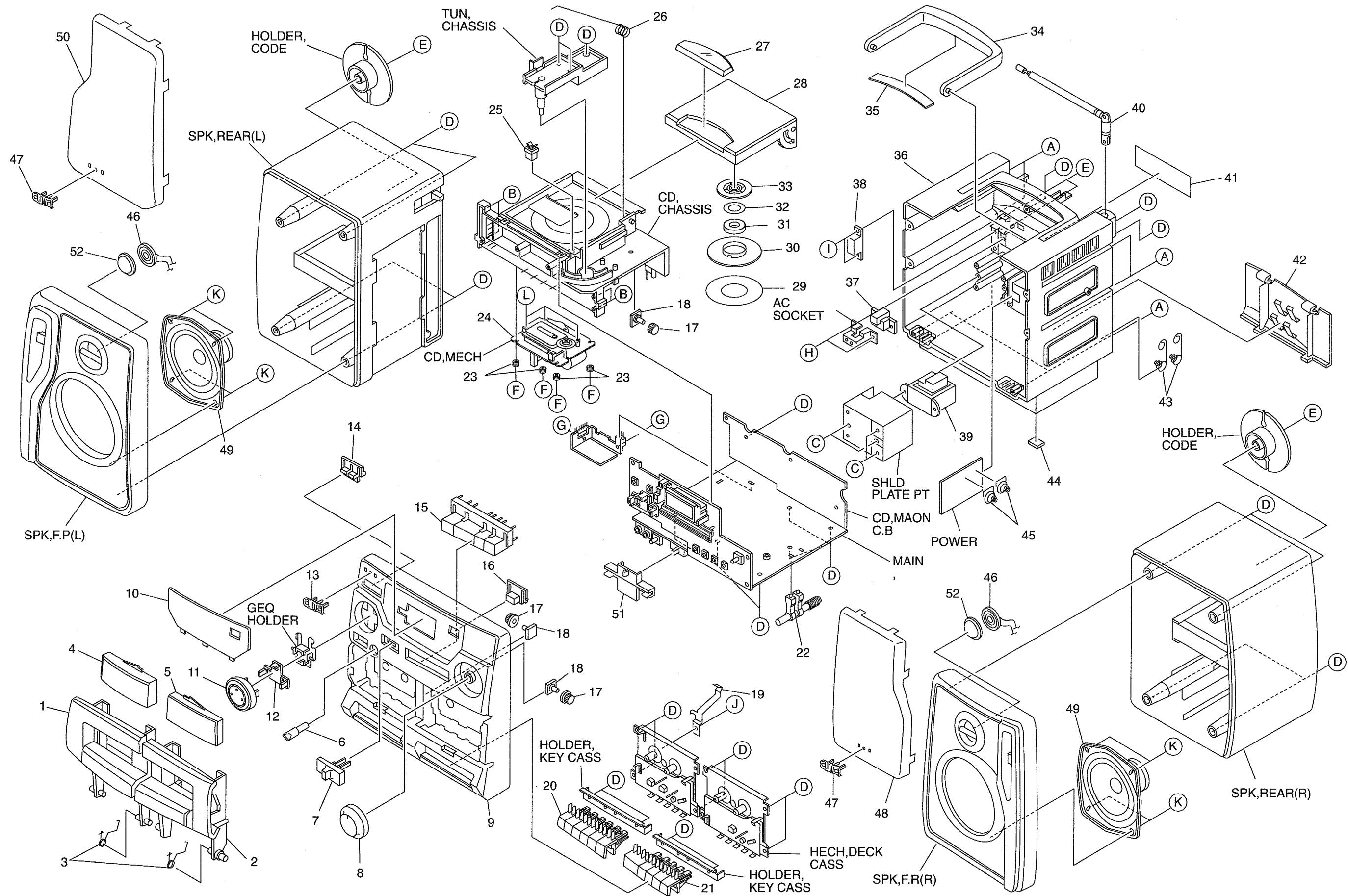
(AC/DC, MIN)

Tape speed: 3000 ± 90 Hz

Wow & flutter: Less than 0.35% (JIS, UN WTD)

Take-up torque: 30 ~ 60 g-cm

F.F & REW torque: 55 ~ 140 g-cm

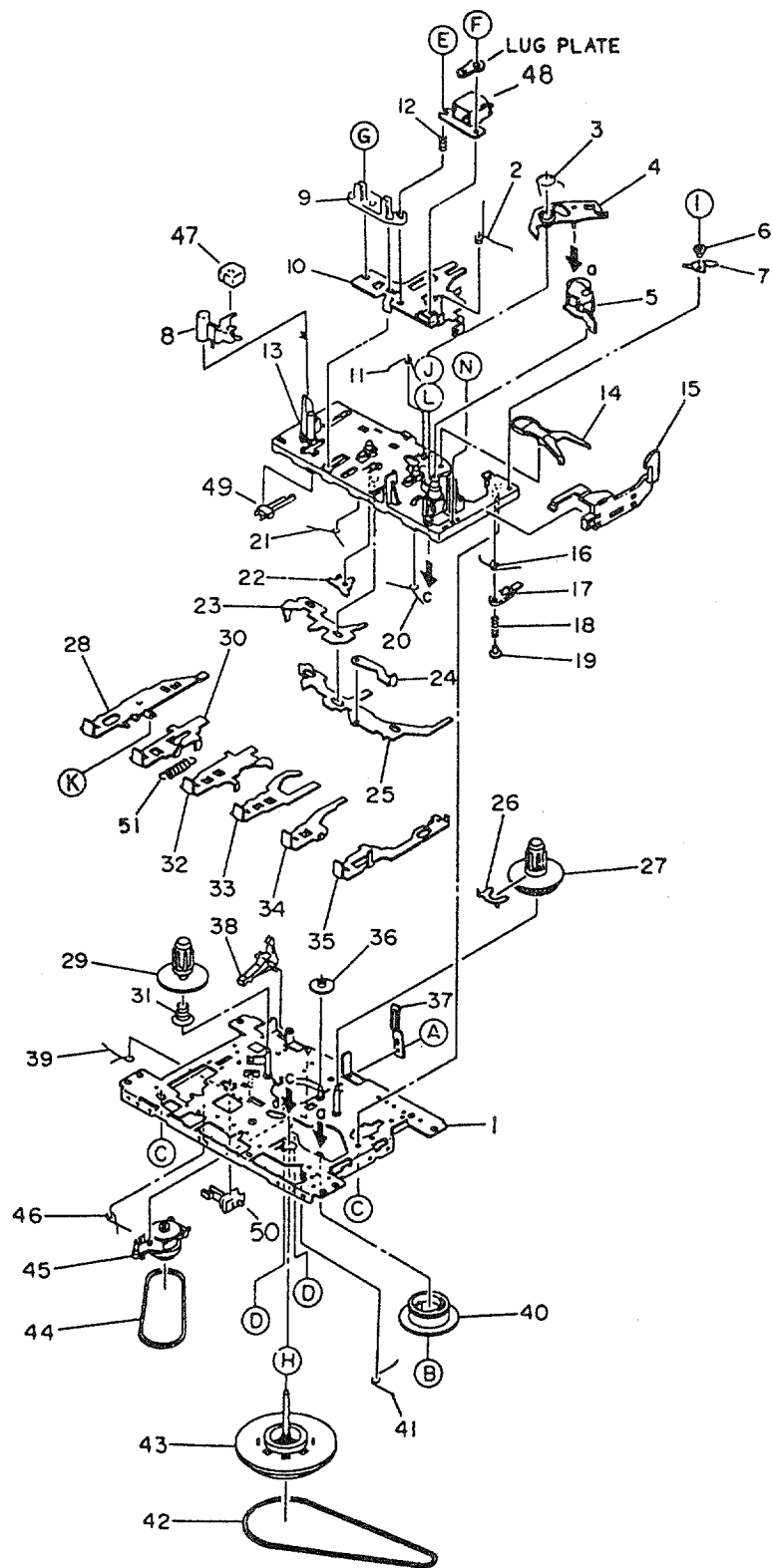


MECHANICAL PARTS LIST 1/1

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	SF-230-006-40H		CASSETT BOX(L)	32	SF-MD4-067-900		PLATE MAGNET(CAD205)
2	SF-230-006-50H		CASSETT BOX(R)	33	SF-330-001-80Z		CHUCK (A)
3	SF-MD4-067-000		SPR-T,CASS	34	SF-230-006-00Y		HANDLE RF
4	SF-330-005-80H		CASSETT WINDOW(L)	35	SF-MD4-079-000		HANDLE PLATE
5	SF-330-005-90H		CASSETT WINDOW(R)	36	SF-130-002-20Y		REAR CABINET RF
6	SF-430-007-30H		MIC KNOB	37	SJ-A02-000-01D		AC JACK W/SW
7	SF-430-007-20H		FUNC, KNOB	38	SS-SP1-120-010		SW, POWER VOLTAGE<LH>
8	SF-430-006-90H		VOL, KNOB	39	ST-T48-000-290		PT, EI-48/23 (CAD205U) <U>
9	SF-130-005-40H		CAB, FRONT<LH>	39	ST-T57-0E0-440		PT, EI-57/25<LH>
9	SF-130-004-10H		CAB, FRONT (U) <U>	40	SY-H81-012-9A0		ROD ANT
10	SF-330-007-70H		DISPLAY WINDOW<U>	41	SF-MD4-068-300		PLATE BAT(CAD205)
10	SF-330-007-30H		WINDOW, DISPLAY<LH>	42	SF-330-005-20Y		BATTERY LID RF
11	SF-330-007-90H		BTN, GEQ<LH>	43	SF-MD4-067-200		SPR-C, LINK BAT
11	SF-330-006-30H		GEQ. BTN<U>	44	SF-MD4-068-100		CUSH, FOOT
12	SF-430-007-40H		GEQ. LENS	45	SF-MD4-067-300		SPR-C, BAT (-)
13	84-CD5-024-010		BADGE AIWA	46	SM-BP2-700-040		PIEEO TWEETER
14	SF-330-007-20H		MEMORY BTN	47	SF-MD4-075-500		BADGE AIWA (SPKR)
15	SF-330-006-20H		CD BTN	48	SF-210-000-70Q		GRILL (R)
16	SF-330-007-00H		BAND BTN	49	SM-SS5-540-130		SPKR, 5 4 5W<LH>
17	SF-MD4-067-700		GEAR	49	SM-SS5-580-120		SPKR, 5W 80HM<U>
18	SF-MD4-067-800		BRKET, GEAR	50	SF-210-000-60Q		GRILL (L)
19	SF-450-001-20Q		REC. SPRING-W	51	SF-430-007-50H		SW1 LEVER
20	SF-230-006-20Y		CASSETT KEY(A) RF	52	SF-MD4-078-600		CAP, CER TW
21	SF-230-006-30Y		CASSETT KEY(B) RF	A	87-751-104-410		SCREW, TAPPING 3-30
24	SF-430-007-50H		SW1 LEVER	B	87-751-101-410		SCREW, TAPPING 3-18
22	SL-B90-100-12G		AM BAR ANT	C	87-078-157-010		SCREW, TAPPING 3-16
23	80-CD3-214-010		CUSH CD A	D	87-741-097-410		SCREW, MACHINE 3-12
24	SF-420-001-10S		CD PANEL	E	87-741-096-410		SCREW, TAPPING 3-10
25	SS-PS1-110-180		SW, LOCK PUSH	F	81-CD5-204-010		SCREW, CD
26	SF-MD4-067-100		SPR-T, CD	G	87-743-096-410		SCREW, TAPPING 3-6
27	SF-330-006-10H		CD WINDOW	H	87-654-075-410		SCREW, TAPPING 2.6-10
28	SF-230-006-60H		CD BOX	I	87-741-035-410		SCREW, TAPPING 2-6
29	SF-MD4-068-000		CUSH, CHUCK	J	87-262-547-310		SCREW, TAPPING M2-3
30	SF-MD3-013-000		CHUCK (B)	K	87-741-095-410		SCREW, TAPPING 3-8
31	87-036-368-010		MAGNET	L	87-357-529-310		SCREW, MACHINE 1.7-4

TAPE MECHANISM EXPLODED VIEW 1/2

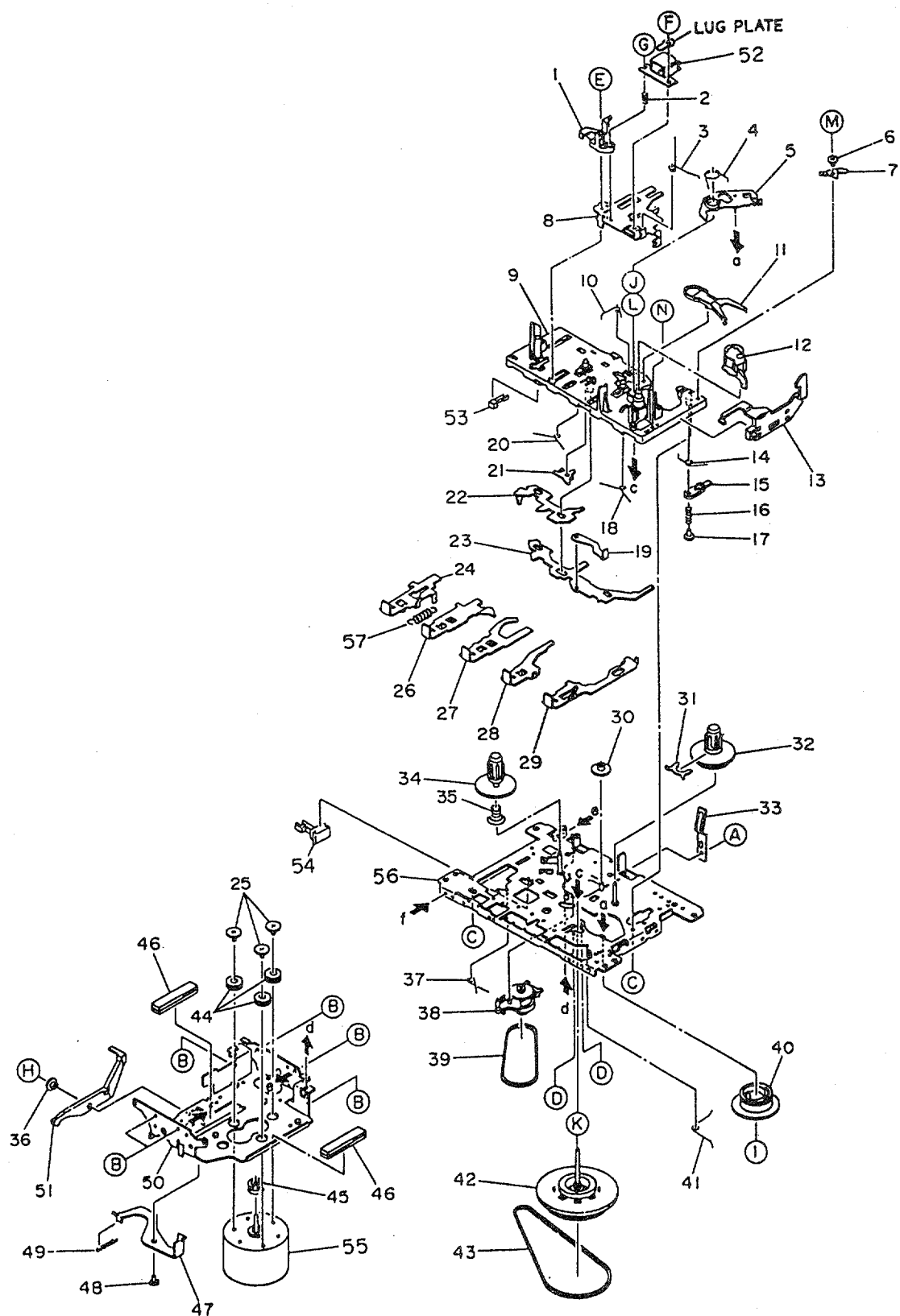


TAPE MECHANISM PARTS LIST 1/2

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	S1-921-015-010		CHASSIS ASSY
2	S1-921-030-030		PANEL P SPRING
3	S1-921-260-050		GEAR PLATE SPRING
4	S1-921-265-020		GEAR PLATE ASSY
5	S1-921-043-090		PINCH ROLLER ARM ASSY
6	S1-921-140-370		P ARM COLLER
7	S1-921-140-340		P ARM
8	S1-921-030-050		MG ARM
9	S1-921-030-4A0		HEAD BASE
10	S1-921-030-110		HEAD PANEL
11	S1-921-141-8A0		M CONTROL SPRING
12	S1-821-030-070		AZIMUTH SPRING
13	S1-921-143-010		BASE ASSY
14	S1-921-260-4A0		SENSING LEVER
15	S1-921-130-020		EJECT SLIDE LEVER
16	S1-921-141-3A0		P CONTROL SPRING
17	S1-921-140-820		PAUSE LEVER(F)
18	S1-921-140-120		PAUSE LEVER SPRING
19	S1-921-140-110		PAUSE STOPPER
20	S1-921-140-150		BUTTON LEVER SPRING(B)
21	S1-921-140-140		BUTTON LEVER SPRING(A)
22	S1-921-140-200		PR STOPPER
23	S1-921-140-090		SWITCH ACTUATOR
24	S1-821-011-590		E KICK LEVER
25	S1-921-140-080		PUSH BUTTON ACTUATOR
26	S1-921-050-060		SENER
27	S1-921-053-030		TAKE UP REEL ASSY
28	S1-921-140-220		REC BUTTON LEVER
29	S1-921-053-040		SUPPLY REEL ASSY
30	S1-921-140-230		PLAY BUTTON LEVER
31	S1-829-100-100		BACK TENSION SPRING
32	S1-921-140-240		REW BUTTON LEVER
33	S1-921-140-250		FF BUTTON LEVER
34	S1-921-140-260		STOP BUTTON LEVER
35	S1-921-140-610		PAUSE BUTTON LEVER
36	S1-821-100-700		FF GEAR
37	S1-829-100-010		PACK SPRING
38	S1-821-100-690		RECORD SAFETY LEVER
39	S1-921-140-210		REC BUTTON LEVER SPRING
40	S1-921-260-020		CAM GEAR
41	S1-921-140-160		E ACTUATOR SPRING
42	S1-921-090-240		MAIN BELT
43	S1-921-093-030		FLYWHEEL ASSY
44	S1-921-070-030		RF BELT
45	S1-921-073-080		RF CLUTCH ASSY
46	S1-921-140-170		P.S.LEVER SPRING
47	S6-209-100-100		E HEAD PH-K380-MS1
48	S6-201-011-110		HEAD,RP7442ES-0951
49	S6-401-011-520		LEAF SW MSW-1541F
50	S6-401-011-610		LEAF SW MSW-17820MVEI
51	S1-821-010-500		PLAY BUTTON LEVER SPRING
A	S9-P33-200-320		DEL TITE SCREW M2-3
B	S9-422-000-000		P WASHER CUT 12-3.8-0.3
C	S9-679-000-000		P TAP SCREW M2-5
D	S9-999-180-090		TAP SCREW M2-4.5
E	S9-922-000-000		AZIMUTH SCREW M2-8
F	S9-P01-200-310		SCREW,M2-3
G	S9-004-000-000		SCREW,M2-6
H	S9-882-000-000		P WASHER 2-3.5-0.4
I	S9-999-200-410		P TAP SCREW M2-3
J	S9-999-030-130		P WASHER CUT 1.45-3.8-0.
K	S9-179-000-000		C TAP SCREW M2-3
L	S9-999-000-030		P WASHER2.1-4-0.13
M	S9-181-000-000		C TAP SCREW M2-5
N	S9-P05-200-610		S TAPPING SCREW M2-6

TAPE MECHANISM EXPLODED VIEW 2/2

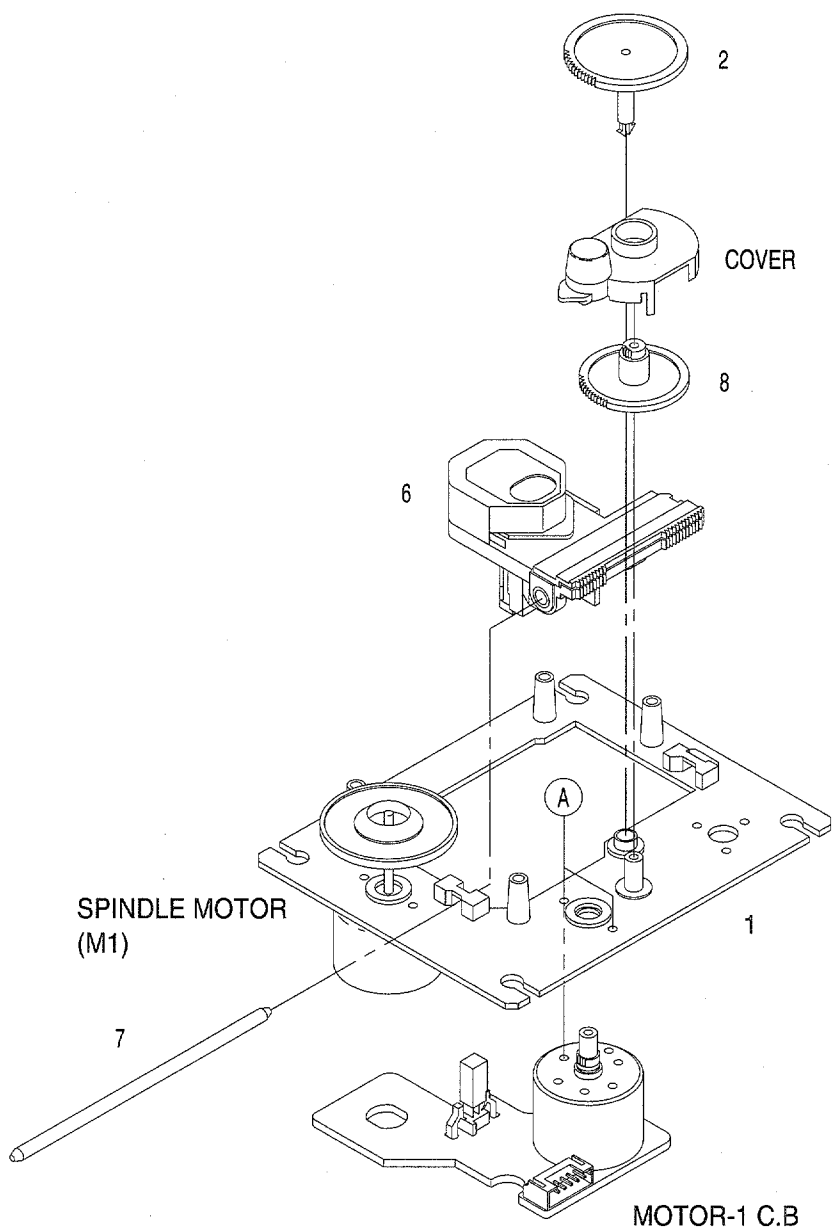


TAPE MECHANISM PARTS LIST 2/2

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REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S1-921-030-4A0		HEAD BASE	36	S1-821-120-650		COLLER B
2	S1-821-030-070		AZIMUTH SPRING	37	S1-921-140-170		P.S.LEVER SPRING
3	S1-921-030-030		PANEL P SPRING	38	S1-921-073-080		RF CLUTCH ASSY
4	S1-921-260-050		GEAR PLATE SPRING	39	S1-921-070-030		RF BELT
5	S1-921-265-020		GEAR PLATE ASSY	40	S1-921-260-020		CAM GEAR
6	S1-921-140-370		P ARM COLLER	41	S1-921-140-160		E ACTUATOR SPRING
7	S1-921-140-340		P ARM	42	S1-921-093-040		FLYWHEEL ASSY
8	S1-921-030-110		HEAD PANEL	43	S1-921-090-240		MAIN BELT
9	S1-921-143-010		BASE ASSY	44	S1-820-130-060		MOTOR RUBBER
10	S1-921-141-8A0		M CONTROL SPRING	45	S1-921-120-130		MOTOR PULLEY
11	S1-921-260-4A0		SENSING LEVER	46	S1-921-120-120		ANTI VIBR FELT MAT
12	S1-921-043-090		PINCH ROLLER ARM ASSY	47	S1-821-120-680		P KICK LEVER (A)
13	S1-921-130-020		EJECT SLIDE LEVER	48	S1-821-120-230		PK COLLER SCREW A
14	S1-921-141-3A0		P CONTROL SPRING	49	S1-821-120-250		P KICK LEVER SPRING
15	S1-921-140-820		PAUSE LEVER(F)	50	S1-921-120-110		MOTOR BRACKET
16	S1-921-140-120		PAUSE LEVER SPRING	51	S1-921-120-090		P KICK LEVER
17	S1-921-140-110		PAUSE STOPPER	52	S6-201-011-110		HEAD,RP7442ES-0951
18	S1-921-140-150		BUTTON LEVER SPRING(B)	53	S6-401-011-520		LEAF SW MSW-1541F
19	S1-821-011-590		E KICK LEVER	54	S6-401-011-610		LEAF SW MSW-17820MVE1
20	S1-921-140-140		BUTTON LEVER SPRING(A)	55	S6-002-030-290		MOTOR EG530YD-2BH
21	S1-921-140-200		PR STOPPER	56	S1-921-015-010		CHASSIS ASSY
22	S1-921-140-090		SWITCH ACTUATOR	57	S1-821-010-500		PLAY BUTTON LEVER SPRING
23	S1-921-140-080		PUSH BUTTON ACTUATOR	A	S9-P33-200-320		DEL TITE SCREW M2-3
24	S1-921-140-230		PLAY BUTTON LEVER	B	S9-180-000-000		C TAP SCREW M2-4
25	S1-821-120-020		MOTOR COLLER SCREW	C	S9-679-000-000		P TAP SCREW M2-5
26	S1-921-140-240		REW BUTTON LEVER	D	S9-999-180-090		TAP SCREW M2-4.5
27	S1-921-140-250		FF BUTTON LEVER	E	S9-004-000-000		SCREW M2-6
28	S1-921-140-260		STOP BUTTON LEVER	F	S9-P01-200-310		SCREW,M2-3
29	S1-921-140-610		PAUSE BUTTON LEVER	G	S9-922-000-000		AZIMUTH SCREW M2-8
30	S1-821-100-700		FF GEAR	H	S9-182-000-000		C TAP SCREW M2-6
31	S1-921-050-060		SENER	I	S9-422-000-000		P WASHER CUT 12-3.8-0.3
32	S1-921-053-030		TAKE UP REEL ASSY	J	S9-999-030-130		P WASHER CUT 1.45-3.8
33	S1-829-100-010		PACK SPRING	K	S9-882-000-000		P WASHER 2-3.5-0.4
34	S1-921-053-040		SUPPLY REEL ASSY	L	S9-999-000-030		P WASHER2.1-4-0.13
35	S1-829-100-100		BACK TENSION SPRING	M	S9-999-200-410		P TAP SCREW M2-3
				N	S9-P05-200-810		SCREW,S TAP 2-8

CD MECHANISM EXPLODED VIEW 1/1



CD 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
1	9X-262-587-010		MOTOR CHASSIS ASSY
2	92-626-907-010		GEAR(A)
6	98-848-376-110		OPTICAL PICK UP KSS-213B RP
7	92-626-908-010		SHAFT SLED
8	92-627-003-010		GEAR B
A	97-621-255-150		SCREW+P2-3

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	SF-440-025-20J		INSTRUCTION BOOK ESF<U>
1	SF-440-027-70J		INSTRUCTION BOOK<LH>
2	86-CDE-951-010		RC UNIT, RC-6AT04<LH>
△3	SW-A18-0U0-250		CORD, AC SET<U>
△3	SW-A20-0E0-270		CORD, AC SET<LH>
△4	SJ-A02-000-300		PLUG, SIEMNS<LH>

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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