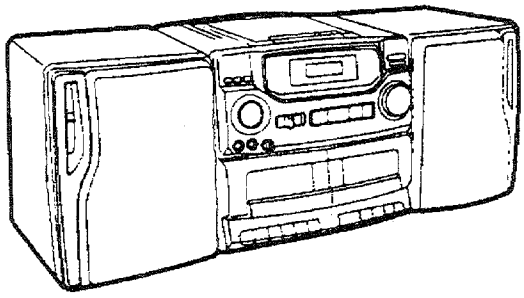
aiwa

aiwa SERVICE

CA-DW425
CA-DW420

SERVICE MANUAL



COMPACT DISC CARRY
COMPONENT SYSTEM

- BASIC CD MECHANISM: KSM-2131BDM
- BASIC TAPE MECHANISM: TN-21ZSW-1694
- TYPE: U(420),LH(425)

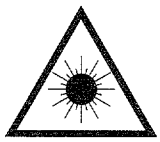
S/M Code No. 09-977-196-20I

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

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling 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.

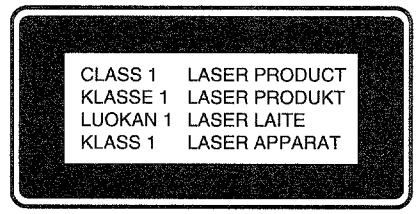
ATTENTION

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

ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer 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.

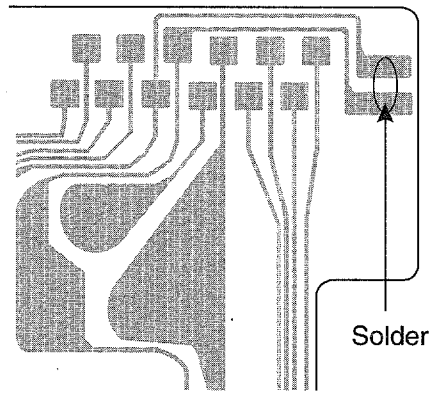


Precaution to replace Optical block

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
λ = 780 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

Erasure system
Magnet erase

Motor
DC motor(1)

Heads
Deck 1
Recording/playback head(1)
Erasure head(1)
Deck 2
Playback head(1)

Common section

Dimensions (W x H x D)
624 x 245 x 262 mm(24 $^5/_8$ x 9 $^3/_4$ x 10 $^3/_8$ 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 $^3/_8$ x 9 $^3/_8$ x 9 $^1/_8$ in.)

Weight
1.3Kg(2lbs 14 oz.) x 2

• Design and specifcations 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
λ = 780 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

Erasure system
Magnet erase

Motor
DC motor(1)

Heads
Deck 1
Recording/playback head(1)
Erasure head(1)
Deck 2
Playback head(1)

Common section

Dimensions (W x H x D)
624 x 245 x 262 mm(24 $^5/_8$ x 9 $^3/_4$ x 10 $^3/_8$ 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 $^3/_8$ x 9 $^3/_8$ x 9 $^1/_8$ in.)

Weight
1.3Kg(2lbs 14 oz.) x 2

• Design and specifcations are subject to change without notice.

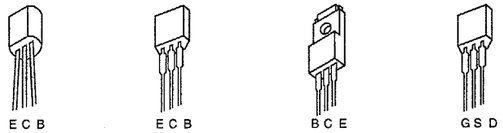
ELECTRICAL MAIN PARTS LIST

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

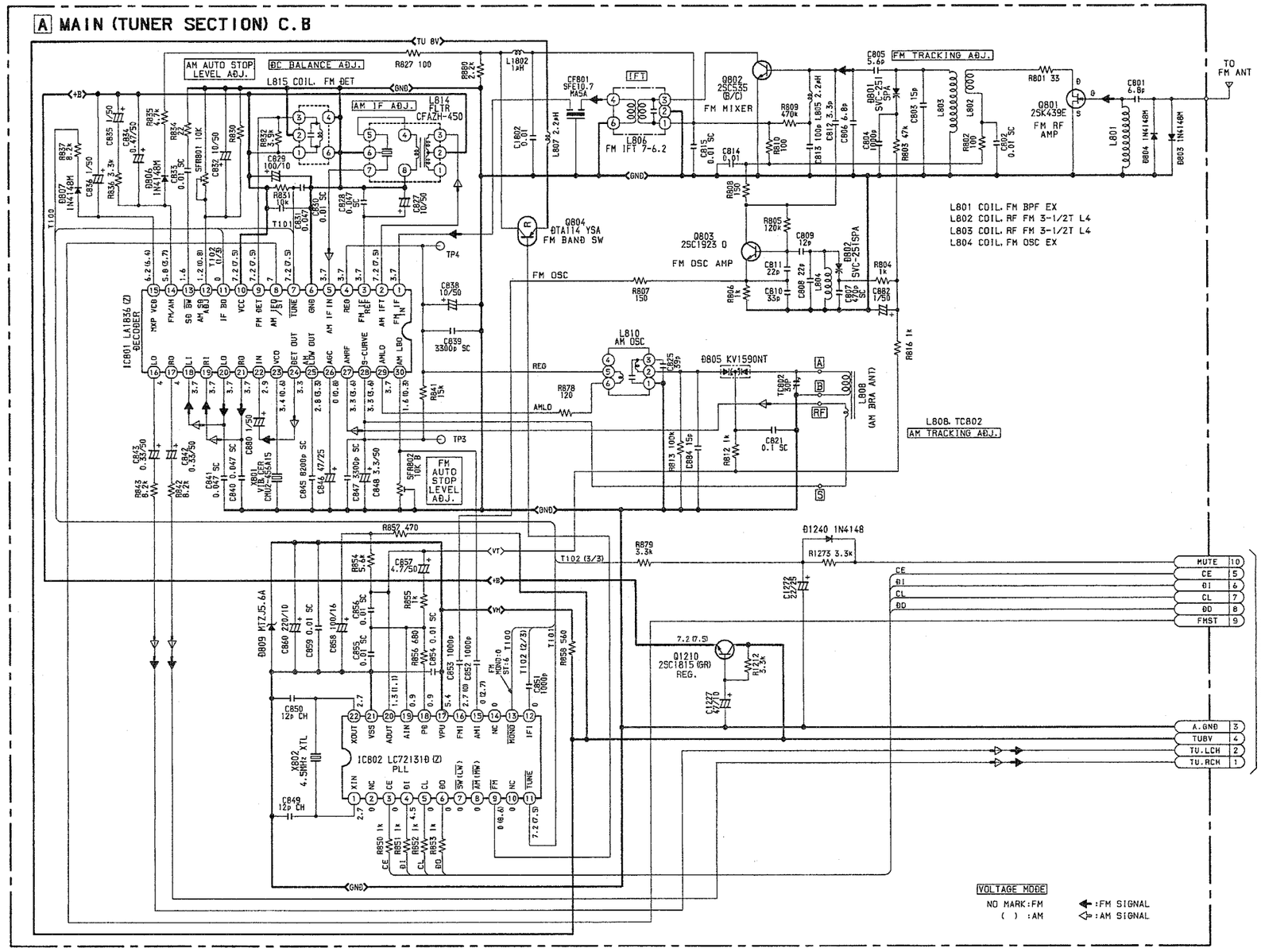
REF.NO	PART NO.	KANRI NO.	DESCRIPTION
SW501	SS-SS1-430-110		SW,SLIDE 4P3T
TC802	SC-W00-0A0-30X		CER,TRIMMER (GREEN)
VR401	SR-Y10-3A0-200		VR,10KA
X801	SF-R45-400-020		CER.RESO CSB455-B<425LH>
X801	SF-R45-400-9X2		CER.RESONATOR<420U>
X802	SF-R45-500-20Z		X'TAL 4.5MHZ
FRONT C.B			
C213	87-010-754-040		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	SF-R32-300-130		X'TAL CD 32.768KHZ
X202	SF-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
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 4.7UF-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
CN3	SW-C06-001-630		CONN ASSY 6P
FFC1	SW-F16-P55-228		FFC WIRE 16P<425LH>
FFC1	SW-F16-P05-501		FFC WIRE 16P (1.0mm PICH)<420U>
L1	87-005-196-080		FIXED IND 1UH
L2	SF-L54-100-000		COIL,TROIDAL(FL5R100)10UH
L3	SF-L54-100-000		COIL,TROIDAL(FL5R100)10UH
L4	SF-L54-100-000		COIL,TROIDAL(FL5R100)10UH
X1	SF-R16-600-120		X'TAL CD 16.93MHZ
POWER C.B			
⚠	SF-MD4-067-300		SPR-C,BAT(-)
⚠	SF-MD4-067-200		SPR-C,LINK BAT
⚠P701	SP-FC2-0E3-120		FUSE(UL TYPE)<425LH>
⚠P701	SP-FA2-0U3-120		FUSE,T3.15/250V<420U>
⚠FC701	ST-ML0-100-000		HOLDER FUSE
⚠FC702	ST-ML0-100-000		HOLDER FUSE
CD MOTOR C.B			

TRANSISTOR ILLUSTRATION

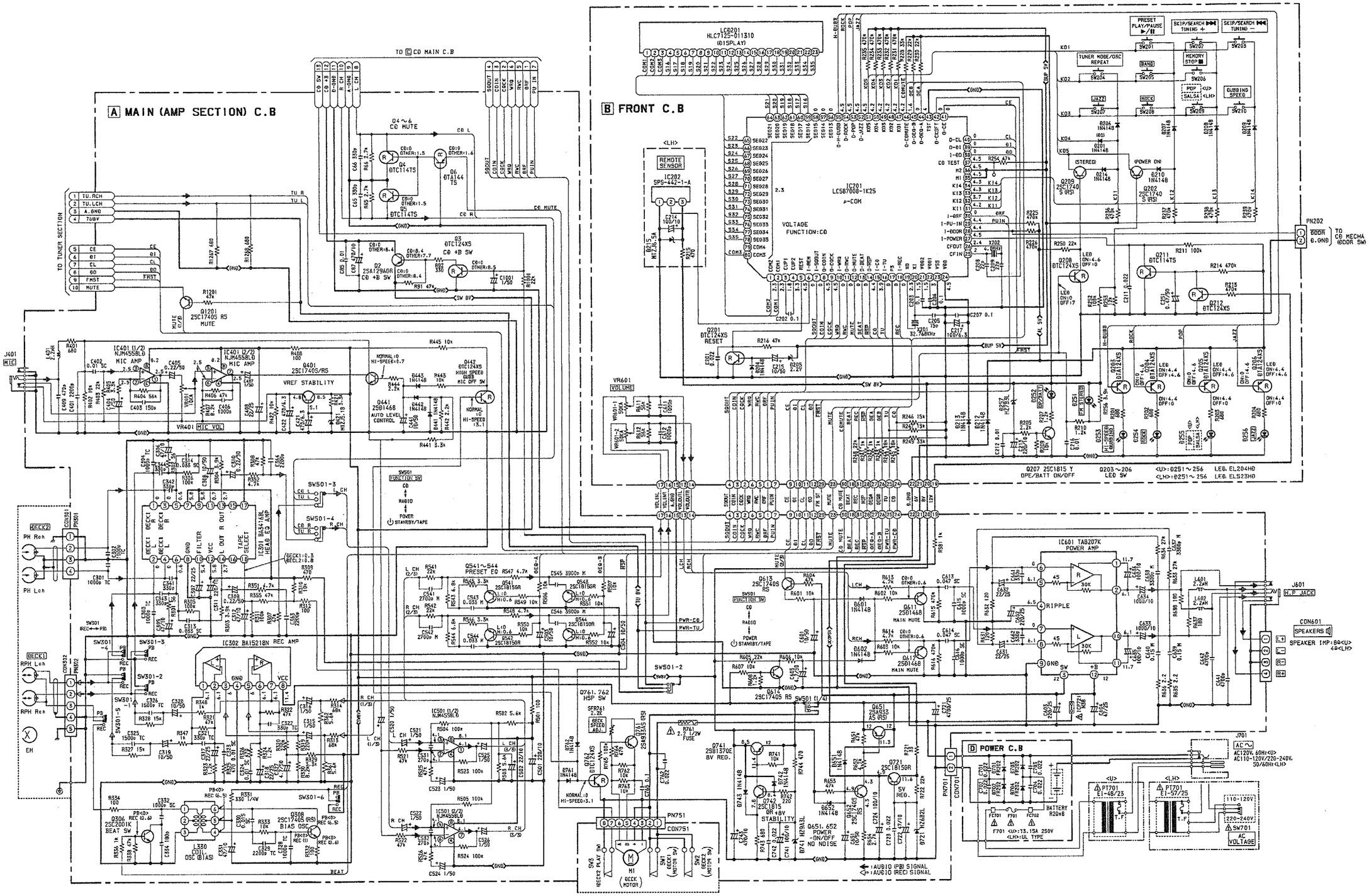


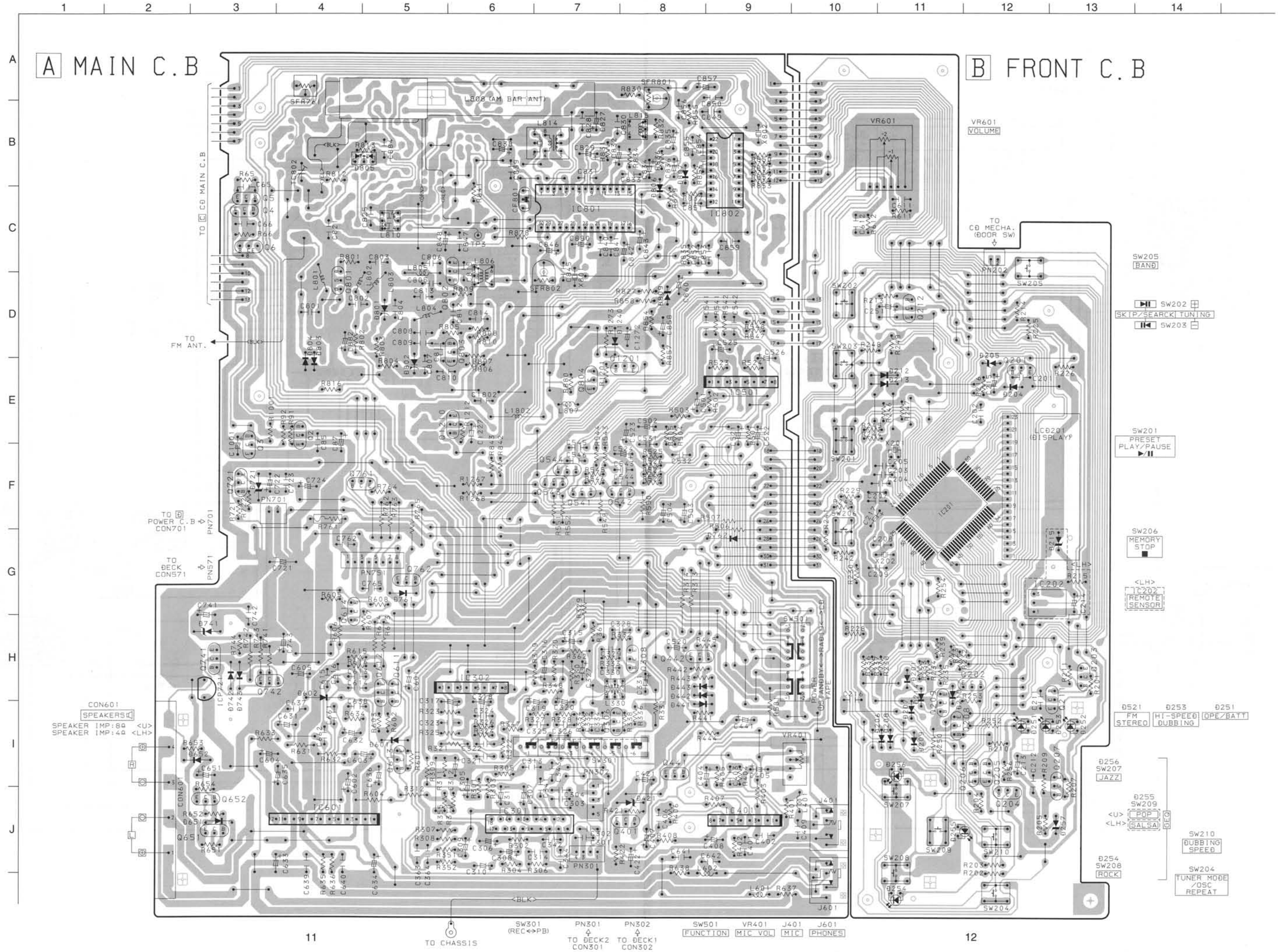
E C B	E C B	B C E	G S D
2SA1296	2SA933	2SB1370	2SK439
2SC535	DTA114YS		
2SC1740	DTA124XS		
2SC1815	DTA144TS		
2SC1923	DTC114TS		
2SC2001	DTC124XS		
2SD1468			

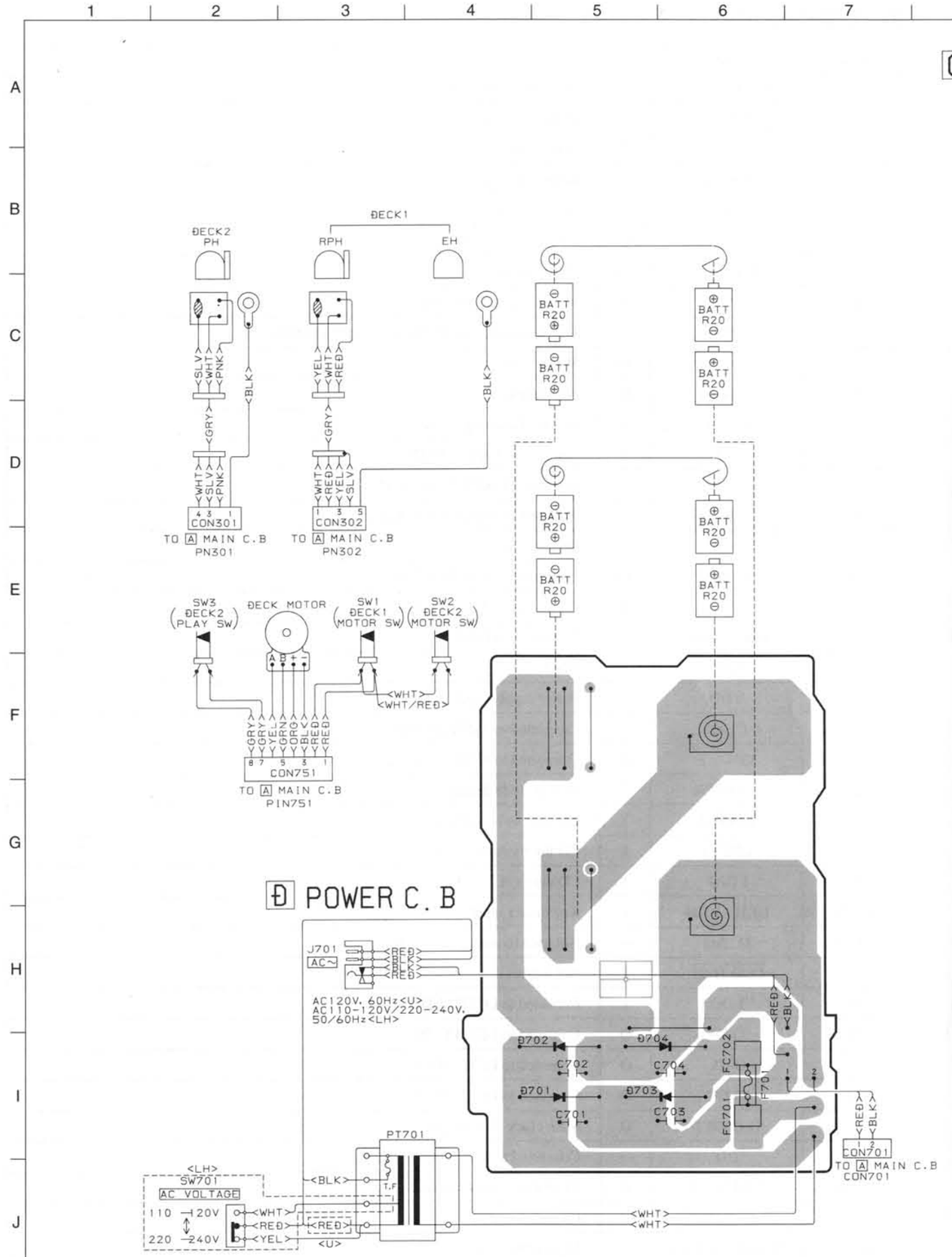
SCHEMATIC DIAGRAM-1 (MAIN TUNER SECTION)

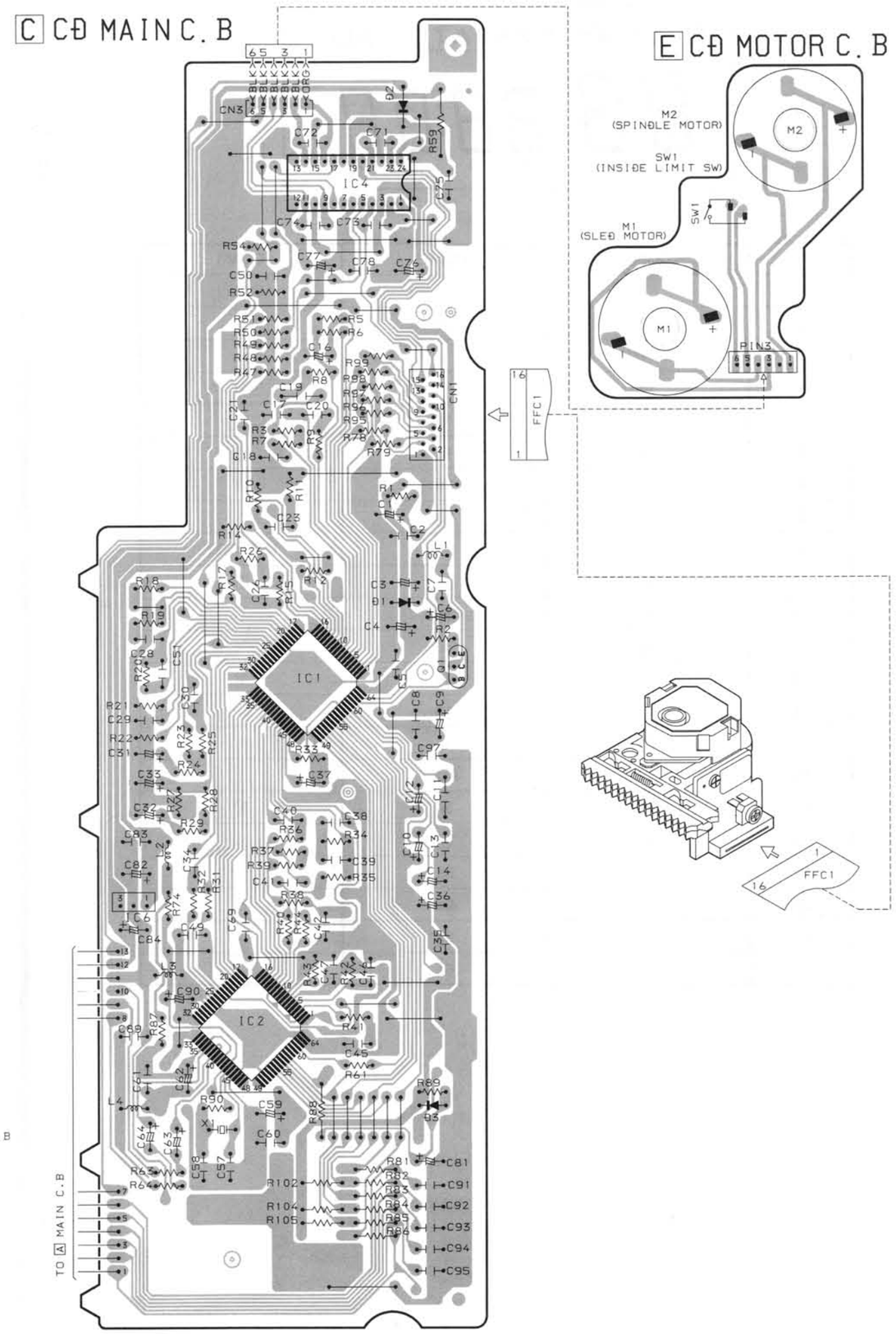


SCHEMATIC DIAGRAM-1 (MAIN AMP SECTION)



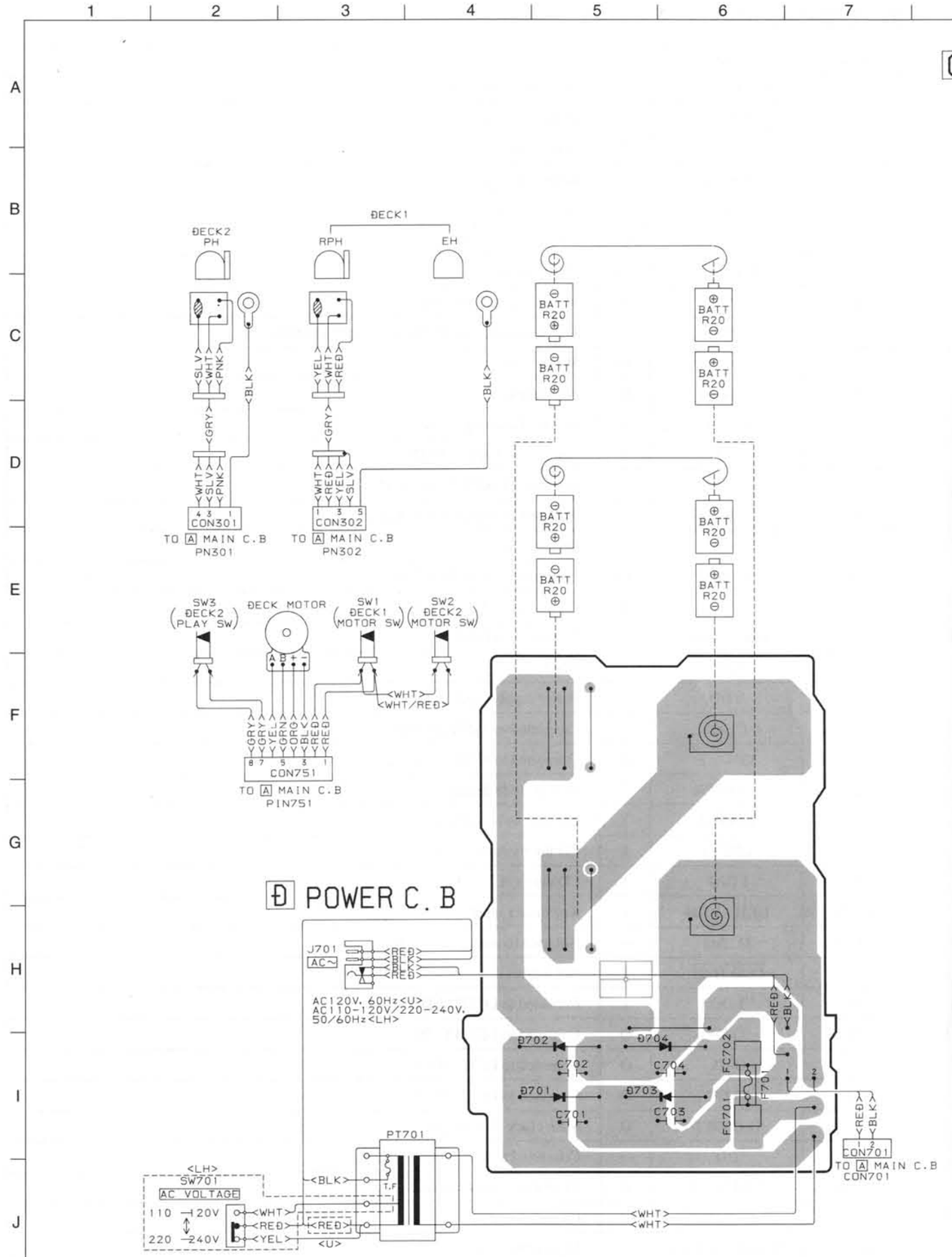

A MAIN C.B
B FRONT C.B
TO C CD MAIN C.B
TO FM ANT.
TO D POWER C.B CON701
TO DECK CON571
CON601 SPEAKERS
SPEAKER IMP:8Ω <U>
SPEAKER IMP:4Ω <LH>
TO CHASSIS
SW301 (REC↔PB)
PN301 TO DECK2 CON301
PN302 TO DECK1 CON302
SW501 FUNCTION
VR401 MIC VOL
J401 MIC
J601 PHONES
VR601 VOLUME
TO CD MECHA. (DOOR SW)
SW205 BAND
SW202 SKIP/SEARCK TUNING
SW203
SW201 PRESET PLAY/PAUSE
SW206 MEMORY STOP
<LH> IC202 REMOTE SENSOR
D521 FM STEREO
D253 HI-SPEED DUBBING
D251 OPE/BATT
D256 SW207 JAZZ
D255 SW209 <U> POP <LH> SALSA
D254 SW208 ROCK
SW210 DUBBING SPEED
SW204 TUNER MODE /OSC REPEAT
LC0201 (DISPLAY)
IC801
IC802
IC302
IC601
IC401
IC201
IC202
11
12


1 2 3 4 5 6 7 8 9 10 11 12 13 14
A B C D E F G H I J
DECK2
PH
DECK1
RPH
EH
BATT R20
CON301
TO A MAIN C.B
PN301
CON302
TO A MAIN C.B
PN302
SW3 (DECK2 PLAY SW)
DECK MOTOR
SW1 (DECK1 MOTOR SW)
SW2 (DECK2 MOTOR SW)
CON751
TO A MAIN C.B
PIN751
D POWER C.B
J701
AC~
AC120V. 60Hz<U>
AC110-120V/220-240V.
50/60Hz<LH>
D702
D704
D701
D703
C702
C704
C701
C703
FC702
FC701
F701
PT701
CON701
TO A MAIN C.B
CON701
<LH>
SW701
AC VOLTAGE
110 120V
220 240V
<U>


C CD MAIN C.B
CN3
IC4
IC1
IC2
CN1
FFC1
TO A MAIN C.B

E CD MOTOR C.B
M2
(SPINDLE MOTOR)
SW1
(INSIDE LIMIT SW)
M1
(SLED MOTOR)
PIN3

FFC1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TO A MAIN C.B
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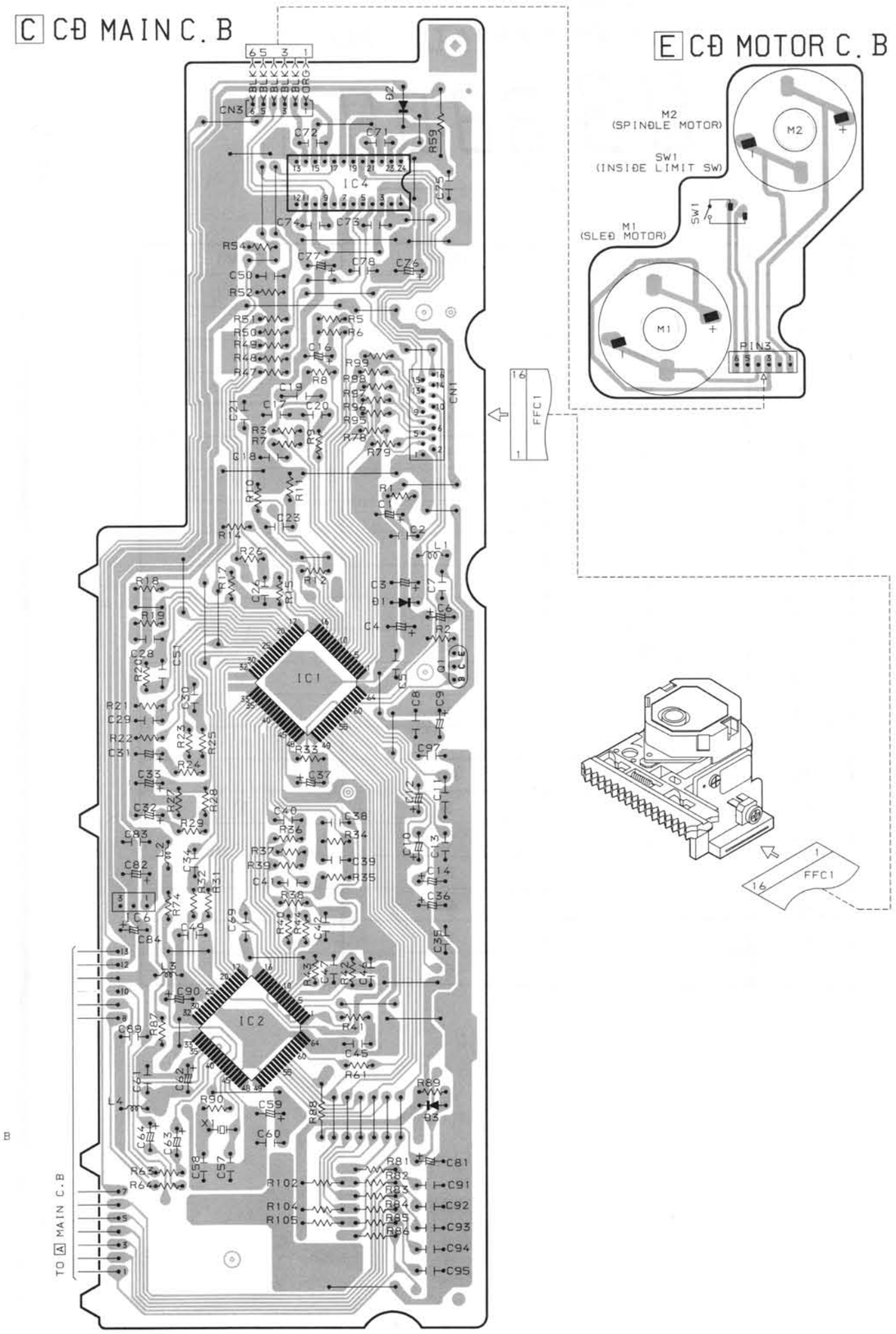
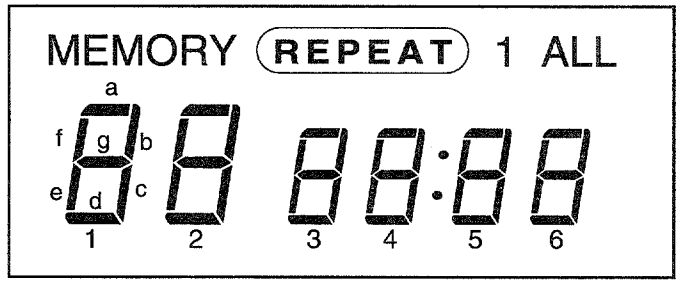
J701
AC~
AC120V. 60Hz<U>
AC110-120V/220-240V.
50/60Hz<LH>
D702
D704
D701
D703
C702
C704
C701
C703
FC702
FC701
F701
PT701
CON701
TO A MAIN C.B
CON701
<LH>
SW701
AC VOLTAGE
110 120V
220 240V
<U>


C CD MAIN C.B
CN3
IC4
IC1
IC2
CN1
FFC1
TO A MAIN C.B

E CD MOTOR C.B
M2
(SPINDLE MOTOR)
SW1
(INSIDE LIMIT SW)
M1
(SLED MOTOR)
PIN3

FFC1

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

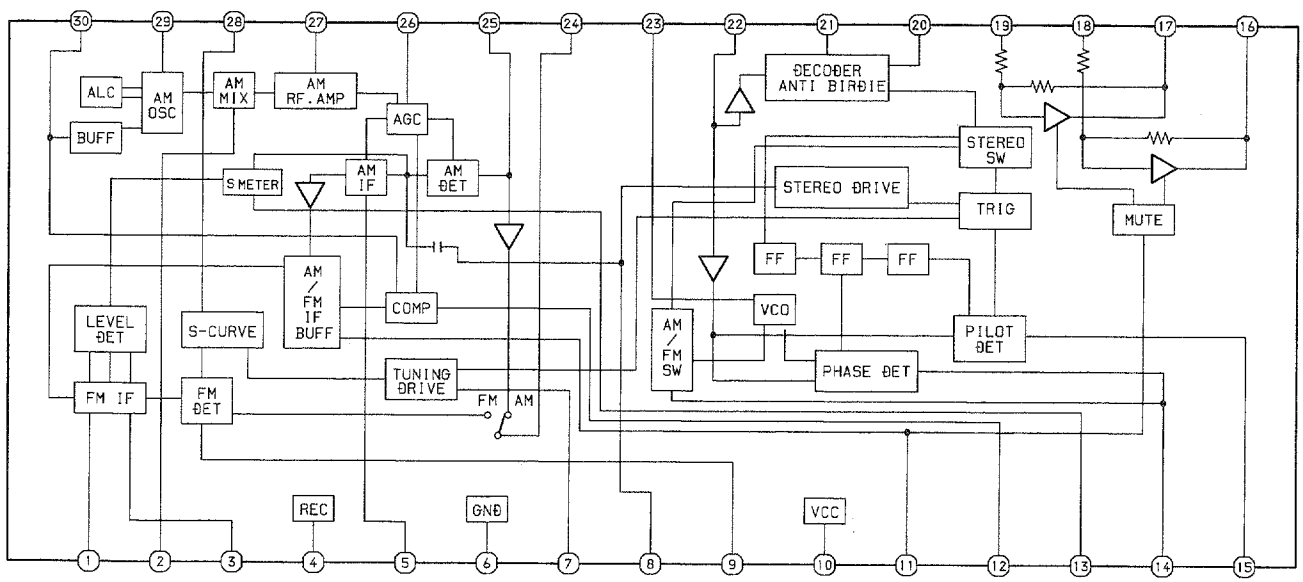
IC, LC587008-1K25

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.09-966-136-00l)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

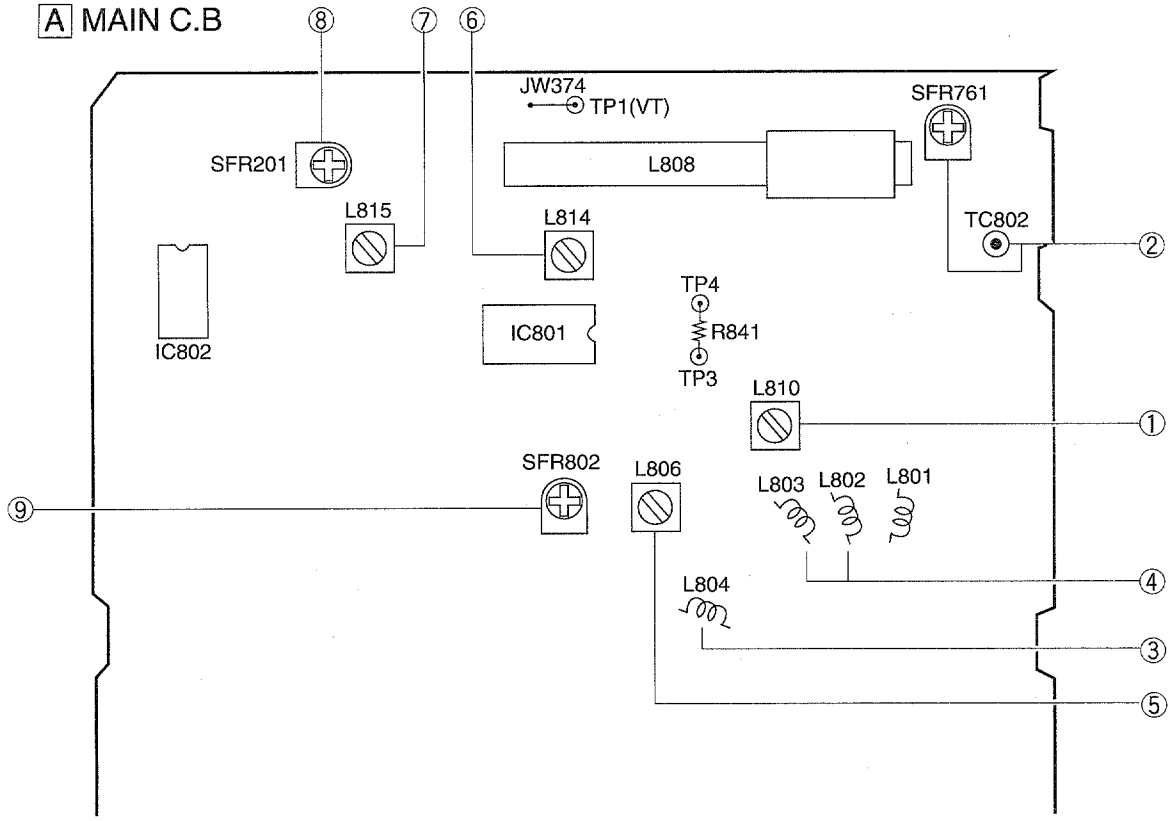


IC, LC72131

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

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

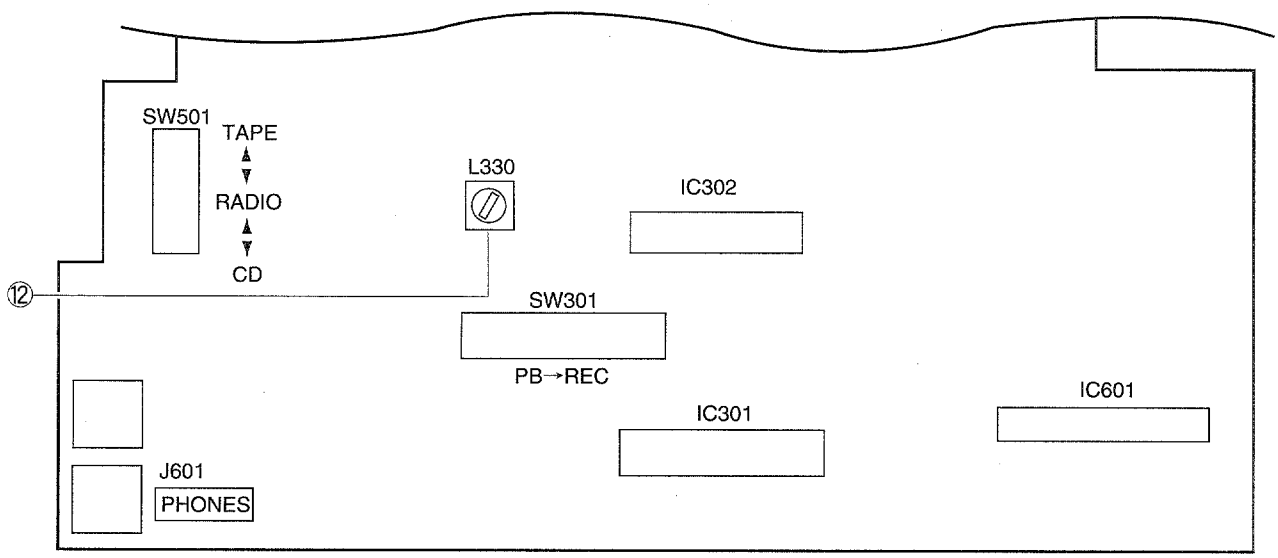
7. DC Balance Adjustment
   Settings: · Test point: TP3, 4
   · Adjustment location: L815
   Method: Set to FM 98.0 MHz and adjust L815 so that the voltage between TP3 and TP4 becomes 0 ± 0.04 V.

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

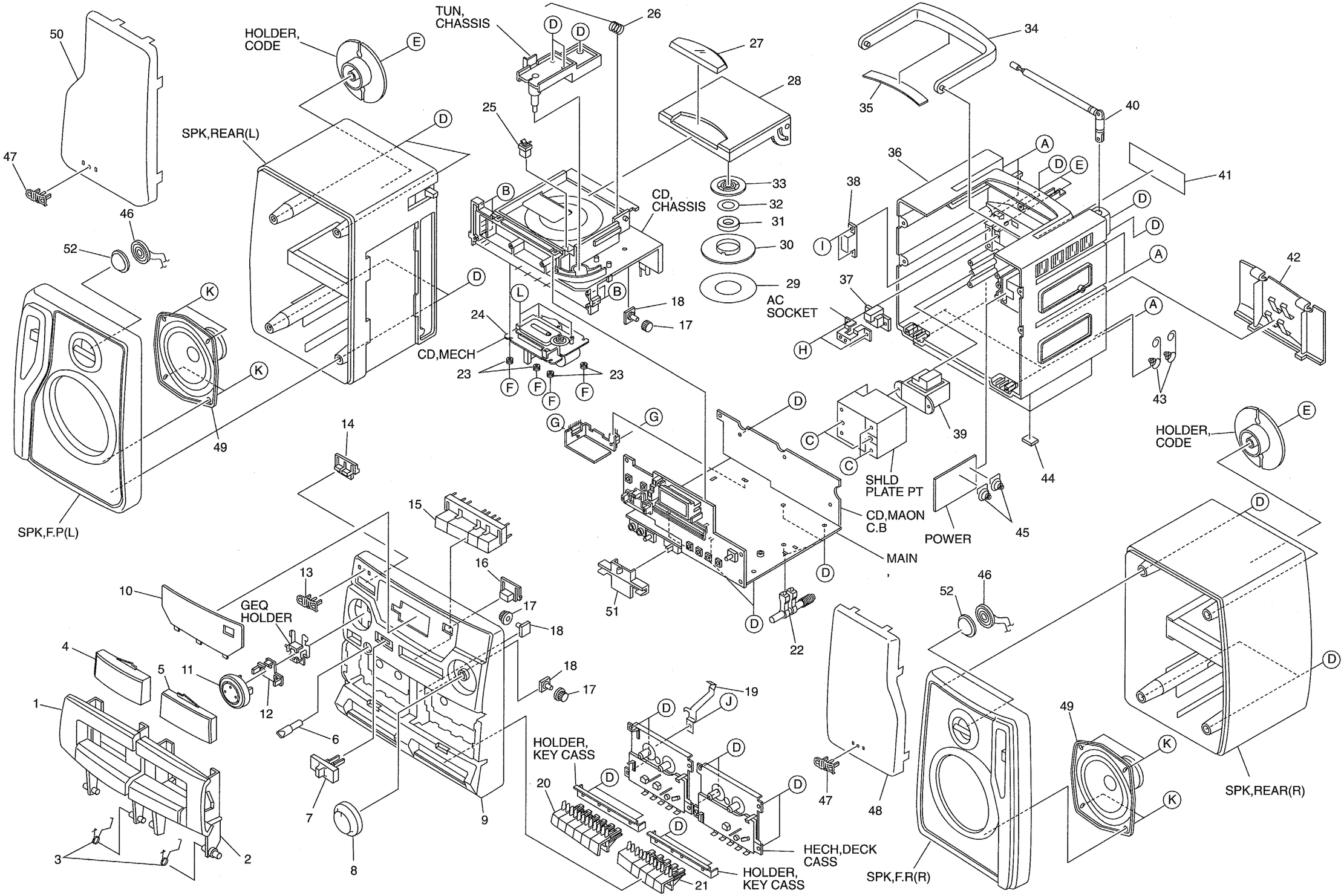
(AM)

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 EXPLODEDVIEW 1/1

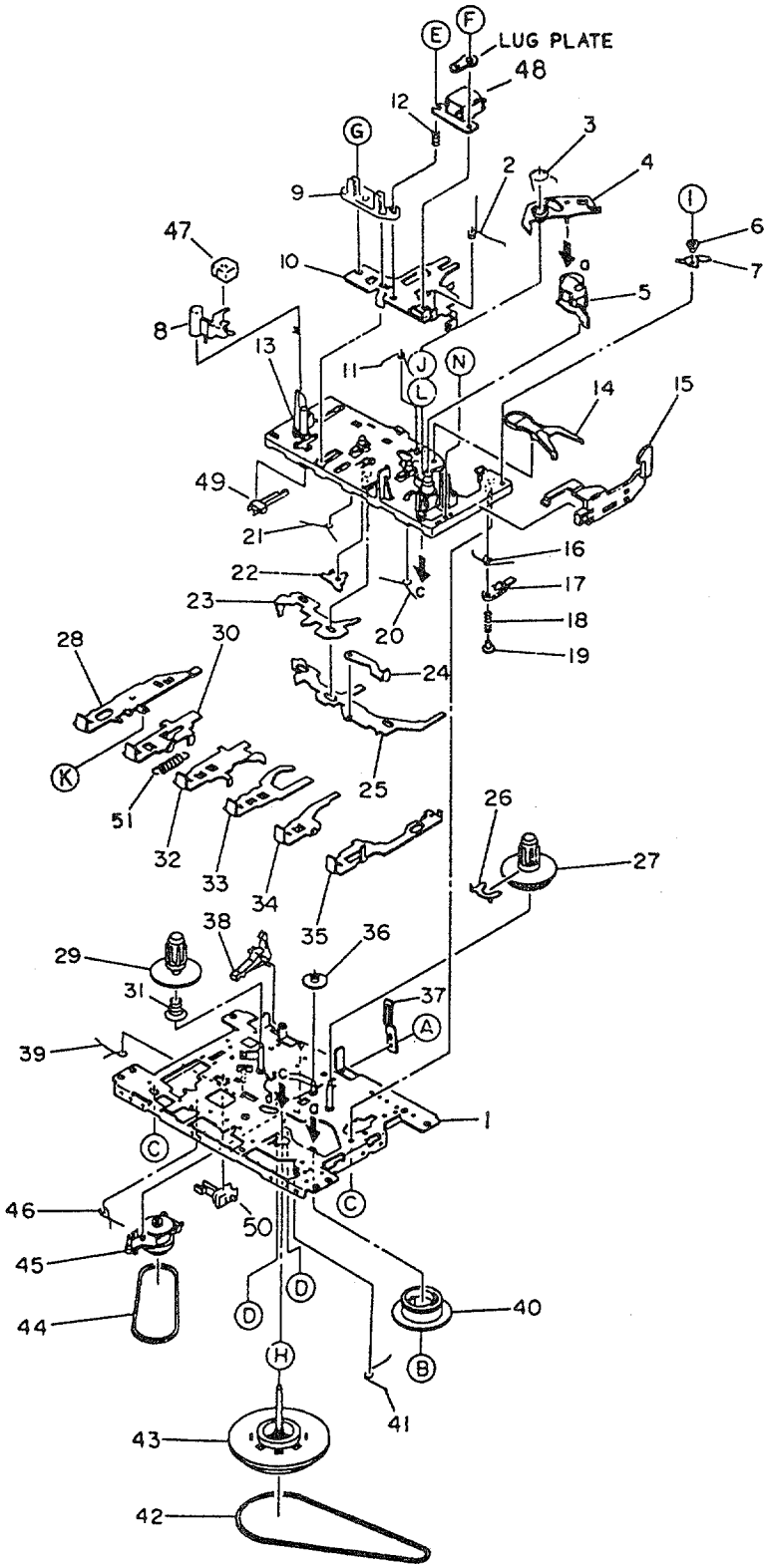


MECHANICAL PARTS LIST 1/1

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
1	SF-230-006-40H		CASSETT BOX(L)
2	SF-230-006-50H		CASSETT BOX(R)
3	SF-MD4-067-000		SPR-T,CASS
4	SF-330-005-80H		CASSETT WINDOW(L)
5	SF-330-005-90H		CASSETT WINDOW(R)
6	SF-430-007-30H		MIC KNOB
7	SF-430-007-20H		FUNC,KNOB
8	SF-430-006-90H		VOL,KNOB
9	SF-130-005-40H		CAB,FRONT<LH>
9	SF-130-004-10H		CAB,FRONT(U)<U>
10	SF-330-007-70H		DISPLAY WINDOW<U>
10	SF-330-007-30H		WINDOW,DISPLAY<LH>
11	SF-330-007-90H		BTN,GEQ<LH>
11	SF-330-006-30H		GEQ. BTN<U>
12	SF-430-007-40H		GEQ.LENS
13	84-CD5-024-010		BADGE AIWA
14	SF-330-007-20H		MEMORY BTN
15	SF-330-006-20H		CD BTN
16	SF-330-007-00H		BAND BTN
17	SF-MD4-067-700		GEAR
18	SF-MD4-067-800		BRKET,GEAR
19	SF-450-001-20Q		REC.SPRING-W
20	SF-230-006-20Y		CASSETT KEY(A)RF
21	SF-230-006-30Y		CASSETT KEY(B)RF
24	SF-430-007-50H		SW1 LEVER
22	SL-B90-100-12G		AM BAR ANT
23	80-CD3-214-010		CUSH CD A
24	SF-420-001-10S		CD PANEL
25	SS-PS1-110-180		SW,LOCK PUSH
26	SF-MD4-067-100		SPR-T,CD
27	SF-330-006-10H		CD WINDOW
28	SF-230-006-60H		CD BOX
29	SF-MD4-068-000		CUSH,CHUCK
30	SF-MD3-013-000		CHUCK(B)
31	87-036-368-010		MAGNET
32	SF-MD4-067-900		PLATE MAGNET(CAD205)
33	SF-330-001-80Z		CHUCK (A)
34	SF-230-006-00Y		HANDLE RF
35	SF-MD4-079-000		HANDLE PLATE
36	SF-130-002-20Y		REAR CABINET RF
⚠37	SJ-A02-000-01D		AC JACK W/SW
⚠38	SS-SP1-120-010		SW,POWER VOLTAGE<LH>
⚠39	ST-T48-0U0-290		PT,EI-48/23(CAD205U)<U>
⚠39	ST-T57-0E0-440		PT,EI-57/25<LH>
40	SY-H81-012-9A0		ROD ANT
41	SF-MD4-068-300		PLATE BAT(CAD205)
42	SF-330-005-20Y		BATTERY LID RF
43	SF-MD4-067-200		SPR-C,LINK BAT
44	SF-MD4-068-100		CUSH,FOOT
45	SF-MD4-067-300		SPR-C,BAT(-)
46	SM-BP2-700-040		PIEEO TWEETER
47	SF-MD4-075-500		BADGE AIWA(SPKR)
48	SF-210-000-70Q		GRILL (R)
49	SM-SS5-540-130		SPKR,5 4 5W<LH>
49	SM-SS5-580-120		SPKR,5W 8OHM<U>
50	SF-210-000-60Q		GRILL (L)
51	SF-430-007-50H		SW1 LEVER
52	SF-MD4-078-600		CAP,CER TW
A	87-751-104-410		SCREW,TAPPING 3-30
B	87-751-101-410		SCREW,TAPPING 3-18
C	87-078-157-010		SCREW,TAPPING 3-16
D	87-741-097-410		SCREW,MACHINE 3-12
E	87-741-096-410		SCREW,TAPPING 3-10
F	81-CD5-204-010		SCREW,CD
G	87-743-096-410		SCREW,TAPPING 3-6
H	87-654-075-410		SCREW,TAPPING 2.6-10
I	87-741-035-410		SCREW,TAPPING 2-6
J	87-262-547-310		SCREW,TAPPING M2-3
K	87-741-095-410		SCREW,TAPPING 3-8
L	87-357-529-310		SCREW,MACHINE 1.7-4

TAPE MECHANISM EXPLODED VIEW 1/2



TAPE MECHANISM PARTS LIST 1/2

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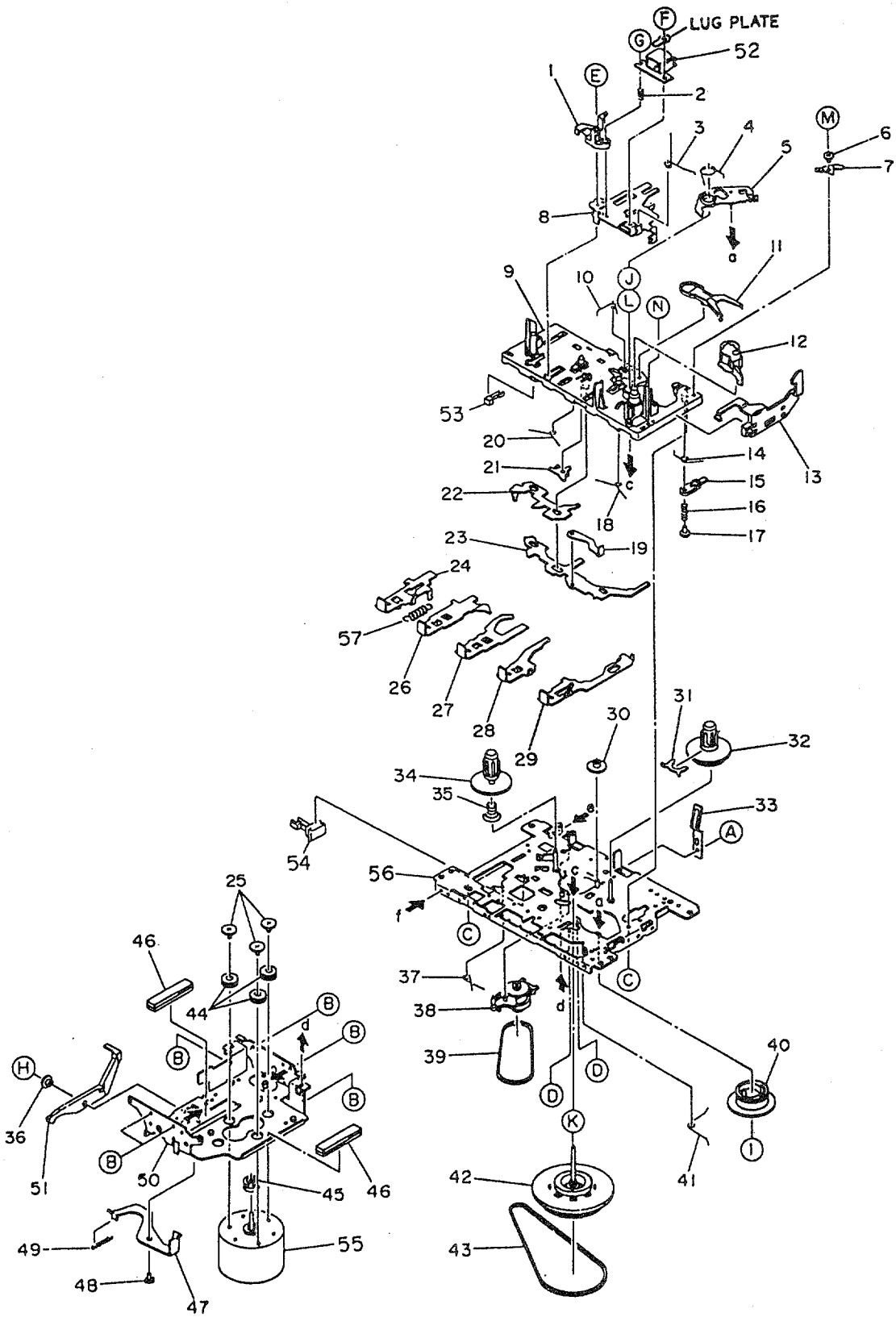
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

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		SENSER
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

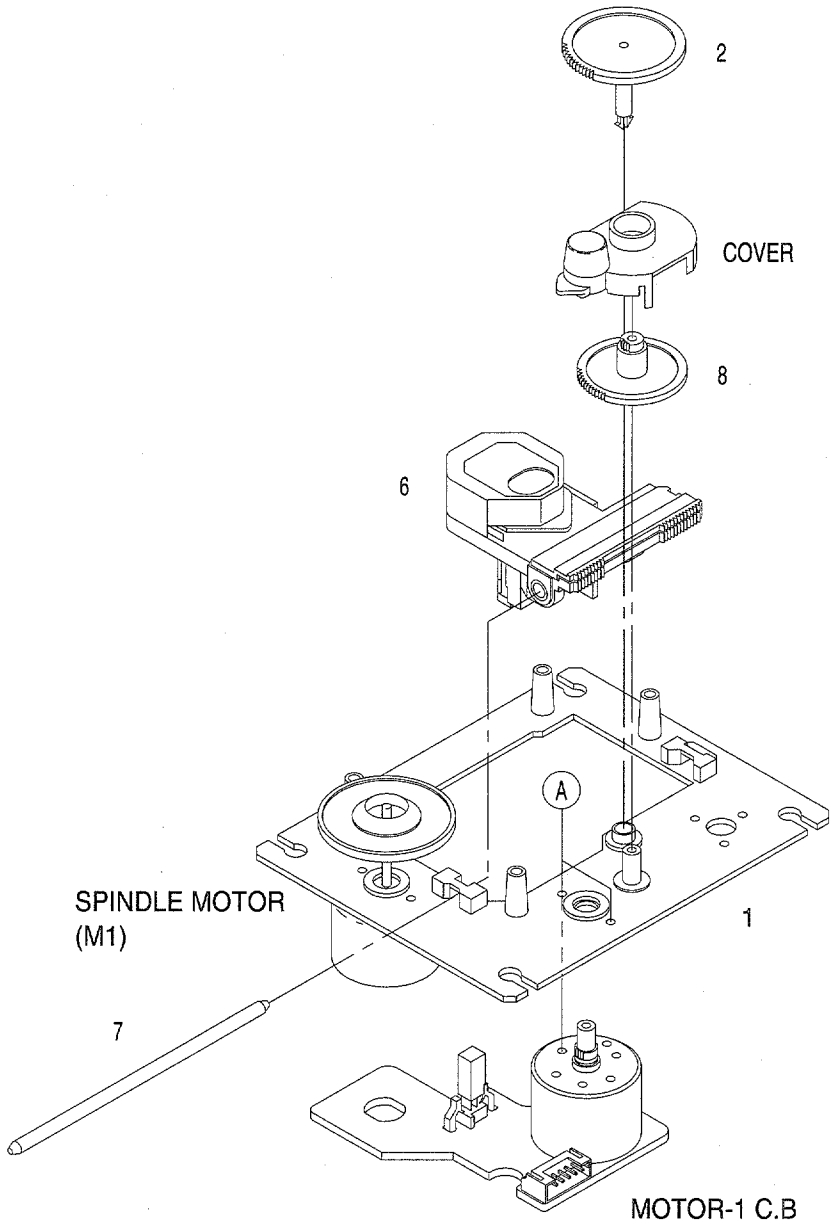


TAPE MECHANISM PARTS LIST 2/2

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	S1-921-030-4A0		HEAD BASE
2	S1-821-030-070		AZIMUTH SPRING
3	S1-921-030-030		PANEL P SPRING
4	S1-921-260-050		GEAR PLATE SPRING
5	S1-921-265-020		GEAR PLATE ASSY
6	S1-921-140-370		P ARM COLLER
7	S1-921-140-340		P ARM
8	S1-921-030-110		HEAD PANEL
9	S1-921-143-010		BASE ASSY
10	S1-921-141-8A0		M CONTROL SPRING
11	S1-921-260-4A0		SENSING LEVER
12	S1-921-043-090		PINCH ROLLER ARM ASSY
13	S1-921-130-020		EJECT SLIDE LEVER
14	S1-921-141-3A0		P CONTROL SPRING
15	S1-921-140-820		PAUSE LEVER(F)
16	S1-921-140-120		PAUSE LEVER SPRING
17	S1-921-140-110		PAUSE STOPPER
18	S1-921-140-150		BUTTON LEVER SPRING(B)
19	S1-821-011-590		E KICK LEVER
20	S1-921-140-140		BUTTON LEVER SPRING(A)
21	S1-921-140-200		PR STOPPER
22	S1-921-140-090		SWITCH ACTUATOR
23	S1-921-140-080		PUSH BUTTON ACTUATOR
24	S1-921-140-230		PLAY BUTTON LEVER
25	S1-821-120-020		MOTOR COLLER SCREW
26	S1-921-140-240		REW BUTTON LEVER
27	S1-921-140-250		FF BUTTON LEVER
28	S1-921-140-260		STOP BUTTON LEVER
29	S1-921-140-610		PAUSE BUTTON LEVER
30	S1-821-100-700		FF GEAR
31	S1-921-050-060		SENSER
32	S1-921-053-030		TAKE UP REEL ASSY
33	S1-829-100-010		PACK SPRING
34	S1-921-053-040		SUPPLY REEL ASSY
35	S1-829-100-100		BACK TENSION SPRING
36	S1-821-120-650		COLLER B
37	S1-921-140-170		P.S.LEVER SPRING
38	S1-921-073-080		RF CLUTCH ASSY
39	S1-921-070-030		RF BELT
40	S1-921-260-020		CAM GEAR
41	S1-921-140-160		E ACTUATOR SPRING
42	S1-921-093-040		FLYWHEEL ASSY
43	S1-921-090-240		MAIN BELT
44	S1-820-130-060		MOTOR RUBBER
45	S1-921-120-130		MOTOR PULLEY
46	S1-921-120-120		ANTI VIBR FELT MAT
47	S1-821-120-680		P KICK LEVER (A)
48	S1-821-120-230		PK COLLER SCREW A
49	S1-821-120-250		P KICK LEVER SPRING
50	S1-921-120-110		MOTOR BRACKET
51	S1-921-120-090		P KICK LEVER
52	S6-201-011-110		HEAD,RP7442ES-0951
53	S6-401-011-520		LEAF SW MSW-1541F
54	S6-401-011-610		LEAF SW MSW-17820MVE1
55	S6-002-030-290		MOTOR EG530YD-2BH
56	S1-921-015-010		CHASSIS ASSY
57	S1-821-010-500		PLAY BUTTON LEVER SPRING
A	S9-P33-200-320		DEL TITE SCREW M2-3
B	S9-180-000-000		C TAP SCREW M2-4
C	S9-679-000-000		P TAP SCREW M2-5
D	S9-999-180-090		TAP SCREW M2-4.5
E	S9-004-000-000		SCREW M2-6
F	S9-P01-200-310		SCREW,M2-3
G	S9-922-000-000		AZIMUTH SCREW M2-8
H	S9-182-000-000		C TAP SCREW M2-6
I	S9-422-000-000		P WASHER CUT 12-3.8-0.3
J	S9-999-030-130		P WASHER CUT 1.45-3.8
K	S9-882-000-000		P WASHER 2-3.5-0.4
L	S9-999-000-030		P WASHER2.1-4-0.13
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	
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G— —	
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Printed in Singapore