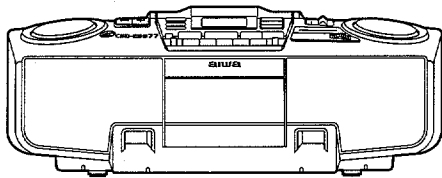


aiwa



CSD-ES577 CSD-ES777



COMPACT DISC STEREO
RADIO CASSETTE RECORDER

- BASIC TAPE MECHANISM : TN21ZVC-1816
- BASIC CD MECHANISM : KSM-213CDM

• TYPE : EZ,K

REVISION PUBLISHING

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual", CSD-ES577<K>, (S/M Code No. 09-993-407-4T1), CSD-ES577/777<EZ>, (S/M Code No. 09-994-407-4T2) and CSD-ES777<K>, (S/M Code No. 09-995-407-4T3).

S/M Code No. 09-996-407-4R2

MANUAL
SERVICE

SPECIFICATIONS

<Tuner section>

Frequency range

FM :	87.5 MHz - 108.0 MHz Antenna : Rod antenna
MW :	530 kHz - 1,605kHz Antenna : Ferrite bar antenna
LW :	150 kHz - 285 kHz Antenna : Ferrite bar antenna

<Deck section>

Track format

4 tracks, 2 channels

Frequency range

Normal tape : 50 Hz-12,500 Hz
(EIAJ)

Recording system

AC bias

Erasing system

Magnet erase

Heads

Recording/Playback head x 1/
erasure head x 1

<CD player section>

Disc

Compact disc

Scanning method

Non-contact optical scanner
(semiconductor laser)

<General>

Speaker

100 mm cone type (2)
36 mm cone type (2)

Output

Headphones jack (stereo mini- jack)

Power output

577EZ,777EZ :
5.0 W + 5.0 W (DIN MUSIC
POWER)
4.5 W + 4.5 W (EIAJ 3.2 ohms DC)
3.3 W + 3.3 W (DIN 1% Rated
Power)

Power requirements

DC 12 V using eight R14 (size
C) batteries,
AC 230 V,50 Hz

Power consumption

27 W

Dimensions (W x H x D)

500(W) x 196 (H) x 290 (D) mm

Weight

4.6 kg
(excluding batteries)

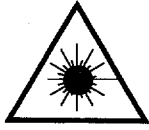
• Design and specifications are subject to change without notice.

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 ylittävälle näkymättömälle lasersäteilylle.

WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstråling, 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

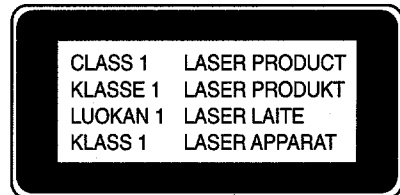
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

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.

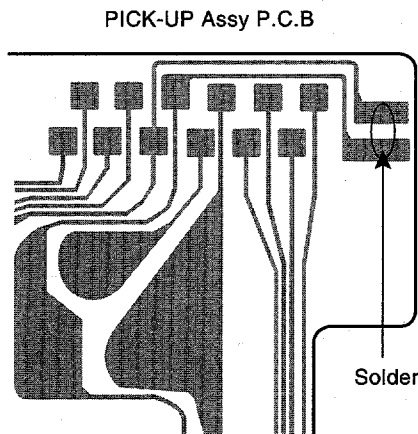


Precaution to replace Optical block

(KSS - 213C)

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 right figure.



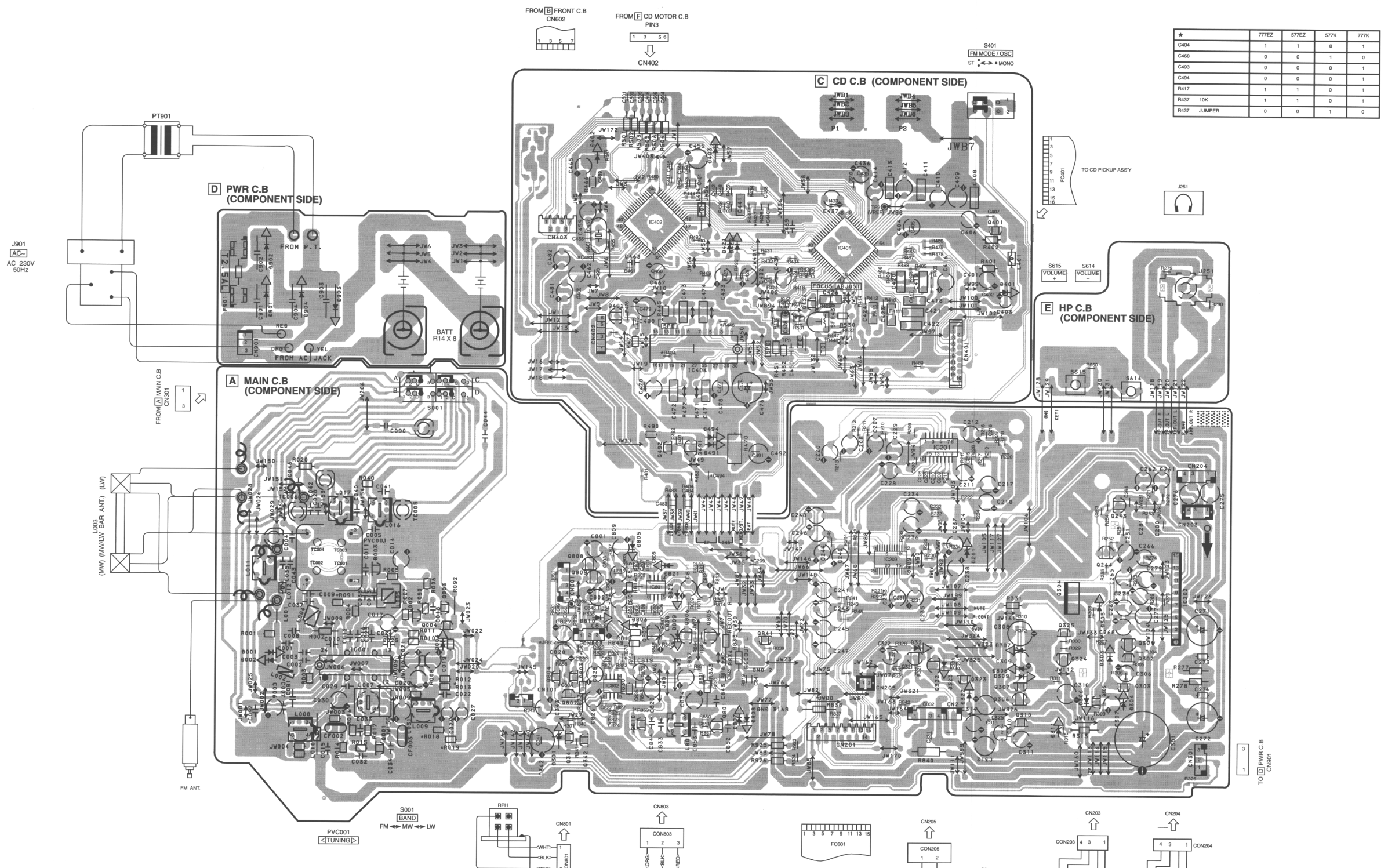
ELECTRICAL MAIN PARTS LIST

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				C28	87-018-208-080		CAP 0.047-50F
	87-A20-955-010	IC,LA1828		C29	87-018-208-080		CAP 0.047-50F
	87-A20-946-040	C-IC,MM1434XF		C30	87-010-260-080		CAP, ELECT 47-25V
	87-A20-591-010	IC,BA5417		C030	87-010-248-080		CAP, ELECT 220-10V
	87-A21-111-040	C-IC,M62495FP		C31	87-010-379-080		CAP, ELECT 22-16V
	87-070-416-010	IC,NJU7201 L55		C32	87-018-134-080		CAP, TC U 0.01-16
				C33	87-018-134-080		CAP, TC U 0.01-16
	87-A20-446-010	C-IC,LA9241ML		C34	87-018-134-080		CAP, TC U 0.01-16
	87-A20-459-010	C-IC,LC78622ED		C37	87-018-122-080		CAP 180P-50 B
	87-A21-093-010	IC,LA6541D		C38	87-A11-086-080		CAP,TC U 82P-50 J CH
	8Z-CD5-636-010	IC,LC865508A-5K51<EXP 777K>		C41	87-A11-080-080		CAP,TC U 47P-50 J CH
	8Z-CDB-650-010	IC,LC865516A-5L26<777K>		C44	87-018-123-080		CAP,CER 220P-50V<EXP 577K>
	87-A21-245-010	IC,RPM6938-V4<777EZ,577EZ>		C44	87-018-124-080		CAP,CER 270P-50V<577K>
	87-A21-145-040	C-IC,BA4560F-E2		C91	87-018-134-080		CAP,TC U 0.01-16
				C92	87-A11-073-080		CAP,TC U 22P-50J CH<777K>
TRANSISTOR				C207	87-010-408-080		CAP, ELECT 47-50V
	89-319-233-080	TR,2SC1923 (0.1W)		C208	87-010-402-080		CAP, ELECT 2.2-50V
	87-026-572-080	TR,DTA114TS		C209	87-010-190-080		C-CAP,S 0.01-50 Z F
	87-026-215-080	TR,DTC114YS		C210	87-010-190-080		C-CAP,S 0.01-50 Z F
	89-320-011-010	TR,2SC2001 (0.6W)		C211	87-010-401-080		CAP, ELECT 1-50V
	89-112-965-010	TR,2SA1296GR		C212	87-010-401-080		CAP, ELECT 1-50V
				C215	87-010-425-080		C-CAP,S 0.22-25 Z F
	87-026-463-010	TR,2SA933S,RS		C216	87-010-425-080		C-CAP,S 0.22-25 Z F
	87-026-291-010	TR,DTC124XS		C217	87-010-400-080		CAP, ELECT 0.47-50V
	87-A30-226-010	TR,2SB1655E		C218	87-010-400-080		CAP, ELECT 0.47-50V
	87-026-462-010	TR,2SC1740S		C220	87-010-405-080		CAP, ELECT 10-50V
	89-318-154-080	TR,2SC1815Y		C222	87-010-190-080		C-CAP,S 0.01-50 Z F
				C223	87-010-190-080		C-CAP,S 0.01-50 Z F
	89-113-184-080	TR,2SA1318T		C226	87-010-190-080		C-CAP,S 0.01-50 Z F
	87-A30-216-080	TR,2SA933AS(R)		C228	87-010-401-080		CAP, ELECT 1-50V
	87-026-464-010	TR,DTC114TS		C229	87-010-401-080		CAP, ELECT 1-50V
	89-110-150-010	TR,2SA1015		C231	87-010-213-080		C-CAP,S 0.015-50 B
	89-318-155-010	TR,2SC1815(GR)		C232	87-010-213-080		C-CAP,S 0.015-50 B
	87-026-496-080	FET,2SJ103GR		C233	87-010-546-080		CAP, ELECT 0.33-50V
	S8-CL5-624-010	TR,2SB1010Q<777K>		C234	87-010-546-080		CAP, ELECT 0.33-50V
	89-109-521-080	TR,2SA952(0.6W)		C235	87-010-544-080		CAP, ELECT 0.1-50V
	87-026-239-010	C-TR,DTC114TK		C236	87-010-544-080		CAP, ELECT 0.1-50V
				C237	87-010-260-080		CAP, ELECT 47-25V
DIODE				C238	87-010-263-080		CAP, ELECT 100-10V
	87-020-465-080	DIODE,1SS133 (110MA)		C241	87-010-405-080		CAP, ELECT 10-50V
	87-A40-226-080	VARI-CAP,SVC251SPA		C242	87-010-405-080		CAP, ELECT 10-50V
	87-A40-441-080	ZENER,MTZJ7.5B		C243	87-010-405-080		CAP, ELECT 10-50V
	87-A40-466-080	ZENER,MTZJ2.7A		C244	87-010-405-080		CAP, ELECT 10-50V
	87-017-437-080	DIODE,1N4148M		C245	87-010-405-080		CAP, ELECT 10-50V
				C246	87-010-405-080		CAP, ELECT 10-50V
	87-A40-648-080	ZENER,MTZJ8.2A		C247	87-010-404-080		CAP, ELECT 4.7-50V
	87-A40-234-080	ZENER,MTZJ5.6A		C248	87-010-404-080		CAP, ELECT 4.7-50V
	87-017-139-010	ZENER,HZS15-2		C251	87-010-401-080		CAP, ELECT 1-50V
	87-A40-465-010	DIODE,FR202		C261	87-010-402-080		CAP, ELECT 2.2-50V
				C262	87-010-402-080		CAP, ELECT 2.2-50V
MAIN C.B				C263	87-010-178-080		CHIP CAP 1000P
C1	87-A11-073-080	CAP,TC U 22P-50 J CH		C264	87-010-178-080		CHIP CAP 1000P
C2	87-A11-076-080	CAP,TC U 33P-50 J CH		C265	87-010-383-080		CAP, ELECT 33-25V
C3	87-A11-073-080	CAP,TC U 22P-50 J CH		C266	87-010-383-080		CAP, ELECT 33-25V
C6	87-010-378-080	CAP, ELECT 10-16V		C267	87-010-380-080		CAP, ELECT 47-16V
C7	87-018-208-080	CAP 0.047-50F		C268	87-010-380-080		CAP, ELECT 47-16V
				C271	87-010-236-010		CAP,ELECT 1000-10
C8	87-018-132-080	CAP, CER 2200P-16V		C272	87-010-236-010		CAP,ELECT 1000-10
C9	87-018-161-080	TC CAP 12P		C275	87-010-403-080		CAP,ELECT 3.3-50V
C10	87-018-134-080	CAP, TC U 0.01-16		C276	87-010-403-080		CAP,ELECT 3.3-50V
C12	87-A11-073-080	CAP,TC U 22P-50 J CH		C277	87-010-260-080		CAP, ELECT 47-25V
C15	87-018-134-080	CAP, TC U 0.01-16		C278	87-010-263-080		CAP, ELECT 100-10V
				C279	87-010-112-080		CAP, ELECT 100-16V
C16	87-018-131-080	CAP, CER 1000P-50V		C280	87-010-956-080		C-CAP,S 0.068-50
C17	87-010-544-080	CAP, ELECT 0.1-50V		C281	87-010-956-080		C-CAP,S 0.068-50
C18	87-018-205-080	CAP, CERA-SOL 0.022		C299	87-010-190-080		S CHIP F 0.01<777K>
C19	87-010-544-080	CAP, ELECT 0.1-50V		C301	87-010-453-010		CAP, ELECT 4700-25V
C21	87-010-403-080	CAP, ELECT 3.3-50V		C306	87-010-404-080		CAP, ELECT 4.7-50V
				C307	87-010-401-080		CAP, ELECT 1-50V
C22	87-018-134-080	CAP,TC U 0.01-16		C308	87-010-221-080		CAP, ELECT 470-10V
C24	87-018-134-080	CAPACITOR,TC-U 0.01-16					
C25	87-018-134-080	CAPACITOR,TC-U 0.01-16					
C26	87-010-545-080	CAP, ELECT 0.22-50V					
C27	87-010-545-080	CAP, ELECT 0.22-50V					

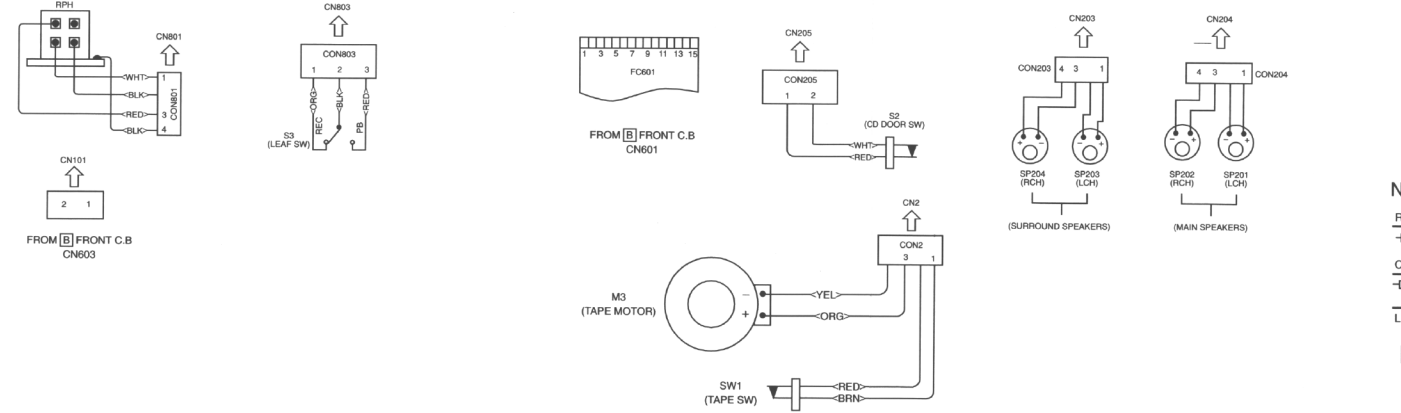
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

A
B
C
D
E
F
G
H
I
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K
L
M
N

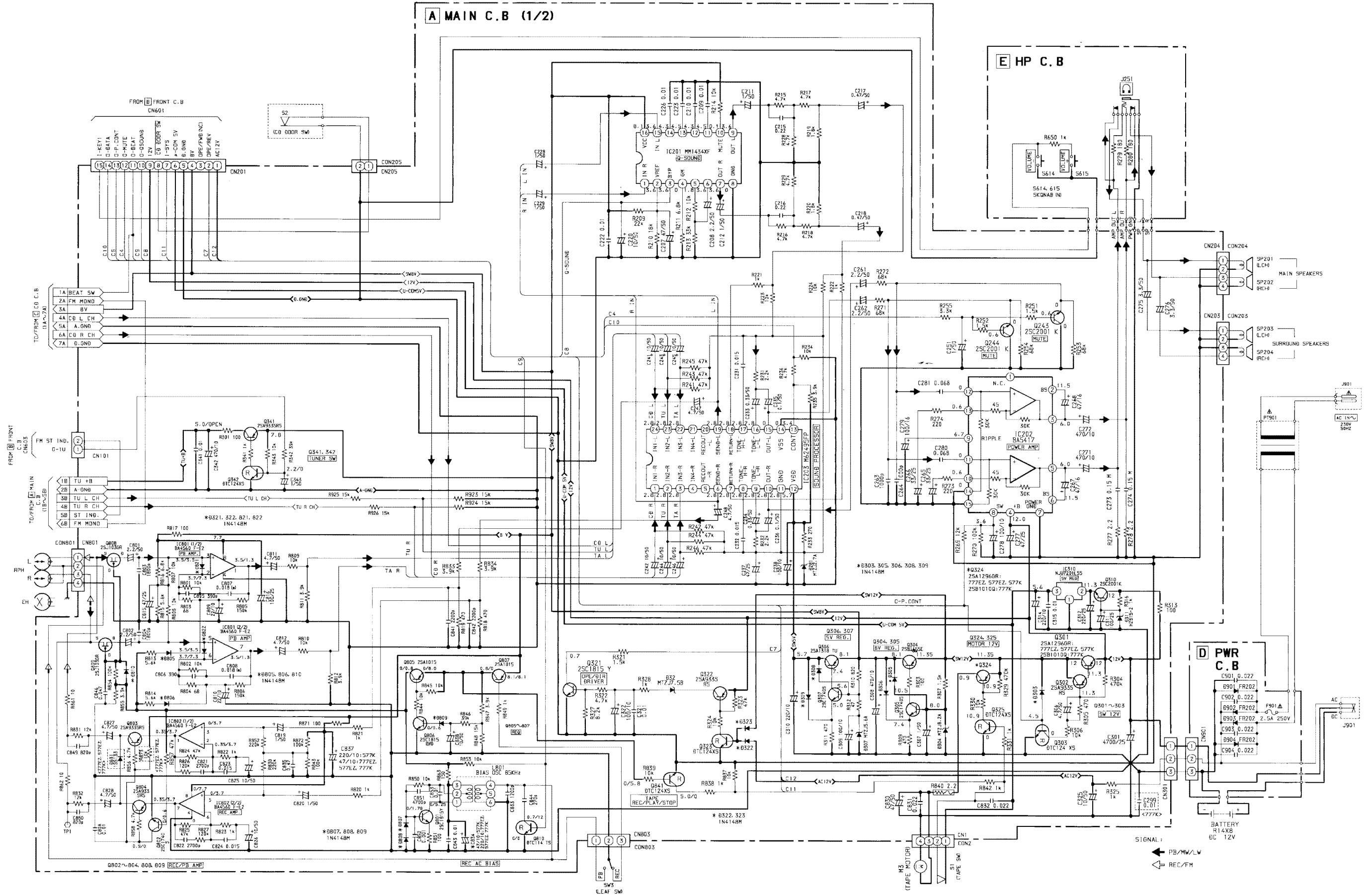


*	777EZ	577EZ	577K	777K
C404	1	1	0	1
C408	0	0	1	0
C493	0	0	0	1
C494	0	0	0	1
R417	1	1	0	1
R437 10K	1	1	0	1
R437 JAMPER	0	0	1	0

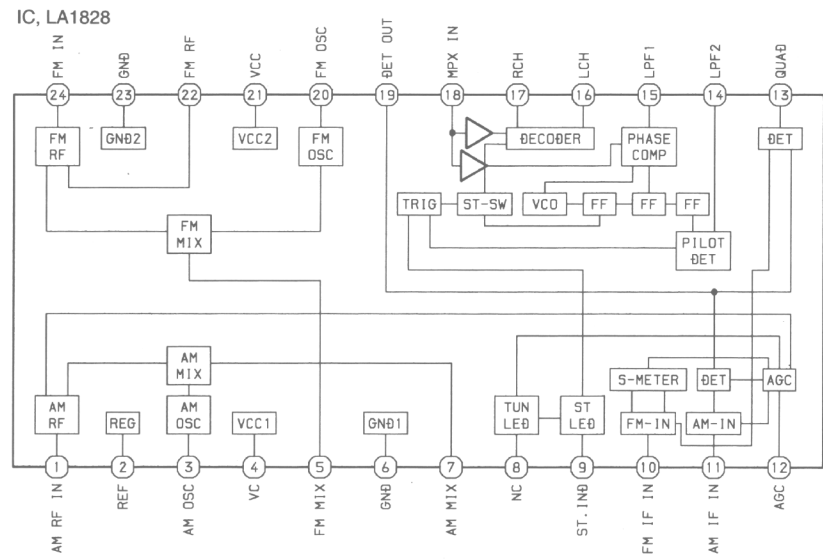
*	777EZ	577EZ	577K	777K
C092	0	0	0	1
C099	0	0	0	1
D031	1	1	0	1
R013	1	1	0	1
R018	0	0	0	1
R019	0	0	0	1
R091	1	1	0	1
R093	1	1	0	1
R073	1	1	0	1
R078	1	1	0	1
JR052	1	1	0	1



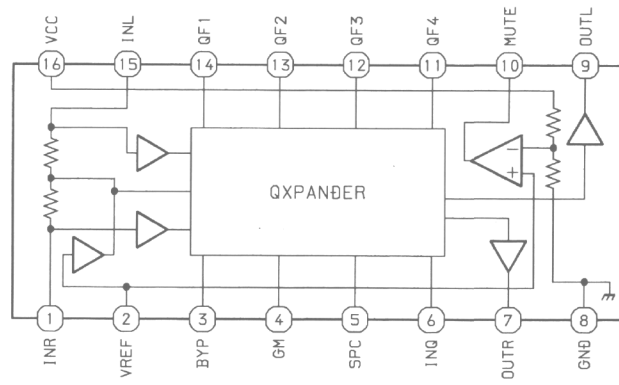
NOTE
 RXXX = [Resistor symbol]
 CXXX = [Capacitor symbol]
 LXXX = [Inductor symbol]
 [Speaker symbol] = [Speaker symbol]
 [Speaker symbol] = [Speaker symbol]



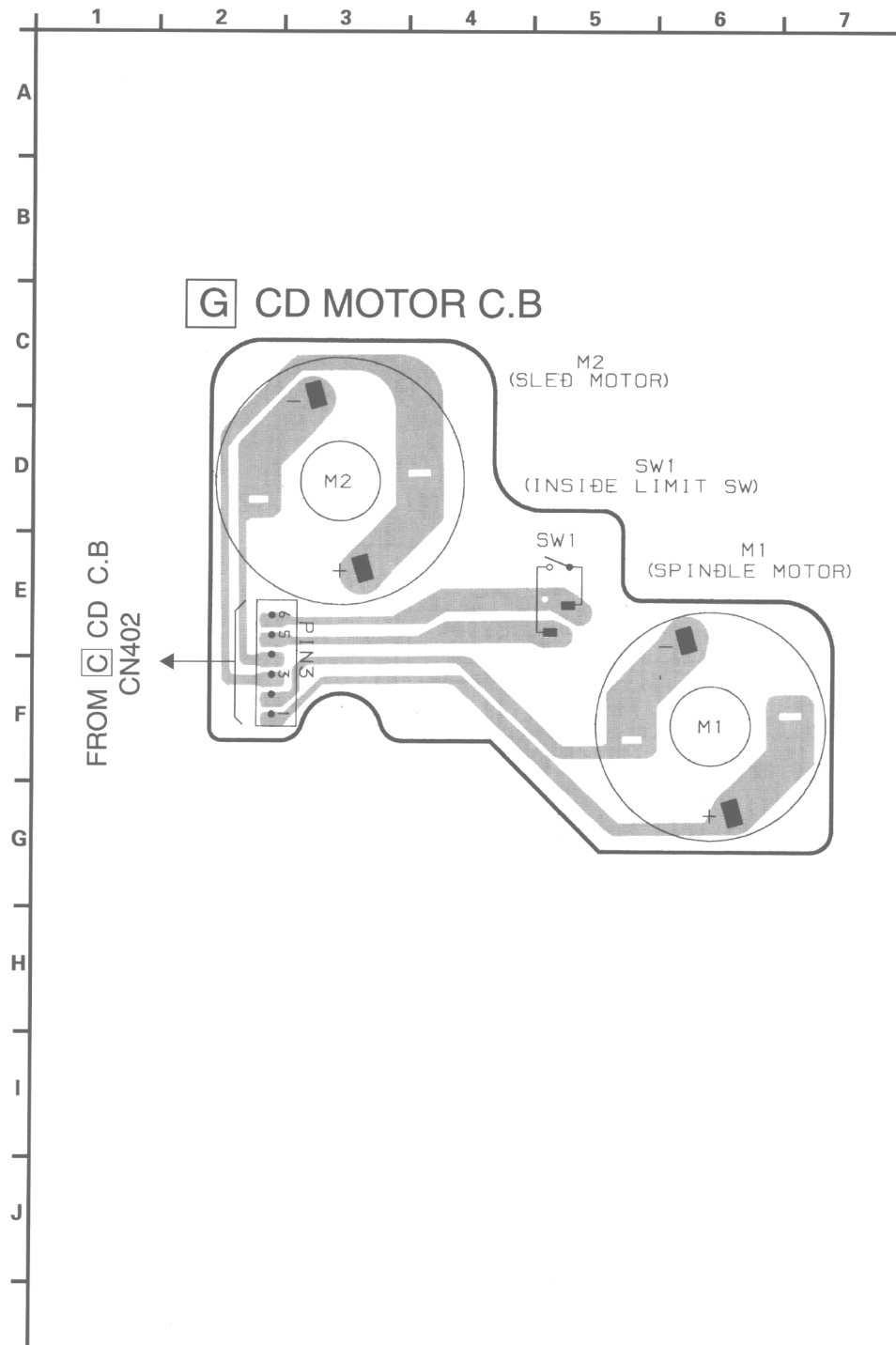
IC BLOCK DIAGRAM - 2



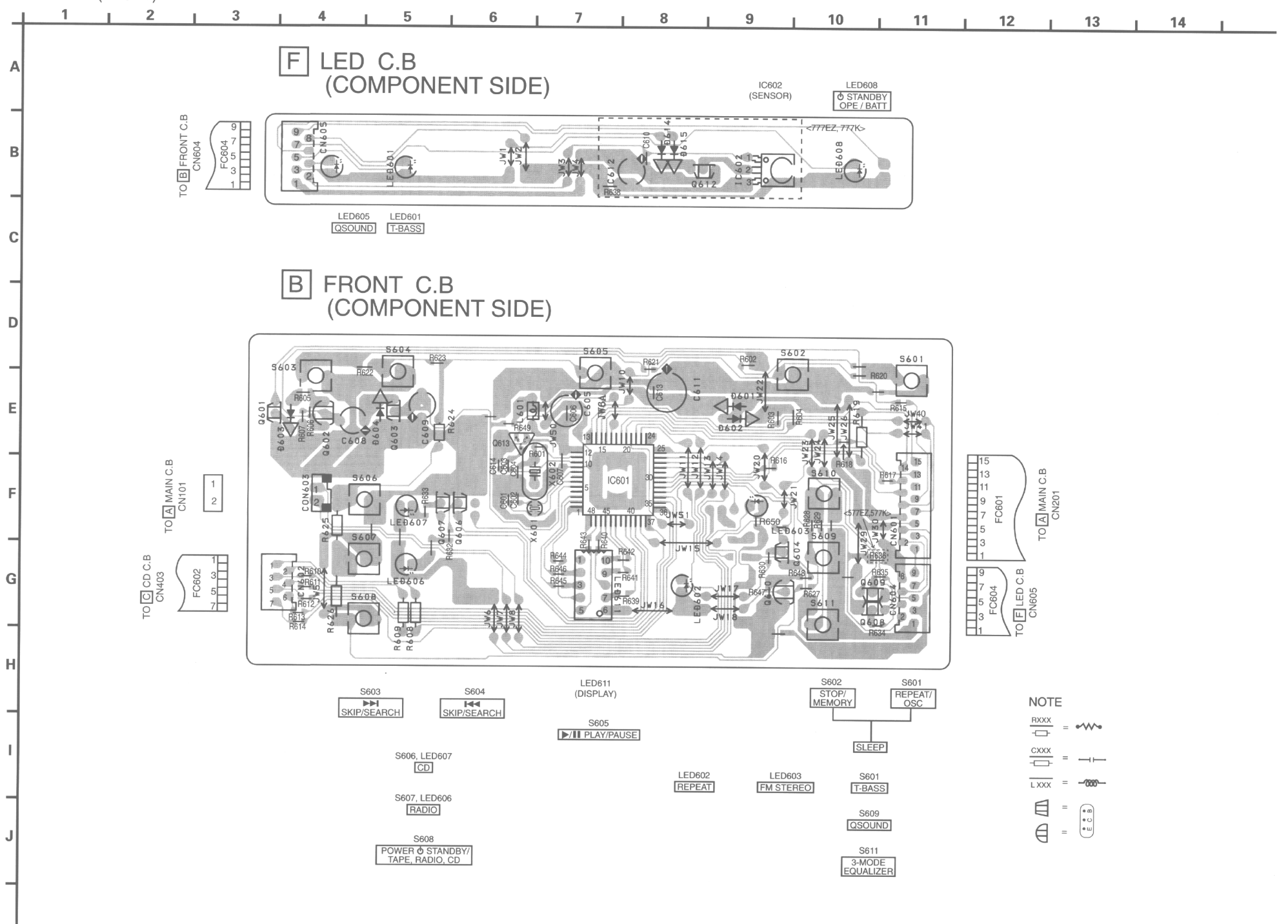
IC, MM1434XF



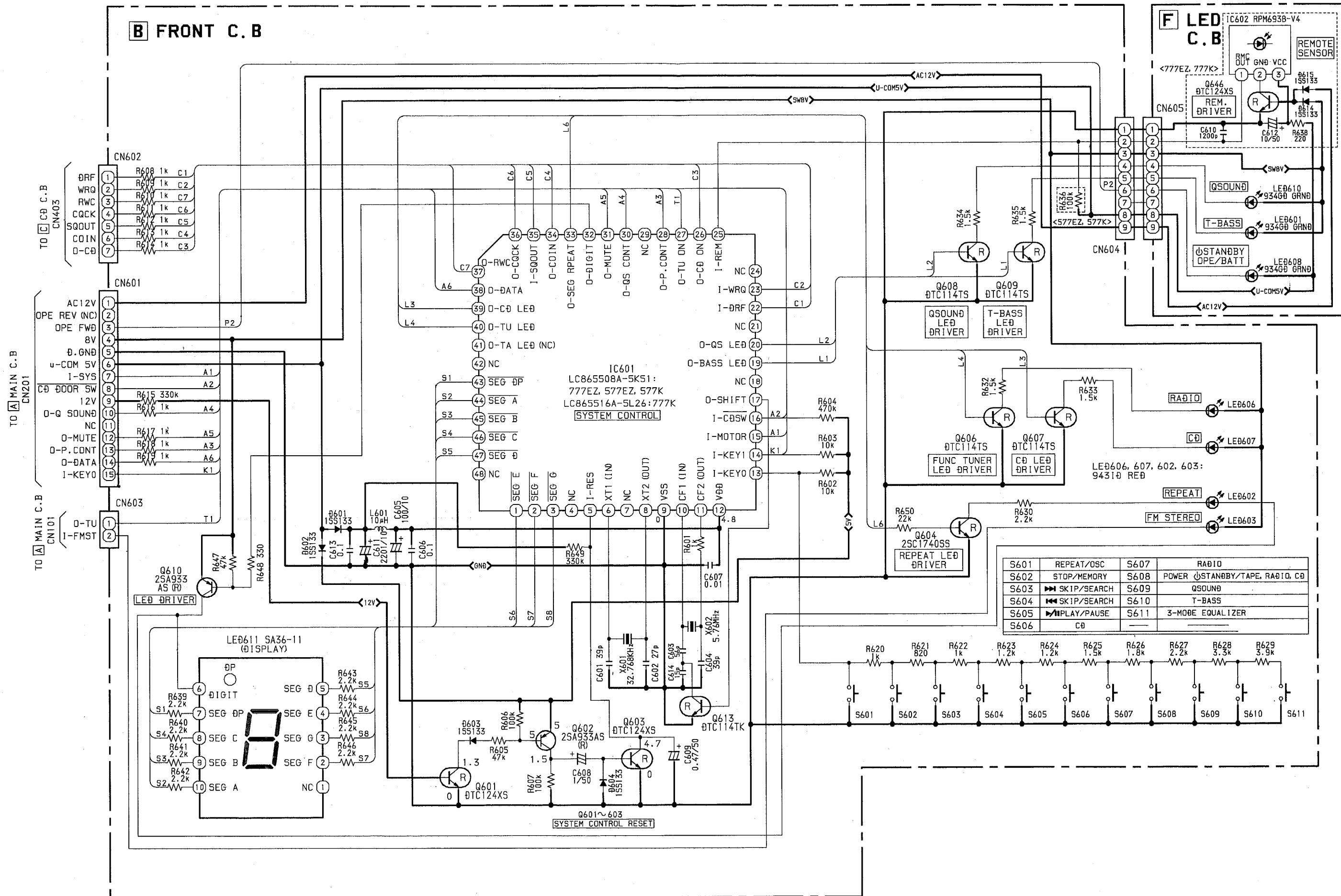
WIRING - 2 (CD MOTOR)

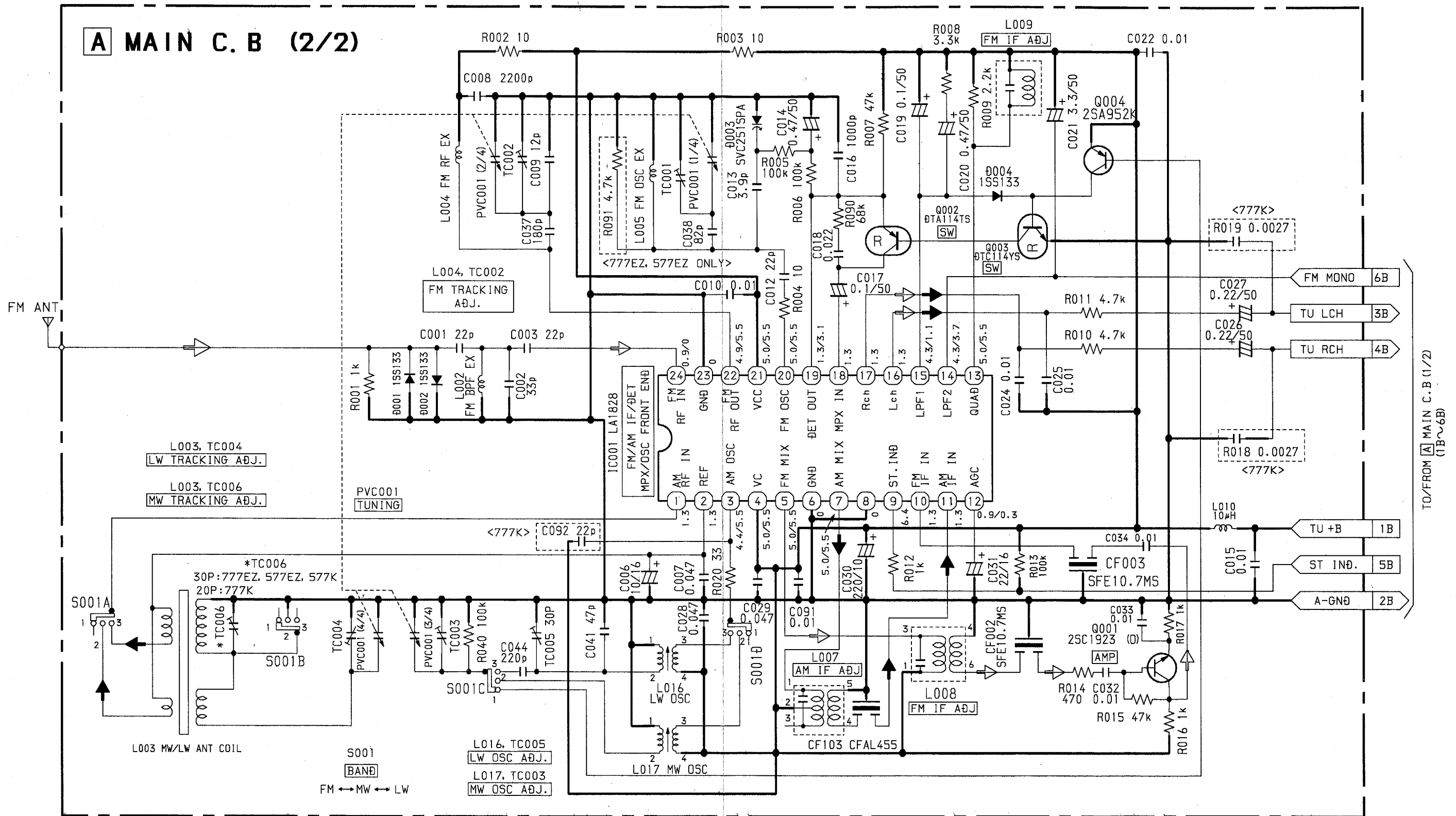


WIRING - 3 (FRONT)



SCHEMATIC DIAGRAM - 2 (FRONT)

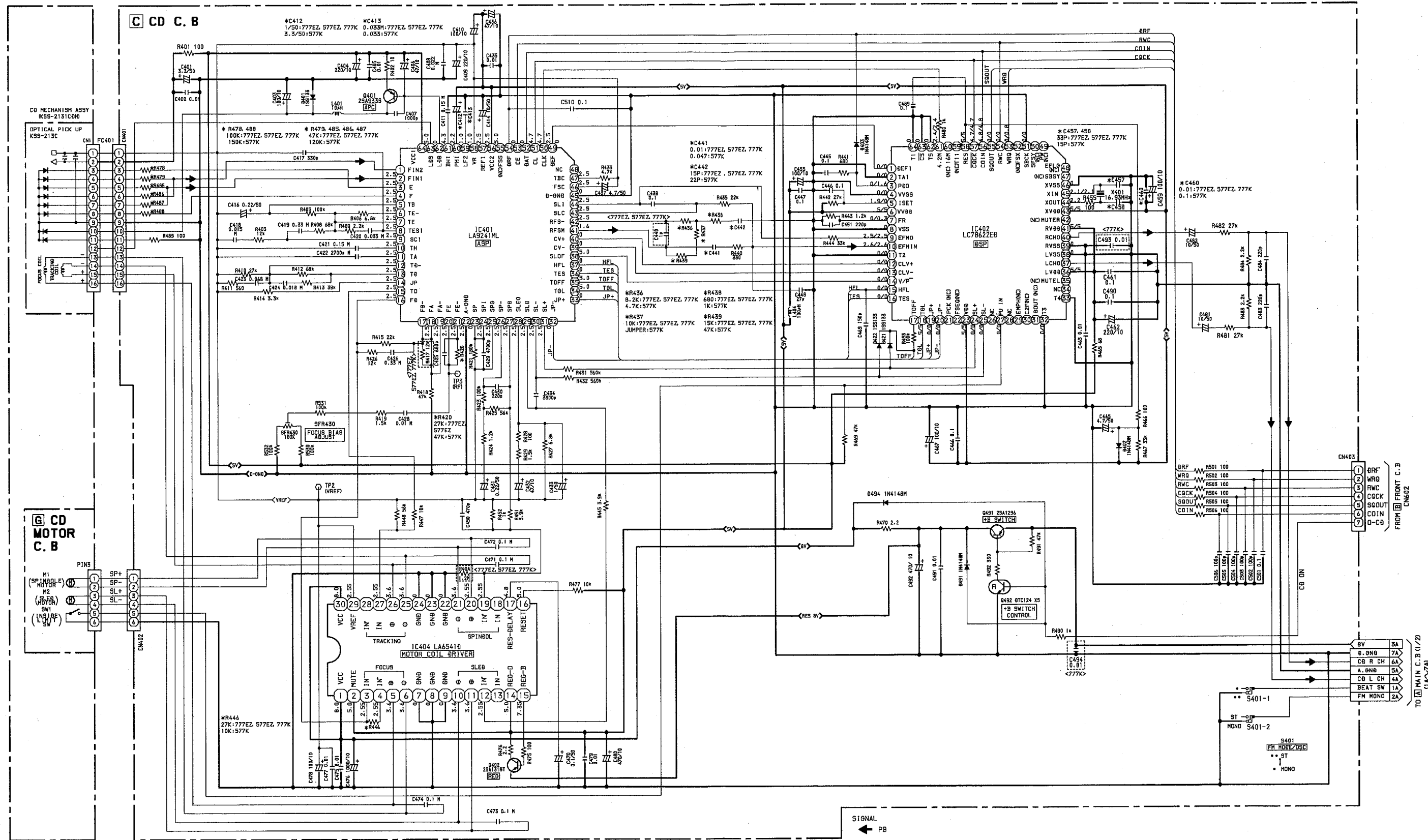




VOLTAGE:
FM / MW / LW

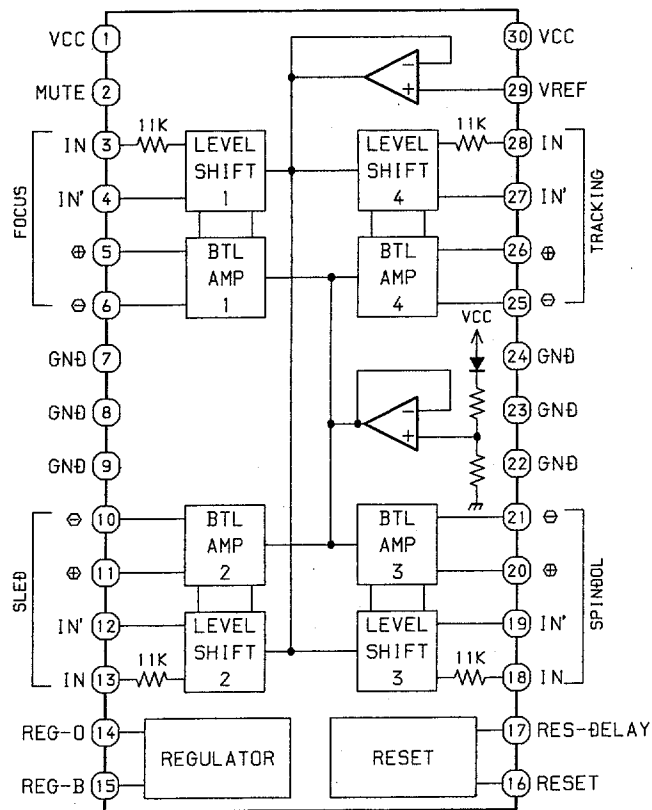
SIGNAL:
← MW/LW
← FM

TO/FROM MAIN C.B. (1/2)
(1B~6B)

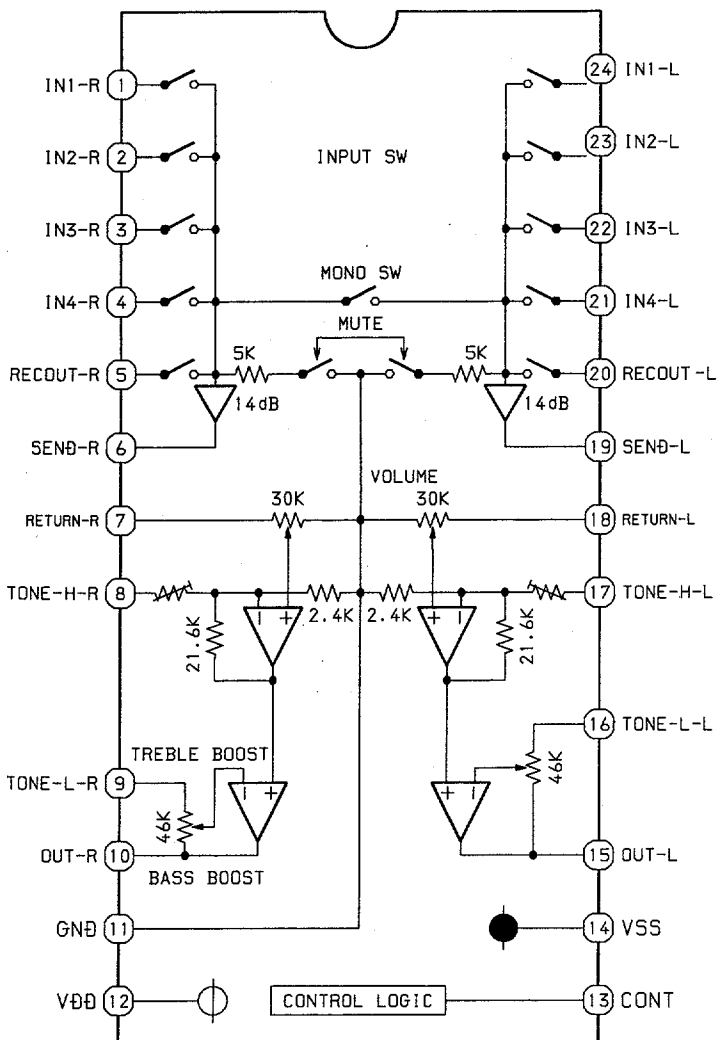


IC BLOCK DIAGRAM - 2

IC, LA6541D



IC, M62495FP



IC DESCRIPTION

IC, LC78622ED

Pin No.	Pin Name	I/O	Description
1	DEFI	I	Defect detection signal (DEF) input. ("L" is applied when not used.)
2	TAI	I	For PLL/Test input. A pull-down resistor is incorporated.
3	PDO	O	Phase comparison output to control the external VCO.
4	VVSS	-	Ground of the built-in VCO. Normally, 0V.
5	ISSET	I	For the connection of a resistor which adjusts the PDO output current.
6	VVDD	-	Power supply of the built-in VCO.
7	FR	I	Adjusts the VCO frequency range.
8	VSS	-	Ground of digital circuits. Normally, 0V.
9	EFMO	O	For slice level control/EFM signal output.
10	EFMIN	I	EFM signal input.
11	T2	I	Test input. A pull-down resistor is incorporated. Be sure to connect this to 0V.
12	CLV+	O	Disc motor control tri-state outputs.
13	CLV-		
14	V/P	O	Output to monitor the automatic switching between the rough servo control and phase servo control. "H" :Rough servo, "L": Phase servo.
15	HFL	I	Track detection signal input. Schmitt trigger input.
16	TES	I	Track error signal input. Schmitt trigger input.
17	TOFF	O	Tracking off output.
18	TGL	O	Tracking gain switching output. "L" raises the gain.
19	JP+	O	Track jump control tri-state outputs.
20	JP-		
21	PCK(NC)	O	Monitors the clock signal for EFM data playback.4.3218MHz when the phase is locked.
22	FSEQ(NC)	O	Sync signal detection output. Goes "H" when the sync signal detected from the EFM signal matches the sync signal generated internally. (Not connected.)
23	VDD	-	Power supply of digital circuits.
24	SL+	O	Serial data command sled signal.
25	SL-	O	Output terminal from microprocessor.
26	NC	-	Not connected.
27	PU IN	I/O	CD pickup inside limit switch.
28	NC	-	Not connected.
29	EMPH(NC)	O	Deemphasis monitor. "H": when playing a deemphasis disc. (Not connected)
30	C2F(NC)	O	C2 flag output. (Not connected)
31	DOUT(NC)	O	Outputs a digital OUT signal. (EIAJ format) (Not connected)
32	T3	I	Test input. A pull-down resistor is incorporated. Be sure to connect this to 0V.
33	T4		
34	NC	-	Not used. Set to open.
35	MUTEL(NC)	O	Lch 1-bit DAC/Lch muting output. (Not connected)
36	LVDD	-	Lch power supply.
37	LCHO	O	Lch output.
38	LVSS	-	Lch ground. Normally, 0V.
39	RVSS	-	Rch 1-bit DAC/Rch ground. Normally, 0V.

Pin No.	Pin Name	I/O	Description
40	RCHO	O	Rch output.
41	RVDD	-	Rch power supply.
42	MUTER(NC)	O	Rch muting output. (Not connected)
43	XVDD	-	Power supply of crystal oscillator.
44	XOUT	O	For the connection of a 16.93MHz crystal oscillator.
45	XIN	I	
46	XVSS	-	Ground of crystal oscillator. Normally, 0V.
47	SBSY(NC)	O	Subcode block sync signal output. (Not connected)
48	EFLG(NC)	O	C1,C2,single,duplex correction monitor. (Not connected)
49	PW(NC)	O	Output of subcodes P,Q,R,S,T,U and W. (Not connected)
50	SFSY(NC)	O	Subcode frame sync signal output. Falls when the subcode is set to the standby state.(No connected)
51	SBCK	I	Subcode read-out clock input. Schmitt trigger input.("L" is applied when not used.)
52	FSX(NC)	O	7.35 kHz sync signal output obtained by dividing the oscillator frequency. (Not connected)
53	WRQ	O	Subcode Q standby output.
54	RWC	I	Read/write control input. Schmitt trigger input.
55	SQOUT	O	Subcode Q output.
56	COIN	I	Command input from the microprocessor.
57	$\overline{\text{CQCK}}$	I	Command input retrieval clock or subcode retrieval clock input from SQOUT. Schmitt trigger input.
58	RES	I	LC78622 reset input. Set to "L" when power is supplied.
59	T11	O	Test output. Set to open (normally, "L" output.) (Not connected)
60	16M(NC)	O	16.93MHz output. (Not connected.)
61	4.2M	O	4.236 MHz output.
62	T5	I	Test input. A pull-down resistor is incorporated. Be sure to connect to 0 V.
63	$\overline{\text{CS}}$	I	Chip select input. A pull-down resistor is incorporated.
64	T1	I	Test input with no pull-down resistor. Be sure to connect this to 0 V.

IC, LA9241ML

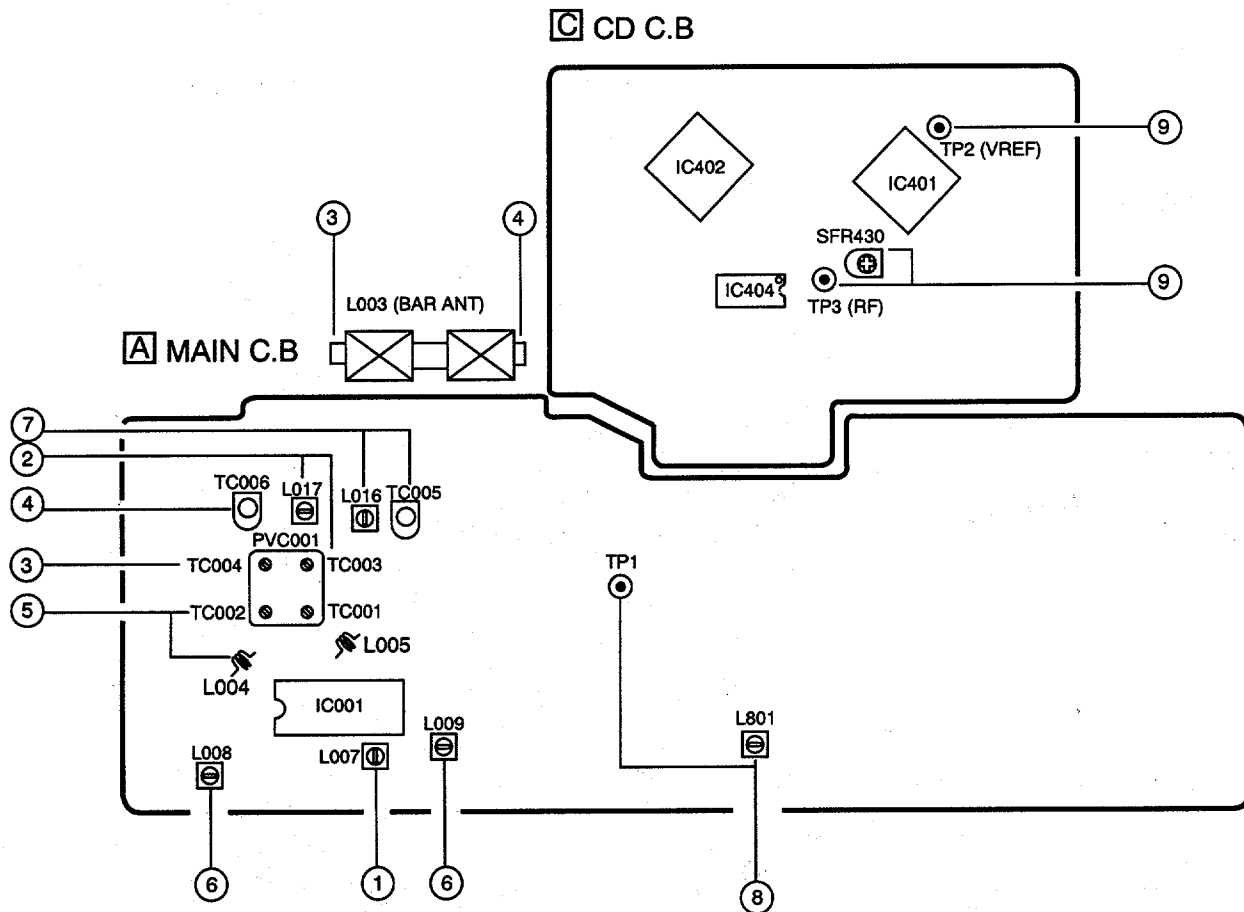
Pin No.	Pin Name	I/O	Description
1	FIN2	O	For the connection of the pickup photodiode. Addition to the FIN1 pin creates an RF signal and subtraction from it create an EF signal.
2	FIN1	O	For the connection of the pickup photodiode.
3	E	O	For the connection of the pickup photodiode. Subtraction from the F pin creates a TE signal.
4	F	O	For the connection of the pickup photodiode.
5	TB	I	Inputs the DC components in the TE signal.
6	TE-	O	For the connection of a resistor which sets the gain of the TE signal between this pin and the TE pin.
7	TE	O	TE signal output.
8	TESI	I	TES (track error sense) comparator input. The TE signal is passed through a BPF.
9	SCI	I	Shock detection input.
10	TH	I	Sets the time constant for the tracking gain.
11	TA	O	TA amp output.
12	TD-	I	Composes the tracking phase compensation constant between the TD and VR pins.
13	TD	O	Sets the tracking phase compensation.
14	JP	I	Sets the amplitude of the tracking jump signal (kick pulses).
15	TO	O	Tracking control signal output.
16	FD	O	Focusing control signal output.
17	FD-	I	Composes the focusing phase compensation constant between the FD and FA pins.
18	FA	O	Composes the focusing phase compensation constant between the FD- and FA- pins.
19	FA-	I	Composes the focusing phase compensation constant between the FA and FE pins.
20	FE	O	FE signal output.
21	FE-	I	For the connection of a resistor which sets the gain of the FE signal between this pin and the TE pin.
22	A-GND	O	Ground of analog signals.
23	SP	O	Single-ended output of the signals input to the CV+ and CV- pins.
24	SPI	I	Spindle amp input.
25	SPG	I	For the connection of a resistor which sets the gain in the spindle 12cm mode.
26	SP-	I	For the connection of the spindle phase compensation constant with the SPD pin.
27	SPD	O	Spindle control signal output.
28	SLEQ	I	For the connection of sled phase compensation constant.
29	SLD	O	Sled control signal output.
30	SL-	I	Sled feed signal input from the microprocessor.
31	SL+		
32	JP-	I	Tracking signal input from the DSP.
33	JP+		
34	TGL	I	Tracking gain control signal input from the DSP. Low gain when TGL is "H".
35	TOFF	I	Tracking off control signal input from the DSP. Off when TOFF is "H".
36	TES	O	Outputs the TES signal to the DSP.

Pin No.	Pin Name	I/O	Description
37	HFL	O	The HFL (high frequency level) signal is used to judge whether the main beam is positioned on the pit or on the mirror.
38	SLOF	I	Sled servo off control input.
39	CV-	I	CLV error signal input from the DSP.
40	CV+		
41	RFSM	O	RF output.
42	RFS-	O	Sets the RF gain and the EFM signal's 3T compensation constant together with the RFSM pin.
43	SLC	O	The SLC (slice level control) signal is output to control the DSP's data slice level of the RF waveform.
44	SL1	I	Input to control the DSP's data slice level.
45	D-GND	-	Ground of digital signals.
46	FSC	O	Output for the focus search smoothing capacitor.
47	TBC	I	The TBC (tracking balance control) signal sets the EF balance variation range.
48	NC	-	Not connected.
49	DEF	O	Disc defect detection output.
50	CLK	I	Reference clock input. 4.23 MHz is input from the DSP.
51	CL	I	Microprocessor command clock input.
52	DAT	I	Microprocessor command data input.
53	CE	I	Microprocessor chip enable input.
54	DRF	O	DRF (detect RF) is an output to detect the RF level.
55	FSS	I	The FSS (focus search select) signal switches the focus search modes (+/-search / +search with respect to the reference voltage).
56	VCC2	-	VCC of servo and digital circuits.
57	REF1	-	For the connection of bypass capacitor for the reference voltage.
58	VR	O	Reference voltage output.
59	LF2	-	Sets the time constant for disc defect detection.
60	PH1	-	For the connection of a capacitor to hold the RF signal peak.
61	BH1	-	For the connection of a capacitor to hold the RF signal bottom.
62	LDD	O	APC circuit output.
63	LDS	I	APC circuit input.
64	VCC1	-	VCC of RF signal circuits.

IC, LC865508-5K51<577EZ,577K,777EZ>, LC865516A-5L26<777K>

Pin No.	Pin Name	I/O	Description
1~3	SEG E~G	O	LED segment E~G control output.
4	NC	-	Not connected.
5	I-RES	I	Micromputer reset.
6	XT1(IN)	I	Connected to 32.768kHz crystal oscillation.
7	NC	-	Not connected.
8	XT2(OUT)	O	Connected to 32.768kHz crystal oscillation.
9	VSS	-	GND.
10	CF1(IN)	I	Connected to 5.76MHz ceramic filter.
11	CF2(OUT)	O	Connected to 5.76MHz ceramic filter.
12	VDD	-	Power supply for microcomputer (+5V).
13,14	I-KEY0,1	I	Key AD input.
15	I-MOTOR	I	Deck mecha motor status input.
16	I-CDSW	I	CD door switch status detection input.
17	O-SHIFT	O	Clock shift output of the microcomputer.
18	NC	-	Not connected.
19	O-BASS LED	O	BASS LED ON/OFF control output.
20	O-QS LED	O	QS LED ON/OFF control output.
21	NC	-	Not connected.
22	I-DRF	I	CD RF level detection input.
23	I-WRQ	I	CD sub-code Q standby input.
24	NC	-	Not connected.
25	I-REM	I	Remote control input.
26	O-CD ON	O	CD PWR control output.
27	O-TU ON	O	TUNER PWR control output.
28	O-P.CONT	O	Power supply control output.
29	NC	-	Not connected.
30	O-QS CONT	O	Q-SOUND LED ON/OFF control output.
31	O-MUTE	O	Main mute output.
32	O-DIGIT	O	7 segment LED power output.
33	O-SEG REPEAT	O	REPEAT LED ON/OFF control output.
34	O-COIN	O	CD command output.
35	I-SQOUT	I	CD subcode Q input.
36	O-CQCK	O	Clock for CD commands/sub codes.
37	O-RWC	O	CD read/write control output and TU CE.
38	O-DATA	O	Data output to sound processor IC (M62495FP).
39	O-CD LED	O	CD LED ON/OFF control output.
40	O-TU LED	O	TUNER LED ON/OFF control output.
41	O-TA LED	O	RADIO LED ON/OFF control output.
42,48	NC	-	Not connected.
43	SEG DP	O	LED segment DP control output.
44~47	SEGA~D	O	LED segment A~D control output.

ADJUSTMENT <TUNER / CD / TAPE>



< TUNER SECTION >

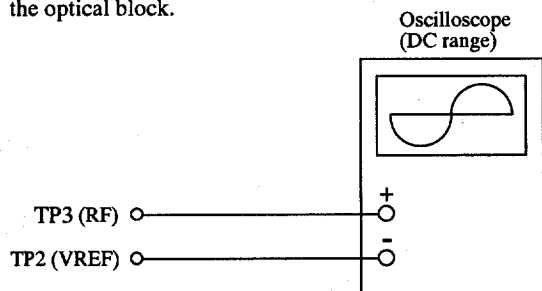
1. AM IF Adjustment
L007..... 455kHz
2. MW OSC Adjustment
L017 515kHz
TC003 1635kHz
3. MW Tracking Adjustment
L003 600kHz
TC004 1400kHz
4. LW Tracking Adjustment
L003 150kHz
TC006 280kHz
5. FM Tracking Adjustment
L004 88.0MHz
TC002 108.0MHz
6. FM IF Adjustment
L008,L009..... 10.7MHz
7. LW OSC Adjustment
L016 145kHz
TC005 295kHz

< TAPE SECTION >

8. Bias Frequency Adjustment
Test point : TP1
L801 85kHz

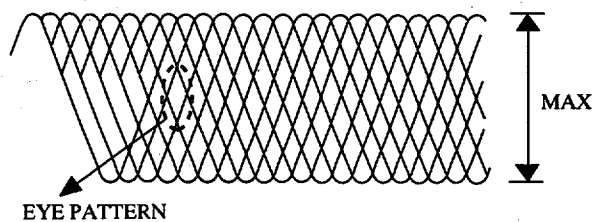
< CD SECTION >

9. Focus Bias Adjustment
Make the focus bias adjustment when replacing and repairing the optical block.



- 1) Connect an oscilloscope to the test points TP3 (RF) and TP2 (VREF).
- 2) Turn on the power switch.
- 3) Insert test disc TCD-782 (YEDS-18) and play back the second composition.
- 4) Adjust SFR430 so that RF signal of the test point TP3 (RF) is MAX and CLEAREST.

RF signal waveform



EYE PATTERN

Must be CLEAR and MAX

VOLT / DIV: 50mV
TIME / DIV: 0.5µs

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

IHF Sensitivity : Less than 19dB
(THD 3%) [at 88.0MHz]
Less than 18dB
[at 98.0/108.0MHz]
Signal to noise ratio : More than 57dB
[at 98.0MHz]
Distortion(Input 60dB) : Less than 1.5% [at 98.0MHz]
Distortion(Input 120dB) : Less than 5.0% [at 98.0MHz]
Stereo separation : More than 18dB [at 98.0MHz]
Intermediate frequency : 10.7MHz \pm 0.1MHz

<MW SECTION>

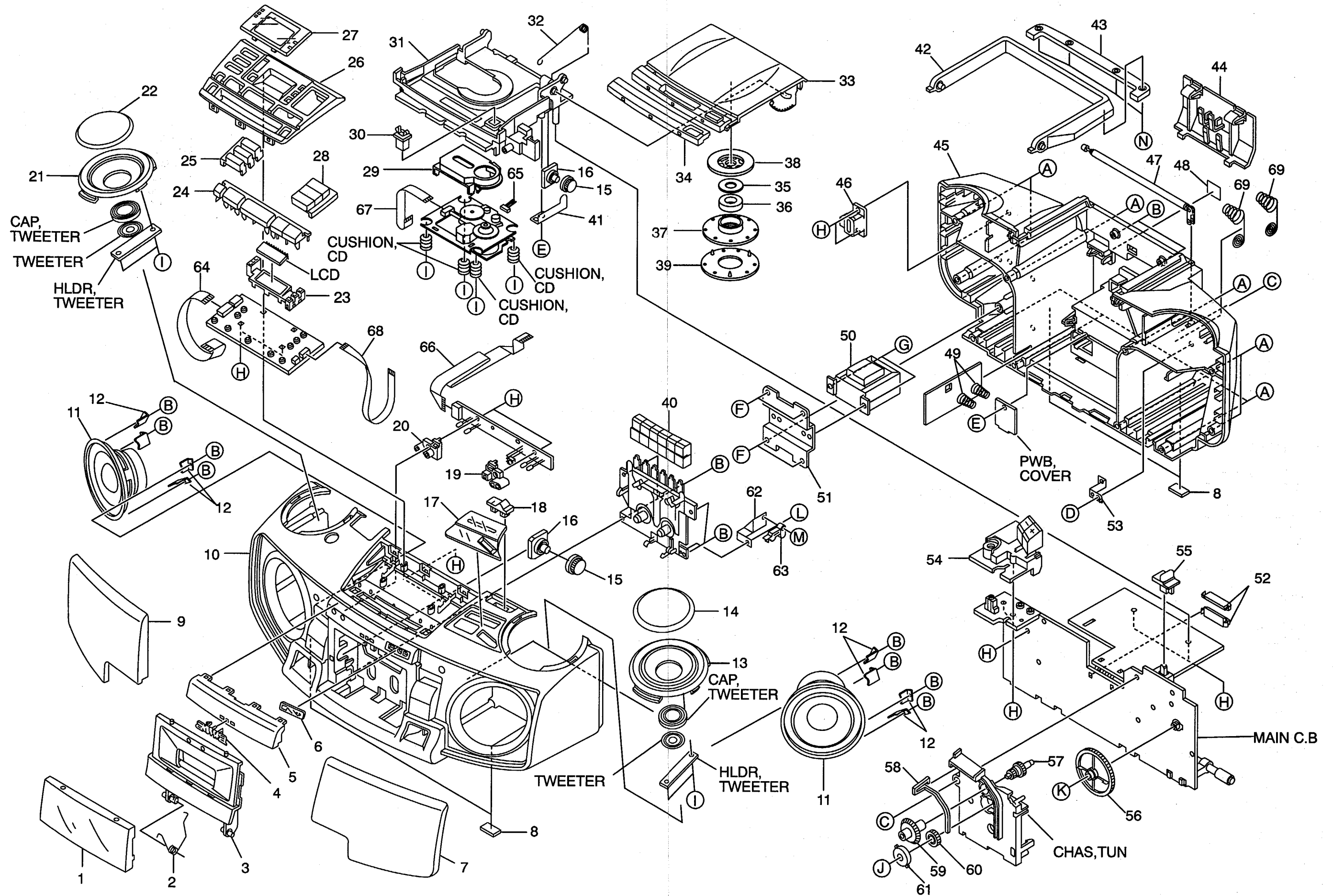
Sensitivity : Less than 45dB
S/N (10dB) [at 600/1000/1400kHz]
Signal to noise ratio : More than 35dB
[at 1000kHz]
Distortion : Less than 3.0%
[at 1000kHz]
Intermediate frequency : 455kHz \pm 3.5kHz

<LW SECTION>

Sensitivity : Less than 57dB
S/N (10dB) [at 153/198/288kHz]
Signal to noise ratio : More than 24dB
[at 198kHz]
Distortion : Less than 3.0%
[at 198kHz]
Intermediate frequency : 455kHz \pm 3.5Hz

<DECK SECTION>

Tape speed : 3000Hz +90 / -60Hz
Wow & flutter : Less than 0.4% (R.M.S)
Take-up torque : 30 ~ 60g-cm (FWD)
F.F & REW torque : 55 ~ 140g-cm
Distortion : Less than 3% (PB,DC)
Less than 5% (REC/PB,DC)
S/N ratio : More than 35dB (PB, AC, DC)
More than 25dB (REC/PB, AC, DC)
Max Noise level : Less than 45mV (PB, DC, AC)
Min Noise level : Less than 1mV (PB, DC)
Less than 1.2mV (PB, AC)
Erasing ratio : More than 45dB
Test tape : TTA-100
TTA-210
TTA-602



MECHANICAL PARTS LIST 1 / 1

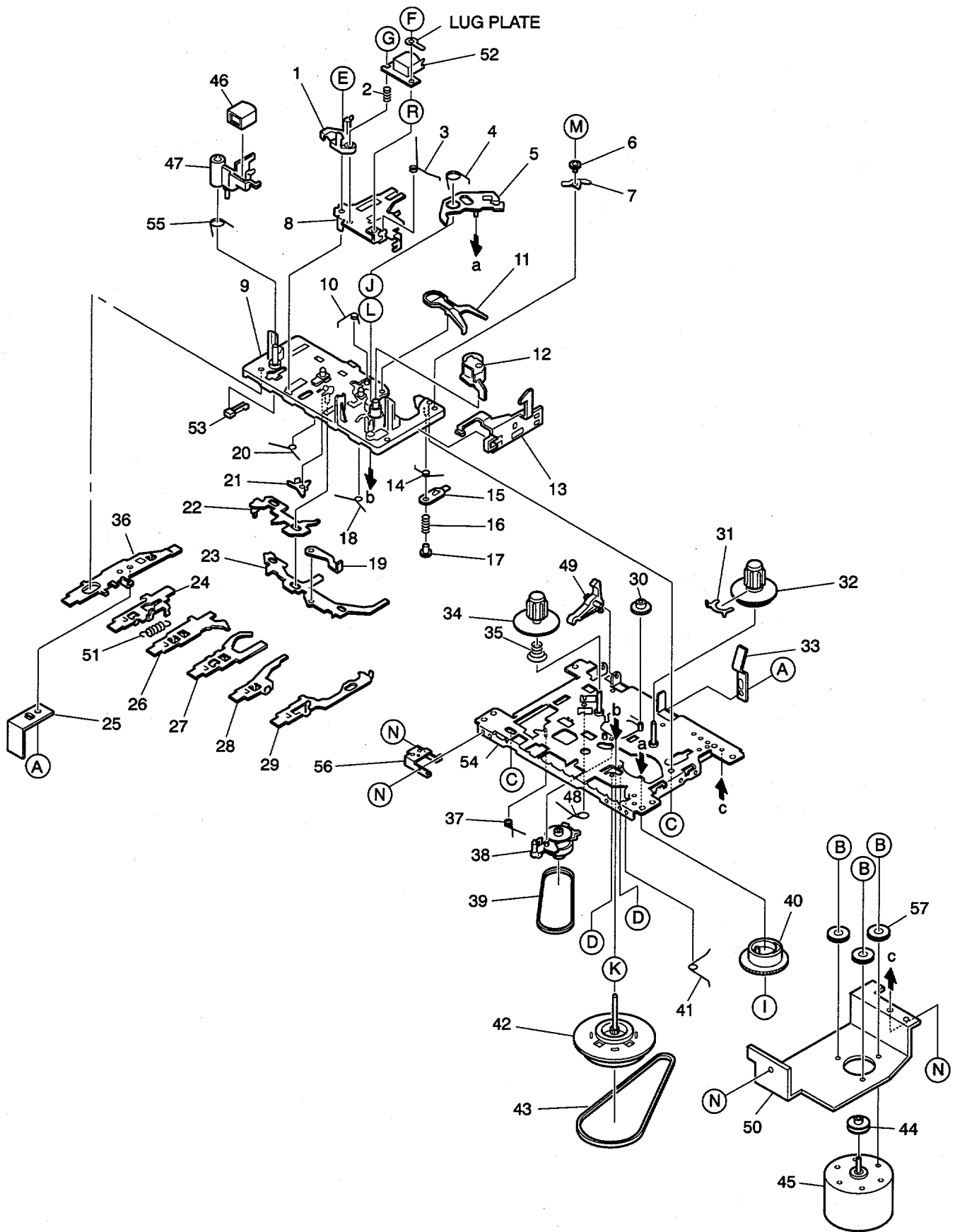
If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-CD5-006-010		WINDOW,CASS 21<577EZ,577K>	39	8Z-CH4-211-010		BASE,CHUCK
1	8Z-CD5-085-010		WINDOW,CASS 21 R<777EZ,777K>	40	8Z-CD5-029-010		KEY,CASS 21<577EZ,577K>
2	8Z-CD5-204-010		SPR-T,CASS	40	8Z-CD5-099-010		KEY,CASS 21 15<777EZ,777K>
3	8Z-CD5-003-010		BOX,CASS	41	8Z-CD5-213-010		HLDL, OIL-DMPR
4	84-CD5-024-010		BADGE,AIWA 30N	42	8Z-CD5-027-010		HANDL,ARM
5	8Z-CD5-048-010		WINDOW,FR 21 5	43	8Z-CD5-028-010		HANDL,GRIP
6	8Z-CD5-039-010		PLATE,LED 21 5<577EZ,577K>	44	8Z-CD5-026-010		LID,BATT
7	8Z-CD5-023-010		GRILLE,FR R<577EZ,577K>	45	8Z-CD5-009-010		CABI,REAR EX
7	8Z-CD5-089-010		GRILLE,FR R 15<777EZ,777K>	△ 46	87-A60-178-010		JACK,AC E W/SW
8	86-CT4-218-010		CUSHION,FOOT/PORON	47	8Z-CH4-640-010		ANT,ROD
9	8Z-CD5-022-010		GRILLE,FR L<577EZ,577K>	48	87-CD6-041-010		PLATE,AC
9	8Z-CD5-088-010		GRILLE,FR L 15<777EZ,777K>	49	87-CD6-223-010		SPR-C,BATT LINK L
10	8Z-CD5-042-010		CABI,FR EZ 21<577EZ,577K>	△ 50	8Z-CD5-631-010		PT,E 4W
10	8Z-CD5-083-010		CABI,FR EZ 21 R<777EZ,777K>	51	8Z-CH4-209-010		HLDL,PT
11	8Z-CH4-645-010		SPKR,MAYLOR 80HM SILVER	52	8Z-CH4-208-010		HLDL,PWB
12	8Z-CH4-204-010		HLDL,SPEAKER	53	88-CH6-207-010		HLDL,ANT
13	8Z-CD5-021-010		CABI, TOP R2	54	8Z-CD5-032-010		BTN,VOL
14	8Z-CD5-025-010		GRILLE, TOP R<577EZ,577K>	55	8Z-CD5-203-010		HLDL,BAND
14	8Z-CD5-093-010		GRILLE, TOP R 15<777EZ,777K>	56	8Z-CD5-209-010		DRUM,TU
15	84-CD5-215-010		GEAR	57	8Z-CD5-208-010		GEAR,B
16	84-CD5-216-010		BRACKET	58	8Z-CD5-037-010		POINTER,TU
17	8Z-CD5-067-010		WINDOW,TU EZ	59	8Z-CD5-036-010		KNOB,RTRY TU
18	8Z-CD5-035-010		KNOB,SL BAND	60	8Z-CD5-207-010		GEAR,A
19	8Z-CD5-212-010		GUIDE,LED 2	61	8Z-CD5-210-010		COVER, TU
20	8Z-CD5-202-010		GUIDE,LED 1	62	8Z-CH4-214-010		HLDL,REC-SW 21
21	8Z-CD5-020-010		CABI, TOP L2	63	87-A91-151-010		SW,LEAF 1P2T/TC48-021
22	8Z-CD5-024-010		GRILLE, TOP L<577EZ,577K>	64	8Z-CD5-601-010		FF-CABLE, 15P AF-FR
22	8Z-CD5-092-010		GRILLE, TOP L 15<777EZ,777K>	65	8Z-CH4-614-010		CONN ASSY,6P CD-ME
23	8Z-CD5-211-010		HLDL,LED	66	8Z-CD5-602-010		FF-CABLE, 9P LED-FR
24	8Z-CD5-033-010		BTN,CONTROL<577EZ,577K>	67	8Z-CH4-618-010		FF-CABLE, 16P CD-FR
24	8Z-CD5-097-010		BTN,CONTROL 15<777EZ,777K>	68	8Z-CH4-621-010		FF-CABLE, 7P CD-FR
25	8Z-CD5-050-010		BTN,EQ EX<577EZ,577K>	69	87-CD6-214-010		SPR-C,BATT LINK
25	8Z-CD5-098-010		BTN,EQ EX 15<777EZ,777K>	A	87-B10-242-010		UT2+3-30 W/O CR
26	8Z-CD5-040-010		PANEL,LED 21<577EZ,577K>	B	87-644-096-410		UT1+3-10 CR
26	8Z-CD5-087-010		PANEL,LED 21 15<777EZ,777K>	C	87-254-097-410		U+3-12 CR
27	8Z-CD5-044-010		WINDOW,LED<577EZ,577K>	D	87-751-094-410		VT2+3-6 W10SLOT
27	8Z-CD5-103-010		WINDOW,LED 15<777EZ,777K>	E	87-741-095-410		UT2+3-8 GLD
28	8Z-CD5-049-010		BTN,FUNC EX<577EZ,577K>	F	87-661-097-410		TAPPING SCREW, VFT1+3-12
28	8Z-CD5-096-010		BTN,FUNC EX 15<777EZ,777K>	G	87-067-566-010		TAPPING SCREW, VFTT+3-6
29	88-CH6-019-010		PANEL,CD	H	87-641-096-410		UT1+3-10 GLD
30	87-036-389-010		SW,PUSH LOCK	I	87-342-074-010		UT2+2.6-8
31	8Z-CD5-005-010		CHAS,CD	J	87-741-097-410		UT2+3-12
32	8Z-CD5-205-010		SPR-T,CD	K	87-501-073-410		VF+2.6-6
33	8Z-CD5-004-010		BOX,CD LCD 5<577EZ,577K>	L	87-261-037-410		V+2-10 GLD
33	8Z-CD5-058-010		BOX,CD LCD 15<777EZ,777K>	M	87-571-032-410		VIT+2-3
34	8Z-CD5-013-010		WINDOW,CD	N	87-721-095-410		QT2+3-8GLD W/O SLOT
35	84-CD5-217-010		PLATE,MAGNET				
36	87-036-368-010		MAGNET				
37	85-CD7-217-010		HLDL,CHUCK A				
38	8Z-CH4-212-010		RING,CHUCK				

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

TAPE MECHANISM EXPLODED VIEW 1 / 1

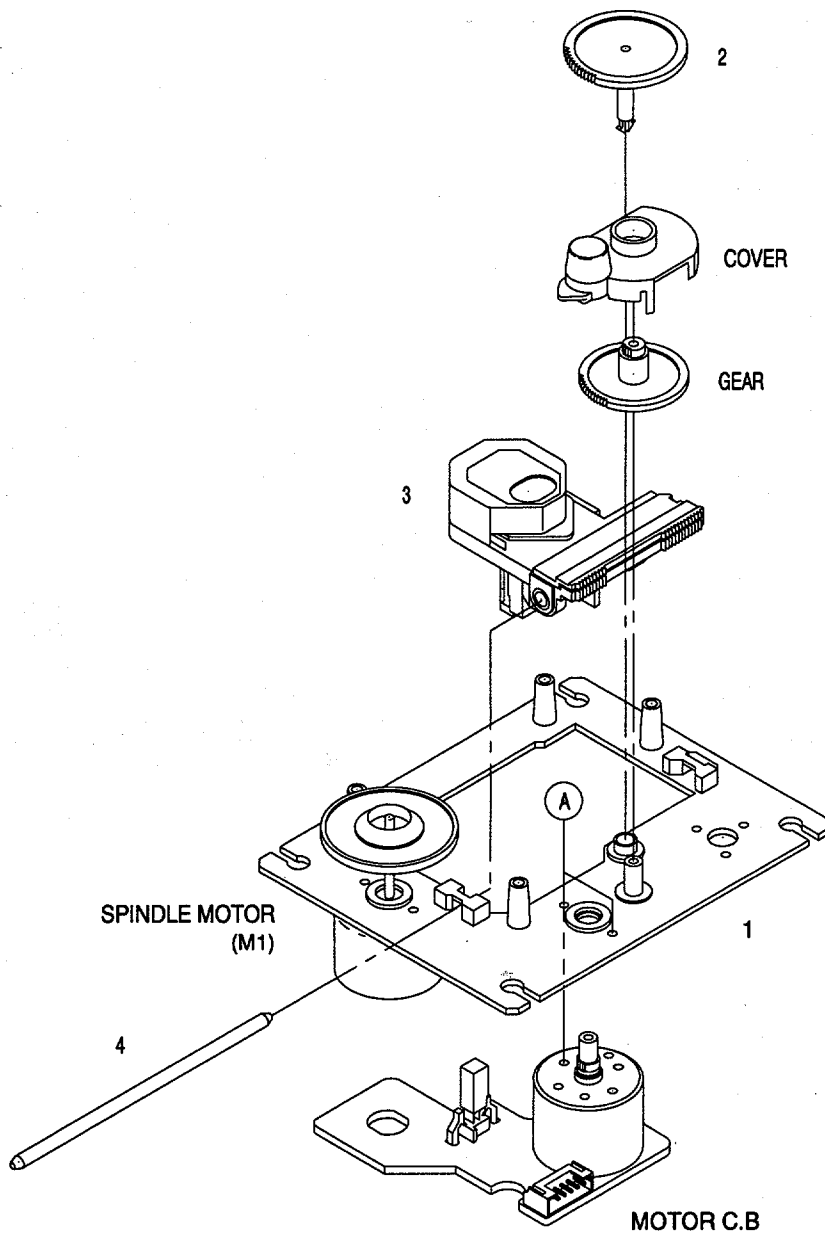


TAPE MECHANISM PARTS LIST 1 / 1

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	S1-921-030-4A0		HEAD BASE	46	S6-209-100-100		E HEAD PH-K380-MS1
2	S1-821-030-070		AZIMUTH SPRING	47	S1-921-030-050		MG ARM
3	S1-921-030-090		PANEL P SPRING	48	S1-921-140-210		REC BUTTON LEVER SPRING
4	S1-921-260-050		GEAR PLATE SPRING	49	S1-821-100-690		RECORD SAFETY LEVER
5	S1-921-265-020		GEAR PLATE ASSY	50	S1-921-120-540		MOTOR BRACKET
6	S1-921-140-370		P ARM COLLER	51	S1-821-010-500		PLAY BUTTON LEVER SPRING
7	S1-921-140-340		P ARM	52	S6-202-010-920		R.P HEAD MS15R-AK0N1
8	S1-921-030-110		HEAD PANEL	53	S6-401-011-490		LEAF SW MSW-1541T
9	S1-921-143-160		BASE ASSY	54	S1-921-015-010		CHASSIS ASSY
10	S1-921-141-8A0		M CONTROL SPRING	55	S1-921-030-100		MG ARM SPRING
11	S1-921-260-4A0		SENSING LEVER	56	S1-921-010-160		SIDE BRACKET
12	S1-921-043-100		PINCH ROLLER ARM ASSY	57	S1-821-120-660		MOTOR RUBBER
13	S1-921-130-010		EJECT SLIDE LEVER	A	S9-P04-200-310		C TAPPING SCREW 2-3
14	S1-921-141-3A0		P CONTROL SPRING	B	S1-851-140-180		MOTOR COLLER SCREW
15	S1-921-140-550		PAUSE LEVER(E)	C	S9-B10-200-510		P TAPPING BIND SCREW M2-5
16	S1-921-140-120		PAUSE LEVER SPRING	D	S9-C07-204-510		SCREW, TAPPING(CAMERA)M2-4.5
17	S1-921-140-110		PAUSE STOPPER	E	S9-P01-200-610		SCREW, M2-6
18	S1-921-140-150		BUTTON LEVER SPRING(B)	F	S9-P01-200-310		SCREW, M2-3
19	S1-821-011-590		E KICK LEVER	G	S9-F08-200-710		AZIMUTH SCREW M2-7
20	S1-921-140-140		BUTTON LEVER SPRING(A)	H	S9-P05-200-810		S TAPPING SCREW M2-8
21	S1-921-140-200		PR STOPPER	I	S9-W02-300-100		P WASHER CUT 1.2-3.8-0.3
22	S1-921-140-090		SWITCH ACTUATOR	J	S9-W02-500-100		P WASHER CUT 1.45-3.8-0.5
23	S1-921-140-080		PUSH BUTTON ACTUATOR	K	S9-W01-400-100		P WASHER 2-3.5-0.4
24	S1-921-140-190		PLAY BUTTON LEVER	L	S9-W01-130-200		P WASHER 2.1-4-0.13
25	S1-510-020-020		REC SPRING PLATE	M	S9-P08-203-010		PS TAPPING SCREW M2-3
26	S1-921-140-040		REW BUTTON LEVER	N	S9-P04-200-410		C TAPPING SCREW M2-4
27	S1-921-140-050		FF, BUTTON REVER				
28	S1-921-140-060		STOP BUTTON LEVER				
29	S1-921-140-600		PAUSE BUTTON LEVER				
30	S1-821-100-700		FF GEAR				
31	S1-921-050-060		SENSOR				
32	S1-921-053-030		TAKE UP REEL ASSY				
33	S1-821-100-980		PACK SPRING				
34	S1-921-053-040		SUPPLY REEL ASSY				
35	S1-821-100-990		BACK TENSION SPRING				
36	S1-921-140-030		REC BUTTON LEVER				
37	S1-921-140-170		P.S. LEVER SPRING				
38	S1-921-073-040		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	S1-921-093-030		FLYWHEEL ASSY				
43	S1-921-090-040		MAIN BBELT				
44	S1-921-120-010		MOTOR PULLEY				
45	S6-002-030-220		MOTOR EG530AD-2B				

CD MECHANISM EXPLODED VIEW 1 / 1



CD 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	9X-262-620-210		MOTOR CHASSIS ASSY
2	92-626-907-010		GEAR(A)
3	87-A90-468-010		PICK UP KSS-213C
4	92-626-908-010		SHAFT SLED
A	97-621-255-150		SCREW+P2-3

ACCESSORIES / PACKAGE LIST

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

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-CD5-909-010		IB,K(E)B<577K,777K>
1	8Z-CD5-908-010		IB,EZ(9L)B<577EZ,777EZ>
2	87-A80-036-010		AC CORD SET ASSY,E W/FLTR VOL<577EZ,777EZ>
2	87-A80-034-010		AC CORD SET ASSY,K W/F MAY-BG<577K,777K>
3	8Z-CDK-962-010		RC UNIT,RC-ZAT02(VS)<777EZ,777K>

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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