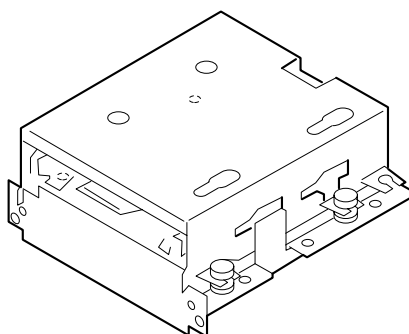




SERVICE MANUAL

MD MECHANISM

BASIC MD MECHANISM : 7ZG-8 B2
ZZG-D A1

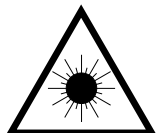
TYPE
A
YA

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 mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylitävälle näkymättömälle lasersäteilylle.

VARNING!

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

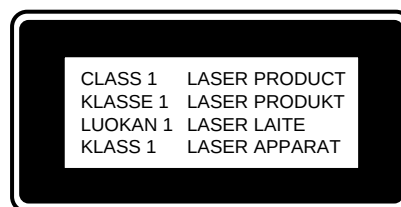
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

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.

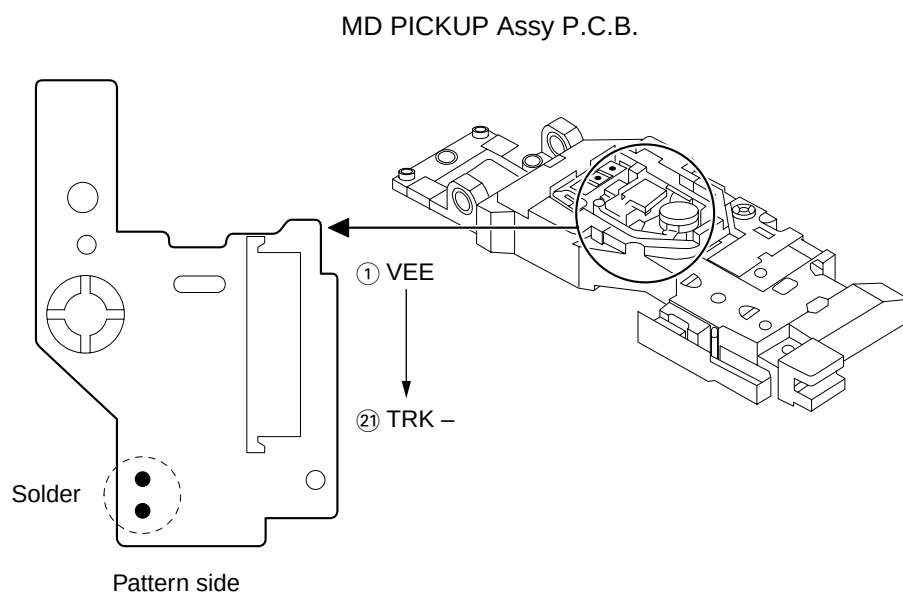
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



Precaution to replace Optical block (KMS-260B)

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.



ELECTRICAL MAIN PARTS LIST-1/2

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				C221	87-010-831-080		C-CAP,U 0.1-16 Z F
	87-A20-707-010	C-IC,CXA2523AR		C222	87-016-444-080		C-CAP,TN 47-10 M
	87-A21-752-030	C-IC,CXD2662R		C223	87-010-831-080		C-CAP,U 0.1-16 Z F
	87-A20-709-040	C-IC,BD7910FV		C224	87-A10-685-080		C-CAP,S 470P-100 J CH
	8A-ZGU-601-030	C-IC,CXP81952M-566R		C225	87-010-831-080		C-CAP,U 0.1-16 Z F
	87-A21-526-010	C-IC,GM71VLS17403CTL-1		C226	87-010-831-080		C-CAP,U 0.1-16 Z F
	87-A20-755-080	C-IC,AK93C45AF		C227	87-012-274-080		C-CAP,U 1000P-50 K B
	87-A20-710-040	C-IC,S-8110AMP		C228	87-012-274-080		C-CAP,U 1000P-50 K B
	87-A20-711-040	C-IC,BA5970FP		C229	87-012-274-080		C-CAP,U 1000P-50 K B
	87-A21-110-040	C-IC,AK4519VF		C232	87-012-274-080		C-CAP,U 1000P-50 K B
	87-017-853-040	C-IC,NJM2100V		C233	87-012-274-080		C-CAP,U 1000P-50 K B
	87-A21-878-040	C-IC,LA5678H		C237	87-010-831-080		C-CAP,U 0.1-16 Z F
	87-A21-764-040	C-IC,BA00ASFP		C300	87-010-831-080		C-CAP,U 0.1-16 Z F
				C301	87-010-831-080		C-CAP,U 0.1-16 Z F
				C302	87-010-831-080		C-CAP,U 0.1-16 Z F
TRANSISTOR				C305	87-016-462-080		C-CAP,S 1-16 Z F
	87-026-412-080	C-TR,RN1305		C307	87-010-831-080		C-CAP,U 0.1-16 Z F
	87-026-423-080	C-TR,RN2305		C308	87-010-831-080		C-CAP,U 0.1-16 Z F
	89-115-884-080	C-TR,2SA1588Y		C311	87-010-662-080		C-CAP,E 22-6.3 M MV
	89-341-164-080	C-TR,2SC4116Y		C312	87-012-195-080		C-CAP,U 100P-50 J CH
DIODE				C321	87-012-274-080		C-CAP,U 1000P-50 K B
	87-001-166-080	C-DIODE,1SS301		C322	87-012-274-080		C-CAP,U 1000P-50 K B
	87-A40-412-040	C-DIODE,SB05-05CP		C323	87-012-274-080		C-CAP,U 1000P-50 K B
				C324	87-012-274-080		C-CAP,U 1000P-50 K B
				C325	87-012-274-080		C-CAP,U 1000P-50 K B
MD C.B				C400	87-010-831-080		C-CAP,U 0.1-16 Z F
	87-A11-241-080	C-CAP,TN 22-6.3 M F93 A		C401	87-010-831-080		C-CAP,U 0.1-16 Z F
C101	87-A11-241-080	C-CAP,TN 22-6.3 M F93 A		C402	87-010-831-080		C-CAP,U 0.1-16 Z F
C102	87-012-286-080	C-CAP,U 0.01-25 K B		C403	87-010-831-080		C-CAP,U 0.1-16 Z F
C103	87-010-787-080	C-CAP,U 0.022-25 K B		C404	87-010-831-080		C-CAP,U 0.1-16 Z F
C104	87-010-662-080	C-CAP,E 22-6.3 M MV		C405	87-010-661-080		C-CAP,E 10-16 M MV
				C406	87-010-779-080		C-CAP,E 100-6.3 M MV
C105	87-010-831-080	C-CAP,U 0.1-16 Z F		C407	87-012-197-080		C-CAP,U 150P-50 J CH
C106	87-016-462-080	C-CAP,S 1-16 Z F		C408	87-012-197-080		C-CAP,U 150P-50 J CH
C107	87-012-195-080	C-CAP,U 100P-50 J CH		C411	87-012-271-080		C-CAP,U 560P-50 K B
C108	87-012-274-080	C-CAP,U 1000P-50 K B		C412	87-012-271-080		C-CAP,U 560P-50 K B
C109	87-016-558-080	C-CAP,TN 47-6.3 F93B		C413	87-012-197-080		C-CAP,U 150P-50 J CH
				C414	87-012-197-080		C-CAP,U 150P-50 J CH
C111	87-A10-917-080	C-CAP,TN 10-10 M A TCFG		C415	87-012-286-080		C-CAP,U 0.01-25 K B
C112	87-012-286-080	C-CAP,U 0.01-25 K B		C416	87-012-286-080		C-CAP,U 0.01-25 K B
C113	87-012-284-080	C-CAP,U 6800P-50 K B GRM		C417	87-012-268-080		C-CAP,U 330P-50 K B GRM
C114	87-010-828-080	C-CAP,U 0.033-16 Z F		C418	87-012-268-080		C-CAP,U 330P-50 K B GRM
C115	87-A10-369-080	C-CAP,S 0.47-16 K B		C423	87-012-286-080		C-CAP,U 0.01-25 K B
				C424	87-012-286-080		C-CAP,U 0.01-25 K B
C116	87-012-282-080	C-CAP,U 4700P-50 K B		C429	87-012-286-080		C-CAP,U 0.01-25 K B
C117	87-016-462-080	C-CAP,S 1-16 Z F		C430	87-012-286-080		C-CAP,U 0.01-25 K B
C118	87-012-282-080	C-CAP,U 4700P-50 K B		C431	87-010-779-080		C-CAP,E 100-6.3 M MV
C119	87-016-491-080	C-CAP,S 0.22-16 Z F C2021		C434	87-010-831-080		C-CAP,U 0.1-16 Z F
C120	87-010-787-080	C-CAP,U 0.022-25 K B		C435	87-A10-353-080		C-CAP,U 0.22-10 K B
				C501	87-010-831-080		C-CAP,U 0.1-16 Z F
C121	87-012-286-080	C-CAP,U 0.01-25 K B		C502	87-010-831-080		C-CAP,U 0.1-16 Z F
C122	87-010-829-080	C-CAP,U 0.047-16 Z F		C503	87-010-662-080		C-CAP,E 22-6.3 M MV
C123	87-012-286-080	C-CAP,U 0.01-25 K B		C504	87-010-831-080		C-CAP,U 0.1-16 Z F
C124	87-010-662-080	C-CAP,E 22-6.3 M MV		C505	87-010-662-080		C-CAP,E 22-6.3 M MV
C125	87-010-662-080	C-CAP,E 22-6.3 M MV		C506	87-010-831-080		C-CAP,U 0.1-16 Z F
C201	87-010-831-080	C-CAP,U 0.1-16 Z F		C507	87-010-661-080		C-CAP,E 10-16 M MV
C202	87-010-831-080	C-CAP,U 0.1-16 Z F		C508	87-010-831-080		C-CAP,U 0.1-16 Z F
C203	87-010-785-080	C-CAP,U 0.015-25 K B GRM		C509	87-010-662-080		C-CAP,E 22-6.3 M MV
C204	87-016-461-080	C-CAP,S 0.47-16 Z F		C510	87-010-831-080		C-CAP,U 0.1-16 Z F
C205	87-010-831-080	C-CAP,U 0.1-16 Z F		C511	87-010-661-080		C-CAP,E 10-16 M MV
				C513	87-010-661-080		C-CAP,E 10-16 M MV
C206	87-012-270-080	C-CAP,U 470P-50 K B		C514	87-010-661-080		C-CAP,E 10-16 M MV
C207	87-016-461-080	C-CAP,S 0.47-16 Z F		C515	87-012-337-080		C-CAP,U 56P-50 J CH GRM
C208	87-012-286-080	C-CAP,U 0.01-25 K B		C516	87-012-337-080		C-CAP,U 56P-50 J CH GRM
C209	87-010-831-080	C-CAP,U 0.1-16 Z F		C517	87-012-278-080		C-CAP,U 2200P-50 K B
C212	87-012-195-080	C-CAP,U 100P-50 J CH		C518	87-012-278-080		C-CAP,U 2200P-50 K B
				C519	87-010-831-080		C-CAP,U 0.1-16 Z F
C213	87-010-662-080	C-CAP,E 22-6.3 M MV		C520	87-010-661-080		C-CAP,E 10-16 M MV
C214	87-012-274-080	C-CAP,U 1000P-50 K B		C521	87-010-831-080		C-CAP,U 0.1-16 Z F
C217	87-012-188-080	C-CAP,U 47P-50 J CH		C522	87-010-661-080		C-CAP,E 10-16 M MV
C218	87-012-172-080	C-CAP,U 10P-50 D CH					
C219	87-A10-917-080	C-CAP,TN 10-10 M A TCFG					
C220	87-010-662-080	C-CAP,E 22-6.3 M MV					

ELECTRICAL MAIN PARTS LIST-2/2

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C523	87-010-662-080		C-CAP,E 22-6.3 M MV	L611	87-A50-163-080		C-COIL,ZBFS5101-PT
C524	87-010-662-080		C-CAP,E 22-6.3 M MV	L612	87-005-512-080		C-COIL,2125 80 BLM21
C525	87-012-274-080		C-CAP,U 1000P-50 K B	L614	87-A50-163-080		C-COIL,ZBFS5101-PT
C526	87-012-274-080		C-CAP,U 1000P-50 K B	L615	87-A90-034-080		C-FLTR,EMI BLM41P750S
C527	87-010-661-080		C-CAP,E 10-16 M MV	L616	87-A50-163-080		C-COIL,ZBFS5101-PT
C528	87-010-661-080		C-CAP,E 10-16 M MV	R423	87-025-564-080		C-RES,M/F U 47K-1/16W D
C530	87-010-831-080		C-CAP,U 0.1-16 Z F	R424	87-025-564-080		C-RES,M/F U 47K-1/16W D
C531	87-010-831-080		C-CAP,U 0.1-16 Z F	R425	87-022-583-080		C-RES,M/F U 12K-1/16W D
C600	87-010-662-080		C-CAP,E 22-6.3 M MV	R426	87-022-583-080		C-RES,M/F U 12K-1/16W D
C601	87-010-779-080		C-CAP,E 100-6.3 M MV	R610	87-022-230-080		C-RES,U 4.3K-1/16W F
C602	87-010-779-080		C-CAP,E 100-6.3 M MV	R611	87-022-224-080		C-RES,U 2.4K-1/16W F
C603	87-010-662-080		C-CAP,E 22-6.3 M MV	X200	87-A70-313-040		C-VIB,XTAL 90.3168MHZ KCO-735
C604	87-010-779-080		C-CAP,E 100-6.3 M MV	X301	87-A70-100-080		C-VIB,CER 12.0MHZ PBRC-BR-A
CN100	87-A60-537-080		C-CONN,21P H CFP55				
CN201	87-A60-467-080		C-CONN,4P V FMN-BMTR				
CN300	87-A60-518-080		C-CONN,8P H 6232				
CN400	87-A60-027-080		C-CONN,8P H 52207				
CN401	87-A60-062-010		CONN,05P V 9604S-05C				
CN600	87-A60-519-080		C-CONN,14P H 6232				
FB501	87-A90-828-080		C-F-BEAD, BK1608LM182				
FFC100	8A-ZG4-611-110		PWB,FLEX 21P AZG-4				
FFC401	87-ZG9-604-010		FF-CABLE,5P 1.25 100MM				
L100	87-A50-117-080		C-COIL,10UHLQH3C				
L101	87-A50-012-080		C-COIL, 100UH LQH3C				
L102	87-A50-117-080		C-COIL,10UHLQH3C				
L103	87-A50-117-080		C-COIL,10UHLQH3C				
L201	87-A50-117-080		C-COIL,10UHLQH3C				
L202	87-A50-117-080		C-COIL,10UHLQH3C				
L203	87-A50-116-080		C-COIL,4.7UHLQH3C				
L301	87-A50-117-080		C-COIL,10UHLQH3C				
L501	87-A50-116-080		C-COIL,4.7UHLQH3C				
L502	87-A50-116-080		C-COIL,4.7UHLQH3C				
L503	87-A50-116-080		C-COIL,4.7UHLQH3C				
L504	87-005-774-080		C-COIL,4BLH				
L505	87-005-774-080		C-COIL,4BLH				

MECHA C.B

CON1	87-A61-058-080	C-CONN,8P H 6232BOT
FFC400	87-ZG9-603-010	FF-CABLE, 8P 1.0 120MM
M400	87-A91-490-010	MOT,BCD3B04
M401	87-A91-489-010	MOT,BCD3B93
SW1	87-A91-419-080	C-SW,PUSH MPU11121MLB1
SW2	87-A91-445-080	C-SW,PUSH MPU20420MLB1

LOAD C.B

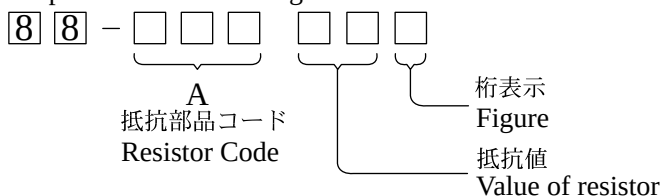
CON451	86-NFZ-675-010	CONN,5P H 6216-11H
M450	87-A90-672-010	MOT,M25E-4
SW451	87-A90-673-010	SW,MICRO ESE11SH1C
SW452	87-A90-117-010	SW,PUSH 1-1-1 MPU103

- Regarding connectors, they are not stocked as they are not the initial order items.
The connectors are available after they are supplied from connector manufacturers upon the order is received.

チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち

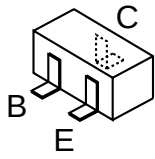
Chip Resistor Part Coding



チップ抵抗
Chip resistor

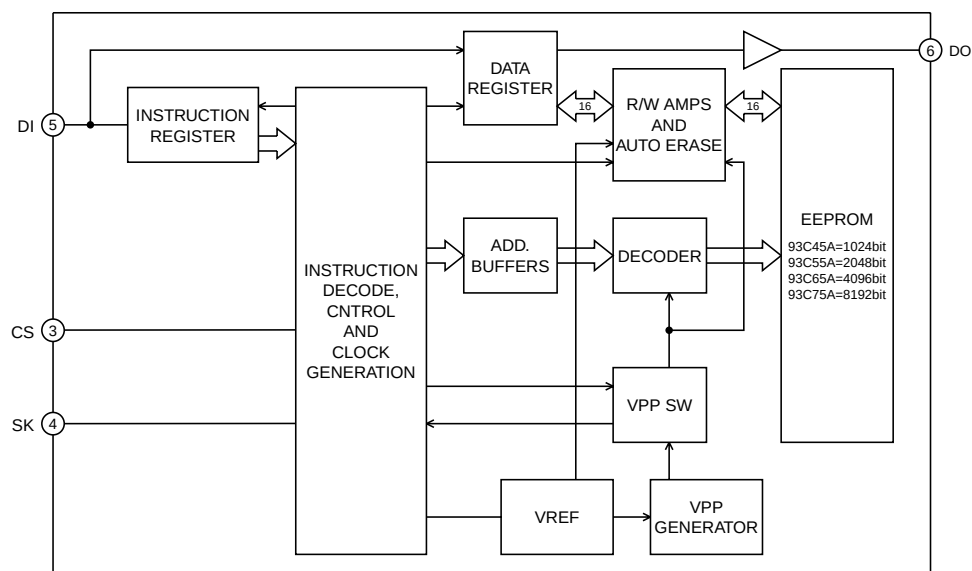
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード : A Resistor Code : A
				外形／Form	L	W	t	
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION-1/1

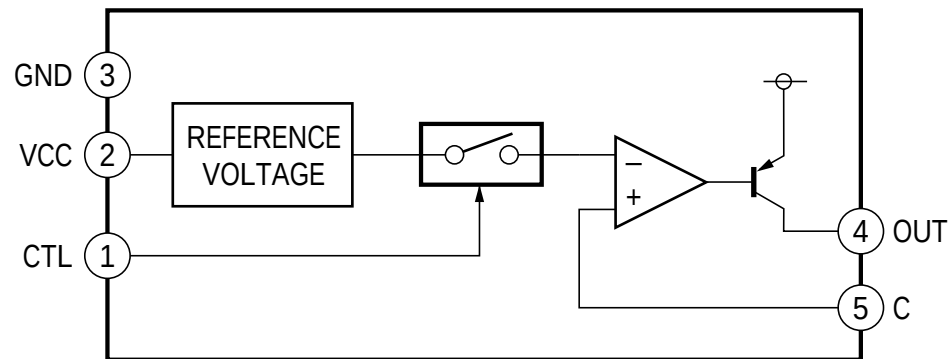


2SA1588
2SC4116
RN1305
RN2305

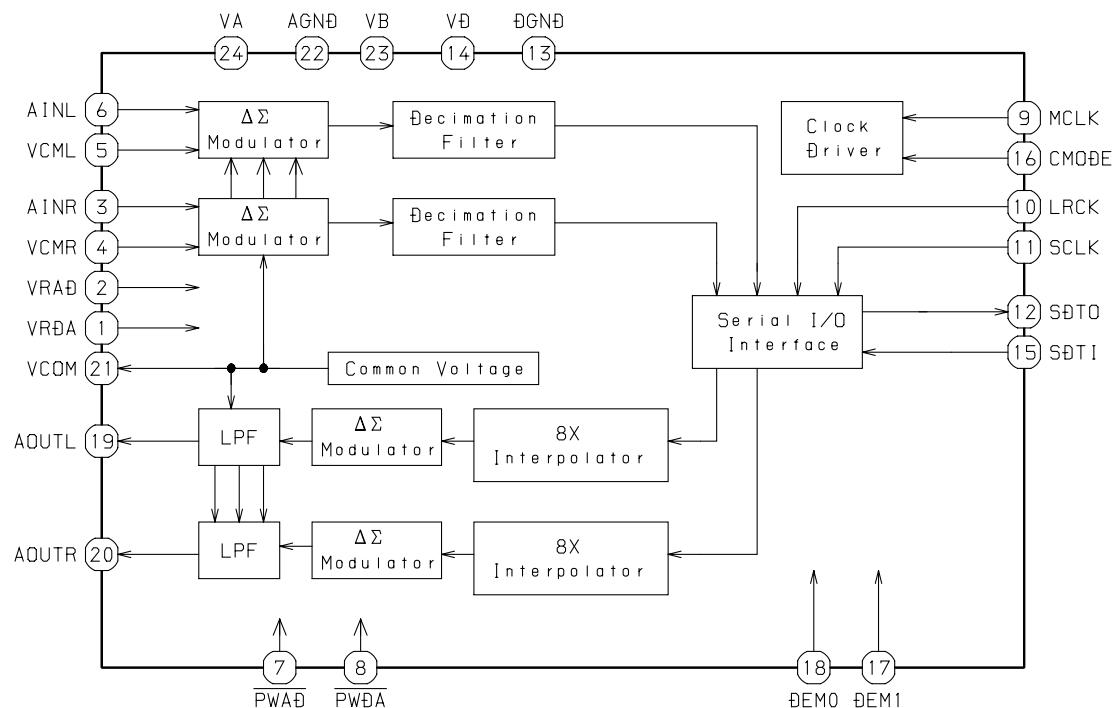
IC BLOCK DIAGRAM-1/2
IC, AK93C45AF



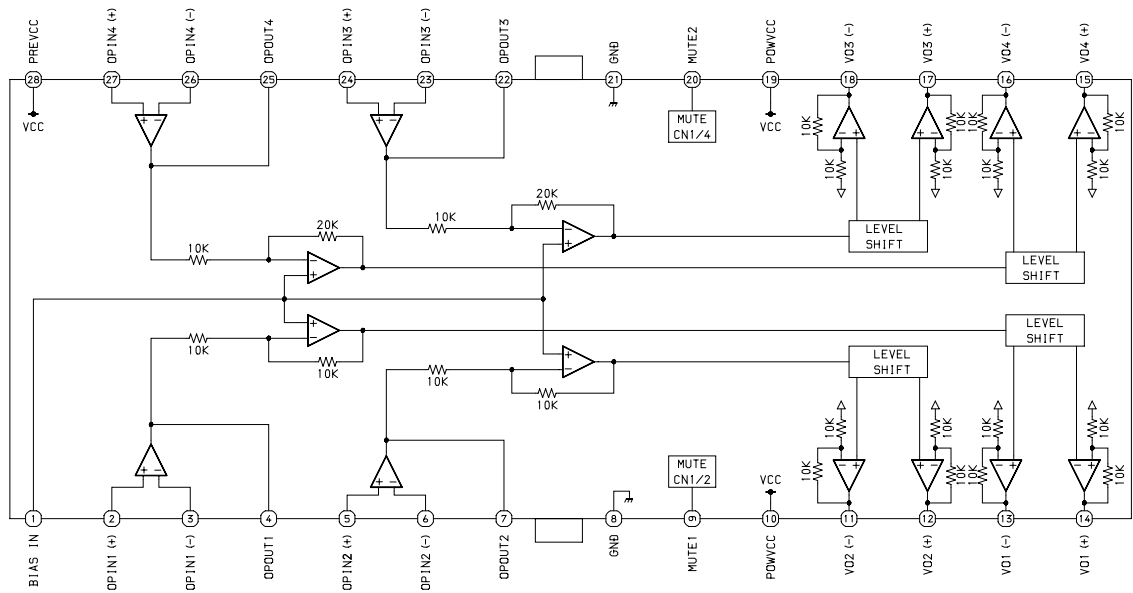
IC, BA00ASFP



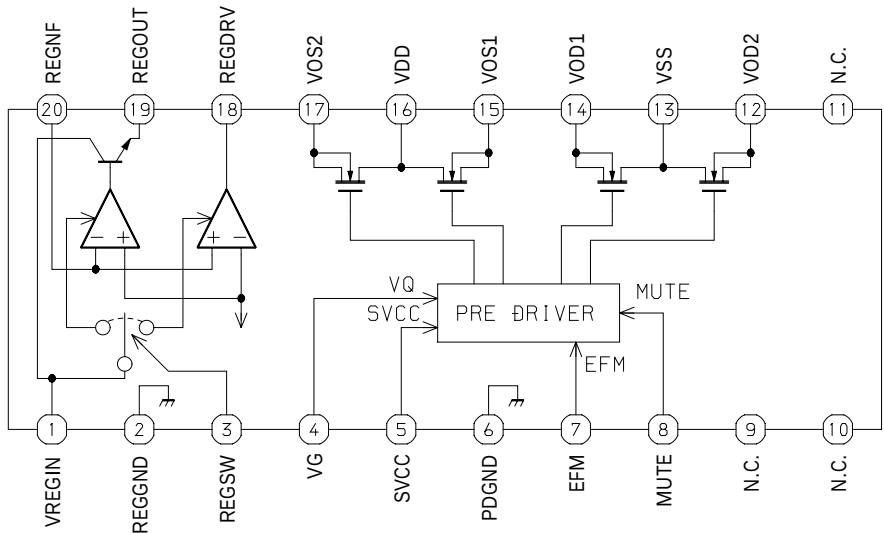
IC, AK4519VF



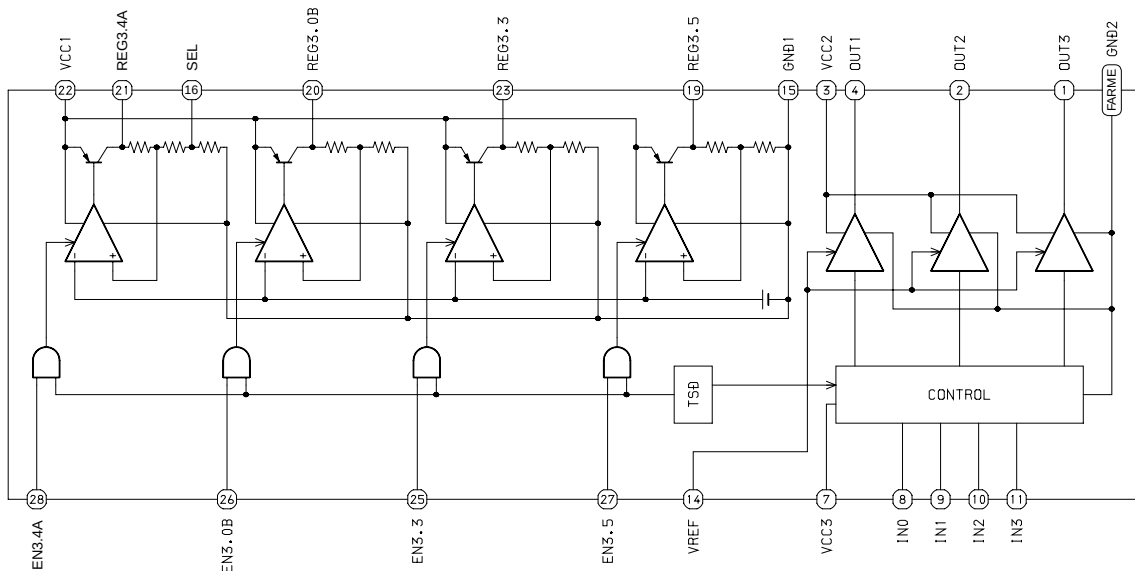
IC BLOCK DIAGRAM-2/2
IC, BA5970FP



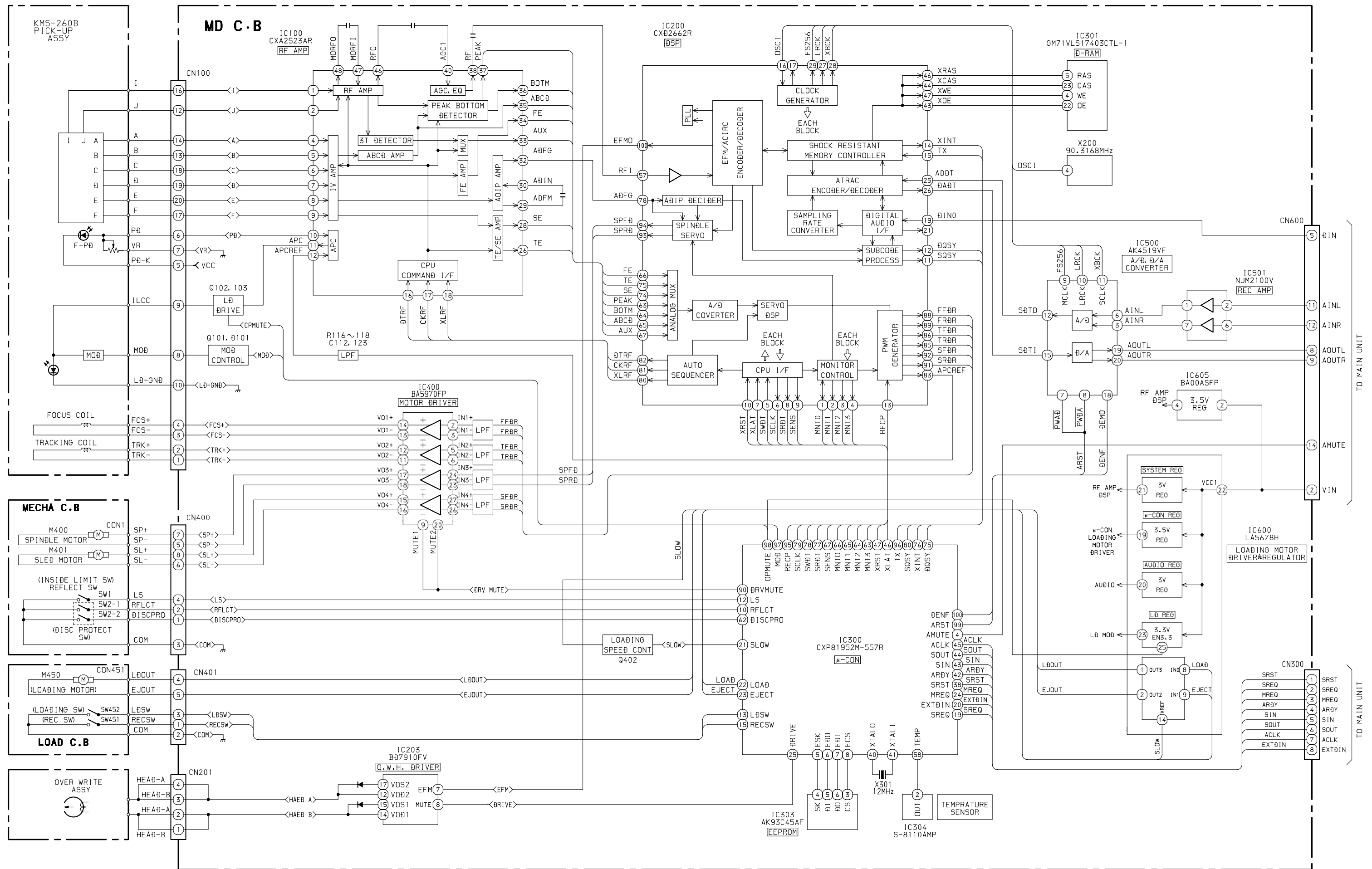
IC, BD7910FV

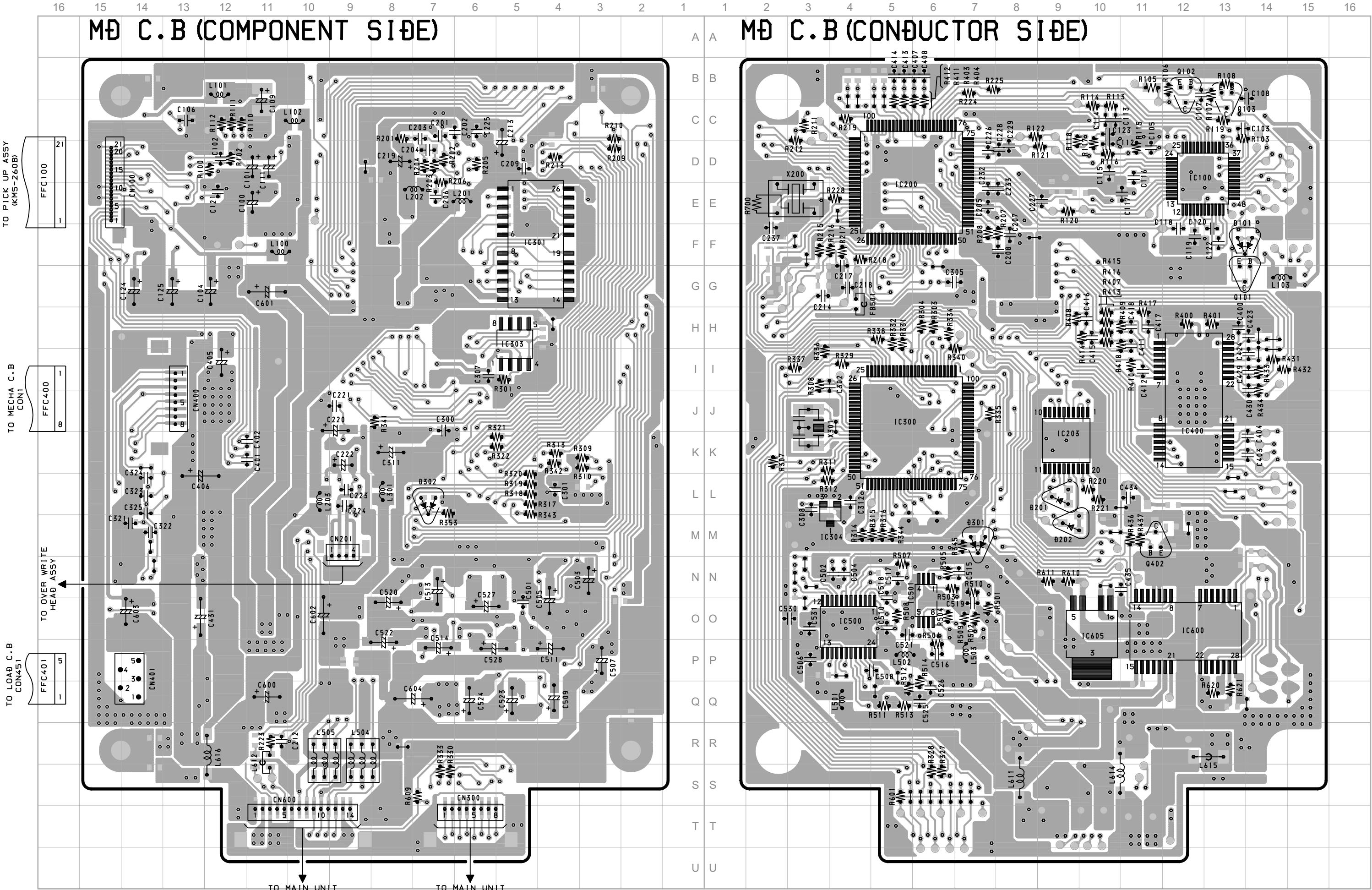


IC, LA5678H

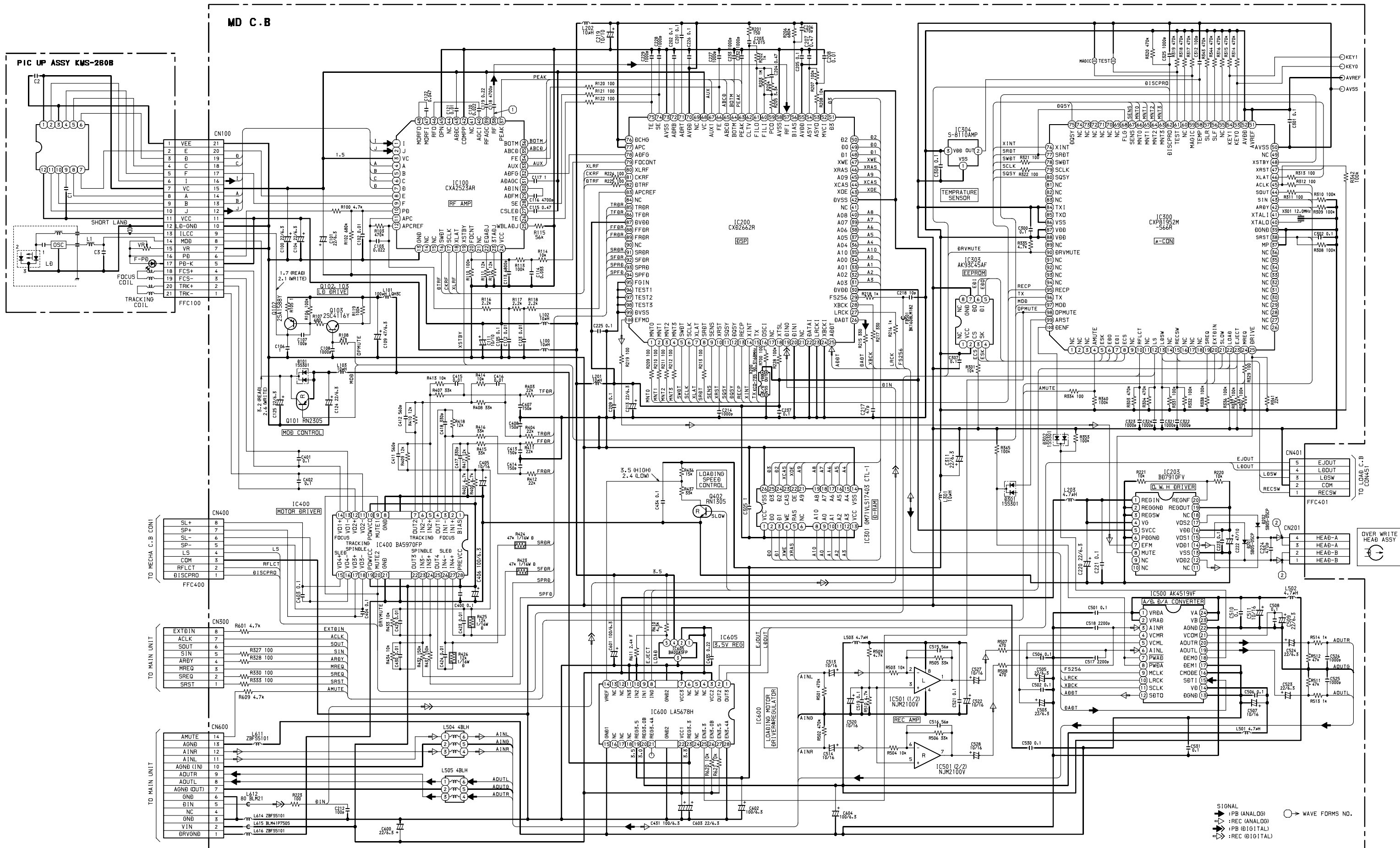


BLOCK DIAGRAM-1/1



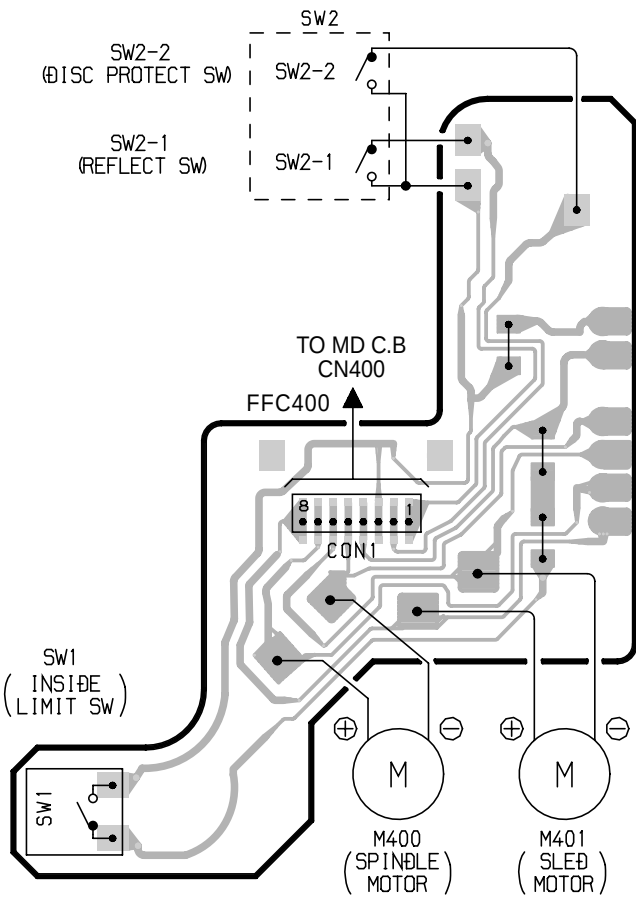


SCHEMATIC DIAGRAM-1/2 (MD)

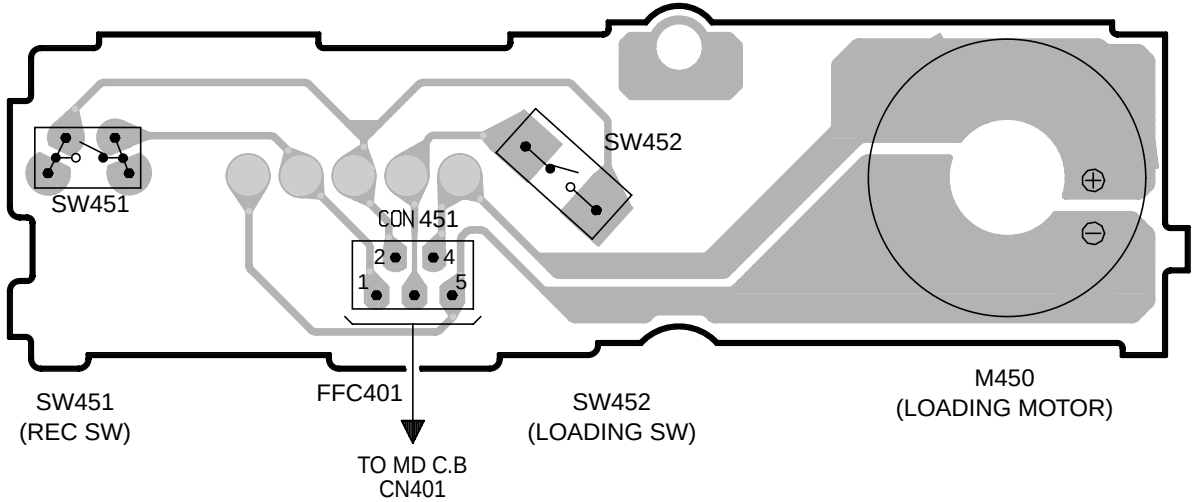


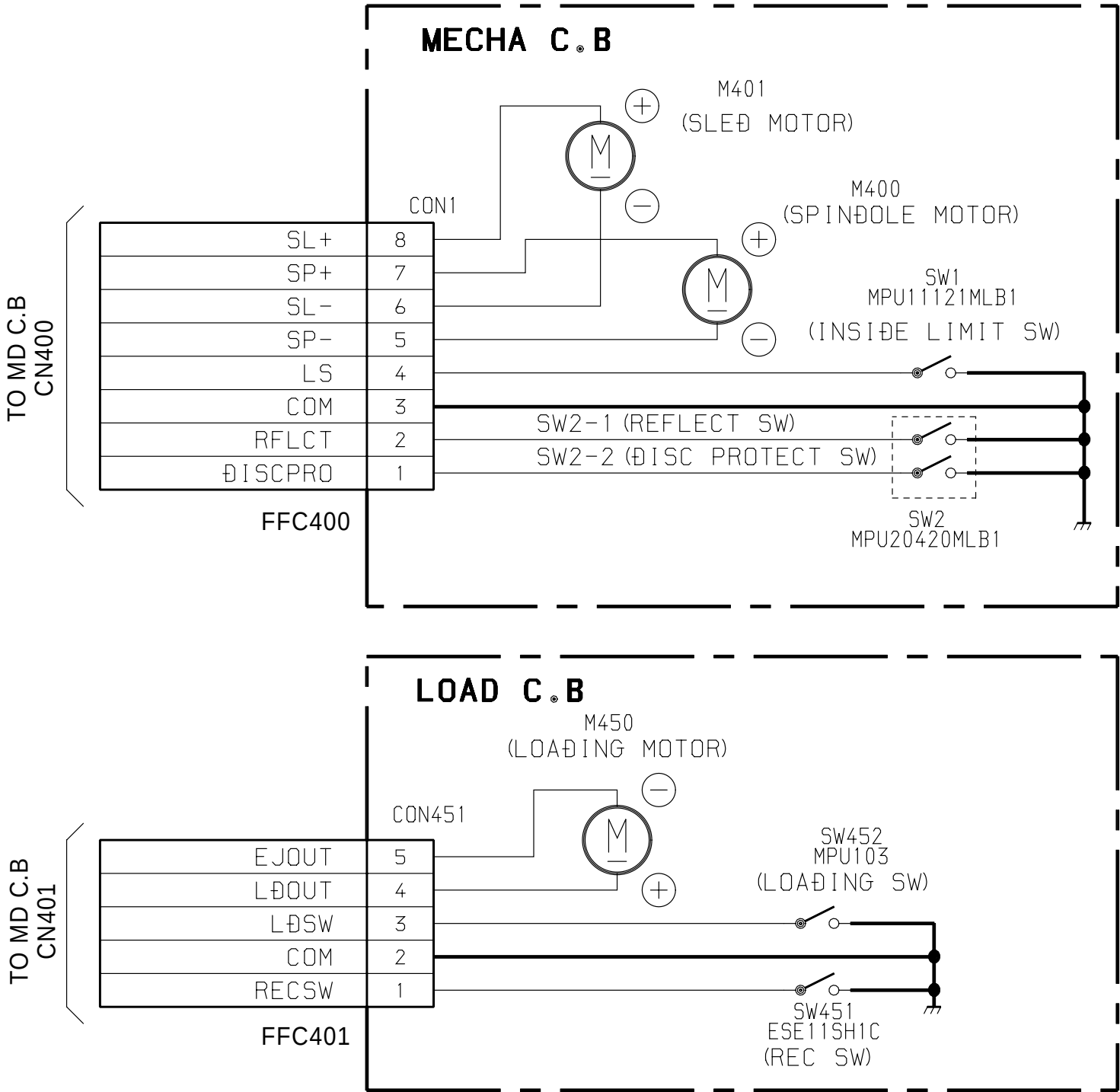
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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MECHA C. B



LOAD C. B





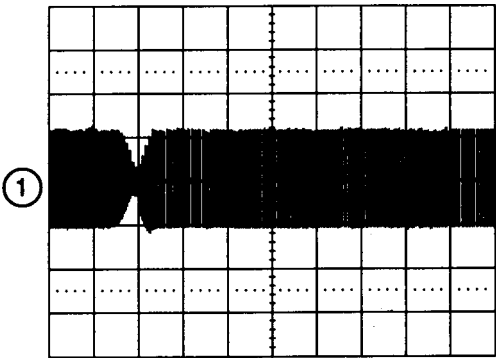
WAVE FORM-1/1

1

IC100 Pin 38 (RF)

VOLT/DIV: 0.5V

TIME/DIV: 1mS



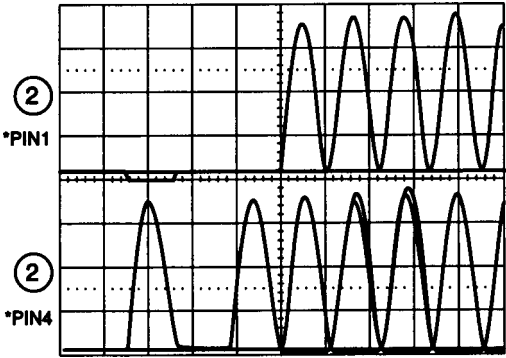
2

CN201 Pin 1 (HEAD-B)

CN201 Pin 4 (HEAD-A)

VOLT/DIV: 10V

TIME/DIV: 0.2μS



IC DESCRIPTION-1/3 (CXA2523AR)-1/2

Pin No.	Pin Name	I/O	Description
1	I	I	Input “I” RF signal converted to I-V.
2	J	I	Input “J” RF signal converted to I-V.
3	VC	O	Output voltage for VCC/2.
4	A	I	Input current for main beam servo signal A.
5	B	I	Input current for main beam servo signal B.
6	C	I	Input current for main beam servo signal C.
7	D	I	Input current for main beam servo signal D.
8	E	I	Input current for side beam servo signal E.
9	F	I	Input current for side beam servo signal F.
10	PD	I	Input beam spectrum monitor signal.
11	APC	O	Output laser APC.
12	APCREF	I	Input reference voltage for laser power setting.
13	GND	—	GND.
14	TEMPI	I	Not used.
15	TEMPR	I	
16	SWDT	I	Input micro-processor serial interface data.
17	SCLK	I	Input micro-processor serial interface shift clock.
18	XLAT	I	Input micro-processor serial interface latch. “L”: Latch.
19	XSTBY	I	Standby setting pin. “H”: Normal mode, “L”: Standby.
20	FOCNT	I	Internal current setting pin.
21	VREF	O	Not used.
22	EQADJ	I/O	EQ central frequency setting pin.
23	3TADJ	I/O	BPF3T central frequency setting pin.
24	VCC	—	Power supply pin.
25	WBLADJ	I/O	BPF22 central frequency setting pin.
26	TE	O	Output tracking error signal.
27	CSLED	—	LPF capacitor connection pin for SLED error signal.
28	SE	O	Output SLED error signal.
29	ADFM	O	Output ADIP FM signal.
30	ADIN	I	Input ADIP signal comparator.
31	ADAGC	—	ADIPAGC capacitor connection pin.
32	ADFG	O	Output ADIP2 binary data signal.
33	AUX	O	I3 output temperature signal. Switched by serial command.
34	FE	O	Output focus error signal.
35	ABCD	O	Output beam spectrum signal for main beam servo detector.
36	BOTM	O	Output bottom hold signal for RF/ABCD.
37	PEAK	O	Output peak hold signal for RF/ABCD.
38	RF	O	RF equalizer output pin.
39	RFAGC	—	RFAGC capacitor connection pin.
40	AGCI	I	RFAGC input pin.
41	COMPO	O	Not used.

IC DESCRIPTION-1/3 (CXA2523AR)-2/2

Pin No.	Pin Name	I/O	Description
42	COMPP	I	User comparator non-inverted input pin.
43	ADDC	I/O	Capacitor connection pin for ADIP amplifier on return circuit.
44	OPO	O	Not used.
45	OPN	I	Non-inverted input pin for user operational amplifier.
46	RFO	O	RF amplifier output pin. Check point for eye pattern.
47	MORFI	I	Input pin where Groove RF signal is AC coupled.
48	MORFO	O	Output pin for Groove RF signal.

IC DESCRIPTION-2/3 (CXD2662R)-1/3

Pin No.	Pin Name	I/O	Description
1	MNT0	I/O	Monitor output.
2	MNT1	O	
3	MNT2	O	
4	MNT3	O	
5	SWDT	I	Data input for microcomputer serial interface.
6	SCLK	I	Shift clock input for microcomputer serial interface.
7	XLAT	I	Latch input for microcomputer serial interface. Latched at the falling edge.
8	SRDT	O	Data output for microcomputer serial interface.
9	SENS	O	Outputs the internal status corresponding to the microcomputer serial interface address.
10	XRST	I	Reset input. Low: reset.
11	SQSY	O	Disc subcode Q sync/ADIP sync output.
12	DQSY	O	Subcode Q sync output in U-bit CD or MD format when the Digital in source is CD or MD.
13	RECP	I	Laser power switching input. High: recodeing power; low; playback power.
14	XINT	O	Interruption request output. Low when the interruption status occurs.
15	TX	I	Enable signal input for recoding data output. High: enabled.
16	OSCI	I	Crystal oscillation circuit input.
17	OSCO	O	Clystral oscillation circuit output. (inverted output of the OSCI pin) (Not used)
18	XTSL	I	OSCI input frequency switching. XTSL1 (command) =low and XTSL=high: 512Fs. (22.5792MHz) XTSL1(command) =low and XTSL=low: 1024Fs. (45.1584MHz) XTSL1 (command) =high: 2048Fs. (90.3168MHz)
19	DIN0	I	Digital audio interface signal input 1.
20	DIN1	I	Digital audio interface signal input 2.
21	DOUT	O	Digital audio interface signal output. (Not used)
22	DATAI	I	Test pin. Connect to GND.
23	LRCKI	I	
24	XBCKI	I	
25	ADDT	I	Data input from A/D converter.
26	DADT	O	REC monitor output/decoded audio data output.
27	LRCK	O	LR clock (44.1kHz) output to the external audio block.
28	XBCK	O	Bit clock (2.8224MHz) output to the external audio block.
29	FS256	O	256Fs output.
30	DVDD	—	Digital power supply.
31	A03	O	External DRAM address output.
32	A02	O	
33	A01	O	
34	A00	O	
35	A10	O	
36	A04	O	
37	A05	O	

IC DESCRIPTION-2/3 (CXD2662R)-2/3

Pin No.	Pin Name	I/O	Description
38	A06	O	External DRAM address output.
39	A07	O	
40	A08	O	
41	A11	O	External DRAM address output. (Not used)
42	DVSS	—	Digital ground.
43	XOE	O	External DRAM output enable.
44	XCAS	O	External DRAM $\overline{\text{CAS}}$ output.
45	A09	O	External DRAM address output.
46	XRAS	O	External DRAM $\overline{\text{RAS}}$ output.
47	XWE	O	External DRAM write enable.
48	D1	I/O	External DRAM data bus.
49	D0	I/O	
50	D2	I/O	
51	D3	I/O	
52	MVCI	I	MD-DATA mode 1 switching input. (Low: normal mode; high: MD-DATA mode1)
53	ASYO	O	Playback EFM full-swing output. (Low: VSS; high: VDD)
54	ASYI	I	Playback EFM comparator slice voltage input.
55	AVDD	—	Analog power supply.
56	BIAS	I	Playback EFM comparator bias current input.
57	RFI	I	Playback EFM RF signal input.
58	AVSS	—	Analog ground.
59	PCO	O	Phase comparison output for master PLL of playback digital PLL and recording EFM PLL.
60	FILI	I	Filter input for master PLL of playback digital PLL and recording EFM PLL.
61	FILO	O	Filter output for master PLL of playback digital PLL and recording EFM PLL.
62	CLTV	I	Internal VCO control voltage input for master PLL of playback digital PLL and recording EFM PLL.
63	PEAK	I	Peak hold signal input for quantity of light.
64	BOTM	I	Bottom hold signal input for quantity of light.
65	ABCD	I	Signal input for quantity of light.
66	FE	I	Focus error signal input.
67	AUX1	I	Auxiliary input 1.
68	VC	I	Center voltage input.
69	ADIO	O	Monitor output for A/D converter input signal. (Not used)
70	AVDD	—	Analog power supply.
71	ADRT	I	Voltage input for the upper limit of the A/D converter operating range.
72	ADRB	I	Voltage input for the lower limit of the A/D converter operating range.
73	AVSS	—	Analog ground.
74	SE	I	Sled error signal input.
75	TE	I	Tracking error signal input.
76	DCHG	I	Connect to the low-impedance power supply.
77	APC	I	Error signal input for laser digital APC.

IC DESCRIPTION-2/3 (CXD2662R)-3/3

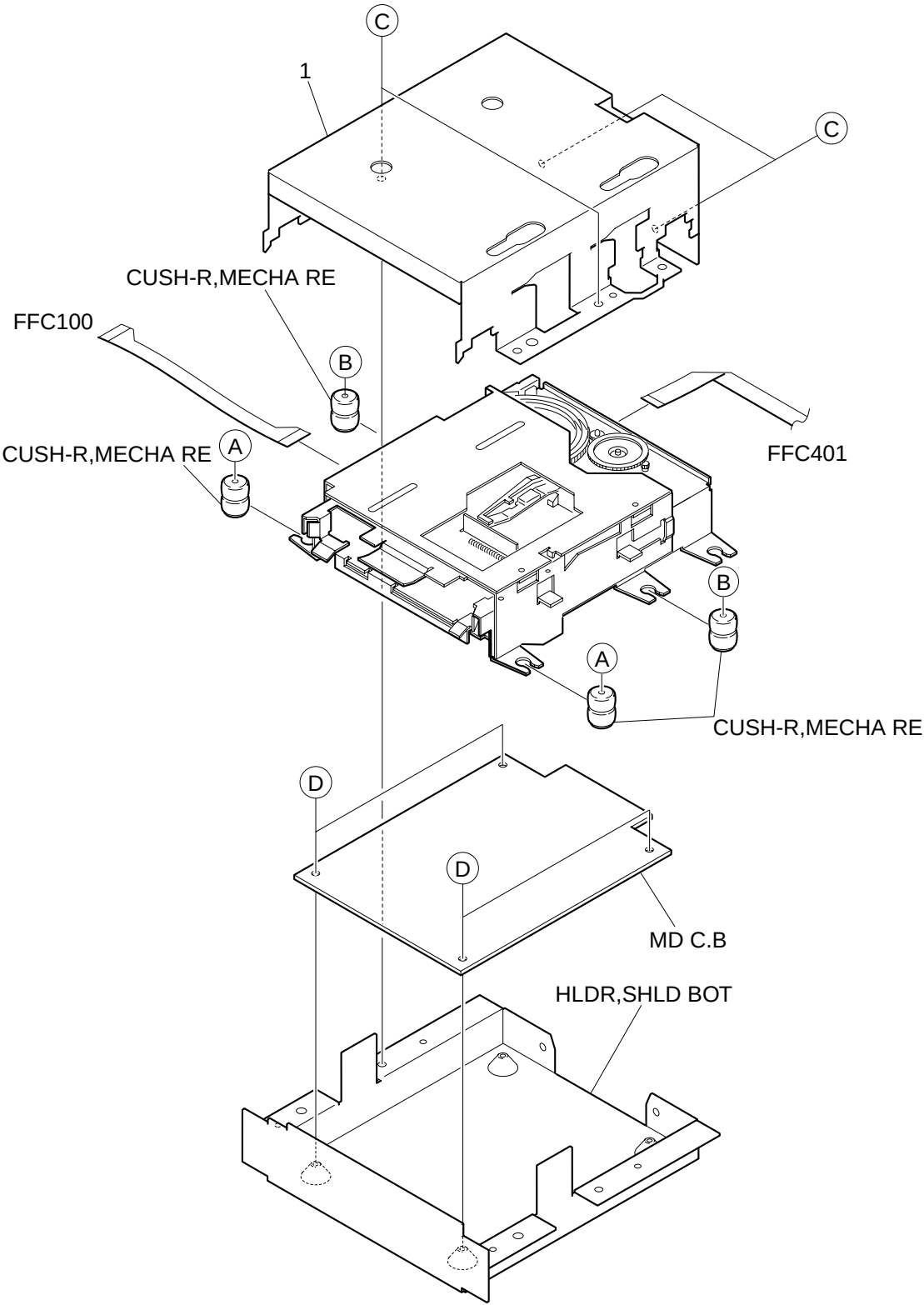
Pin No.	Pin Name	I/O	Description
78	ADFG	I	ADIP binary FM signal (22.05±1kHz) input.
79	F0CNT	O	CXA2523 current source setting output.
80	XLRF	O	CXA2523 control latch output. Latched at the falling edge.
81	CKRF	O	CXA2523 control shift clock output.
82	DTRF	O	CXA2523 control data output.
83	APCREF	O	Reference PWM output for laser APC.
84	LDDR	O	PWM output for laser digital APC. (Not used)
85	TRDR	O	Tracking servo drive PWM output. (-)
86	TFDR	O	Tracking servo drive PWM output. (+)
87	DVDD	—	Digital power supply.
88	FFDR	O	Focus servo drive PWM output. (+)
89	FRDR	O	Focus servo drive PWM output. (-)
90	FS4	O	4Fs output. (176.4kHz) (Not used)
91	SRDR	O	Sled servo drive PWM output. (-)
92	SFDR	O	Sled servo drive PWM output. (+)
93	SPRD	O	Spindle servo drive output. (PWM (-) or polarity)
94	SPFD	O	Spindle servo drive output. (PWM (+) or PWM absolute value)
95	FGIN	I	Spindle CAV servo FG input.
96	TEST1	I	Test pin.Connect to GND.
97	TEST2	I	
98	TEST3	I	
99	DVSS	—	Digital ground.
100	EFMO	O	Low when playback; EFM (encoded data) output when recording.

IC DESCRIPTION-3/3 (CXP81952M-566R)-1/2

Pin No.	Pin Name	I/O	Description
1	MCAS	—	Not used.
2	MRAS	—	
3	BUP	—	
4	AMUTE	O	Audio mute signal output.
5	ESK	O	Serial clock output for EEPROM interface.
6	EDO	O	Serial data output for EEPROM interface.
7	EDI	I	Serial data input for EEPROM interface.
8	ECS	O	EEPROM chip select signal output.
9	NC	—	Not used.
10	RFLCT	I	Input from disc reflectance detection switch.
11	NC	—	Not used.
12	LS	I	Input signal from pickup inner circumference detect switch.
13	LDSW	I	Input signal from loading mechanism EJECT position detect switch.
14	PBSW	—	Not used.
15	RECSW	I	Input signal from loading mechanism REC position detect switch.
16, 17	NC	—	Not used.
18	ACOFF	—	
19	SREQ	I	System control send request signal input for system control interface.
20	EXTDIN	O	External DIGITAL-IN permission signal output.
21	SLOW	O	Speed control signal output to loading mechanism.
22	LOAD	O	Movement direction control signal output-1 to loading mechanism.
23	EJECT	O	Movement direction control signal output-2 to loading mechanism.
24	MREQ	O	MD controller send request output signal for system control interface.
25	DRIVE	O	EFM driver ON/OFF signal output.
26-36	NC	—	Not used.
37	MP	—	Connected to VSS.
38	SRST	I	MD controller reset signal input.
39	DGND	—	Connected to VSS.
40	XTALO	O	External crystal connection terminal-1 for system clock oscillation.
41	XTALI	I	External crystal connection terminal-2 for system clock oscillation.
42	ARDY	I	READY input signal for system control interface.
43	SIN	I	Serial data input for system control interface.
44	SOUT	O	Serial data output for system control interface.
45	ACLK	O	Serial clock output for system control interface.
46	XLAT	O	Latch signal output for CXD2662 interface.
47	XRST	O	CXD2662 reset signal output.
48	XSTBY	O	CXA2523 standby signal output.
49	NC	O	Not used.
50	AVSS	—	Connected to VSS.
51	AVREF	—	Connected to VDD.
52	AVDD	—	

IC DESCRIPTION-3/3 (CXP81952M-566R)-2/2

Pin No.	Pin Name	I/O	Description
53	KEY0	I	Connected to VDD.
54	KEY1	I	
55	NC	I	
56	SLF	I	
57	SLR	I	
58	TEMP	I	Temperature sensor. Connected to S-8110 AMP.
59	MAGIC	I	Connected to VDD.
60	NC	I	
61	TEST	I	
62	DISCPRO	I	Disc write protection switch input.
63-66	MNT3-0	I	CXD2662 monitor signal input-1-4.
67	SENS	I	CXD2662 SENS signal input.
68	FLG	O	Monitoring signal of flag contained in SRDT of CXD2662 interface.
69	NC	O	Not used.
70	NC	O	
71	P-CONT	O	
72	RFSW	O	
73	NC	O	
74	NC	O	
75	DQSY	I	DIGITAL-IN SUB-Q sync input.
76	XINT	I	CXD2662 status sync input.
77	SRDT	I	Serial data input for CXD2662 interface.
78	SWDT	O	Serial data output for CXD2662 interface.
79	SCLK	O	Serial clock output for CXD2662 interface.
80	SQSY	I	SUB-Q, ADIP sync input.
81-83	NC	—	Not used.
84	TXI	I	Connected to VSS.
85	TXO	O	Open.
86	VSS	—	Connected to VSS.
87, 88	VDD	—	Connected to VDD.
89	NC	—	Not used.
90	DRVMUTE	O	BA5970FP mute signal output.
91-94	NC	—	Not used.
95	RECP	O	Laser power select signal output.
96	TX	O	Record data output enable signal.
97	MOD	O	High frequency superimpose circuit ON/OFF signal output.
98	OPMUTE	O	Laser mute signal output.
99	ARST	O	AK4519 reset signal output.
100	DENF	O	De-emphasis ON/OFF signal output.



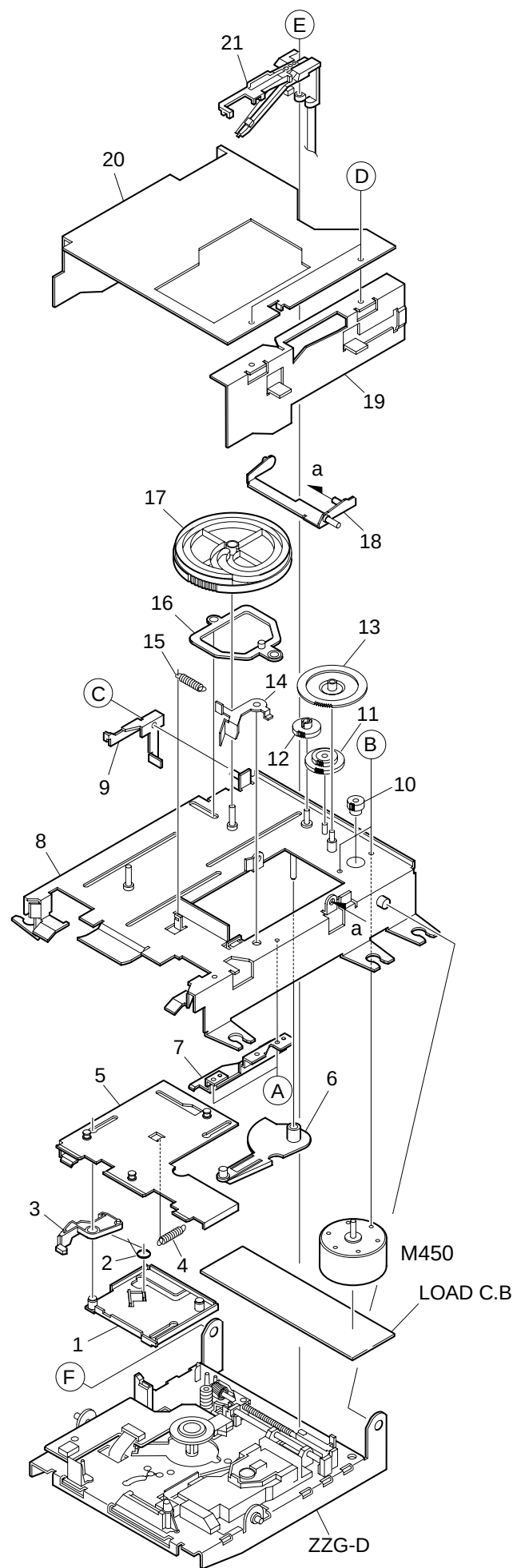
MECHANICAL PARTS LIST-1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	87-ZG9-202-310		HLD R,SHLD TOP
A	87-ZG9-209-010		S-SCREW,MD TF
B	87-ZG9-208-010		S-SCREW,MD T
C	87-067-020-010		SCREW, VTT+3-4
D	87-067-421-010		VTT+2-4

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	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue	GL	Light Green		

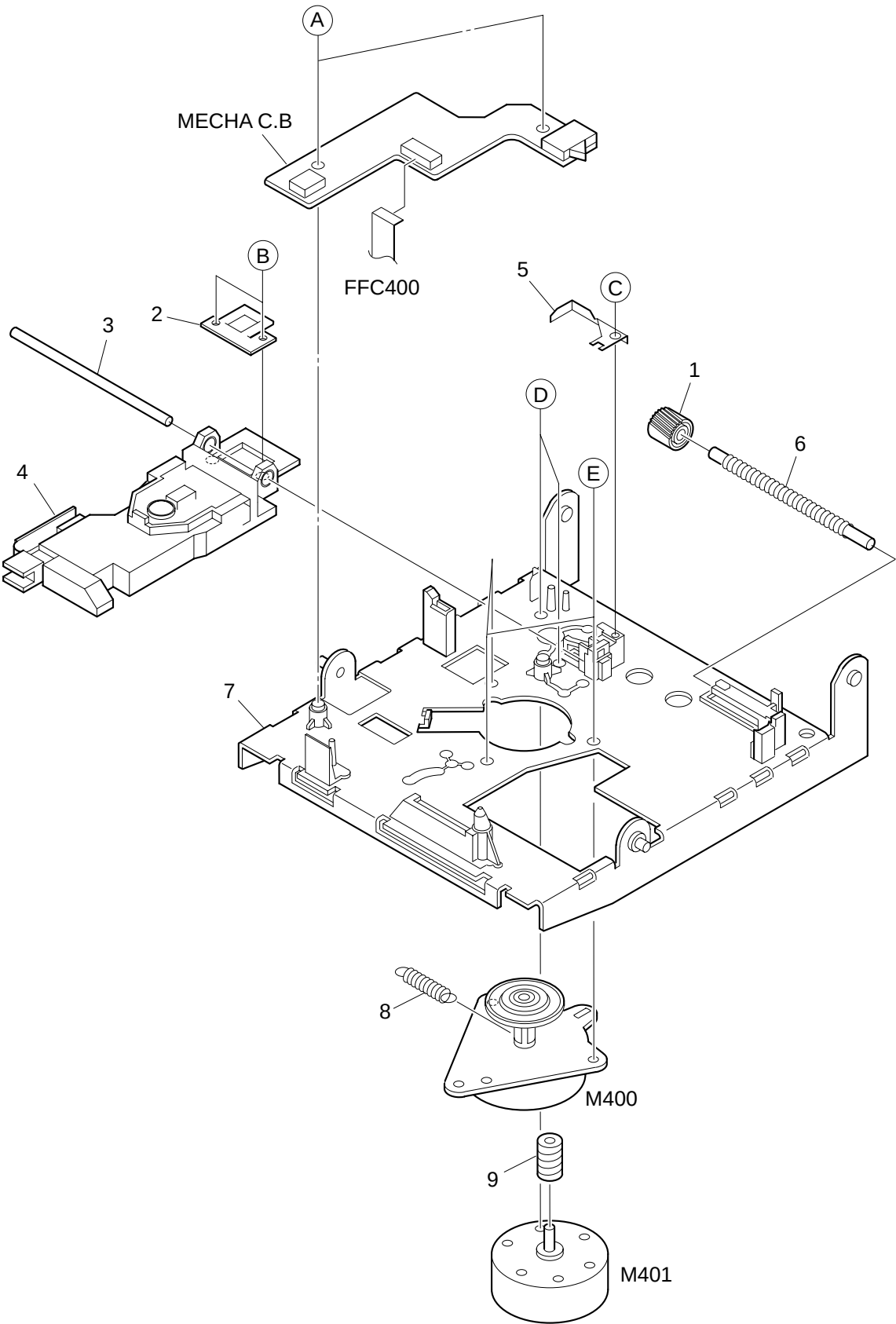
MECHANISM EXPLODED VIEW-1/2 (7ZG8 B2)-1/1



MECHANISM PARTS LIST-1/2 (7ZG8 B2)-1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	87-ZG8-220-210		PLATE ASSY,LATCH
2	87-ZG8-259-110		SPR-T,LATCH
3	87-ZG8-230-210		LEVER,LATCH (*)
4	87-ZG8-224-110		SPR-E,LATCH
5	87-ZG8-214-210		HLDR ASSY,CARTRIGE
6	87-ZG8-233-310		LEVER,SW H (*)
7	87-ZG8-255-210		PLATE,CARTRIGE
8	87-ZG8-277-010		CHAS ASSY,MAIN B
9	87-ZG8-256-110		LEVER,SW S2
10	87-ZG8-242-010		GEAR,MOT
11	87-ZG8-253-010		GEAR,REDUCTION S3
12	87-ZG8-246-010		GEAR,IDLER 2
13	87-ZG8-252-010		GEAR,REDUCTION L3
14	87-ZG8-231-110		LEVER,SHUTTER
15	87-ZG8-232-110		SPR-E,SHUTTER

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
16	87-ZG8-225-310		LEVER ASSY,CAM
17	87-ZG8-239-110		CAM,LOAD (*)
18	87-ZG8-257-210		LEVER ASSY,REC
19	87-ZG8-213-310		PLATE,SLIDE R
20	87-ZG8-209-310		PLATE ASSY,SLIDE L
21	87-A90-605-210		HEAD,OWH RF325-74A
A	87-B10-129-010		VTT+1.7-3.5 W/O MFZN2-C
B	87-B10-128-010		V+1.7-2 W/O MFZN2-C
C	87-B10-130-010		W-P,1.23-3.1-0.25 SLIT
D	87-B10-185-010		VTT+2-3
E	87-B10-286-010		VW+1.7-5 W/O MFZN2C
F	87-067-315-010		PW 3.1-7-0.5



MECHANISM PARTS LIST-2/2 (ZZG-D A1)-1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-ZGD-206-010		GEAR, LEAD
2	87-ZG3-216-010		SPR-P, RACK
3	87-ZG3-211-010		SHAFT, GUIDE
4	87-A91-444-010		PICKUP, KMS-260B
5	8Z-ZGD-207-010		SPR-P, LEAD
6	8Z-ZGD-208-010		SHAFT, LEAD
7	8Z-ZGD-201-010		CHAS ASSY, MECHA
8	8Z-ZGD-209-010		SPR-E, SPINDLE
9	8Z-ZGD-205-010		GEAR, MOT
A	87-341-035-210		SCREW, UT1+2-6
B	87-067-393-010		SCREW +1.4-1.4
C	8Z-ZGD-211-010		S-SCREW, VBT+1.7-5
D	87-263-523-310		SCREW, V+1.7-2
E	8Z-ZGD-210-010		S-SCREW, +2-2.5



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