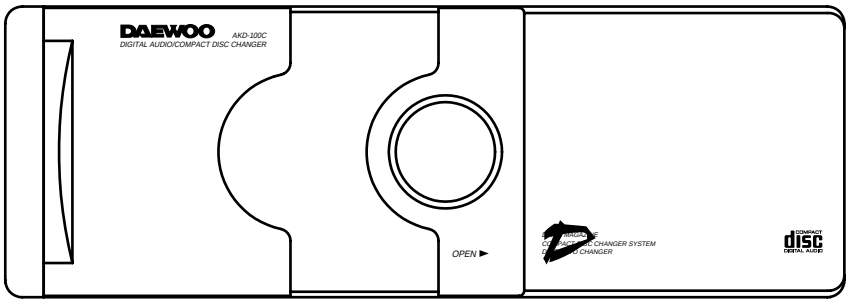
Service Manual

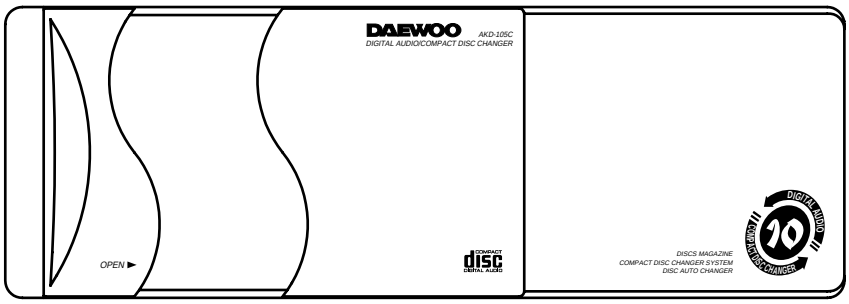
Car Audio

COMPACT DISC CHANGER

MODEL: AKD-100C
AKD-105C



AKD–100C



AKD–105C

DAEWOO ELECTRONICS CO., LTD

CONTENTS

GENERAL SPECIFICATIONS

¡ **System**	Compact Disc Digital Audio System
¡ **Laser Diode Properties**	Material : GAAIAS Wavelength : 780nm Emission Duration : Continuous Laser Output Power : Less Than 44.6μW
¡ **Frequency Response**	5-20,000Hz ± 1dB
¡ **Wow and Flutter**	Below Measurable Limit
¡ **Signal-To Noise Ratio**	90dB
¡ **Outputs**	Line Output (For Changer Connector Only)
¡ **Current Drain**	800mA (CD Play Back) 800mA (During Loading or Ejection a Disc)
¡ **Operating Temperature**	-10˚C to 55˚C (14˚F to 131˚F)
¡ **Dimensions**	Approx 245 x 85 x 174 mm (WxHxD) Not Incl. Projection Parts and Control
¡ **Weight**	Approx. 2.3kg
¡ **Power Requirment**	12V DC Car Battery (Negative Ground)
¡ **Supplied Accessories**	Disc Magazine (1) Mounting Hardware(1Set) Connecting Cable (1)

§ NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

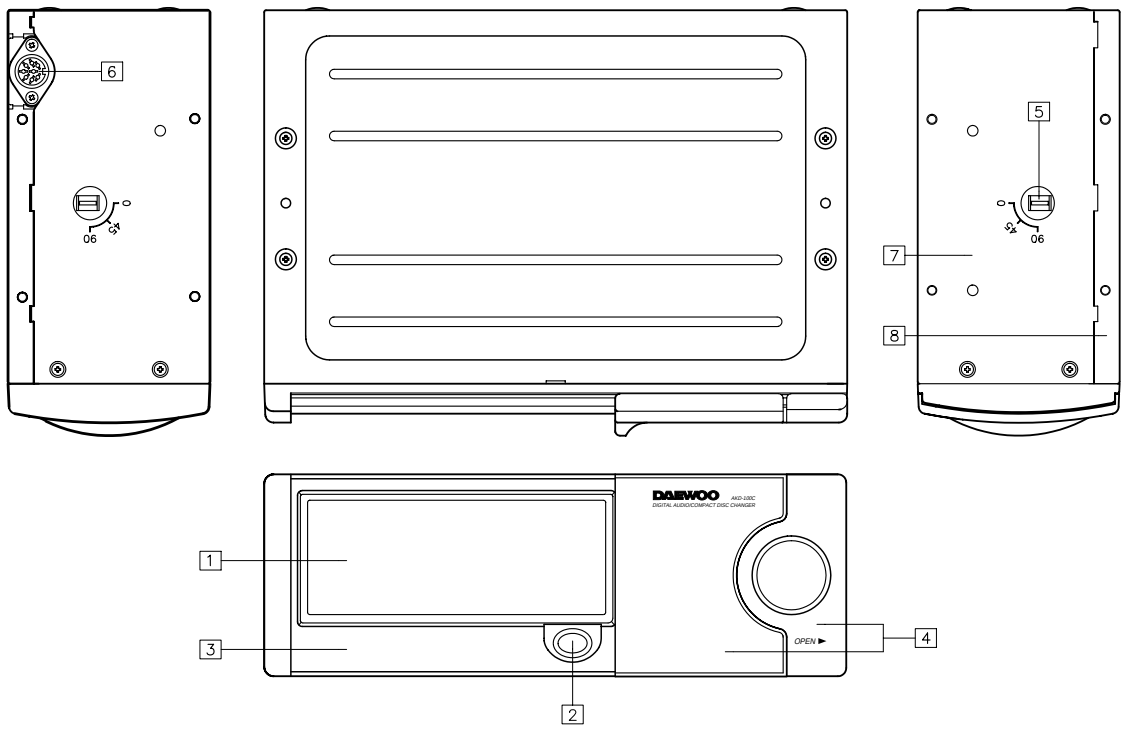
The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

CAUTION:
USE OF CONTROLS, ADJUSTMENTS, OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN, MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

THE COMPACT DISC PLAYER SHOULD NOT BE ADJUSTED OR REPAIRED BY ANYONE EXCEPT PROPERLY QUALIFIED SERVICE PERSONNEL.

GENERAL

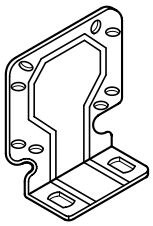
1. IDENTIFICATION OF PARTS



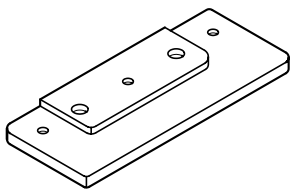
¥BMAGAZINE (REMAINED 10 DISCS)
/BEJECT BUTTON (When the eject button is depressed, the CD magazine will be ejected)
/CESCUTCHEON
/DSLIDING DOOR
/EINSTALLATION SELECTOR LEVERS
/FDIN SOCKET
/GCASE TOP
/HCHASSIS MAIN

2. INSTALLATION PARTS AND SUPPLIED MOUNTING HARDWARE

SCREW MACHINE
(M4X10) X 4

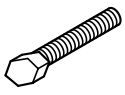


BRACKET MOUNTING X 2

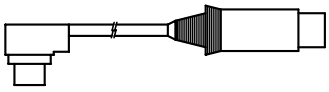


BRACKET STUD X 2

NUT HEX
(M6) X4



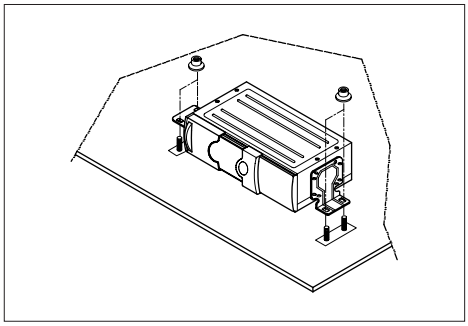
BOLT HEX
(M6X15) X 4



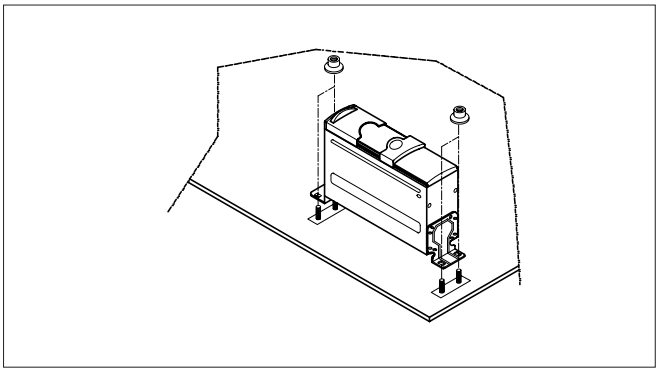
DIN CABLE X 1

§ **HORIZONTAL POSITION INSTALLATION (WITH BRKT STUD)**

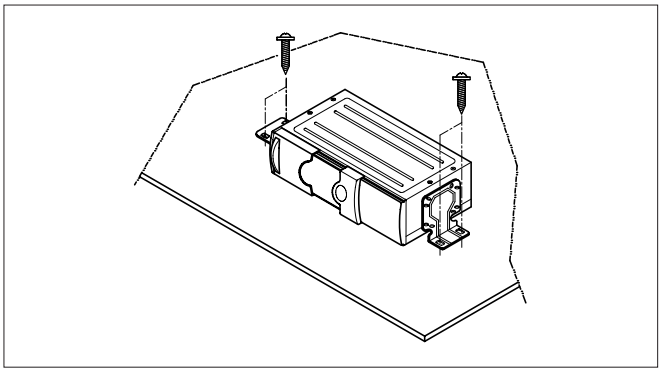
Use the wing nut to hold in place the installation bracket with bolt (M6x25) to the installation bracket, which is attached to the unit. Then affix the cushion rubber. Holes with the “0” marks are to be used for horizontal or suspending and “90” for vertical installation.



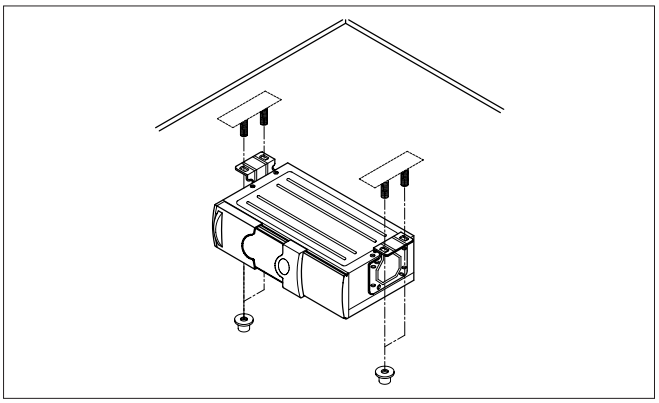
§ **VERTICAL POSITION INSTALLATION (WITH BRKT STUD)**



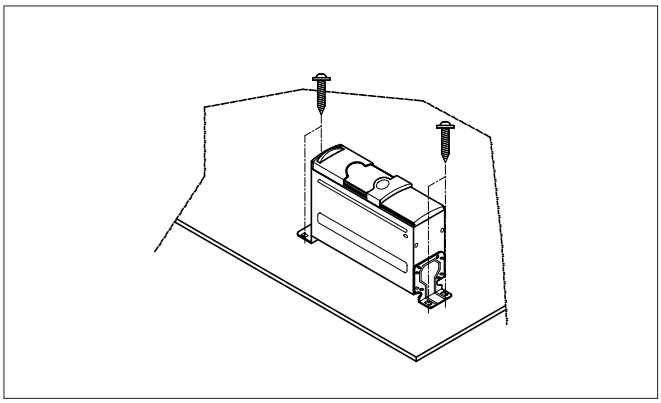
§ **HORIZONTAL POSITION INSTALLATION (WITHOUT BRKT STUD)**



§ **SUSPENDED POSITION INSTALLATION (WITH BRKT STUD)**

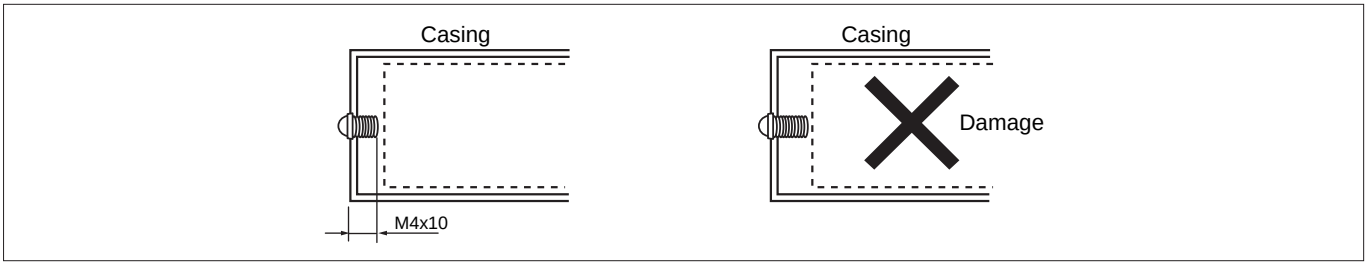


§ **VERTICAL POSITION INSTALLATION (WITHOUT BRKT STUD)**



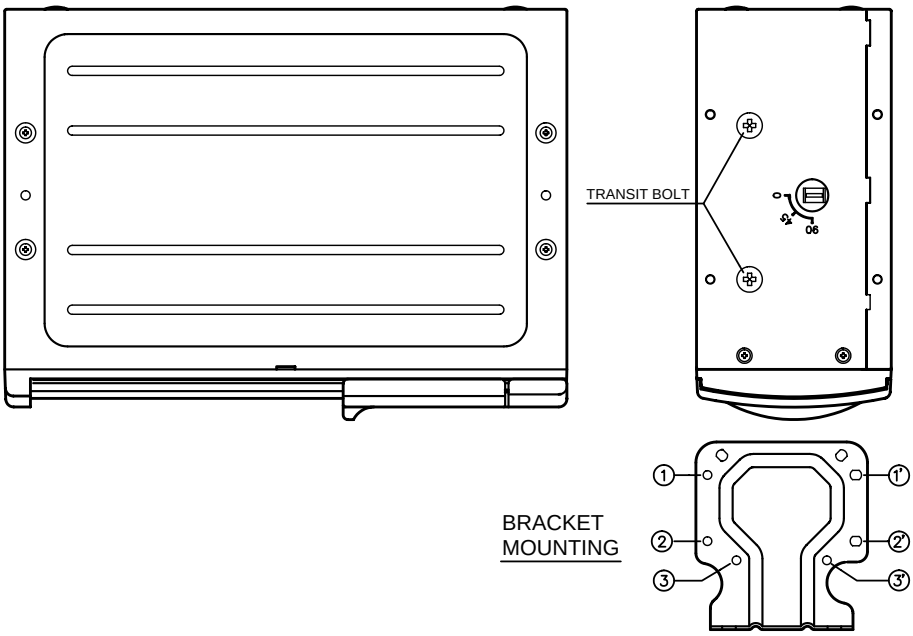
Dangerous Installation

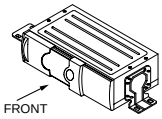
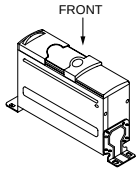
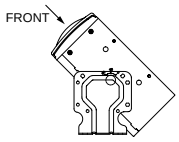
1. Only the provided screws and brackets should be used during installation. Using screws other than those specified will cause damage.
2. Before installation, check that there is no harness at the back when making a hole on the dashboard.



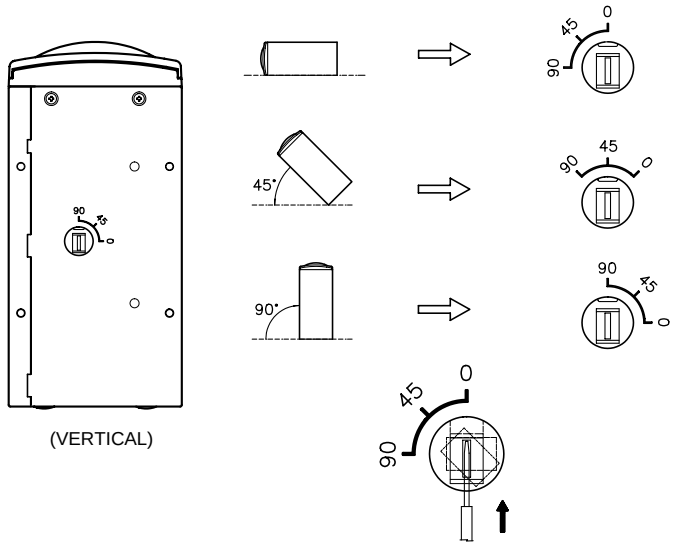
3. INSTALLATION METHOD (HOW TO INSTALL THE UNIT)

§ REMOVE TRANSIT SCREW 3 EACH BEFORE INSTALLATION.



HORIZONTAL	VERTICAL	DECLINING
		
After Select Mark Hole ①,① The unit fasten by the screw (M4x8)	After Select Mark Hole ②, ② The unit fasten by the screw (M4x8)	After Select Mark Hole ①,③ The unit fasten by the screw (M4x8)

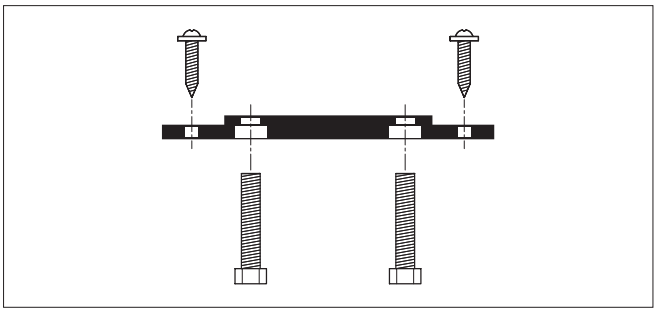
§ SETTING THE INSTALLATION SELECTOR LEVERS ADJUST FOR THE UNIT (PRIOR TO INSTALL)



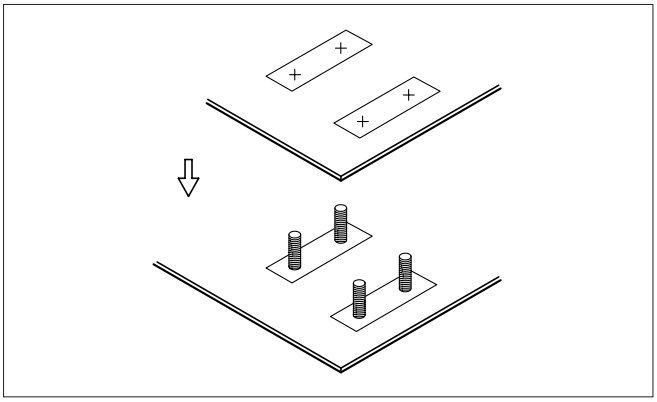
4. INSTALLATION METHOD (HOW TO INSTALL THE VECHICLE)

Should be determined before the unit install under carpet.

Adjust the installation bracket with bolts to suit the place of installation.



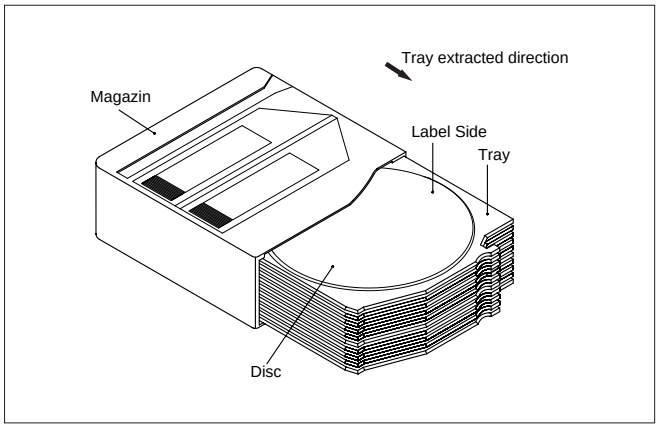
* Remove the floor carpet and decide on the place to install.
* Remove the separator of the cushion rubber that is attached to the installation bracket with bolt and install accordingly.
* Align the unit with the bolts and secure it with the wing nuts.



5. PREPARATIONS

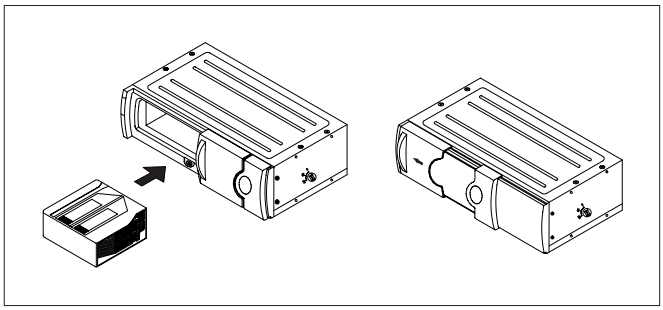
§ USAGE OF MAGAZINE (To load the discs)

* Load the discs with the labels facing upwards, as shown in the diagram.



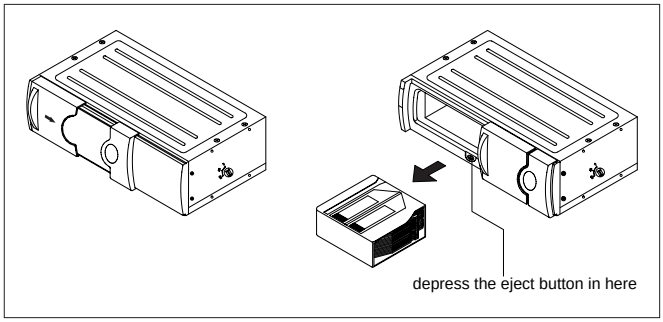
§ TO LOAD THE MAGAZINE

* Slide the sliding door to the right until it is completely latched on.
* Load the magazine in the direction as shown in the diagram push it in until is locked into the unit.
* After the magazine has been loaded, close the sliding door.
  (If not close sliding door, Dirt or dust entering it will cause damage)



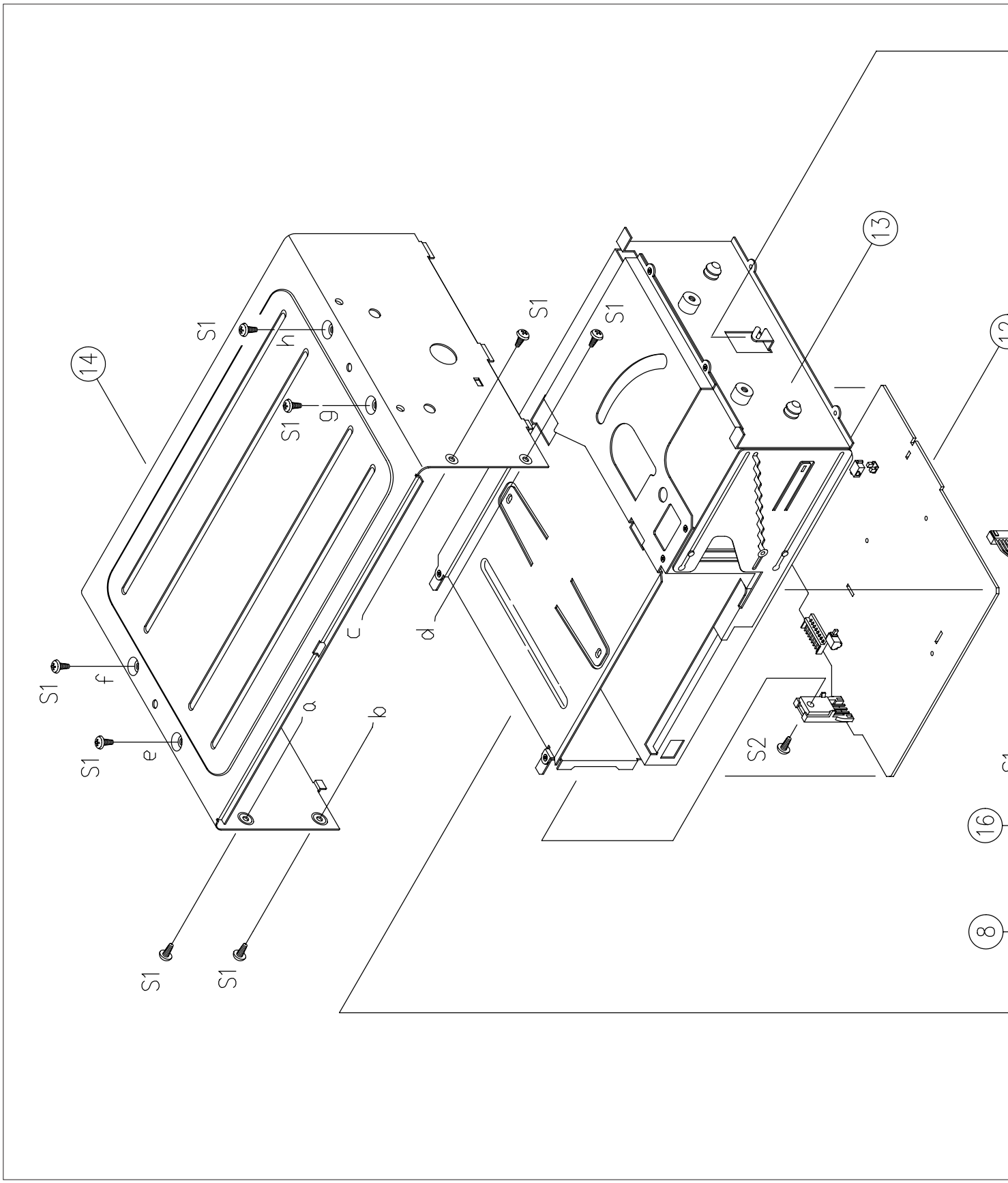
§ TO REMOVE THE MAGAZINE

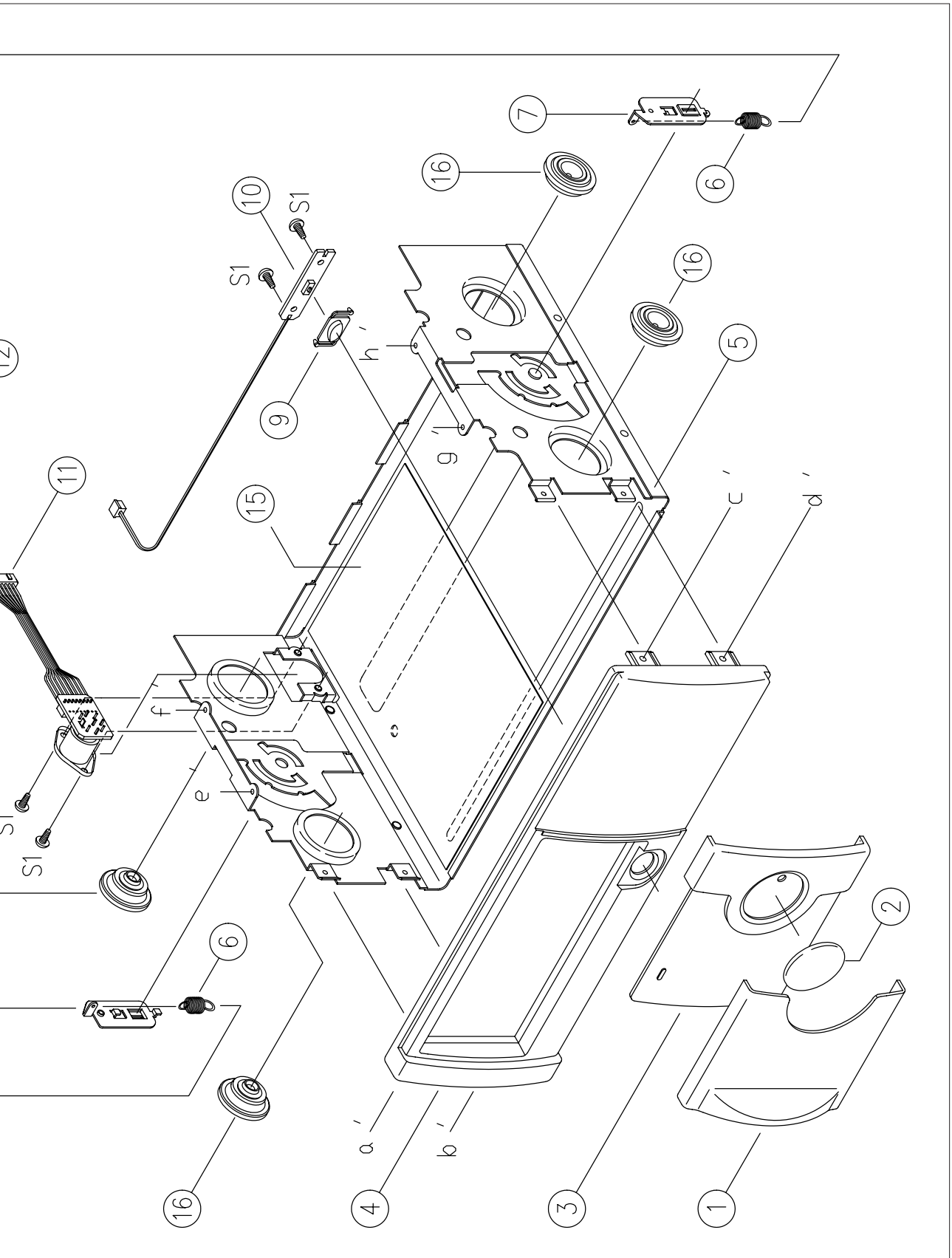
* Open the sliding door and depress the eject button.
* Remove the magazine when it has been ejected.
* Close the sliding door.



DISASSEMBLY

1. DISASSEMBLY




7
6
16
10
S1
S1
16
12
9
h'
5
g'
11
15
c'
d'
f'
e'
S1
S1
6
2
a'
b'
16
4
3
1

2. PICK UP ASSEMBLY

3. MAGAZINE ASSEMBLY

4. MECHANISM ASSEMBLY

DIAGRAMS

1. ELECTRICAL SPECIFICATION

§ TEST DISC: SONY YEDS 18 YTPE 4 OR TCD-784

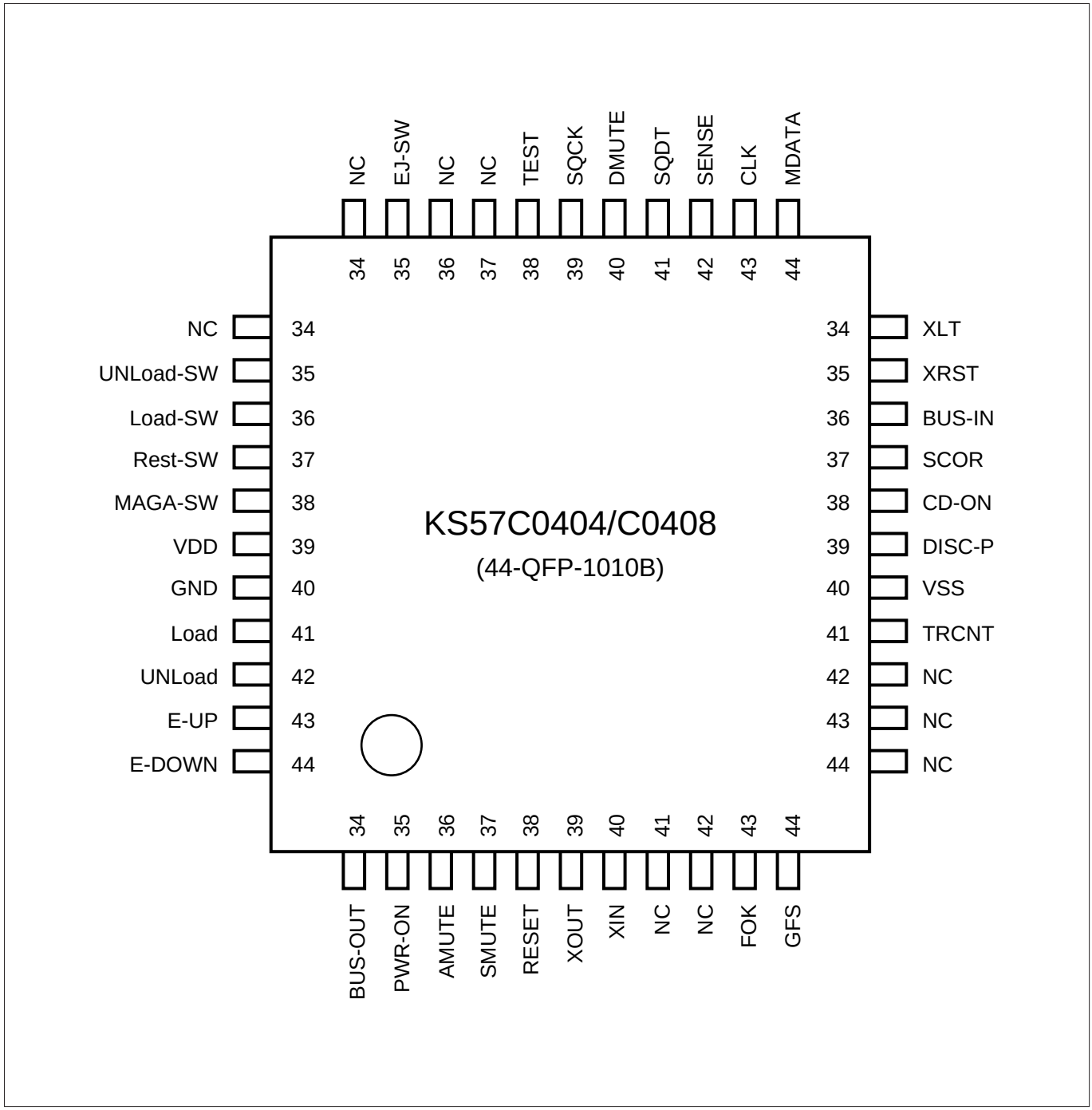
NO	ITEM	TEST CONDITION		UNIT	NOMINAL	LIMIT	1	2	REMARK
1	FREQUENCY RESPONSE	20Hz			-2.6	¡ ´±4dB			
		100Hz		dB	0.01	¡ ´±2dB			
		10KHz			-0.3	¡ ´±2dB			
		20KHz			-1.3	¡ ´±3dB			
2	S/N RATIO	1KHz		dB	90	¡ ˆ±80dB			JIS A FILTER
3	DYNAMIC RANGE			dB	90	¡ ˆ±75dB			JIS A FILTER
4	T.H.D			%	0.07	¡ ´0.3%			JIS A FILTER
5	DE-EMPHASIS	5KHz		dB	20dB	±3dB			JIS A FILTER
		16KHz		dB	20dB	±3dB			
6	CHANNEL SEPARATION	1KHz	L	dB	86	¡ ¯70dB			JIS A FILTER
			R						
		10KHz	L		76	¡ ˆ60dB			
			R						
7	OUTPUT LEVEL (V)	1KHz		V		0.8±0.1			
8	BACK UP CURRENT (mA)			mA	2.7	/ 5mA			

§ PLAY ABILITY TEST (25°C)

ITEM	TEST CONDITION	LIMIT
SCRATCH DISC	A-BEX TCD-721R	600µM
INTERRUPTION DISC	A-BEX TCD-725A	700µM
BLACK DOT	A-BEX TCD-725A	600µM
FINGER PRINTS	A-BEX TCD-725A	65µM
ECCENTRICITY DISC	A-BEX TCD-713	210µM
VERTICAL DEVIATION DISC	A-BEX TCD-731R	1000µM

2. MICOM PIN CONFIGURATION & DESCRIPTIONS

§ **PIN CONFIGURATIONS**

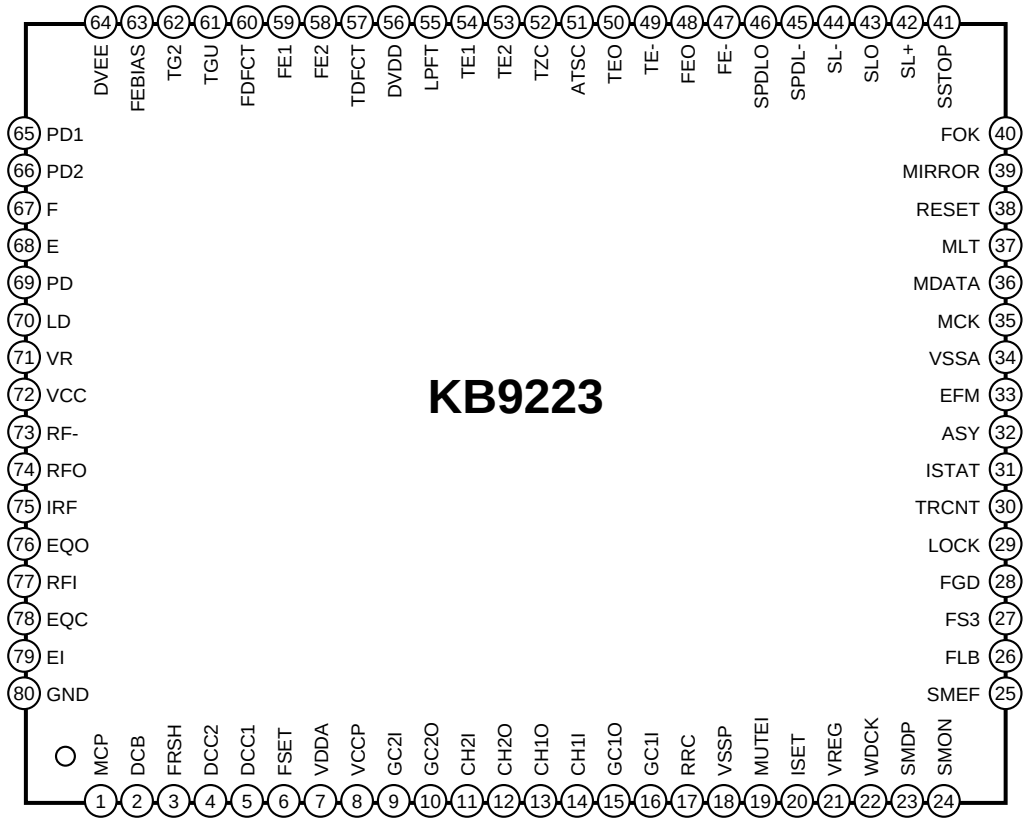


PIN	PIN NAME	DESCRIPTION	I/O	ACTIVE
1	BUS-OUT	MASTER MICOM DATA SIGNAL OUTPUT PIN.	I/O	H
2	PWR-ON	THIS PIN IS USED FOR POWER CONTROL OUTPUT.	O	H
3	AMUTE	AUDIO MUTE CONTROL PIN.	O	H
4	SMUTE	MOTOR DRIVE IC MUTE CONTROL PIN.	O	L
5	RESET	MICOM RESET INPUT PIN.	I	L
6	XOUT	OSC OUTPUT PIN.	O	H
7	XIN	OSC INPUT PIN.	I	H
8	NC	NO CONNECTION.	-	-
9	NC	NO CONNECTION.	-	-
10	FOK	THE INPUT PIN OF FOCUS OK SIGNAL (KB9223).	I	H
11	GFS	THE LOCK STATUS INPUT OF FRAME SYNC (KS9286).	I	H
12	NC	NO CONNECTION.	-	-
13	NC	NO CONNECTION.	-	-
14	NC	NO CONNECTION.	-	-
15	TRCNT	TRACK COUNT INPUT PIN (KB9223).	I	H
16	VSS	GROUND PIN.	-	-
17	DISC-P	DISC POSITION INPUT PIN (FROM PHOTO INTERRUPTER)	I	H
18	CD-ON	CDC MODE INPUT PIN (FROM MASTER MICOM).	I	H
19	SCOR	SUB CODE FRAME SYNC INPUT PIN (KS9286).	I	-
20	BUS-IN	MASTER MICOM DATA SIGNAL INPUT PIN.	I	H
21	XRST	SERVO/DSP IC RESET CONTROL PIN (KB9223, KS9286)	O	L
22	XLT	SERVO/DSP IC DATA LATCH OUTPUT PIN.	I/O	-
23	MDATA	SERVO/DSP IC DATA OUTPUT PIN.	I/O	-
24	CLK	SERVO/DSP IC CLOCK OUTPUT PIN.	I/O	-
25	SENSE	KB9223, KS9286 INTERNAL STATUS INPUT PIN.	I	-
26	SQDT	SERIAL INPUT OF SUBCODE-Q DATA (KS9286)	I	-
27	DMUTE	SYSTEM MUTE CONTROL OUTPUT PIN.	O	H
28	SQCK	SUBCODE-Q DATA CLOCK INPUT PIN.	I	-
29	TEST	SERVO/DSP IC TEST PIN.	O	H
30	NC	NO CONNECTION.	-	-

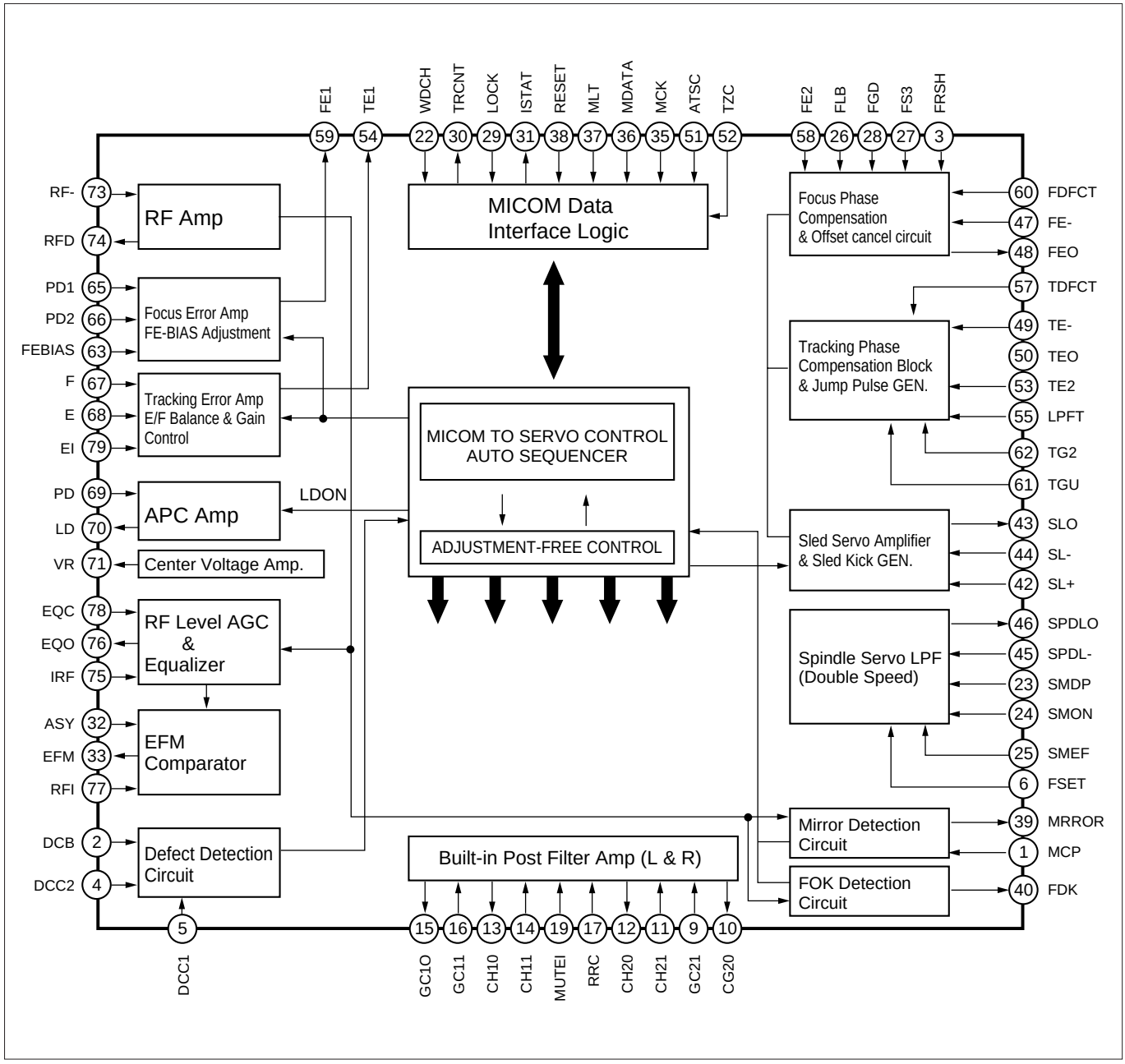
PIN	PIN NAME	DESCRIPTION	I/O	ACTIVE
31	NC	NO CONNECTION.	-	-
32	EJ-SW	EJECT KEY INPUT PIN.	I	H
33	NC	IT MUST BE CONNECTED TO GROUND	-	-
34	NC	IT MUST BE CONNECTED TO GROUND	-	-
35	UNLOAD-SW	MECHA UNLOAD SWITCH INPUT PIN.	I	H
36	LOAD-SW	MECHA LOAD SWITCH INPUT PIN.	I	H
37	RESET-SW	MECHA RESET SWITCH INPUT PIN.	I	H
38	MAGA-SW	MECHA MAGAZINE SWITCH INPUT PIN.	I	H
39	VDD	DEVICE POWER SUPPLY PIN.	-	H
40	GND	GROUND PIN.	-	-
41	LOAD	DISC LOAD OUTPUT PIN.	O	H
42	UNLOAD	DISC UNLOAD OUTPUT PIN.	O	H
43	E-UP	MECHA ELEVATOR UP CONTROL PIN.	O	H
44	E-DOWN	MECHA ELEVATOR DOWN CONTROL PIN.	O	H

3. IC BLOCK DIAGRAM & TERMINAL VOLTAGE

§ IC 101 (KB9223) - RF + ASSP + AUDIO FILTER



§ BLOCK DIAGRAM

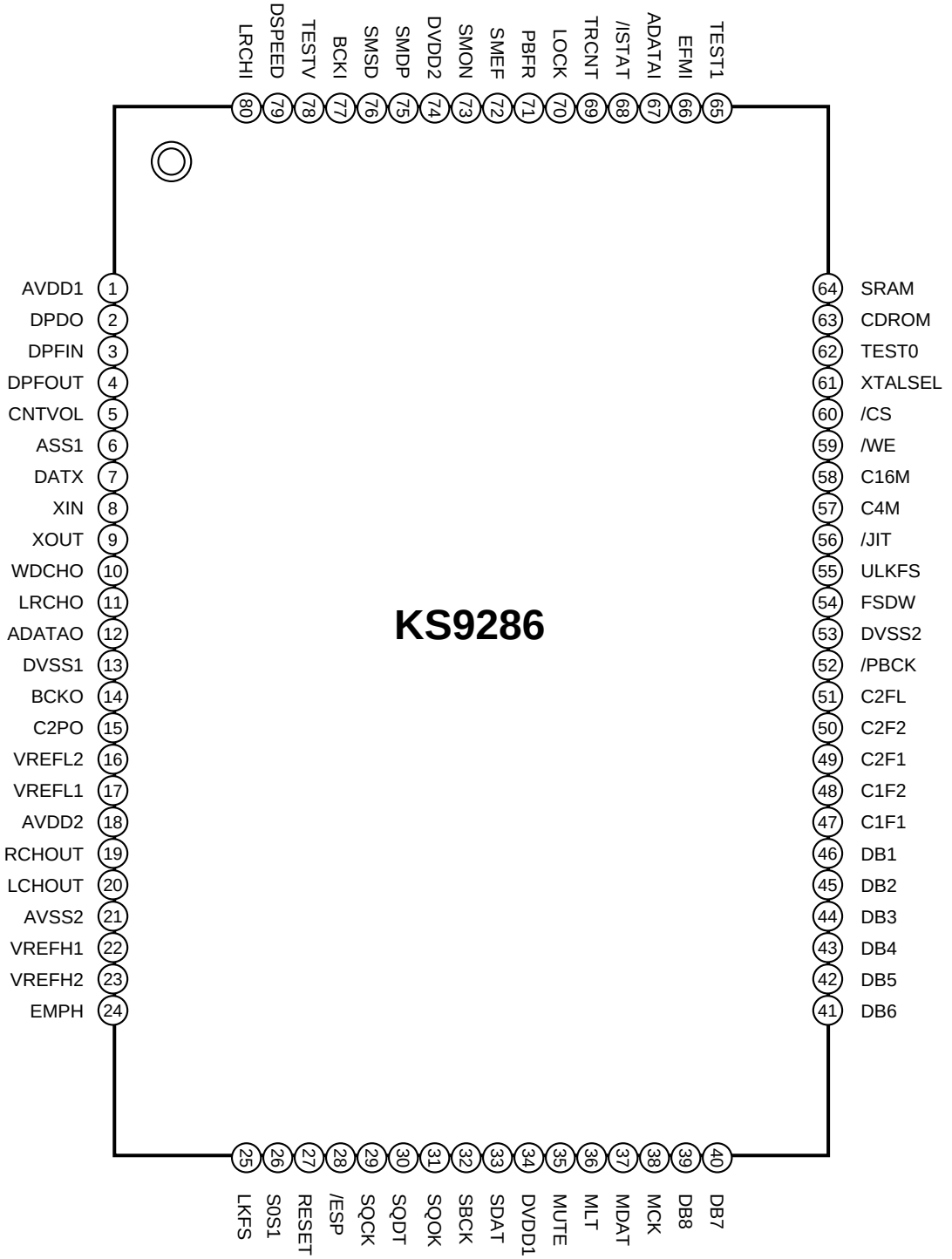


PIN	PIN NAME	DESCRIPTION	VOLTAGE
1	MCP	Capacitor connection pin for mirror hold	3.0V
2	DCB	Capacitor connection pin for defect Botton hold	2.0V
3	FRSH	Capacitor connection pin for time constant to generate focus search waveform	2.6V
4	DCC2	The input pin through capacitor of defect bottom hold output	0.9V
5	DCC1	The output pin of defect bottom hold	1.1V
6	FSET	The peak frequency setting pin for focus, tracking servo and cut off frequency of CLV LPF	0.8V
7	VDD	Analog VCC for servo part	4.9V
8	VCCP	VCC for post filter	4.9V
9	GC2I	Amplifier negative input pin for gain and low pass filtering of DAC output CH2	2.5V
10	GC2O	Amplifier output pin for gain and low pass filtering of DAC output CH2	2.5V
11	CH2I	The input pin for post filer channel 2	2.5V
12	CH2O	The output pin for post filter channel 2	2.5V
13	CH1O	The output pin for post filter channel 1	2.5V
14	CH1I	The input pin for post filter channel 1	2.5V
15	GC1O	Amplifier negative input pin for gain and low pass filtering of DAC output CH1	2.5V
16	GC1I	Amplifier negative input pin for gain and low pass filtering of DAC output CH1	2.5V
17	RRC	The pin for noise reduction of post filter bias	2.5V
18	VSSP	VSS for post filter	-
19	MUTEI	The input pin for post filter muting control	-
20	ISET	The input pin for current setting of focus search, track jump and sled kick voltage	2.0V
21	VREG	The output pin of regulator	3.4V
22	WDCK	The clock input pin for auto sequence	2.5V
23	SMDP	The input pin of CLV control output pin SMDP of DSP	2.8V
24	SMON	The input pin for spindle servo ON through SMON of DSP	4.9V
25	SMEF	The input pin of provide for an external LPF time constant	2.5V
26	FLB	Capacitor connection pin to perform rising low bandwidth of focus loop	2.5V
27	FS3	The pin for high frequency gain change of focus loop with internal FS3 switch	2.4V
28	FGD	Reducing high frequency gain with capacitor between FS3 pin	2.5V
29	LOCK	Sled runaway prevention pin	4.9V
30	TRCNT	Track count output pin	-
31	ISTAT	Internal status output pin	4.9V
32	ASY	The input pin for asymmetry control	2.5V
33	EFM	EFM comparator output pin	2.5V
34	VSSA	Analog VSS for servo part	-
35	MCK	MICOM clock input pin	4.9V
36	MDATA	MICOM data input pin	4.9V
37	MLT	MICOM data latch input pin	4.9V
38	RESET	Reset input pin	4.9V
39	MIRROR	The mirror output for test	-
40	FOK	The output pin of focus KO comparator	4.9V

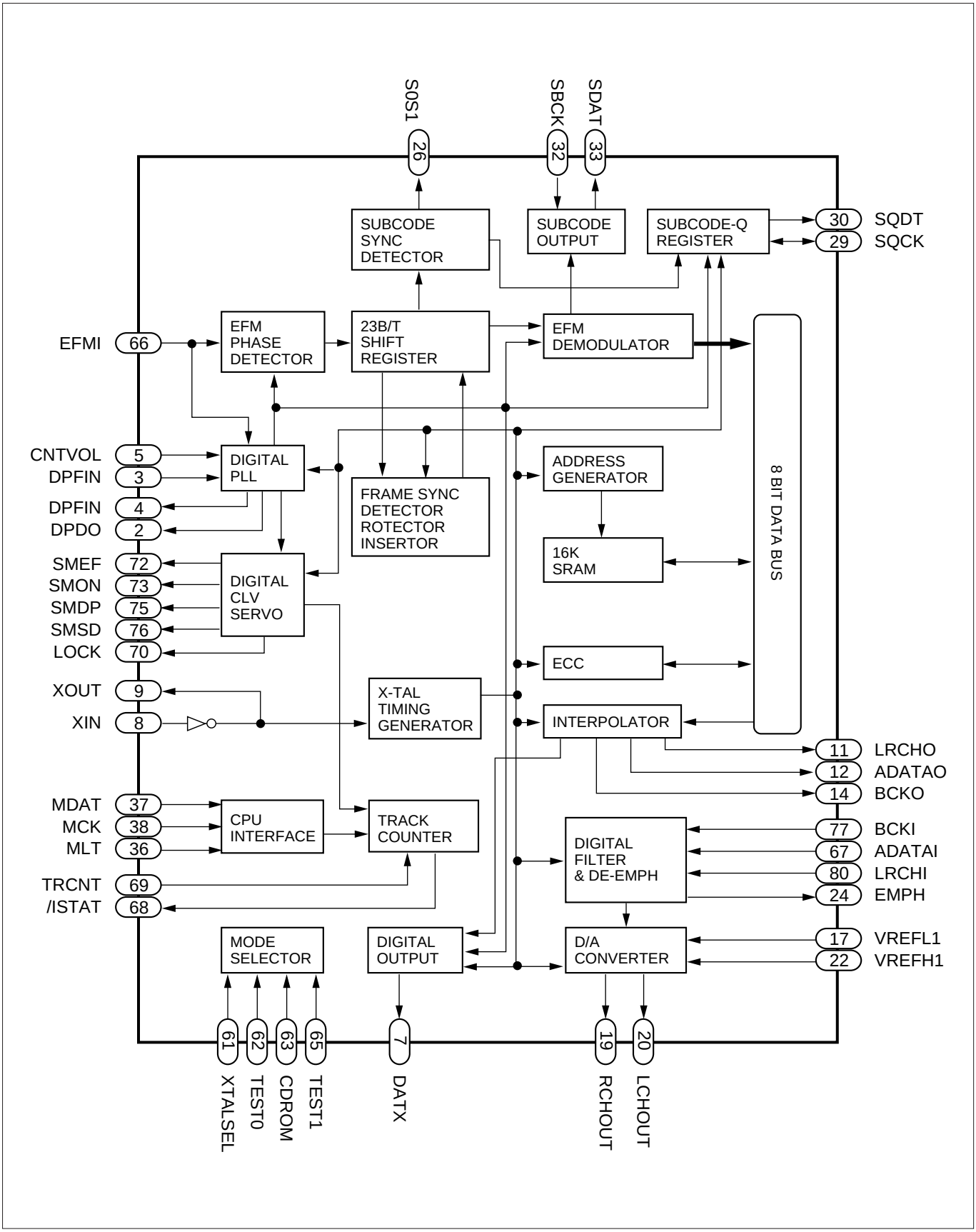
PIN	PIN NAME	DESCRIPTION	VOLTAGE
41	SSTOP	The pin detection whether pick up position is innermost or not	4.9V
42	SL+	The moninverting input pin of sled servo amplifier	2.5V
43	SLO	The output pin of sled servo amplifier	2.5V
44	SL-	The inverting input pin of sled servo amplifier	2.5V
45	SPDL-	The noninverting input pin of spindle servo amplifier	2.5V
46	SPDLO	The output pin of spindle servo amplifier	2.7V
47	FE-	The inverting input pin of focus servo amplifier	2.5V
48	FEO	The output pin of focus servo amplifier	2.3V
49	TE-	The inverting input pin of tracking servo amplifier	2.5V
50	TEO	The output pin of tracking servo amplifier	2.5V
51	ATSC	The input pin for Anti-shock detection	2.5V
52	TZC	The comparator input pin for tracking zero crossing detection	2.5V
53	TE2	Tracking servo input pin	2.5V
54	TE1	Tracking error amplifier output pin	
55	LPFT	The input pin of tracking error low pass filtering signal	2.5V
56	DVDD	The power supply pin for logic circuit	4.9V
57	TDFCT	The capacitor connection pin for tracking defect compensation	2.4V
58	FE2	Focus servo input pin	2.5V
59	FE1	Focus error amplifier output pin	2.4V
60	FDFCT	The capacitor connection pin for focus defect compensation	2.4V
61	TGU	The capacitor connection pin for focus defect compensation	2.4V
62	TG2	The pin for high frequency gain change of tracking servo loop with internal TG2 switch	2.5V
63	FEBIAS	Focus error bias voltage control pin	-
64	DVEE	The DVEE pin for logic circuit	-
65	PD1	The negative input pin of RF I/V amplifier 1 (A+C signal)	2.5V
66	PD2	The negative input pin of RF I/V amplifier 2 (B+D signal)	2.5V
67	F	The negative input pin of F I/V amplifier (F signal)	2.5V
68	E	The negative input pin E I/V amplifier (E signal)	2.5V
69	PD	The input pin for APC	-
70	LD	The output pin for APC	4.0V
71	VR	The output pin of (AVEE+AVCC)/2 voltage	2.5V
72	VCC	VCC for RF part	4.9V
73	RF-	RF summing amplifier inverting input pin	2.5V
74	RFO	RF summing amplifier output pin	3.3V
75	IRF	The input pin for AGC	2.5V
76	ARF	The output pin for AGC	2.5V
77	RFI	The input pin for EFM comparating	2.5V
78	CAGC	The capacitor connection pin for AGC	4.1V
79	EI	Feedback input pin of E I/V amplifier for EF Balance control	-
80	GND	GND for RF part	0V

§ IC 501 (KS9286) - DSP + DAC

PIN CONFIGURATION



§ BLOCK DIAGRAM



§ PIN DESCRIPTION

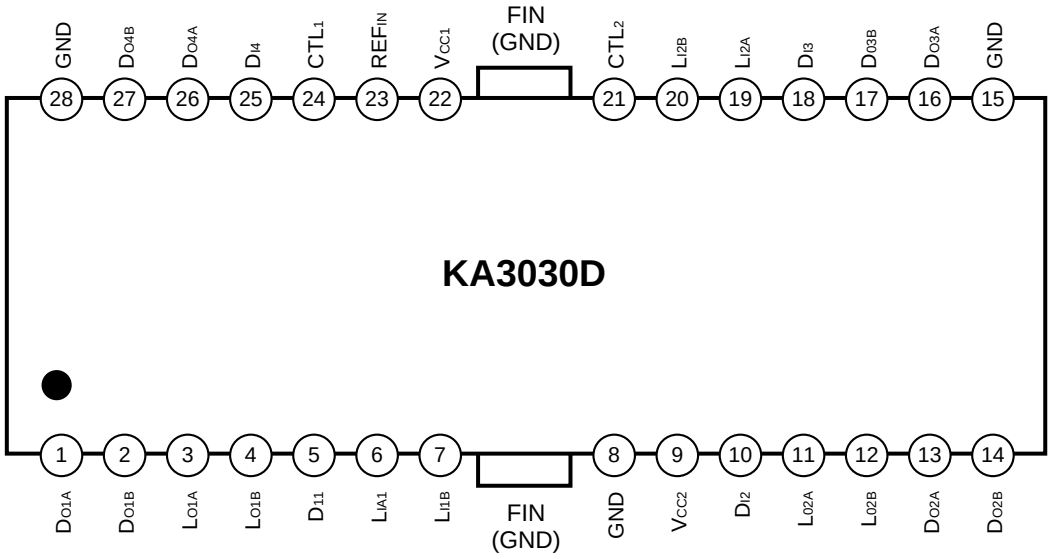
PIN	PIN NAME	IO	DESCRIPTION	VOLTAGE
1	AVDD1	-	Analog VCC1	4.9V
2	DPDO	O	Charge pump output for Digital PLL	2.4V
3	DPFIN	I	Filter input for Digital PLL	2.4V
4	DPFOUT	O	Filter output for digital PLL	3.0V
5	CNTVOL	I	VCO control voltage for digital PLL	3.0V
6	AVSS1	-	Analog Ground1	-
7	DATX	O	Digital Audio output data	-
8	XIN	I	X'tal oscillator input	2.1V
9	XOUT	O	X'tal oscillator output	2.3V
10	WDCHO	O	Word clock output of 48bit/Slot (88.2KHz)	2.5V
11	LRCHO	O	Channel clock output of 48bit/Slot (44.1KHz), 88.2KHz when ESP ON	-
12	ADATAO	O	Serial audio data output of 48bit/Slot (MSB first), double speed output when ESP ON	-
13	DVSS1	-	Digital Ground1	-
14	BCKO	O	Audio data bit clock output of 48 bit/Slot (2.1168MHz), 4.2336MHz when ESP ON	-
15	C2PO	O	C2 Pointer for output audio data	-
16	VREFL2	I	Input terminal2 of reference voltage "L" (Floating)	-
17	VREFL1	I	Input terminal1 of reference voltage "L" (GND connection)	1.2V
18	AVDD2	-	Analog VCC2	4.9V
19	RCHOUT	O	Right-Channel audio output through D/A converter	2.5V
20	LCHOUT	O	Left-Channel audio output through D/A converter	2.5V
21	AVSS2	-	Analog ground2	-
22	VREFH1	I	Input terminal1 of reference voltage "H" (VDD connection)	3.8V
23	VREFH2	I	Input terminal2 of reference voltage "H" (Floating)	-
24	EMPH	O	Emphasis/Non-Emphasis output, H: Emphasis ON, L: Emphasis OFF	-
25	LKFS	O	The Lock Status output of frame sync	4.9V
26	S0S1	O	Output of subcode sync signal (S0+S1)	-
27	RESET	I	System reset at "L"	4.9V
28	/ESP	I	ESP function ON/OFF control ("L": ESP function ON, "H": ESP function OFF)	4.9V
29	SQCK	I	Clock for output Subcode-Q data	4.9V
30	SQDT	O	Serial output of Subcode-Q data	-

PIN	PIN NAME	IO	DESCRIPTION	VOLTAGE
31	SQOK	O	The CRC (Cycle Redundancy Check) check result signal output of Subcode-Q	-
32	SBCK	I	Clock for output subcode data	-
33	SDAT	O	Subcode serial data output	-
34	DVDD1	-	Digital VDD1	4.9V
35	MUTE	I	Mute control input (“H”: Mute ON)	0V
36	MLT	I	Latch Signal Input from Micom (Schmit Trigger)	4.9V
37	MDAT	I	Serial data input from Micom (Schmit Trigger)	4.9V
38	MCK	I	Serial clock input from Micom (Schmit Trigger)	4.9V
39	DB8	I/O	SRAM data I/O port 8 (MSB)	0V
40	DB7	I/O	SRAM data I/O port 7	0V
41	DB6	I/O	SRAM data I/O port 6	0V
42	DB5	I/O	SRAM data I/O port 5	0V
43	DB4	I/O	SRAM data I/O port 4	0V
44	DB3	I/O	SRAM data I/O port 3	0V
45	DB2	I/O	SRAM data I/O port 2	0V
46	DB1	I/O	SRAM data I/O port 1 (LSB)	0V
47	C1F1	I/O	Monitoring output for C1 error correction (RA1)	-
48	C1F2	I/O	Monitoring output for C1 error correction (RA2)	-
49	C2F1	I/O	Monitoring output for C2 error correction (RA3)	-
50	C2F2	I/O	Monitoring output for C2 error correction (RA4)	-
51	C2FL	I/O	C2 decoder flag (RA5, “H”: When the processing C2 code is impossible correction status.)	-
52	/PBCK	I/O	Output of VCO/2 (4.3218MHz) (RA6)	-
53	DVSS2	I/O	Digital ground2	0V
54	FSDW	I/O	Windown or unprotected frame sync (RA7)	-
55	ULKFS	I/O	Frame sync protection state (RA8)	-
56	/JIT	I/O	Display of either RAM overflow or underflow for ±4 frame jitter margin (RA9)	-
57	C4M	I/O	Only monitoring signal (4.2336MHz) (RA10)	-
58	C16	I/O	16.9344MHz signal output (RA11)	-
59	/WE	I/O	Terminal for test	-
60	/CS	I/O	Terminal for test	-
61	XTALSEL	I	Mode Selection1 (H: 33.8688MHz, L: 16.9344MHz)	0V

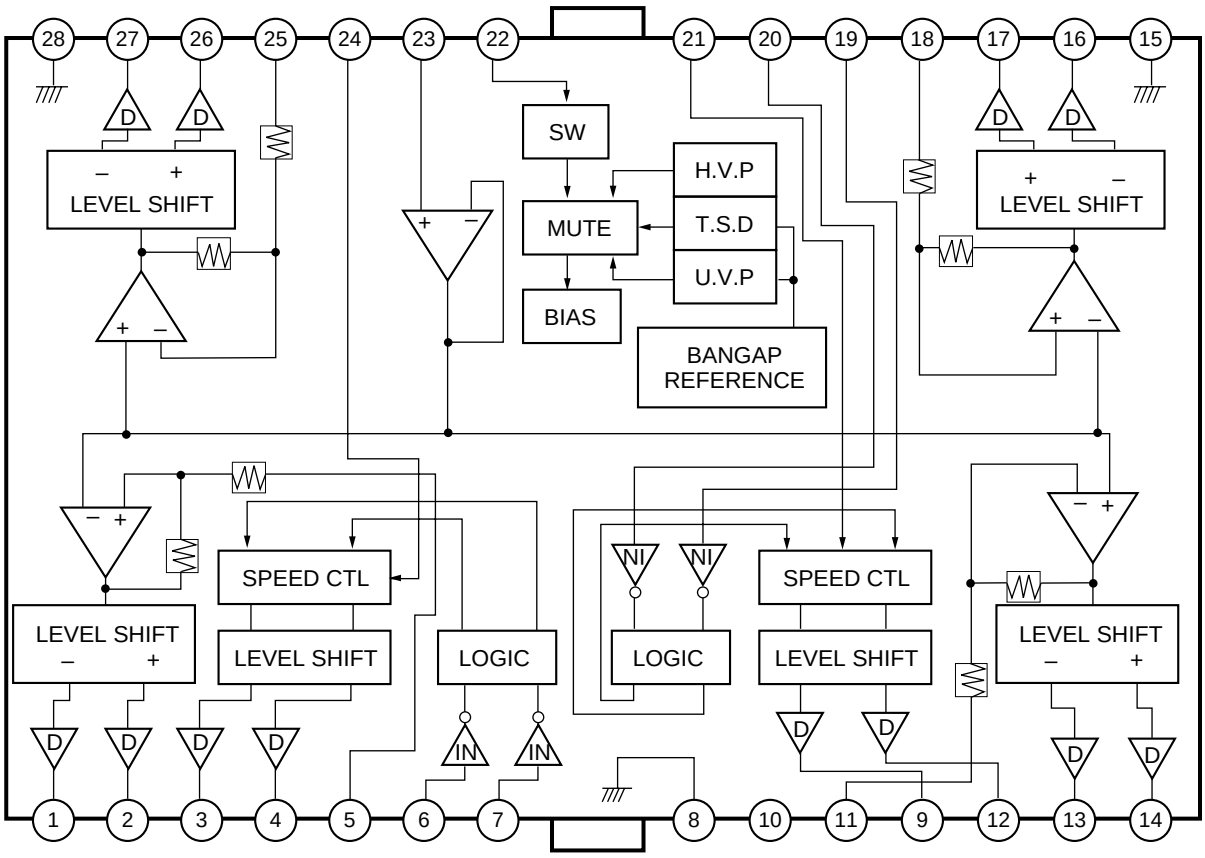
PIN	PIN NAME	IO	DESCRIPTION	VOLTAGE
62	TESTO	I	TEST input terminal (GND connection)	0V
63	CDROM	I	Mode Selection 2 (H: CD-ROM, L; CDP)	0V
64	SRAM	I	TEST input terminal (GND connection)	0V
65	TEST1	I	TEST input terminal (GND connection)	0V
66	EFMI	I	EFM signal input	2.5V
67	ADATAI	I	Serial audio data input of 48 bit/Slot (MSB first)	0V
68	/ISTAT	O	The internal status output	4.9V
68	/ISTAT	O	The internal status output	4.9V
69	TRCNT	I	Tracing counter input signal	-
70	LOCK	O	Output signal of LKFS condigiton sampled PBFR/16 (if LKFS is “H”, LOCK is “H if LKFS is sampled “L” at least 8 times by PBFR/16, LOCK is “L”.)	4.9V
71	PBFR	O	Write frame clock (Lock: 7.35Khz)	-
72	SMEF	O	LPF time constant control of the spindle servo error signal	2.5V
73	SMON	O	ON/OFF control signal for spindle servo	4.9V
74	DVDD2	-	Digital VDD2	4.9V
75	SMDP	O	Spindle Motor drive (Rough control in the PSEED mode, Phase control in the PHASE mode)	2.8V
76	SMSD	O	Spindle Motor drive (Velocity control in the PHASE mode)	2.5V
77	BCKI	I	Audio data bit clock input of 48 bit/Slot (2.1168MHz)	0V
78	TESTV	I	TEST input terminal (GND connection)	-
79	DSPEED	I	TEST input terminal (VDD connection)	4.9V
80	LRCHI	I	Channel clock input of 48bit/Slot (44.1KHz)	0V

§ IC 201 (KA3030D) - 6CH MOTOR DRIVE

PIN CONFIGURATION



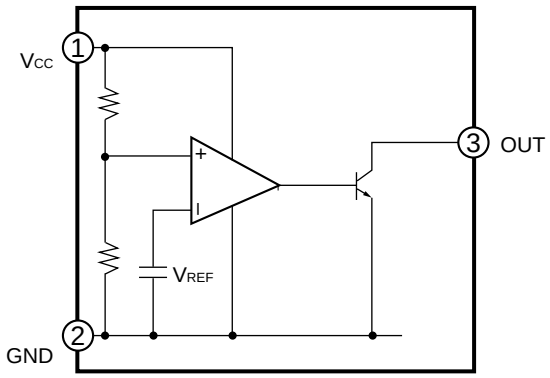
BLOCK DIAGRAM



PIN	PIN NAME	DESCRIPTION	I/O	VOLTAGE
1	FO-	FOCUS SERVO DRIVE OUTPUT (-)	O	3.9V
2	FO+	FOCUS SERVO DRIVE OUTPUT (+)	O	3.3V
3	EO-	ELEVATOR DOWN OUTPUT	O	3.6V
4	EO+	ELEVATOR UP OUTUT	O	3.6V
5	FOIN	FOCUS SERVO DRIVE INPUT	I	2.3V
6	EI-	ELEVATOR DOWN INPUT	I	0V
7	EI+	ELEVATOR UP INPUT	I	0V
8	GND	GROUND	-	0V
9	VCC1	MECHANISM OPERATION SUPPLY VOLTAGE	-	7.8V
10	SPIN	SPINDLE MOTOR DRIVE INPUT	I	2.7V
11	LO-	LOADING MOTOR DRIVE OUTPUT (-)	O	0V
12	LO+	LOADING MOTOR DRIVE OUTPUT (+)	O	0V
13	SP+	SPINDLE MOTOR DRIVE OUTPUT (+0	O	3.9V
14	SP-	SPINDLE MOTOR DRIVE OUTPUT (1)	O	3.4V
15	GND	GROUND	-	0V
16	SL-	SLED MOTOR DRIVE OUTPUT (-)	O	3.9V
17	SL+	SLED MOTOR DRIVE OUTPUT (+)	O	3.4V
18	SLIN	SLED MOTOR DRIVE INPUT	I	2.7V
19	LI+	LOADING MOTOR DRIVE INPUT (+)	I	0V
20	LI-	LOADING MOTOR DRIVE INPUT (-)	I	0V
21	L-CNT	LOADING MOTOR SPEED CONTROL	I	5.7V
22	VCC2	SERVO MOTOR OPERATION SUPPLY VOLTAGE	-	7.8V
23	VREF/MUTE	REFERENCE & MUTE INPUT	I	2.5V
24	E-CNT	ELEVATOR MOTOR SPEED CONTROL	I	5.7V
25	TOIN	TRACKING SERVO DRIVE INPUT	I	2.5V
26	TO+	TRACKING SERVO DRIVE OUTPUT (+)	O	3.7V
27	TO-	TRACKING SERVO DRIVE OUTPUT (-)	O	3.5V
28	GND	GROUND	-	0V

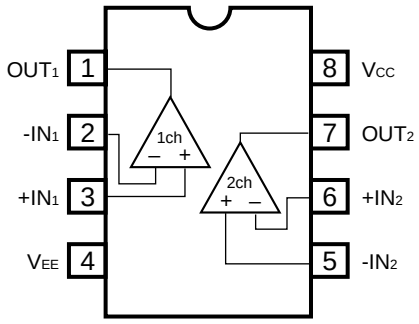
§ IC 602 (KIA7027AP) - RESET IC

BLOCK DIAGRAM



PIN	PIN NAME	DESCRIPTION	I/O	VOLTAGE
1	INPUT	SUPPLY VOLTAGE INPUT	I	4.9V
2	GND	GROUND	-	0V
3	OUTPUT	VOLTAGE OUTPUT	O	4.9V

§ IC 102 (BA4560F) - OP AMP

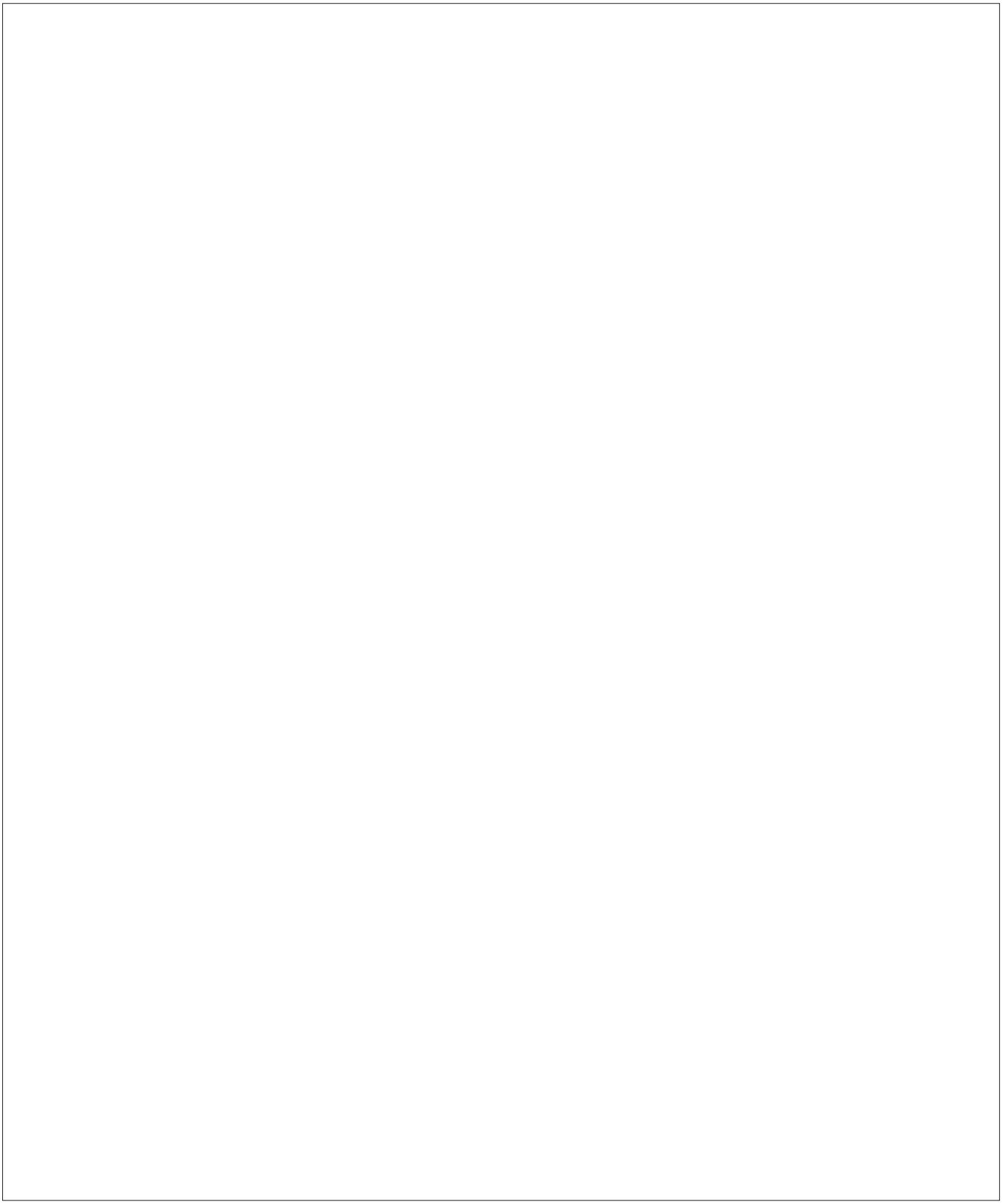


PIN	PIN NAME	DESCRIPTION	I/O	VOLTAGE
1	OUT1	NB SIGNAL AMP OUTPUT	O	2.5V
2	IN1 (-)	NB SIGNAL INPUT	I	2.5V
3	IN1 (+)	REFERENCE VOLTAGE INPUT	I	2.5V
4	GND	GROUND	-	0V
5	IN2 (+)	REFERENCE VOLTAGE INPUT	I	2.5V
6	IN2 (-)	NA SIGNAL INPUT	I	2.5V
7	OUT2	NA SIGNAL AMP OUTPUT	O	2.5V
8	VCC	SUPPLY VOLTAGE	-	4.9V

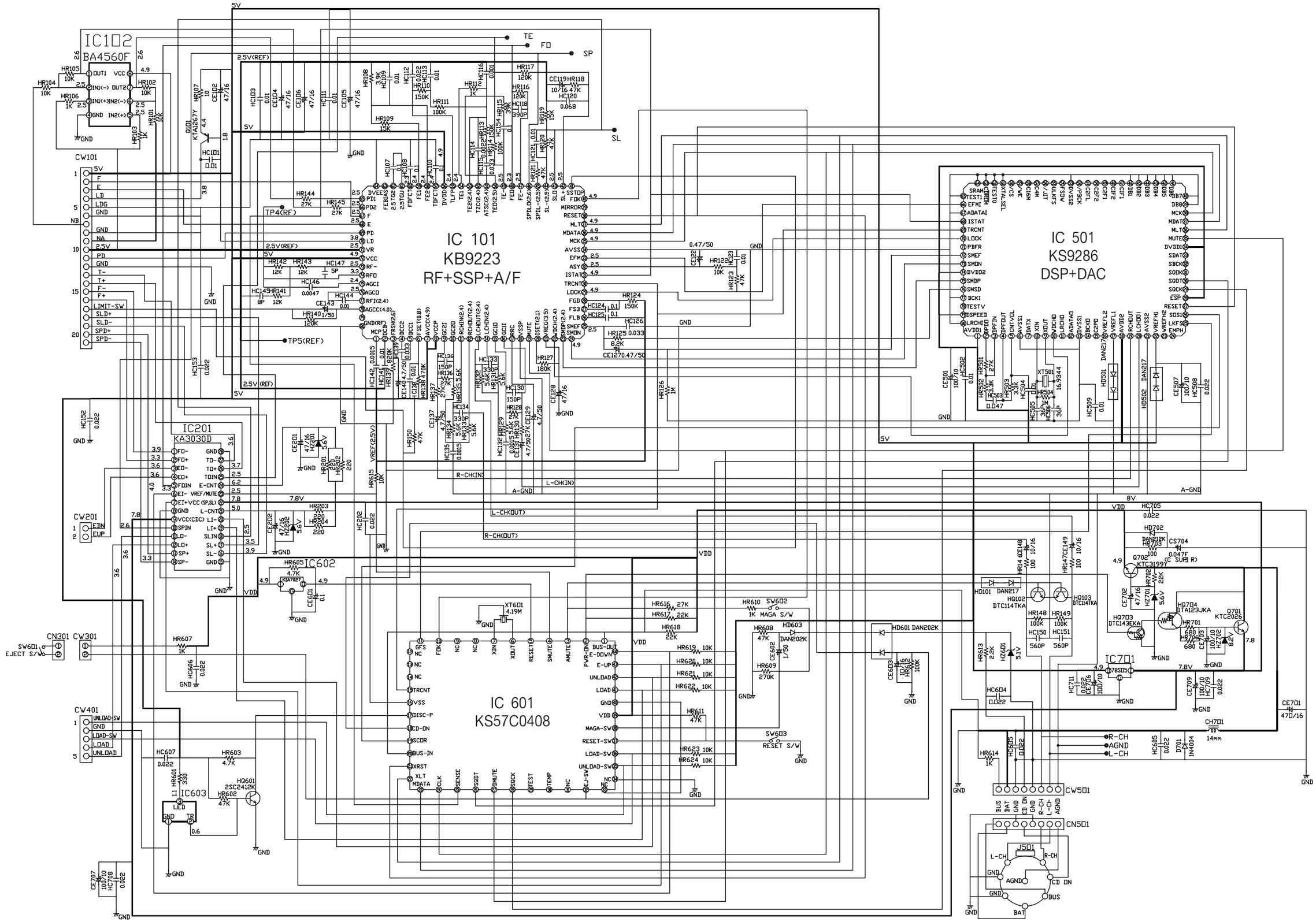
4. PRINTED WIRING BOARDS

§ **Top Side**

§ **Bottom Side**



AKD-100C / 105C Circuit Diagram



6. MECHANISM ASSEMBLY

NO.	PART NAME	PARTS No	DESCRIPTION	Q'TY
1	MAIN CHASSIS ASS'Y	3008 01 504		1
2	SIDE PLATE ASS'Y	3008 01 502		1
3				
4	EL PLATE A ASS'Y	3008 02 502		1
5	MAIN FRAME ASS'Y	3008 03 501		1
6	SUB FRAME ASS'Y	3008 04 501		1
7	P CHASSIS ASS'Y	3008 05 501		1
8	MAGAZINE ASS'Y	3008 06 302		1
9				
10				
11				
12	EL MOTOR ASS'Y	3008 02 301		1
13	SW PWB ASS'Y	3008 03 303		1
14	L MOTOR ASS'Y	3008 03 302		1
15	LOCK PLATE A ASS'Y	3008 03 304		1
16	LOCK PLATE B ASS'Y	3008 03 305		1
17	CLAMP PLATE ASS'Y	3008 04 301		1
18	TURN TABLE ASS'Y	3008 05 301		1
19	21P PWB ASS'Y	3008 05 302		1
20	FEED MOTOR ASS'Y	3008 05 303		1
21	HOOK LEVER P ASS'Y	3008 04 502		1
22				
23	FEED SCREW (M) ASS'Y	3031 05 304		1
24				
25				
26	EL GEAR B	3008 02 02		1
27	EL GEAR C	3008 02 17		1
28	EL GEAR D	3008 02 04		3
29	EL PLATE B	3008 02 06		1
30				
31	MLA SPRING	3008 02 11		1
32	ML AR	3008 02 10		1
33				
34	ER PLATE	3008 02 12		1
35				
36				
37	MOTOR BRACKET L	3008 03 07		1
38	TRAY GEAR	3008 03 28		1
39	MAIN GEAR	3008 03 31		1
40	LOADING GEAR	3008 03 10		1
41	LIFT GEAR	3008 03 33		1
42	TRAY GUIDE A	3008 03 13		1
43	TRAY GUIDE B	3008 03 14		1
44	CHAKING ARM	3008 03 30		1
45	LIFT PLATE A	3008 03 16		1
46	LIFT PLATE B	3008 03 17		1
47	LIFT SPRING	3008 03 18		2
48	CLUTCH SPRING	3008 03 27		1
49	LOCK PLATE C	3008 02 29		1
50	TRIG PLATE SPRING	3031 01 15		1

(MODEL TN-CDC1010-102M)

NO.	PART NAME	PARTS No	DESCRIPTION	Q'TY
51				
52	HOOK LEVER M	3008 04 06		1
53	TRAY ARM	3008 04 11		1
54				
55				
56	P BASE A	3008 05 02		1
57	P BASE B	3008 05 03		1
58				
59	EJECT LEVER	3008 02 20		1
60	TOP COVER	3008 01 14		1
61	E SPRING (10)	3008 02 25		1
62	PU GEAR (B)	3030 05 10		1
63	NUT PUSH SPR PLATE (M)	3031 05 30		1
64	FD GR BLK (M)	3031 05 28		1
65	PU M NUT (M)	3031 05 29		1
66	THRUST SPR	3031 05 10		1
67	PU SHAFT (M)	3031 05 32		1
68				
69	PICK UP VED0375-TN	6904 16 01		1
70				
71	HOLD PLATE	3008 01 13		1
72				
73	ROTARY DAMPER	6502 01 01		1
74	GEAR SHEET	3008 02 18		1
75				
76				
77				
78				
79				
80				
81	CAMERA SCREW 1.7x2.2	9C01 17 223		2
82				
83	CAMERA S TAPPING SCREW (G) 2x2.5	9C04 20 253		3
84	CAMERA B TAPPING 2x3.5	9C06 20 353		3
85	CAMERA B TAPPING SCREW 2x5	9C06 20 503		9
86	TS. SG2x3	9C20 20 301		18
87	TS.S TAMS 2x15	9C39 20 051		1
88	CAMERA TAPPING SCREW B (3) 2x5	9C44 20 503		2
89	CAMERA TAPPING SCREW P (3) 1.7x5	9C45 17 503		1
90				
91	TAMS SCREW 2x3	9P02 20 031		2
92				
93	TS. SG2x4	9C20 20 401		2
94				
95	E RING S2.3	9E01 00 231		1
96				
97	P WASHER CUT 1.55x5x0.5	9W02 50 060		6
98				
99				
100				

PART LIST

1. EXPLODED PARTS LIST

NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY
1	97T1806200	DOOR L	ABS XR-404 SPRAY/SILK	1
2	97T1001500	DECORATION	URETAN PRINT	1
3	97T1806300	DOOR R	ABS XR-404 SPRAY/SILK	1
4	97T1414900	ESCUTCHEON	ABS XR-404 SPRAY/SILK	1
5	97T0663030	CHASSIS MAIN	SECC1 0.8T PAINT	1
6	97T3013900	SPRING MTG	STS-304 0.7PI	2
7	97T2609200	LEVER MTG	SECC1 0.8T PAINT	2
8	97T13C4500	KNOB EJECT	ABS XR-404 SILK	1
9	PNSWMBKC00	PCB SW AS	AKD-100C	1
10	PNDJMBKC00	PCB CONN AS	AKD-100C	1
11	PNMAMBKC00	PCB MAIN AS	AKD-100C	1
12	97T6009300	DECK MECHANISM	TN-CDC1010-102M	1
13	97T0436200	COVER TOP	SECC1 0.8T PAINT/SILK	1
14	97T5602500	INSULATION	PET 0.25T	1
15	97T2609900	DAMPER	TN-CDC1010	4
S1	7173260611	SCREW TAPTITE	TT2 BIN 2.6x6 MFZN	12
S2	7173260811	SCREW TAPTITE	TT2 BIN 2.6x8 MFZN	1

§ OTHER

NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY
1	97T1500200	MAGAZINE ASS'Y	TN-CDC1010 IN/BAG	1

§ MOUNTING ACCESSORIES

NO.	PART CODE	PART NAME	DESCRIPTION	Q'TY
	97T2444400	BRACKET MTG	SCP-1 BK PAINT	2
	97T2441400	BRACKET STUD	ABS XR-404 BK	2
	7343601511	BOLT HEXAGON	6B-3-6x15 MFZN	4
	7393600611	NUT HEXAGON	6N-3-6 MFZN	4
	7061401012	SCREW MACHINE	PAN 4x10 HSBK	4

2. ELECTRIC PARTS LIST

§ IC

REF	PART NO.	DESCRIPTION	
IC101	1KB9223---	IC CHIP RF	KB9223 RF+SSP+AF
IC102	1BA4560F--	IC AMP	BA4560F
IC201	1KA3030D--	IC CHIP DRIVE	KA3030D
IC501	1KS9286---	IC CHIP DSP	KS9286 DSP+DAC
IC601	19920408H0	IC CHIP CUSTOM	KS57C0408
IC602	1K1A7027P-	IC RESET	KIA7027AP
IC603	1SP123519-	IC PHOTO	SPI-235-19 SANYO
IC701	IZ1A78S05P	IC REGULATOR	KIA78S05P (AUTO)

§ TRANSISTER

REF	PART NO.	DESCRIPTION	
HQ101	TKTA1663Y-	TR CHIP	KTA1663Y
HQ102	TKSR1110-Y	TR CHIP	KSR1110 (R10)
HQ103	TKSR1110-Y	TR CHIP	KSR1110 (R10)
HQ601	TKSC2859-Y	TR CHIP	KSC2859-Y (EIY)
Q701	TKTD2058Y-	TR	KTD2058-Y
Q702	TZSC945YC-	TR	KSC945YC
HQ703	TKSR1101-Y	TR CHIP	KSR1101-Y (R01)
HQ704	TKSR2113-Y	TR CHIP	KSR2113-Y (R63)

§ DIODE

REF	PART NO.	DESCRIPTION	
HD101	DKDS226--B	DIODE CHIP	KDS226 SOT-23 C3
HD501	DKDS226-B	DIODE CHIP	KDS226 SOT-23 C3
HD502	DKDS226-BB	DIODE CHIP	KDS226 SOT-23 C3
HD601	DKDS184--B	DIODE CHIP	KDS-184 SOT-23 B3
HD603	DKDS184--B	DIODE CHIP	KDS-184 SOT-23 B3
HD604	DKDS184--B	DIODE CHIP	KDS-184 SOT-23 B3
D701	DKN4004A--	DIODE	KN4004A AUTO 26MM
HD702	DKDS193--B	DIODE CHIP	KDS-193 SOT-23 F3

§ OTHERS

REF	PART NO.	DESCRIPTION	
CH701	5LC0000308	COIL CHOKE	EI-14MM PCB TYPE
CN101	97T8859400	CONN AS	21P 22x160 (FFC)
CN401	97T8859300	CONN AS	5P 6x120 (FFC)
CW101	97T6220800	CONNECTOR WAFER	6232-121-102-800 ELCO
CW201	97T6220600	CONNECTOR WAFER	S2B-ZR-SM2-TF
CW301	97T62E7202	WAFER CN-W	00-8283-0211-000
CW401	97T6220700	CONNECTOR WAFER	6232-105-102-800 ELCO
CW501	97T62E7208	WAFER CN-W	00-8283-0811-000
CN501	97TH82406D	CONN AS	8P #28 UL 1007 60MM
J501	97T6367600	SOCKET DIN	LN-0505B-008 8P PCB TY
CN301	97TH294158	CONN AS	2P #28 UL 1007 150MM
SW601	5S50101Z02	SW TACT	1C-1P SKQC10918B 260G
SW602	5S50101113	SW TACT	SPPB61180A ALPS
SW603	5S40201A30	SW PUSH	MPU1130MLB0 MIC
XT501	5XJY16R93E	CRYSTAL QUARTZ	HC-49/S 16.9344MHz 30PF
XT601	5PT4R19MGW	RESONATOR CERA	CST4.19MGW