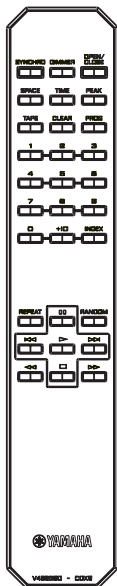
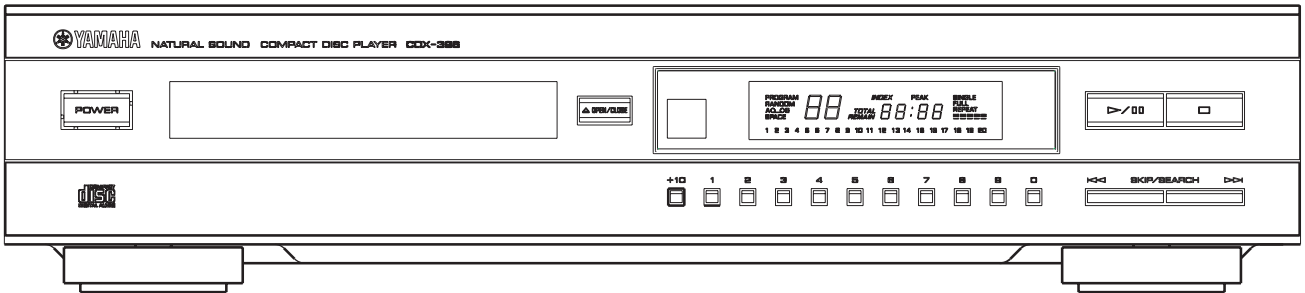


COMPACT DISC PLAYER CDX-396/496



IMPORTANT NOTICE

This manual has been provided for the use of authorized YAMAHA Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically YAMAHA Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all YAMAHA product owners that all service required should be performed by an authorized YAMAHA Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of YAMAHA are continually striving to improve YAMAHA products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

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このサービスマニュアルは、エコマーク認定の再生紙を使用しています。
This Service Manual uses recycled paper.



■ TO SERVICE PERSONNEL

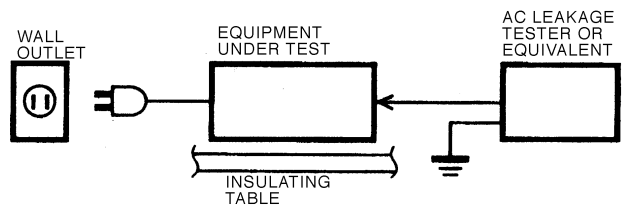
1. Critical Components Information.

Components having special characteristics are marked \triangle and must be replaced with parts having specifications equal to those originally installed.

2. Leakage Current Measurement (For 120V Models Only).

When service has been completed, it is imperative to verify that all exposed conductive surfaces are properly insulated from supply circuits.

- Meter impedance should be equivalent to 1500 ohm shunted by 0.15 μ F.
- Leakage current must not exceed 0.5mA.
- Be sure to test for leakage with the AC plug in both polarities.



CAUTION: USE OF CONTROLS OR 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.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

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

1. Laser Diode Properties

- Material : GaAlAs
- Wavelength : 780 nm
- Emission Duration : Continuous
- Laser Output : max. 44.6 μ W*

* This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.

2. When checking the laser diode emission, keep your eyes more than 30 cm away from the objective lens.

WARNING: CHEMICAL CONTENT NOTICE!

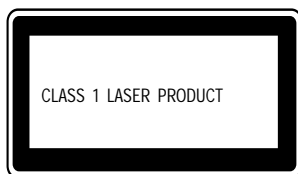
The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHATSOEVER!

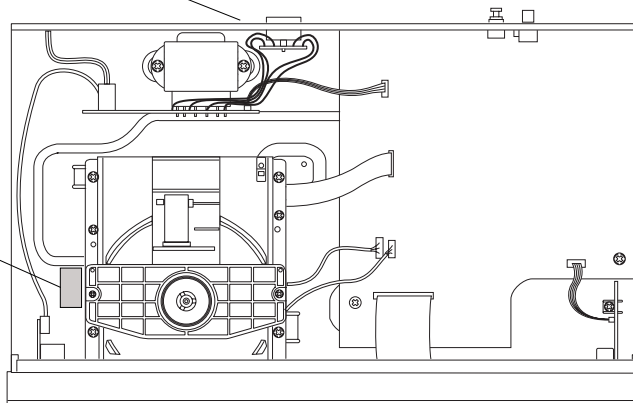
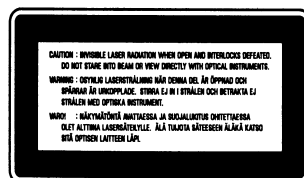
Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

① G, B models



② R, G, B model



English

- ① THIS PRINTING (SEE POSITION SHOWN IN THE ILLUSTRATION) INFORMS THE USER THAT THE APPARATUS CONTAINS A LASER COMPONENT.
- ② THIS LABEL (SEE POSITION SHOWN IN THE ILLUSTRATION) WARNS THAT ANY FURTHER PROCEDURE WILL BRING THE USER INTO EXPOSURE WITH THE LASER BEAM.

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

Swedish

- ① DENNA MÄRKNING (SE FIGUR) UPPLYSER OM ATT DET I APPARATEN INGÅR EN LASERKOMPONENT AV TYP KLAS 1.
- ② VARNINGSMÄRKNING (SE FIGUR) FÖR STRÅLNING. INGREPP I APPARATEN BÖR ENDAST FÖRETAGAS AV FACKMAN MED KÄNNEDOM OM LASER. APPARATEN INNEHÅLLER EN LASERKOMPONENT SOM AVGER STRÅLNING ÖVERSTIGANDE GRÄNSEN FÖR LASERKLASS 1.

VARNING : OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD: BETRÄKTA EJ STRÅLEN.

Danish

- ① DETTE MÆRKAT ER ANBRAGT SOM VIST I ILLUSTRATIONEN FOR AT ADVARE BRUGEREN OM AT APPARATET INDEHOLDER EN LASERKOMPONENT.
- ② DETTE MÆRKAT OM LASEREN ER ANBRAGT PÅ APPARATET SOM EN OPLYSNING OM AT APPARATET INDEHOLDER ET LASERKOMPONENT.

ADVARSEL : INDGREB BOR KUN FORETAGES AF EN FAGMAND DA DER ER RISIKO FOR RADIOAKTIV STRÅLING.

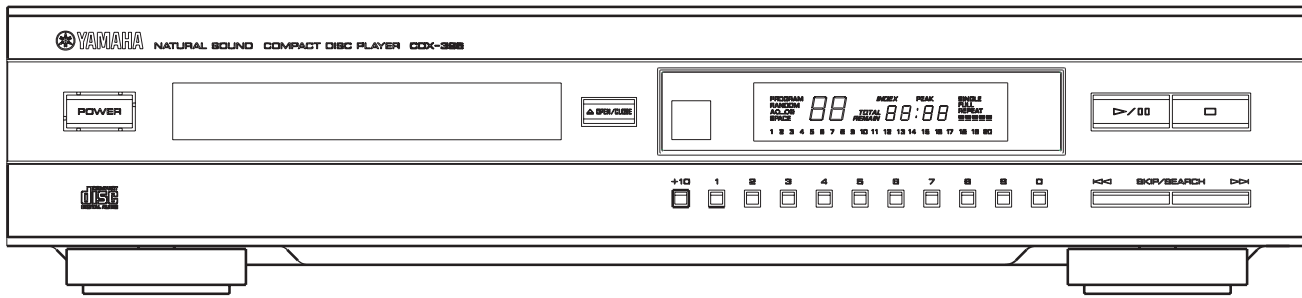
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING.
UNDGÅ UDSAETTELSE FOR STRÅLING.

Finnish

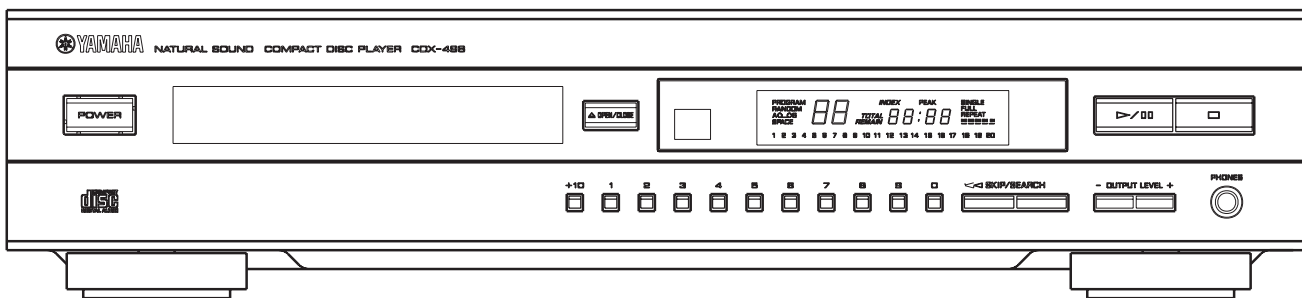
VARO! :
AVATTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

FRONT PANELS

CDX-396

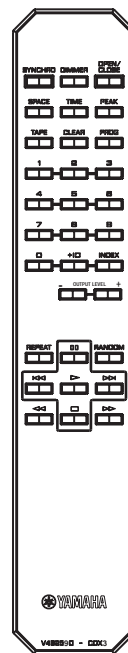
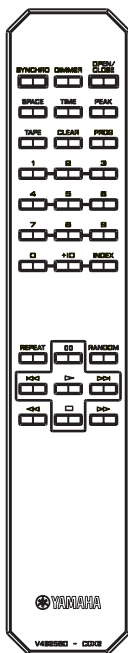


CDX-496



CDX-396

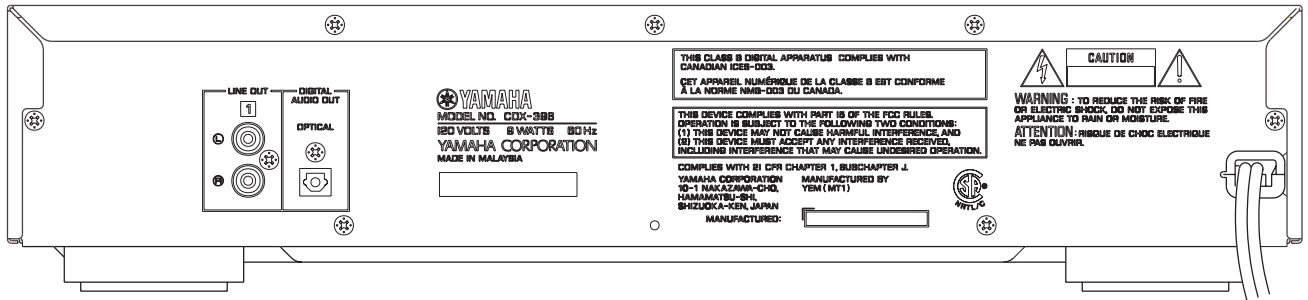
CDX-496



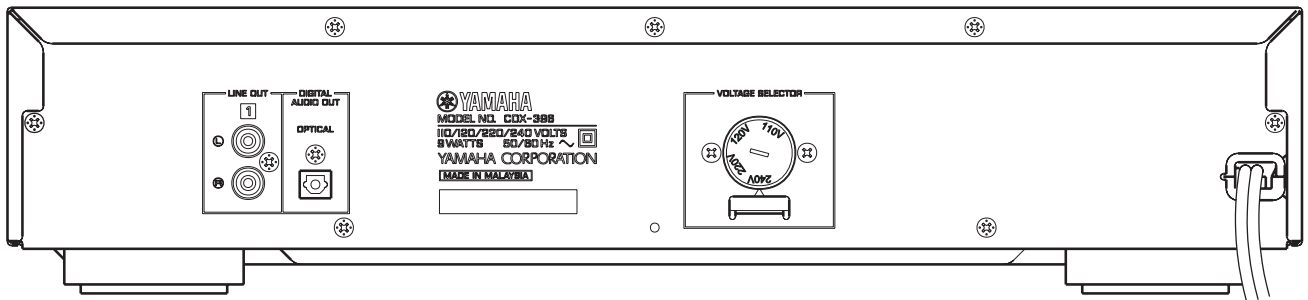
CDX-396/496

REAR PANELS

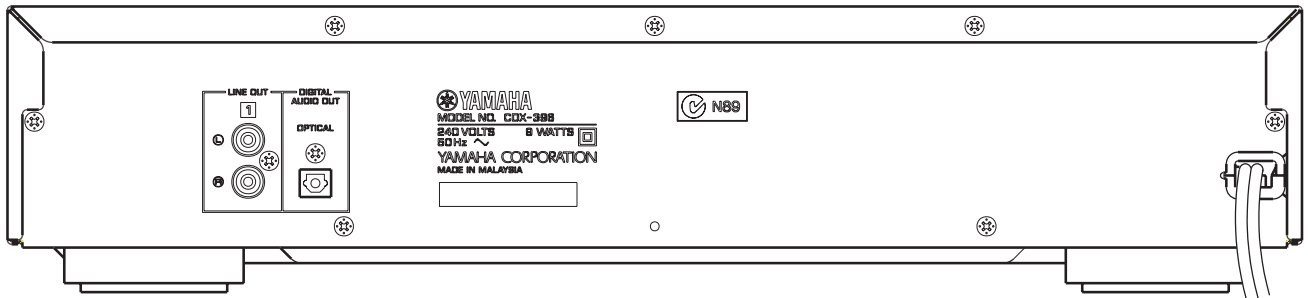
U, C models



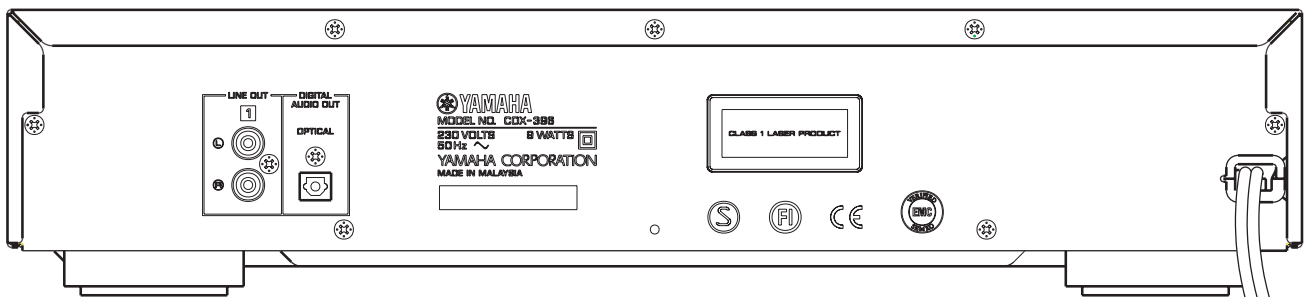
R model



A model



G, B models



CDX-396/496

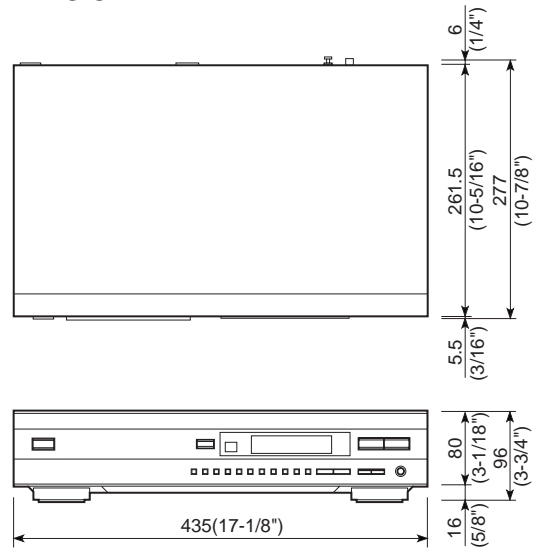
■ SPECIFICATIONS

Output Level 1kHz, 0dB	2.0 ± 0.5Vrms
Signal to Noise Ratio (EIAJ)	105dB
Dynamic Range	95dB
Harmonic Distortion+Noise (1kHz)	0.003%
Frequency Response 2Hz — 20kHz	±0.5dB
Power Requirements	
U, C models (CDX-396 ONLY)	120V AC 60Hz
B, G models	230V AC 50Hz
A model (CDX-396 ONLY)	240V AC 50Hz
R model	110/120/220/240V AC 50/60Hz
Power Consumption	9W
Dimensions (W x H x D)	435 x 96 x 277mm (17-1/8" x 3-3/4" x 10-7/8")
Weight	3.7kg (7 lbs 11 oz)
Finish	
CDX-396	
CDX-396BL	Black color
CDX-396TI	Titanium color
CDX-496	
CDX-496BL	Black color
CDX-496TI	Titanium color
Accessories	Pin plug cord Remote control transmitter (Dry-cell : x 2: Size "AA", R06)

*Specifications are subject to change without notice.

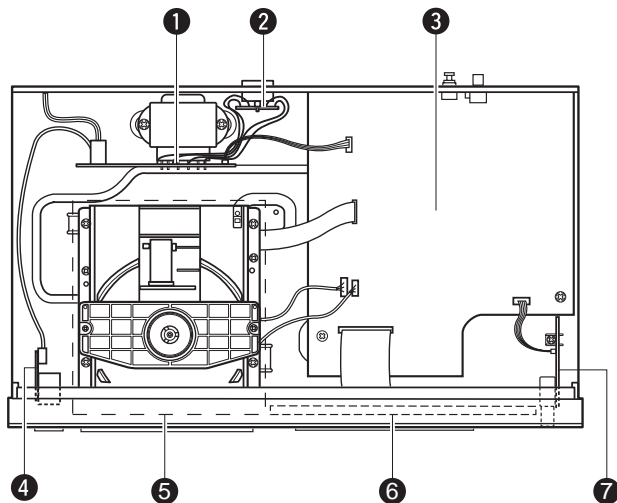
U U. S. A. model B British model
 C Canadian model G European model
 A Australian model R General model

● DIMENSION



Unit : mm (inch)

■ INTERNAL VIEW



- ① MAIN P.C.B. (3)
- ② MAIN P.C.B. (6)
- ③ MAIN P.C.B. (1)
- ④ MAIN P.C.B. (4)
- ⑤ CD MECHANISM UNIT
- ⑥ MAIN P.C.B. (2)
- ⑦ MAIN P.C.B. (5) (CDX-496 ONLY)

DISASSEMBLY PROCEDURES (Remove parts in disassembly order as numbered.)

1. Removal of Top Cover

- Remove 4 screws (①) and 3 screws (②) in Fig. 1.
- Lift the Top Cover at the rear and move it rear-ward.

2. Removal of Front Panel

- Press the OPEN/CLOSE key and open the tray. Then remove the Lid attached to the front edge of the tray in Fig. 2. Press the OPEN/CLOSE key and close the tray, then unplug the power cord.
- Remove 2 connectors (CB202, CB301) in Fig. 2.
- Remove a connector (CB100) in Fig. 2. (CDX-496 only)
- Remove 5 (③) screws in Fig. 1.
- Remove 2 hooks and then pull the Front Panel forward.

3. Removal of CD Mechanism Unit

- Remove 3 connectors (CB1, CB2, CB3) in Fig. 2.
- Remove 4 screws (④) in Fig. 1.

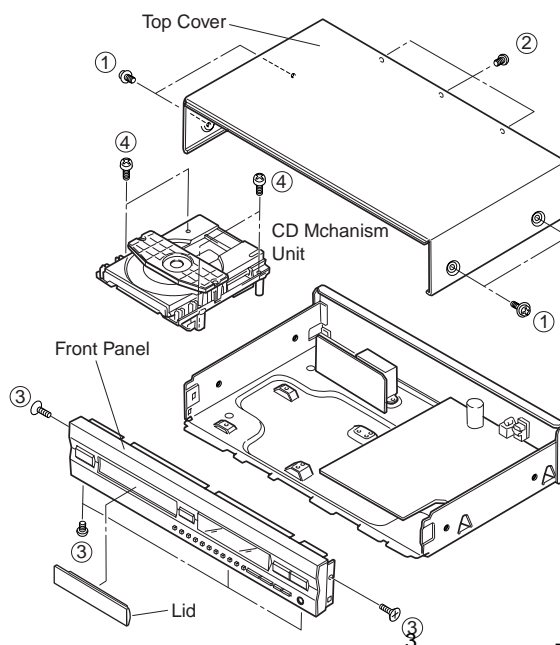


Fig. 1

4. Removal of Tray Unit

- Remove 2 screws (⑤) and then remove the Chucking Unit in Fig. 3.
- Remove 1 hook and then remove the Stopper Pin in Fig. 3.
- Rotate the Drive Gear and then open the Tray Unit in Fig. 3.
- Detach the Stoppers on both sides and then pull out the Tray in Fig. 3.

5. Removal of Pick-up Head

- Remove 2 screws (⑥) in Fig. 4.
- Remove 4 screws (⑦) and then remove the Drive Unit in Fig. 4.
- Remove the gear A in Fig. 5.
- Pull out the Sled Shaft in Fig. 5.
- Remove the Pick-up Head.

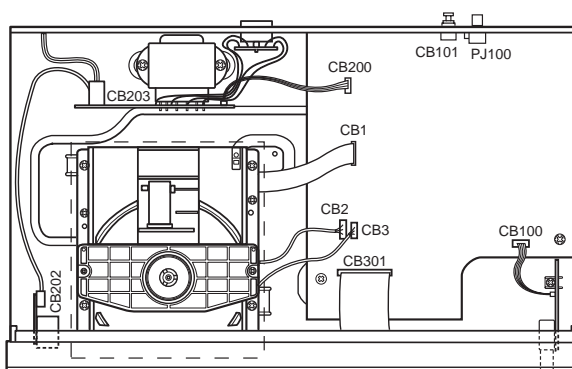


Fig. 2

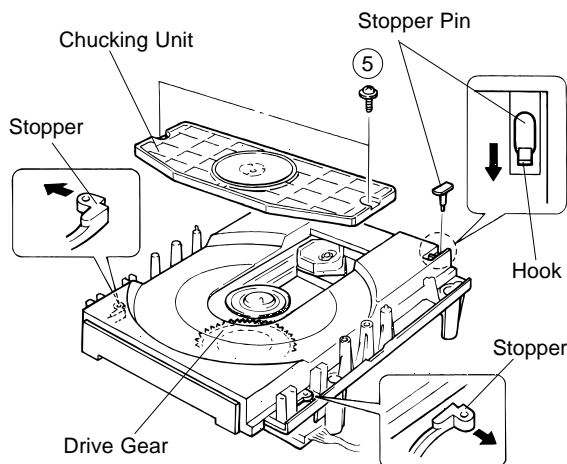


Fig. 3

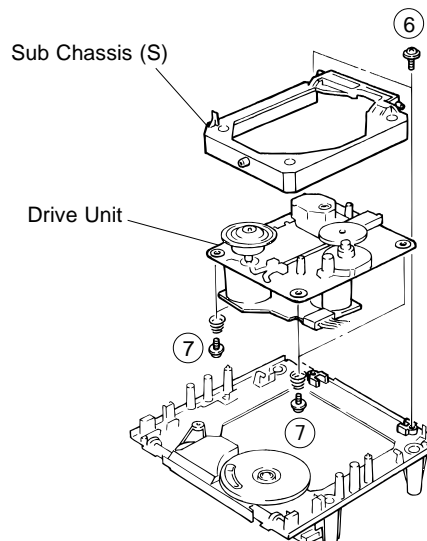
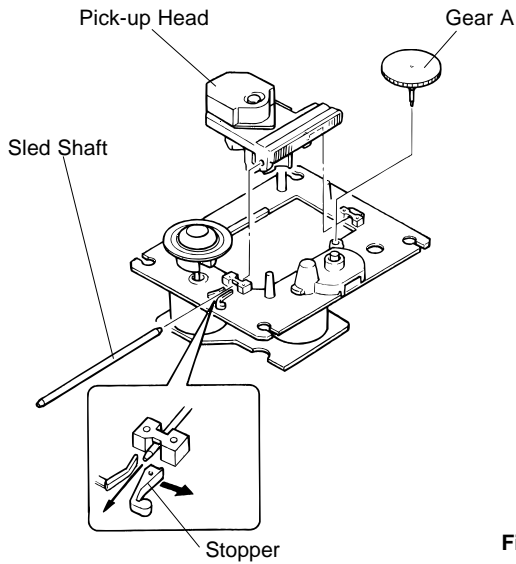


Fig. 4



Check that the disc table height is as specified below.

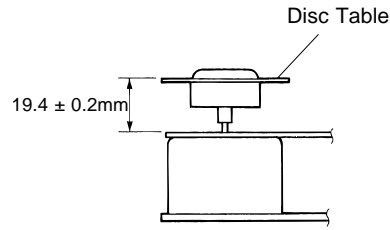
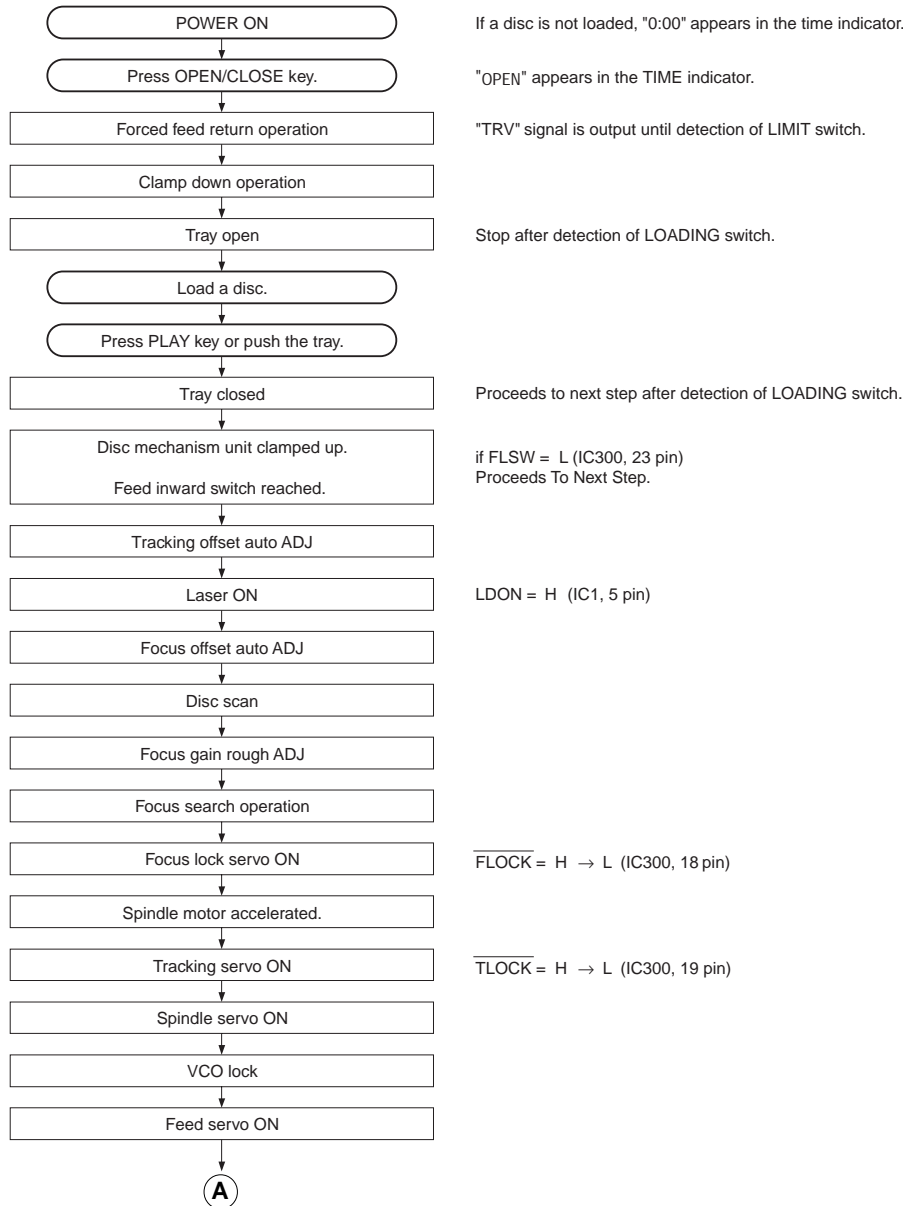
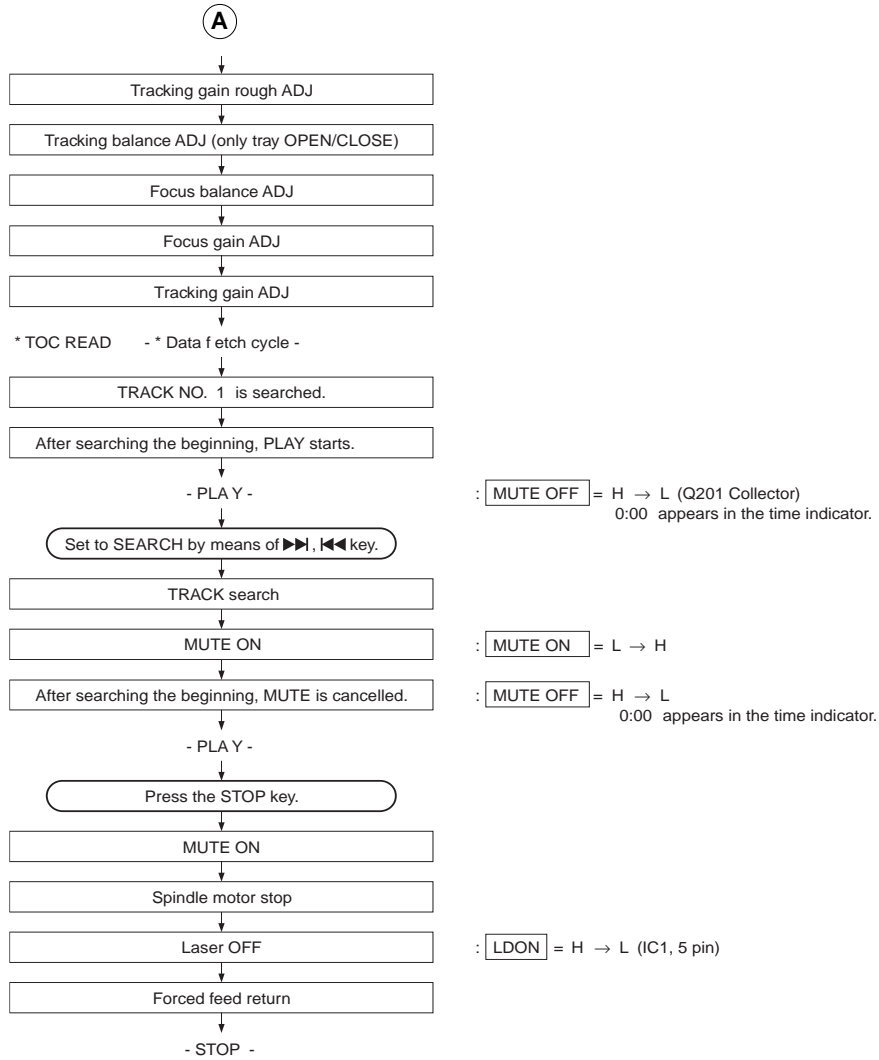


Fig. 5

STANDARD OPERATION CHART

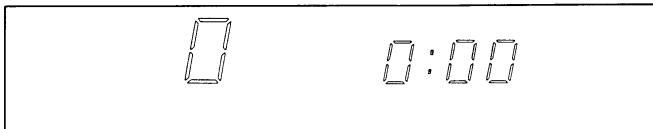


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■ TEST MODE

- (1) Turning ON the POWER while pressing the keys "PLAY/PAUSE" and "STOP" will set to the TEST mode. (When the TEST mode is set, all indicators light for 1 second.)



(2) Shown below are the panel key and remote control transmitter functions in the TEST mode.

● **Function List of Panel keys**

Note) "Traverse servo" means the same as "feed servo".

PANEL KEY	FUNCTION
▲OPEN/CLOSE	Tray open/close.
▶/	FOON, TRON, SPON, TVON(FEON).
■	All stop. (Focus, spindle, feed, laser, tray, etc.) Initializes FL display
◀◀ (SKIP/SEARCH)	Inner circumference traverse servo.
▶▶ (SKIP/SEARCH)	Outer circumference traverse servo.
+10	Rotating the mode of coefficients. (Coefficient mode --- Coefficient setting --- product mode) Pressing twice will set to the product mode.
1	Returns to product mode.
2	Auto adjustment mode 1 (TR-off set, FO-off set, FO-rough gain adjustment)
3	Auto adjustment mode 2 (TR-balance, TR-rough gain adjustment)
4	Auto adjustment mode 3 (FO-fine gain, TR-fine gain, FO-balance adjustment)
5	1 TRACK KICK (-) continuously (Coefficient set up mode : address down)
6	1 TRACK KICK (+) continuously (Coefficient set up mode : address up)
7	30 TRACK KICK (-) continuously (Coefficient set up mode : upper digit down)
8	30 TRACK KICK (+) continuously (Coefficient set up mode : upper digit up)
9	150 TRACK KICK (-) continuously (Coefficient set up mode : lower digit down)
0	150 TRACK KICK (+) continuously (Coefficient set up mode : lower digit up)

● **Function List of Remote Control Transmitter**

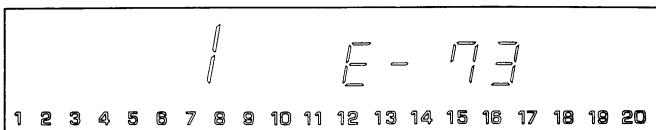
CUSTOM CODE = (79)x

CODE	KEY	FUNCTION
01	OPEN/CLOSE	Tray open/close.
02	▶	PLAY (FOON, TRON, TVON(FEON), SPON)
04	◀◀	Inner circumference traverse servo.
05	◀◀	Inner 10 tracks kick continuously.
06	▶▶	Outer 10 tracks kick continuously.
07	◀◀	Outer circumference traverse servo.
08	REPEAT	FOON, TROF (Enter focus search if focus servo is off.)
0A	TIME	Checks FL display. (88 8888 --- goes out --- All lamps.)
0B	INDEX	FOON, TROF, TVOF(EFOF) (Enter focus search if focus servo is off.)
0C	PROG	Rotates or accelerates spindle.
0D	CLEAR	Decelerates spindle. (checking EFM pattern and reflected STAT)
0F	SPACE	FOOF, TROF, TVOF(EFOF)
10	0	150 TRACK KICK (+) continuously (Coefficient set up mode : lower digit up)
11	1	Returns to product mode. (tray inoperative.)
12	2	Auto adjustment mode 1 (TR-off set, FO-off set, FO-rough gain adjustment)
13	3	Auto adjustment mode 2 (TR-balance, TR-rough gain adjustment)
14	4	Auto adjustment mode 3 (FO-fine gain, TR-fine gain, FO-balance adjustment)
15	5	1 TRACK KICK (-) continuously (Coefficient set up mode : address down)
16	6	1 TRACK KICK (+) continuously (Coefficient set up mode : address up)
17	7	30 TRACK KICK (-) continuously (Coefficient set up mode : upper digit down)
18	8	30 TRACK KICK (+) continuously (Coefficient set up mode : upper digit up)
19	9	150 TRACK KICK (-) continuously (Coefficient set up mode : lower digit down)
1A	+10	Rotating the mode of coefficients.
1B	RANDOM	SPON (Spindle servo on.)
1E	DIMMER	Checks FL display. (All lamps --- 88 8888 --- goes out.)
55		FOON, TROF, TVOF(EFOF) (Enter focus search if focus servo is off.)
56	■	All stop. (Focus, spindle, traverse, laser, tray, etc.)
57	TAPE	Spindle free (off)
58	SYNCHRO	TV(Feed) REV
5D	PEAK	-

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■ ERROR MESSAGE

- (1) When operation is terminated in an abnormal condition (stop or open), pressing STOP on the remote control while pressing STOP on the panel will set to the error message display enable mode.
- (2) Shown below is an example of display. ("E-73" as an example)



- (3) This function stays effective till the power is turned OFF. (It is cleared at OFF.)
- (4) Listed in the table below are error messages.

● Error Messages List

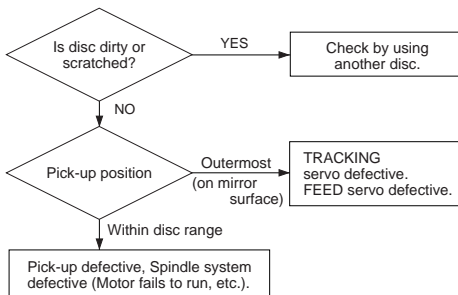
ERROR MESSAGES	DESCRIPTION
E - X 0	Data cannot be read after finishing search.
E - X 1	Data cannot be read during PLAY(X=0), PAUSE(X=3), or SCAN(X=2).
E - 7 1	At the start, tracking servo is not effective.
E - 7 2	At the start, spindle servo PLL is not effective.
E - 7 3	At the start, data cannot be read.
E - 9 4	Close switch does not work with tray closed.
E - - 5	Open switch does not work with tray open.
E - X 7	Traverse(Feed) inner switch does not work.
E - X 8	Recovery action fails after focus drop.
E r r	MN35511AL does not give response of SENSE, with resetting by the unit's microcomputer.

***No. for each state (meaning of "X")**

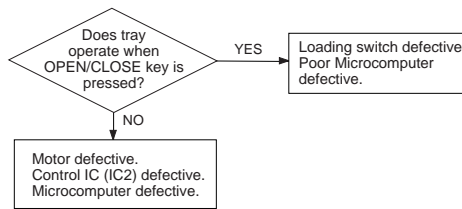
PLAY	X="0"
SCAN	X="2"
PAUSE	X="3"
PEAK SEARCH	X="4"
SEARCH	X="5"
START	X="7"
STOP	X="8"
LOADING	X="9"
OPEN	X="-"
NO DISC	X="C"

1) Error Code Troubleshooting

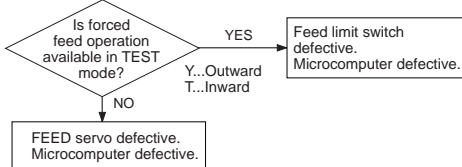
Error code **X0** , **X1** , **73** Data cannot be read.



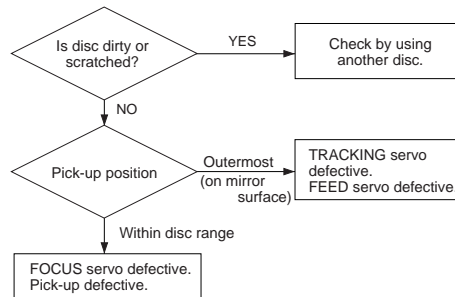
Error codes **94** , **- 5** Poor tray loading operation.



Error code **X7** FEED operation defective. (Limit switch fails)

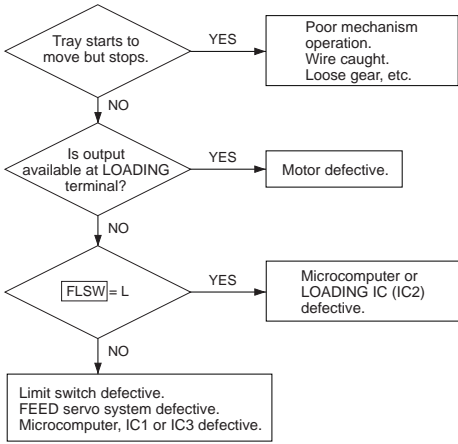


Error code **X8** Focus drops.



2) Troubleshooting from System Malfunctions

a) Tray fails to come out/go in.

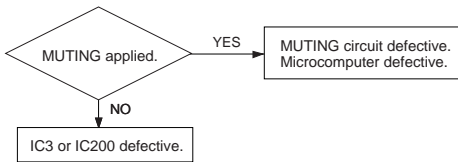


When tray fails to close completely (when it stops midway)

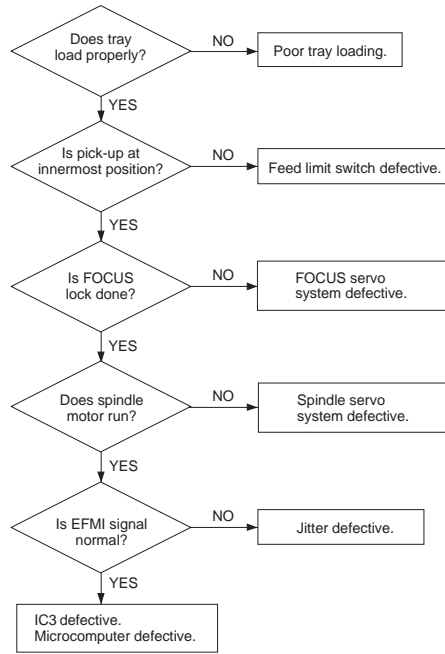
[Corrective measure]

- 1) Turn ON the power and open the tray.
- * If it failed to open (head and tray contacting each other), open it after removing the chucking unit.
- 2) Turn OFF the power and force the tray to go in fully and close.
- 3) With the power turned ON, open and close the tray to check if the tray close completely.

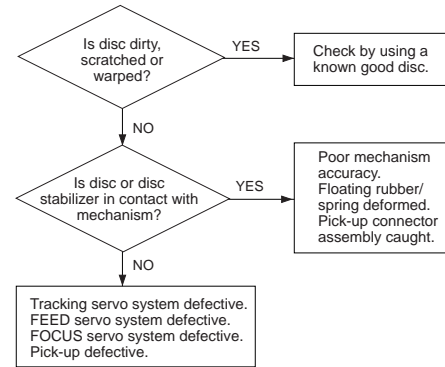
b) No sound generated, Sound cut during play. (but time display advances properly)



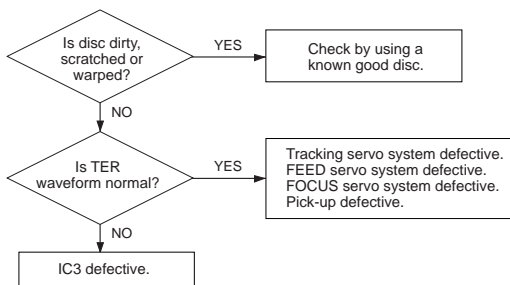
c) Operates as if no disc loaded. (although loaded)



d) Sound skips. (Time display fails to advance properly)



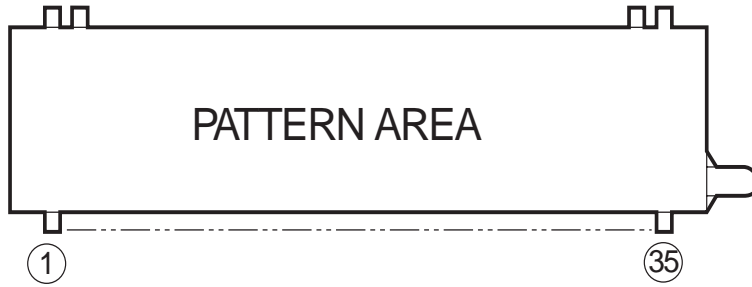
e) No search provided. (Sound skipped after search)



CDX-396/496

■ DISPLAY DATA

V401 : 9-MT-133GK

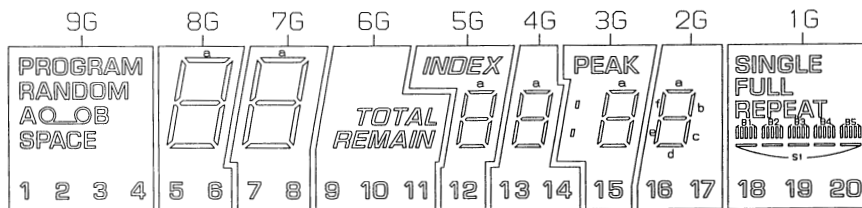


PIN CONNECTION

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
CONNECTION	F1	F1	NP	9G	8G	7G	6G	5G	4G	3G	2G	1G	NC	NC	NC	NC	NC	NC
PIN NO.	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
CONNECTION	NC	NC	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	NP	F2	F2	

- NOTE
- 1) F1, F2..... Filament
 - 2) NPNo pin
 - 3) NCNo connection
 - 4) P1~P10 Datum Line
 - 5) 1G~9G..... Grid

GRID ASSIGNMENT



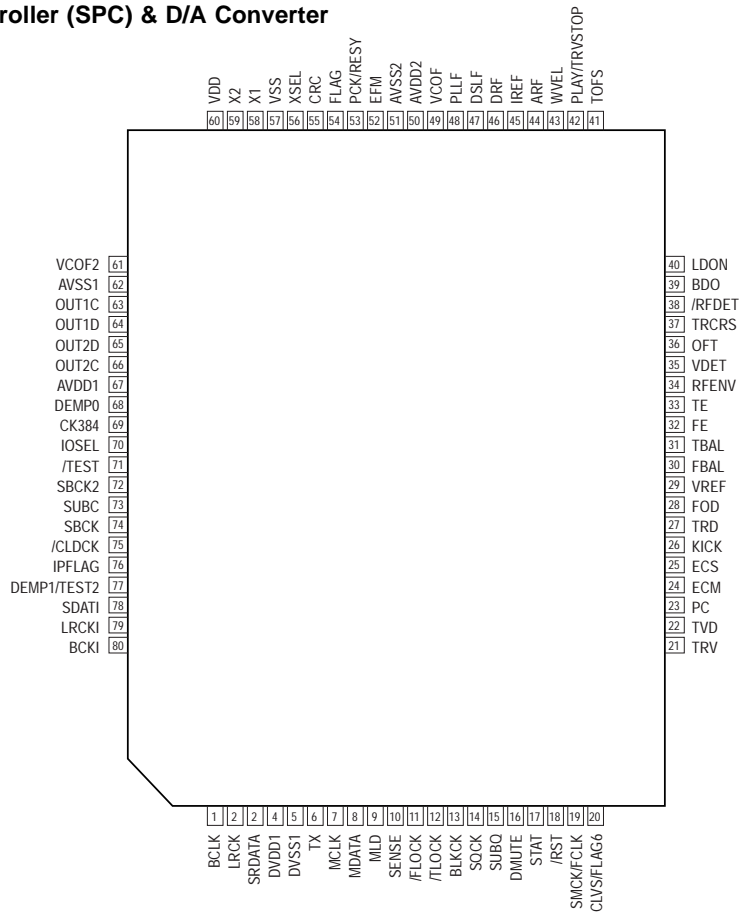
ANODE CONNECTION

	9G	7G	7G	6G	5G	4G	3G	2G	1G
P1		a	a	TOTAL	a	a	a	a	SINGLE
P2		b	b	REMAIN	b	b	b	b	FULL
P3		c	c	—	c	c	c	c	REPEAT
P4	A	d	d	—	d	d	d	d	B1
P5	B	e	e	—	e	e	e	e	B2
P6	SPACE	f	f	—	f	f	f	f	B3
P7	—	g	g	—	g	g	g	g	B4
P8	—	—	—	—	—	—	:	—	B5
P9	1	5	7	9	12	13	15	16	S1
P10	2	6	8	10	INDEX	14	PEAK	17	18
P11	3	—	—	11	—	—	—	—	19
P12	4	—	—	—	—	—	—	—	20

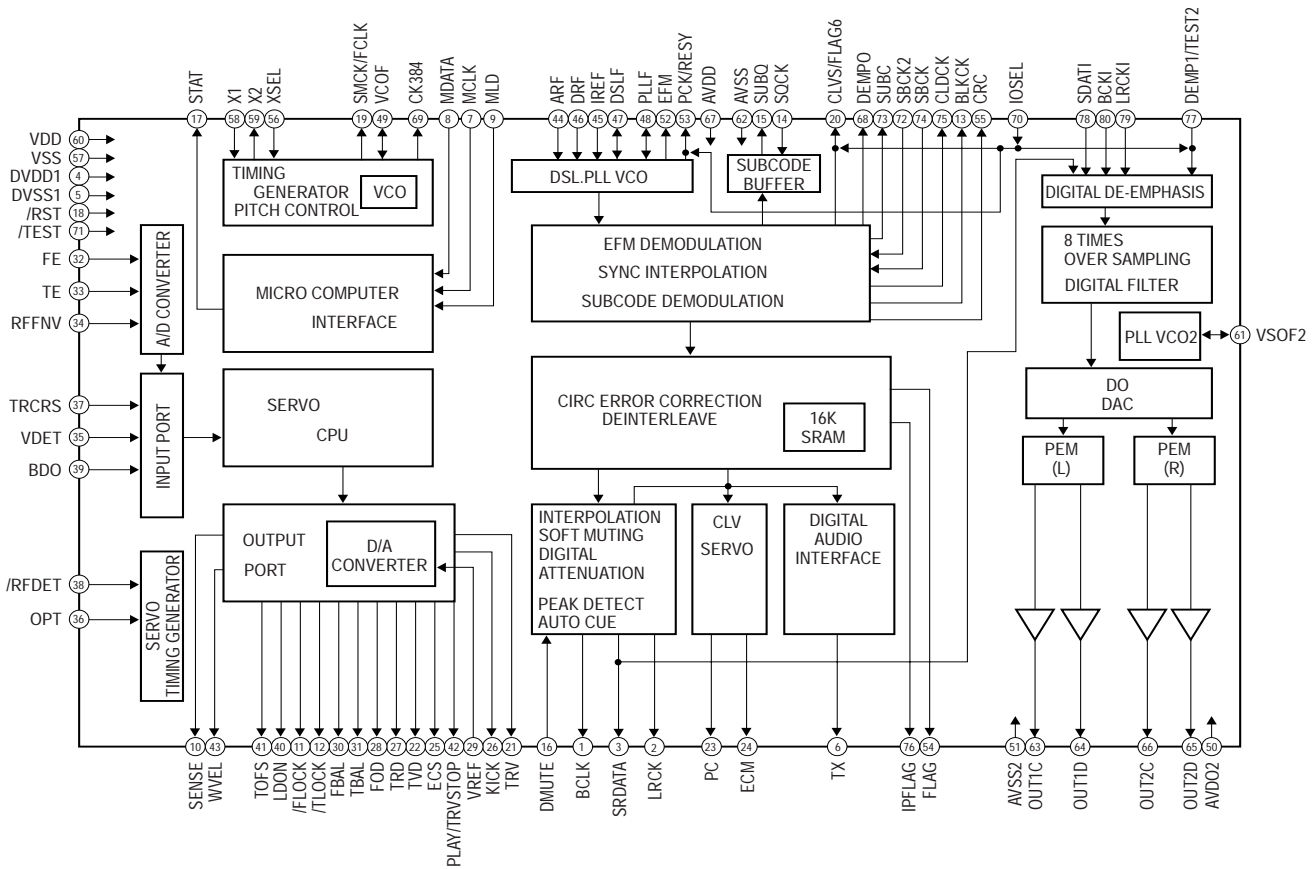
CDX-396/496

IC DATA

IC3 : MN35511AL
Signal Processor Controller (SPC) & D/A Converter



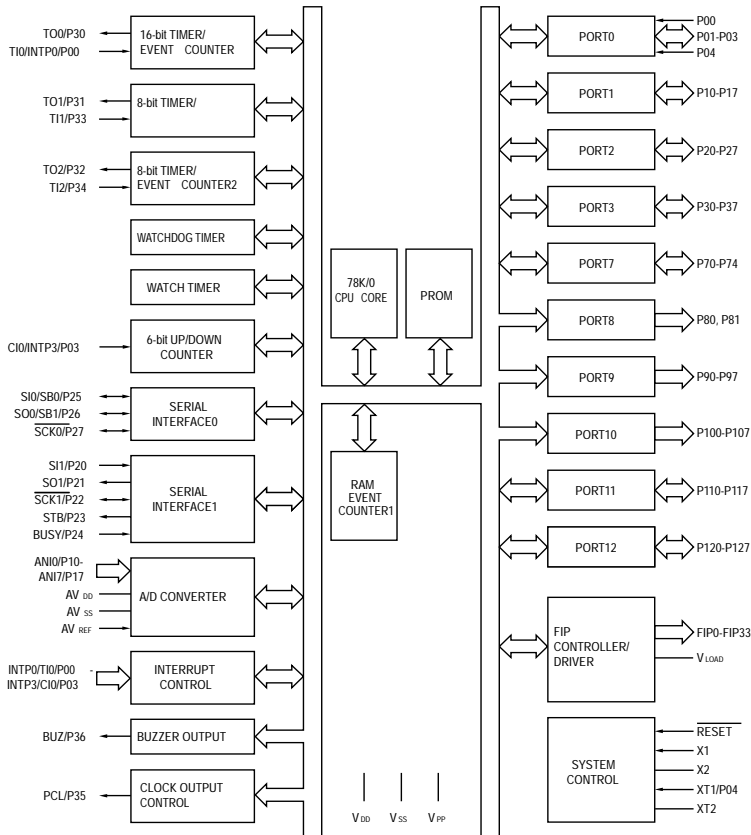
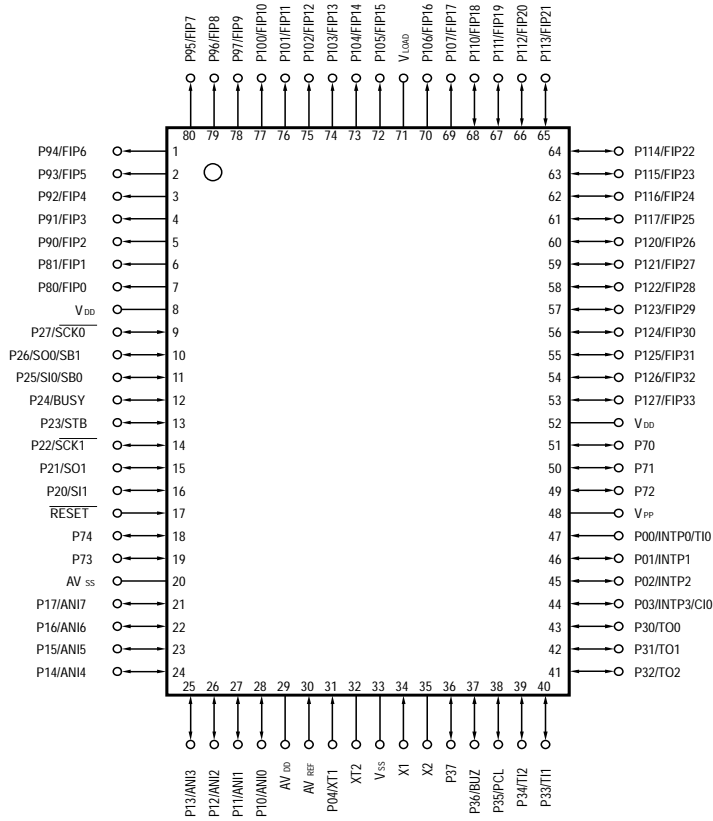
CDX-396/496



PIN No.	NAME	I / O	FUNCTION
1	BCLK		NC
2	LRCK		NC
3	SRDR		NC
4	DVDD1		+5V
5	DVSS1		GND
6	TX	O	Digital audio interface signal
7	MCLK	I	CPU clock
8	MDATA	I	CPU data
9	MLD	I	CPU load signal
10	SENSE	O	Sense signal
11	/FLOCK	O	Focus servo draw signal
12	/TLOCK	O	Tracking servo draw signal
13	BLKCK	O	Sub-code block clock
14	SQCK	I	Sub-code Q clock
15	SUBQ	O	Sub-code Q code signal
16	DMUTE	I	Mute signal
17	STAT	O	Status signal
18	/RST	I	Reset signal
19	SMCK/FCLK		NC
20	CLVS/FLAG6		NC
21	TRV	O	Traverse forced feed signal
22	TVD	O	Traverse drive signal
23	PC		NC
24	ECM	O	Spindle forced drive signal
25	ECS	O	Spindle drive signal
26	KICK	O	Kick pulse
27	TRD	O	Tracking drive signal
28	FOD	O	Focus drive signal
29	VREF	O	Reference Voltage
30	FBAL	O	Focus balance signal
31	TBAL	O	Tracking balance signal
32	FE	I	Focus error signal
33	TE	I	Tracking error signal
34	RFENV	I	RF envelope signal
35	VDET		GND
36	OFT	I	Off-track signal
37	TRCRS	I	Tracking close signal
38	/RFDET	I	RF signal detect
39	BD0	I	Black dot detect
40	LDON	O	Laser ON signal

PIN No.	NAME	I / O	FUNCTION
41	TOFS		NC
42	PLAY		NC
43	WVEL		NC
44	ARF	I	RF signal
45	IREF	I	Reference current
46	DREF	I	Bias for DSL
47	DSLIF	I / O	Loop filter for DSL
48	PLLF	I / O	Loop filter for PLL
49	VCOF		+5V
50	AVDD2		+5V
51	AVSS2		GND
52	EFM		NC
53	PCK		NC
54	FLAG		NC
55	CRC		NC
56	XSEL		GND
57	VSS		GND
58	X1	I	Crystal oscillation
59	X2	O	Crystal oscillation
60	VDD		+5V
61	VCOF2		GND
62	AVSS1		GND
63	OUT1C	O	PEM 1C signal
64	OUT1D	O	PEM 1D signal
65	OUT2D	O	PEM 2D signal
66	OUT2C	O	PEM 2C signal
67	AVDD1		+5V
68	DEMPO		De-emphasis detect signal
69	CK384	O	NC
70	IOSEL		Mode select (H)
71	/TEST		Test mode set (H)
72	SBCK2		NC
73	SUBC		NC
74	SBCK		NC
75	/CLDCK		NC
76	IPFLAG		NC
77	DEMPI		GND
78	SDATI		NC
79	LRCKI		NC
80	BCKI		NC

IC300 : uPD78043FGF-072
System Control

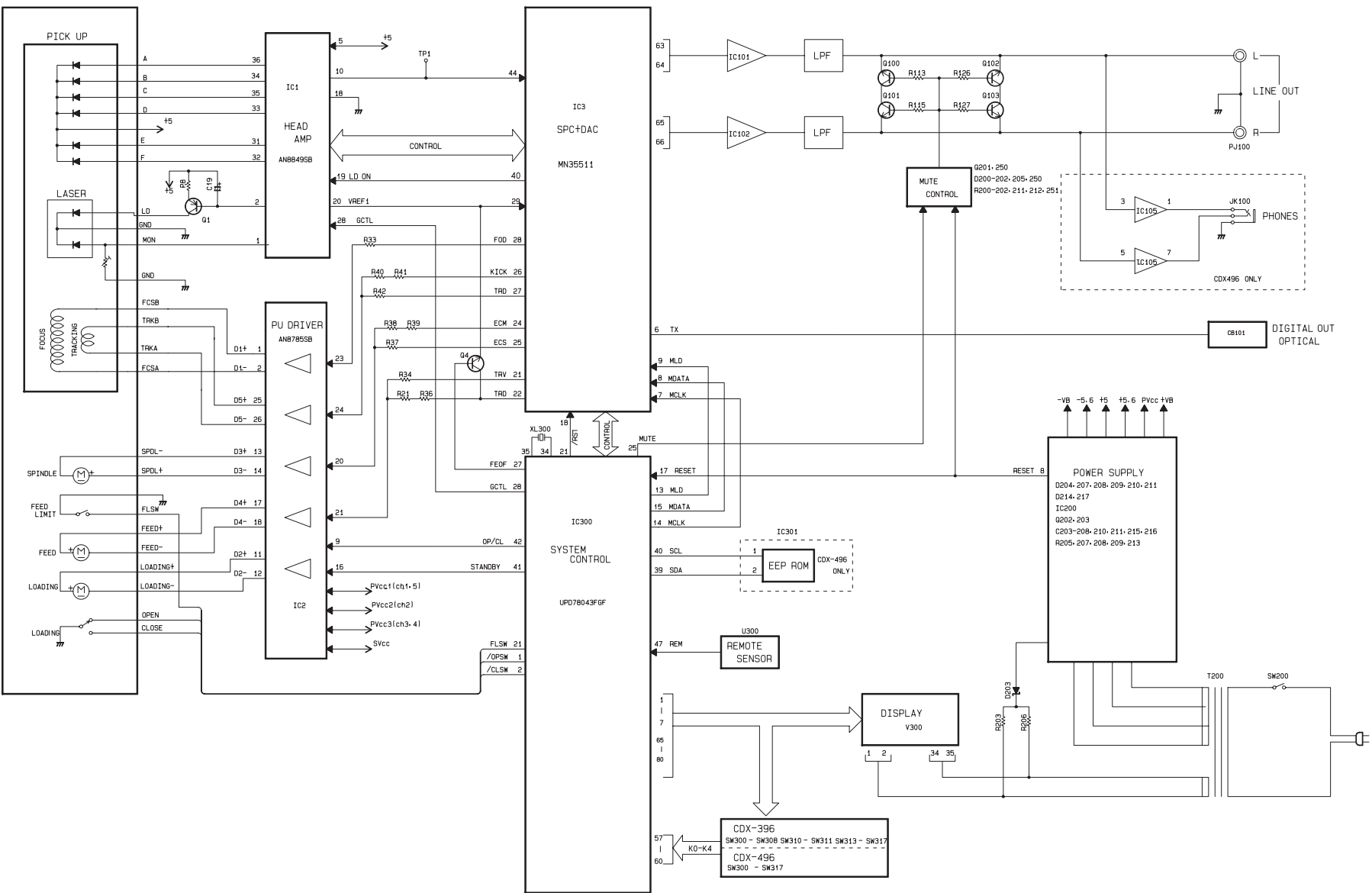


CDX-396/496

PIN No.	NAME		I / O	FUNCTION
	DEVICE	CIRCUIT		
1	P94/FIP6	G7	O	FL grid signals 1-7
2	P93/FIP5	G6	O	
3	P92/FIP4	G5	O	
4	P91/FIP3	G4	O	
5	P90/FIP2	G3	O	
6	P81/FIP1	G2	O	
7	P80/FIP0	G1	O	
8	VDD			+5V
9	P27/SCK0	SQCK	O	Serial clock (SQCK)
10	P26/S00/SB1	STAT	I	Status signal
11	P25/SI0/SB0	SUBQ	I	Serial I/F data (SUBQ)
12	P24/BUSY	SENSE	I	Sense signal
13	P23/STB	MLD	O	MN35511 chip select signal
14	P22/SCK1	MCLK	O	Serial clock
15	P21/SO1	MDATA	O	Serial data
16	P20/SI1			NC
17	RESET	/RESET	I	Reset signal
18	P74	/FLOCK	I	Focus lock signal
19	P73	/TLOCK	I	Tracking lock signal
20	AVSS	GND		GND
21	P17/ANI7	/MNRST	I	Reset signal
22	P16/ANI6	/DMUTE	I	Mute signal
23	P15/ANI5	FLSW	I	Feed limit switch
24	P14/ANI4	ERR	O	Error detect flag (H)
25	P13/ANI3	MUTE	O	Analog mute signal
26	P12/ANI2			NC
27	P11/ANI1	FEED OFF	O	Feed servo off signal
28	P10/ANI0	GCTRL	O	Gain control signal
29	AVDD	AVDD		+5V
30	AVREF	AVREF		GND
31	P04/XT1	396/496	I	Model detect (396:L, 496:H)
32	XT2			NC
33	VSS	GND		GND
34	X1	X1		Oscillator (5.0 MHz)
35	X2	X2		Oscillator (5.0 MHz)
36	P37	MON3		(Fixed to H)
37	P36/BUZ	MON2		
38	P35/PCL	MON1		
39	P34/TI2	SDA		
40	P33/TI1	SCL		NC

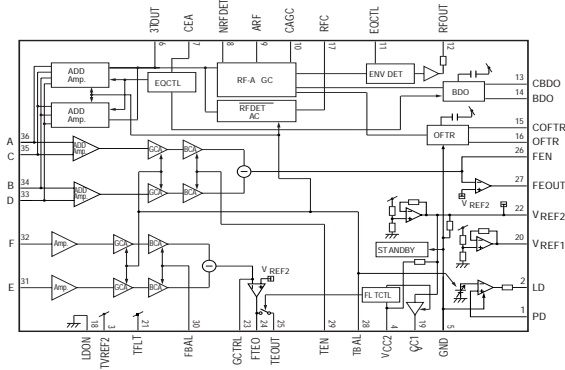
PIN No.	NAME		I / O	FUNCTION
	DEVICE	CIRCUIT		
41	P32/TO2	STANDBY	O	Standby signal
42	P31/TO1	OPN/CLS	O	Tray open/close signal
43	P30/TO0	SREF	O	Standby reference
44	P03/INTP3/CI0	CLSW	I	Tray open switch
45	P02/INTP2	OPSW	I	Tray close switch
46	P01/INTP1	BLKCK	I	Sub-code block clock
47	P00/INTP0/TI0	REM	I	Remote control sensor
48	IC (VPP)	GND		GND
49	P72		O	(Fixed to L)
50	P71		O	
51	P70		O	
52	VDD			+5V
53	P127/FIP33		O	(Fixed to L)
54	P126/FIP32		O	
55	P125/FIP31		O	
56	P124/FIP30		O	
57	P123/FIP29	K3	I	Key return signals 0-3
58	P122/FIP28	K2	I	
59	P121/FIP27	K1	I	
60	P120/FIP26	K0	I	
61	P117/FIP25		O	(Fixed to L)
62	P116/FIP24		O	
63	P115/FIP23		O	
64	P114/FIP22		O	
65	P113/FIP21	P12	O	FL segment signals 7-12
66	P112/FIP20	P11	O	
67	P111/FIP19	P10	O	
68	P110/FIP18	P9	O	
69	P107/FIP17	P8	O	
70	P106/FIP16	P7	O	
71	VLOAD			- 20V
72	P105/FIP15	P6	O	FL segment signal 6
73	P104/FIP14	P5/KD4	O	FL segment signals 1-5/ Key scan signals 0-4
74	P103/FIP13	P4/KD3	O	
75	P102/FIP12	P3/KD2	O	
76	P101/FIP11	P2/KD1	O	
77	P100/FIP10	P1/KD0	O	
78	P97/FIP9			(Fixed to L)
79	P96/FIP8	G9	O	FL grid signals 8, 9
80	P95/FIP7	G8	O	

■ BLOCK DIAGRAM

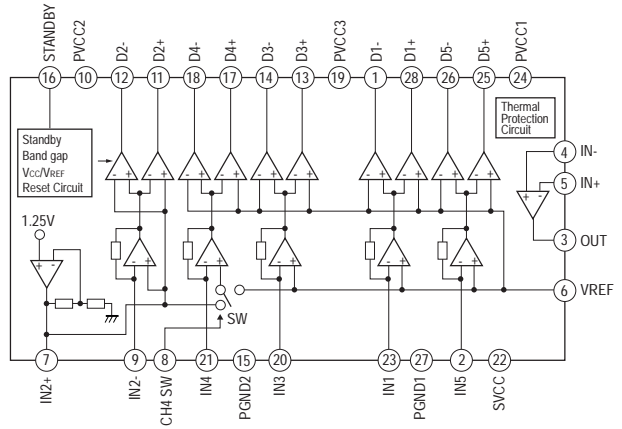


IC BLOCK

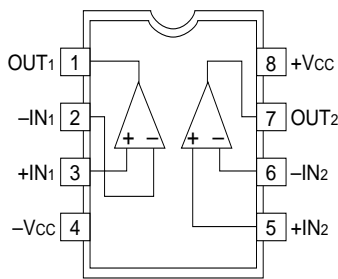
IC1 : AN8882SB
Digital Servo Head Amp



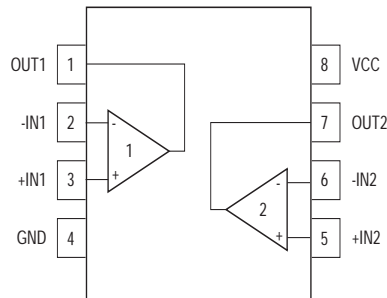
IC2 : AN8785SB
PU Driver



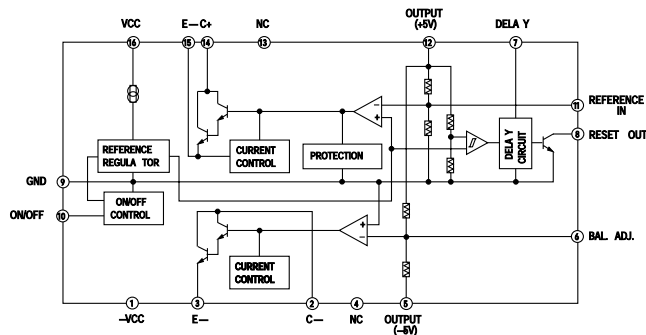
IC101, 102 : NJM2068D-D
Dual OP-Amp



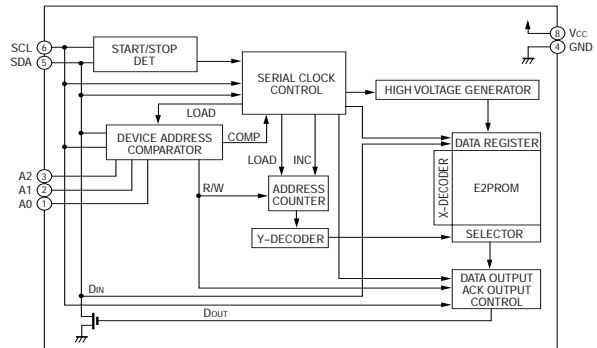
IC105 : BA15218
Dual OP-Amp



IC200 : M5290P
Constant-Voltage Tracking Supply with Reset



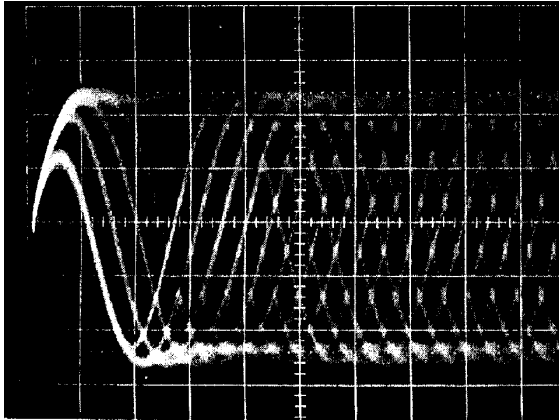
IC301 : S-24001ADP
EEPROM



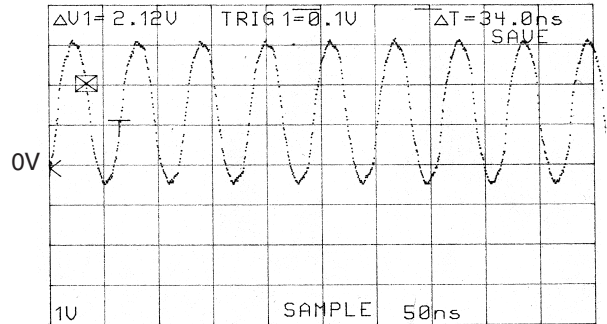
Other ICs
IC3: See page 13.
IC300: See page 15.

■ WAVEFORMS

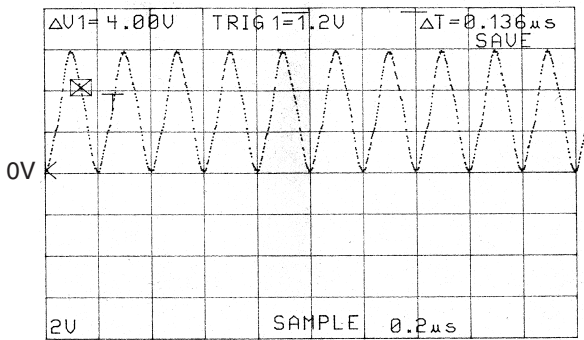
Point ① (EFM : Pin10 of IC1)
 V : 0.2V/div H : 0.5 usec/div
 AC range 1 : 1 probe



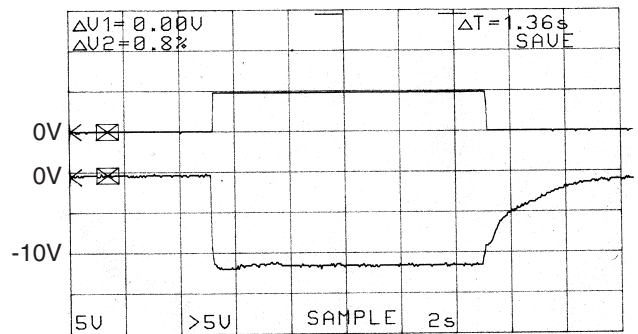
Point ② (Pin59 of IC3)
 V : 1V/div H : 50 nsec/div
 DC range 1 : 1 probe



Point ③ (Pin35 of IC300)
 V : 2V/div H : 0.2 usec/div
 DC range 1 : 1 probe



Point ④ (CH1 : Pin1 of IC200)
Point ⑤ (CH2 : Pin8 of IC200)
 V : 5V/div H : 2 sec/div
 DC range1 1 : 1 probe

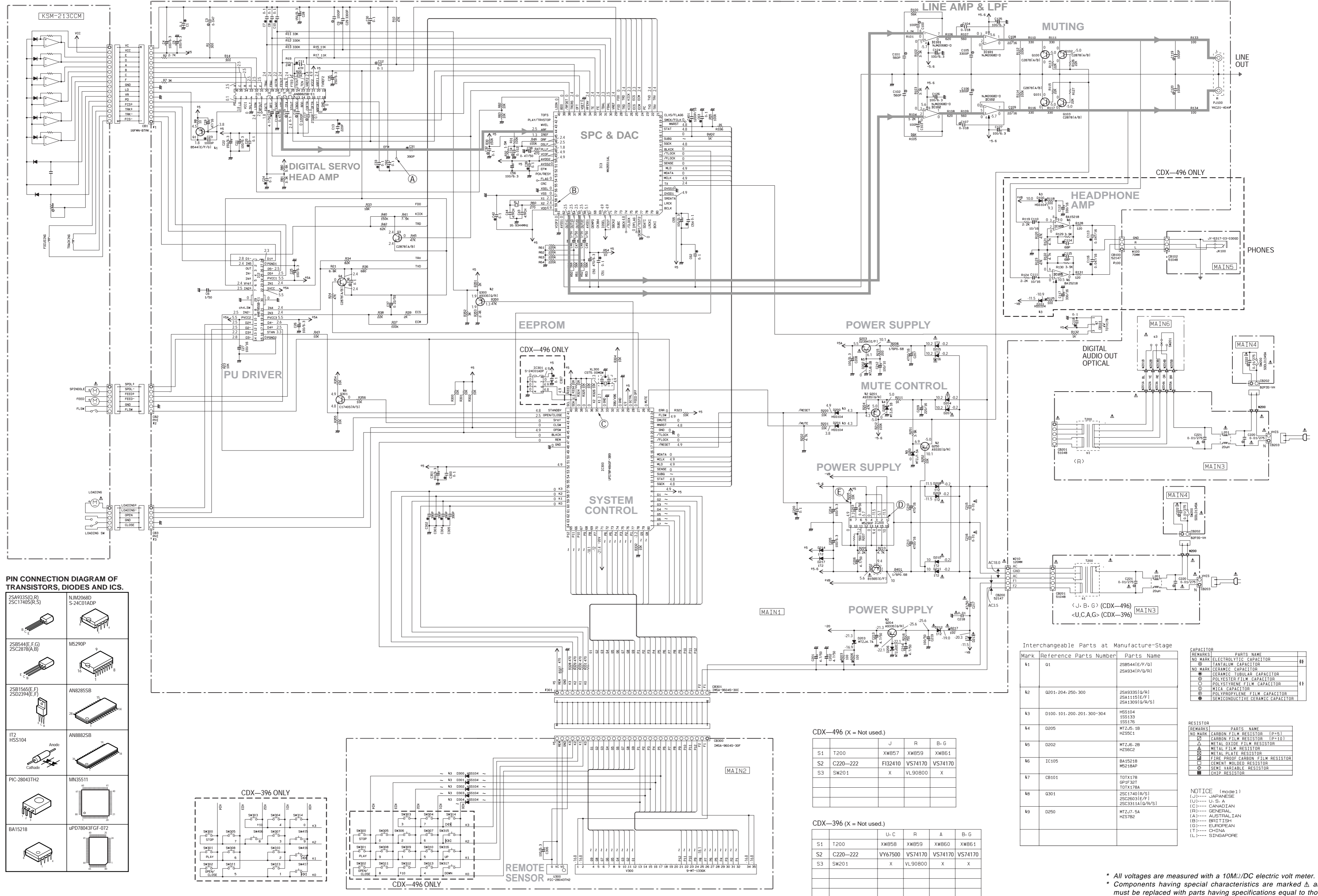


▲
 With the POWER switch turned ON, connect the power cord to the AC outlet.

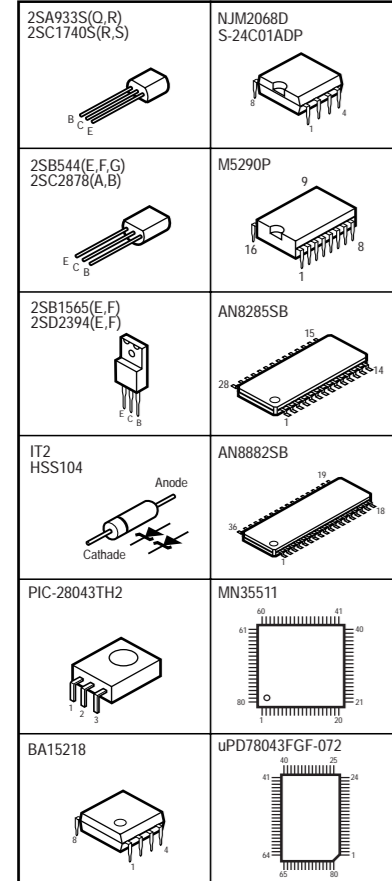
▲
 Disconnect the power cord from the AC outlet.

{ This waveform is not available by pushing the power switch ON and OFF. }

SCHEMATIC DIAGRAM



PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.



Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
k1	01	2SB544(E/F/G) 2SA934(P/D/R)
	0201-204-250-300	2SA933S(O/R) 2SA1151E(P/F) 2SA13051(O/R/S)
k3	D100-101-200-201-300-304	HSS104 1SS133 1SS176
	D205	MT2-25-1B H255C1
k4	D202	MT2-25-2B H255C2
	IC105	BA15218 MS218AP
k7	CB101	TOT117B GP1F32T TOT137BA
	0301	2SC1740(R/S) 2SC26031E(P/F) 2SC3314(O/R/S)
k9	D250	MT2J7-5A H257B2

CDX-496 (X = Not used.)

S1	T200	J	R	B-G
S2	C220-222	F132410	VS74170	VS74170
S3	SW201	X	VL90B00	X

CDX-396 (X = Not used.)

S1	T200	U-C	R	A	B-G
S2	C220-222	XY67500	VS74170	VS74170	VS74170
S3	SW201	X	VL90B00	X	X

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
NO MARK	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
NO MARK	CERAMIC TUBULAR CAPACITOR
NO MARK	POLYESTER FILM CAPACITOR
NO MARK	POLYSTYRENE FILM CAPACITOR
NO MARK	MICA CAPACITOR
NO MARK	POLYPROPYLENE FILM CAPACITOR
NO MARK	SEMICONDUCTIVE CERAMIC CAPACITOR
NO MARK	CARBON FILM RESISTOR [P-5]
NO MARK	CARBON FILM RESISTOR [P-10]
NO MARK	METAL FILM RESISTOR
NO MARK	METAL PLATE RESISTOR
NO MARK	FIRE PROOF CARBON FILM RESISTOR
NO MARK	CEMENT MOLDED RESISTOR
NO MARK	SEMI VARIABLE RESISTOR
NO MARK	CHIP RESISTOR

NOTICE (mode1)
 (J)..... JAPANESE
 (U)..... U. S. A.
 (C)..... CANADIAN
 (E)..... GENERAL
 (A)..... AUSTRALIAN
 (B)..... BRITISH
 (G)..... EUROPEAN
 (T)..... CHINA
 (L)..... SINGAPORE

All voltages are measured with a 10MΩ/DC electric volt meter.
 Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.
 Schematic diagram is subject to change without notice.

PARTS LIST

■ ELECTRICAL PARTS

■ WARNING

Components having special characteristics are marked \triangle and must be replaced with parts having specifications equal to those originally installed.

- Carbon resistors (1/6W or 1/4W) are not included in the ELECTRICAL PARTS List. For the part Nos. of the carbon resistors, refer to the last page.

ABBREVIATIONS IN THIS LIST ARE AS FOLLOWS :

C.A.EL.CHP	: CHIP ALUMI. ELECTROLYTIC CAP	L.EMIT	: LIGHT EMITTING MODULE
C.CE	: CERAMIC CAP	LED.DSPLY	: LED DISPLAY
C.CE.ARRAY	: CERAMIC CAP ARRAY	LED.INFRD	: LED, INFRARED
C.CE.CHP	: CHIP CERAMIC CAP	MODUL.RF	: MODULATOR, RF
C.CE.ML	: MULTILAYER CERAMIC CAP	PHOT.CPL	: PHOTO COUPLER
C.CE.M.CHP	: CHIP MULTILAYER CERAMIC CAP	PHOT.INTR	: PHOTO INTERRUPTER
C.CE.SAFTY	: RECOGNIZED CERAMIC CAP	PHOT.RFLCT	: PHOTO REFLECTOR
C.CE.TUBLR	: CERAMIC TUBULAR CAP	PIN.TEST	: PIN, TEST POINT
C.CE.SMI	: SEMI CONDUCTIVE CERAMIC CAP	PLST.RIVET	: PLASTIC RIVET
C.EL	: ELECTROLYTIC CAP	R.ARRAY	: RESISTOR ARRAY
C.MICA	: MICA CAP	R.CAR	: CARBON RESISTOR
C.ML.FLM	: MULTILAYER FILM CAP	R.CAR.CHP	: CHIP RESISTOR
C.MP	: METALLIZED PAPER CAP	R.CAR.FP	: FLAME PROOF CARBON RESISTOR
C.MYLAR	: MYLAR FILM CAP	R.FUS	: FUSABLE RESISTOR
C.MYLAR.ML	: MULTILAYER MYLAR FILM CAP	R.MTL.CHP	: CHIP METAL FILM RESISTOR
C.PAPER	: PAPER CAPACITOR	R.MTL.FLM	: METAL FILM RESISTOR
C.PLS	: POLYSTYRENE FILM CAP	R.MTL.OXD	: METAL OXIDE FILM RESISTOR
C.POL	: POLYESTER FILM CAP	R.MTL.PLAT	: METAL PLATE RESISTOR
C.POLY	: POLYETHYLENE FILM CAP	RSNR.CE	: CERAMIC RESONATOR
C.PP	: POLYPROPYLENE FILM CAP	RSNR.CRYS	: CRYSTAL RESONATOR
C.TNTL	: TANTALUM CAP	R.TW.CEM	: TWIN CEMENT FIXED RESISTOR
C.TNTL.CHP	: CHIP TANTALUM CAP	R.WW	: WIRE WOUND RESISTOR
C.TRIM	: TRIMMER CAP	SCR.BND.HD	: BIND HEAD B-TITE SCREW
CN	: CONNECTOR	SCR.BW.HD	: BW HEAD TAPPING SCREW
CN.BS.PIN	: CONNECTOR, BASE PIN	SCR.CUP	: CUP TITE SCREW
CN.CANNON	: CONNECTOR, CANNON	SCR.TERM	: SCREW TERMINAL
CN.DIN	: CONNECTOR, DIN	SCR.TR	: SCREW, TRANSISTOR
CN.FLAT	: CONNECTOR, FLAT CABLE	SUPRT.PCB	: SUPPORT, P.C.B.
CN.POST	: CONNECTOR, BASE POST	SURG.PRTCT	: SURGE PROTECTOR
COIL.MX.AM	: COIL, AM MIX	SW.TACT	: TACT SWITCH
COIL.AT.FM	: COIL, FM ANTENNA	SW.LEAF	: LEAF SWITCH
COIL.DT.FM	: COIL, FM DETECT	SW.LEVER	: LEVER SWITCH
COIL.MX.FM	: COIL, FM MIX	SW.MICRO	: MICRO SWITCH
COIL.OUTPT	: OUTPUT COIL	SW.PUSH	: PUSH SWITCH
DIOD.ARRAY	: DIODE ARRAY	SW.RT.ENC	: ROTARY ENCODER
DIODE.BRG	: DIODE BRIDGE	SW.RT.MTR	: ROTARY SWITCH WITH MOTOR
DIODE.CHP	: CHIP DIODE	SW.RT	: ROTARY SWITCH
DIODE.VAR	: VARACTOR DIODE	SW.SLIDE	: SLIDE SWITCH
DIOD.Z.CHP	: CHIP ZENER DIODE	TERM.SP	: SPEAKER TERMINAL
DIODE.ZENR	: ZENER DIODE	TERM.WRAP	: WRAPPING TERMINAL
DSCR.CE	: CERAMIC DISCRIMINATOR	THRMST.CHP	: CHIP THERMISTOR
FER.BEAD	: FERRITE BEADS	TR.CHP	: CHIP TRANSISTOR
FER.CORE	: FERRITE CORE	TR.DGT	: DIGITAL TRANSISTOR
FET.CHP	: CHIP FET	TR.DGT.CHP	: CHIP DIGITAL TRANSISTOR
FL.DSPLY	: FLUORESCENT DISPLAY	TRANS	: TRANSFORMER
FLTR.CE	: CERAMIC FILTER	TRANS.PULS	: PULSE TRANSFORMER
FLTR.COMB	: COMB FILTER MODULE	TRANS.PWR	: POWER TRANSFORMER ASS'y
FLTR.LC.RF	: LC FILTER ,EMI	TUNER.AM	: TUNER PACK, AM
GND.MTL	: GROUND PLATE	TUNER.FM	: TUNER PACK, FM
GND.TERM	: GROUND TERMINAL	TUNER.PK	: FRONT-END TUNER PACK
HOLDER.FUS	: FUSE HOLDER	VR	: ROTARY POTENTIOMETER
IC.PRTCT	: IC PROTECTOR	VR.MTR	: POTENTIOMETER WITH MOTOR
JUMPER.CN	: JUMPER CONNECTOR	VR.SW	: POTENTIOMETER WITH ROTARY SW
JUMPER.TST	: JUMPER, TEST POINT	VR.SLIDE	: SLIDE POTENTIOMETER
L.DTCT	: LIGHT DETECTING MODULE	VR.TRIM	: TRIMMER POTENTIOMETER

Note) Those parts marked with “#” are not included in the P.C.B. ass'y.

CDX-396 MAIN P.C.B.

Schm Ref.	PART NO.	Description		
* V5003700	P.C.B.	MAIN(UC)		
* V5003800	P.C.B.	MAIN(R)		
* V5003900	P.C.B.	MAIN(A)		
* V5004000	P.C.B.	MAIN(BG)		
CB1	V2731000	CN.FMN	16P	
CB2	VB390200	CN.BS.PIN	6P	
CB3	VB390100	CN.BS.PIN	5P	
CB101	VT707200	L.EMIT	TOTX178	
CB200	VK024900	CN.BS.PIN	5P	
CB201	Vi878300	CN.BS.PIN	5P	
CB202	VP245600	CN	2P	
CB203	VG879900	CN.BS.PIN	2P	
CB300	VU283000	CN.BS.PIN	30P	
CB301	VU273000	CN.BS.PIN	30P	
C1	VJ599100	C.CE.TUBLR	0.1uF	50V
C3	UA654470	C.MYLAR	0.047uF	50V
C4	UR818100	C.EL	100uF	6.3V
C5	UR818100	C.EL	100uF	6.3V
C6	UR866100	C.EL	1uF	50V
C7	VJ599100	C.CE.TUBLR	0.1uF	50V
C8	VJ599100	C.CE.TUBLR	0.1uF	50V
C9	UA953100	C.MYLAR	1000pF	50V
C10	VJ599100	C.CE.TUBLR	0.1uF	50V
C11	VF466700	C.CE.TUBLR	47pF	50V
C12	UA655100	C.MYLAR	0.1uF	50V
C13	VG278400	C.CE.TUBLR	220pF	50V
C14	UN865470	C.EL	0.47uF	50V
C15	UA655100	C.MYLAR	0.1uF	50V
C16	UA953120	C.MYLAR	1200pF	50V
C17	UA953270	C.MYLAR	2700pF	50V
C18	UN866470	C.EL	4.7uF	50V
C19	UR837470	C.EL	47uF	16V
C20	VJ599100	C.CE.TUBLR	0.1uF	50V
C21	UR818100	C.EL	100uF	6.3V
* C22	V4749000	C.EL	150uF	6.3V
C23	VF467000	C.CE.TUBLR	1000pF	50V
C24	VJ599100	C.CE.TUBLR	0.1uF	50V
C25	UR818100	C.EL	100uF	6.3V
C26	UR818100	C.EL	100uF	6.3V
C27	UR838100	C.EL	100uF	16V
* C28	V4749000	C.EL	150uF	6.3V
C29	UA953330	C.MYLAR	3300pF	50V
C30	UA655100	C.MYLAR	0.1uF	50V
C31	VG278700	C.CE.TUBLR	390pF	50V
C32	UA655100	C.MYLAR	0.1uF	50V
C33	VJ599100	C.CE.TUBLR	0.1uF	50V
C34	UA954120	C.MYLAR	0.012uF	50V
* C35	V4749000	C.EL	150uF	6.3V
C36	UA655100	C.MYLAR	0.1uF	50V
* C37	UN865220	C.EL	0.22uF	50V
C38	UA655100	C.MYLAR	0.1uF	50V
C39	VJ599100	C.CE.TUBLR	0.1uF	50V
C42	VJ599100	C.CE.TUBLR	0.1uF	50V

* New Parts

Schm Ref.	PART NO.	Description		
C43	VA761400	C.CE	47pF	50V
C44	VA761400	C.CE	47pF	50V
C46	UR866100	C.EL	1uF	50V
C47	UR866100	C.EL	1uF	50V
C48	UR866100	C.EL	1uF	50V
C49	UR866100	C.EL	1uF	50V
C50	UR818470	C.EL	470uF	6.3V
C51	VJ599100	C.CE.TUBLR	0.1uF	50V
C54	VJ599100	C.CE.TUBLR	0.1uF	50V
C55	UR818100	C.EL	100uF	6.3V
C56	UR818100	C.EL	100uF	6.3V
C60	VJ599100	C.CE.TUBLR	0.1uF	50V
C62	VJ599100	C.CE.TUBLR	0.1uF	50V
C63	VJ599100	C.CE.TUBLR	0.1uF	50V
C100	UA952100	C.MYLAR	100pF	50V
* C101	V4850700	C.MYLAR	560pF	50V
* C102	V4850700	C.MYLAR	560pF	50V
C103	UA952100	C.MYLAR	100pF	50V
C104	UA954180	C.MYLAR	0.018uF	50V
C105	V2680700	C.MYLAR	3300pF	50V
C106	V2680700	C.MYLAR	3300pF	50V
C107	UA954180	C.MYLAR	0.018uF	50V
C108	VG287300	C.EL	22uF	50V
C109	VG287300	C.EL	22uF	50V
C118	VJ599100	C.CE.TUBLR	0.1uF	50V
C119	UA953100	C.MYLAR	1000pF	50V
C120	UA953100	C.MYLAR	1000pF	50V
C124	UR818100	C.EL	100uF	6.3V
C125	UR818100	C.EL	100uF	6.3V
C126	UR818100	C.EL	100uF	6.3V
C127	UR818100	C.EL	100uF	6.3V
C200	VJ599100	C.CE.TUBLR	0.1uF	50V
C201	UR866470	C.EL	4.7uF	50V
C202	UR866470	C.EL	4.7uF	50V
C203	UR865680	C.EL	0.68uF	50V
C204	UR818100	C.EL	100uF	6.3V
C205	UR818100	C.EL	100uF	6.3V
C206	UR866470	C.EL	4.7uF	50V
C207	UR739470	C.EL	4700uF	16V
C208	UR818100	C.EL	100uF	6.3V
C209	UR838220	C.EL	220uF	16V
C210	VG287900	C.EL	470uF	16V
C211	VG288300	C.EL	4700uF	16V
C212	UR828100	C.EL	100uF	10V
C213	UR866470	C.EL	4.7uF	50V
C214	UR866470	C.EL	4.7uF	50V
C215	FG644100	C.CE	0.01uF	50V
C216	FG644100	C.CE	0.01uF	50V
C217	UR867470	C.EL	47uF	50V
C218	FG644100	C.CE	0.01uF	50V
C219	UR868100	C.EL	100uF	50V
C220	VS741700	C.CE.SAFTY	0.01uF	275V
C221	VS741700	C.CE.SAFTY	0.01uF	275V



* New Parts

CDX-396/496

CDX-396 MAIN P.C.B.

Schm Ref.	PART NO.	Description
C222	VS741700	C.CE.SAFTY 0.01uF 275V
C300	VJ599100	C.CE.TUBLR 0.1uF 50V
C301	UR818100	C.EL 100uF 6.3V
C302	VG278700	C.CE.TUBLR 390pF 50V
C303	VG278700	C.CE.TUBLR 390pF 50V
C304	VG278700	C.CE.TUBLR 390pF 50V
C305	VG278700	C.CE.TUBLR 390pF 50V
C306	UM388100	C.EL 100uF 10V
C401	VG279100	C.CE.TUBLR 1200pF 16V
D200	VD631600	DIODE 1SS133,176,HSS104
D201	VD631600	DIODE 1SS133,176,HSS104
D202	VG438000	DIODE.ZENR MTZJ6.2B 6.2V
* D203	VG437000	DIODE.ZENR MTZJ4.7A 4.7V
⚠ D204	VS997800	DIODE 1T2
D205	VG437400	DIODE.ZENR MTZJ5.1B 5.1V
D206	VG442200	DIODE.ZENR MTZJ22C 22V
⚠ D207	VS997800	DIODE 1T2
⚠ D208	VS997800	DIODE 1T2
⚠ D209	VS997800	DIODE 1T2
⚠ D210	VS997800	DIODE 1T2
⚠ D211	VS997800	DIODE 1T2
⚠ D212	VS997800	DIODE 1T2
⚠ D213	VS997800	DIODE 1T2
⚠ D214	VS997800	DIODE 1T2
⚠ D215	VS997800	DIODE 1T2
⚠ D216	VS997800	DIODE 1T2
D217	VS997800	DIODE 1T2
* D250	VG438500	DIODE.ZENR MTZJ7.5A 7.5V
D300	VD631600	DIODE 1SS133,176,HSS104
D301	VD631600	DIODE 1SS133,176,HSS104
D302	VD631600	DIODE 1SS133,176,HSS104
D303	VD631600	DIODE 1SS133,176,HSS104
D304	VD631600	DIODE 1SS133,176,HSS104
HS201	VA119100	HEAT.SINK
HS202	VA119100	HEAT.SINK
* IC1	XW249A00	IC AN8882SB
* IC2	XW244A00	IC AN8785SB
* IC3	XW915A00	IC MN35511AL
IC101	XA987A00	IC NJM2068D-D
IC102	XA987A00	IC NJM2068D-D
IC200	XD201A00	IC M5290P
* IC300	XY240A00	IC.CPU UPD78043FGF-072
⚠ L201	VV900900	FLTR 3071-012-0
* PJ100	V4925100	JACK.PIN 2P
Q1	iB054430	TR 2SB544 D,E,F,G
Q3	iC287820	TR 2SC2878 A,B
Q4	iC287820	TR 2SC2878 A,B
Q100	iC287820	TR 2SC2878 A,B
Q101	iC287820	TR 2SC2878 A,B
Q102	iC287820	TR 2SC2878 A,B
Q103	iC287820	TR 2SC2878 A,B
Q201	iA093320	TR 2SA933S Q,R
⚠ Q202	VS883300	TR 2SB1565 E,F

* New Parts

Schm Ref.	PART NO.	Description
⚠ Q203	VS883400	TR 2SD2394 E,F
Q204	iA093320	TR 2SA933S Q,R
Q250	iA093320	TR 2SA933S Q,R
Q300	iA093320	TR 2SA933S Q,R
Q301	iC174020	TR 2SC1740S R,S
R203	HV755100	R.CAR.FP 100 Ω 1/4W
R206	HV755100	R.CAR.FP 100 Ω 1/4W
⚠ R208	Vi868300	R.FUS 0.68 Ω 1/6W
⚠ R217	HV755150	R.CAR.FP 150 Ω 1/4W
R401	Vi868300	R.FUS 0.68 Ω 1/6W
⚠ SW200	VZ364100	SW.PUSH SDDL1-A2-F-1
⚠ SW201	VL908000	VOLT.SELCT ESE-370(R)
SW300	VG392900	SW.TACT SKHVAA
SW301	VG392900	SW.TACT SKHVAA
SW302	VG392900	SW.TACT SKHVAA
SW303	VG392900	SW.TACT SKHVAA
SW304	VG392900	SW.TACT SKHVAA
SW305	VG392900	SW.TACT SKHVAA
SW307	VG392900	SW.TACT SKHVAA
SW308	VG392900	SW.TACT SKHVAA
SW310	VG392900	SW.TACT SKHVAA
SW311	VG392900	SW.TACT SKHVAA
SW313	VG392900	SW.TACT SKHVAA
SW314	VG392900	SW.TACT SKHVAA
SW406	VG392900	SW.TACT SKHVAA
SW415	VG392900	SW.TACT SKHVAA
SW416	VG392900	SW.TACT SKHVAA
SW417	VG392900	SW.TACT SKHVAA
⚠ * T200	XW858A00	TRANS.PWR (UC)
⚠ * T200	XW859A00	TRANS.PWR (R)
⚠ * T200	XW860A00	TRANS.PWR (A)
⚠ * T200	XW861A00	TRANS.PWR (BG)
U300	V2856200	L.DTCT PIC-28043TH2
V300	VR061600	FL.DSPLY 9-MT-133GK
XL1	VJ719800	RSNR.CRYS 16.9344MHz
XL300	VU763600	RSNR.CE 5MHz
	V3750100	PIN L=50(R)
	VQ948800	SHEET.FL GD
	VZ156000	SPACER.FL t4x5x23

* New Parts

CDX-496 MAIN P.C.B.

Schm Ref.	PART NO.	Description		
* V5004200	P.C.B.	MAIN(R)		
* V5004300	P.C.B.	MAIN(BG)		
CB1	V2731000	CN.FMN	16P	
CB2	VB390200	CN.BS.PIN	6P	
CB3	VB390100	CN.BS.PIN	5P	
CB100	VK024700	CN.BS.PIN	3P	
CB101	VT707200	L.EMIT	TOTX178	
CB102	Vi878100	CN.BS.PIN	3P	
CB200	VK024900	CN.BS.PIN	5P	
CB201	Vi878300	CN.BS.PIN	5P	
CB202	VP245600	CN	2P	
CB203	VG879900	CN.BS.PIN	2P	
CB300	VU283000	CN.BS.PIN	30P	
CB301	VU273000	CN.BS.PIN	30P	
C1	VJ599100	C.CE.TUBLR	0.1uF	50V
C3	UA654470	C.MYLAR	0.047uF	50V
C4	UR818100	C.EL	100uF	6.3V
C5	UR818100	C.EL	100uF	6.3V
C6	UR866100	C.EL	1uF	50V
C7	VJ599100	C.CE.TUBLR	0.1uF	50V
C8	VJ599100	C.CE.TUBLR	0.1uF	50V
C9	UA953100	C.MYLAR	1000pF	50V
C10	VJ599100	C.CE.TUBLR	0.1uF	50V
C11	VF466700	C.CE.TUBLR	47pF	50V
C12	UA655100	C.MYLAR	0.1uF	50V
C13	VG278400	C.CE.TUBLR	220pF	50V
C14	UN865470	C.EL	0.47uF	50V
C15	UA655100	C.MYLAR	0.1uF	50V
C16	UA953120	C.MYLAR	1200pF	50V
C17	UA953270	C.MYLAR	2700pF	50V
C18	UN866470	C.EL	4.7uF	50V
C19	UR837470	C.EL	47uF	16V
C20	VJ599100	C.CE.TUBLR	0.1uF	50V
C21	UR818100	C.EL	100uF	6.3V
* C22	V4749000	C.EL	150uF	6.3V
C23	VF467000	C.CE.TUBLR	1000pF	50V
C24	VJ599100	C.CE.TUBLR	0.1uF	50V
C25	UR818100	C.EL	100uF	6.3V
C26	UR818100	C.EL	100uF	6.3V
C27	UR838100	C.EL	100uF	16V
* C28	V4749000	C.EL	150uF	6.3V
C29	UA953330	C.MYLAR	3300pF	50V
C30	UA655100	C.MYLAR	0.1uF	50V
C31	VG278700	C.CE.TUBLR	390pF	50V
C32	UA655100	C.MYLAR	0.1uF	50V
C33	VJ599100	C.CE.TUBLR	0.1uF	50V
C34	UA954120	C.MYLAR	0.012uF	50V
* C35	V4749000	C.EL	150uF	6.3V
C36	UA655100	C.MYLAR	0.1uF	50V
* C37	UN865220	C.EL	0.22uF	50V
C38	UA655100	C.MYLAR	0.1uF	50V
C39	VJ599100	C.CE.TUBLR	0.1uF	50V
C42	VJ599100	C.CE.TUBLR	0.1uF	50V

* New Parts

Schm Ref.	PART NO.	Description		
C43	VA761400	C.CE	47pF	50V
C44	VA761400	C.CE	47pF	50V
C46	UR866100	C.EL	1uF	50V
C47	UR866100	C.EL	1uF	50V
C48	UR866100	C.EL	1uF	50V
C49	UR866100	C.EL	1uF	50V
C50	UR818470	C.EL	470uF	6.3V
C51	VJ599100	C.CE.TUBLR	0.1uF	50V
C54	VJ599100	C.CE.TUBLR	0.1uF	50V
C55	UR818100	C.EL	100uF	6.3V
C56	UR818100	C.EL	100uF	6.3V
C60	VJ599100	C.CE.TUBLR	0.1uF	50V
C62	VJ599100	C.CE.TUBLR	0.1uF	50V
C63	VJ599100	C.CE.TUBLR	0.1uF	50V
C100	UA952100	C.MYLAR	100pF	50V
* C101	V4850700	C.MYLAR	560pF	50V
* C102	V4850700	C.MYLAR	560pF	50V
C103	UA952100	C.MYLAR	100pF	50V
C104	UA954180	C.MYLAR	0.018uF	50V
C105	V2680700	C.MYLAR	3300pF	50V
C106	V2680700	C.MYLAR	3300pF	50V
C107	UA954180	C.MYLAR	0.018uF	50V
C108	VG287300	C.EL	22uF	50V
C109	VG287300	C.EL	22uF	50V
C110	UR837100	C.EL	10uF	16V
C111	UR837100	C.EL	10uF	16V
C112	UR838330	C.EL	330uF	16V
C113	VJ599000	C.CE.TUBLR	0.047uF	16V
C114	VG277700	C.CE.TUBLR	68pF	50V
C115	VG277700	C.CE.TUBLR	68pF	50V
C116	VJ599000	C.CE.TUBLR	0.047uF	16V
C117	UR838330	C.EL	330uF	16V
C118	VJ599100	C.CE.TUBLR	0.1uF	50V
C119	UA953100	C.MYLAR	1000pF	50V
C120	UA953100	C.MYLAR	1000pF	50V
C124	UR818100	C.EL	100uF	6.3V
C125	UR818100	C.EL	100uF	6.3V
C126	UR818100	C.EL	100uF	6.3V
C127	UR818100	C.EL	100uF	6.3V
C200	VJ599100	C.CE.TUBLR	0.1uF	50V
C201	UR866470	C.EL	4.7uF	50V
C202	UR866470	C.EL	4.7uF	50V
C203	UR865680	C.EL	0.68uF	50V
C204	UR818100	C.EL	100uF	6.3V
C205	UR818100	C.EL	100uF	6.3V
C206	UR866470	C.EL	4.7uF	50V
C207	UR739470	C.EL	4700uF	16V
C208	UR818100	C.EL	100uF	6.3V
C209	UR838220	C.EL	220uF	16V
C210	VG287900	C.EL	470uF	16V
C211	VG288300	C.EL	4700uF	16V
C212	UR828100	C.EL	100uF	10V
C213	UR866470	C.EL	4.7uF	50V

* New Parts

CDX-496 MAIN P.C.B.

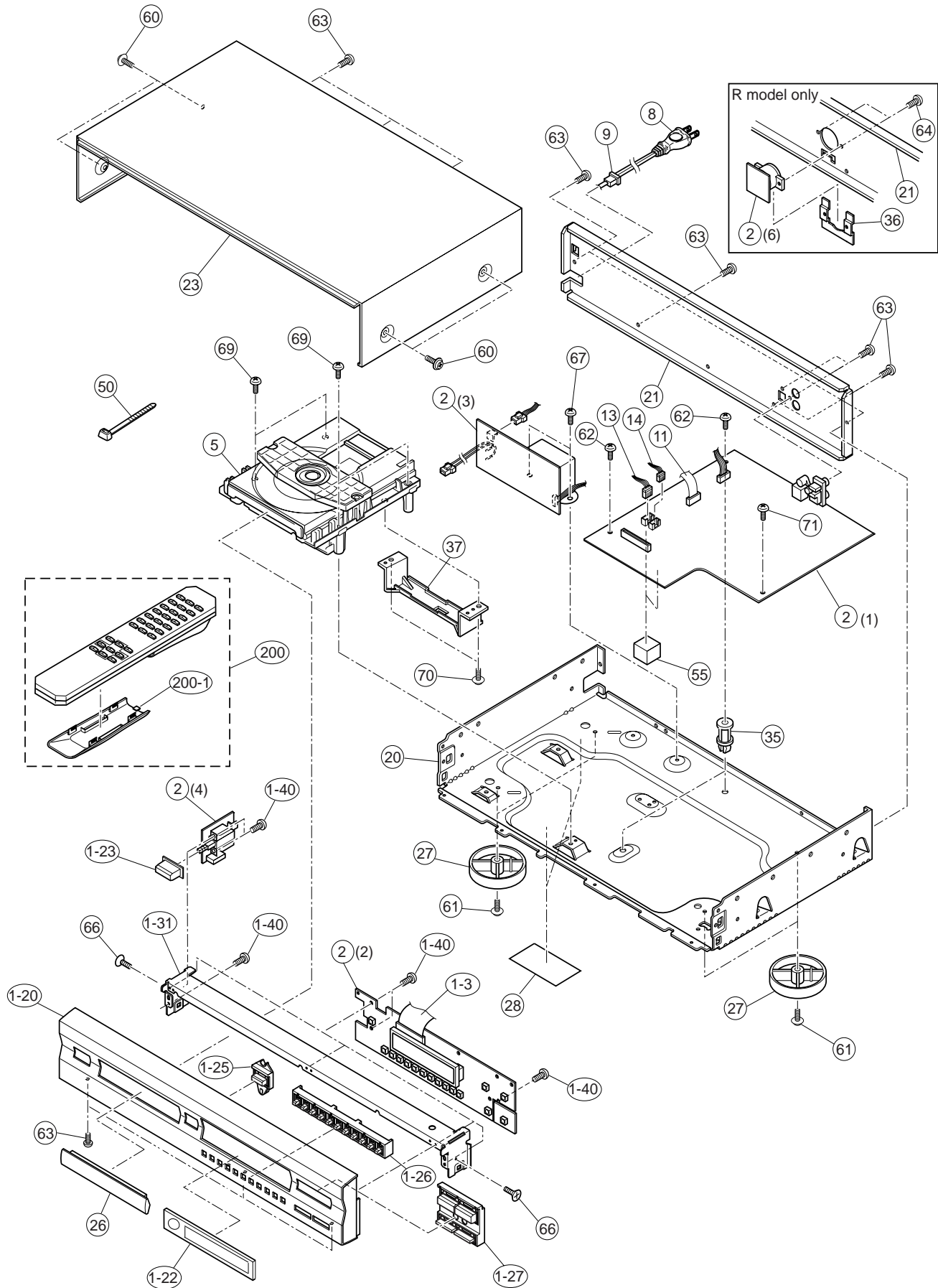
Schm Ref.	PART NO.	Description
△ C214	UR866470	C.EL 4.7uF 50V
△ C215	FG644100	C.CE 0.01uF 50V
△ C216	FG644100	C.CE 0.01uF 50V
△ C217	UR867470	C.EL 47uF 50V
△ C218	FG644100	C.CE 0.01uF 50V
△ C219	UR868100	C.EL 100uF 50V
△ C220	VS741700	C.CE.SAFTY 0.01uF 275V
△ C221	VS741700	C.CE.SAFTY 0.01uF 275V
C222	VS741700	C.CE.SAFTY 0.01uF 275V
C300	VJ599100	C.CE.TUBLR 0.1uF 50V
C301	UR818100	C.EL 100uF 6.3V
C302	VG278700	C.CE.TUBLR 390pF 50V
C303	VG278700	C.CE.TUBLR 390pF 50V
C304	VG278700	C.CE.TUBLR 390pF 50V
C305	VG278700	C.CE.TUBLR 390pF 50V
C306	UM388100	C.EL 100uF 10V
C307	VJ599100	C.CE.TUBLR 0.1uF 50V
C401	VG279100	C.CE.TUBLR 1200pF 16V
D100	VD631600	DIODE 1SS133,176,HSS104
D101	VD631600	DIODE 1SS133,176,HSS104
D200	VD631600	DIODE 1SS133,176,HSS104
D201	VD631600	DIODE 1SS133,176,HSS104
D202	VG438000	DIODE.ZENR MTZJ6.2B 6.2V
* D203	VG437000	DIODE.ZENR MTZJ4.7A 4.7V
△ D204	VS997800	DIODE 1T2
D205	VG437400	DIODE.ZENR MTZJ5.1B 5.1V
D206	VG442200	DIODE.ZENR MTZJ22C 22V
△ D207	VS997800	DIODE 1T2
△ D208	VS997800	DIODE 1T2
△ D209	VS997800	DIODE 1T2
△ D210	VS997800	DIODE 1T2
△ D211	VS997800	DIODE 1T2
△ D212	VS997800	DIODE 1T2
△ D213	VS997800	DIODE 1T2
△ D214	VS997800	DIODE 1T2
△ D215	VS997800	DIODE 1T2
△ D216	VS997800	DIODE 1T2
D217	VS997800	DIODE 1T2
* D250	VG438500	DIODE.ZENR MTZJ7.5A 7.5V
D300	VD631600	DIODE 1SS133,176,HSS104
D301	VD631600	DIODE 1SS133,176,HSS104
D302	VD631600	DIODE 1SS133,176,HSS104
D303	VD631600	DIODE 1SS133,176,HSS104
D304	VD631600	DIODE 1SS133,176,HSS104
HS201	VA119100	HEAT.SINK
HS202	VA119100	HEAT.SINK
* IC1	XW249A00	IC AN8882SB
* IC2	XW244A00	IC AN8785SB
* IC3	XW915A00	IC MN35511AL
IC101	XA987A00	IC NJM2068D-D
IC102	XA987A00	IC NJM2068D-D
IC105	Xi249A00	IC BA15218
IC200	XD201A00	IC M5290P
* IC300	XY240A00	IC CPU UPD78043FGF-072

* New Parts

Schm Ref.	PART NO.	Description
IC301	XS070A00	IC S-24C01ADP EEPROM
JK100	V2700900	JACK.PHONE JY-6317-03-030GD
L201	VV900900	FLTR 3071-012-0
* PJ100	V4925200	JACK.PIN 2P
Q1	iB054430	TR 2SB544 D,E,F,G
Q3	iC287820	TR 2SC2878 A,B
Q4	iC287820	TR 2SC2878 A,B
Q100	iC287820	TR 2SC2878 A,B
Q101	iC287820	TR 2SC2878 A,B
Q102	iC287820	TR 2SC2878 A,B
Q103	iC287820	TR 2SC2878 A,B
Q201	iA093320	TR 2SA933S Q,R
△ Q202	VS883300	TR 2SB1565 E,F
△ Q203	VS883400	TR 2SD2394 E,F
Q204	iA093320	TR 2SA933S Q,R
Q250	iA093320	TR 2SA933S Q,R
Q300	iA093320	TR 2SA933S Q,R
Q301	iC174020	TR 2SC1740S R,S
R118	HV755120	R.CAR.FP 120 Ω 1/4W
R125	HV755120	R.CAR.FP 120 Ω 1/4W
R203	HV755100	R.CAR.FP 100 Ω 1/4W
R206	HV755100	R.CAR.FP 100 Ω 1/4W
△ R208	Vi868300	R.FUS 0.68 Ω 1/6W
△ R217	HV755150	R.CAR.FP 150 Ω 1/4W
R401	Vi868300	R.FUS 0.68 Ω 1/6W
△ SW200	VZ364100	SW.PUSH SDDL1-A2-F-1
△ SW201	VL908000	VOLT.SELCT ESE-370(R)
SW300	VG392900	SW.TACT SKHVAA
SW301	VG392900	SW.TACT SKHVAA
SW302	VG392900	SW.TACT SKHVAA
SW303	VG392900	SW.TACT SKHVAA
SW304	VG392900	SW.TACT SKHVAA
SW305	VG392900	SW.TACT SKHVAA
SW306	VG392900	SW.TACT SKHVAA
SW307	VG392900	SW.TACT SKHVAA
SW308	VG392900	SW.TACT SKHVAA
SW309	VG392900	SW.TACT SKHVAA
SW310	VG392900	SW.TACT SKHVAA
SW311	VG392900	SW.TACT SKHVAA
SW312	VG392900	SW.TACT SKHVAA
SW313	VG392900	SW.TACT SKHVAA
SW314	VG392900	SW.TACT SKHVAA
SW315	VG392900	SW.TACT SKHVAA
SW316	VG392900	SW.TACT SKHVAA
SW317	VG392900	SW.TACT SKHVAA
△ * T200	XW859A00	TRANS.PWR (R)
△ * T200	XW861A00	TRANS.PWR (BG)
U300	V2856200	L.DTCT PIC-28043TH2
V300	VR061600	FL.DSPLY 9-MT-133GK
XL1	VJ719800	RSNR.CRYS 16.9344MHz
XL300	VU763600	RSNR.CE 5MHz
	V3750100	PIN L=50(R)
	VQ948800	SHEET.FL GD
	VZ156000	SPACER.FL t4x5x23
	VN008600	SCR.TERM 8.3x13

* New Parts

CDX-396 EXPLODED VIEW



MECHANICAL PARTS

Ref. No.	PART NO.	Description	Remarks	Markets
1-3	MF130100	FLEXIBLE FLAT CABLE	30P 100mm	
* 1-20	V4200600	FRONT PANEL		BL
* 1-20	V4200700	FRONT PANEL		TI
* 1-22	V4210400	WINDOW PANEL,LID		
1-23	VZ494400	BUTTON	11x22	BL
1-23	VZ494500	BUTTON	11x22	TI
* 1-25	V4201400	BUTTON		BL
* 1-25	V4201500	BUTTON		TI
* 1-26	V4201200	BUTTON,4P		BL
* 1-26	V4201300	BUTTON,4P		TI
* 1-27	V4201000	BUTTON		BL
* 1-27	V4201100	BUTTON		TI
* 1-31	V4201600	SUPPORT,PANEL		
1-40	EP630290	BIND HEAD P-TITE SCREW	3x6 FCRM3-BL	
* 2	V5003700	P.C.B.ASS'Y	MAIN	(UC)
* 2	V5003800	P.C.B.ASS'Y	MAIN	(R)
* 2	V5003900	P.C.B.ASS'Y	MAIN	(A)
* 2	V5004000	P.C.B.ASS'Y	MAIN	(BG)
5	VZ573200	CD MECHANISM UNIT	KSL-2130CCM	
⚠ 8	V2296800	POWER CORD ASS'Y		(A)
⚠ 8	V2363800	POWER CORD ASS'Y		(UC)
⚠ 8	VN363700	POWER CORD ASS'Y		(G)
⚠ 8	VV437300	POWER CORD ASS'Y		(B)
⚠ 8	VZ542500	POWER CORD ASS'Y		(R)
9	V2438700	CORD STOPPER	#10P1	
11	V2017700	CONNECTOR,FLAT CABLE	16P 280mm	
* 13	MF706120	IDC CABLE ASS'Y	6P 120mm	
14	MF705120	IDC CABLE ASS'Y	5P 120mm	
20	VZ151800	CHASSIS,MAIN	ALL	
* 21	V4410100	REAR PANEL		(UC)
* 21	V4410200	REAR PANEL		(R)
* 21	V4410300	REAR PANEL		(BG)
* 21	V4410400	REAR PANEL		(A)
23	VZ151900	TOP COVER		BL
23	VZ152000	TOP COVER		TI
* 26	V4200800	LID,CDX		BL
* 26	V4200900	LID,CDX		TI
27	VQ780300	LEG	D60xH16	
28	VS037900	SHEET,TRAY	B	
35	VU981200	SUPPORT,P.C.B.No.3596		
36	VS257300	PLATE,R		(R)
37	VZ262200	SUPPORT	PU	
50	VU590000	BINDING TIE	CBTD001B	
55	V2113100	SPACER		
60	21991500	PW HEAD S-TITE SCREW	4x8-10 FCRM3-BL	BL
60	VH313200	BW HEAD S-TITE SCREW	4x8-10 FNM3-BL	TI
61	EP600250	BIND HEAD B-TITE SCREW	3x8 ZMC2-Y	
62	EP630640	BIND HEAD P-TITE SCREW	3x20 FCRM3-BL	
63	VN413300	BIND HEAD BONDING B-T.SCREW	3x8 MFZN2-BL	
64	EP600140	BIND HEAD B-TITE SCREW	3x10 MFZN2-BL	(R)
66	EP630400	FLAT HEAD B-TITE SCREW	3x6 FCRM3-BL	
67	V2728500	BIND HEAD S-TITE SCREW	4x7 MFZN2-BL	
69	EP600830	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL	

* New Parts

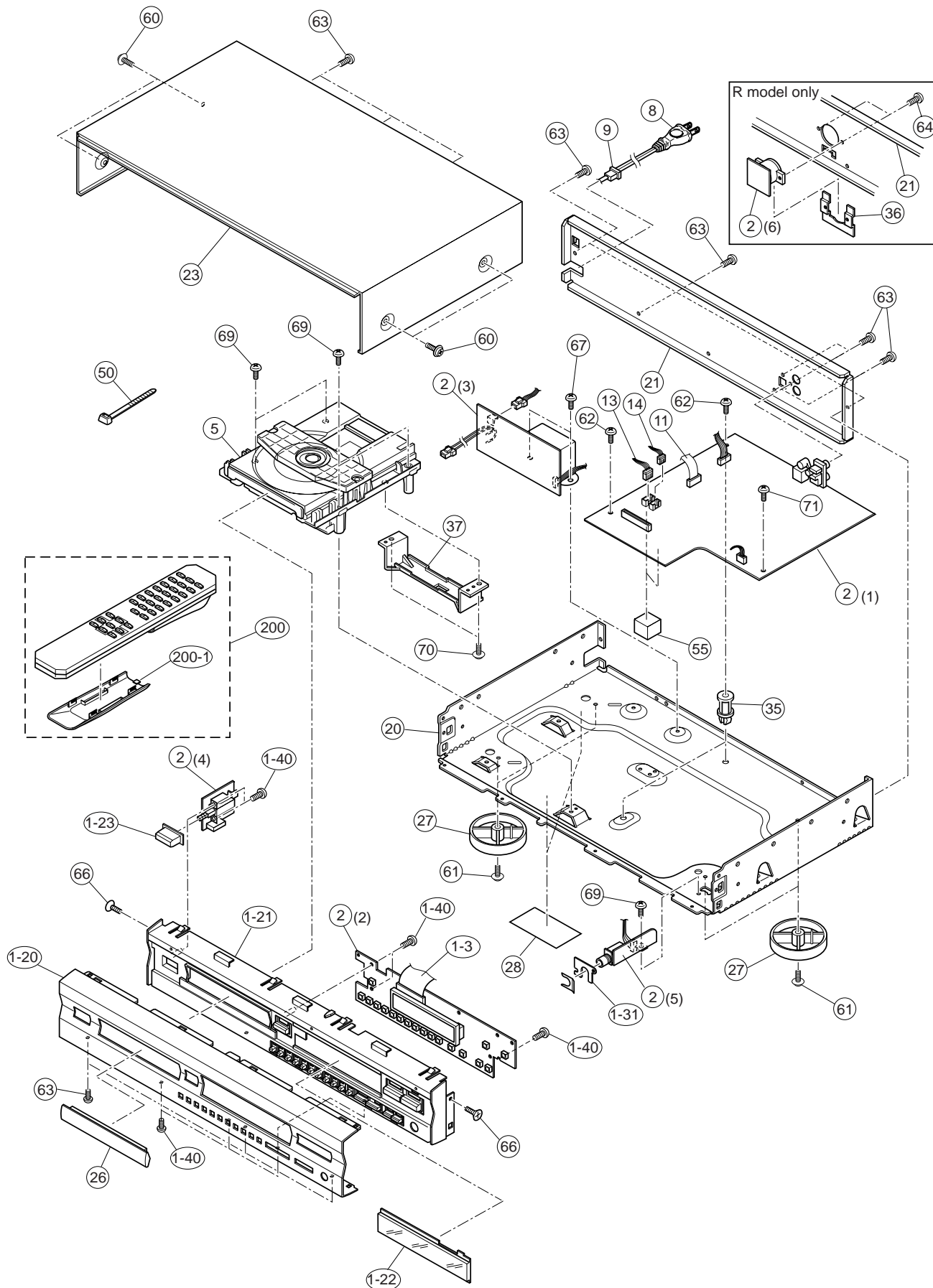
CDX-396

Ref. No.	PART NO.	Description	Remarks	Markets
70	V2128100	PW HEAD S-TITE SCREW	3x12-8 MFZN2-Y	
71	VT669300	PW HEAD B-TITE SCREW	3x8-8 MFC2	
		ACCESSORIES		
* 200	V4925800	REMOTE CONTROL TRANSMITTER		
* 200-1	AAX13340	LID	BLJYE 60050001	
	VS381600	PIN-PLUG CORD	2P 1.0m	
		BATTERY, MANGANESE	SUM-3, AA, R06	

* New Parts

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CDX-496 EXPLODED VIEW



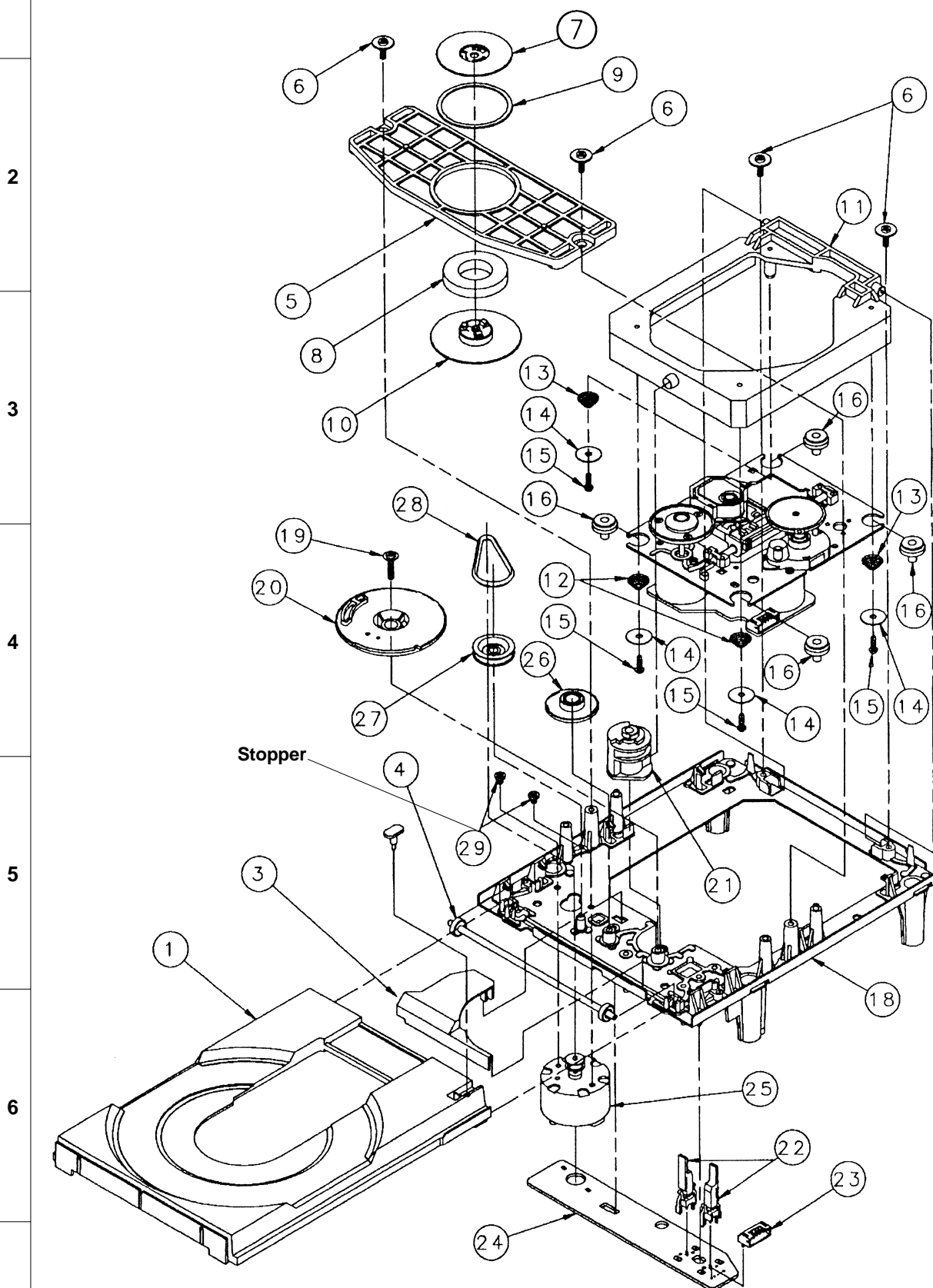
MECHANICAL PARTS

Ref. No.	PART NO.	Description	Remarks	Markets
1-3	MF130100	FLEXIBLE FLAT CABLE	30P	100mm
* 1-20	V4241800	FRONT PANEL	BL	
* 1-20	V4241900	FRONT PANEL	TI	
* 1-21	V4211000	PANEL, SUB	BL	
* 1-21	V4211100	PANEL, SUB	TI	
* 1-22	V4316800	WINDOW PANEL, LID		
1-23	VZ494400	BUTTON	11x22	BL
1-23	VZ494500	BUTTON	11x22	TI
1-31	V2668300	SUPPORT, HP		
1-40	EP630290	BIND HEAD P-TITE SCREW	3x6 FCRM3-BL	
* 2	V5004200	P.C.B. ASS'Y	MAIN	(R)
* 2	V5004300	P.C.B. ASS'Y	MAIN	(BG)
5	VZ573200	CD MECHANISM UNIT	KSL-2130CCM	
⚠ 8	VN363700	POWER CORD ASS'Y		(G)
⚠ 8	VV437300	POWER CORD ASS'Y		(B)
⚠ 8	VZ542500	POWER CORD ASS'Y		(R)
9	V2438700	CORD STOPPER	#10P1	
11	V2017700	CONNECTOR, FLAT CABLE	16P 280mm	
* 13	MF706120	IDC CABLE ASS'Y	6P 120mm	
14	MF705120	IDC CABLE ASS'Y	5P 120mm	
20	VZ151800	CHASSIS, MAIN	ALL	
* 21	V4410600	REAR PANEL		(R)
* 21	V4410700	REAR PANEL		(BG)
23	VZ151900	TOP COVER	BL	
23	VZ152000	TOP COVER	TI	
* 26	V4200800	LID, CDX	BL	
* 26	V4200900	LID, CDX	TI	
27	VQ780300	LEG	D60xH16	
28	VS037900	SHEET, TRAY	B	
35	VU981200	SUPPORT, P.C.B.No. 3596		
36	VS257300	PLATE, R	(R)	
37	VZ262200	SUPPORT	PU	
50	VU590000	BINDING TIE	CBTD001B	
55	V2113100	SPACER		
60	21991500	PW HEAD S-TITE SCREW	4x8-10 FCRM3-BL	BL
60	VH313200	BW HEAD S-TITE SCREW	4x8-10 FNM3-BL	TI
61	EP600250	BIND HEAD B-TITE SCREW	3x8 ZMC2-Y	
62	EP630640	BIND HEAD P-TITE SCREW	3x20 FCRM3-BL	
63	VN413300	BIND HEAD BONDING B-T. SCREW	3x8 MFZN2-BL	
64	EP600140	BIND HEAD B-TITE SCREW	3x10 MFZN2-BL	(R)
66	EP630400	FLAT HEAD B-TITE SCREW	3x6 FCRM3-BL	
67	V2728500	BIND HEAD S-TITE SCREW	4x7 MFZN2-BL	
69	EP600830	BIND HEAD B-TITE SCREW	3x8 FCRM3-BL	
70	V2128100	PW HEAD S-TITE SCREW	3x12-8 MFZN2-Y	
71	VT669300	PW HEAD B-TITE SCREW	3x8-8 MFC2	
		ACCESSORIES		
* 200	V4925900	REMOTE CONTROL TRANSMITTER		
200-1	AAX13340	LID	BLJYE 60050001	
	VS381600	PIN-PLUG CORD	2P 1.0m	
		BATTERY, MANGANESE	SUM-3, AA, R06	

* New Parts

COMMON

1 ■ EXPLODED VIEW (CD Mechanism Unit)



* The stopper is not supplied with the tray as a spare part.

When replacing the tray, keep the removed stopper and reuse it.

Should it be lost and a new one be necessary, order service part ⑱ Main Chassis (S) and remove the stopper only from it and use it as a spare part.

7

COMMON

■ MECHANICAL PARTS (CD Mechanism Unit)

Ref. No.	PART NO.	Description	Remarks	Markets
	VZ573200	CD MECHANISM UNIT	KSL-2130CCM	
1	CX680620	TRAY (C)	2130	264629001
3	CX675250	GEAR COVER (S)		262554401
4	CX675210	TRAY GEAR (S)		262553501
5	AX619150	CHUCKING PLATE (S)		262554601
6	EX602890	BW HEAD P-TITE SCREW	2.6x7	262629401
7	BX602660	CHUCKING YOKE (S)		262553701
8	NX610570	MAGNET ASS'Y		145249321
9	CX675240	DAMPER (S)		262554102
10	NX636010	CHUCKING PULLEY		264629101
11	AX624650	SUB CHASSIS ASS'Y (S)		264628801
12	AX624640	COIL, SPRING (F)		264723601
13	AX624630	COIL, SPRING (R)		262723501
14	AX624660	WASHER	2130	264628901
15	EX604270	P-TITE SCREW	2.6x10	768513511
16	AX624620	INSULATOR		262723401
18	AX619160	MAIN CHASSIS (S), OUTSERT		262555206
19	VH554700	BW HEAD P-TITE SCREW	2.6x16	331950151
20	CX675270	DRIVE GEAR (S)		262554701
21	CX675260	CONTROL CAM (S)		262554504
22	KX604780	LEAF SWITCH		169266711
23	LX608390	CONNECTOR PIN	5P	156472111
24	NX613050	PWB, LOADING (S)		164052311
25	JX601470	LOADING MOTOR ASS'Y		X26251171
26	CX675200	CENTER GEAR (S)		262527402
27	CX675220	LOADING PULLEY (S)		262553602
28	CX610840	BELT, LOADING MOTOR		365338700
29	EX602880	SCREW	2.6x2.5	262527901

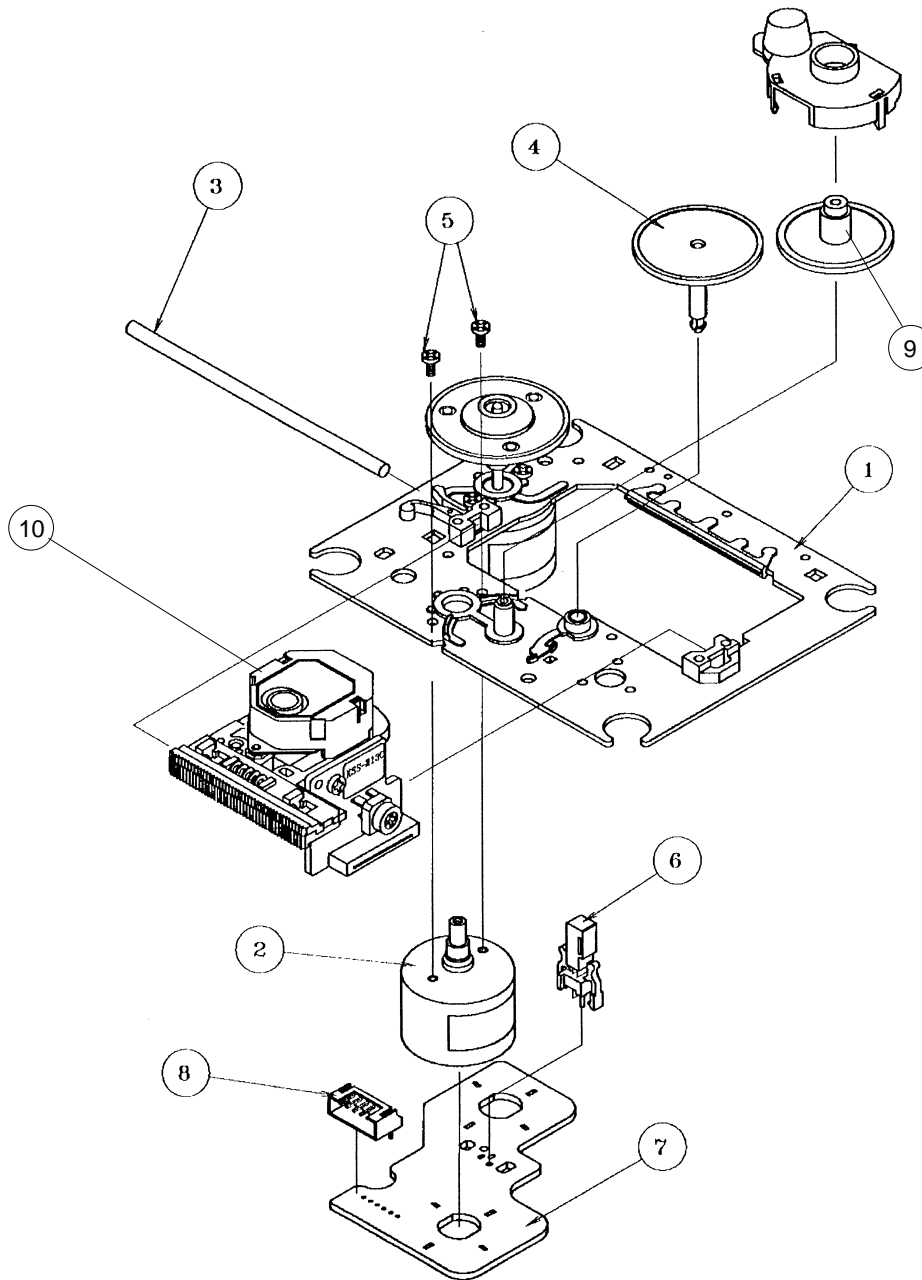


* New Parts

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COMMON

1 ■ EXPLODED VIEW (Drive Unit)



Ref. No.	PART NO.	Description	Remarks	Markets
1	NX635420	MOTOR CHASSIS ASS'Y	(MB)	X26258771
2	CX679710	MOTOR GEAR ASS'Y		X26257691
3	AX623980	SLED SHAFT		262690801
4	CX679720	GEAR, A	(S)	262690701
5	EA020036	PAN HEAD SCREW	2x3 ZMC2-Y	762125515
6	KX604660	LEAF SWITCH		157208511
7	NX613040	PWB, MOTOR	MOTOR 6P	163967812
8	LX610120	CONNECTOR PIN	6P	156472211
9	CX680030	GEAR		262700301
10	NX636020	OPTICAL HEAD		KSS213C

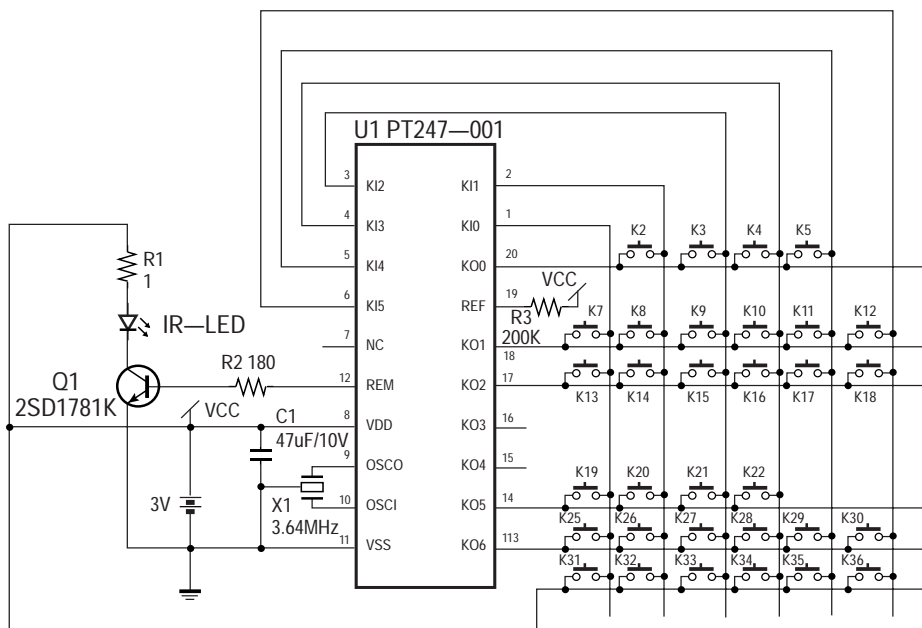
* New Parts

CDX-396/496

COMMON

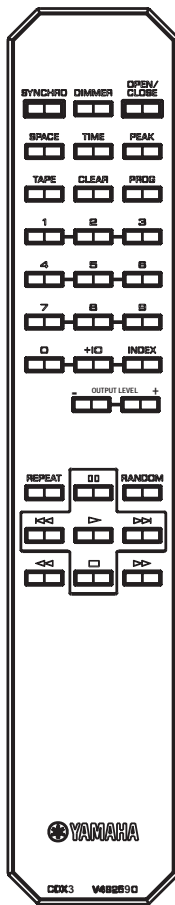
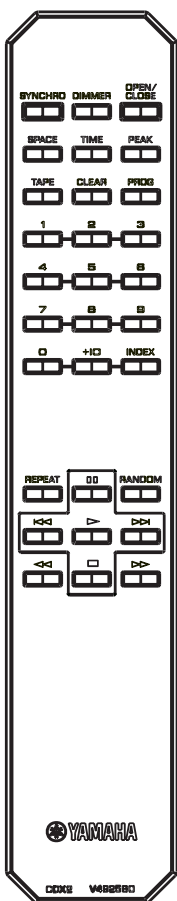
REMOTE CONTROL TRANSMITTER

■ SCHEMATIC DIAGRAM



CDX-396

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KEY No.	FUNCTION	CUSTOM CODE (HEX)	DATA CODE (HEX)
K2	REPEAT	79	08
K3	0	79	10
K4	8	79	18
K5	5	79	15
K7	OPEN/CLOSE	79	01
K8	CLEAR	79	0D
K9	1	79	11
K10	9	79	19
K11	6	79	16
K12	STOP	79	56
K13	PLAY	79	02
K14	TIME	79	0A
K15	2	79	12
K16	+10	79	1A
K17	SEARCH >>	79	06
*K18	OUTPUT LEVEL-	79	1D
K19	PEAK	79	5D
K20	INDEX	79	0B
K21	3	79	13
K22	RANDOM	79	1B
K25	I<< SKIP	79	04
K26	PROG	79	0C
K27	4	79	14
*K28	OUTPUT LEVEL+	79	1C
K29	TAPE	79	57
K30	SYNCHRO	79	58
K31	SKIP>>I	79	07
K32	SPACE	79	0F
K33	7	79	17
K34	DIMMER	79	1E
K35	PAUSE	79	55
K36	<<SEARCH	79	05

*K18,K28: CDX-496 ONLY

Parts List for Carbon Resistors

Value	1/4W Type Part No.	1/6W Type Part No.	Value	1/4W Type Part No.	1/6W Type Part No.
1.0	HJ35 3100	HF85 3100	10 k	HF45 7100	HF45 7100
1.8	HJ35 3180	*	11 k	HF45 7110	HF45 7110
2.2	HJ35 3220	HF85 3220	12 k	HJ35 7120	HF85 7120
3.3	HJ35 3330	HF85 3330	13 k	HF45 7130	HF45 7130
4.7	HJ35 3470	HF85 3470	15 k	HF45 7150	HF45 7150
5.6	HJ35 3560	HF85 3560	18 k	HF45 7180	HF45 7180
10	HF45 4100	HF45 4100	22 k	HF45 7220	HF45 7220
15	HJ35 4150	HF85 4150	24 k	HF45 7240	HF45 7240
22	HF45 4220	HF45 4220	27 k	HJ35 7270	HF85 7270
27	HJ35 4270	HF85 4270	30 k	HF45 7300	HF45 7300
33	HF45 4330	HF45 4330	33 k	HF45 7330	HF45 7330
39	HJ35 4470	HF85 4390	36 k	HF45 7360	HF45 7360
47	HF45 4470	HF45 4470	39 k	HF45 7390	HF45 7390
56	HF45 4560	HF45 4560	47 k	HF45 7470	HF45 7470
68	HF45 4680	HF45 4680	51 k	HF45 7510	HF45 7510
75	HF45 4750	HF45 4750	56 k	HF45 7560	HF45 7560
82	HF45 4820	HF45 4820	62 k	HF45 7620	HF45 7620
91	HF45 4910	HF45 4910	68 k	HF45 7680	HF45 7680
100	HF45 5100	HF45 5100	82 k	HF45 7820	HF45 7820
110	HJ35 5110	HF85 5110	91 k	HF45 7910	HF45 7910
120	HF45 5120	HF45 5120	100 k	HF45 8100	HF45 8100
150	HF45 5150	HF45 5150	110 k	HF45 8110	HF45 8110
160	HJ35 5160	*	120 k	HF45 8120	HF45 8120
180	HF45 5180	HF45 5180	150 k	HF45 8150	HF45 8150
200	HF45 5200	HF45 5200	180 k	HF45 8180	HF45 8180
220	HF45 5220	HF45 5220	220 k	HJ35 8220	HF85 8220
270	HF45 5270	HF45 5270	270 k	HF45 8270	HF45 8270
330	HF45 5330	HF45 5330	300 k	HF45 8300	HF45 8300
390	HF45 5390	HF45 5390	330 k	HF45 8330	HF45 8330
430	HF45 5430	HF45 5430	390 k	HJ35 8390	HF85 8390
470	HF45 5470	HF45 5470	470 k	HF45 8470	HF45 8470
510	HF45 5510	HF45 5510	560 k	HJ35 8560	HF85 8560
560	HF45 5560	HF45 5560	680 k	HJ35 8680	HF85 8680
680	HF45 5680	HF45 5680	820 k	HJ35 8820	HF85 8820
820	HF45 5820	HF45 5820	1.0 M	HF45 9100	HF45 9100
910	HF45 5910	HF45 5910	1.2 M	HJ35 9120	*
1.0 k	HF45 6100	HF45 6100	1.5 M	HJ35 9150	HF85 9150
1.2 k	HF45 6120	HF45 6120	1.8 M	HJ35 9180	HF85 9180
1.5 k	HF45 6150	HF45 6150	2.2 M	HJ35 9220	HF85 9220
1.8 k	HF45 6180	HF45 6180	3.3 M	HJ35 9330	HF85 9330
2.0 k	HJ35 6200	HF85 6200	3.9 M	HJ35 9390	*
2.2 k	HF45 6220	HF45 6220	4.7 M	HJ35 9470	HF85 9470
2.4 k	HJ35 6240	HF85 6240			
2.7 k	HF45 6270	HF45 6270			
3.0 k	HF45 6300	HF45 6300			
3.3 k	HF45 6330	HF45 6330			
3.6 k	HJ35 6360	HF85 6360			
3.9 k	HF45 6390	HF45 6390			
4.7 k	HF45 6470	HF45 6470			
5.1 k	HF45 6510	HF45 6510			
5.6 k	HF45 6560	HF45 6560			
6.8 k	HF45 6680	HF45 6680			
8.2 k	HF45 6820	HF45 6820			
9.1 k	HF45 6910	HF45 6910			

1/4W Type

HJ35 ○○○○

10mm

1/4W Type

HF45 ○○○○

1/6W Type

HF85 ○○○○

5mm