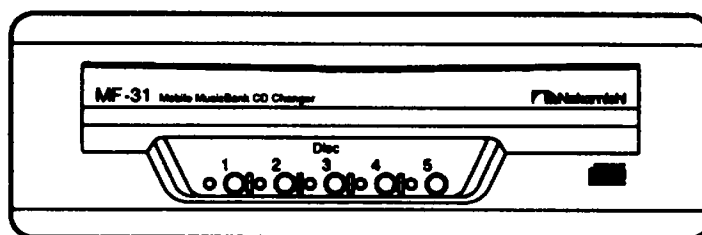


# Service Manual

Mobile MusicBank CD Changer

**MF-31/31FM**

**MF-51/51d**



Mobile D/A Converter

**DAC-41**

 Nakamichi

## 1. PACKAGE ASS'Y AND ACCESSORY ASS'Y

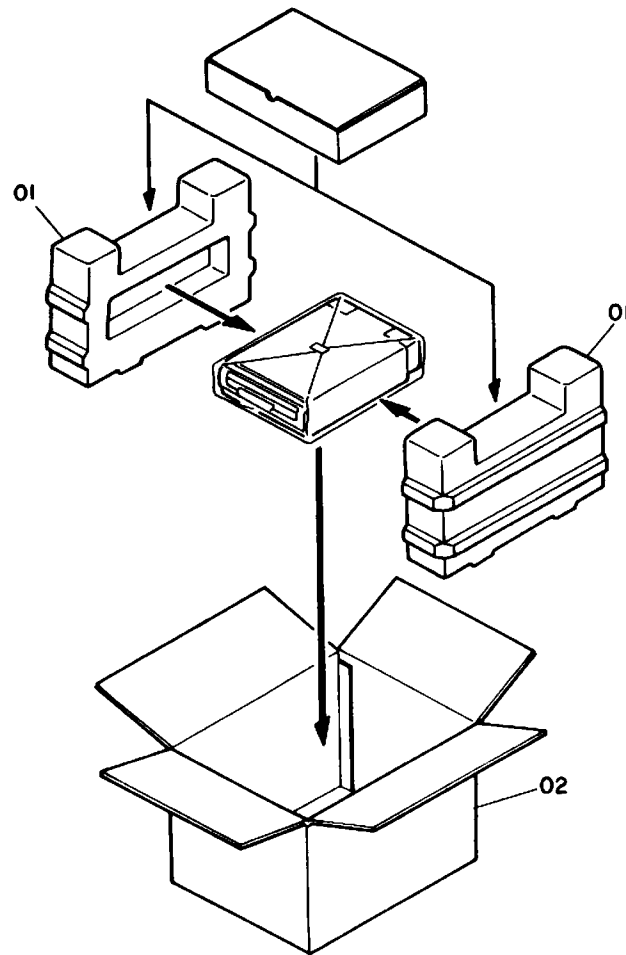


Fig. 1

## 1.1. Package Ass'y and Accessory Ass'y (MF-31)

Schematic Ref. No.	Part No.	Description	Qty
<b>Package Ass'y (MF-31)</b>			
01	0F05138A	Packing	2
02	0F05274A	Inner Carton (AB)	1
—	0F05280A	Inner Carton (OTR)	1
—	0F05174A	Soft Bag	1
—	0F05275A	Outer Carton (AB)	1
—	0F05281A	Outer Carton (OTR)	1

Schematic Ref. No.	Part No.	Description	Qty
<b>Accessory Ass'y (MF-31)</b>			
	0D06848A	DIN Wire	1
	0D06968A	Owner's Manual (Japanese)	1
	0D06971A	Owner's Manual (English)	1
	0H07397B	Angle Sheet A	2
	0H07398A	Angle Sheet B	2
	0H07413A	Adhesive Tape (Angle Plate)	2
	0H07666A	Angle	2
	0J07417A	Metal Stay	1
	DA05038A	Screw Ass'y	1
	HA07307A	Angle Plate Ass'y	2

## 1.2 Package Ass'y and Accessory Ass'y (MF-31FM)

Schematic Ref. No.	Part No.	Description	Qty
<b>Package Ass'y (MF-31FM)</b>			
01	0F05138A	Packing	2
02	0F05278A	Inner Carton	1
—	0F05279A	Outer Carton	1
—	0F05174A	Soft Bag	1
—	DG05203A	Remote Unit Ass'y	1

Schematic Ref. No.	Part No.	Description	Qty
<b>Accessory Ass'y (MF-31FM)</b>			
	0B90451A	Battery UM3X1	2
	0D06848A	DIN Wire	1
	0D06970A	Owner's Manual (Japanese)	1
	0H06835A	Magic Tape A	2
	0H06836A	Magic Tape B	2
	0H06863A	Magic Tape A2	2
	0H06864A	Magic Tape B2	2
	0H07397B	Angle Sheet A	2
	0H07398A	Angle Sheet B	2
	0H07413A	Adhesive Tape (Angle Plate)	2
	0H07666A	Angle	2
	0J07417A	Metal Stay	1
	DA05038A	Screw Ass'y	1
	HA07307A	Angle Plate Ass'y	2

## 5.1. Synthesis

Schematic Ref. No.	Part No.	Description	Qty
<b>Synthesis (MF-31, MF-31FM)</b>			
01	0H07662A	Side Plate	2
02	0H07593A	Top Cover	1
03	0H07373C	Edge Protector A	1
04	0J07825A	Damper Sheet	4
05	—	Mechanism Synthesis Ass'y	1
06	HA07463A	Front Panel Ass'y	1
07	BA09772A	Connector P.C.B. Ass'y	1
08	0H07328B	Damper Spring	2
09	0H07365C	Spring Plate L	1
10	0H07340C	Spring Plate R	1
11	0H07326A	Damper	4
12	0J07813A	Damper Adhesive Tape	4
13	0H07374D	Edge Protector B	1
14	HA07525A	Bottom Cover Ass'y	1
15	0H07663A	Rear Cover L	1
16	0H07664A	Rear Cover R	1
L01	0E04001A	Lock Screw	
L02	0E04038A	Lock Washer	
L03	0E04002A	ST2.6x4 + Truss (Black Chromate)	
L04	0E03322A	M3x6 + Pan (Black Chromate)	

## 5.2. Mechanism Synthesis Ass'y (A01)

Schematic				Schematic			
Ref. No.	Part No.	Description	Qty	Ref. No.	Part No.	Description	Qty
A01	—	<b>Mechanism Synthesis Ass'y (MF-31, MF-31FM)</b>	1	L06	0E03845A	M1.7x2.5 + Pan (#0 Type 3 Black)	
01	CG09367A	Mechanism Deck MF Ass'y	1	L07	0E03945A	M2x2 + Pan (#0 Type 3 Black)	
02	CA09333A	Top Cover SL S Ass'y	1	L08	0E03953A	M2x2 + Pan (#0 Type 1)	
03	CA09365B	Loading MF Ass'y	1	L09	0E03971A	Pet Washer	
04	CA09354A	Loading Link SL Ass'y	1	L10	0E03956A	Cut Washer 3.2x5.2x0.2	
05	0C10172A	Stocker CD SL	1	L11	0E04032A	M2.6x5 + Pan (#0 Type 3)	
06	CA09351A	Stocker Motor SL Ass'y	1	L12	0E00922A	M2x3 + Pan (Black Chromate)	
07	CA09344A	Disc Lock SL Ass'y	1	L13	0E04036A	M2.6x8 + Pan	
08	0C10175A	Stocker Position Gear SL	1				
09	CA09363A	Traverse Mecha Ass'y	1				
10	CA09345A	Motor Chassis SL Ass'y	1				
11	BA09736A	Mecha Flexible P.C.B. Ass'y	1				
12	CA09352B	Front Chassis SL Ass'y	1				
13	0C10286A	Anti Rattle Spring SL	1				
14	CA09325B	SUS Base X Sub Ass'y	1				
15	0C10185B	Mechanism UD Sub Cam SL	1				
16	0C10186A	UD S Cam Guide SL	2				
17	0J08004A	Dust Seal Emergency SL	1				
18	0C10211A	Plate Spring SL	1				
19	0C10184A	Disc Lock Spring SL	1				
20	0C10183A	Disc Lock Arm SL	1				
21	0C10187A	UD Link Arm SL	1				
22	BA09819A	LED P.C.B. Ass'y	1				
23	0B84818A	Wire Flex 19P	1				
24	BA09771A	Main P.C.B. Ass'y	1				
25	CA09362A	Bottom Cover MF Ass'y	1				
L01	0E00120A	M2.6x3 + Pan					
L02	0E03964A	ST2.6x3 + Pan (#0 Type 3)					
L03	0E03955A	Cut Washer 2.2x4.2x0.2					
L04	0E03457A	M2.6x4.5 + Pan (Black Chromate)					
L05	0C10287A	Damper Screw SL					

Apply **FL-955** (grease) to the following places when parts are replaced.

<u>Ref. No.</u>	<u>Location</u>	<u>Remarks</u>
03	Loading MF Ass'y Edges which are inserted into the chassis plate	
06	Stocker Motor SL Ass'y • Motor Shaft Worm Gear • Motor Shaft End	
07	Disc Lock SL Ass'y • Disc Lock Pinion	
14	SUS Base X Sub Ass'y • Contact part with the Plate Spring SL (Ref. No. 18)	
15	Mecha UD Sub Cam SL	Whole surface
16	UD S Cam Guide SL (2 pcs.)	Whole surface
18	Plate Spring SL Contact part (bottom end) with the SUS Base X Sub Ass'y (Ref. No. 14)	
20	Disc Lock Arm SL	Whole surface
21	UD Link Arm SL • Around the Top End	
—	Shaft for UD Link Arm SL (Ref. No. 21)	

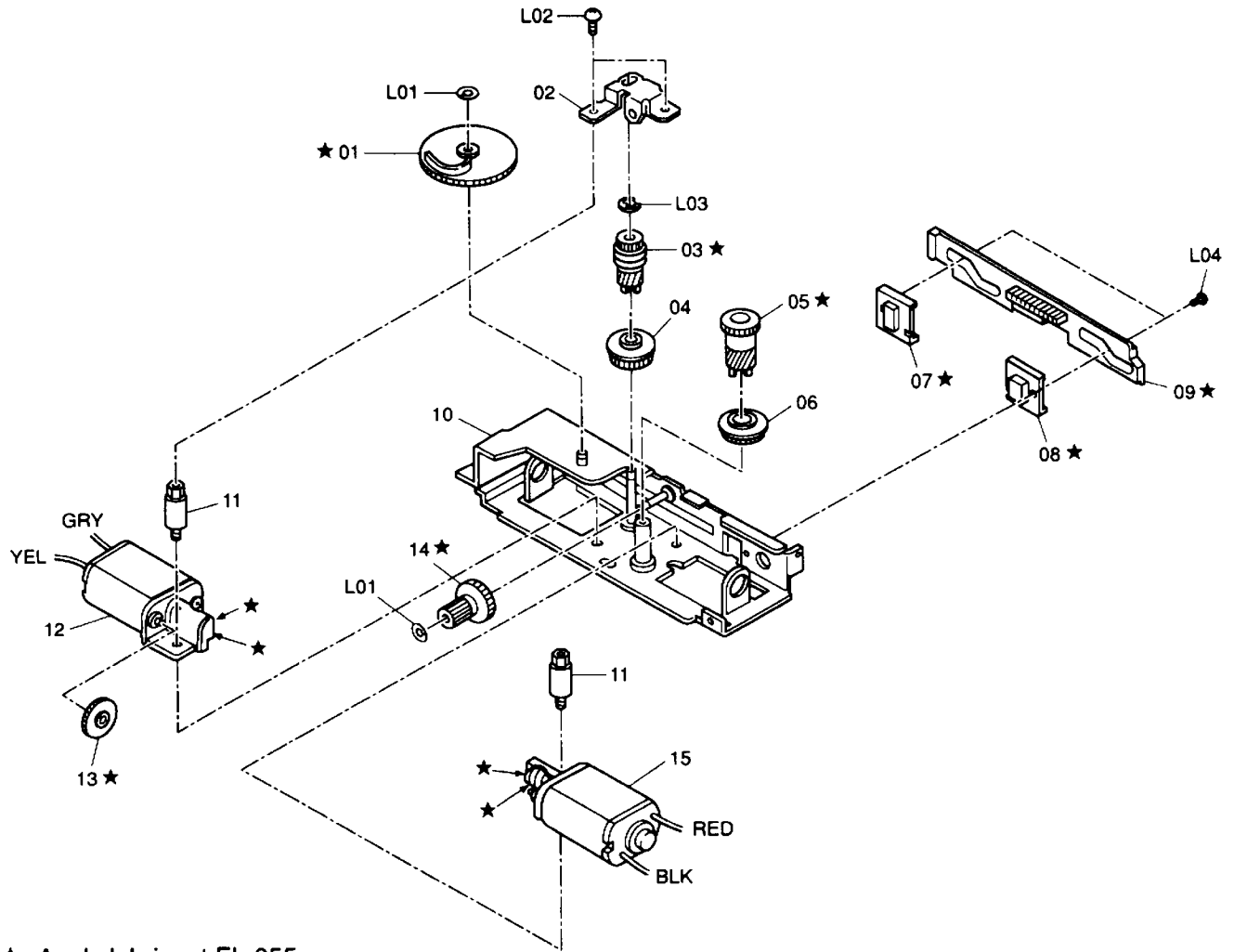
**Lubricant:**

We suggest that you use grease FL-955/FG-84M or equivalent type.

The company dealing FL-955/FG-84M is as follows:

- FL-955  
Kanto Chemicals Co. Ltd., 2-7 Kanda Sakuma-cho, Chiyoda-Ku, Tokyo, Japan
- FG-84M  
Wada Kousan Co. Ltd., 7-35-5 Higashi Oizumi, Nerima-ku, Tokyo, Japan

5.3. Motor Chassis SL Ass'y (B01)



★: Apply lubricant FL-955.

Fig. 5.3

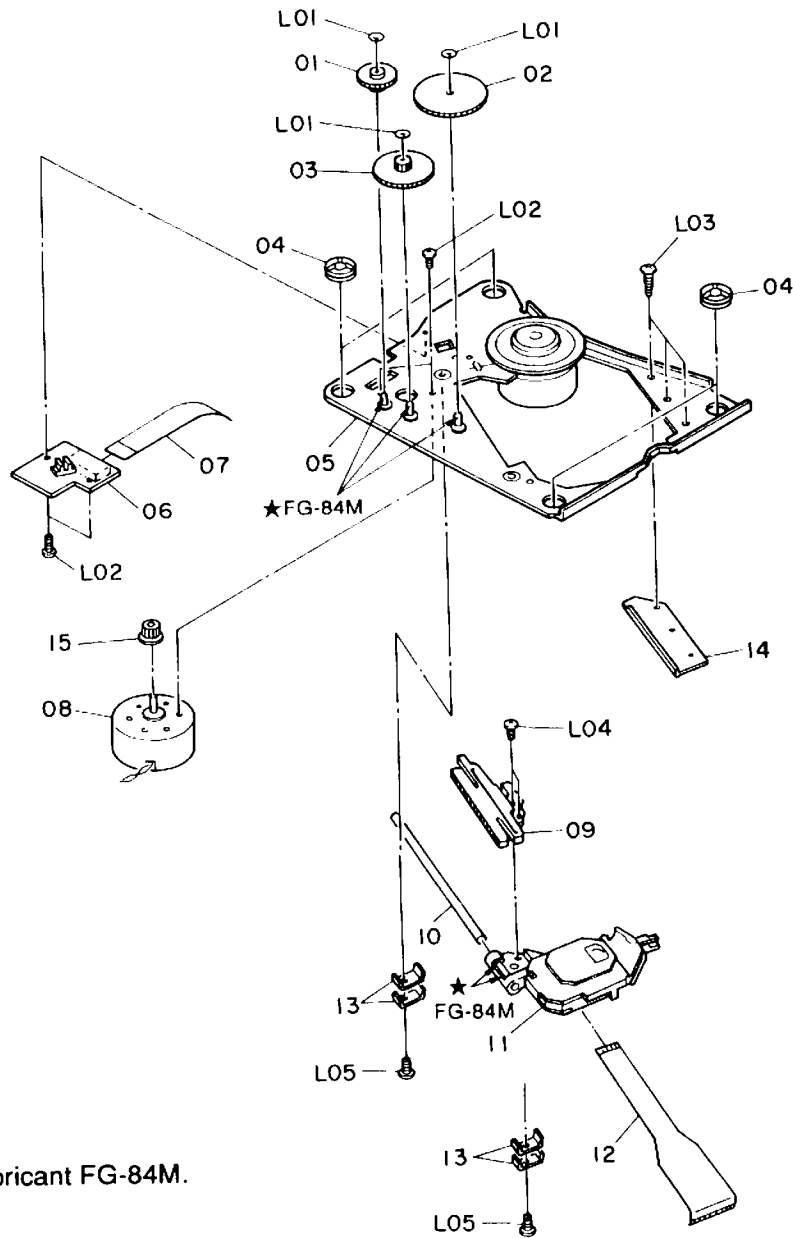
5.3. Motor Chassis SL Ass'y (B01)

Schematic Ref. No.	Part No.	Description	Qty
B01	CA09345A	Motor Chassis SL Ass'y (MF-31, MF-31FM)	1
01	0C10238A	Loading Plate Cam SL	1
02	0C10240A	UD Worm Plate SL	1
03	0C10233A	UD Worm Gear SL	1
04	0C10235A	Mech Sensor Ring SL	1
05	0C10236A	Loading Worm Gear SL	1
06	0C10237A	Loading Sensor Ring SL	1
07	0C10208A	UD Cam Guide SL	1
08	0C10242A	UD Cam Guide W SL	1
09	0C10232A	UD Cam SL	1
10	CA09338A	Motor Chassis SL S Ass'y	1
11	0C10241A	Bracket Screw SL	2
12	CA09350A	UD Motor SL Ass'y	1
13	0C10239A	Emergency Gear SL	1
14	0C10234A	Mech UD Gear SL	1
15	CA09349A	Loading Motor SL Ass'y	1
L01	0E03955A	Cut Washer 2.2x4.2x0.2	
L02	0E03947A	M2.6x3.5 + Pan (#0 Type 3)	
L03	0E00222A	E-Ring 2.0mm	
L04	0E03967A	M1.4x2 + Pan (#0 Type 1 Black)	

Apply FL-955 (grease) to the following places when parts are replaced.

Ref. No.	Location	Remarks
01	Loading Plate Cam SL	Whole surface
03	UD Worm Gear SL	Whole surface
05	Loading Worm Gear SL	Whole surface
07	UD Cam Guide SL	Whole surface
08	UD Cam Guide W SL	Whole surface
09	UD Cam SL	Whole surface
12	UD Motor SL Ass'y	• Motor Shaft Worm Gear • Motor Shaft End
13	Emergency Gear SL	Whole surface
14	Mecha UD Gear SL	Whole surface
15	Loading Motor SL Ass'y	• Motor Shaft Worm Gear • Motor Shaft End

### 5.4. Traverse Mecha Ass'y (B02)



★: Apply lubricant FG-84M.

Fig. 5.4

### 5.4. Traverse Mecha Ass'y (B02)

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
<b>B02</b>	<b>CA09363A</b>	<b>Traverse Mecha Ass'y (MF-31, MF-31FM)</b>	<b>1</b>	10	0C10277A	PU Guide Shaft SL	1
01	0C10139A	Second Gear	1	11	0B90741A	Pickup KSS-540A	1
02	0C09923B	Power Gear	1	12	0B61355A	Pick up Flexible P.C.B.	1
03	0C10140A	Third Gear	1	13	0C10278A	Shaft Lock Plate SL	4
04	0C10279A	Damper S SL	4	14	0C10282A	PU Guide Plate H SL	1
05	CA09364A	Disc Motor Chassis Ass'y	1	15	0C10138A	First Gear	1
06	BA09777A	Traverse P.C.B. Ass'y	1	L01	0E03954A	Cut Washer 1.6x3.2x0.2	
07	0B84608A	8P Flexible Wire	1	L02	0E03845A	M1.7x2.5 + Pan (#0 Type 3 Black)	
08	3B90704A	Sled Motor	1	L03	0E00955A	BT2x4 + Binding	
09	0C10141B	Rack CA	1	L04	0E00887A	M1.7x4 + Pan	
				L05	0E03947A	M2.6x3.5 + Pan (#0 Type 3)	

**NOTES:** 1. Abbreviations

TR – Transistor, SID – Silicon Diode, ZD – Zener Diode, Varicap – Variable Capacitance Diode  
 RK – Carbon Resistor, RM – Metal Film Resistor, RF – Fail Safe Type Resistor,  
 RC – Cement Resistor, CE – Electrolytic Capacitor, CML – Mylar Capacitor,  
 CC – Ceramic Capacitor, CPP – PP Capacitor, CMM – Metalized Mylar Capacitor,  
 CSP – Polystyrene Capacitor, C – Mica Capacitor, CT – Tantalum Capacitor

2. Description of capacitor: 10 16V = 10 $\mu$  16V

3. Parts marked with \* show chip parts.

**6.1. Main P.C.B. Assy**

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
	<b>BA09771A</b>	<b>Main P.C.B. Assy (MF-31, MF-31FM)</b>	R103,104	0B25595A	RK 220K 1/10W J*	R501,502	0B25525A	RK 270 1/10W J*
			R105,106	0B25562A	RK 9.1K 1/10W J*	R503,504	0B25525A	RK 270 1/10W J*
			R107,108	0B25556A	RK 5.1K 1/10W J*	R505	0B25525A	RK 270 1/10W J*
U101	0B10691A	IC CXA2521Q*	R109	0B25514A	RK 91 1/10W J*	R506,507	0B25563A	RK 10K 1/10W J*
U102	0B10630A	IC CXA1372AQ*	R110	0B25563A	RK 10K 1/10W J*	R508,509	0B25563A	RK 10K 1/10W J*
U103	0B10696A	IC CXD2510Q*	R111	0B25584A	RK 75K 1/10W J*	R510,511	0B25563A	RK 10K 1/10W J*
U104	0B10718A	IC BA6398FP*	R112	0B25580A	RK 51K 1/10W J*	R512,513	0B25563A	RK 10K 1/10W J*
U105,106	0B10719A	IC TA8409F*	R114	0B25595A	RK 220K 1/10W J*	R516	0B25565A	RK 12K 1/10W J*
U107	0B10719A	IC TA8409F*	R115	0B25556A	RK 5.1K 1/10W J*	R517	0B25547A	RK 2.2K 1/10W J*
U180	0B10645A	IC NJM2100M*	R116	0B25591A	RK 150K 1/10W J*	R518	0B25587A	RK 100K 1/10W J*
U401	0B10566A	IC PQ09RF1	R118,119	0B25595A	RK 220K 1/10W J*	R519	0B25563A	RK 10K 1/10W J*
U404	0B10772A	IC BA6792FP*	R120	0B25597A	RK 270K 1/10W J*	R521	0B25579A	RK 47K 1/10W J*
U501	0B10929A	IC HD6433396A32F*	R121	0B21419A	RM 120K 1/10W D*	R524	0B25508A	RK 51 1/10W J*
U502	0B11928A	IC TC4049BF	R122	0B25569A	RK 18K 1/10W J*	R526	0B25563A	RK 10K 1/10W J*
U504	0B10723A	IC SN74LV32NS*	R123	0B25599A	RK 330K 1/10W J*	R527	0B25555A	RK 4.7K 1/10W J*
U801	0B10778A	IC TC9293AF*	R124	0B25581A	RK 56K 1/10W J*	R528	0B25611A	RK 1M 1/10W J*
U802	0B10645A	IC NJM2100M*	R125	0B25590A	RK 130K 1/10W J*	R529,530	0B25555A	RK 4.7K 1/10W J*
Q101	0B10731A	TR 2SB1132*	R127	0B25596A	RK 240K 1/10W J*	R531	0B25611A	RK 1M 1/10W J*
Q121	0B14013A	TR DTC144EK*	R128	0B25539A	RK 1K 1/10W J*	R532	0B25555A	RK 4.7K 1/10W J*
Q401	0B10792A	TR 2SB1182QR*	R136	0B25587A	RK 100K 1/10W J*	R536,537	0B25579A	RK 47K 1/10W J*
Q402	0B14167A	TR 2SC2412K*	R141	0B25563A	RK 10K 1/10W J*	R538,539	0B25579A	RK 47K 1/10W J*
Q403	0B10901A	TR 2SD2153TL*	R142	0B25574A	RK 30K 1/10W J*	R540,541	0B25579A	RK 47K 1/10W J*
Q404	0B10930A	TR 2SD1758F5*	R143	0B25589A	RK 120K 1/10W J*	R542,543	0B25579A	RK 47K 1/10W J*
Q411,412	0B14167A	TR 2SC2412K*	R144	0B25577A	RK 39K 1/10W J*	R545	0B25531A	RK 470 1/10W J*
Q413	0B14167A	TR 2SC2412K*	R145	0B25571A	RK 22K 1/10W J*	R548	0B25579A	RK 47K 1/10W J*
Q501	0B14167A	TR 2SC2412K*	R149,150	0B25515A	RK 100 1/10W J*	R549	0B25563A	RK 10K 1/10W J*
Q502	0B14013A	TR DTC144EK*	R151	0B25515A	RK 100 1/10W J*	R551	0B25599A	RK 330K 1/10W J*
Q511,512	0B14018A	TR DTC143TK*	R152	0B25562A	RK 9.1K 1/10W J*	R552	0B25587A	RK 100K 1/10W J*
Q513,514	0B14018A	TR DTC143TK*	R153	0B25604A	RK 510K 1/10W J*	R553	0B25585A	RK 82K 1/10W J*
Q515	0B14018A	TR DTC143TK*	R164	0B25559A	RK 6.8K 1/10W J*	R554	0B25539A	RK 1K 1/10W J*
Q521	0B14002A	TR DTA114EK*	R165	0B25551A	RK 3.3K 1/10W J*	R563	0B25563A	RK 10K 1/10W J*
Q522	0B14167A	TR 2SC2412K*	R166	0B25563A	RK 10K 1/10W J*	R564,565	0B25531A	RK 470 1/10W J*
Q801L,R	0B14206A	TR DTC323TK*	R177	0B25547A	RK 2.2K 1/10W J*	R570	0B25524A	RK 240 1/10W J*
ZD401	0B12150A	ZD RD5.6V JS B2	R178	0B25539A	RK 1K 1/10W J*	R571	0B25509A	RK 56 1/10W J*
ZD402	0B12160A	ZD RD7.5V JS B3	R179,180	0B25566A	RK 5.1K 1/10W J*	R572	0B25517A	RK 120 1/10W J*
ZD403	0B12153A	ZD RD6.2V JS B2	R181	0B25577A	RK 39K 1/10W J*	R573	0B25513A	RK 82 1/10W J*
ZD404	0B12150A	ZD RD5.6V JS B2	R183	0B25596A	RK 240K 1/10W J*	R602	0B25523A	RK 220 1/10W J*
ZD502,503	0B12154A	ZD RD6.2V JS B3	R194	0B25563A	RK 10K 1/10W J*	R603	0B25555A	RK 4.7K 1/10W J*
ZD521	0B12147A	ZD RD5.1V JS B2	R195,196	0B25575A	RK 33K 1/10W J*	R801L,R	0B26111A	RM 220 1/4W F*
D101	0B10539A	SID MA152WK*	R197	0B25575A	RK 33K 1/10W J*	R804L,R	0B26159A	RM 22K 1/8W F*
D121	0B10539A	SID MA152WK*	R200	0B25577A	RK 39K 1/10W J*	R805L,R	0B26159A	RM 22K 1/8W F*
D404	0B10540A	SID MA152WA*	R401	0B25527A	RK 330 1/10W J*	R806L,R	0B26159A	RM 22K 1/8W F*
D406	0B10540A	SID MA152WA*	R402	0B25581A	RK 56K 1/10W J*	R807L,R	0B26159A	RM 22K 1/8W F*
D409	0B10540A	SID MA152WA*	R403	0B25539A	RK 1K 1/10W J*	R808L,R	0B26121A	RM 560 1/8W F*
D511,512	0B10782A	LED GL3HY025 Amber	R404	0B25587A	RK 100K 1/10W J*	R809L,R	0B26175A	RM 100K 1/8W F*
D513,514	0B10782A	LED GL3HY025 Amber	R405	0B25563A	RK 10K 1/10W J*	R810L,R	0B26103A	RM 100 1/8W F*
D515	0B10782A	LED GL3HY025 Amber	R406	0B25595A	RK 220K 1/10W J*	R811,812	0B21321A	RM 10 1/10W J*
D516,517	0B10539A	SID MA152WK*	R407	0B25579A	RK 47K 1/10W J*	R813,814	0B25612A	RK 0 1/10W J*
D521	0B10539A	SID MA152WK*	R408,409	0B25587A	RK 100K 1/10W J*	J404	0B25612A	RK 0 1/10W J*
D801,802	0B10540A	SID MA152WA*	R410	0B25515A	RK 100 1/10W J*	JFE	0B25612A	RK 0 1/10W J*
L101	0B50287A	Coil 120uH*	R411	0B20068A	RK 220 1/2W J	JTE	0B25612A	RK 0 1/10W J*
L102	0B51300A	Inductor 10uH	R412	0B25563A	RK 10K 1/10W J*	C100	0B42500A	CC 2.2 16V*
L503	0B50287A	Coil 120uH*	R413	0B25533A	RK 560 1/10W J*	C101	0B42320A	CE 100 6.3V
L801,802	0B50287A	Coil 120uH*	R414,415	0B25587A	RK 100K 1/10W J*	C102	0B43226A	CC 2700P 50V K*
L803	0B50287A	Coil 120uH*	R416	0B25587A	RK 100K 1/10W J*	C103	0B43092A	CC 0.1 25V Z*
X501	0B90740A	Resonator 6.00MHz	R417	0B20068A	RK 220 1/2W J	C104	0B42622A	CC 2.2 16V J*
X801	0B92063A	X'tal 16.9344MHz	R418	0B25539A	RK 1K 1/10W J*	C105	0B43078A	CC 2200P 50V K*
VR101,102	0B32186A	Semi VR 22K (B)	R419	0B25595A	RK 220K 1/10W J*	C106	0B43092A	CC 0.1 25V Z*
VR103,104	0B32186A	Semi VR 22K (B)	R420	0B25611A	RK 1M 1/10W J*	C108	0B43078A	CC 2200P 50V K*
R101	0B21321A	RM 10 1/10W F*	R421	0B25563A	RK 10K 1/10W J*	C109,110	0B43092A	CC 0.1 25V Z*
R102	0B25571A	RK 22K 1/10W J*	R422	0B25567A	RK 15K 1/10W J*	C111	0B43080A	CC 4700P 50V K*

Schematic Ref. No.	Part No.	Description
C112,113	0B43064A	CC 0.01 50V J*
C114	0B43092A	CC 0.1 25V Z*
C115	0B43221A	CC 0.047 25V K*
C116	0B43080A	CC 4700P 50V K*
C117	0B40272A	CE 4.7 25V
C118	0B43092A	CC 0.1 25V Z*
C119	0B43224A	CC 1500P 50V K*
C120	0B43083A	CC 0.022 50V K*
C121	0B43064A	CC 0.01 50V J*
C122	0B43092A	CC 0.1 25V Z*
C123	0B42300A	CE 10 16V
C124	0B42500A	CC 2.2 16V*
C125	0B42622A	CC 2.2 16V J*
C126	0B42577A	CC 0.33 16V Z*
C127	0B42500A	CC 2.2 16V*
C128,129	0B43092A	CC 0.1 25V Z*
C130	0B43084A	CC 0.033 50V K*
C131	0B43092A	CC 0.1 25V Z*
C132	0B43064A	CC 0.01 50V J*
C134	0B43064A	CC 0.01 50V J*
C135	0B43092A	CC 0.1 25V Z*
C136	0B43210A	CC 1000P 50V J*
C140	0B43092A	CC 0.1 25V Z*
C141	0B42318A	CE 47 16V
C142,143	0B43092A	CC 0.1 25V Z*
C144	0B43084A	CC 0.033 50V K*
C146	0B43224A	CC 1500P 50V K*
C147	0B43221A	CC 0.047 25V K*
C148	0B43062A	CC 100P 50V J*
C150,151	0B43066A	CC 33P 50V J*
C158,159	0B43092A	CC 0.1 25V Z*
C160,161	0B43092A	CC 0.1 25V Z*
C162	0B43092A	CC 0.1 25V Z*
C165	0B43179A	CC 0.15 25V K*
C166	0B43090A	CC 47P 50V J*
C169	0B43062A	CC 100P 50V J*
C403	0B42321A	CE 100 10V
C404	0B43092A	CC 0.1 25V Z*
C405	0B42324A	CE 220 10V
C406	0B43221A	CC 0.047 25V K*
C407	0B42313A	CE 33 16V
C409	0B42322A	CE 100 16V
C411	0B42247A	CE 0.1F 5.5V
C413,414	0B43092A	CC 0.1 25V Z*
C417	0B42312A	CE 33 10V
C419	0B43221A	CC 0.047 25V K*
C422	0B43210A	CC 1000P 50V J*
C502	0B43092A	CC 0.1 25V Z*
C504	0B43092A	CC 0.1 25V Z*
C505,506	0B43206A	CC 560P 50V J*
C507	0B42500A	CC 2.2 16V*
C509	0B43090A	CC 47P 50V J*
C516	0B43092A	CC 0.1 25V Z*
C521	0B43092A	CC 0.1 25V Z*
C801	0B42324A	CE 220 10V
C802	0B43091A	CC 0.1 50V M*
C803L,R	0B43092A	CC 0.1 25V Z*
C804L,R	0B42324A	CE 220 10V
C807L,R	0B43078A	CC 2200P 50V K*
C808L,R	0B43090A	CC 47P 50V J*
C809	0B42324A	CE 220 10V
C809L,R	0B43090A	CC 47P 50V J*
C810L,R	0B42300A	CE 10 16V
C812	0B43091A	CC 0.1 50V M*
C820,821	0B43060A	CC 18P 50V J*
CP101	0B84768A	16P F Connector*
CP102	0B84607A	8P F Connector*
CP103	0B84785A	22P F Connector*
CP501	0B80994A	F Connector
S501,502	0B70251A	Tact Switch
S503,504	0B70251A	Tact Switch

Schematic Ref. No.	Part No.	Description
S505	0B70251A	Tact Switch
TP101	0B84813A	Connector Header 8P
	0J07771C	LED Holder (5)
	0J07818A	Heat Sink MD SL (1)
	0J07819A	Cooling Sheet (1)

6.2. Connector P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	<b>BA09772A</b>	<b>Connector P.C.B. Ass'y (MF-31, MF-31FM)</b>
D401,402	0B10675A	SID RB100AT-32
D403	0B12693A	SID S5688B
J801	0B25612A	RK 0 1/10W J*
J804	0B25612A	RK 0 1/10W J*
J807	0B25612A	RK 0 1/10W J*
C401	0B42615A	CE 1000 16V
C402	0B43092A	CC 0.1 25V Z*
C416	0B43221A	CC 0.047 25V K*
C418	0B42615A	CE 1000 16V
CP502	0B80994A	F Connector
PJ501	0B80668A	DIN 13P Socket
	0E04002A	ST2.6x4 + Truss (Black Chromate) (1)
	0J07798A	Holder P.C.B. (1)

6.3. LED P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	<b>BA09819A</b>	<b>LED P.C.B. Ass'y (MF-31, MF-31FM)</b>
D550	0B10754A	LED LT1H92A Amber*
R550	0B25515A	RK 100 1/10W J*
GND	0B84839A	JW GND
VCC	0B84838A	JW VCC

6.4. Traverse P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	<b>BA09777A</b>	<b>Traverse P.C.B. Ass'y (MF-31, MF-31FM)</b>
CN102	0B84607A	8P F Connector*
PC201	0B10737A	Photointerrupter
	0C10111A	Sensor Adaptor (1)

6.5. Mecha Flexible P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	<b>BA09736A</b>	<b>Mecha Flexible P.C.B. Ass'y (MF-31, MF-31FM)</b>
R701,702	0B21219A	RK 220 1/10W J*
R703,704	0B21219A	RK 220 1/10W J*
R705,706	0B21219A	RK 220 1/10W J*
R707,708	0B21219A	RK 220 1/10W J*
R709	0B21219A	RK 220 1/10W J*
PC701,702	0B10737A	Photointerrupter
PC703,704	0B10737A	Photointerrupter
PC705,706	0B10737A	Photointerrupter
PC707,708	0B10737A	Photointerrupter
PC709	0B10737A	Photointerrupter



1. PACKAGE ASS'Y AND ACCESSORY ASS'Y

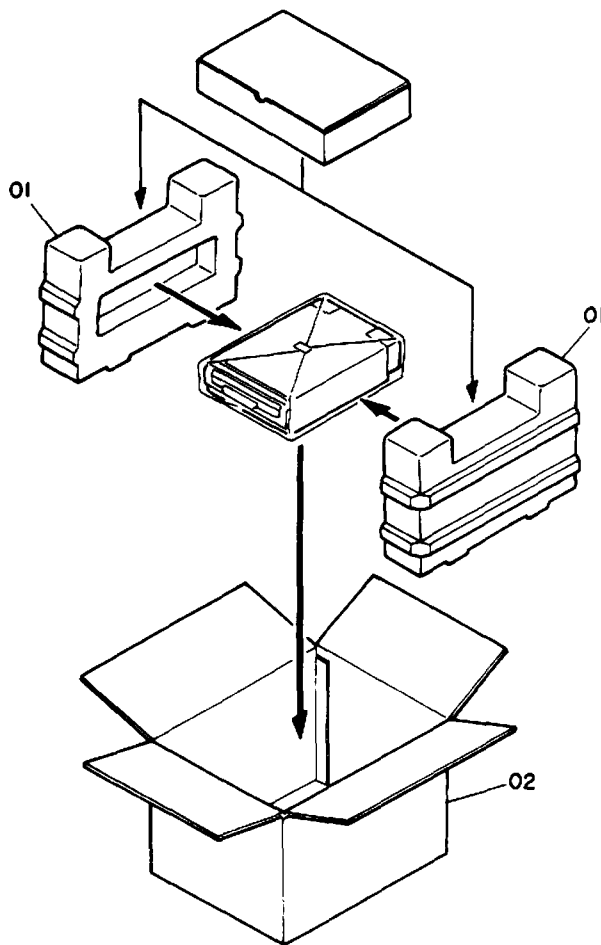


Fig. 1

1.1. Package Ass'y and Accessory Ass'y (MF-51)

Schematic Ref. No.	Part No.	Description	Qty
<b>Package Ass'y (MF-51)</b>			
01	0F05138A	Packing	2
02	0F05276A	Inner Carton	1
—	0F05174A	Soft Bag	1
—	0F05277A	Outer Carton	1

Schematic Ref. No.	Part No.	Description	Qty
<b>Accessory Ass'y (MF-51)</b>			
	0D06848A	DIN Wire	1
	0D06969A	Owner's Manual (Japanese)	1
	0D06972B	Owner's Manual (English)	1
	0H07397B	Angle Sheet A	2
	0H07398A	Angle Sheet B	2
	0H07408A	Angle	2
	0H07413A	Adhesive Tape (Angle Plate)	2
	0J07417A	Metal Stay	1
	DA05038A	Screw Ass'y	1
	HA07307A	Angle Plate Ass'y	2

1.2 Package Ass'y and Accessory Ass'y (MF-51d)

Schematic Ref. No.	Part No.	Description	Qty
<b>Package Ass'y (MF-51d)</b>			
01	0F05138A	Packing	2
02	0F05305A	Inner Carton	1
—	0F05306A	Outer Carton	1
—	0F05174A	Soft Bag	1

Schematic Ref. No.	Part No.	Description	Qty
<b>Accessory Ass'y (MF-51d)</b>			
	0D06848A	DIN Wire	1
	0D06969A	Owner's Manual (Japanese)	1
	0D06972B	Owner's Manual (English)	1
	0H07397B	Angle Sheet A	2
	0H07398A	Angle Sheet B	2
	0H07408A	Angle	2
	0H07413A	Adhesive Tape (Angle Plate)	2
	0J07417A	Metal Stay	1
	DA05038A	Screw Ass'y	1
	HA07307A	Angle Plate Ass'y	2
	0B84724A	Pin Pin Cable NVC-30D (DAC-1)	1

**2.1. Synthesis**

Schematic			
Ref. No.	Part No.	Description	Qty
<b>Synthesis (MF-51, MF-51d)</b>			
01	0H07406A	Side Plate	2
02	0H07597A	Top Case	1
03	0H07373C	Edge Protector A	1
04	0J07825A	Damper Sheet	4
05	—	Mechanism Synthesis Ass'y	1
06	HA07468A	Front Panel Ass'y	1
07	BA09775A	Connector P.C.B. Ass'y	1
08	0H07328B	Damper Spring	2
09	0H07365C	Spring Plate L	1
10	0H07340C	Spring Plate R	1
11	0H07326A	Damper	4
12	0J07813A	Damper Adhesive Tape	4
13	0H07374D	Edge Protector B	1
14	HA07305A	Bottom Case Ass'y	1
15	0H07376E	Rear Cover L	1
16	0H07405B	Rear Cover R	1
17	0E03700A	Clip	1
L01	0E04001A	Lock Screw	
L02	0E04038A	Lock Washer	
L03	0E04002A	ST2.6x4 + Truss (Black Chromate)	
L04	0E03322A	M3x6 + Pan (Black Chromate)	
L05	0E03936A	BT3x8 + Binding Projected (Black Chromate)	

**2.2. Mechanism Synthesis Ass'y (A01)**

Schematic Ref. No.	Part No.	Description	Q'ty
<b>A01</b>	—	<b>Mechanism Synthesis Ass'y (MF-51, MF-51d)</b>	<b>1</b>
01	CG09367A	Mechanism Deck MF Ass'y	1
02	CA09333A	Top Cover SL S Ass'y	1
03	CA09365B	Loading MF Ass'y	1
04	CA09354A	Loading Link SL Ass'y	1
05	0C10172A	Stocker CD SL	1
06	CA09351A	Stocker Motor SL Ass'y	1
07	CA09344A	Disc Lock SL Ass'y	1
08	0C10175A	Stocker Position Gear SL	1
09	CA09363A	Traverse Mecha Ass'y	1
10	CA09345A	Motor Chassis SL Ass'y	1
11	BA09736A	Mecha Flexible P.C.B. Ass'y	1
12	CA09352B	Front Chassis SL Ass'y	1
13	0C10286A	Anti Rattle Spring SL	1
14	CA09325B	SUS Base X Sub Ass'y	1
15	0C10185B	Mechanism UD Sub Cam SL	1
16	0C10186A	UD S Cam Guide SL	2
17	0J08004A	Dust Seal Emergency SL	1
18	0C10211A	Plate Spring SL	1
19	0C10184A	Disc Lock Spring SL	1
20	0C10183A	Disc Lock Arm SL	1
21	0C10187A	UD Link Arm SL	1
22	BA09819A	LED P.C.B. Ass'y	1
23	0B84818A	Wire Flex 19P	1
24	BA09774A	Main P.C.B. Ass'y	1
26	CA09362A	Bottom Cover MF Ass'y	1
L01	0E00120A	M2.6x3 + Pan	
L02	0E03964A	ST2.6x3 + Pan (#0 Type 3)	
L03	0E03955A	Cut Washer 2.2x4.2x0.2	
L04	0E03457A	M2.6x4.5 + Pan (Black Chromate)	
L05	0C10287A	Damper Screw SL	
L06	0E03845A	M1.7x2.5 + Pan (#0 Type 3 Black)	
L07	0E03945A	M2x2 + Pan (#0 Type 3 Black)	
L08	0E03953A	M2x2 + Pan (#0 Type 1)	
L09	0E03971A	Pat Washer	
L10	0E03956A	Cut Washer 3.2x5.2x0.2	
L11	0E04032A	M2.6x5 + Pan (#0 Type 3)	
L12	0E00922A	M2x3 + Pan (Black Chromate)	
L13	0E04036A	M2.6x8 + Pan	

**2.3. Motor Chassis SL Ass'y (B01)**

**NOTE:** Refer to "5.3. Motor Chassis SL Ass'y (B01)" on page 1-25 in the section "MF-31/31FM".

**2.4. Traverse Mecha Ass'y (B02)**

**NOTE:** Refer to "5.4. Traverse Mecha Ass'y (B02)" on page 1-26 in the section "MF-31/31FM".

## 3. MOUNTING DIAGRAMS AND PARTS LIST

For mounting diagrams, refer to pages 1-27 to 1-29 in the section "MF-31/31FM".

## NOTES: 1. Abbreviations

TR – Transistor, SID – Silicon Diode, ZD – Zener Diode, Varicap – Variable Capacitance Diode  
 RK – Carbon Resistor, RM – Metal Film Resistor, RF – Fail Safe Type Resistor,  
 RC – Cement Resistor, CE – Electrolytic Capacitor, CML – Mylar Capacitor,  
 CC – Ceramic Capacitor, CPP – PP Capacitor, CMM – Metalized Mylar Capacitor,  
 CSP – Polystyrene Capacitor, C – Mica Capacitor, CT – Tantalum Capacitor

2. Description of capacitor: 10 16V = 10 $\mu$  16V

3. Parts marked with \* show chip parts.

## 3.1. Main P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
	<b>BA09774A</b>	<b>Main P.C.B. Ass'y (MF-51,MF-51d)</b>	L803	0B50287A	Coil 120uH*	R413	0B25533A	RK 560 1/10W J*
			VR101,102	0B32186A	Semi VR 22K (B)	R414,415	0B25587A	RK 100K 1/10W J*
			VR103,104	0B32186A	Semi VR 22K (B)	R416	0B25587A	RK 100K 1/10W J*
U101	0B10691A	IC CXA2521Q*	R101	0B21321A	RM 10 1/10W F*	R417	0B20068A	RK 220 1/2W J
U102	0B10630A	IC CXA1372AQ*	R102	0B25571A	RK 22K 1/10W J*	R418	0B25539A	RK 1K 1/10W J*
U103	0B10696A	IC CXD2510Q*	R103,104	0B25595A	RK 220K 1/10W J*	R419	0B25595A	RK 220K 1/10W J*
U104	0B10718A	IC BA6398FP*	R105,106	0B25562A	RK 9.1K 1/10W J*	R420	0B25611A	RK 1M 1/10W J*
U105,106	0B10719A	IC TA8409F*	R107,108	0B25556A	RK 5.1K 1/10W J*	R421	0B25563A	RK 10K 1/10W J*
U107	0B10719A	IC TA8409F*	R109	0B25514A	RK 91 1/10W J*	R422	0B25567A	RK 15K 1/10W J*
U180	0B10645A	IC NJM2100M*	R110	0B25563A	RK 10K 1/10W J*	R501,502	0B25525A	RK 270 1/10W J*
U401	0B10566A	IC PQ09RF1	R111	0B25584A	RK 75K 1/10W J*	R503,504	0B25525A	RK 270 1/10W J*
U404	0B10772A	IC BA6792FP*	R112	0B25580A	RK 51K 1/10W J*	R505	0B25525A	RK 270 1/10W J*
U501	0B10929A	IC HD6433396A32F*	R114	0B25595A	RK 220K 1/10W J*	R506,507	0B25563A	RK 10K 1/10W J*
U502	0B11928A	IC TC4049BF	R115	0B25556A	RK 5.1K 1/10W J*	R508,509	0B25563A	RK 10K 1/10W J*
U504	0B10723A	IC SN74LV32NS*	R116	0B25591A	RK 150K 1/10W J*	R510,511	0B25563A	RK 10K 1/10W J*
U601	0B11613A	IC TC74HC00AF	R118,119	0B25595A	RK 220K 1/10W J*	R512,513	0B25563A	RK 10K 1/10W J*
U801	0B10778A	IC TC9293AF*	R120	0B25597A	RK 270K 1/10W J*	R516	0B25565A	RK 12K 1/10W J*
U802	0B10645A	IC NJM2100M*	R121	0B21419A	RM 120K 1/10W D*	R517	0B25547A	RK 2.2K 1/10W J*
Q101	0B10731A	TR 2SB1132*	R122	0B25569A	RK 18K 1/10W J*	R518	0B25587A	RK 100K 1/10W J*
Q121	0B14013A	TR DTC144EK*	R123	0B25599A	RK 330K 1/10W J*	R519	0B25563A	RK 10K 1/10W J*
Q401	0B10792A	TR 2SB1182QR*	R124	0B25581A	RK 56K 1/10W J*	R521	0B25579A	RK 47K 1/10W J*
Q402	0B14167A	TR 2SC2412K*	R125	0B25590A	RK 130K 1/10W J*	R524	0B25508A	RK 51 1/10W J*
Q403	0B10901A	TR 2SD2153TL*	R127	0B25596A	RK 240K 1/10W J*	R526	0B25563A	RK 10K 1/10W J*
Q404	0B10930A	TR 2SD1758F5*	R128	0B25539A	RK 1K 1/10W J*	R527	0B25555A	RK 4.7K 1/10W J*
Q411,412	0B14167A	TR 2SC2412K*	R136	0B25587A	RK 100K 1/10W J*	R528	0B25611A	RK 1M 1/10W J*
Q413	0B14167A	TR 2SC2412K*	R141	0B25563A	RK 10K 1/10W J*	R529,530	0B25555A	RK 4.7K 1/10W J*
Q501	0B14167A	TR 2SC2412K*	R142	0B25574A	RK 30K 1/10W J*	R531	0B25611A	RK 1M 1/10W J*
Q502	0B14013A	TR DTC144EK*	R143	0B25589A	RK 120K 1/10W J*	R532	0B25555A	RK 4.7K 1/10W J*
Q511,512	0B14018A	TR DTC143TK*	R144	0B25577A	RK 39K 1/10W J*	R536,537	0B25579A	RK 47K 1/10W J*
Q513,514	0B14018A	TR DTC143TK*	R145	0B25571A	RK 22K 1/10W J*	R538,539	0B25579A	RK 47K 1/10W J*
Q515	0B14018A	TR DTC143TK*	R149,150	0B25515A	RK 100 1/10W J*	R540,541	0B25579A	RK 47K 1/10W J*
Q521	0B14002A	TR DTA114EK*	R151	0B25515A	RK 100 1/10W J*	R542,543	0B25579A	RK 47K 1/10W J*
Q522	0B14167A	TR 2SC2412K*	R152	0B25562A	RK 9.1K 1/10W J*	R545	0B25531A	RK 470 1/10W J*
Q801L,R	0B14206A	TR DTC323TK*	R153	0B25604A	RK 510K 1/10W J*	R548	0B25579A	RK 47K 1/10W J*
ZD401	0B12150A	ZD RD5.6V JS B2	R164	0B25559A	RK 6.8K 1/10W J*	R549	0B25563A	RK 10K 1/10W J*
ZD402	0B12160A	ZD RD7.5V JS B3	R165	0B25551A	RK 3.3K 1/10W J*	R551	0B25599A	RK 330K 1/10W J*
ZD403	0B12153A	ZD RD6.2V JS B2	R166	0B25563A	RK 10K 1/10W J*	R552	0B25587A	RK 100K 1/10W J*
ZD404	0B12150A	ZD RD5.6V JS B2	R177	0B25547A	RK 2.2K 1/10W J*	R553	0B25585A	RK 82K 1/10W J*
ZD502,503	0B12154A	ZD RD6.2V JS B3	R178	0B25539A	RK 1K 1/10W J*	R554	0B25539A	RK 1K 1/10W J*
ZD521	0B12147A	ZD RD5.1V JS B2	R179,180	0B25556A	RK 5.1K 1/10W J*	R563	0B25563A	RK 10K 1/10W J*
D101	0B10539A	SID MA152WK*	R181	0B25577A	RK 39K 1/10W J*	R564,565	0B25531A	RK 470 1/10W J*
D121	0B10539A	SID MA152WK*	R183	0B25596A	RK 240K 1/10W J*	R570	0B25524A	RK 240 1/10W J*
D404	0B10540A	SID MA152WA*	R194	0B25563A	RK 10K 1/10W J*	R571	0B25509A	RK 56 1/10W J*
D406	0B10540A	SID MA152WA*	R195,196	0B25575A	RK 33K 1/10W J*	R572	0B25517A	RK 120 1/10W J*
D409	0B10540A	SID MA152WA*	R197	0B25575A	RK 33K 1/10W J*	R573	0B25513A	RK 82 1/10W J*
D511,512	0B10782A	LED GL3HY025 Amber	R200	0B25577A	RK 39K 1/10W J*	R601,602	0B25523A	RK 220 1/10W J*
D513,514	0B10782A	LED GL3HY025 Amber	R401	0B25527A	RK 330 1/10W J*	R603	0B25555A	RK 4.7K 1/10W J*
D515	0B10782A	LED GL3HY025 Amber	R402	0B25581A	RK 56K 1/10W J*	R604	0B25547A	RK 2.2K 1/10W J*
D516,517	0B10539A	SID MA152WK*	R403	0B25539A	RK 1K 1/10W J*	R801L,R	0B26111A	RM 220 1/4W F*
D521	0B10539A	SID MA152WK*	R404	0B25587A	RK 100K 1/10W J*	R804L,R	0B26159A	RM 22K 1/8W F*
D801,802	0B10540A	SID MA152WA*	R405	0B25563A	RK 10K 1/10W J*	R805L,R	0B26159A	RM 22K 1/8W F*
X501	0B90740A	Resonator 6.00MHz	R406	0B25595A	RK 220K 1/10W J*	R806L,R	0B26159A	RM 22K 1/8W F*
X801	0B92063A	X'tal 16.9344MHz	R407	0B25579A	RK 47K 1/10W J*	R807L,R	0B26159A	RM 22K 1/8W F*
L101	0B50287A	Coil 120uH*	R408,409	0B25587A	RK 100K 1/10W J*	R808L,R	0B26121A	RM 560 1/8W F*
L102	0B51300A	Inductor 10uH	R410	0B25515A	RK 100 1/10W J*	R809L,R	0B26175A	RM 100K 1/8W F*
L503	0B50287A	Coil 120uH*	R411	0B20068A	RK 220 1/2W J	R810L,R	0B25612A	RK 0 1/10W J*
L801,802	0B50287A	Coil 120uH*	R412	0B25563A	RK 10K 1/10W J*	R811,812	0B21321A	RM 10 1/10W F*

Schematic Ref. No.	Part No.	Description
R813,814	0B25612A	RK 0 1/10W J*
J404	0B25612A	RK 0 1/10W J*
JFE	0B25612A	RK 0 1/10W J*
JTE	0B25612A	RK 0 1/10W J*
C100	0B42500A	CC 2.2 16V*
C101	0B42320A	CE 100 6.3V
C102	0B43226A	CC 2700P 50V K*
C103	0B43092A	CC 0.1 25V Z*
C104	0B42622A	CC 2.2 16V J*
C105	0B43078A	CC 2200P 50V K*
C106	0B43092A	CC 0.1 25V Z*
C108	0B43078A	CC 2200P 50V K*
C109,110	0B43092A	CC 0.1 25V Z*
C111	0B43080A	CC 4700P 50V K*
C112,113	0B43064A	CC 0.01 50V J*
C114	0B43092A	CC 0.1 25V Z*
C115	0B43221A	CC 0.047 25V K*
C116	0B43080A	CC 4700P 50V K*
C117	0B40272A	CE 4.7 25V
C118	0B43092A	CC 0.1 25V Z*
C119	0B43224A	CC 1500P 50V K*
C120	0B43083A	CC 0.022 50V K*
C121	0B43064A	CC 0.01 50V J*
C122	0B43092A	CC 0.1 25V Z*
C123	0B42300A	CE 10 16V
C124	0B42500A	CC 2.2 16V*
C125	0B42622A	CC 2.2 16V J*
C126	0B42577A	CC 0.33 16V Z*
C127	0B42500A	CC 2.2 16V*
C128,129	0B43092A	CC 0.1 25V Z*
C130	0B43084A	CC 0.033 50V K*
C131	0B43092A	CC 0.1 25V Z*
C132	0B43064A	CC 0.01 50V J*
C134	0B43064A	CC 0.01 50V J*
C135	0B43092A	CC 0.1 25V Z*
C136	0B43210A	CC 1000P 50V J*
C140	0B43092A	CC 0.1 25V Z*
C141	0B42318A	CE 47 16V
C142,143	0B43092A	CC 0.1 25V Z*
C144	0B43084A	CC 0.033 50V K*
C146	0B43224A	CC 1500P 50V K*
C147	0B43221A	CC 0.047 25V K*
C148	0B43062A	CC 100P 50V J*
C150,151	0B43066A	CC 33P 50V J*
C158,159	0B43092A	CC 0.1 25V Z*
C160,161	0B43092A	CC 0.1 25V Z*
C162	0B43092A	CC 0.1 25V Z*
C165	0B43179A	CC 0.15 25V K*
C166	0B43090A	CC 47P 50V J*
C169	0B43062A	CC 100P 50V J*
C403	0B42321A	CE 100 10V
C404	0B43092A	CC 0.1 25V Z*
C405	0B42324A	CE 220 10V
C406	0B43221A	CC 0.047 25V K*
C407	0B42313A	CE 33 16V
C409	0B42322A	CE 100 16V
C411	0B42247A	CE 0.1F 5.5V
C413,414	0B43092A	CC 0.1 25V Z*
C417	0B42312A	CE 33 10V
C419	0B43221A	CC 0.047 25V K*
C422	0B43210A	CC 1000P 50V J*
C502	0B43092A	CC 0.1 25V Z*
C504	0B43092A	CC 0.1 25V Z*
C505,506	0B43206A	CC 560P 50V J*
C507	0B42500A	CC 2.2 16V*
C509	0B43090A	CC 47P 50V J*
C516	0B43092A	CC 0.1 25V Z*
C521	0B43092A	CC 0.1 25V Z*
C601	0B42321A	CE 100 10V
C602,603	0B43092A	CC 0.1 25V Z*
C801	0B42324A	CE 220 10V
C802	0B43091A	CC 0.1 50V M*
C803L,R	0B43092A	CC 0.1 25V Z*
C804L,R	0B42324A	CE 220 10V
C807L,R	0B43078A	CC 2200P 50V K*

Schematic Ref. No.	Part No.	Description
C808L,R	0B43090A	CC 47P 50V J*
C809	0B42324A	CE 220 10V
C809L,R	0B43090A	CC 47P 50V J*
C810L,R	0B42300A	CE 10 16V
C812	0B43091A	CC 0.1 50V M*
C820,821	0B43060A	CC 18P 50V J*
CP101	0B84768A	16P F Connector*
CP102	0B84607A	8P F Connector*
CP103	0B84785A	22P F Connector*
CP501	0B80994A	F Connector
S501,502	0B70251A	Tact Switch
S503,504	0B70251A	Tact Switch
S505	0B70251A	Tact Switch
TP101	0B84813A	Connector Header 8P
	0J07771C	LED Holder (5)
	0J07818A	Heat Sink MD SL (1)
	0J07819A	Cooling Sheet (1)

### 3.2. Connector P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	<b>BA09775A</b>	<b>Connector P.C.B. Ass'y (MF-51, MF-51d)</b>
D401,402	0B10675A	SID RB100AT-32
D403	0B12693A	SID S5688B
T601	0B51351A	Pulse Transformer (TC-1027-04)
R605	0B25512A	RK 75 1/10W J*
J801	0B26103A	RM 100 1/8W F*
J804	0B26103A	RM 100 1/8W F*
J807	0B25612A	RK 0 1/10W J*
L804L,R	0B26103A	RM 100 1/8W F*
C401	0B42615A	CE 1000 16V
C402	0B43092A	CC 0.1 25V Z*
C416	0B43221A	CC 0.047 25V K*
C418	0B42615A	CE 1000 16V
C604	0B43064A	CC 0.01 50V J*
C605	0B42312A	CE 33 10V
C813,814	0B43091A	CC 0.1 50V M*
CP502	0B80994A	F Connector
PJ501	0B80668A	13P DIN Socket
PJ601	0B80692A	1P Pin Jack
PJ801	0B81630A	2P Pin Jack

### 3.3. LED P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	<b>BA09819A</b>	<b>LED P.C.B. Ass'y (MF-51, MF-51d)</b>
D550	0B10754A	LED LT1H92A Amber*
R550	0B25515A	RK 100 1/10W J*
GND	0B84839A	JW GND
VCC	0B84838A	JW VCC

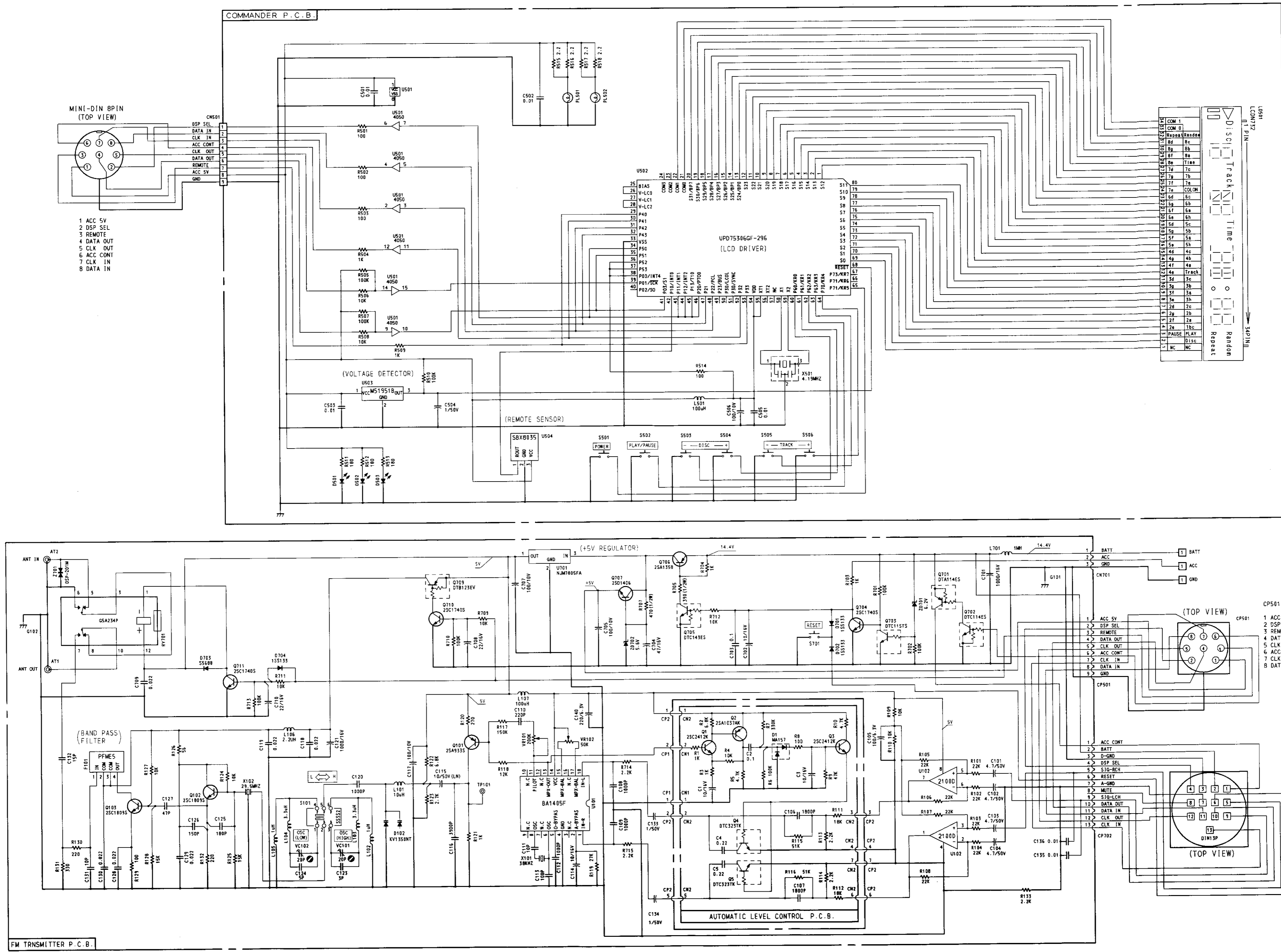
### 3.4. Traverse P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	<b>BA09777A</b>	<b>Traverse P.C.B. Ass'y (MF-51, MF-51d)</b>
PJ201	0B10737A	Photointerrupter
	0B84607A	8P F Connector* (1)
	0C10111A	Sensor Adaptor (1)

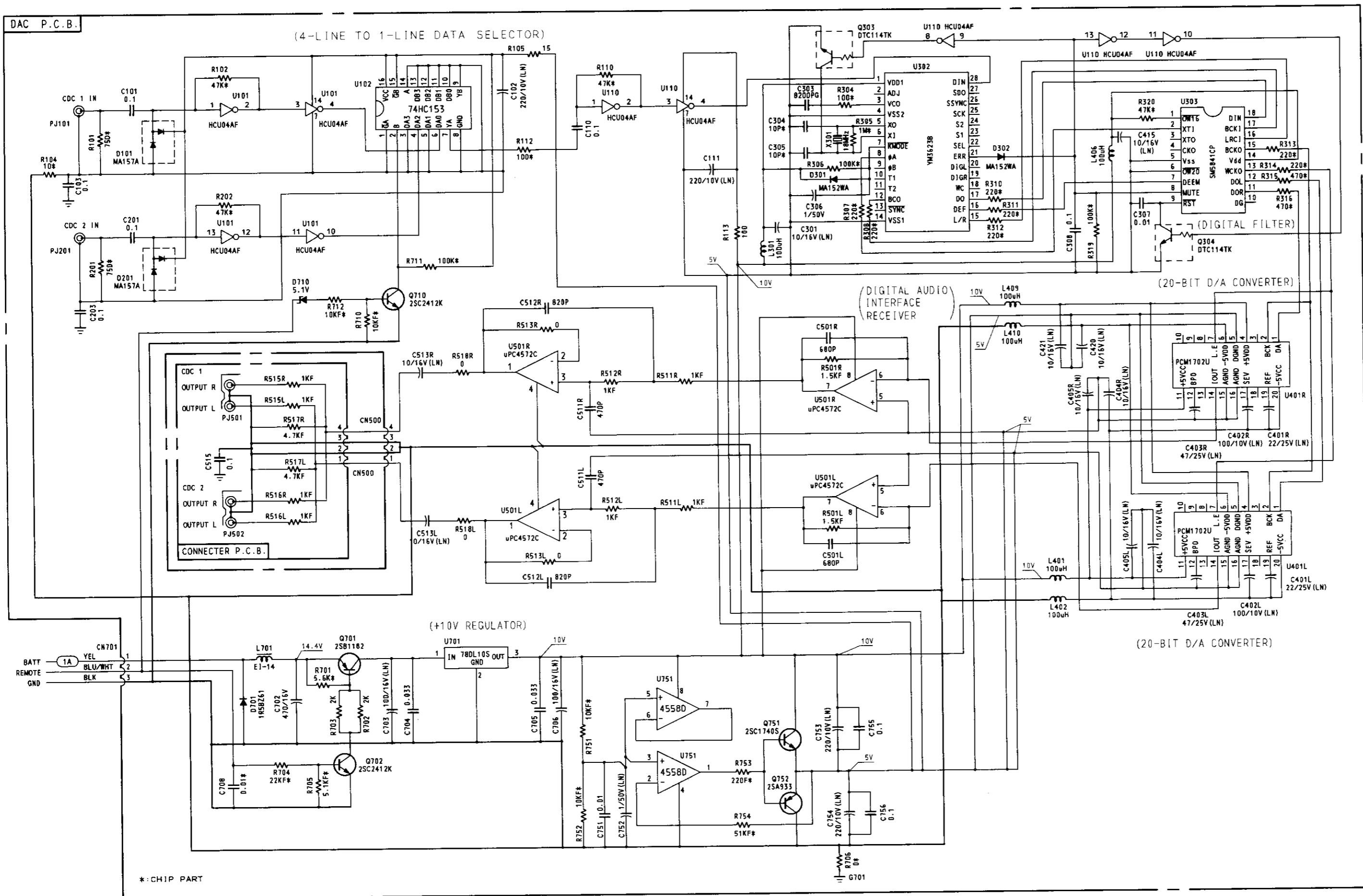
### 3.5. Mecha Flexible P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	<b>BA09736A</b>	<b>Mecha Flexible P.C.B. Ass'y (MF-51, MF-51d)</b>
R701,702	0B21219A	RK 220 1/10W J*
R703,704	0B21219A	RK 220 1/10W J*
R705,706	0B21219A	RK 220 1/10W J*
R707,708	0B21219A	RK 220 1/10W J*
R709	0B21219A	RK 220 1/10W J*
PC701,702	0B10737A	Photointerrupter
PC703,704	0B10737A	Photointerrupter
PC705,706	0B10737A	Photointerrupter
PC707,708	0B10737A	Photointerrupter
PC709	0B10737A	Photointerrupter

● FM MODULATOR (MF-31FM ONLY)



● DAC-41



NOTE: Description of electrolytic capacitor: 100/16V = 100μ, 16V

