

Ensure for safety reasons there is no possibility of secondary problems around the repaired spots.

If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

4. Caution in removal and making wiring connection to the parts for the automobile.

Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

5. Cautions regarding chips.

Do not reuse removed chips even when no abnormality

is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc). The negative pole of tantalum capacitors is highly susceptible to heat, so use special care when replacing them and check the operation afterwards.

6. Cautions in handling flexible PWB

Before working with a soldering iron, make sure that the iron tip temperature is around 270°C. Take care not to apply the iron tip repeatedly (more than three times) to the same patterns. Also take care not to apply the tip with force.

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

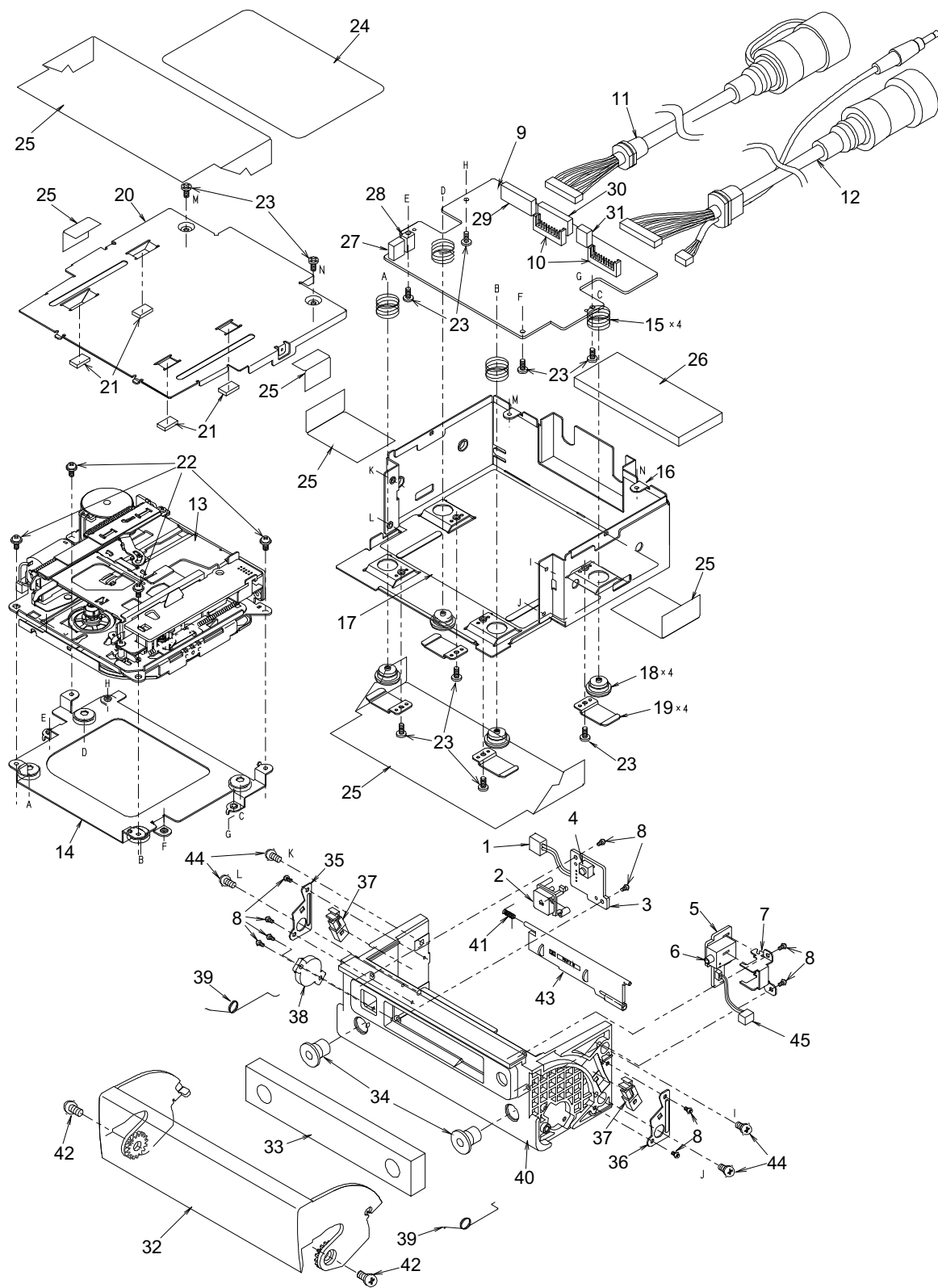
ADJUSTMENT

Item	Procedure	Measuring instrument
Dolby level	1. Playback a Dolby level test tape (400Hz, 200nWb/m) and connect the Milli-volt meter to TP101(L)/TP102(R). 2. Adjust VR101(L)/VR102(R) to obtain an output of TP101(L)/TP102(R) is 388mV $\pm$ 1dB. (Dolby SW: off)	Dolby test tape Milli-volt meter
Azimuth adjustment	1. Playback a azimuth test tape (10kHz, -10VU) and turn each azimuth-adjusting screw to make each FOW & REV Maximum. 2. After adjustment, make adhesion with bond.	Azimuth test tape Milli-volt meter
Tape speed	1. Playback a Wow & flutter test tape (3kHz, -10VU) and connect the frequency counter to TP101(L) or TP102(R). 2. Adjust Speed VR of the motor to obtain an output of TP101(L), TP102(R) is 3000Hz $\pm$ 45Hz.	Wow & flutter test tape Frequency counter

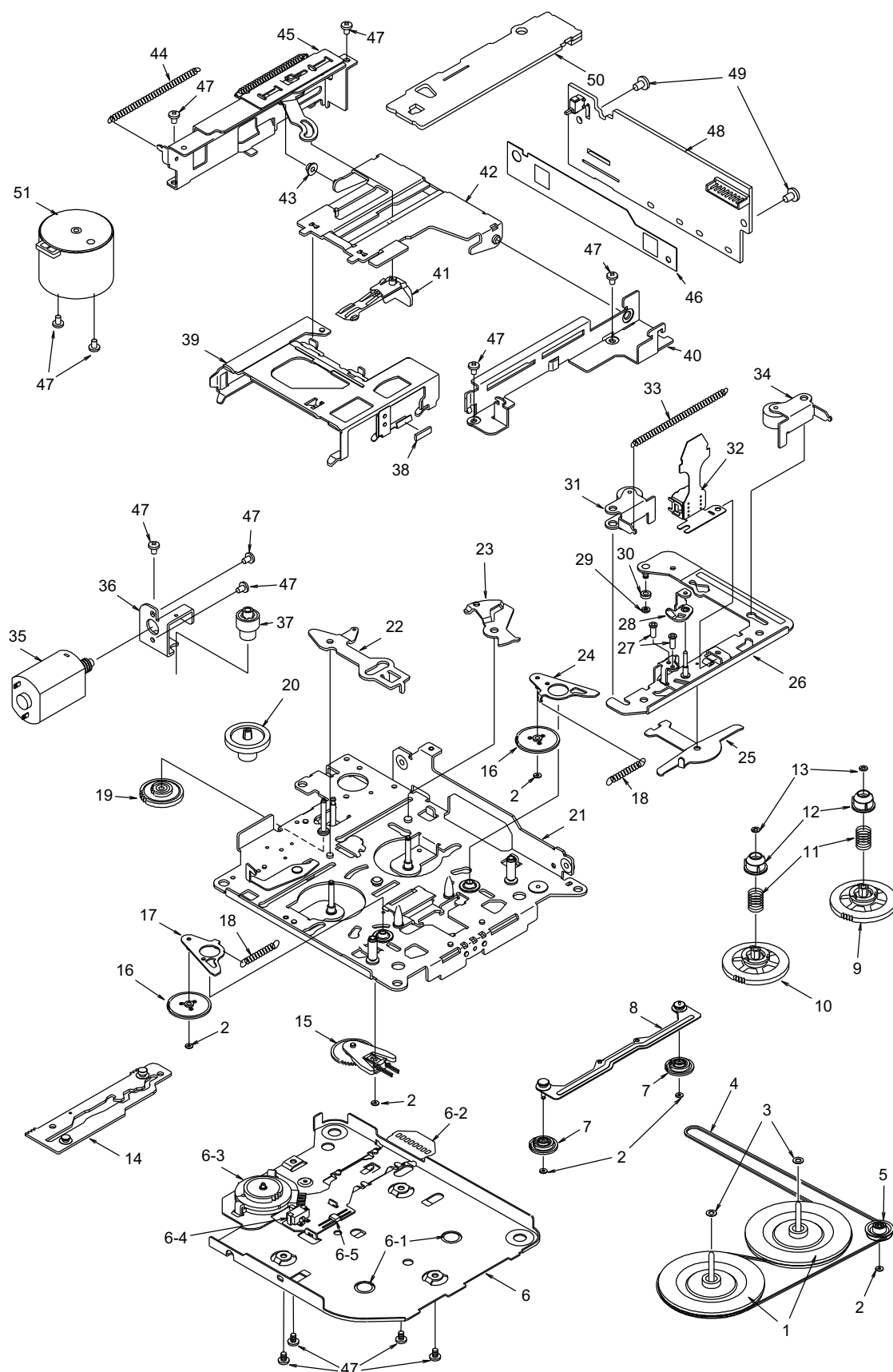
EXPLODED VIEW • PARTS LIST

Main section

NO.	PART NO.	DESCRIPTION	Q'TY	NO.	PART NO.	DESCRIPTION	Q'TY
1	854-4434-00	EXTENTION LEAD	1	23	714-2604-81	MACHINE SCREW (M2.6 $\times$ 4)	10
2	382-5128-00	BUTTON	1	24	286-9163-00 286-9158-00	SETPLATE (PR-8209V-A) SETPLATE (PR-8209V-B)	1
3	039-1337-00	SW PWB (WITHOUT COMPONENT)	1	25	347-5957-00	WATER PROOF KIT	1
4	013-6006-00	SWITCH	1	26	345-7010-01	RUBBER PART	1
5	039-1341-00	JACK PWB (WITHOUT COMPONENT)	1	27	076-0312-03	PLUG (3P)	1
6	075-0376-00	JACK	1	28	076-0312-02	PLUG (2P)	1
7	331-2488-00	JACK HOLDER	1	29	076-0312-11	PLUG (11P)	1
8	704-2006-80	TAP SCREW	10	30	076-0312-12	PLUG (12P)	1
9	039-1340-00	MAIN PWB (WITHOUT COMPONENT)	1	31	854-4435-00	EXTENTION LEAD	1
10	076-0506-09	PLUG	2	32	308-1090-00 308-1090-01	FRONT LID (PR-8209V-A) FRONT LID (PR-8209V-B)	1
11	855-3440-00	MULTI-POLE CORD	1	33	345-8168-00	GASKET	1
12	855-3438-00	MULTI-POLE CORD ASSY	1	34	722-0599-00	WELL NUT	2
13	930-0738-80	TAPE MECHANISM	1	35	331-2490-00	LATCH HOLDER-L	1
14	312-0434-00	CHASSIS	1	36	331-2489-00	LATCH HOLDER-R	1
15	750-3324-00	SPRING	4	37	335-5812-00	LATCH	1
16	311-1759-00	LOWER CASE	1	38	629-0069-00	OIL DAMPER	1
17	347-5794-00	INSULATOR	1	39	750-3314-00	LID SPRING	1
18	629-0068-00	OIL DAMPER	4	40	370-5765-00	ESCUTCHEON	1
19	331-2609-00	DAMPER HOLDER	4	41	750-2309-00	SPRING	1
20	310-1664-00	UPPER CASE	1	42	704-3010-87	TAP SCREW (ϕ 3 $\times$ 10)	2
21	345-8213-00	DAMPER	4	43	320-0567-01	DUSTPROOF ASSY	1
22	716-0878-00	IT SCREW (M2.6 $\times$ 5)	4	44	714-2604-87	MACHINE SCREW (M2.6 $\times$ 4 BLACK)	4



Tape mechanism section : 930-0738-80



NO.	PART NO.	DESCRIPTION	Q'TY
1	611-0091-03	FLYWHEEL	2
2	746-0724-00	WASHER	6
3	746-0624-00	WASHER	2
4	602-0118-00	BELT	1
5	604-0046-00	TENSION PULLEY	1
6	960-4338-07	BOTTOM SUB ASSY	1
6-1	746-0767-00	WASHER	2
6-2	099-9926-01	FPC	1
6-3	013-7300-00	MODE SWITCH	1
6-4	013-3953-01	SWITCH	1
6-5	051-1776-00	IC NJL5801KC	1
7	613-0286-02	FF/REW GEAR	2
8	960-4262-03	FF/REW PLATE ASSY	1
9	960-4348-90	REEL ASSY F	1
10	960-4349-90	REEL ASSY R	1
11	750-2949-00	SLIDE SPRING	2
12	631-1993-01	SLIDE BUSH	2
13	746-0761-00	WASHER	2
14	960-4266-20	MODE PLATE ASSY	1
15	960-4282-06	DETECT SUB ASSY	1
16	613-0662-00	IDLER GEAR	2
17	960-4264-03	IDLER PLATE ASSY R	1
18	750-3148-00	IDLER SPRING	2
19	613-0337-00	POWER GEAR	1
20	613-0289-01	GEAR A	1
21	960-4405-20	DECK PLATE ASSY	1
22	960-4301-02	PLAY LINK ASSY	1
23	630-2598-05	EJECT LINK	1
24	960-4263-03	IDLER PLATE ASSY F	1

NO.	PART NO.	DESCRIPTION	Q'TY
25	630-2718-00	CHANGE LINK	1
26	960-4404-01	HEAD PLATE ASSY	1
27	716-0833-10	AZIMUTH SCREW	2
28	630-2600-01	ADJUST LINK	1
29	746-0762-00	WASHER	1
30	610-0342-01	HEAD PLATE ROLLER	1
31	960-4270-05	ROLLER ASSY R	1
32	011-0328-00	HEAD(H2309-0102)	1
33	750-2946-02	PINCH SPRING	1
34	960-4269-05	ROLLER ASSY F	1
35	SMA-131-100	POWER MOTOR ASSY	1
36	630-2601-02	MOTOR PLATE	1
37	613-0288-01	HELICAL GEAR	1
38	746-0883-00	CLEANING PAD	1
39	960-4406-02	PACK GUIDE ASSY	1
40	630-2626-05	PWB FRAME	1
41	631-1992-02	PACK STOPPER	1
42	630-2642-01	GUIDE ARM	1
43	610-0343-00	GUIDE A ROLLER	1
44	750-2947-04	EJECT PLATE SPRING	1
45	960-4389-20	EJECT SUB ASSY	1
46	347-4080-01	INSULATOR	1
47	716-0484-00	SCREW	13
48	039-0367-01	REAR PWB (WITHOUT COMPONENT)	1
49	716-0761-01	PWB SCREW	2
50	039-0053-00	SIDE PWB (WITHOUT COMPONENT)	1
51	SMA-130-100	MAIN MOTOR ASSY	1

■ EXPLANATION OF IC

■ μ PD75006GB-723-3B4 052-4009-00 GF-C Mechanism Controller

1. Outward Form : 44 pins QFP

2. Function : Cassette Tape mechanism control

3. Terminal Description

pin 1 : N.C.	: O : Not in use.
pin 2 : CRO2 OUT	: O : Equalizer control signal output. "H"= 70 μ sec.
pin 3 : 5V REMOTE	: O : 5V Power supply ON signal output.
pin 4 : MUSIC SRCH	: IN : "H"= Music interval.
pin 5 : N.C.	: O : Not in use.
pin 6 : SRCH SENSE	: O : Sensitivity control output. "H"= FF/REW. "L"= Play
pin 7 : HEAD SW_	: O : "L"= FWD. "H"= REV.
pin 8 : N.C.	: IN : Not in use.
pin 9 : N.C.	: IN : Not in use.
pin 10 : N.C.	: IN : Not in use.
pin 11 : N.C.	: IN : Not in use.
pin 12 : N.C.	: - : Not in use.
pin 13 : NR 1	: O : "H"= Dolby ON.
pin 14 : NR 2	: O : "L"= Dolby B. "H"= Dolby C.
pin 15 : AUX/TAPE	: O : "H"= Tape. "L"= CD or Tuner
pin 16 : SRQ_	: O : Serial line service request signal output. Negative logic.
pin 17 : VSS	: - : Ground.
pin 18 : XT 1	: - : Connect to ground.
pin 19 : XT 2	: - : Open.
pin 20 : RESET_	: IN : Reset signal input. Negative logic.
pin 21 : X 1	: - : Crystal connection.
pin 22 : X 2	: - : Crystal connection.
pin 23 : MODE BIT 1	: IN : Mechanism mode switch signal input. Ref. Table 1.
pin 24 : MODE BIT 2	: IN : Mechanism mode switch signal input. Ref. Table 1.
pin 25 : MODE BIT 3	: IN : Mechanism mode switch signal input. Ref. Table 1.
pin 26 : MM	: O : Main motor control signal output. "H"= ON.
pin 27 : P 2	: O : Power motor control signal output. Ref. Table 2.
pin 28 : P 1	: O : Power motor control signal output. Ref. Table 2.

pin 29 : SI	: IN : Serial data input terminal.
pin 30 : SO	: O : Serial data output terminal.
pin 31 : SCK_	: IN : Serial clock input terminal. Negative logic.
pin 32 : ACC CONT	: IN : "H"= ACC ON.
pin 33 : CRO2 SW	: IN : Metal/Chrom Tape Switch signal input. "H"= Metal/Chrom Tape.
pin 34 : N.C.	: - : Not in use.
pin 35 : REEL PULSE	: IN : Reel pulse input terminal.
pin 36 : TAPE IN	: IN : "H"= Tape loading start.
pin 37 : N.C.	: IN : Not in use.
pin 38 : N.C.	: - : Not in use.
pin 39 : VDD	: - : Positive supply voltage. 5V.
pin 40 : MECH VCC	: O : Mechanism power supply ON signal output terminal.
pin 41 : MECH MUTE_	: O : "L"= Mute ON.
pin 42 : N.C.	: O : Not in use.
pin 43 : N.C.	: O : Not in use.
pin 44 : N.C.	: O : Not in use.

Table 1. Mechanism mode switch input

Mechanism Mode	bit 1 (pin23)	bit 2 (pin24)	bit 3 (pin25)
Eject	H	H	H
Loading	H	H	L
Stop	L	H	L
FWD FF (REV REW)	L	L	H
FWD REW (REV FF)	H	L	L
FWD Play	H	L	H
REV Play	L	H	H

Table 2. Power motor control output

Mechanism Mode	P 1 (pin28)	P 2 (pin27)
Loading head shift forward	H	L
Eject head go back	L	H
Brake	H	H
Stop	L	L

■ PARTS LIST

MAIN PWB section(B1)

Note) Several different parts of the same reference number are alternative parts.
One of those parts is used in the set.

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
C102	042-0443-01	6.3V47 μ F	D102	001-0330-00	1SS119	R145	117-1041-10	1/10W 100k Ω
C103	042-0443-05	16V10 μ F	D103	001-0503-33	HZS6B2L	R146	117-1001-10	1/10W 10 Ω
C104	042-0443-13	35V 4.7 μ F	D104	001-0376-45	MTZJ8.2C	R147	117-1001-10	1/10W 10 Ω
C105	042-0443-13	35V 4.7 μ F	D105	001-0584-25	MA8091	RY102	014-0580-00	RELAY
C106	042-0443-02	16V 47 μ F	D106	001-0584-25	MA8091	VR101	012-6000-09	47k Ω
C107	178-1042-78	0.1 μ F	D107	001-0584-25	MA8091	VR102	012-6000-09	47k Ω
C108	042-0443-02	16V 47 μ F	D108	001-0466-00	S5688B	Q104	125-2020-03	DTC124EK
C109	042-0443-05	16V10 μ F	D109	001-0528-48	MA8091-H	Q105	125-2020-03	DTC124EK
C110	042-0443-05	16V10 μ F	D110	001-0528-48	MA8091-H	Q106	103-1858-00	2SD1858
C111	042-0443-05	16V10 μ F	D111	001-0528-48	MA8091-H	Q107	100-1162-00	2SA1162
C112	183-1066-21	10V10 μ F NP	IC101	051-1556-05	S-80740AN-D4-X	Q108	125-2020-03	DTC124EK
C113	183-1066-21	10V10 μ F NP	IC102	051-1038-01	CXA1102M	Q109	103-1858-00	2SD1858
C114	178-2255-79	2.2 μ F	IC103	051-7400-06	HD74LS07FP	Q110	125-0014-03	DTA124EK
C115	042-0443-05	16V10 μ F	IC104	051-3010-00	NJM4580E	Q111	102-2712-00	2SC2712
C116	042-0443-05	16V10 μ F	P101	076-0506-09	9P	Q112	103-1306-00	2SD1306
C117	042-0443-05	16V10 μ F	P102	076-0506-09	9P	Q113	103-1306-00	2SD1306
C118	042-0443-05	16V10 μ F	P103	076-0312-11	11P	Q114	103-1858-00	2SD1858
C119	042-0443-02	16V 47 μ F	P104	076-0312-12	12P	R101	117-4731-10	1/10W 47k Ω
C120	042-0443-05	16V10 μ F	P105	076-0312-03	3P	R102	117-1021-10	1/10W 1k Ω
C121	042-0443-02	16V 47 μ F	P106	076-0312-02	2P	R103	117-4731-10	1/10W 47k Ω
C122	042-0443-05	16V10 μ F	P107	076-0312-03	3P	R104	117-1031-10	1/10W 10k Ω
C123	042-0443-05	16V10 μ F	Q101	100-1162-00	2SA1162	R105	111-1031-91	1/4WS 10k Ω
C124	178-2255-79	2.2 μ F	Q103	125-0014-03	DTA124EK	R106	117-1031-10	1/10W 10k Ω
C125	178-2255-79	2.2 μ F	R140	117-2221-10	1/10W 2.2k Ω	R107	117-1041-10	1/10W 100k Ω
C126	178-2255-79	2.2 μ F	R141	117-2221-10	1/10W 2.2k Ω	R108	117-1031-10	1/10W 10k Ω
C127	178-2255-79	2.2 μ F	R142	117-2231-10	1/10W 22k Ω	R109	117-2211-10	1/10W 220 Ω
C128	178-2255-79	2.2 μ F	R143	117-1031-10	1/10W 10k Ω	R110	117-2211-10	1/10W 220 Ω
D101	001-0330-00	1SS119	R144	117-4731-10	1/10W 47k Ω	R111	117-1021-10	1/10W 1k Ω

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
R112	117-1021-10	1/10W 1k Ω	R122	117-1031-10	1/10W 10k Ω	R132	117-2731-10	1/10W 27k Ω
R113	117-1021-10	1/10W 1k Ω	R123	117-1031-10	1/10W 10k Ω	R133	117-2231-10	1/10W 22k Ω
R114	117-1021-10	1/10W 1k Ω	R124	117-1051-10	1/10W 1M Ω	R134	111-4711-91	1/4WS 470 Ω
R115	117-1031-10	1/10W 10k Ω	R125	117-1031-10	1/10W 10k Ω	R135	111-4701-91	1/4WS 47 Ω
R116	117-1031-10	1/10W 10k Ω	R126	117-1031-10	1/10W 10k Ω	R136	111-4711-91	1/4WS 470 Ω
R117	117-2221-10	1/10W 2.2k Ω	R127	117-1231-10	1/10W 12k Ω	R137	111-1011-91	1/4WS 100 Ω
R118	117-1031-10	1/10W 10k Ω	R128	117-1231-10	1/10W 12k Ω	R138	117-4731-10	1/10W 47k Ω
R119	117-4331-10	1/10W 43k Ω	R129	117-1231-10	1/10W 12k Ω	R139	117-4731-10	1/10W 47k Ω
R120	111-4721-91	1/4WS 4.7k Ω	R130	117-1231-10	1/10W 12k Ω			
R121	117-1021-10	1/10W 1k Ω	R131	117-1021-10	1/10W 1k Ω			

Jack PWB section(B2)

REF No.	PART No.	DESCRIPTION
J501	075-0376-00	JACK

Switch PWB section(B3)

REF No.	PART No.	DESCRIPTION
S401	013-6006-00	TACT SW

Tape mechanism Side PWB section(B4)

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
C1	175-3311-00	330pF CH	C13	183-4743-61	50V0.47 μ F	R7	117-3341-10	1/10W 330k Ω
C2	175-3311-00	330pF CH	C14	183-2263-31	16V22 μ F	R8	117-1131-10	1/10W 11k Ω
C3	175-3311-00	330pF CH	C15	183-4753-51	35V4.7 μ F	R9	117-1531-10	1/10W 15k Ω
C4	175-3311-00	330pF CH	C16	183-4753-51	35V4.7 μ F	R10	117-1531-10	1/10W 15k Ω
C5	183-4763-11	6.3V47 μ F	IC1	051-1546-10	BA3430S	R11	117-1131-10	1/10W 11k Ω
C6	042-0552-02	10V68 μ F	J1	074-0881-08	8P	R12	117-3341-10	1/10W 330k Ω
C7	042-0552-02	10V68 μ F	R1	111-1241-91	1/4WS 120k Ω	R13	117-1811-10	1/10W 180 Ω
C8	173-1231-10	0.012 μ F J	R2	111-1241-91	1/4WS 120k Ω	R14	117-8211-10	1/10W 820 Ω
C9	173-1231-10	0.012 μ F J	R3	111-1241-91	1/4WS 120k Ω	R15	116-2231-10	1/8W 22k Ω
C10	183-4753-51	35V4.7 μ F	R4	111-1241-91	1/4WS 120k Ω	R16	117-1031-10	1/10W 10k Ω
C11	183-1043-61	50V0.1 μ F	R5	116-1011-10	1/8W 100 Ω	R17	117-1031-10	1/10W 10k Ω
C12	175-5611-00	560pF CH	R6	116-1011-10	1/8W 100 Ω			

Tape mechanism Rear PWB section(B5)

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
C101	178-2232-78	0.022 μ F	P101	076-0353-08	8P	R106	117-1031-10	1/10W 10k Ω
C102	178-1042-78	0.1 μ F	Q101	101-1123-00	2SB1123	R108	118-5611-10	1/2W 560 Ω
C103	163-4763-30	16V47 μ F	Q102	125-2004-06	RN1406	R109	117-1031-10	1/10W 10k Ω
C104	163-4763-30	16V47 μ F	Q103	125-2004-06	RN1406	R110	117-1031-10	1/10W 10k Ω
C105	163-1063-30	16V10 μ F	Q104	101-1123-00	2SB1123	R111	117-2231-10	1/10W 22k Ω
C106	042-0505-00	25V1 μ F	Q105	103-1802-60	2SD1802FA-R.S.T	R112	118-6811-15	1/2W 680 Ω
D101	001-0595-17	MA5091	R101	117-1031-10	1/10W 10k Ω	R113	117-1031-10	1/10W 10k Ω
IC101	052-4009-00	μ PD75006GB-723-3B4	R102	117-1031-10	1/10W 10k Ω	R114	118-2711-15	1/2W 270 Ω
IC102	051-1014-05	TA7291F	R103	117-1031-10	1/10W 10k Ω	R115	117-1051-10	1/10W 1M Ω
J101	074-1012-09	9P	R104	117-1031-10	1/10W 10k Ω	R116	117-1041-10	1/10W 100k Ω
J102	074-1012-09	9P	R104	118-6811-15	1/2W 680 Ω	S101	013-3906-00	SPPB51(T-IN)
			R105	117-1031-10	1/10W 10k Ω	X101	060-0266-00	KBR-4.19MWS

Tape mechanism Bottom PWB section(B6)

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
IC201	051-1776-00	NJL5801KC	S201	013-7300-00	HMW0605(MODE)	S202	013-3953-01	SPPB32H(CRO2)