Ensure for safety reasons there is no possibility of secondary ploblems 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℃. 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

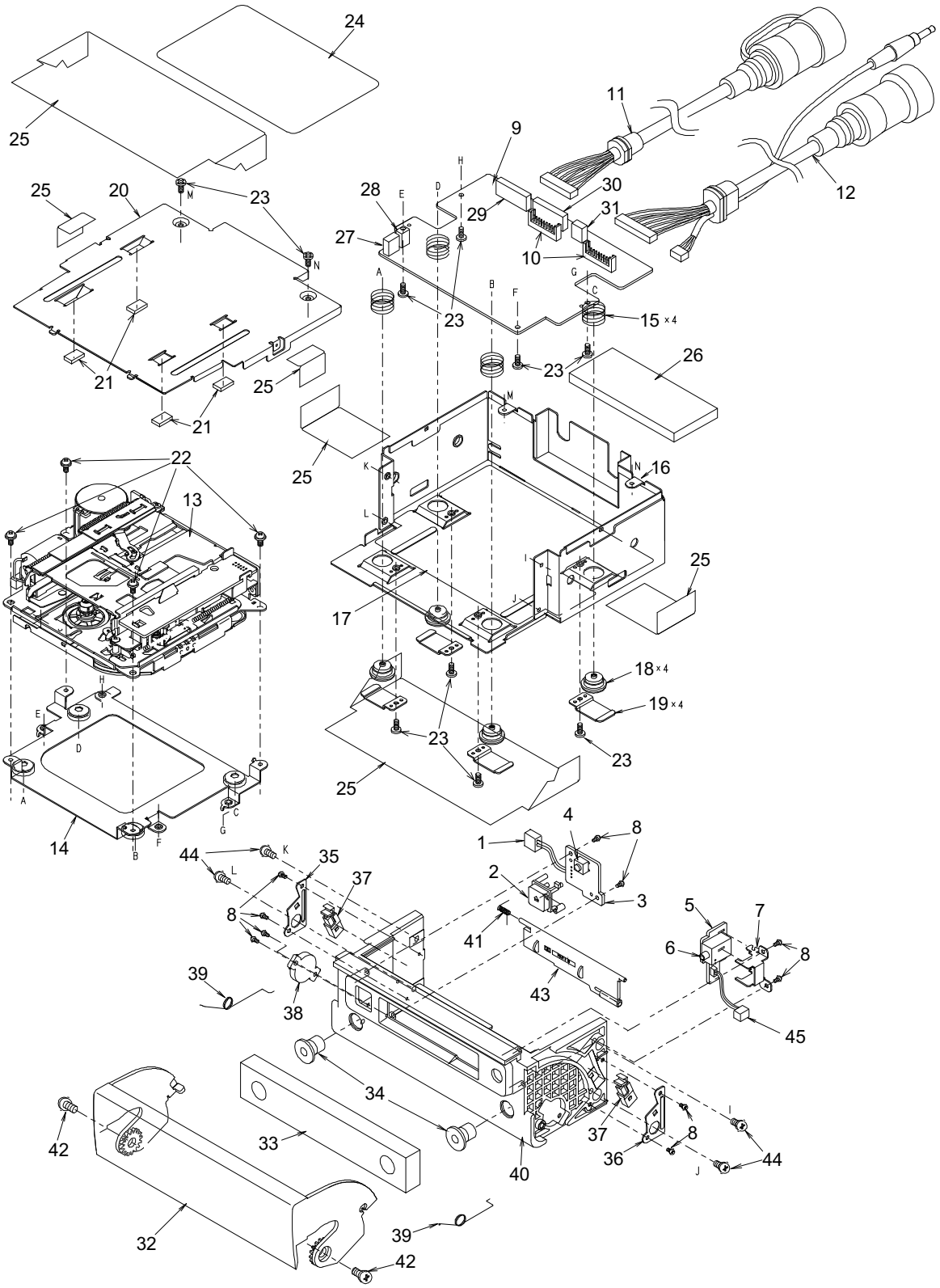
Item	Procedure	Measuring instrument
Dolby level	1. Playback a Dolby level test tape(400Hz,200nWb/m) and connect the Milli-volt meter to TP101(L)/TP102(R). 2. Adjust VR101(L)/VR102(R) to obtain an output of TP101(L)/TP102(R) is 388mV ±1dB.(Dolby SW:off)	Dolby test tape Milli-volt meter
Azimuth adjustment	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±45Hz.	Wow & flutter test tape Frequency counter

■EXPLODED VIEW • PARTS LIST

Main section

NO.	PART NO.	DESCRIPTION	Q'TY
1	854-4434-00	EXTENTION LEAD	1
2	382-5128-00	BUTTON	1
3	039-1337-00	SW PWB (WITHOUT COMPONENT)	1
4	013-6006-00	SWITCH	1
5	039-1341-00	JACK PWB (WITHOUT COMPONENT)	1
6	075-0376-00	JACK	1
7	331-2488-00	JACK HOLDER	1
8	704-2006-80	TAP SCREW	10
9	039-1340-00	MAIN PWB (WITHOUT COMPONENT)	1
10	076-0506-09	PLUG	2
11	855-3440-00	MULTI-POLE CORD	1
12	855-3438-00	MULTI-POLE CORD ASSY	1
13	930-0738-80	TAPE MECHANISM	1
14	312-0434-00	CHASSIS	1
15	750-3324-00	SPRING	4
16	311-1759-00	LOWER CASE	1
17	347-5794-00	INSULATOR	1
18	629-0068-00	OIL DAMPER	4
19	331-2609-00	DAMPER HOLDER	4
20	310-1664-00	UPPER CASE	1
21	345-8213-00	DAMPER	4
22	716-0878-00	IT SCREW(M2.6×5)	4

NO.	PART NO.	DESCRIPTION	Q'TY
23	714-2604-81	MACHINE SCREW(M2.6×4)	10
24	286-9163-00 286-9158-00	SETPLATE(PR-8209V-A) SETPLATE(PR-8209V-B)	1
25	347-5957-00	WATER PROOF KIT	1
26	345-7010-01	RUBBER PART	1
27	076-0312-03	PLUG(3P)	1
28	076-0312-02	PLUG(2P)	1
29	076-0312-11	PLUG(11P)	1
30	076-0312-12	PLUG(12P)	1
31	854-4435-00	EXTENTION LEAD	1
32	308-1090-00 308-1090-01	FRONT LID(PR-8209V-A) FRONT LID(PR-8209V-B)	1
33	345-8168-00	GASKET	1
34	722-0599-00	WELL NUT	2
35	331-2490-00	LATCH HOLDER-L	1
36	331-2489-00	LATCH HOLDER-R	1
37	335-5812-00	LATCH	1
38	629-0069-00	OIL DAMPER	1
39	750-3314-00	LID SPRING	1
40	370-5765-00	ESCUTCHEON	1
41	750-2309-00	SPRING	1
42	704-3010-87	TAP SCREW(φ3×10)	2
43	320-0567-01	DUSTPROOF ASSY	1
44	714-2604-87	MACHINE SCREW (M2.6×4 BLACK)	4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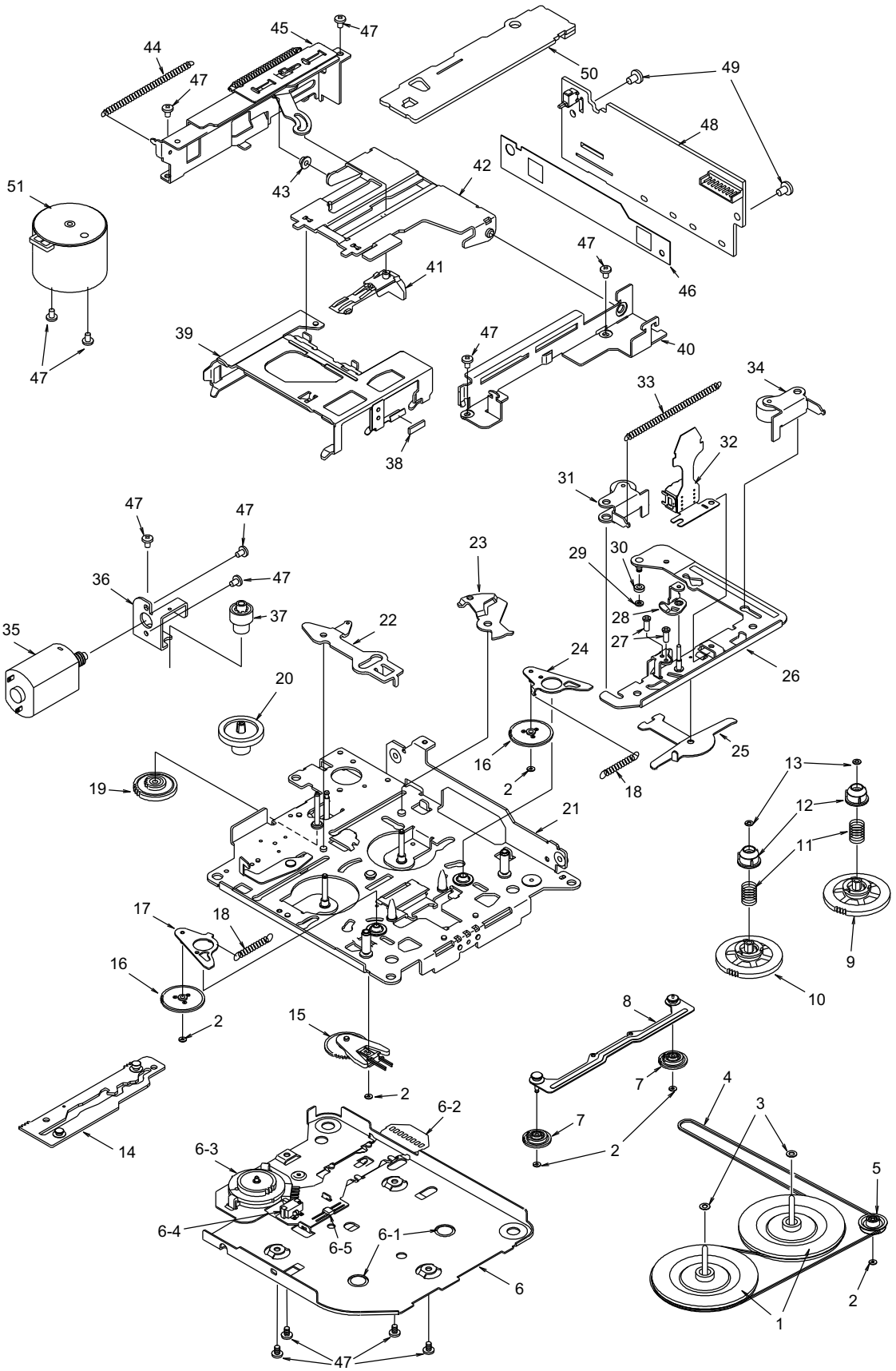
Tape mechanism section : 930-0738-80



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

■EXPLANATIOPN OF IC

■ μPD75006GB-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 μsec.
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
C102	042-0443-01	6.3V47 μF
C103	042-0443-05	16V10 μF
C104	042-0443-13	35V 4.7 μF
C105	042-0443-13	35V 4.7 μF
C106	042-0443-02	16V 47 μF
C107	178-1042-78	0.1 μF
C108	042-0443-02	16V 47 μF
C109	042-0443-05	16V10 μF
C110	042-0443-05	16V10 μF
C111	042-0443-05	16V10 μF
C112	183-1066-21	10V10 μF NP
C113	183-1066-21	10V10 μF NP
C114	178-2255-79	2.2 μF
C115	042-0443-05	16V10 μF
C116	042-0443-05	16V10 μF
C117	042-0443-05	16V10 μF
C118	042-0443-05	16V10 μF
C119	042-0443-02	16V 47 μF
C120	042-0443-05	16V10 μF
C121	042-0443-02	16V 47 μF
C122	042-0443-05	16V10 μF
C123	042-0443-05	16V10 μF
C124	178-2255-79	2.2 μF
C125	178-2255-79	2.2 μF
C126	178-2255-79	2.2 μF
C127	178-2255-79	2.2 μF
C128	178-2255-79	2.2 μF
D101	001-0330-00	1SS119
D102	001-0330-00	1SS119
D103	001-0503-33	HZS6B2L
D104	001-0376-45	MTZJ8.2C
D105	001-0584-25	MA8091
D106	001-0584-25	MA8091
D107	001-0584-25	MA8091
D108	001-0466-00	S5688B
D109	001-0528-48	MA8091-H
D110	001-0528-48	MA8091-H
D111	001-0528-48	MA8091-H
IC101	051-1556-05	S-80740AN-D4-X
IC102	051-1038-01	CXA1102M
IC103	051-7400-06	HD74LS07FP
IC104	051-3010-00	NJM4580E
P101	076-0506-09	9P
P102	076-0506-09	9P
P103	076-0312-11	11P
P104	076-0312-12	12P
P105	076-0312-03	3P
P106	076-0312-02	2P
P107	076-0312-03	3P
Q101	100-1162-00	2SA1162
Q103	125-0014-03	DTA124EK
R140	117-2221-10	1/10W 2.2kΩ
R141	117-2221-10	1/10W 2.2kΩ
R142	117-2231-10	1/10W 22kΩ
R143	117-1031-10	1/10W 10kΩ
R144	117-4731-10	1/10W 47kΩ
R145	117-1041-10	1/10W 100kΩ
R146	117-1001-10	1/10W 10Ω
R147	117-1001-10	1/10W 10Ω
RY102	014-0580-00	RELAY
VR101	012-6000-09	47kΩ
VR102	012-6000-09	47kΩ
Q104	125-2020-03	DTC124EK
Q105	125-2020-03	DTC124EK
Q106	103-1858-00	2SD1858
Q107	100-1162-00	2SA1162
Q108	125-2020-03	DTC124EK
Q109	103-1858-00	2SD1858
Q110	125-0014-03	DTA124EK
Q111	102-2712-00	2SC2712
Q112	103-1306-00	2SD1306
Q113	103-1306-00	2SD1306
Q114	103-1858-00	2SD1858
R101	117-4731-10	1/10W 47kΩ
R102	117-1021-10	1/10W 1kΩ
R103	117-4731-10	1/10W 47kΩ
R104	117-1031-10	1/10W 10kΩ
R105	111-1031-91	1/4WS 10kΩ
R106	117-1031-10	1/10W 10kΩ
R107	117-1041-10	1/10W 100kΩ
R108	117-1031-10	1/10W 10kΩ
R109	117-2211-10	1/10W 220Ω
R110	117-2211-10	1/10W 220Ω
R111	117-1021-10	1/10W 1kΩ

REF No.	PART No.	DESCRIPTION
R112	117-1021-10	1/10W 1kΩ
R113	117-1021-10	1/10W 1kΩ
R114	117-1021-10	1/10W 1kΩ
R115	117-1031-10	1/10W 10kΩ
R116	117-1031-10	1/10W 10kΩ
R117	117-2221-10	1/10W 2.2kΩ
R118	117-1031-10	1/10W 10kΩ
R119	117-4331-10	1/10W 43kΩ
R120	111-4721-91	1/4WS 4.7kΩ
R121	117-1021-10	1/10W 1kΩ

REF No.	PART No.	DESCRIPTION
R122	117-1031-10	1/10W 10kΩ
R123	117-1031-10	1/10W 10kΩ
R124	117-1051-10	1/10W 1MΩ
R125	117-1031-10	1/10W 10kΩ
R126	117-1031-10	1/10W 10kΩ
R127	117-1231-10	1/10W 12kΩ
R128	117-1231-10	1/10W 12kΩ
R129	117-1231-10	1/10W 12kΩ
R130	117-1231-10	1/10W 12kΩ
R131	117-1021-10	1/10W 1kΩ

REF No.	PART No.	DESCRIPTION
R132	117-2731-10	1/10W 27kΩ
R133	117-2231-10	1/10W 22kΩ
R134	111-4711-91	1/4WS 470Ω
R135	111-4701-91	1/4WS 47Ω
R136	111-4711-91	1/4WS 470Ω
R137	111-1011-91	1/4WS 100Ω
R138	117-4731-10	1/10W 47kΩ
R139	117-4731-10	1/10W 47kΩ

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
C1	175-3311-00	330pF CH
C2	175-3311-00	330pF CH
C3	175-3311-00	330pF CH
C4	175-3311-00	330pF CH
C5	183-4763-11	6.3V47μF
C6	042-0552-02	10V68μF
C7	042-0552-02	10V68μF
C8	173-1231-10	0.012μF J
C9	173-1231-10	0.012μF J
C10	183-4753-51	35V4.7μF
C11	183-1043-61	50V0.1μF
C12	175-5611-00	560pF CH

REF No.	PART No.	DESCRIPTION
C13	183-4743-61	50V0.47μF
C14	183-2263-31	16V22μF
C15	183-4753-51	35V4.7μF
C16	183-4753-51	35V4.7μF
IC1	051-1546-10	BA3430S
J1	074-0881-08	8P
R1	111-1241-91	1/4WS 120kΩ
R2	111-1241-91	1/4WS 120kΩ
R3	111-1241-91	1/4WS 120kΩ
R4	111-1241-91	1/4WS 120kΩ
R5	116-1011-10	1/8W 100Ω
R6	116-1011-10	1/8W 100Ω

REF No.	PART No.	DESCRIPTION
R7	117-3341-10	1/10W 330kΩ
R8	117-1131-10	1/10W 11kΩ
R9	117-1531-10	1/10W 15kΩ
R10	117-1531-10	1/10W 15kΩ
R11	117-1131-10	1/10W 11kΩ
R12	117-3341-10	1/10W 330kΩ
R13	117-1811-10	1/10W 180Ω
R14	117-8211-10	1/10W 820Ω
R15	116-2231-10	1/8W 22kΩ
R16	117-1031-10	1/10W 10kΩ
R17	117-1031-10	1/10W 10kΩ

Tape mechanism Rear PWB section(B5)

REF No.	PART No.	DESCRIPTION
C101	178-2232-78	0.022μF
C102	178-1042-78	0.1μF
C103	163-4763-30	16V47μF
C104	163-4763-30	16V47μF
C105	163-1063-30	16V10μF
C106	042-0505-00	25V1μF
D101	001-0595-17	MA5091
IC101	052-4009-00	μPD75006GB-723-3B4
IC102	051-1014-05	TA7291F
J101	074-1012-09	9P
J102	074-1012-09	9P

REF No.	PART No.	DESCRIPTION
P101	076-0353-08	8P
Q101	101-1123-00	2SB1123
Q102	125-2004-06	RN1406
Q103	125-2004-06	RN1406
Q104	101-1123-00	2SB1123
Q105	103-1802-60	2SD1802FA-R.S.T
R101	117-1031-10	1/10W 10kΩ
R102	117-1031-10	1/10W 10kΩ
R103	117-1031-10	1/10W 10kΩ
R104	117-1031-10	1/10W 10kΩ
R104	118-6811-15	1/2W 680Ω
R105	117-1031-10	1/10W 10kΩ

REF No.	PART No.	DESCRIPTION
R106	117-1031-10	1/10W 10kΩ
R108	118-5611-10	1/2W 560Ω
R109	117-1031-10	1/10W 10kΩ
R110	117-1031-10	1/10W 10kΩ
R111	117-2231-10	1/10W 22kΩ
R112	118-6811-15	1/2W 680Ω
R113	117-1031-10	1/10W 10kΩ
R114	118-2711-15	1/2W 270Ω
R115	117-1051-10	1/10W 1MΩ
R116	117-1041-10	1/10W 100kΩ
S101	013-3906-00	SPPB51(T-IN)
X101	060-0266-00	KBR-4.19MWS

Tape mechanism Bottom PWB section(B6)

REF No.	PART No.	DESCRIPTION
IC201	051-1776-00	NJL5801KC

REF No.	PART No.	DESCRIPTION
S201	013-7300-00	HMW0605(MODE)

REF No.	PART No.	DESCRIPTION
S202	013-3953-01	SPPB32H(CRO2)