

# ALPINE® SERVICE



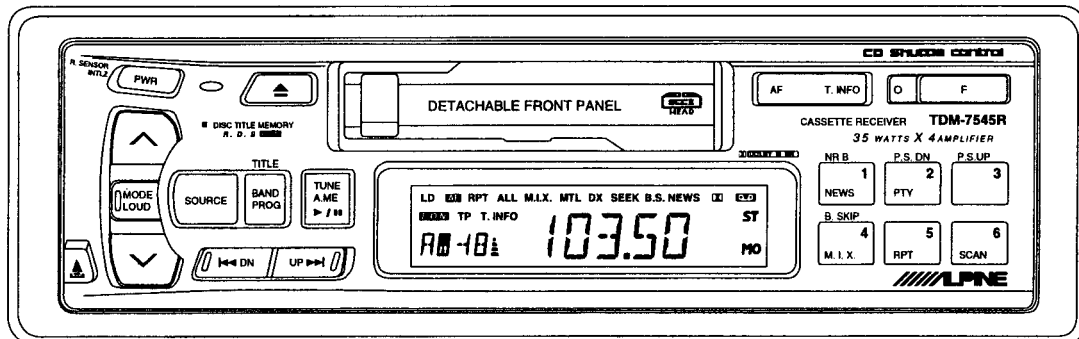
ALPI-00411

# MANUAL

## FM/MW/LW/RDS Cassette Receiver

## CD Shuttle Controller

- For the cassette deck mechanism parts (GR75S310/410) of this model, refer to the Service Manual • GR-S SERIES • ADDENDUM & REVISED (II) (Part No. 68E24873S01/68E26177S01).



(TDM-7545R)

# TDM-7545R/ TDM-7544R

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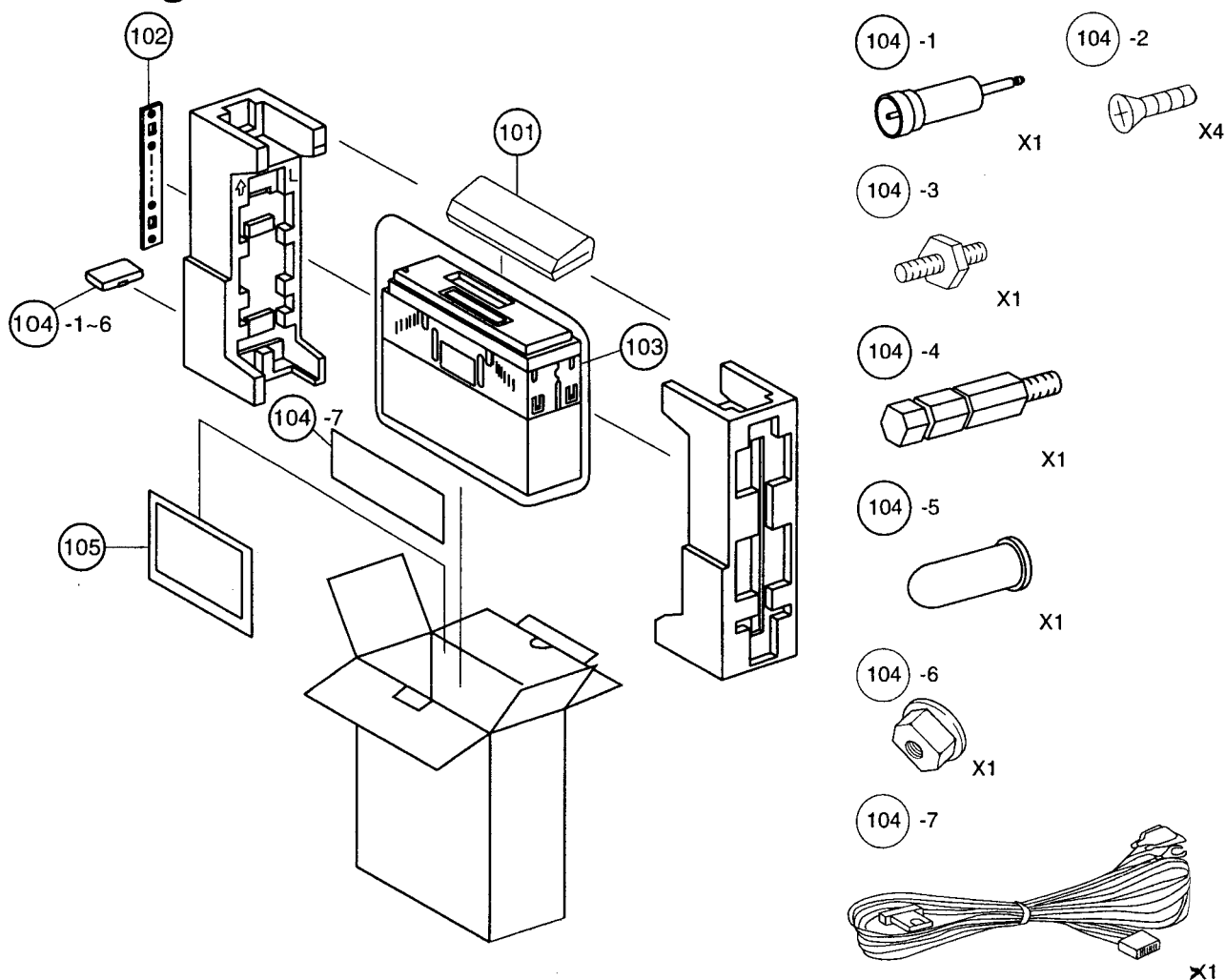
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## Packing Assembly Parts List

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
101	15D71506W01	Carrying, Case	104-6	02E20771S01	Nut, Hex. (M5)
102	07E09438S01	Bracket, Strap Receiver	104-7	01E27452S01	Assy., Power Wire (For Battery Line (Fuse 15A))
103	15E21170S01	Case, Inner	105-1	68P91666W52	Owner's Manual
○ 104	01E27625S01	Assy., Kit Installation	105-2	68P91666W53	Owner's Manual (I/G/S)
△ 104	01E27737S01	Assy., Kit Installation			
104-1	01T15394Y02	Antenna, JASO-ISO			
104-2	03E10240S02	Screw, MCH (M5X8)			
104-3	03E11374S01	Stud, Bolt			
104-4	03E27739S01	Bolt, Hex. (M5)			
104-5	75E27734S01	Cap, Rubber			

NOTE : ○ : For TDM-7545R Model Only, △ : For TDM-7544R Model Only, Others : Common.

## Packing Method View



# Specifications

## FM RADIO

Intermediate Frequency .....	10.7±0.1MHz
Frequency Range .....	87.5~108MHz
Usable Sensitivity (Mono, 30dB S/N, at 98.1MHz) .....	17.2dBf
-3dB Limiting Sensitivity (at 98.1MHz) .....	19.2dBf
Residual Noise (Ref. 400Hz, at 98.1MHz) .....	25±10dB
S/N Ratio (Stereo, at 98.1MHz) .....	55dB
Image Rejection (at 106.1MHz) .....	40dB
IF Rejection (at 90.1MHz) .....	60dB
Distortion (Input 60dB $\mu$ , at 98.1MHz) .....	1%
Frequency Response (Ref. 400Hz, at 98.1MHz) .....	100Hz : 0±3dB 10kHz : -12±3dB
Stereo Separation (1kHz, at 98.1MHz) .....	20dB
PS Sensitivity (at 98.1MHz) .....	36.2dBf

## MW RADIO

Intermediate Frequency .....	450kHz
Frequency Range .....	531~1,602kHz
Usable Sensitivity (20dB S/N, at 999kHz) .....	35dB
S/N Ratio (at 999kHz) .....	44dB
Image Rejection (at 603kHz) .....	40dB
IF Rejection (at 603kHz) .....	40dB
Distortion (at 999kHz) .....	1.5%
Frequency Response (Ref. 400Hz, at 999kHz) .....	100Hz : -3±4dB 4kHz : -12+6, -12dB

## LW RADIO

Intermediate Frequency .....	450kHz
Frequency Range .....	153~281kHz
Usable Sensitivity (20dB S/N, at 216kHz) .....	41dB
S/N Ratio (at 216kHz) .....	42dB
Image Rejection (at 270kHz) .....	40dB
IF Rejection (at 162kHz) .....	50dB
Distortion (at 216kHz) .....	1.5%
Frequency Response (Ref. 400Hz, at 216kHz) .....	100Hz : -3±4dB 4kHz : -12+6, -12dB

## TAPE PLAYER

Wow & Flutter (JIS, WRMS/MTT-111N) .....	0.2%
Tape Speed (MTT-111N) .....	4.76cm/sec.+3 to -1%
S/N Ratio .....	Dolby OFF : 52dB Dolby B NR : 60.5dB (○)
Distortion (MTT-118) .....	2%
Frequency Response (-3dB) .....	250Hz~10kHz
Separation (MTT-141N) .....	35dB
Crosstalk (MTT-121N) .....	45dB

**GENERAL**

Power Supply ..... DC14.4V  
Power Output (T.H.D. 10%) /Impedance ..... 16W/ch/4ohm  
Semiconductors ..... 22IC's, 42Transistors, 19Diodes, 7Zener Diodes (○)  
..... 17IC's, 36Transistors, 18Diodes, 7Zener Diodes (△)  
Dimensions (W×H×D) ..... Chassis : 180×50×155mm  
..... Nose : 188×58×19.4mm  
Weight ..... 1.4kg

NOTE : Due to Continuing product improvement, specifications and designs are subject to change without notice.

○ : For TDM-7545R Model Only,      △ : For TDM-7544R Model Only,      Others :Common.

# Adjustment Procedures

## 1. FM SECTION

### (1) Dummy Antenna Circuit

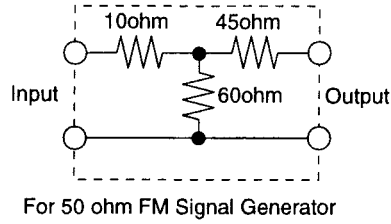


Figure 1

### (2) Connections

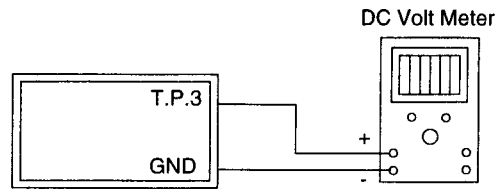


Figure 2

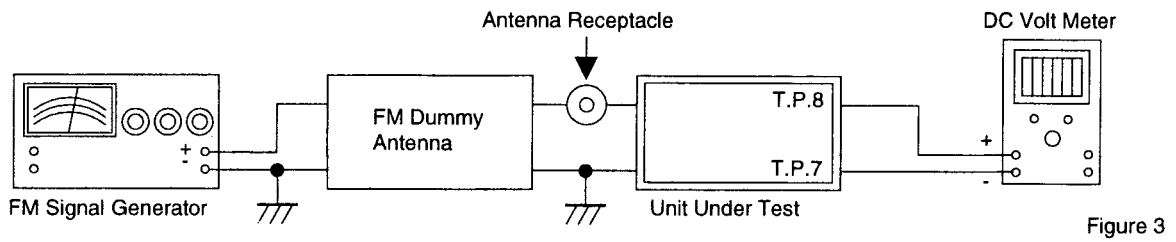


Figure 3

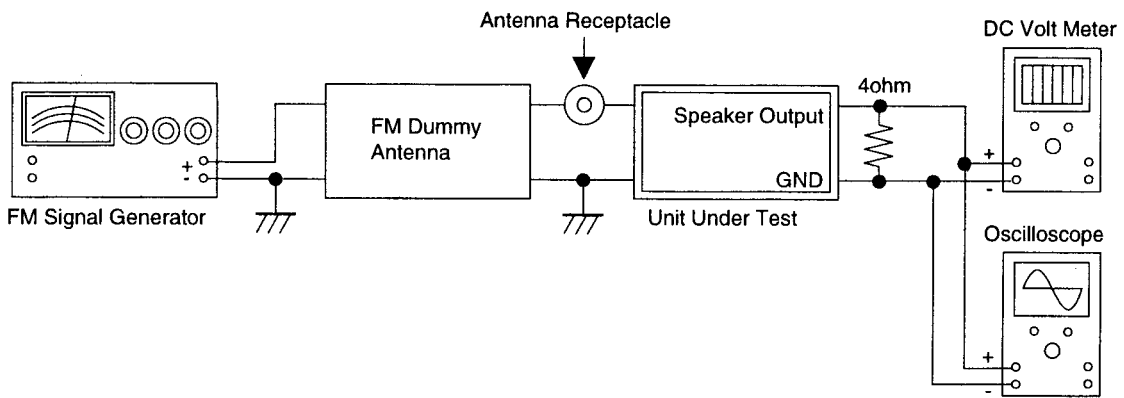


Figure 4

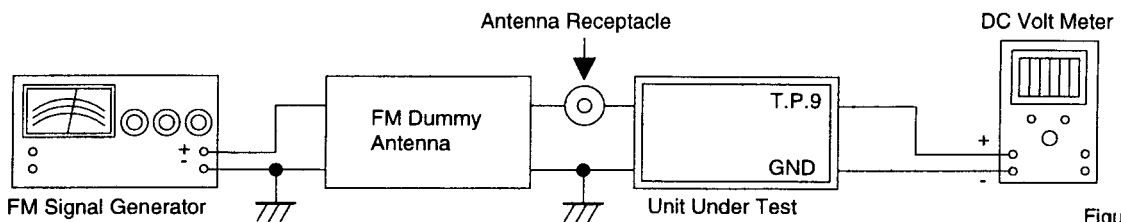


Figure 5

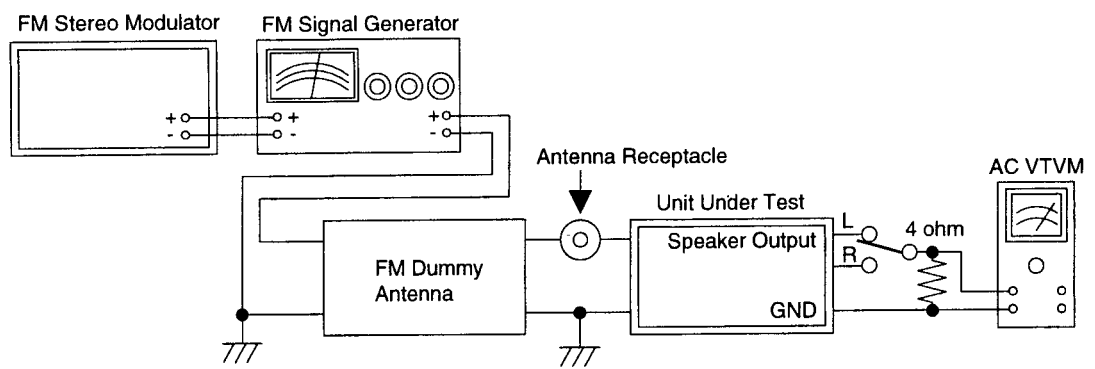


Figure 6

(3) Control Settings

Power Switch ..... ON      Treble/Bass Control..... Center Position  
 Fader Control ..... Center Position      Band Switch ..... FM  
 Balance Control ..... Center Position      Others ..... OFF

(4) Adjustment Procedures

Step	Description	Connection	Signal Generator	Dial Control	Test Point/ P.W.Board Coordinates	Adjustment
1	VT Adjustment	Figure 2	—	Max.	T.P.3 (3-B)	Adjust L2006 for 7.5V.
2	IF Adjustment	Figure 3	98.1MHz, 60dB $\mu$ (Mod. 400Hz, Dev. 40kHz)	98.1MHz	T.P.7 (4-B) T.P.8 (4-B)	Adjust L2101 for 0 $\pm$ 20mV.
3	Ant. Coil Adjustment	Figure 4	90.1MHz, 20dB $\mu$ (Mod. 400Hz, Dev. 40kHz)	90.1MHz	Speaker Output	Adjust L2002 for max. output.
4	RF Coil Adjustment	Figure 4	90.1MHz, 20dB $\mu$ (Mod. 400Hz, Dev. 40kHz)	90.1MHz	Speaker Output	Adjust L2005 for max. output.
5	IFT Coil Adjustment	Figure 4	98.1MHz, 20dB $\mu$ (Mod. 400Hz, Dev. 40kHz)	98.1MHz	Speaker Output	Adjust T2001 for max. output.
6	Signal Meter Adjustment	Figure 5	98.1MHz, 34dB $\mu$ (Mod. 400Hz, Dev. 40kHz)	98.1MHz	T.P.9 (4-B)	Adjust VR2101 to 3.5V.
7	Stereo Blend Adjustment (Lch)	Figure 6	98.1MHz, 34dB $\mu$ (Mod. 1kHz, Dev. 36kHz, Stereo, Lch Only)	98.1MHz	Speaker Output	Adjust VR2102 for Lch and Rch output level difference to be 8dB.
8	Stereo Blend Adjustment (Rch)	Figure 6	98.1MHz, 34dB $\mu$ (Mod. 1kHz, Dev. 36kHz, Stereo, Rch Only)	98.1MHz	Speaker Output	Proceed same adjustment under step 7.

**2. MW/LW SECTION**

(1) Dummy Antenna Circuit

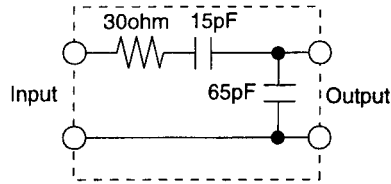


Figure 7

(2) Connections

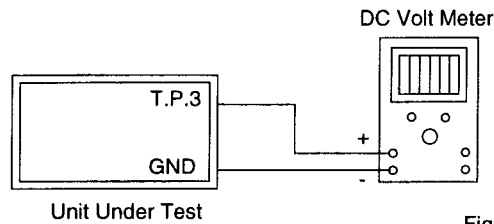


Figure 8

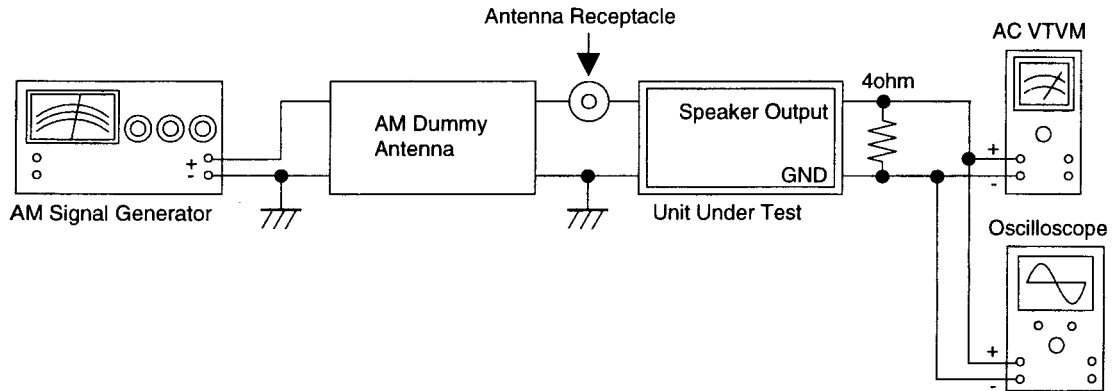


Figure 9

(3) Control Settings

Power Switch ..... ON      Treble/Bass Control ..... Center Position  
 Fader Control ..... Center Position      Band Switch ..... LW/MW  
 Balance Control ..... Center Position      Others ..... OFF

(4) Adjustment Procedures

Step	Description	Connection	Signal Generator	Dial Control	Test Point/ P.W.Board Coordinates	Adjustment
1	VT Adjustment	Figure 8	—	LW f. Max.	T.P.3 (3-B)	Adjust L2204 for 7.5V.
2	LW RF Coil Adjustment	Figure 9	162kHz, 30dB $\mu$ (Mod. 400Hz, 30%)	162kHz	Speaker Output	Adjust L2202 for max. output.
3	MW RF Coil Adjustment	Figure 9	603kHz, 30dB $\mu$ (Mod. 400Hz, 30%)	603kHz	Speaker Output	Adjust L2203 for max. output.
4	MW IFT Coil Adjustment	Figure 8	999kHz, 40dB $\mu$ (Mod. 400Hz, 30%)	999kHz	Speaker Output	Adjust T2201, 2202 for max. output.



### 3. TAPE PLAYER SECTION

#### (1) Connection

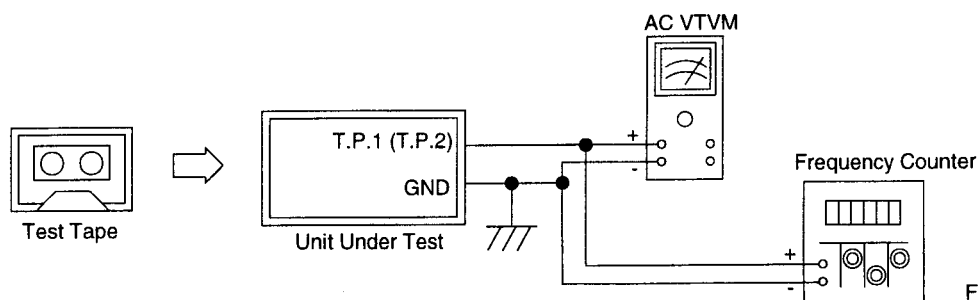


Figure 10

#### (2) Control Settings

Power Switch ..... ON  
 Fader Control ..... Center Position  
 Balance Control ..... Center Position  
 Treble/Bass Control ..... Center Position  
 Others ..... OFF

#### (3) The necessities for adjustment

GR-S Extension Cord  
 Assy., EX Cord Kit for GR-S Mechanism  
 Part No. 01E23255S01  
 See Adjustment Locations (Figure 13).

#### (4) Adjustment Procedures

Step	Description	Test Tape	Connection	Test Point/ P.W.Board Coordinates	Adjustment Point	Adjustment
1	Head Azimuth Adjustment	MTT-114NB (14kHz)	Figure 10	T.P.1 (Lch) (2-C) T.P.2 (Rch) (2-C)	Head Azimuth Adjustment screws (Figure 11)	Adjust for Max. and same level output at Forward and Reverse positions.
2 (○)	Dolby Level Adjustment	MTT-150 (400Hz)	Figure 10	T.P.1 (Lch) (2-C) T.P.2 (Rch) (2-C)	VR2101 (Lch) VR2102 (Rch)	Adjust for 388mV at T.P.1 (Lch) and T.P.2 (Rch).
3	Tape Speed Adjustment	MTT-111N (3kHz)	Figure 10	T.P.1 (Lch) (2-C) or T.P.2 (Rch) (2-C)	Tape Speed Adjustment (Figure 12)	Adjust for 2,970 to 3,090Hz at T.P.1 (T.P.2).

NOTE: ○ : For TDM-7545R Model Only, Others : Common

## Adjustment Locations

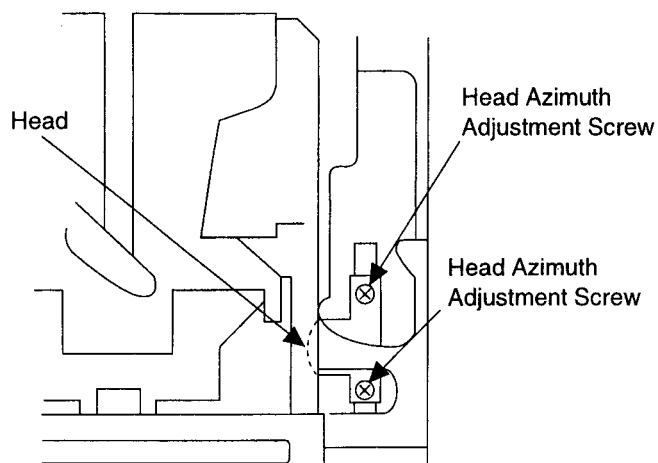


Figure 11

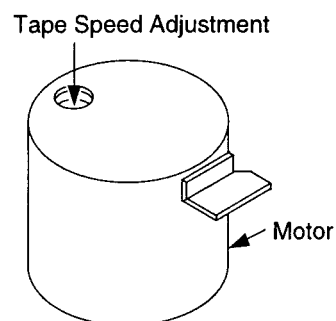


Figure 12

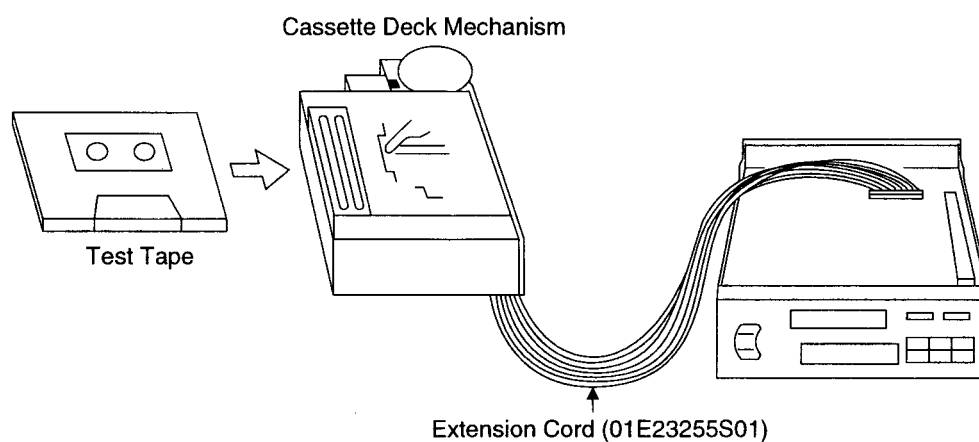
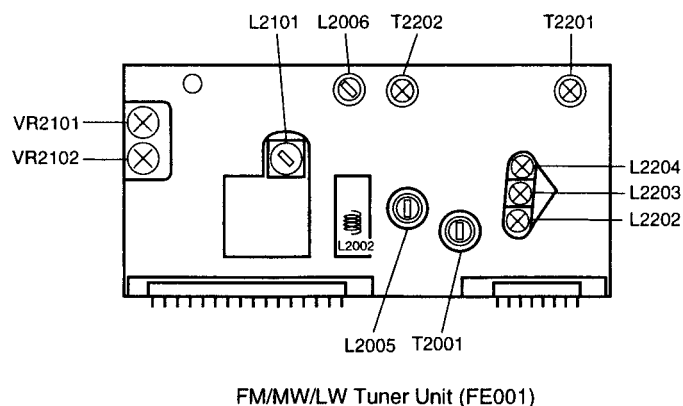
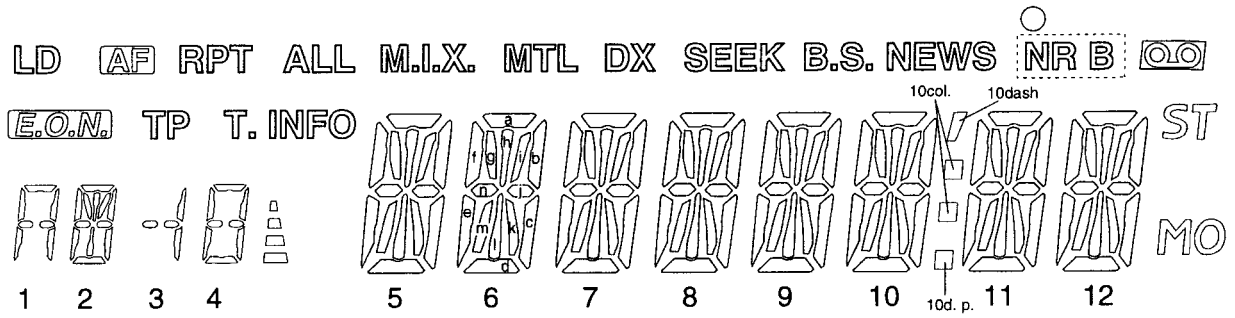


Figure 13



NOTE : For the Test Points, refer to the Parts Layout on P.W. Boards and Wiring Diagram.

# LCD Display



PAD No.	1	2	3	4	5	6	7	8	9	10
COM.1	1b, c	/	2e	2d	/	4d	4c	/	/	/
COM.2	E.O.N.	2a	2f, g	/	2i	4f	4a	/	/	/
COM.3	1a, e, f, j, n	2h	2n	2l	2j	4n, j	4b	/	/	/

11	12	13	14	15	16	17	18	19	20
5m	5d	5k	5c	6m	6k	7m	7d	7k	8m
5n	5h, l	5j	6e	6n	6j	7n	7h, l	7j	8n
5g	5i	5b	6f	6g	6i	7g	7a	7i	8g

21	22	23	24	25	26	27	28	29	30
8d	8k	8c	9m	9d	9k	10m	10d	10k	10d. p.
8h, l	8j	9e	9n	9h, l	9j	10n	10h, l	10j	10col
8i	8b	9f	9g	9a	9i	10g	10a	10i	10dash

31	32	33	34	35	36	37	38	39	40
11m	11k	12e	12m	12d	12k	12c	MO	COM. 1	/
11n	11j	11c	12n	12h, l	12j	12b	ST	/	COM. 2
11g	11i	11b	12f	12g	12i	12a	○	/	/

41	42	43	44	45	46	47	48	49	50
/	11d	11e	10c	10e	9c	8e	7c	7e	6c
/	11h, l	11f	10b	10f	9b	8f	7b	7f	6b
COM. 3	11a	○ NR B △ -	NEWS	B. S.	SEEK	8a	DX	MTL	M. I. X.

PAD No.	51	52	53	54	55	56	57	58	59	60
COM.1										
COM.2										
COM.3										

61	62	63	64	65	66	67	68	69	70

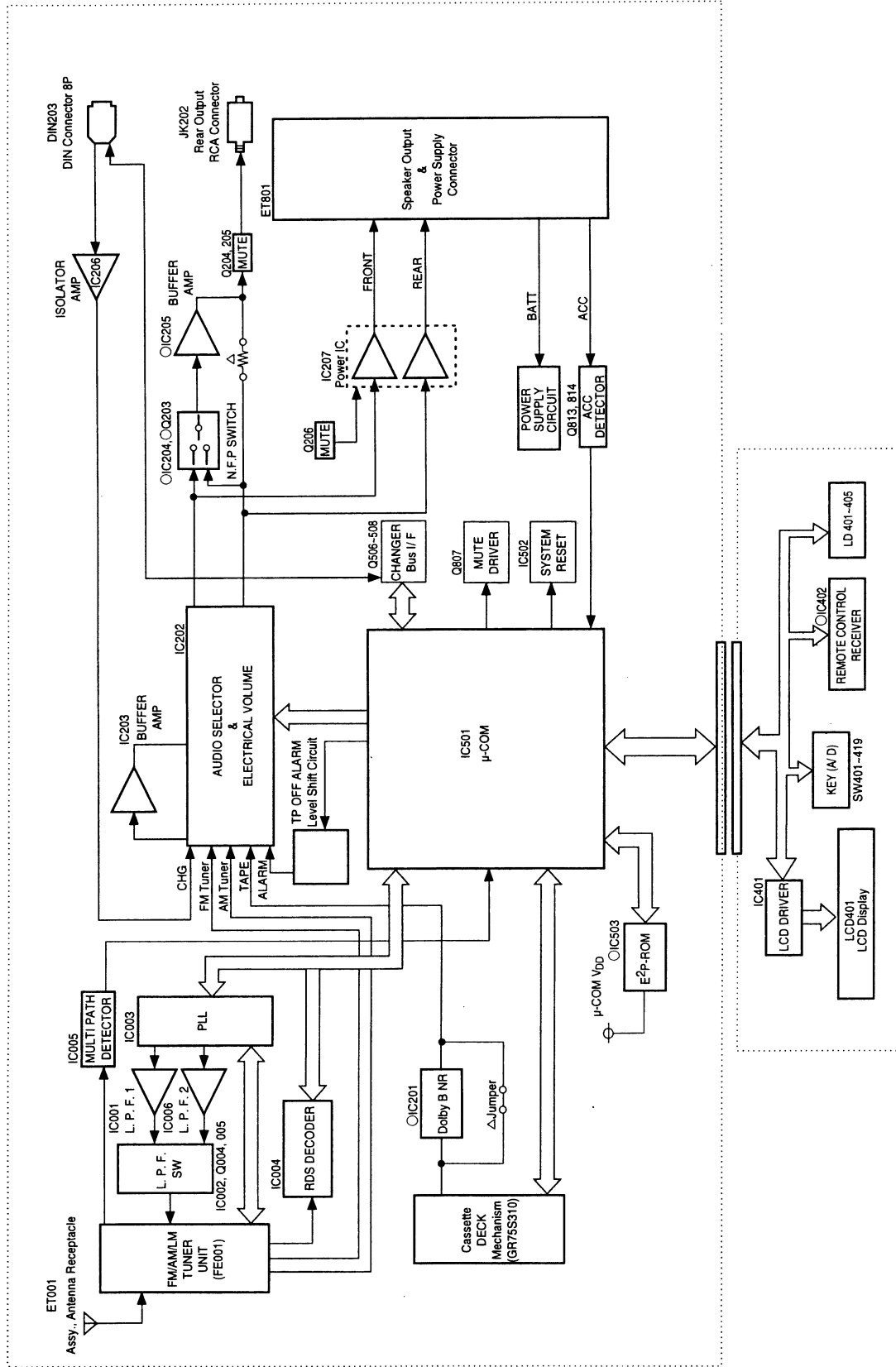
71	72	73	74	75	76
6d	5e	⏏	T. INFO	4e	2c
6h, l	5f	ALL	TP	3b, c	LD
6a	5a	RPT	AF	3n, j	2b

NOTE : ○ : For TDM-7545R Model Only,

△ : For TDM-7544R Model Only,

Others :Common.

# Block Diagram



NOTE : ○ : For TDM-7545R Model Only,

△ : For TDM-7544R Model Only,

Others :Common.

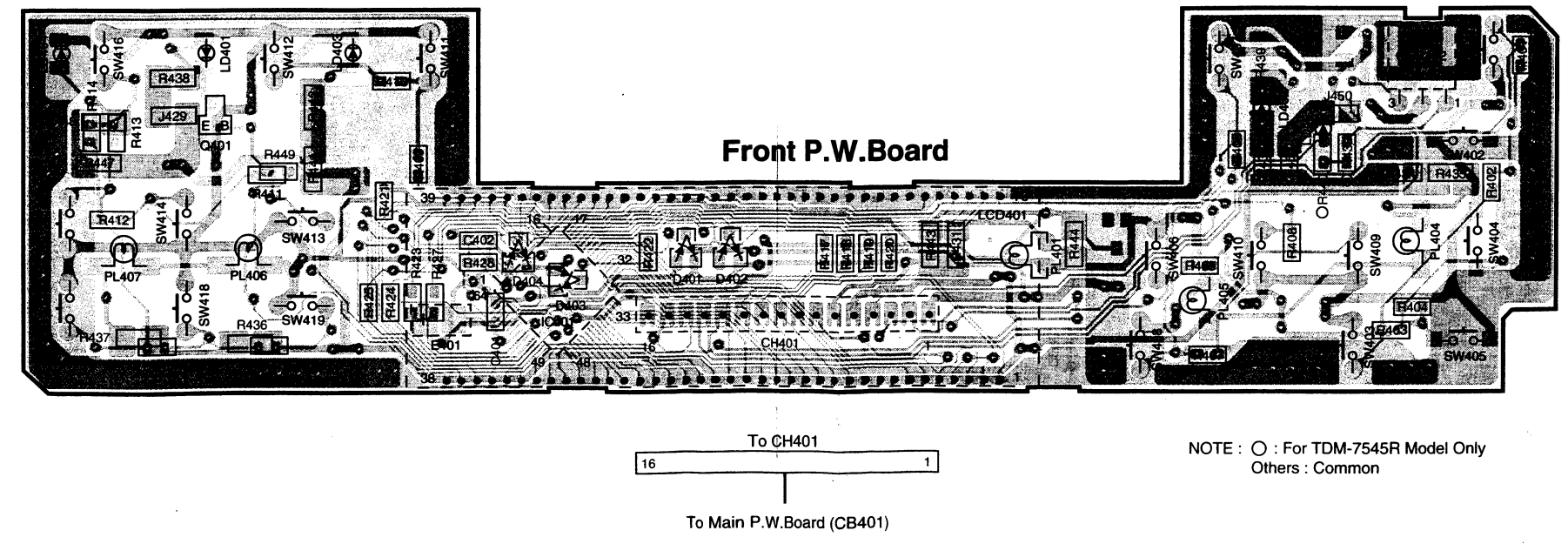
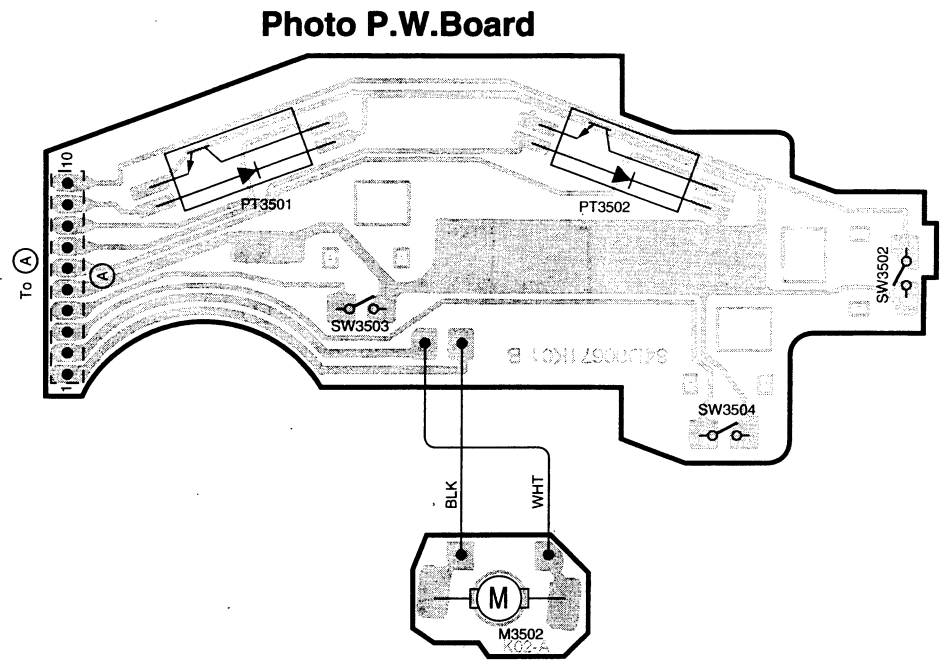
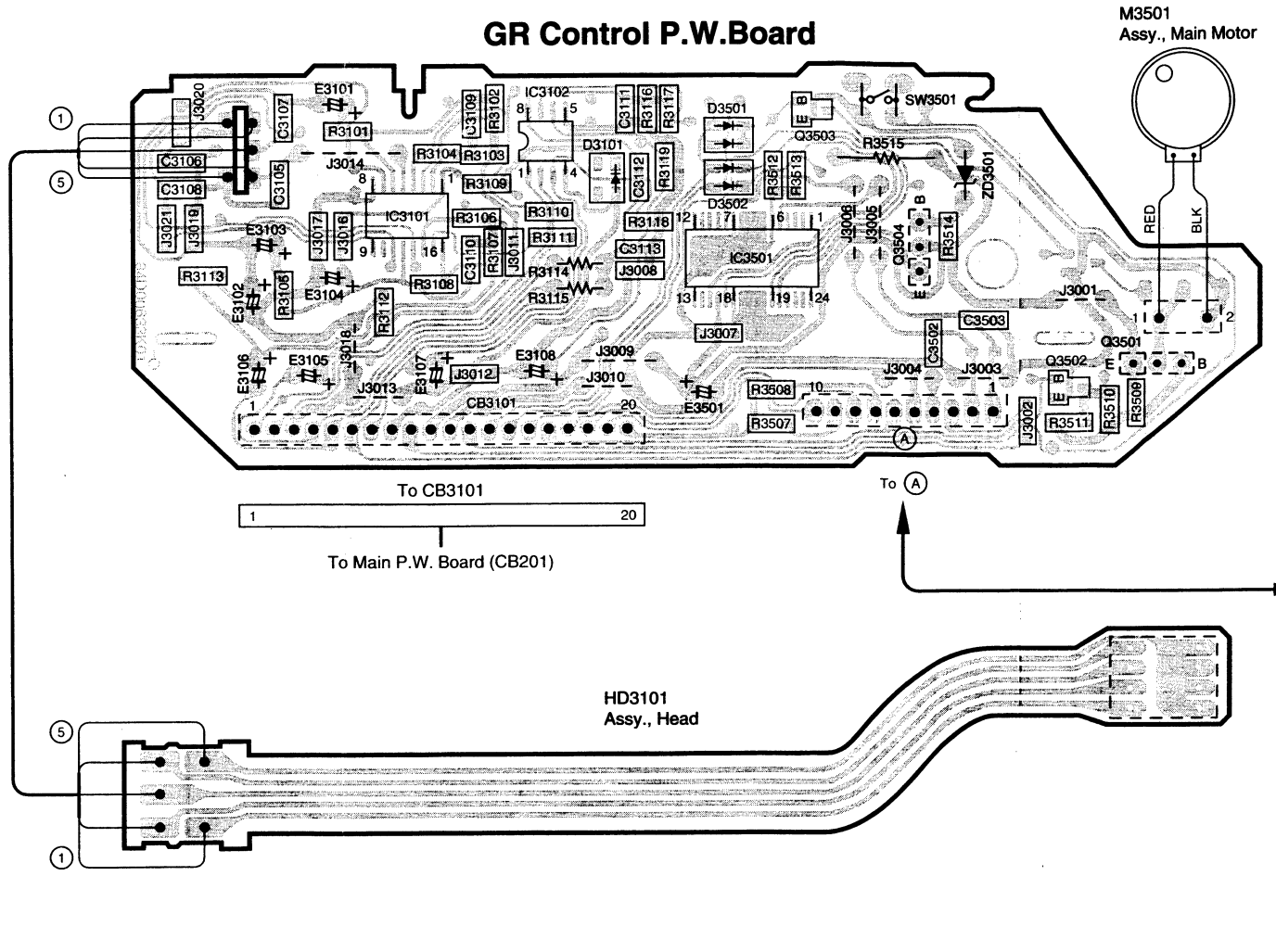




# Parts Layout on P.W. Boards and Wiring Diagram (2/2)

All P.W. Boards viewed from soldered side.

1  
2  
3  
4  
5



NOTE : ○ : For TDM-7545R Model Only  
Others : Common

Orange Color Pattern : Component Side Pattern  
Blue Color Pattern : Foil Side Pattern

A | B - 17 - | C | D | E | F - 18 - | G |



# Schematic Diagram (1/4)

1

2

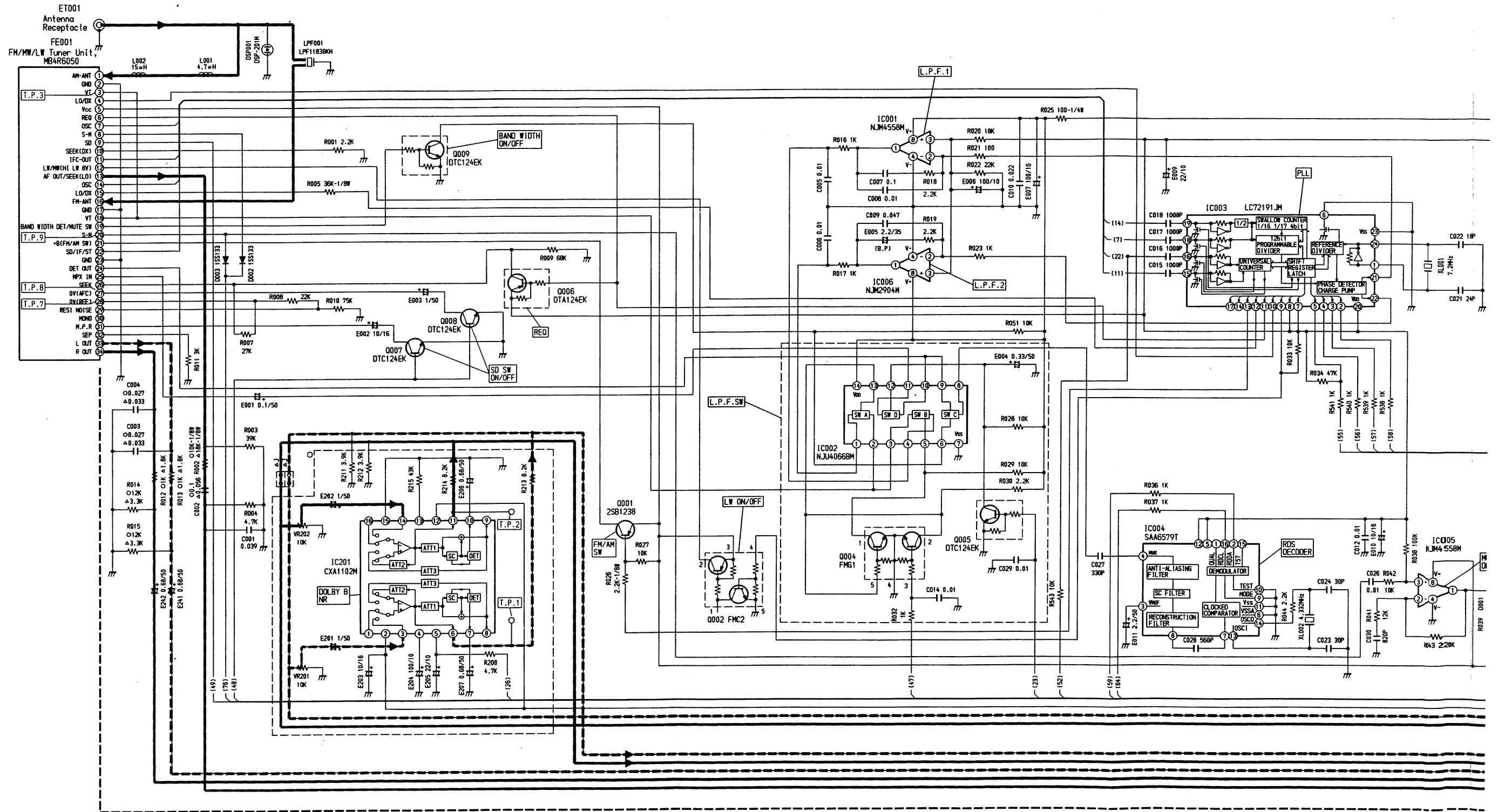
3

4

5

IC	IC201	0007	0009	0006	0001	0002	IC002	IC001	IC006	0004	0005	IC004	IC003	IC005
Transistor (Q)														

Main P.W.Board (1/3)



A

B -19-

C

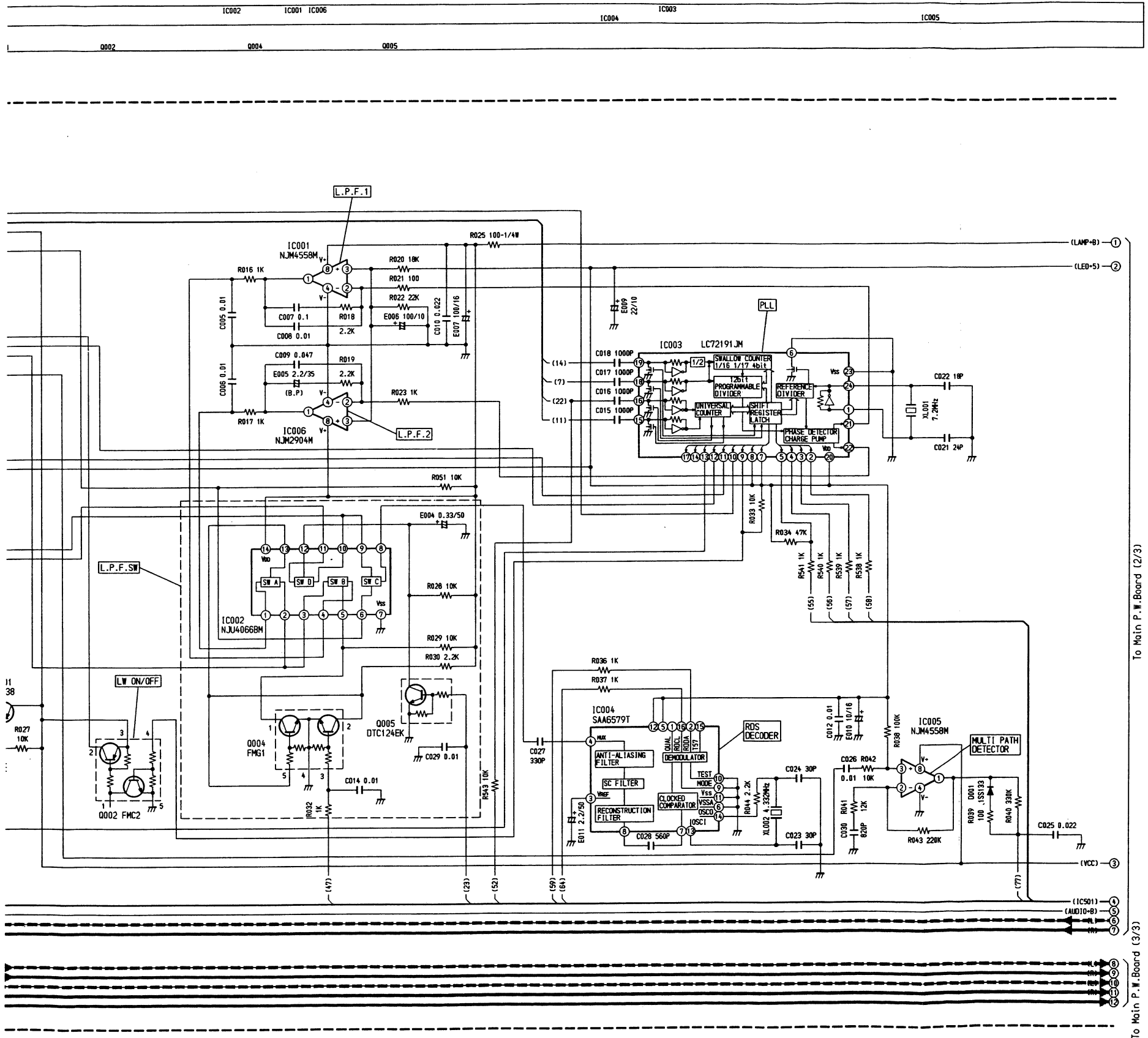
D

E

F -20-

G

H



IC001, 006		IC002		IC003		IC004		IC005		IC201	
1	3.4V	1	13V	1	2.4V	14	NC	1	5V	1	NC
2-4	0V	2-4	0V	2-4	0V	15, 16	0V	2	4.9V	2	8.8V
5-7	NC	5, 6	13V	5	5V	17	NC	3	0V	3-7	0V
8	13V	7	0V	6	0V	18	0V	4	0V	8, 9	NC
		8-11	3.4V	7, 8	5V	19	2.5V	5	5V	10-15	0V
		12	13V	9-11	0V	20	5V	6	0V	16	NC
		13	0V	12	4.6V	21-23	0V	7	2.5V		
		14	13V	13	0V	24	2.6V				

	E	C	B	MODE
Q001	9V/9V	0V/9V	8V/8V	AM/FM
Q005	0V/0V	0V/14V	5V/0V	MUTE ON/OFF
Q006	5V	5V	0V	REQ
Q007	0V/0V	0V/0V	0V/5V	SD SW ON/OFF
Q008	0V/0V	0V/0V	0V/5V	SD SW ON/OFF
Q009	0V/0V	0V/13V	8V/0V	BAND WIDTH ON/OFF

	1	2	3	4	5	MODE
Q002	NC	8V/0V	8V/8V	5V/0V	0V/0V	LW ON/OFF
Q004	13V/0V	0V/13V	5V/0V	0V/0V	0V/13V	AF ON/OFF

- [Measuring Conditions]**
- Power Supply Voltage : DC14.4V
  - Measuring Meter : Digital Multi Meter
  - Measuring Point Reference : Between Ground
  - Measuring Conditions : No Signal Input
  - FM ..... 98.1MHz
  - MW ..... 999kHz
  - LW ..... 216kHz
  - Tape ..... Blank

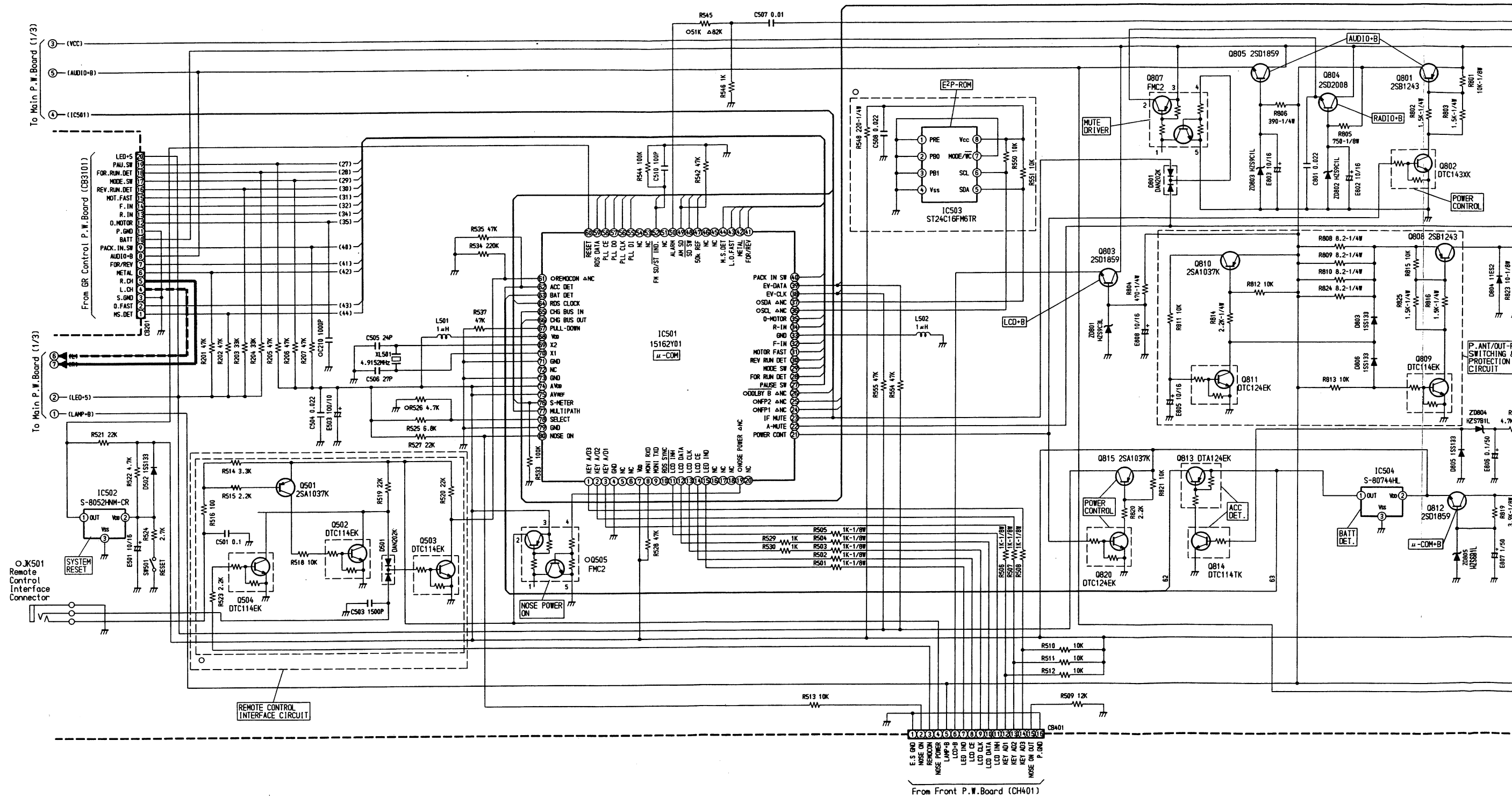
NOTE : ○ : For TDM-7545R Model Only,  
● : For TDM-7544R Model Only,  
Others : Common.

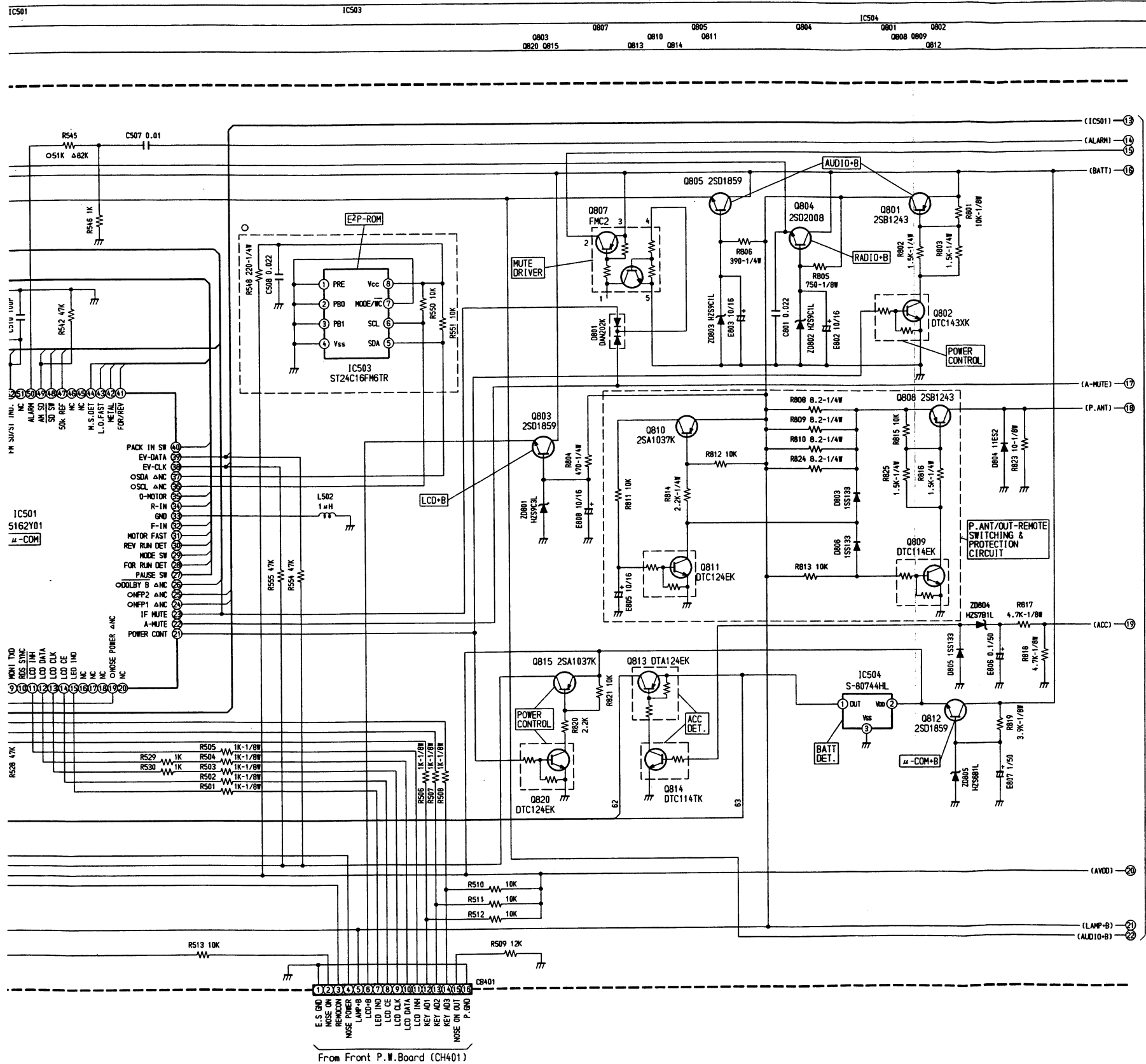
NOTE:  
1. All resistance values are in ohms. K = 1,000  
2. All capacitance values are in microfarads. P =  $\frac{1}{1,000,000}$

# Schematic Diagram (2/4)

IC	IC502	IC501	IC503	IC504
Transistor (Q)	Q504	Q501	Q502	Q503
	Q505	Q505	Q505	Q505
	Q803	Q807	Q810	Q805
	Q820	Q815	Q813	Q814
	Q808	Q809	Q802	Q812

Main P.W.Board (2/3)





IC501

1-3	5.1V	29	5.1V	64	2.5V
4	0V	30-35	0V	65	5.1V
5,6	NC	36,37	0V	66,67	0V
7-9	5.1V		Δ NC	68	5.1V
10	0V	38-43	0V	69	3.1V
11	5.1V	44	5.1V	70	2.7V
12,13	0V	45,46	NC	71	0V
14	3.5V	47,48	5.1V	72	NC
15	5.1V	49,50	0V	73	0V
16-18	NC	51	NC	74,75	5.1V
19	○ 5.1V	52	4.3V	76,77	0V
	Δ NC	53,54	NC	78	2.1V
20	NC	55-58	0V	79	0V
21	5.1V	59	2.5V	80	2.5V
22,23	0V	60	5.1V		
24-26	○ 5.1V	61	○ 3.5V		
	Δ NC		Δ NC		
27,28	0V	62,63	4.9V		

IC502

1,2	5.2V
3	0V

IC503

1-7	0V
8	5V

IC504

1	4.9V
2	5.2V
3	0V

	E	C	B	MODE
○ Q501	5V/5V	5V/0V	5V/5V	REAR REMOTE CONTROL ON/OFF
○ Q502	0V/0V	0V/0V	4V/0V	REAR REMOTE CONTROL ON/OFF
○ Q503	0V/0V	3V/3V	0V/0V	REAR REMOTE CONTROL ON/OFF
○ Q504	0V/0V	0V/0V	0V/0V	REAR REMOTE CONTROL ON/OFF
Q801	14V/14V	14V/0V	13V/13V	POWER ON/OFF
Q802	0V/0V	0V/14V	5V/0V	POWER ON/OFF
Q803	9V/0V	14V/14V	9V/0V	POWER ON/OFF
Q804	9V/0V	14V/14V	9V/0V	POWER ON/OFF
Q805	9V/0V	14V/14V	9V/0V	POWER ON/OFF
Q808	14V/0V	14V/0V	13V/13V	POWER ON/OFF
Q809	0V/0V	0V/13V	13V/0V	POWER ON/OFF
Q810	13V/13V	13V/0V	13V/13V	PROTECT ON/OFF
Q811	0V/0V	13V/0V	10V/0V	PROTECT ON/OFF
Q812	5.2V	14V	5.8V	
Q813	5V/5V	5V/0V	0V/5V	ACC ON/OFF
Q814	0V/0V	0V/5V	7V/0V	ACC ON/OFF
Q815	5V/5V	5V/0V	5V/5V	POWER ON/OFF
Q820	0V/0V	0V/5V	5V/0V	POWER ON/OFF

	1	2	3	4	5	MODE
○ Q505	NC	5V	5V	5V	0V	
Q807	NC	14V/0V	14V/14V	5V/0V	0V/0V	MUTE ON/OFF

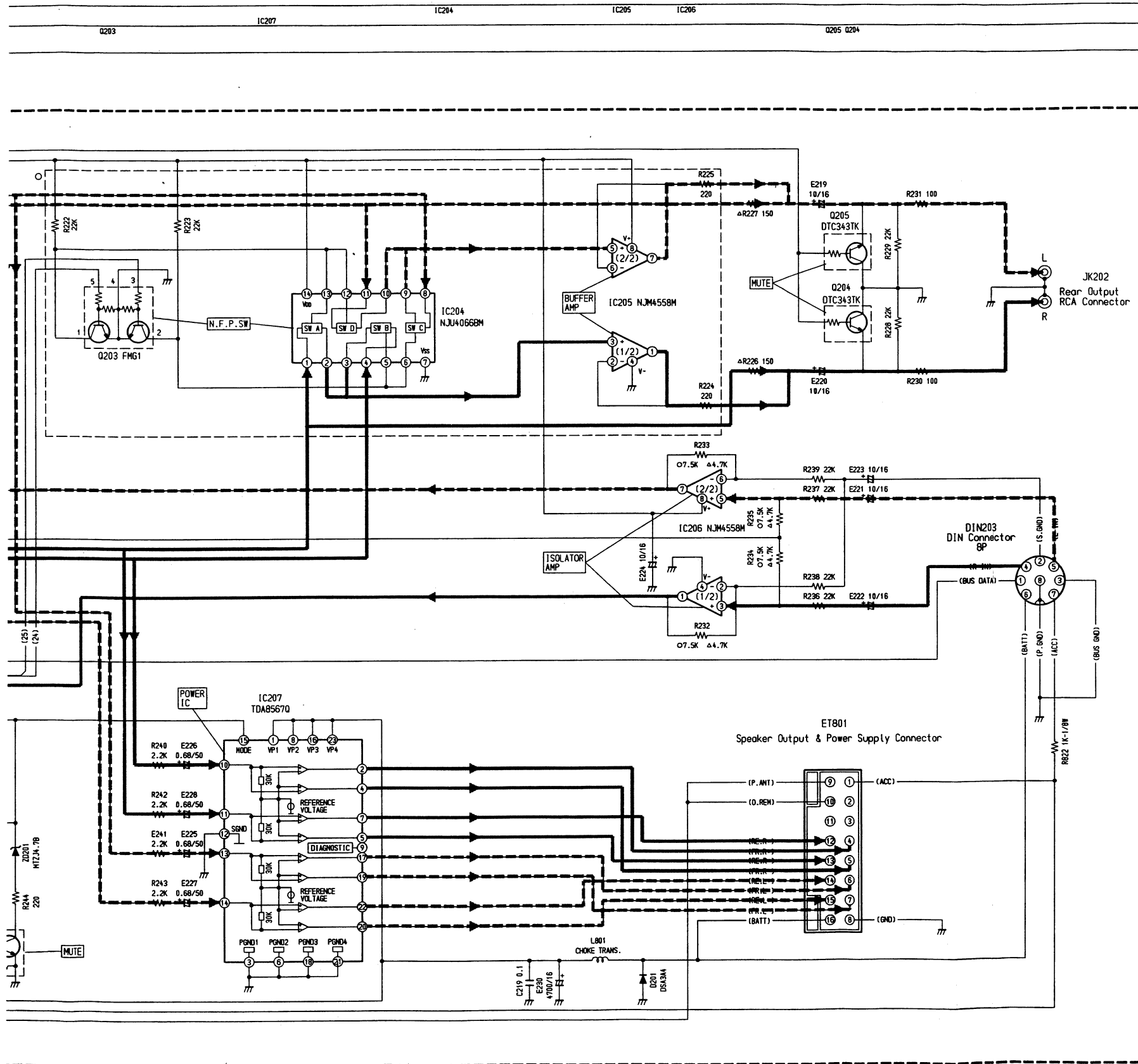
[Measuring Conditions]

- Power Supply Voltage : DC14.4V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between Ground
- Measuring Conditions : No Signal Input
- FM ..... 98.1MHz
- MW ..... 999kHz
- LW ..... 216kHz
- Tape ..... Blank

NOTE : ○ : For TDM-7545R Model Only,  
 ● : For TDM-7544R Model Only,  
 Others : Common.

NOTE:  
 1. All resistance values are in ohms. K = 1,000  
 2. All capacitance values are in microfarads. P =  $\frac{1}{1,000,000}$





IC202				IC203, 206		IC204		IC205		IC207			
1	5.2V	13-18	4.5V	1-3	4.4V	1-4	4.4V	1-3	4.4V	1	14V	13, 14	2V
2	0V	19	8.9V	4	0V	5-7	0V	4	0V	2	7.1V	15	5.6V
3-7	4.5V	20-23	4.5V	5-7	4.4V	8-11	4.4V	5-7	4.4V	3	0V	16	14V
8	0V	24	NC	8	8.8V	12-14	8.8V	8	8.8V	4, 5	7.1V	17	7.1V
9	NC	25	0V							6	0V	18	0V
10	4.5V	26-30	4.5V							7	7.1V	19, 20	7.1V
11	—	31	9V							8	4.5V	21	0V
12	8.9V	32	4.5V							9	NC	22	7.1V
										10, 11	2V	23	14V
										12	0V		

	E	C	B	MODE
Q019	0V/0V	0V/0V	14V/0V	MUTE ON/OFF
Q020	0V/0V	0V/0V	14V/0V	MUTE ON/OFF
Q204	0V/0V	0V/0V	14V/0V	MUTE ON/OFF
Q205	0V/0V	0V/0V	14V/0V	MUTE ON/OFF
Q206	0V/9V	0V/0V	5V/0V	MUTE ON/OFF
Q506	0V	5V	0V	
Q507	5V	0V	5V	
Q508	0V	14V	0V	

	1	2	3	4	5	MODE
Q203	9V/0V	0V/9V	5V/0V	0V/0V	0V/5V	NFP ON/OFF

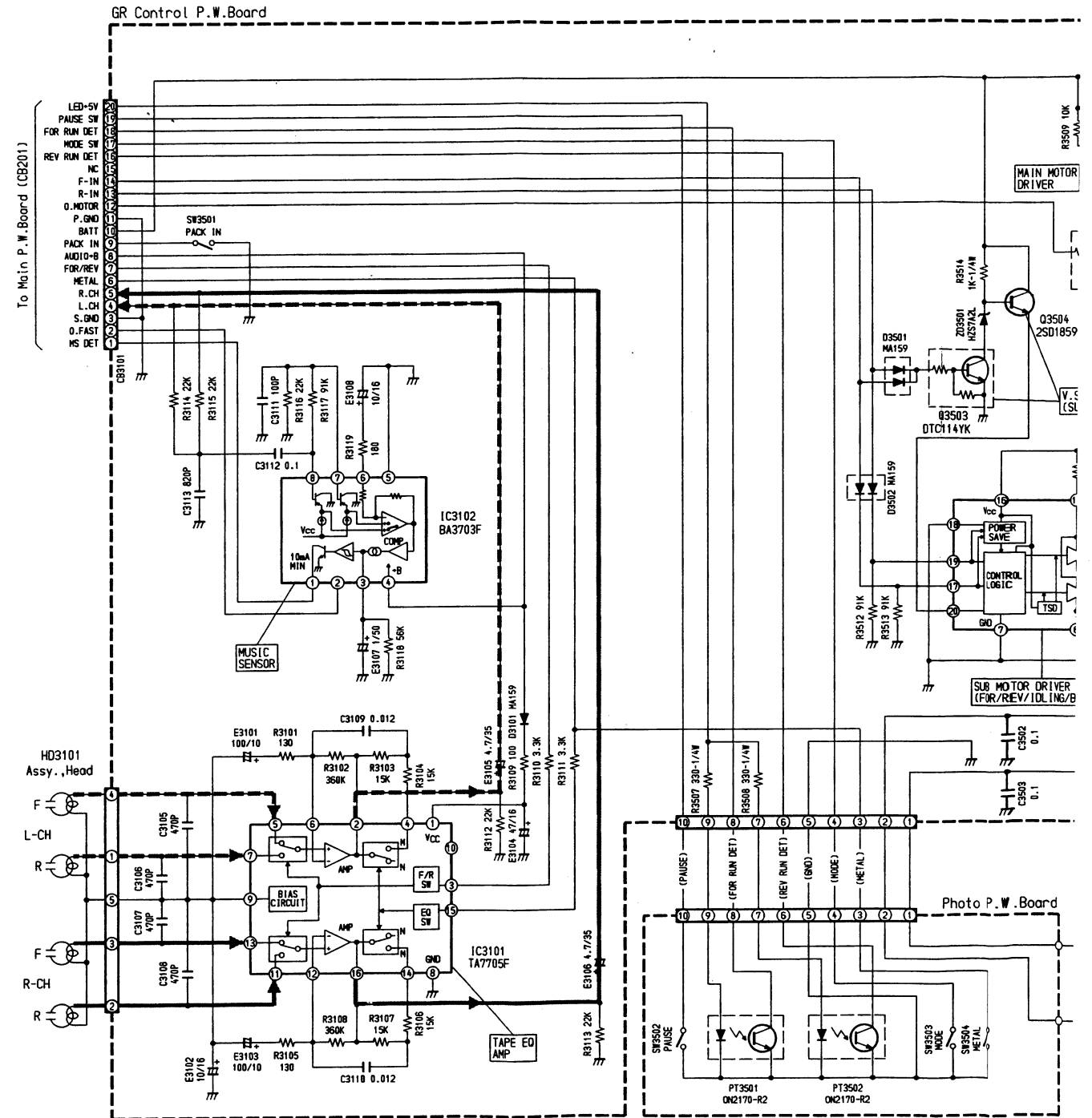
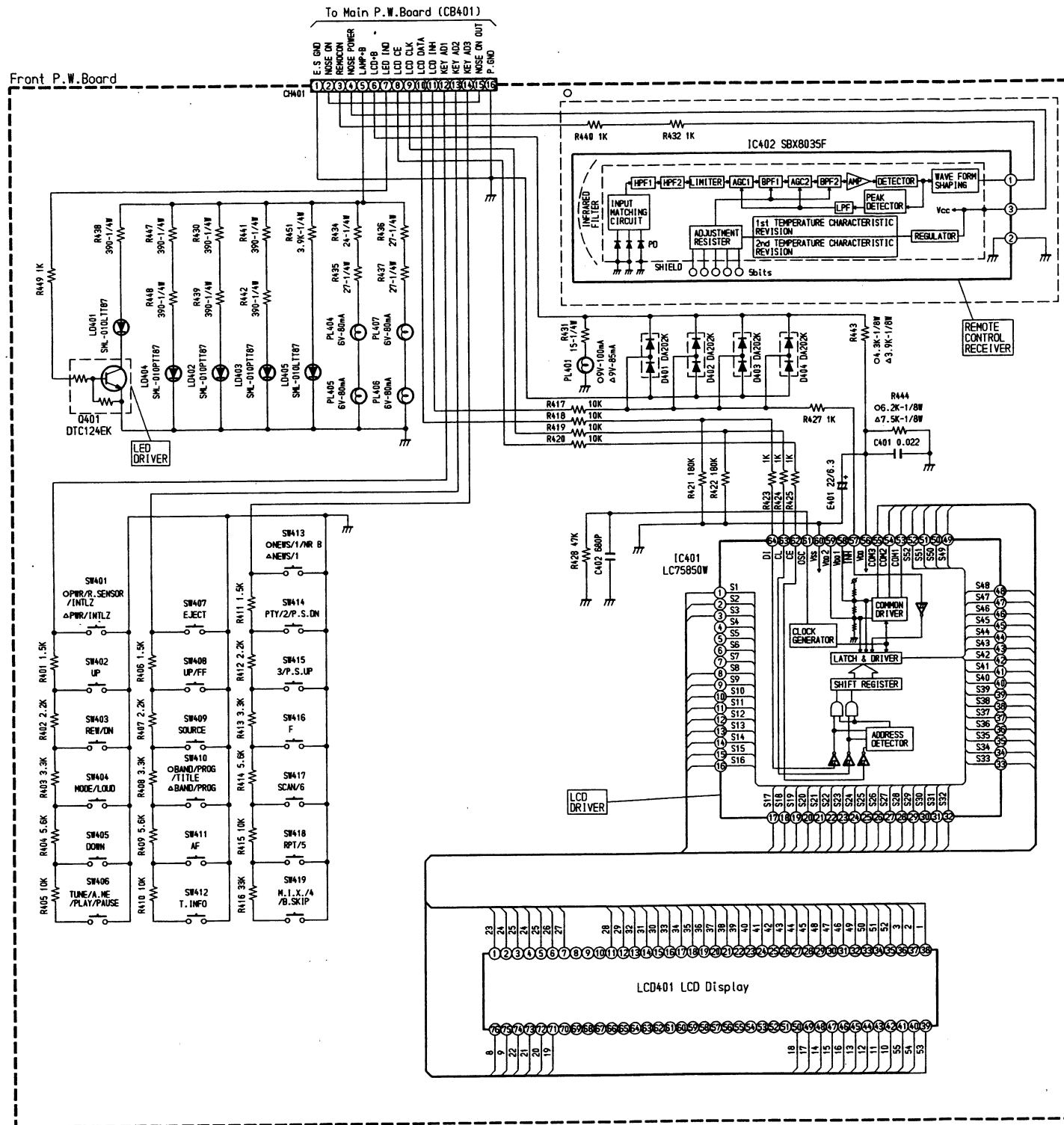
- [Measuring Conditions]
- Power Supply Voltage : DC14.4V
  - Measuring Meter : Digital Multi Meter
  - Measuring Point Reference : Between Ground
  - Measuring Conditions : No Signal Input
- FM ..... 98.1MHz  
MW ..... 999kHz  
LW ..... 216kHz  
Tape ..... Blank

NOTE: ○ : For TDM-7545R Model Only,  
● : For TDM-7544R Model Only,  
Others : Common.

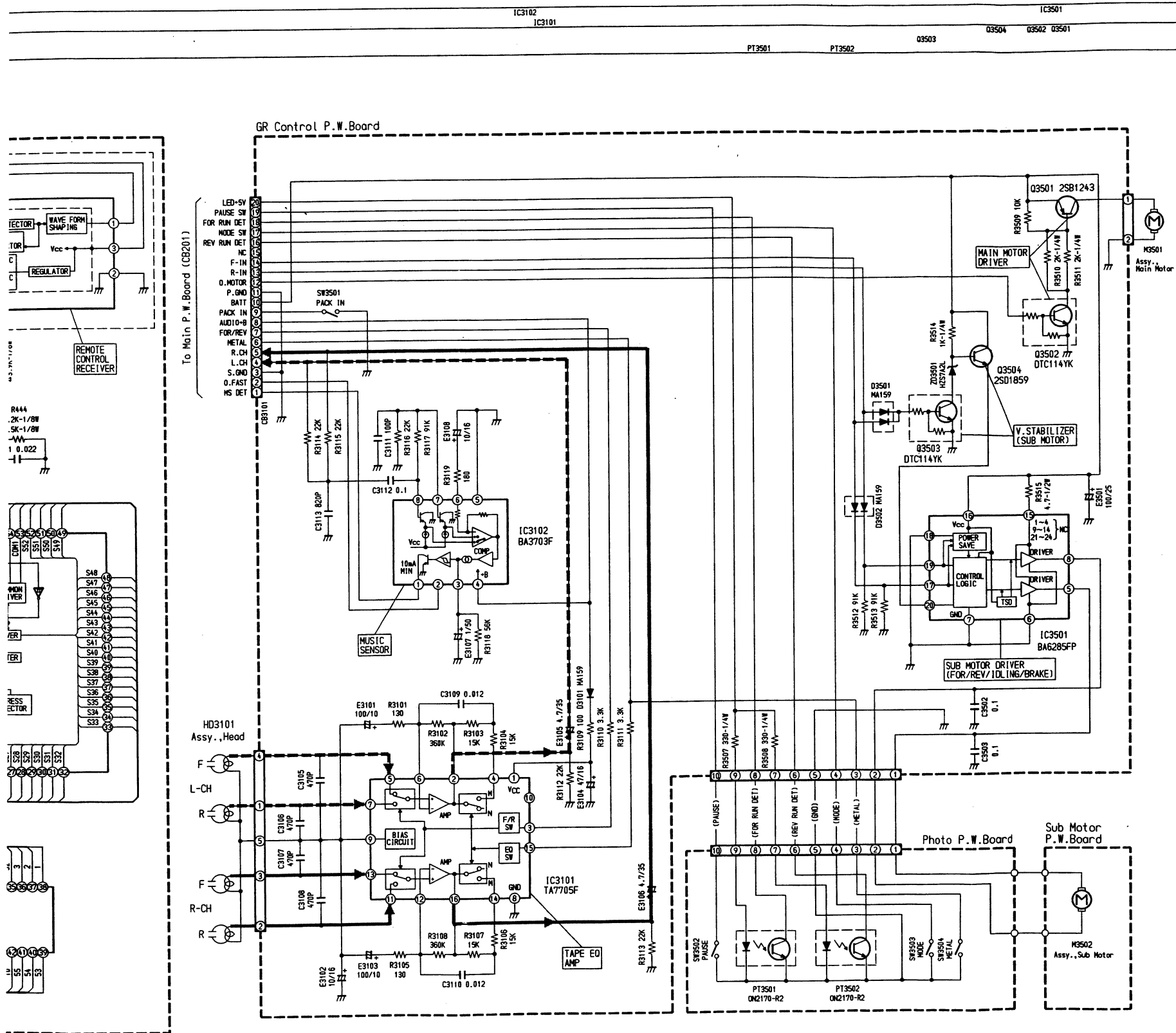
NOTE:  
1. All resistance values are in ohms. K = 1,000  
2. All capacitance values are in microfarads. P =  $\frac{1}{1,000,000}$

# Schematic Diagram (4/4)

IC	Q401	IC401	IC402	IC3102	IC3101	PT3501	PT3502	Q3503	Q3504
Transistor (Q,PT)									



1  
2  
3  
4  
5



IC401

1-3	2.6V	60	0V
4-7	NC	61	3.9V
8-55	2.6V	62	3.5V
56, 57	5.2V	63	0.4V
58	3.5V	64	0.3V
59	NC		

IC402

1	2.3V
2	0V
3	5.1V

	E	C	B	MODE
Q401	0V/0V	0V/14V	5V/0V	LED IND. ON/OFF

[Measuring Conditions]

- Power Supply Voltage : DC14.4V
  - Measuring Meter : Digital Multi Meter
  - Measuring Point Reference : Between Ground
  - Measuring Conditions : No Signal Input
- FM ..... 98.1MHz  
 MW ..... 999kHz  
 LW ..... 216kHz  
 Tape ..... Blank

IC3101				IC3102				IC3501			
1	10.7V	9	3V	1	5.2V	1-4	NC	1-4	NC		
2	3.1V	10	NC	2,3	0V	5-8	0V	5-8	0V		
3	5.2V	11-13	3V	4	12V	9-14	NC	9-14	NC		
4	3.1V	14	3.1V	5	0V	15, 16	12V	15, 16	12V		
5-7	3V	15	0V	6	0.6V	17-19	0V	17-19	0V		
8	0V	16	3.1V	7,8	0V	20	12V	20	12V		
						21-24	NC	21-24	NC		

	E	C	B	MODE
Q3501	12V	11.8V	11.3V	
Q3502	0V	0.1V	5V	
Q3503	0V	5.5V	0V	
Q3504	11.6V	12V	12V	

[Measuring Conditions]

- Power Supply Voltage : DC12V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between Ground
- Measuring Conditions : Tape ..... Blank

NOTE: ○ : For TDM-7545R Model Only,  
 ● : For TDM-7544R Model Only,  
 Others : Common.

NOTE:

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. P =  $\frac{1}{1,000,000}$



# Description of IC Terminal

## 15162Y01 : IC501

No.	Symbol	I/O	Terminal Description
1	KEY A / D 3	I	Key A / D 3 Input Terminal.
2	KEY A / D 2	I	Key A / D 2 Input Terminal.
3	KEY A / D 1	I	Key A / D 1 Input Terminal.
4	GND	—	GND Connection Terminal.
5	NC	—	No Connection Terminal.
6			
7	V <sub>DD</sub>	—	Power Supply Connection Terminal.
8	MONI RXD	I	RDS Monitor Input Terminal.
9	MONI TXD	O	RDS Monitor Output Terminal.
10	RDS SYNC	O	Sync. Signal Output Terminal.
11	LCD INH	O	INH Signal Output Terminal to LCD Driver (LC75850W).
12	LCD DATA	O	Serial Data Output Terminal to LCD Driver (LC75850W).
13	LCD CLK	O	Serial Clock Output Terminal to LCD Driver (LC75850W).
14	LCD CE	O	CE Signal Output Terminal to LCD Driver (LC75850W).
15	LED IND	O	Function Indicator Control Signal Output Terminal.
16	NC	—	No Connection Terminal.
17			
18			
19	○ NOSE POWER	O	Power Control Signal Output Terminal to Nose.
	△ NC	—	No Connection Terminal.
20	NC	—	No Connection Terminal.
21	POWER CONT	O	Power Supply Control Signal Output Terminal for Audio, Light and Tuner.
22	A-MUTE	O	Audio Mute Signal Output Terminal.
23	IF MUTE	O	IF Mute Output Terminal.
24	○ NFP 1	O	NFP Control Signal Output Terminal.
	△ NC	—	No Connection Terminal.
25	○ NFP 2	O	NFP Control Signal Output Terminal.
	△ NC	—	No Connection Terminal.
26	○ <u>DOLBY</u> B	O	B NR ON / OFF Signal Output Terminal.
	△ NC	—	No Connection Terminal.
27	PAUSE SW	I	Pause Mode Detection Input Terminal.
28	FOR RUN DET	I	For Reel Rotating Detection Input Terminal.
29	MODE SW	I	Mode Detection Input Terminal.
30	REV RUN DET	I	Rev Reel Rotating Detection Input Terminal.
31	MOTOR FAST	O	Main Motor Rotating Control Output Terminal.
32	F-IN	O	Sub Motor Rotating Control Output Terminal.
33	GND	—	GND Connection Terminal.
34	R-IN	O	Sub Motor Rotating Control Output Terminal.
35	O-MOTOR	O	Motor Rotating Control Output Terminal.

No.	Symbol	I/O	Terminal Description
36	○	SCL	O Clock Output Terminal for E2P-ROM.
	△	NC	— No Connection Terminal.
37	○	SDA	I/O Data Terminal for E2P-ROM.
	△	NC	— No Connection Terminal.
38		EV-CLK	O Serial Clock Output Terminal to Electrical Volume (TEA6320T).
39		EV-DATA	O Serial Data Output Terminal to Electrical Volume (TEA6320T).
40		PACK IN SW	I Pack IN Detection Input Terminal.
41		FOR / REV	O Tape Direction Indicator Output Terminal.
42		METAL	I Metal Tape Detection Terminal.
43		L.O.FAST	O Gain Control Signal Output Terminal of MS IC at CUE / REV.
44		M.S.DET	I Blank Detection Signal Input Terminal.
45		NC	— No Connection Terminal.
46			
47		50k REF	O LPF Switching Signal Output Terminal at Active RDS.
48		SD SW	O Time Constant Switching Terminal for High Speed Active PLL.
49		AM SD	I AM SD Signal Input Terminal.
50		ALARM	O Alarm Signal Output Terminal.
51		NC	— No Connection Terminal.
52		FM SD / ST IND.	I ST Signal Input Terminal at Receiving FM. FM SD Signal Input Terminal at Tuning FM.
53		NC	— No Connection Terminal.
54			
55		PLL DI	I Data Input Terminal from PLL (LC72191JM).
56		PLL CLK	O Sync. Signal Output Terminal to PLL (LC72191JM).
57		PLL DO	O Data Output Terminal to PLL (LC72191JM).
58		PLL CE	O Communication Control Signal Output Terminal to PLL (LC72191JM).
59		RDS DATA	I RDS Data Input Terminal from RDS Decoder (SAA6579T).
60		RESET	I System Reset Signal Input Terminal.
61	○	REMOCON	I Remocon Data Input Terminal.
	△	NC	— No Connection Terminal.
62		ACC DET	I ACC (Ignition) Detection Signal Input Terminal.
63		BAT DET	I Battery Detection Signal Input Terminal. (Manage Compulsion Stand-by.)
64		RDS CLOCK	I RDS Clock Input Terminal from RDS Decoder (SAA6579T).
65		CHG BUS IN	I Signal Input Terminal from CD Changer BUS I / F.
66		CHG BUS OUT	O Signal Output Terminal to CD Changer BUS I / F.
67		PULL-DOWN	— Pull-Down Connection Terminal.
68		V <sub>DD</sub>	— Power Supply Connection Terminal.
69		X2	— System Clock OSC Circuit Connection Terminal. (4.9152MHz)
70		X1	
71		GND	— GND Connection Terminal.
72		NC	— No Connection Terminal.

No.	Symbol	I/O	Terminal Description
73	GND	—	GND Connection Terminal.
74	AVDD	—	Analog Power Supply Terminal for A/D Converter.
75	AVREF	I	Reference Voltage Input Terminal for A/D Converter.
76	S-METER	I	Signal Meter Input Terminal.
77	MULTIPATH	I	Multi Path Rejection Detection Terminal for Receiving Station.
78	SELECT	I	Function Set Up Input Terminal.
79	GND	—	GND Connection Terminal.
80	NOSE ON	I	Front Panel Detection Signal Input Terminal.

NOTE : ○ : For TDM-7545R Model Only,      △ : For TDM-7544R Model Only,      Others :Common.



Symbol No.	Part No.	Description
<b>Coils</b>		
L001	25E23608S01	Inductor, 4.7μH
L002	24E24202S01	Inductor, 15μH
L501	24E22096S01	Inductor, CP. 1μH
L502	24E22096S01	Inductor, CP. 1μH
L801	24E27607S01	Choke, Trans.
<b>Crystals</b>		
XL001	91E24846S01	7.2MHz
XL002	91E27606S01	4.332MHz
XL501	91E27605S01	4.9152MHz
<b>Filter</b>		
LPF001	91T75257W02	LPF11830KH
<b>Switch</b>		
SW501	40E27609S01	Tact, SKHH17920A (RESET)
<b>Capacitors</b>		
○ C001	08E24214S01	CP., 0.039μF
○ E001	23E09402S10	ELY., 0.1μF / 50V
△ C002	08E26532S01	CP., 0.1μF
△ C002	08E27735S01	CP., 0.056μF
○ E002	23E09402S02	ELY., 10μF / 16V
○ C003	08E08577S04	CP., 0.027μF
△ C003	08E22086S01	CP., 0.033μF
○ E003	23E09402S01	ELY., 1μF / 50V
○ C004	08E08577S04	CP., 0.027μF
△ C004	08E22086S01	CP., 0.033μF
○ E004	23E09402S16	ELY., 0.33μF / 50V
○ C005	08E22083S01	CP., 0.01μF
○ E005	23E09403S03	ELY., (B.P) 2.2μF / 35V
○ C006	08E22083S01	CP., 0.01μF
○ E006	23E09402S09	ELY., 100μF / 10V
○ C007	08E22435S01	TF, 0.1μF
○ E007	23E27615S01	ELY., 100μF / 16V
○ C008	08E22083S01	CP., 0.01μF
○ C009	08E22938S01	TF, 0.047μF
○ E009	23E09402S07	ELY., 22μF / 10V
○ C010	08E22085S01	CP., 0.022μF
○ E010	23E09402S02	ELY., 10μF / 16V

Symbol No.	Part No.	Description
○ E011	23E09402S13	ELY., 2.2μF / 50V
○ C012	08E22083S01	CP., 0.01μF
○ C013	08E27616S01	TF, 0.33μF
○ C014	08E22083S01	CP., 0.01μF
○ C015	08E22081S01	CP., 1000pF
○ C016	08E22081S01	CP., 1000pF
○ C017	08E22081S01	CP., 1000pF
○ C018	08E22081S01	CP., 1000pF
○ C021	08E23580S01	CP., 24pF
○ C022	08E23579S01	CP., 18pF
○ C023	08E08423S05	CP., 30pF
○ C024	08E08423S05	CP., 30pF
○ C025	08E22085S01	CP., 0.022μF
○ C026	08E22083S01	CP., 0.01μF
○ C027	08E22079S01	CP., 330pF
○ C028	08E27612S01	CP., 560pF
○ C029	08E22083S01	CP., 0.01μF
○ C030	08E22511S01	CP., 820pF
○ C201	08E22083S01	CP., 0.01μF
○ E201	23E09402S01	ELY., 1μF / 50V
○ C202	08E22086S01	CP., 0.033μF
○ E202	23E09402S01	ELY., 1μF / 50V
○ C203	08E22086S01	CP., 0.033μF
○ E203	23E09402S02	ELY., 10μF / 16V
○ C204	08E23599S01	CP., 5600pF
○ E204	23E09402S09	ELY., 100μF / 10V
○ C205	08E23599S01	CP., 5600pF
○ E205	23E09402S07	ELY., 22μF / 10V
○ E206	23E09402S03	ELY., 0.68μF / 50V
○ E207	23E09402S03	ELY., 0.68μF / 50V
○ E208	23E09402S01	ELY., 1μF / 50V
○ E209	23E09402S03	ELY., 0.68μF / 50V
○ C210	08E22081S01	CP., 1000pF
○ E210	23E09402S03	ELY., 0.68μF / 50V
○ E211	23E27614S01	ELY., 4.7μF / 16V
○ E212	23E27614S01	ELY., 4.7μF / 16V
○ E213	23E09402S12	ELY., 47μF / 10V
○ E214	23E09402S09	ELY., 100μF / 10V
○ E215	23E09402S03	ELY., 0.68μF / 50V
○ E216	23E09402S03	ELY., 0.68μF / 50V
○ E218	23E09402S09	ELY., 100μF / 10V
○ C219	08E22088S01	CP., 0.1μF
○ E219	23E09402S02	ELY., 10μF / 16V
○ E220	23E09402S02	ELY., 10μF / 16V
○ E221	23E09402S02	ELY., 10μF / 16V
○ E222	23E09402S02	ELY., 10μF / 16V
○ E223	23E09402S02	ELY., 10μF / 16V
○ E224	23E09402S02	ELY., 10μF / 16V
○ E225	23E09402S03	ELY., 0.68μF / 50V

NOTE : ○ : For TDM-7545R Model Only, △ : For TDM-7544R Model Only, Others : Common.

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
	E226	23E09402S03 ELY., 0.68μF / 50V		R019	06E22051S01 2.2K ohm
	E227	23E09402S03 ELY., 0.68μF / 50V		R020	06E22035S01 18K ohm 1/8W
	E228	23E09402S03 ELY., 0.68μF / 50V		R021	06E22041S01 100 ohm
	E229	23E09402S04 ELY., 3.3μF / 25V		R022	06E22060S01 22K ohm
	E230	23E27604S01 ELY., 4700μF / 16V		R023	06E22048S01 1K ohm
	E241	23E09402S03 ELY., 0.68μF / 50V		R025	06E22115S01 100 ohm 1/4W
	E242	23E09402S03 ELY., 0.68μF / 50V		R027	06E20903S01 10K ohm
○	C501	08E22088S01 CP., 0.1μF		R028	06E20903S01 10K ohm
	E501	23E09402S02 ELY., 10μF / 16V		R029	06E20903S01 10K ohm
○	C503	08E08577S02 CP., 1500pF		R030	06E22051S01 2.2K ohm
	E503	23E09402S09 ELY., 100μF / 10V		R032	06E22048S01 1K ohm
	C504	08E22085S01 CP., 0.022μF		R033	06E20903S01 10K ohm
	C505	08E23580S01 CP., 24pF		R034	06E22062S01 47K ohm
	C506	08E08423S04 CP., 27pF		R036	06E22048S01 1K ohm
	C507	08E22083S01 CP., 0.01μF		R037	06E22048S01 1K ohm
○	C508	08E22085S01 CP., 0.022μF		R038	06E22037S01 100K ohm 1/8W
	C510	08E22899S01 CP., 100pF		R039	06E22041S01 100 ohm
	C512	08E22085S01 CP., 0.022μF		R040	06E23575S01 330K ohm
	C513	08E23557S01 CP., 390pF		R041	06E22058S01 12K ohm
	C801	08E22085S01 CP., 0.022μF		R042	06E20903S01 10K ohm
	E802	23E08383S08 ELY., 10μF / 16V		R043	06E22066S01 220K ohm
	E803	23E08383S08 ELY., 10μF / 16V		R044	06E22051S01 2.2K ohm
	E805	23E09402S02 ELY., 10μF / 16V		R045	06E22062S01 47K ohm
	E806	23E08383S18 ELY., 0.1μF / 50V		R046	06E22062S01 47K ohm
	E807	23E08383S15 ELY., 1μF / 50V		R051	06E20903S01 10K ohm
	E808	23E08383S08 ELY., 10μF / 16V		R201	06E22062S01 47K ohm
				R202	06E22062S01 47K ohm
				R203	06E22891S01 33K ohm 1/8W
				R204	06E22061S01 33K ohm
				R205	06E22921S01 47K ohm 1/8W
				R206	06E22062S01 47K ohm
				R207	06E22062S01 47K ohm
			○	R208	06E22055S01 4.7K ohm
			○	R211	06E22054S01 3.9K ohm
			○	R212	06E22054S01 3.9K ohm
			○	R213	06E22057S01 8.2K ohm
			○	R214	06E22057S01 8.2K ohm
			○	R215	06E20851S01 43K ohm
				R218	06E20903S01 10K ohm
				R219	06E20903S01 10K ohm
			○	R220	06E22507S01 15K ohm
			△	R220	06E20904S01 27K ohm
			○	R221	06E22507S01 15K ohm
			△	R221	06E20904S01 27K ohm
			○	R222	06E22060S01 22K ohm
			○	R223	06E22060S01 22K ohm
			○	R224	06E22042S01 220 ohm
			○	R225	06E22042S01 220 ohm
			△	R226	06E24189S01 150 ohm
(All resistors are chip 1/10W±5% unless otherwise noted.)					
<b>Resistors</b>					
	R001	06E22051S01 2.2K ohm			
	R003	06E20850S01 39K ohm			
	R004	06E22055S01 4.7K ohm			
	R007	06E20904S01 27K ohm			
	R008	06E22060S01 22K ohm			
	R009	06E22064S01 68K ohm			
	R010	06E27611S01 75K ohm			
	R011	06E22951S01 3K ohm			
○	R012	06E22048S01 1K ohm			
△	R012	06E22050S01 1.8K ohm			
○	R013	06E22048S01 1K ohm			
△	R013	06E22050S01 1.8K ohm			
○	R014	06E22058S01 12K ohm			
△	R014	06E22053S01 3.3K ohm			
○	R015	06E22058S01 12K ohm			
△	R015	06E22053S01 3.3K ohm			
	R016	06E22048S01 1K ohm			
	R017	06E22048S01 1K ohm			
	R018	06E22051S01 2.2K ohm			

NOTE : ○ : For TDM-7545R Model Only, △ : For TDM-7544R Model Only, Others : Common.

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
△ R227	06E24189S01	150 ohm	R538	06E22048S01	1K ohm
R228	06E22060S01	22K ohm	R539	06E22048S01	1K ohm
R229	06E22060S01	22K ohm	R540	06E22048S01	1K ohm
R230	06E22041S01	100 ohm	R541	06E22048S01	1K ohm
R231	06E22041S01	100 ohm	R542	06E22062S01	47K ohm
○ R232	06E22926S01	7.5K ohm	R543	06E26014S01	10K ohm 1/8W
△ R232	06E22055S01	4.7K ohm	R544	06E22065S01	100K ohm
○ R233	06E22926S01	7.5K ohm	○ R545	06E22546S01	51K ohm
△ R233	06E22055S01	4.7K ohm	△ R545	06E23573S01	82K ohm
○ R234	06E22926S01	7.5K ohm	R546	06E22048S01	1K ohm
△ R234	06E22055S01	4.7K ohm	○ R548	06E20752S01	220 ohm 1/4W
○ R235	06E22926S01	7.5K ohm	○ R550	06E20903S01	10K ohm
△ R235	06E22055S01	4.7K ohm	○ R551	06E20903S01	10K ohm
R236	06E22060S01	22K ohm	R554	06E22062S01	47K ohm
R237	06E22060S01	22K ohm	R555	06E22921S01	47K ohm 1/8W
R238	06E22060S01	22K ohm	R556	06E20752S01	220 ohm 1/4W
R239	06E22060S01	22K ohm	R557	06E22060S01	22K ohm
R240	06E22051S01	2.2K ohm	R558	06E22036S01	22K ohm 1/8W
R241	06E22504S01	2.2K ohm 1/8W	R559	06E22060S01	22K ohm
R242	06E22051S01	2.2K ohm	R801	06E26014S01	10K ohm 1/8W
R243	06E22504S01	2.2K ohm 1/8W	R802	06E22075S01	1.5K ohm 1/4W
R244	06E22042S01	220 ohm	R803	06E22075S01	1.5K ohm 1/4W
R245	06E22033S01	4.7K ohm 1/8W	R804	06E22548S01	470 ohm 1/4W
R509	06E22058S01	12K ohm	R805	06E23734S01	750 ohm 1/8W
R510	06E20903S01	10K ohm	R806	06E23859S01	390 ohm 1/4W
R511	06E20903S01	10K ohm	R808	06E23596S01	8.2 ohm 1/4W
R512	06E20903S01	10K ohm	R809	06E23596S01	8.2 ohm 1/4W
R513	06E20903S01	10K ohm	R810	06E23596S01	8.2 ohm 1/4W
○ R514	06E22053S01	3.3K ohm	R811	06E20903S01	10K ohm
○ R515	06E22051S01	2.2K ohm	R812	06E20903S01	10K ohm
○ R516	06E22041S01	100 ohm	R813	06E20903S01	10K ohm
○ R518	06E20903S01	10K ohm	R814	06E22076S01	2.2K ohm 1/4W
○ R519	06E22060S01	22K ohm	R815	06E20903S01	10K ohm
○ R520	06E22060S01	22K ohm	R816	06E22075S01	1.5K ohm 1/4W
R521	06E22060S01	22K ohm	R817	06E22033S01	4.7K ohm 1/8W
R522	06E22055S01	4.7K ohm	R818	06E22033S01	4.7K ohm 1/8W
○ R523	06E22051S01	2.2K ohm	R819	06E22032S01	3.9K ohm 1/8W
R524	06E22052S01	2.7K ohm	R820	06E22051S01	2.2K ohm
R525	06E22656S01	6.8K ohm 1/8W	R821	06E20903S01	10K ohm
○ R526	06E22055S01	4.7K ohm	R822	06E22030S01	1K ohm 1/8W
R527	06E22036S01	22K ohm 1/8W	R823	06E26014S01	10K ohm 1/8W
R528	06E22062S01	47K ohm	R824	06E23596S01	8.2 ohm 1/4W
R529	06E22048S01	1K ohm	R825	06E22075S01	1.5K ohm 1/4W
R530	06E22048S01	1K ohm	○ VR201	18E20754S01	Variable, 10K ohm
R533	06E22065S01	100K ohm	○ VR202	18E20754S01	Variable, 10K ohm
R534	06E22066S01	220K ohm			
R535	06E22921S01	47K ohm 1/8W			
R536	06E22030S01	1K ohm 1/8W			
R537	06E22062S01	47K ohm			

NOTE : ○ : For TDM-7545R Model Only, △ : For TDM-7544R Model Only, Others : Common.

Symbol No.	Part No.	Description
<b>Front P.W.Board</b>		
<b>IC's</b>		
○ IC401	51T55492W01	LC75850W
○ IC402	51T95040W01	SBX8035F
<b>Transistor</b>		
Q401	48E10426S01	CP., DTC124EK
<b>Diodes</b>		
D401	48E10946S01	CP., DA204K
D402	48E10946S01	CP., DA204K
D403	48E10946S01	CP., DA204K
D404	48E10946S01	CP., DA204K
<b>Lamps</b>		
○ PL401	65T85125W05	9V-100mA.
△ PL401	65T75231W01	9V-85mA
PL404	65T75233W01	CP., 6V-80mA
PL405	65T75233W01	CP., 6V-80mA
PL406	65T75233W01	CP., 6V-80mA
PL407	65T75233W01	CP., 6V-80mA
<b>LED's</b>		
LD401	48T65477W02	CP., SML-010LTT87 (RED)
LD402	48T65477W03	CP., SML-010PTT87 (GRN)
LD403	48T65477W03	CP., SML-010PTT87 (GRN)
LD404	48T65477W03	CP., SML-010PTT87 (GRN)
LD405	48T65477W02	CP., SML-010LTT87 (RED)
<b>Switches</b>		
○ SW401	40T75234W01	Tact, SKQAC (PWR/R.SENSOR/INTLZ)
△ SW401	40T75234W01	Tact, SKQAC (PWR/INTLZ)
SW402	40E23611S01	Tact, CP. EVQPJU04K (UP)
SW403	40T75234W01	Tact, SKQAC (REW/DN)
SW404	40E23611S01	Tact, CP. EVQPJU04K (MODE/LOUD)
SW405	40E23611S01	Tact, CP. EVQPJU04K (DOWN)
SW406	40T75234W01	Tact, SKQAC (TUNE/A.ME/PLAY/PAUSE)

Symbol No.	Part No.	Description
SW407	40T75234W01	Tact, SKQAC (EJECT)
SW408	40T75234W01	Tact, SKQAC (UP/FF)
SW409	40T75234W01	Tact, SKQAC (SOURCE)
○ SW410	40T75234W01	Tact, SKQAC (BAND/PROG/TITLE)
△ SW410	40T75234W01	Tact, SKQAC (BAND/PROG)
SW411	40T75234W01	Tact, SKQAC (AF)
SW412	40T75234W01	Tact, SKQAC (T.INFO)
○ SW413	40T75234W01	Tact, SKQAC (NEWS/1/NR B)
△ SW413	40T75234W01	Tact, SKQAC (NEWS/1)
SW414	40T75234W01	Tact, SKQAC (PTY/2/P.S. DN)
SW415	40T75234W01	Tact, SKQAC (3/P.S. UP)
SW416	40T75234W01	Tact, SKQAC (F)
SW417	40T75234W01	Tact, SKQAC (SCAN/6)
SW418	40T75234W01	Tact, SKQAC (RPT/5)
SW419	40T75234W01	Tact, SKQAC (M.I.X./4/B. SKIP)
<b>Capacitors</b>		
C401	08E22085S01	CP., 0.022μF
E401	23T25191W42	CP. ELY., 22μF / 6.3V
C402	08E08423S06	CP., 680pF
<b>Resistors</b> (All resistors are chip 1/10W±5% unless otherwise noted.)		
R401	06E21164S01	1.5K ohm
R402	06E22051S01	2.2K ohm
R403	06E22053S01	3.3K ohm
R404	06E22111S01	5.6K ohm
R405	06E20903S01	10K ohm
R406	06E21164S01	1.5K ohm
R407	06E22051S01	2.2K ohm
R408	06E22053S01	3.3K ohm
R409	06E22111S01	5.6K ohm
R410	06E20903S01	10K ohm
R411	06E21164S01	1.5K ohm
R412	06E22051S01	2.2K ohm
R413	06E22053S01	3.3K ohm
R414	06E22111S01	5.6K ohm
R415	06E20903S01	10K ohm
R416	06E22061S01	33K ohm
R417	06E20903S01	10K ohm
R418	06E20903S01	10K ohm
R419	06E20903S01	10K ohm
R420	06E20903S01	10K ohm
R421	06E23574S01	180K ohm
R422	06E23574S01	180K ohm
R423	06E22048S01	1K ohm
R424	06E22048S01	1K ohm

NOTE : ○ : For TDM-7545R Model Only, △ : For TDM-7544R Model Only, Others : Common.



Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
R425	06E22048S01	1K ohm	<b>Capacitors</b>		
R427	06E22048S01	1K ohm	E3101	23S75372W02	ELY., 100µF / 10V
R428	06E22062S01	47K ohm	E3102	23S75372W04	ELY., 10µF / 16V
R430	06E23859S01	390 ohm 1/4W	E3103	23S75372W02	ELY., 100µF / 10V
R431	06E23858S01	15 ohm 1/4W	E3104	23S75372W07	ELY., 47µF / 16V
○ R432	06E22048S01	1K ohm	C3105	08S72783F31	CP., 470pF
R434	06E23264S01	24 ohm 1/4W	E3105	23S75372W09	ELY., 4.7µF / 35V
R435	06E22114S01	27 ohm 1/4W	C3106	08S72783F31	CP., 470pF
R436	06E22114S01	27 ohm 1/4W	E3106	23S75372W09	ELY., 4.7µF / 35V
R437	06E22114S01	27 ohm 1/4W	C3107	08S72783F31	CP., 470pF
R438	06E23860S01	3.9K ohm 1/4W	E3107	23S75372W15	ELY., 1µF / 50V
R439	06E23859S01	390 ohm 1/4W	C3108	08S72783F31	CP., 470pF
○ R440	06E22048S01	1K ohm	E3108	23S75372W04	ELY., 10µF / 16V
R441	06E23859S01	390 ohm 1/4W	C3109	08S53332F48	CP., 0.012µF
R442	06E23859S01	390 ohm 1/4W	C3110	08S53332F48	CP., 0.012µF
○ R443	06E27623S01	4.3K ohm 1/8W	C3111	08S65128F35	CP., 100pF
△ R443	06E22032S01	3.9K ohm 1/8W	C3112	08S35374W01	CP., 0.1µF
○ R444	06E27624S01	6.2K ohm 1/8W	C3113	08S82122F59	CP., 820pF
△ R444	06E27736S01	7.5K ohm 1/8W	E3501	23S75372W18	ELY., 100µF / 25V
R447	06E23859S01	390 ohm 1/4W	C3502	08S65128F76	CP., 0.1µF
R448	06E23859S01	390 ohm 1/4W	C3503	08S65128F76	CP., 0.1µF
R449	06E22048S01	1K ohm	(All resistors are chip 1/10W±5% unless otherwise noted.)		
R451	06E23860S01	3.9K ohm 1/4W	<b>Resistors</b>		
<b>GR Control P.W.Board</b>			R3101	06S53330F32	130 ohm 1/8W
<b>IC's</b>			R3102	06S64996F15	360K ohm
IC3101	51T64606F02	TA7705F	R3103	06S64995F81	15K ohm
IC3102	51T75010W01	BA3703F	R3104	06S53330F81	15K ohm 1/8W
IC3501	51T75628W01	BA6285FP	R3105	06S53330F32	130 ohm 1/8W
<b>Transistors</b>			R3106	06S64995F81	15K ohm
Q3501	48T84366F05	2SB1243	R3107	06S64995F81	15K ohm
Q3502	48T62967F06	CP., DTC114YK	R3108	06S64996F15	360K ohm
Q3503	48T62967F06	CP., DTC114YK	R3109	06S53330F29	100 ohm 1/8W
Q3504	48T83835F03	2SD1859	R3110	06S53330F65	3.3K ohm 1/8W
<b>Diodes</b>			R3111	06S53330F65	3.3K ohm 1/8W
D3101	48T81063F01	CP., MA159	R3112	06S53330F85	22K ohm 1/8W
D3501	48T81063F01	CP., MA159	R3113	06S53330F85	22K ohm 1/8W
D3502	48T81063F01	CP., MA159	R3116	06S64995F85	22K ohm
ZD3501	48T83128F11	Zener, HZS7A2L	R3117	06S64996F01	91K ohm
			R3118	06S64995F95	56K ohm
			R3119	06S64995F35	180 ohm
			R3507	06S70072F41	330 ohm 1/4W
			R3508	06S70072F41	330 ohm 1/4W
			R3509	06S64995F77	10K ohm
			R3510	06S70072F60	2K ohm 1/4W
			R3511	06S70072F60	2K ohm 1/4W
			R3512	06S53331F01	91K ohm 1/8W
			R3513	06S53331F01	91K ohm 1/8W

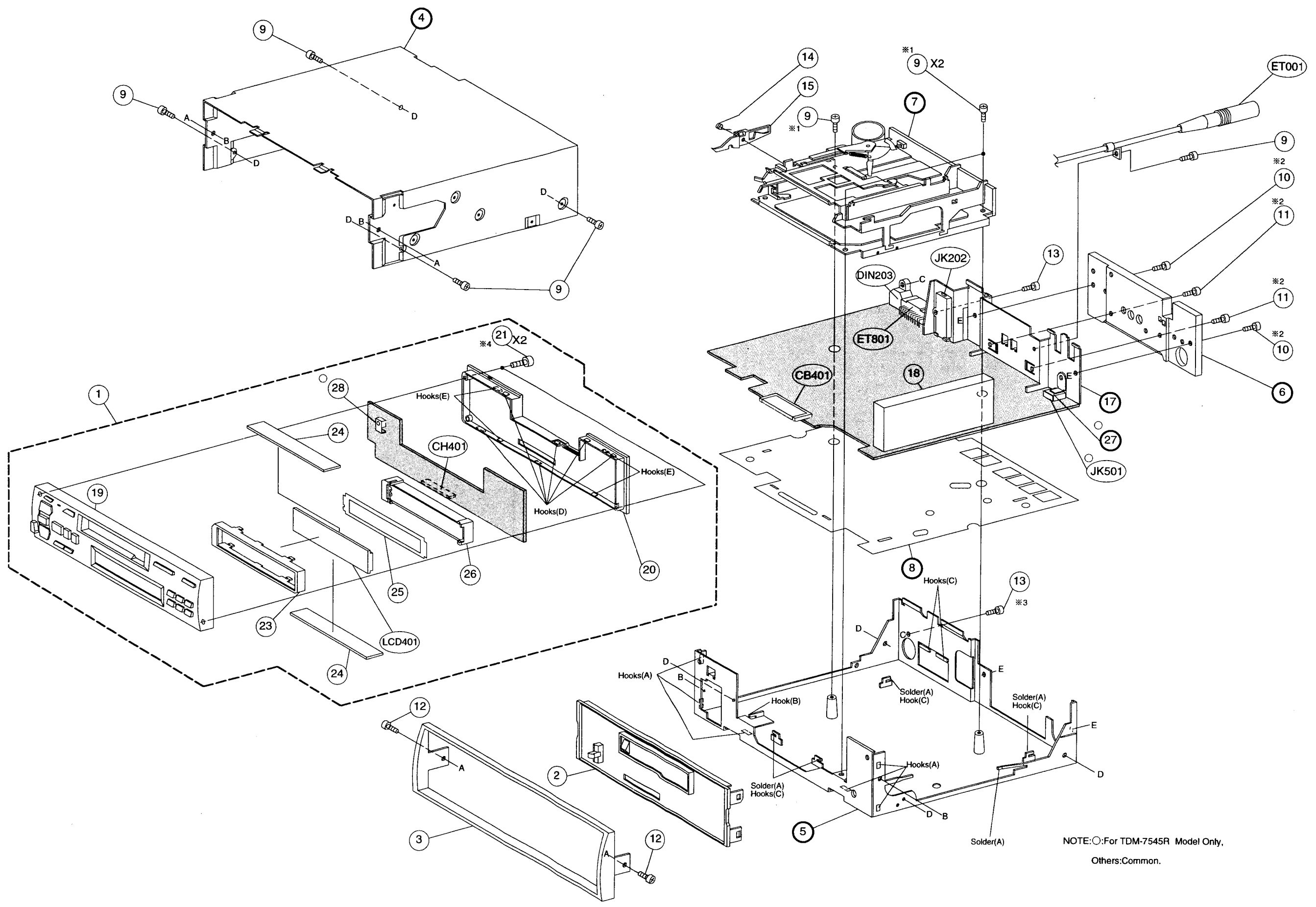
NOTE : ○ : For TDM-7545R Model Only, △ : For TDM-7544R Model Only, Others : Common.

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
R3514	06S70072F53	1K ohm 1/4W	<b>Miscellaneous</b>		
R3515	06S81094F09	M.F., 4.7 ohm 1/2W	CB401	09T85299W16	16P Connector
			CH401	09T85298W16	16P Connector
			DIN203	09T55493W02	DIN Connector 8P
			ET001	09E25398S01	Assy., Antenna Receptacle
			ET801	09E23591S01	Speaker Output & Power Supply Connector
			HD3101	88T95125W02	Assy., Head
			JK202	09T15335Y01	Rear Output RCA Connector
○ JK501	09E27608S01	Remote Control Interface Connector	○ LCD401	65T95241W03	LCD Display
○ LCD401	65T95241W03	LCD Display	△ LCD401	65T85130W04	LCD. Display
			M3501	01V94700W88	Assy., Main Motor (13.2V-95mA)
			M3502	01V91700W81	Assy., Sub Motor (7V-370mA)
			PT3501	51T63433F03	Sensor, Photo ON2170-R2
			PT3502	51T63433F03	Sensor, Photo ON2170-R2
			SW3501	40T15222W01	Switch, Detector (PACK IN)
			SW3502	40T15382W02	Switch, Detector SPPB32 (PAUSE)
			SW3503	40T15382W02	Switch, Detector SPPB32 (MODE)
			SW3504	40T15382W02	Switch, Detector SPPB32 (METAL)

NOTE : ○ : For TDM-7545R Model Only, △ : For TDM-7544R Model Only, Others : Common.

# Exploded View (Cabinet)

1  
2  
3  
4  
5



NOTE: ○: For TDM-7545R Model Only,  
Others: Common.

A | B -41- | C | D | E | F -42- | G |

# Cabinet Assembly Parts List

NOTE: Parts without part number are not supplied.

Symbol No.	Index	Part No.	Description	Symbol No.	Index	Part No.	Description
○	1	3-A 01E27447S01	Assy., Nose Unit				
△	1	3-A 01E27444S01	Assy., Nose Unit				
	2	5-D 13E27728S01	Assy., Front Escutcheon				
	3	5-C 33E27729S01	Assy., Face Plate				
	9	03E09416S05	Screw, MCH-TPT (M2.6X6)				
	10	03E22117S01	Screw, MCH-TPT (M2.6X8)				
	11	2-G 03E22118S01	Screw, MCH-TPT (M2.6X14)				
	12	03E22133S01	Screw, MCH-TPT (M2.6X6)				
	13	03E27618S01	Screw, TPG-TPT (M2.6X8)				
	14	1-E 41E27727S01	Spring, Lever Door				
	15	1-E 45E27738S01	Lever, Door				
	18	3-F 77E27449S01	FM/MW/LW Tuner Unit, MB4R6050 (FE001)				
○	19	3-A 13E27551S01	Assy., Nosepiece				
△	19	3-A 13E27550S01	Assy., Nosepiece				
	20	4-D 13E26908S01	Nose, Bottom				
	21	3-D 03E22134S01	Screw, TPG (M1.7X10)				
	23	4-B 15E25405S01	Cover, LCD				
	24	75E27730S01	Rubber, Electric				
	25	4-C 26E27731S01	Reflector, Sheet				
	26	4-C 01E25404S01	Assy., Case LCD				
○	28	3-C 07E27732S01	Bracket, Remote				

NOTE : ○ : For TDM-7545R Model Only, △ : For TDM-7544R Model Only, Others : Common.

# Disassembly Instructions

## 1. Removal of Nose Unit

- (1) Refer to the Owner's Manual (Part No. 68P91666W52/53).

## 2. Removal of Front Escutcheon

- (1) After removal of Face Plate and Top Cover, remove six Hooks (A). ..... Hooks (A) (4-D, 5-F)

## 3. Removal of Cassette Deck

- (1) After removal of Front Escutcheon, remove three screws No.9. .... Screws No. 9 (※1) (1-E, 1-F)
- (2) Remove a Hook (B). ..... Hook (B) (4-E)
- (3) Disconnect the connector from Main P.W. Board.

## 4. Removal of Main P.W. Board

- (1) After removal of Cassette Deck, remove four screws No. 10, 11, ..... Screws No. 10, 11 (※2) (2-G, 3-G) and remove the Heat Sink.
- (2) Remove a screw No. 13. .... Screw No. 13 (※3) (4-F)
- (3) Remove five points of Solder (A) and six Hooks (C). ..... Solder (A) (4-F, 5-E, 5-F)  
Hooks (C) (4-F, 5-E, 5-F)
- (4) Main P.W. Board with Bracket IC can be removed completely.

## 5. Removal of Front P.W. Board

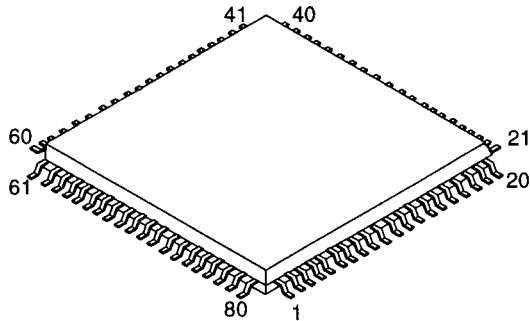
- (1) After removal of Nose Unit, remove two screws No. 21. .... Screws No. 21 (※4) (3-D)
- (2) Remove six Hooks (D), and remove the Nosepiece. .... Hooks (D) (3-D)
- (3) Remove four Hooks (E). ..... Hooks (E) (3-C, 3-D)

NOTE: For the screws No., Hook and Solder, refer to the Exploded View (Cabinet).

# Semi - Conductor Lead Identifications

NOTE : For the parts not mentioned, refer to the Schematic Diagram.

15162Y01 : IC501



PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O	PIN NO.	CODE ADDRESS	I/O
1	KEY A / D3	I	22	A-MUTE	O	39	EV-DATA	O	61	○ REMOCON	I
2	KEY A / D2	I	23	IF MUTE	O	40	PACK IN SW	I		△ NC	—
3	KEY A / D1	I	24	○ NFP 1	O	41	FOR / REV	O	62	ACC DET	I
4	GND	—		△ NC	—	42	METAL	I	63	BAT DET	I
5	NC	—	25	○ NFP 2	O	43	L.O.FAST	O	64	RDS CLOCK	I
6	NC	—		△ NC	—	44	M.S.DET	I	65	CHG BUS IN	I
7	VDD	—	26	○ DOLBY B	O	45	NC	—	66	CHG BUS OUT	O
8	MONI RXD	I		△ NC	—	46	NC	—	67	PULL-DOWN	—
9	MONI TXD	O	27	PAUSE SW	I	47	50k REF	O	68	VDD	—
10	RDS SYNC	O	28	FOR RUN DET	I	48	SD SW	O	69	X2	—
11	LCD INH	O	29	MODE SW	I	49	AM SD	I	70	X1	—
12	LCD DATA	O	30	REV RUN DET	I	50	ALARM	O	71	GND	—
13	LCD CLK	O	31	MOTOR FAST	O	51	NC	—	72	NC	—
14	LCD CE	O	32	F-IN	O	52	FM SD / ST IND.	I	73	GND	—
15	LED IND	O	33	GND	—	53	NC	—	74	AVDD	—
16	NC	—	34	R-IN	O	54	NC	—	75	AVREF	I
17	NC	—	35	O-MOTOR	O	55	PLL DI	I	76	S-METER	I
18	NC	—	36	○ SCL	O	56	PLL CLK	O	77	MULTIPATH	I
19	○ NOISE POWER	O		△ NC	—	57	PLL DO	O	78	SELECT	I
	△ NC	—	37	○ SDA	I/O	58	PLL CE	O	79	GND	—
20	NC	—		△ NC	—	59	RDS DATA	I	80	NOISE ON	I
21	POWER CONT	O	38	EV-CLK	O	60	RESET	I			

NOTE : ○ : For TDM-7545R Model Only,

△ : For TDM-7544R Model Only,

Others : Common.

# MEMO

# **ALPINE<sup>®</sup>** **SERVICE**



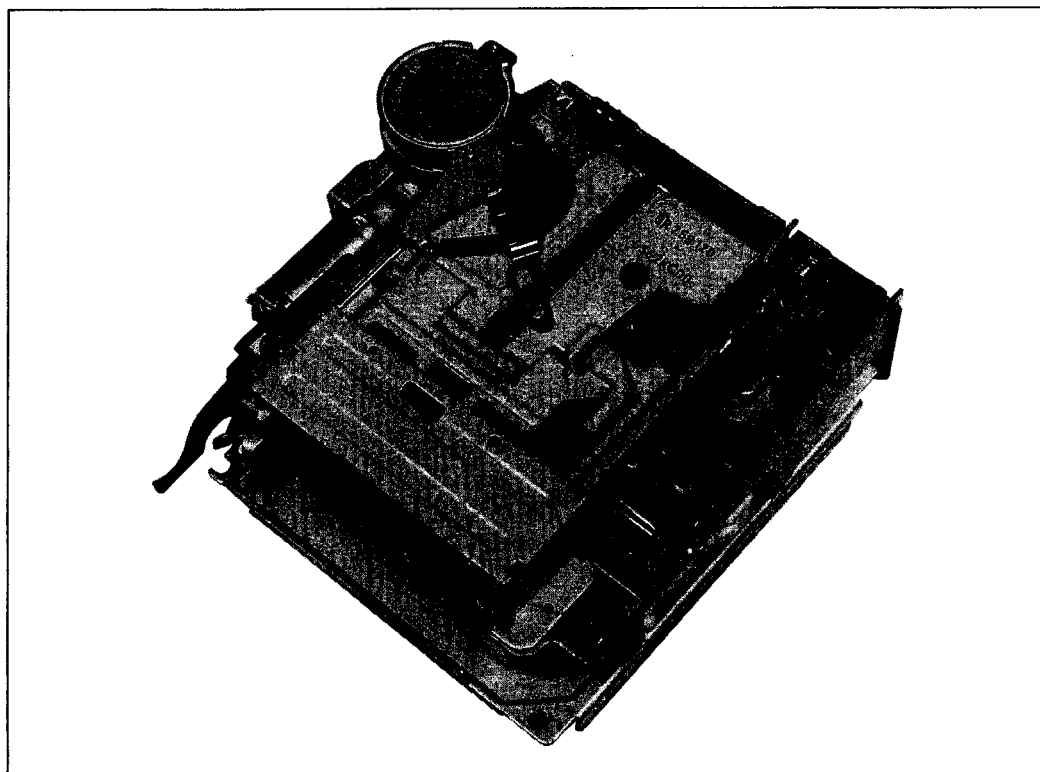
ALPI-00441

# **MANUAL**

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## **Cassette Deck Mechanism**

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**GR-S SERIES**

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## **Contents**

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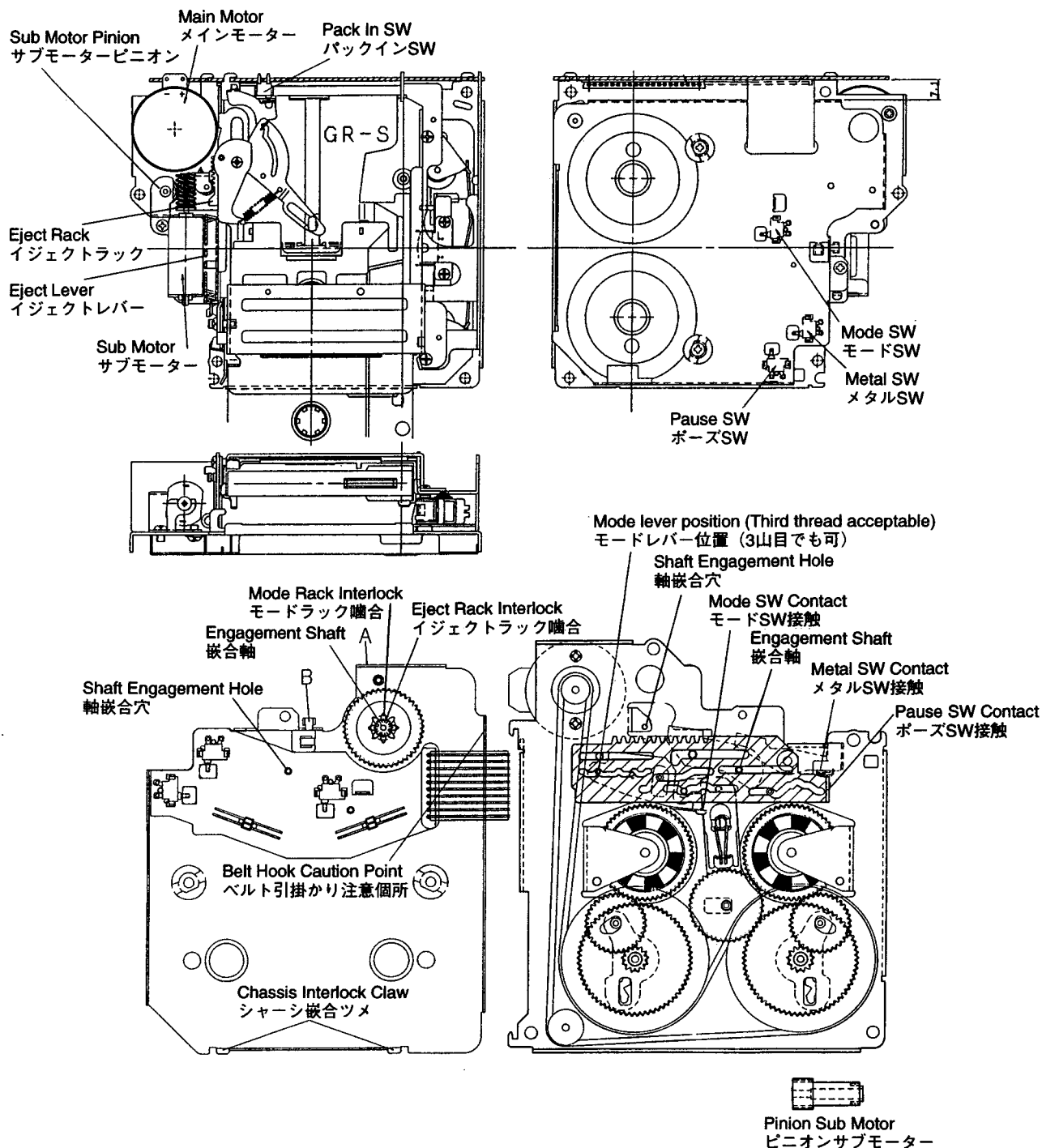
Basic Operation of GR-S Mechanism .....	3 to 11
Disassembly, Assembly and Replacement of Function Parts .....	12 to 21
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Cassette Deck Mechanism Assembly Parts List .....	25

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# Basic Operation of GR-S Mechanism

## GR-Sメカ基本動作



Mode rack engagement should be made so that normal engagement is obtained when an end of section A touches the chassis closely with the pinion sub motor inserted in place and rotated after temporary installation of the bottom cover. In this case, the sub motor wires should be positioned in the normal guide of the section B (should not be jammed). The metal lever should be installed by moving the switch contact section to inside of the mechanism as in GR-H.

モードラックの噛合せはボトムカバー仮装着後PINION SUB MOTORを正規位置に挿入して回転させる。A部端面がシャッシンと密着出来たとき正常な噛合い状態になったことを意味する。又このときサブモータワイヤがB部の正規ガイド位置にあること。(挟み込みさせないこと。)メタルレバーはGR-Hと同様にSW接触部をメカ内部に移動させて組み込むこと。

A. Loading

1. Insert a cassette pack.
2. PACK IN SW goes ON→OFF.
3. SUB motor rotates and the power is transferred to SUB MOTOR PINION, EJECT rack, and EJECT lever, and moves to the direction shown by the arrow.
4. After completion of the cassette pack loading, motion start of the mode lever is detected by checking ON→OFF of the PAUSE SW, and rotation of the SUB MOTOR stops once, and then the SUB MOTOR rotates in reverse direction until the PAUSE SW is ON again. After the stop of the SUB MOTOR, the main motor rotates.
5. When the main motor rotates, both reels rotate in the winding direction and eliminate slack of the tape at the PAUSE position. (Loading completion)

A. ローディング

1. カセットパックを挿入する。
2. PACK IN SWがON→OFFになる。
3. SUBモーターが回転してSUB MOTOR PINION、EJECTラック、EJECTレバーと動力が伝達し、矢印方向へ移動する。
4. カセットパック装着完了後、モードレバーが動き始めたことを、PAUSE SWがON→OFFすることで、検知しSUB MOTORの回転を一旦停止させ、再度PAUSE SWがONするまで逆回転させる、SUB MOTOR停止後メインモーターを回転させる。
5. メインモーターの回転により、両リールを巻き取り方向に回転させ、テープのタルミをPAUSE位置でなくする。(ローディング完了)

B. Play

1. Rotation of the main motor stops and the SUB MOTOR rotates, thereby moving the mode lever to the PLAY position.
2. Motion of the mode lever to the PLAY position is detected by checking ON/OFF number of the mode SW and rotating direction of the sub motor.
3. After detection of the mode lever moved to the PLAY position, the SUB MOTOR rotation stops and the main motor rotates, thus entering the PLAY operation.

B. プレイ

1. メインモーターの回転を停止させ、SUB MOTORを回転させて、モードレバーをPLAY位置に移動させる。
2. モードレバーのプレイ位置への移動はモードSWのON/OFF回数とサブモーターの回転方向で検知する。
3. モードレバーがPLAY位置に移動したことを検知したら、SUB MOTORの回転を停止し、メインモーターを回転させてPLAY動作に入る。

C. PROG

1. With the PROG KEY SW ON, the SUB MOTOR rotates, and the mode lever moves to next PLAY position (NORMAL→REVERSE PLAY or REVERSE→NORMAL PLAY).
2. When the mode switch detects the next PLAY position, the SUB MOTOR rotation stops, and operation shifts to the PLAY.

C. PROG

1. PROG KEY SW ONにより、SUB MOTORを回転させ、モードレバーを次のPLAY位置 (NORMAL→REVERSE PLAY又は、REVERSE→NORMAL PLAY) に移動させる。
2. モードSWが次のPLAY位置を検知したらSUB MOTORの回転を停止し、PLAYに移行する。

**D. FF/REW (QUE/REVIEW)**

1. With KEY ON, rotation of the main motor stops and the SUB MOTOR rotates to bring the mode lever to the specified position.
2. When the specified position is detected by counting ON/OFF number of the mode SW, the SUB MOTOR rotation stops, and the main motor rotates to perform tape fast winding operation.  
(According to the stop position of the mode lever, all of head position retreat, playback engagement releasing, pinch roller retreat, and FF gear engagement are kept.)

**D. FF/REW (QUE/REVIEW)**

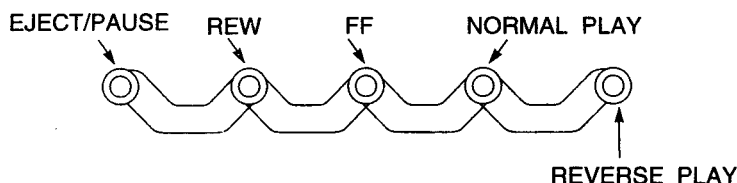
1. KEY ONによりメインモーターの回転を停止し、SUB MOTORを回転させモードレバーを所定の位置に移動させる。
2. モードSWのON/OFF回数をカウントし、所定の位置を検知したらSUB MOTORの回転を停止し、メインモーターを回転させ、TAPE早送り動作を行う。  
(モードレバーの停止位置により、ヘッド位置後退、プレイ噛み合い切り離し、ピンチローラー後退、早送り歯車の噛み合いは、全て維持される。)

**E. EJECT**

1. With KEY ON, main motor rotation stops and SUB MOTOR rotates, thereby moving the mode lever to the EJECT/PAUSE position.
2. When the PAUSE SW turns on with the mode lever moved, the SUB MOTOR rotation stops, the main motor rotates to perform take up operations for both the reels.
3. When beginning of the reel slip is detected with tape slack eliminated, the main motor rotation stops and the sub motor rotates to move the EJECT lever in the eject direction.
4. When the PACK IN SW goes from OFF to ON, the SUB MOTOR rotation stops and the EJECT operation completes.

**E. EJECT**

1. KEY ONにより、メインモーターの回転を停止すると共に、SUB MOTORを回転させ、モードレバーをEJECT/PAUSE位置に移動させる。
2. モードレバーの移動は、PAUSE SWがONした所でSUB MOTORの回転を停止しメインモーターを回転させ両リールの巻き取り動作を行う。
3. テープタルミが無くなり、リールスリップが始まったことを、検知したらメインモーターの回転を停止し、SUB MOTORを回転させてEJECTレバーを排出方向に移動させる。
4. PACK IN SWがOFF→ONに切り換わったらSUB MOTORの回転を停止させEJECT完了となる。

**Mode lever position****モードレバー位置**

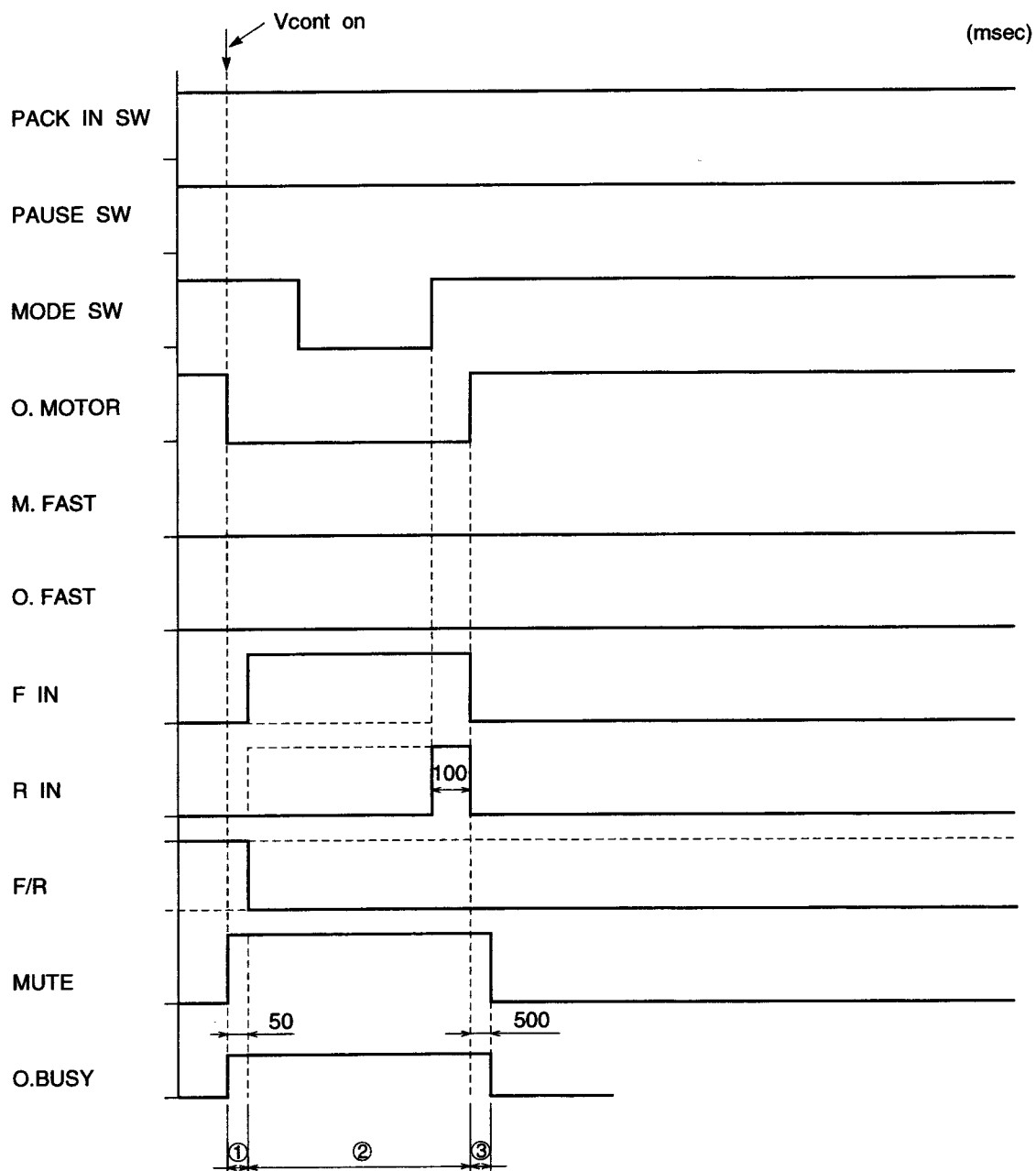
Mechanism operations are determined by positions of the mode lever shown above.

メカの動作は上記モードレバーの位置で決まる。



## Mechanism basic operation timing chart

メカニズム基本動作タイミングチャート

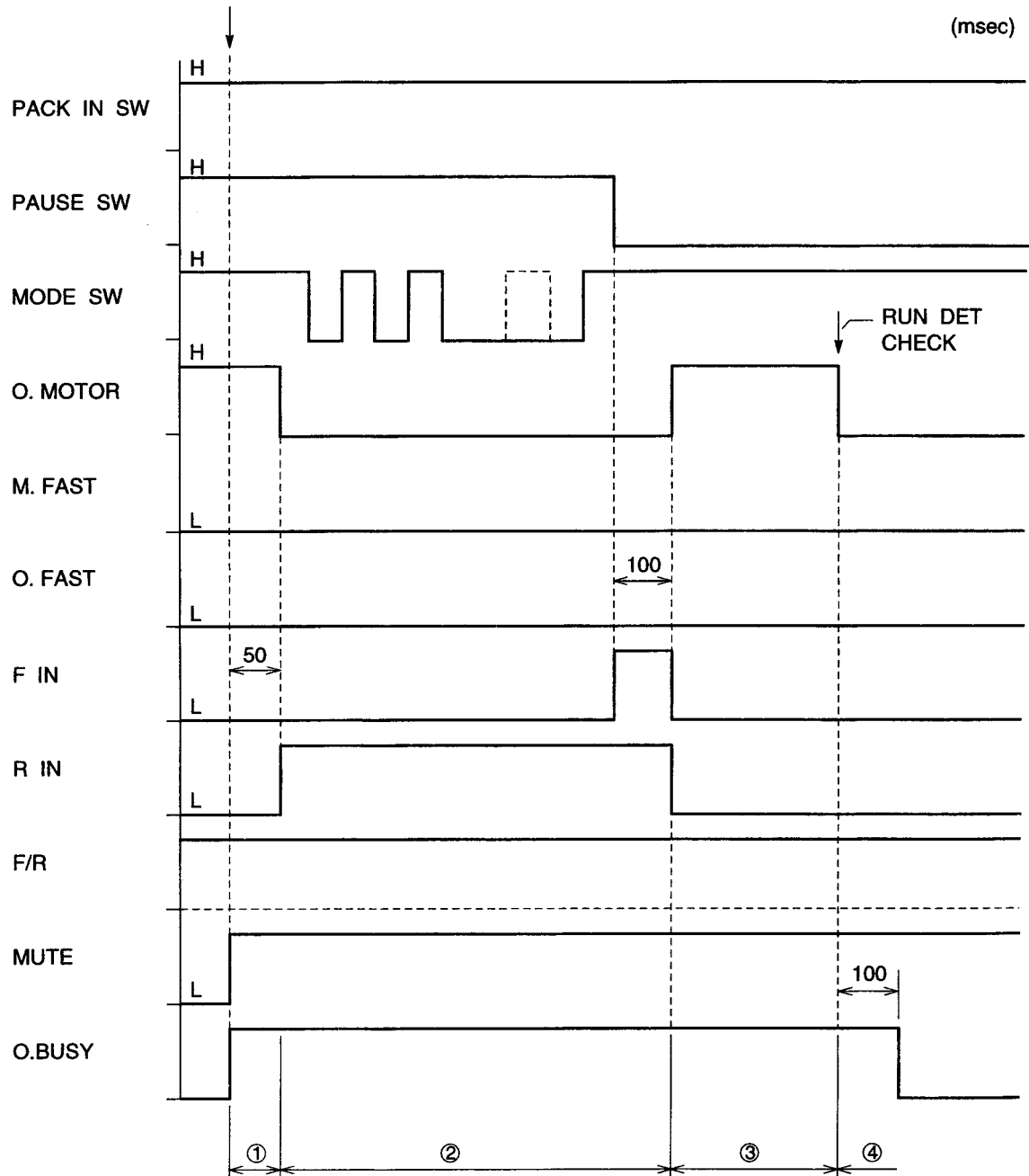
Shift MODE      PLAY → PLAY (PROG)  
移行モード      PLAY → PLAY (PROG)

- ① Tape wind stop: Main motor stops.
- ② Mode lever shift: SUB MOTOR rotates, mode lever moves to a specified position and stops.
- ③ Mode determination: Muting until operation reaches a stable status.

- ① TAPE巻取り停止：MAIN MOTORを停止させる。
- ② MODE LEVER移動：SUB MOTORを回しMODE LEVERを目的の位置まで移動させ停止させる。
- ③ MODE確定：動作安定までMUTE。

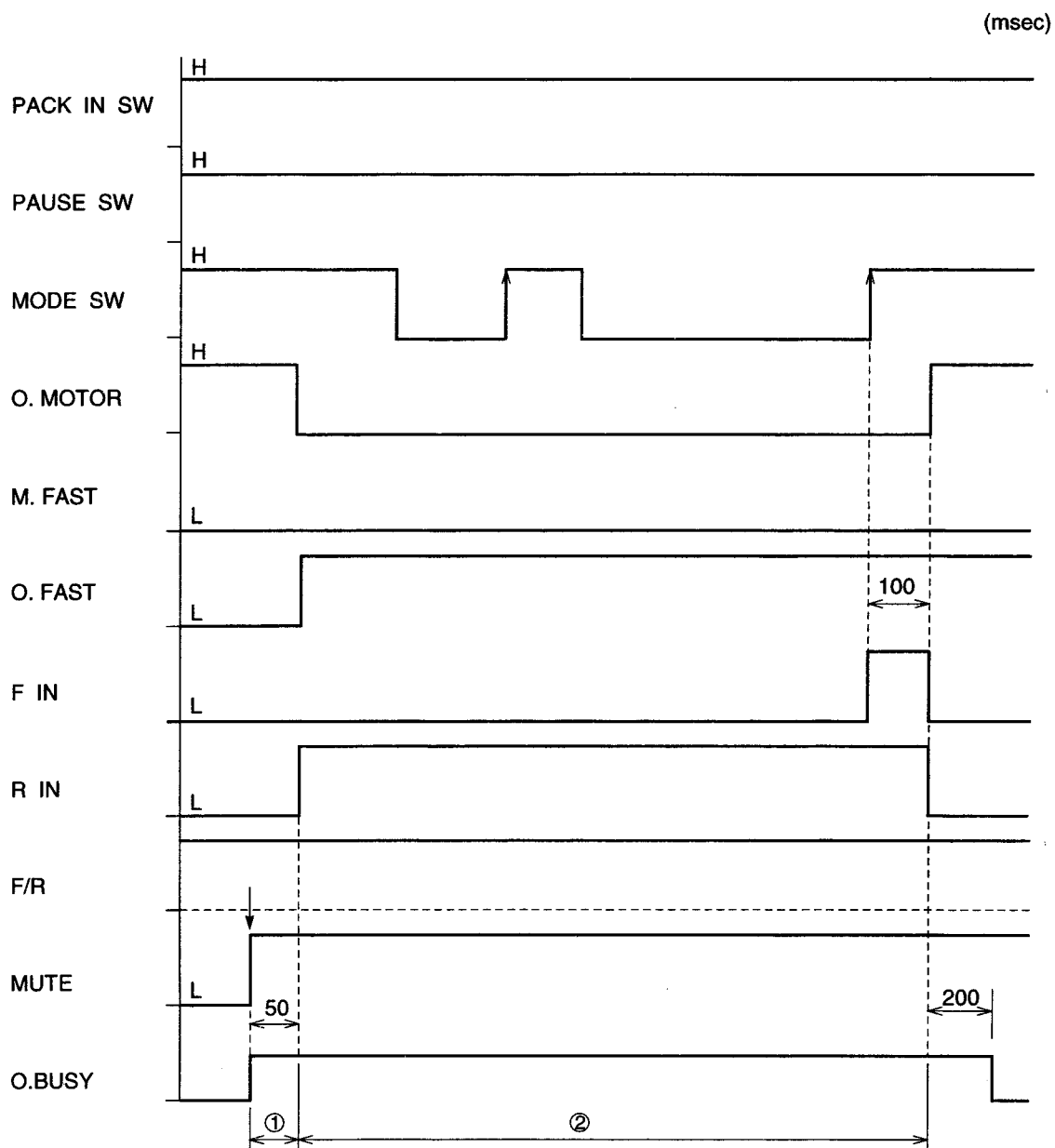
Shift MODE  
移行モード

PLAY → PAUSE  
PLAY → PAUSE



- ① Tape wind stop: Main motor stops.
- ② Mode lever shift: Sub motor rotates, mode lever moves to a specified position and stops.
- ③ Removal of tape slack: Both reel rotate in winding direction and eliminate tape slack.
- ④ Reel stop: Main motor stops when run det pulse reaches a specified value.

- ① TAPE巻取り停止：MAIN MOTOR停止
- ② MODE LEVER移動：SUB MOTORを回し、MODE LEVERを目的の位置まで移動させ停止させる。
- ③ TAPE弛み取り：両リールを巻取方向へ回転させ、TAPEの弛みを無くす。
- ④ リール停止：RUNDET PULSが設定値に達したらMAIN MOTORを停止させる。

Shift MODE  
移行モードPLAY → REW  
PLAY → REW

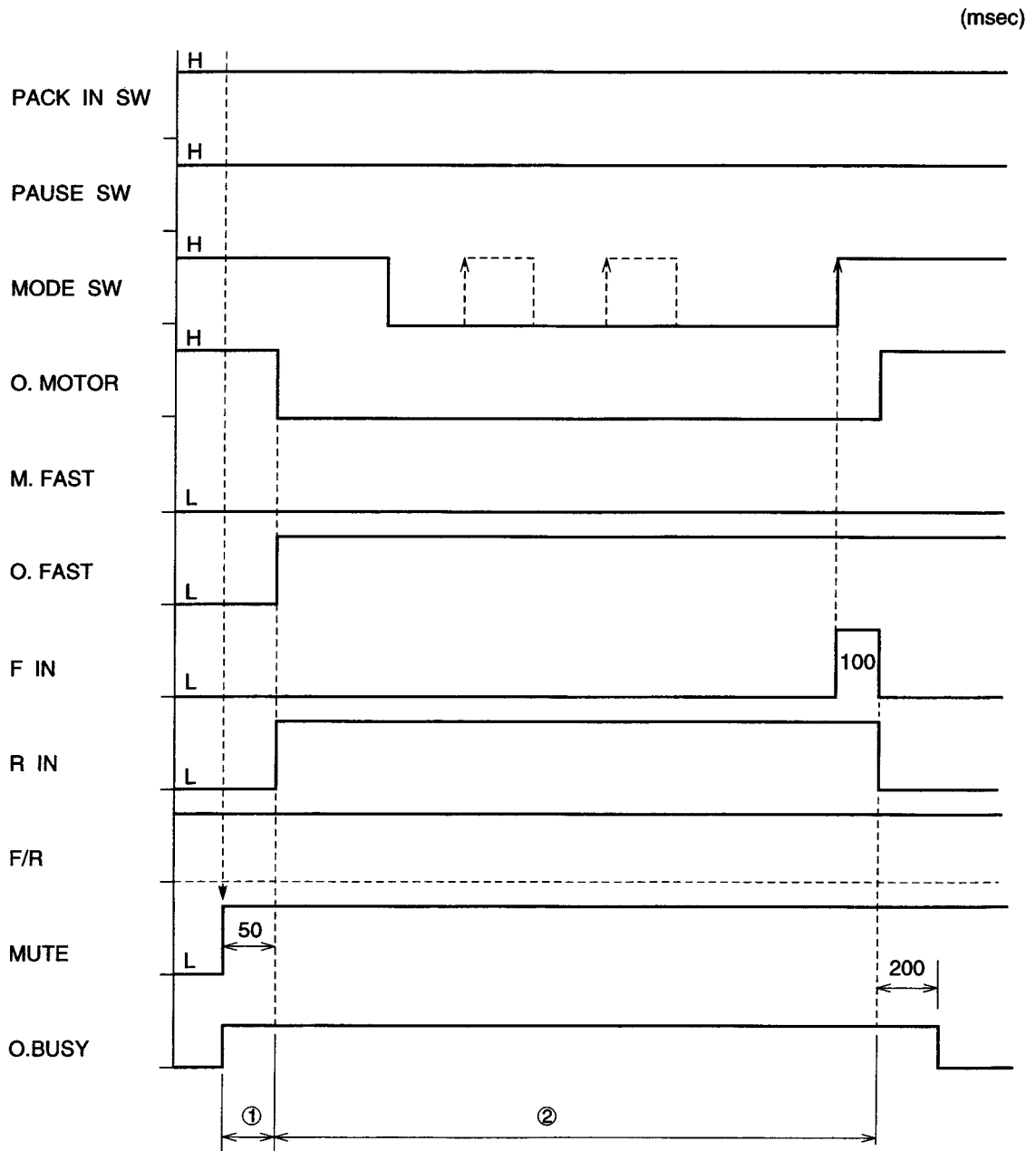
① Tape wind stop: Main motor stops.

② Mode lever shift: Sub motor rotates and mode lever moves to a specified position and stops.

① TAPE巻取り停止：MAIN MOTOR停止

② MODE LEVER移動：SUB MOTORを回しMODE LEVERを目的の位置まで移動させ停止させる。

Shift MODE      PLAY → FF  
移行モード      PLAY → FF



① Tape wind stop: Main motor stops.

② Mode lever shift: Sub motor rotates and mode lever moves to a specified position and stops.

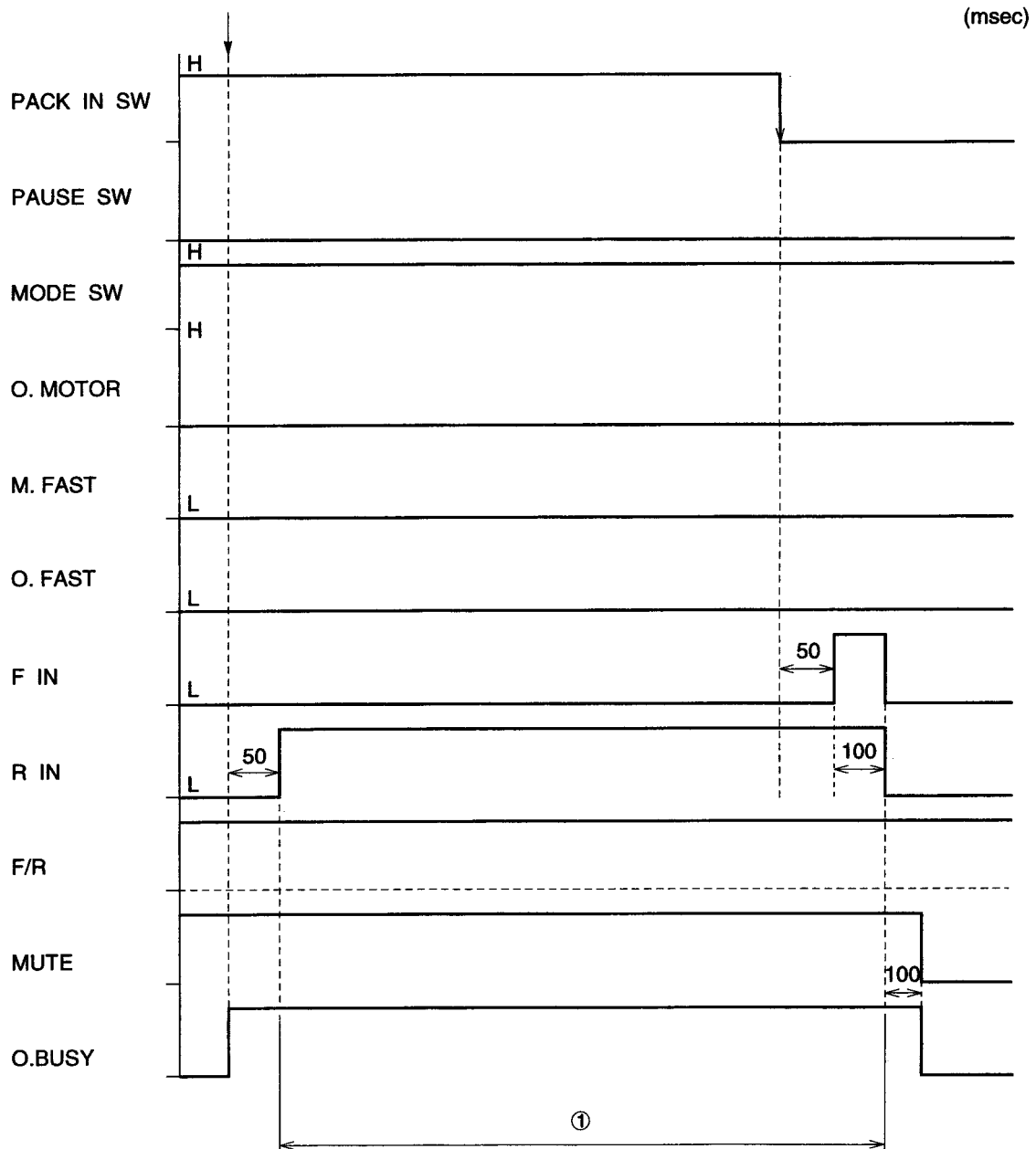
① TAPE巻取り停止：MAIN MOTOR停止

② MODE LEVER移動：SUB MOTORを回しMODE LEVERを目的の位置まで移動させ停止させる。



Shift MODE  
移行モード

PAUSE → EJECT  
PAUSE → EJECT



① Cassette pack eject: Rotates sub motor and lifts up the cassette holder.  
Rotates the sub motor further to move slider forward and ejects the pack.

① カセットパック排出：SUB MOTORを回しCASSETTE HOLDERをリフトさせる。  
さらにSUB MOTORを回しスライダを手前に移動させPACKを排出させる。

## Disassembly, Assembly and Replacement of Functional Parts

### 機能部品の分解・組立及び交換方法

#### 1. Disassembly and Assembly of Bottom Cover

- (1) Turn the mechanism around as shown in Figure 1.
- (2) Remove three screws ① as shown in Figure 1.
- (3) Lift the bottom cover slowly from the position A-1, pull the hooks out of the holes in the chassis, and remove the bottom cover as shown in Figure 1.
- (4) Set the mechanism to pack down status and place the mode lever to the position shown in Figure 2-1.
- (5) Press the metal switch lever in direction shown by the arrow (refer to Figure 2-2), insert the pinion sub motor shaft to the pinion sub motor hook hole, and insert the chassis engagement claws into the chassis engagement holes. (Check to see the sub motor wire is placed in the normal guide position of B section.)
- (6) Rotate the pinion sub motor counterclockwise after insertion of the bottom cover, and check to see the end place of A section in Figure 2 is closely touched. (refer to Figure 3)
- (7) Fix the screws that have been removed.

NOTE : ① When fixing the bottom cover, be careful to avoid damage by the belt.

② Fasten the three screws with a fastening torque of 6 kg.cm.

#### 1. ボトムカバーの分解方法及び組立方法

- (1) メカを裏返しにします。(図1参照)
- (2) 3本のネジ①を外します。(図1参照)
- (3) A-1部からボトムカバーをゆっくりと浮かし、切り起こしの嵌合部を外し、分解します。(図1参照)
- (4) 組立時は、メカをバックDOWN状態にして、モードレバーの位置を図2-1の位置に合わせます。
- (5) メタルSWレバーを矢印方向(図2-2参照)に押し、SUB MOTOR嵌合軸をSUB MOTOR軸嵌合穴に挿入し、シャーシ嵌合ツメをシャーシ嵌合穴に挿入します。←ボトムカバー仮装着完了。  
(この時、サブモーターワイヤーがB部正規ガイド位置にあること)
- (6) ボトムカバー仮装着後SUB MOTORを左回りに回し、図2A部端面がシャーシと密着したことを確認します。(図3参照)
- (7) 分解時に外したネジを止めます。

[注意] ① 組立時、ベルトに傷を付けない様に注意して下さい。

② 3本のネジは6kgcmのトルクで締め付けて下さい。

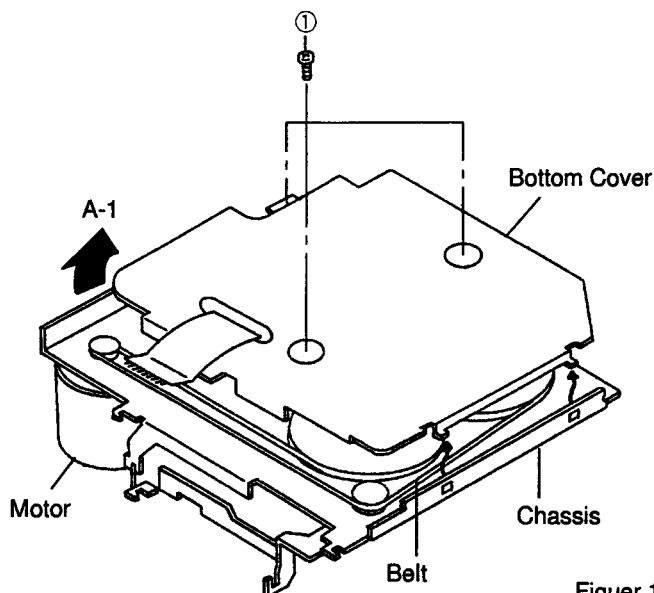


Figure 1

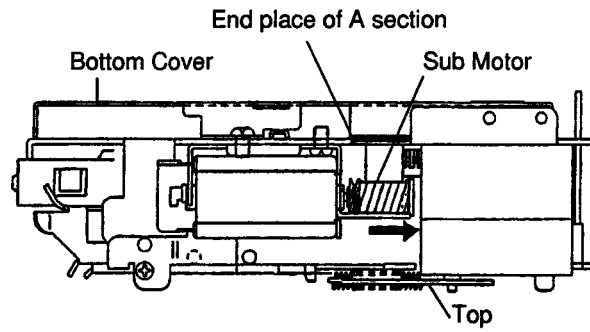
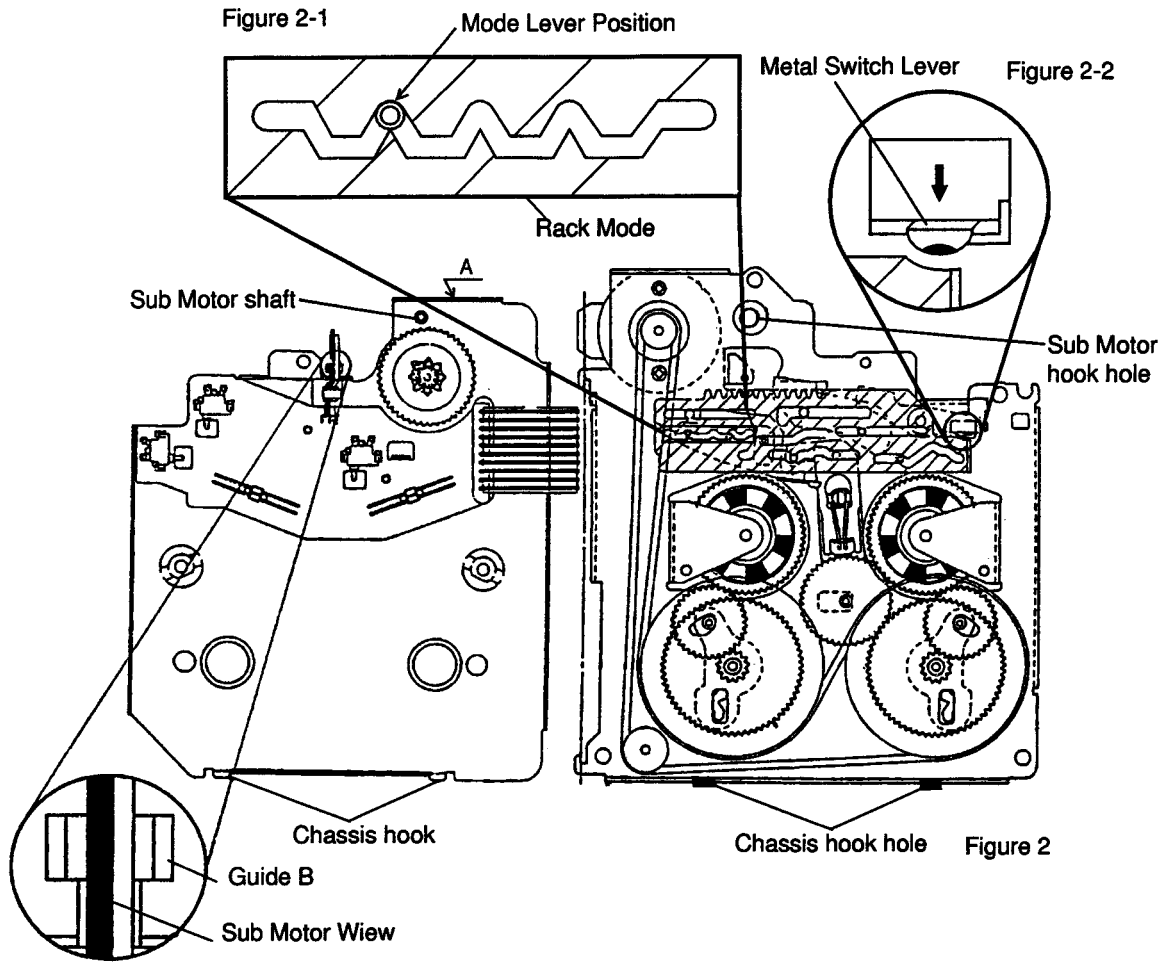


Figure 3

## 2. Replacement of the bottom cover mounting parts

## 2. ボトムカバーの取付部品の交換方法

## a. Replacement of the inner gear/planet gear/sun gear

- (1) Remove M1.2 lock washer ② as shown in Figure 4.
- (2) Pull the eject pinion out of the inner gear and remove the inner gear, eject base pinion and sun gear as shown in Figure 4.
- (3) Turn the eject base pinion, remove the three planet gear as shown in Figure 4.
- (4) Apply the grease (PG-671) to the section B-1, and mount the inner gear/planet gear/sun gear following the removal steps in the reverse order. After replacement is smoothly. (Refer to Figure 6.)

NOTE : ① Do not reuse the used lock washer for remounting.  
 ② Take care to avoid damage by piercing and tearing.  
 ③ Do not forget insertion of planet gears. Check number of the gears also.

## a. インナーギア/プラネットギア/サンギアの交換方法

- (1) ロックワッシャー② (M1.2) を外します。(図4参照)
- (2) イジェクトピニオンをインナーギアより引き抜き、インナーギア/イジェクトベースピニオン/サンギアの順に外します。(図4参照)
- (3) イジェクトベースピニオンを裏返しにしてプラネットギア (3個) を外します。(図4参照)
- (4) B-1部分にグリス (PG-671) を塗布し、取り外しの逆の手順で組み立てて下さい。尚交換後、ギアの回転がスムーズであるか確認して下さい。(図6参照)

[注意] ① 一度使用したロックワッシャーは組立時には使用しないで下さい。  
 ② 口開き、めくれのない様に注意して下さい。  
 ③ プラネットギアの挿入忘れ、不足のないこと。

## b. Replacement of the photo sensor

- (1) Remove eight solders 21 as shown in Figure 5.
- (2) Remove the photo sensor from the photo P.C.Board as shown in Figure 5.
- (3) Solder the legs so that the photo sensor is set as indicated by [ ] in Figure 5.

NOTE : ① When using the soldering iron, set the temperature of the soldering iron to  $270^{\circ} \pm 20^{\circ}\text{C}$  and the soldering time to less than 3 seconds.  
 ② Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damage.

## b. フォトセンサーの交換方法

- (1) 8ヶ所の半田21を外し、フォトセンサーをフォト基板より外します。(図5参照)
- (2) 良品のフォトセンサーを図中の [ ] と同じ方向になる様に半田付けします。(図5参照)

[注意] ① 半田ゴテを使用する際、半田ゴテ先温度  $270^{\circ} \pm 20^{\circ}\text{C}$ 、半田付け時間3秒以下とする。  
 ② ルーズ半田、ショート等のないこと。又、皮膜破れに注意すること。

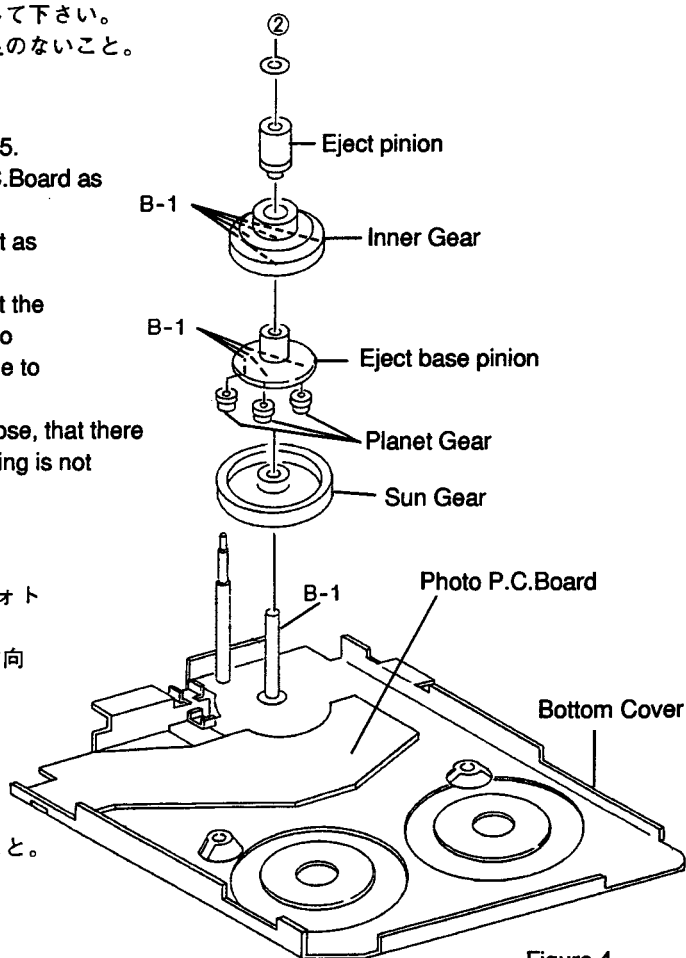


Figure 4

## c. Replacement of the detector switch (Pause/Metal/Mode)

- (1) Remove six solders 22 with which the switch is fixed as shown in Figure 5.
- (2) Prepare the terminals of the switch of the new one as shown in Figure 6.
- (3) After that, insert the switch into the photo P.C.Board, and solder the terminals.

NOTE : ① When using the soldering iron, refer to item 2-b to make sure that the temperature of the soldering iron and the soldering time are proper.

② Take care that the switch guide is properly fixed and straight.

## c. 検出スイッチ（ポーズ・メタル・モード）の交換方法

- (1) スイッチを止めている6ヶ所の半田22をそれぞれ外します。（図5参照）
- (2) 良品のスイッチの端子を水平に直します。（図6参照）
- (3) フォト基板に差し込み、端子を半田付けします。

[注意] ① 項目2-bと同様に半田ゴテのコテ先温度、半田付け時間に注意すること。

② スイッチの浮き及び傾きがない様にする事。

## 3. Replacement of the mounting parts on the rear of the main chassis

## 3. メインシャーシー裏側取付部品の交換方法

## a. Replacement of the belt

- (1) After removing the bottom cover, remove the belt.
- (2) Clean the new belt with absolute alcohol, and fix it as shown in Figure 7.

NOTE : ① When fixing the belt, make sure that is not twisted or dirty.

② When removing the belt, do not turn up the front of chassis.

## a. ベルトの交換方法

- (1) ボトムカバーを外した後、ベルトを取り外します。
- (2) 良品のベルトを無水アルコールでクリーニングしてから掛けます。（7図参照）

[注意] ① 取り付け時、ねじれ及び汚れがない様にする事。

② ベルトを取り外した時、シャーシーを表側にしないこと。

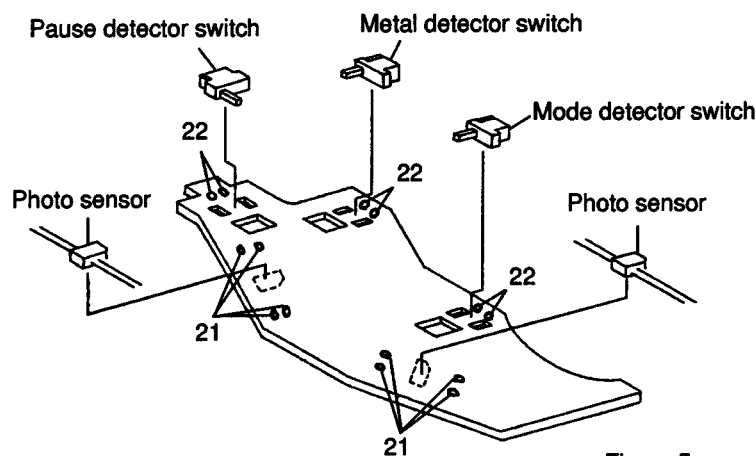


Figure 5

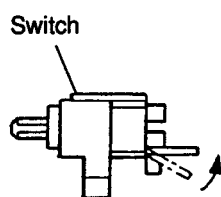


Figure 6

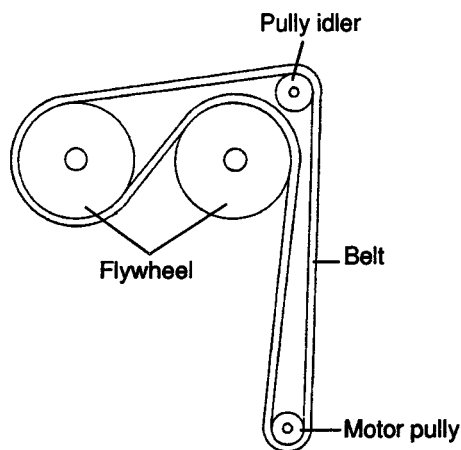


Figure 7

b. Replacement of the main motor

(1) After removing the belt, remove solder ⑫-1, and remove the wire flat (2P) from the control P.C.Board as shown in Figure 10.

(2) Remove two screws ⑦, and remove the main motor as shown in Figure 8.

(3) Mount the new motor following the removal steps in the reverse order.

NOTE : ① When using the soldering iron, set the temperature of the soldering iron to 320° ±20°C and the soldering time to less than 3 seconds.

② Since the wire flat is very easily damaged, handle it with care.

③ Fasten the two screws with a fastening torque of 2kg.cm.

b. メインモーターの交換方法

(1) ベルトを外した後、半田⑫-1を外し、ワイヤーフラット (2P) をコントロール基板より外します。(図10参照)

(2) 2本のネジ⑦を外し、メインモーターを外します。(図8参照)

(3) 良品のメインモーターを取り外し方法の逆の手順で組み立てます。

[注意] ① 半田ゴテを使用する際、半田ゴテ先温度320° ±30°C、半田付け時間3秒以下とする。

② ワイヤーフラットは損傷し易いので取扱いには十分注意すること。

③ 2本のネジは2kgcmのトルクで締め付けること。

c. Replacement of the flywheel

(1) After removing the belt, pull out the two flywheels. Take care not to loose the polyslider washer ⑤ located between the flywheel and the chassis.

(Refer to Figure 8)

(2) Fix the polyslider washer to the new flywheel and mount the flywheel to chassis.

c. フライホイールの交換方法

(1) ベルトを外した後、2個のフライホイールを引き抜きます。この時フライホイールとシャーシの間にそれぞれ1個のポリスライダワッシャー⑤がありますので紛失しない様に注意して下さい。(図8参照)

(2) 良品のフライホイールにポリスライダワッシャーを取り付け、シャーシに取り付けます。

d. Replacement of the rack mode

(1) Remove M1.7 lock washer ③, and remove the rack mode as shown in Figure 8.

(2) Apply the molykote G paste to the section D-3, and mount the rack mode following the removal steps in the reverse order.

(Refer to Figure 8)

NOTE : ① Check to see the rack mode can move left to right in its full stroke.

② Do not reuse the used lock washer for remounting.

③ Take care to avoid damage by piercing and tearing.

d. ラックモードの交換方法

(1) 2個のロックワッシャー③ (M1.7) を外し、シャーシより引き抜き、ラックモードを外します。(図8参照)

(2) 良品のラックモードのD-3部分にモリコートGペーストを塗布し、取り外しの逆の手順で取り付けます。

[注意] ① ラックモードは左右に全ストローク動作することを確認する。  
② 一度使用したロックワッシャーは組立時には使用しないで下さい。  
③ ロックワッシャー取り付け時、口開き、めくれのない様に注意すること。

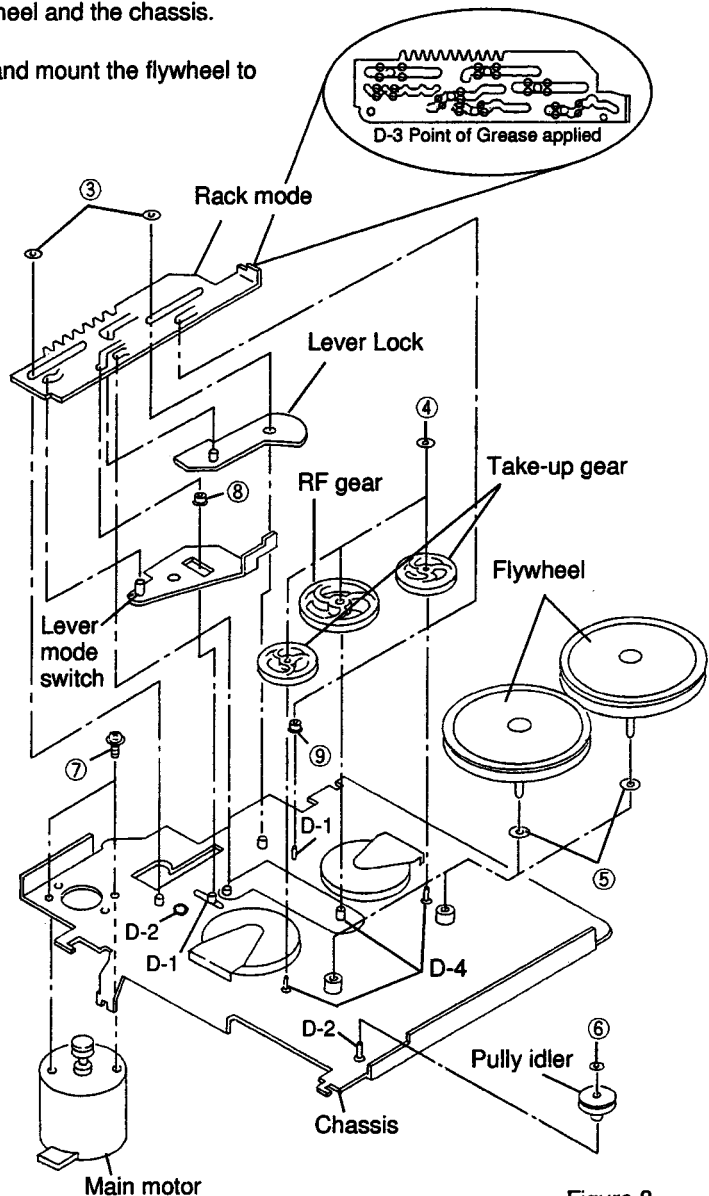


Figure 8

- e. Replacement of the lever lock/lever mode switch/roller mode
- (1) After removing the rack mode, remove the lever lock and lever mode switch. (Refer to Figure 8)
  - (2) Pull it up from the stud and remove the two roller mode ⑧, ⑨ as shown in Figure 8.
  - (3) Apply the molykote G paste to the section D-1, the grease (PG-671) to the section D-2 and mount the roller mode/lever mode switch/lever lock following the removal steps in the reverse order.
- NOTE : ① Check to see the roller mode is inserted without fail.

- e. レバーロック/レバーモードスイッチ/ローラーモードの交換方法
- (1) ラックモードを外した後、レバーロック、レバーモードスイッチの順に引き抜きます。(図8参照)
  - (2) 2個のローラーモード⑧、⑨をスタットより引き抜きます。(図8参照)
  - (3) D-1部分にモリコートGペースト、D-2部分にグリス(PG-671)を塗布し、取り外し方の逆の手順で取り付けます。
- [注意] ① ローラーモードの挿入忘れがないこと。

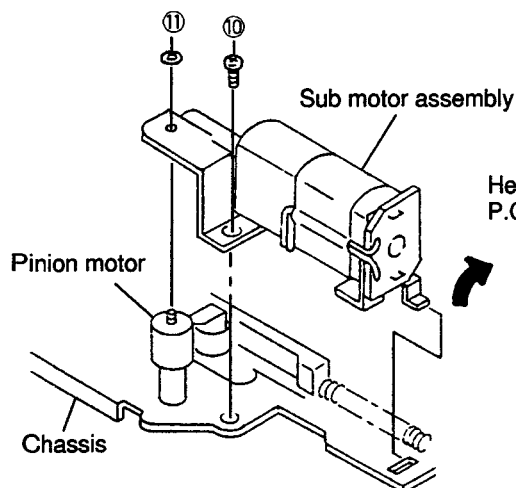


Figure 9

- f. Replacement of gears
- f-1 Replacement of the RF gear
- (1) Remove M1.2 lock washer ④, pull it up from the stud and remove the gear as shown in Figure 8.
  - (2) Mount it, following the removal steps in the reverse order.

## f-1 RFギアの交換方法

- (1) ロックワッシャー④(M1.2)を外し、スタットより引き抜きギアを外します。(図8参照)
- (2) 取り外し方の逆の手順で取り付けます。

## f-2 Replacement of the take-up gear

- (1) Remove M1.2 lock washer ④, pull it up from the stud and remove the gear as shown in Figure 8.
- (2) Mount it, following the removal steps in the reverse order.

## NOTES on f-1 and f-2 :

- ① Do not reuse the used lock washer for remounting.
- ② Take care to avoid damage by piercing and tearing.

## f-2 テイクアップギアの交換方法

- (1) 2個のロックワッシャー④(M1.2)を外し、スタットより引き抜きギアを外します。(図8参照)
- (2) 取り外し方の逆の手順で取り付けます。

## [f1, f2の注意]

- ① 一度使用したロックワッシャーは組立時には使用しないで下さい。
- ② ロックワッシャー取り付け時、口開き、めくれのない様に注意すること。

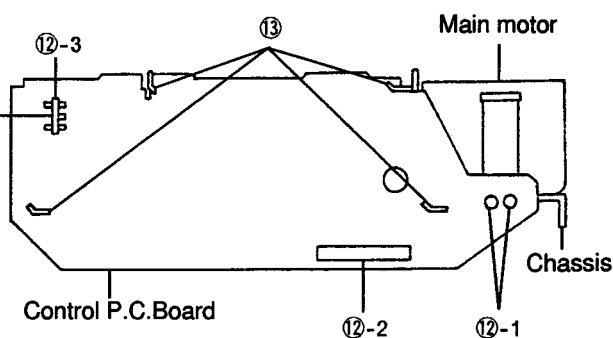


Figure 10

#### 4. Replacement of the parts mounted on the front of the main chassis

##### 4. メインシャーシ表側部品の交換方法

###### a. Replacement of the control P.C.Board

- (1) Remove four solders ⑫ and remove the head P.C.Board and the two wire flat as shown in Figure 10.
- (2) Remove four claws ⑬ and remove the P.C.Board as shown in Figure 10.
- (3) After replacing the old P.C.Board with a new one, mount it following the removal steps in the reverse order.

NOTE : ① Since the wire flat is very easily damaged, handle it with care.

- ② When using the soldering iron, set the temperature of the soldering iron to  $320^{\circ} \pm 30^{\circ}\text{C}$  and the soldering time to less than 3 seconds, but solder point ⑫-3 to less than 1 second.

- ③ Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damage.

###### a. コントロール基板の交換方法

- (1) 4ヶ所の半田⑫を外し、ヘッド基板と2本のワイヤーフラット (2P)、(10P) をそれぞれ外します。(図10参照)
- (2) 4ヶ所のツメ⑬を外し、コントロール基板を外します。(図10参照)
- (3) 良品のコントロール基板と交換後、取り外し方の逆の手順で基板を取り付けます。

[注意] ① ワイヤーフラットは損傷し易いので取扱いには十分注意すること。

- ② 半田ゴテを使用する際、半田ゴテ先温度 $320^{\circ} \pm 30^{\circ}\text{C}$ 、半田付け時間3秒以下とする。

但し、⑫-3は1秒以下とする。

- ③ ルーズ半田、ショート等のないこと。

###### b. Replacement of the sub motor assembly

- (1) Remove M1.2 lock washer ⑪ and one screw ⑩ as shown in Figure 9.
- (2) Remove the sub motor assembly by pulling it up in the direction of the arrow as shown in Figure 9.
- (3) Mount it, following the removal steps in the reverse order.

NOTE : ① Do not reuse the used lock washer for remounting.

- ② Take care to avoid damage by piercing and tearing.

- ③ Fasten the one screw with a fastening torque of 6kg.cm.

###### b. サブモーター組立の交換方法

- (1) ロックワッシャー⑪ (M1.2) と1本のネジ⑩を外します。(図9参照)
- (2) 図中の矢印の方向へ持ち上げながらサブモーター組立を外します。(図9参照)
- (3) 取り外し方の逆の手順で取り付けます。

[注意] ① 一度使用したロックワッシャーは組立時には使用しないで下さい。

- ② ロックワッシャー取り付け時、口開き、めくれのない様に注意すること。

- ③ ネジは6kgcmのトルクで締め付けること。

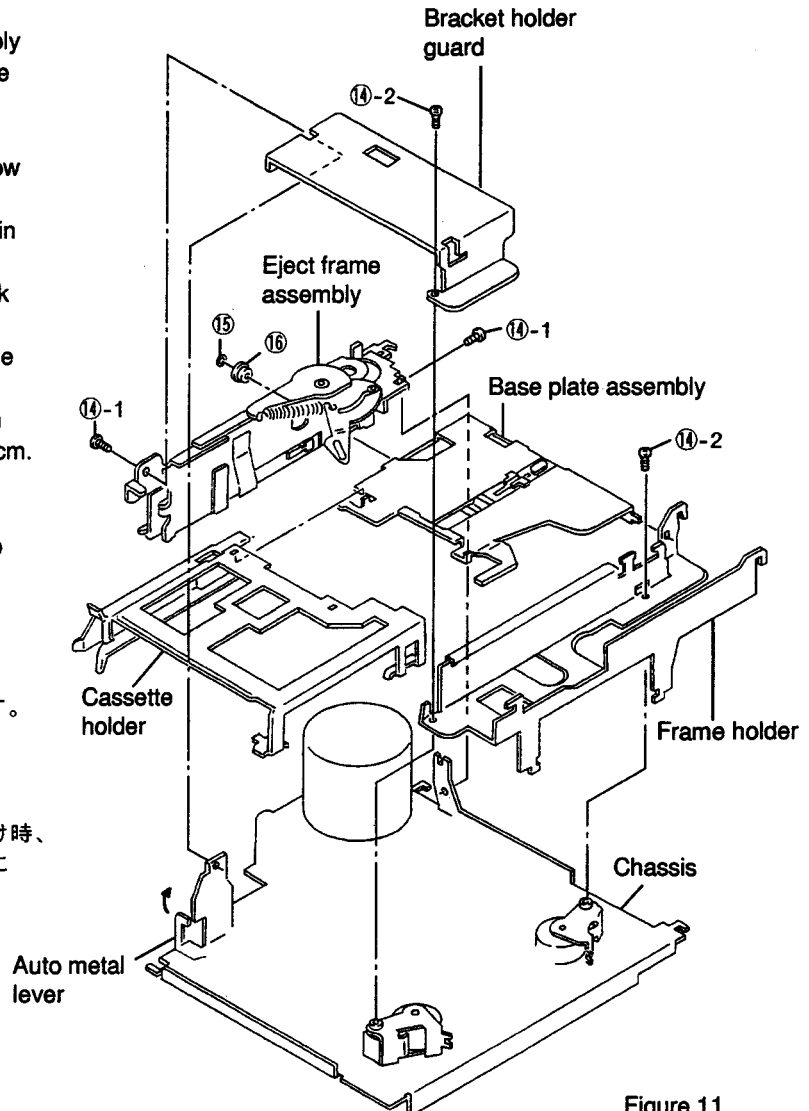


Figure 11



## c. Disassembly and assembly of the cassette holder

- (1) Remove four screws ⑭ and remove the eject frame assembly and the frame holder as shown in Figure 11.
- (2) Remove M1.2 lock washer ⑮ and plate base roller ⑯ and remove the cassette holder and the base plate assembly as shown in Figure 11.
- (3) Remount them following the removal steps in the reverse order.

NOTE : ① When mounting the cassette holder and the base plate, insert the slider shaft into the eject arm and fix them turning the slider shaft in the direction indicated by the arrow in the figure . Make sure that the cassette holder and the base plate are in the cassette-in mode during this operation.  
(Refer to Figure 12)

- ② When mounting the eject frame assembly, push the auto metal lever in the direction indicated by the arrow in the Figure 11.
- ③ When mounting the base plate assembly and the eject frame assembly, or when mounting the eject frame assembly to the chassis, do not apply excessive force to avoid deformations of the eject arm and the frame.
- ④ Do not reuse the used washers. Take care to avoid damage by piercing and tearing.
- ⑤ Fasten the two screws ⑭-1 with a fastening torque of 6kg.cm. and the two screws ⑭-2 with a fastening torque of 1.5kg.cm.

## c. カセットホルダーの分解方法及び組立方法

- (1) 4本のネジ⑭を外し、イジェクトフレーム組立及びフレームホルダーを外します。(図11参照)
- (2) ロックワッシャー⑮ (M1.2) とプレートベースローラー⑯を外し、カセットホルダーとベースプレート組立を外します。(図11参照)
- (3) 分解方法と逆の手順で取り付けます。

- 【注意】 ① カセットホルダーとベースプレート組立を組み立てる際、スライダのシャフトをイジェクトアームに挿入し、図の様に矢印方向に回しながら取り付けます。この時カセットホルダーとベースプレートはカセットインの状態で行うこと。(図12参照)
- ② イジェクトフレーム組立をシャーシに取り付ける際、オートメタルレバーを図の様に矢印方向に押しして下さい。(図11参照)
- ③ ベースプレート組立とイジェクトフレーム組立を取り付ける際、又、シャーシとイジェクトフレーム組立を取り付ける際は、必要以上の力を加えないで下さい。(イジェクトアーム、フレームの変形防止の為)
- ④ 一度使用したワッシャーは、使用しないこと。又、口開き、めくれのないこと。
- ⑤ ネジ⑭-1は6kgcm、⑭-2は1.5kgcmのトルクで締め付けること。

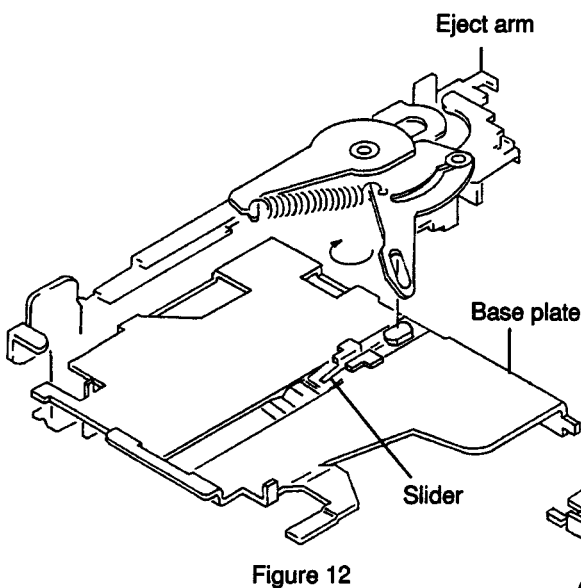


Figure 12

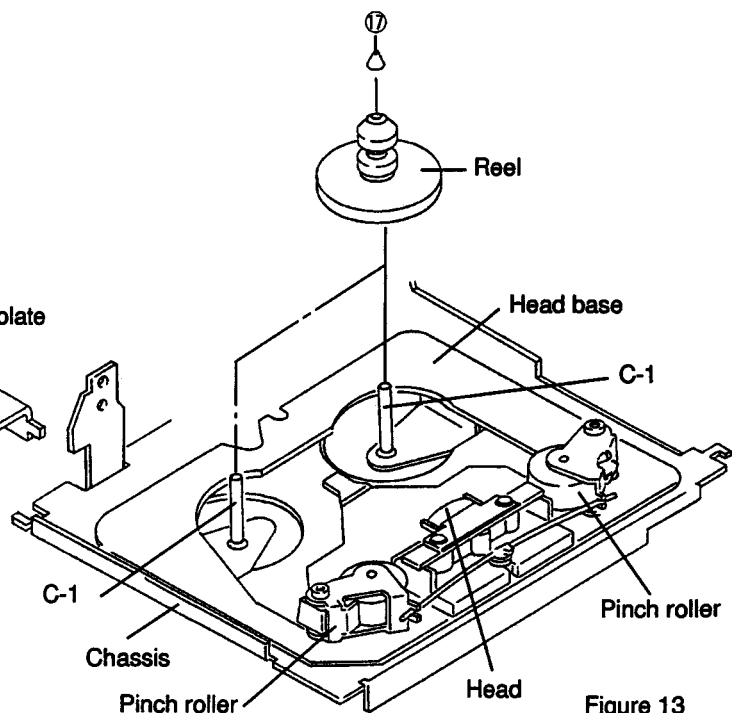


Figure 13

f. Replacement of the head

- (1) After removing the pinch roller spring, remove two screws ② as shown in Figure 15.
- (2) Remove solder 23 and remove the head from the head P.C.Board as shown in Figure 16.
- (3) After replacement, mount the new head following the removal steps in the reverse order.

NOTE : ① When using the soldering iron, set the temperature of the soldering iron to  $270^{\circ} \pm 20^{\circ}\text{C}$  and the soldering time to less than 1 second.

- ② Take care that the solder is not loose, that there is no shortcircuit and that the coating is not damage.
- ③ Do not bring the soldering iron near the head P.C.Board. Make sure that the head P.C.Board is not lifted.
- ④ Fasten the two screws with a fastening torque 1kg.cm. Note that the tension of the head spring can be decreased if the screws are fastened too strongly.

- (4) Adjust the height of the head as shown in Figure 17, 18 and 19.
  - (4) -1 Place the height adjustment gauge(AI-500) on the head base, and adjust the height so that the check bar fits in the tape head guide smoothly.
  - (4) -2 When the check bar touches the top (or bottom) of the tape guide, insert a spacer (t0.1mm or polyslider washer t0.13mm). If necessary, remove the spacer.

NOTE : ① If you do not have a height gauge like described in (4)-1, run the tape at normal speed and adjust the height of the head and the tape head guide so that the tape does not curl.

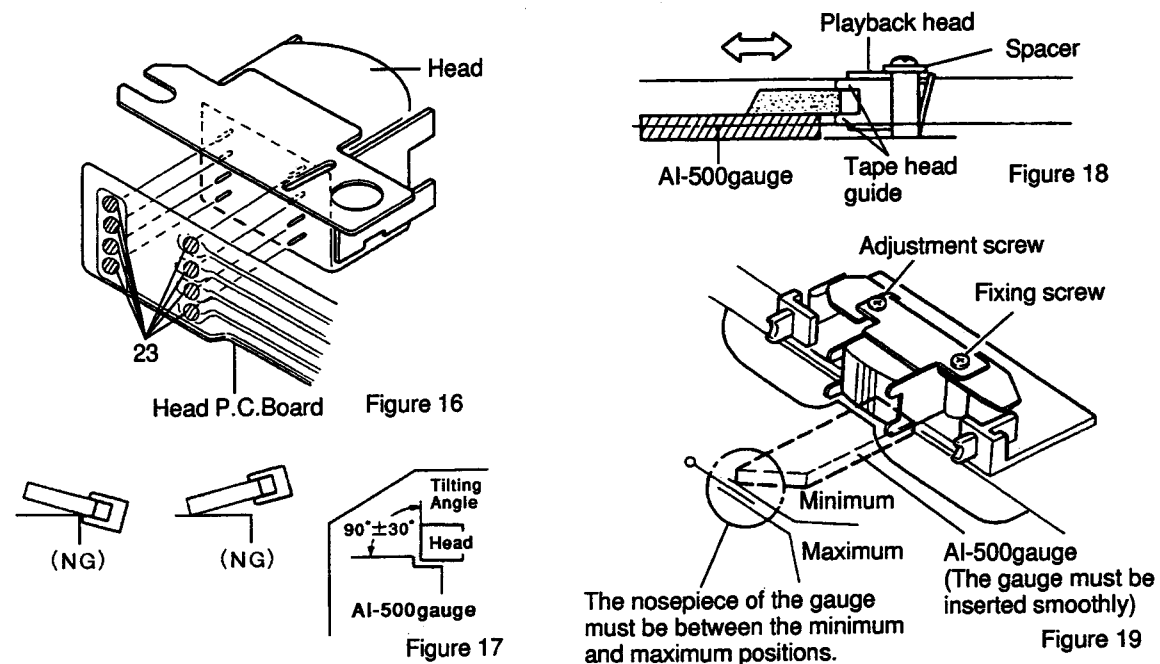
- (5) After having assembled the complete mechanism, adjust the angle of the head with test tape MTT-114NB. (Refer to chapter "Adjustment of the head angle".) After the adjustment, apply the screw lock and fix the screws.

f. ヘッドの交換方法

- (1) ピンチローラーを外した後、2本のネジ②を外します。(図15参照)
- (2) 半田23を外し、ヘッド基板からヘッドを取り外します。(図16参照)
- (3) 良品のヘッドと交換後、取り外し方の逆の手順で取り付けます。

【注意】 ① 半田ゴテを使用する際、半田ゴテ先温度 $270^{\circ} \pm 20^{\circ}\text{C}$ 、半田付け時間1秒以下とする。  
 ② ルーズ半田、ショート等のないこと。  
 ③ ヘッド基板には、コテ先を当てないこと。又、ヘッド基板に浮きがない様注意すること。  
 ④ 2本のネジは1kgcmのトルクで締め付けること。但し、ネジを締め過ぎるとヘッドバネがへたり、バネ性がなくなるので注意すること。

- (4) ヘッド高さ調整を行います。(図17、18、19参照)
    - (4) -1 高さゲージ (AI-500) をヘッドベースにのせ、チェック・バーがテープヘッドガイドにスムーズに入る高さに合わせます。
    - (4) -2 テープガイドの上 (又は下) にチェック・バーが当たる時は、スペーサー (t0.1mm又はポリスライダークワッシャーt0.13mm) を一枚入れます。又は、スペーサーを外すことによって当りをなくす様になります。
- 【注意】 ① (4) -1の様に高さゲージがない場合は、テープを通常走行させ、テープカーリングが生じなくなる様に高さ (ヘッド及びテープヘッドガイド) を調整します。
- (5) 最終的な1台のメカと言う状態に組み上げた後、テストテープ (MTT-114NB) でヘッドの角度を調整します。(ヘッド角度調整方法の項目を参照して下さい。) 調整後、ネジロックを塗布し、ネジを固定します。



# Exploded View (Cassette Deck Mechanism)

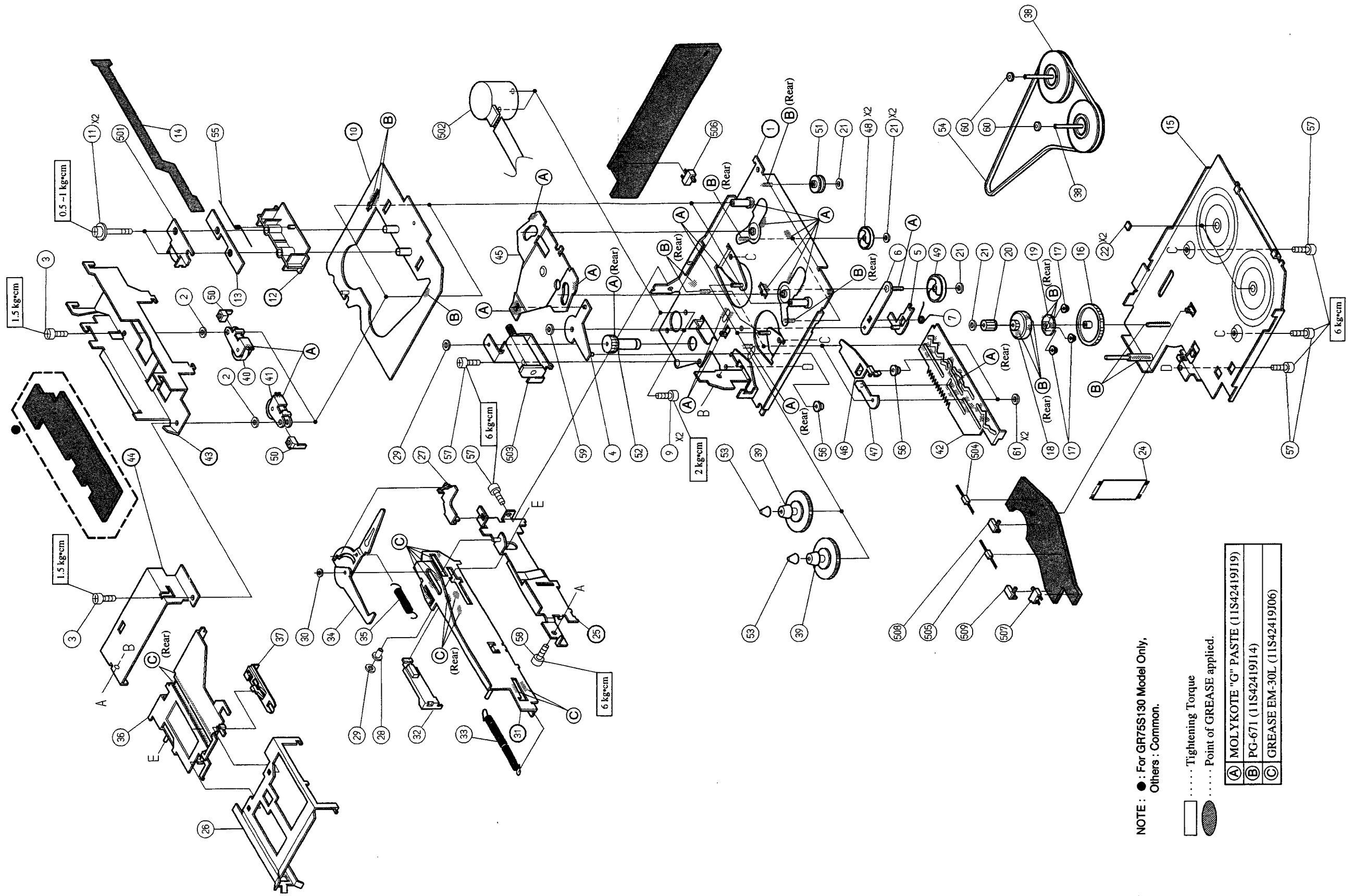
1

2

3

4

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NOTE : ● : For GR75S130 Model Only.  
Others : Common.

..... Tightening Torque  
..... Point of GREASE applied.

(A)	MOLYKOTE "G" PASTE (11S42419J19)
(B)	PG-671 (11S42419J14)
(C)	GREASE EM-30L (11S42419J06)

A

B -23-

C

D

E

F -24-

G

# Cassette Deck Mechanism Assembly Parts List

NOTE: No parts number on parts list are not supplied.

Symbol No.	Index	Part No.	Description	Symbol No.	Index	Part No.	Description	
		04B41345P32	Washer, Lock (M3.1)	55	2-B	41A10387W01	Spring, Pinch Roller	
		03S43997P63	Screw, Pan (M1.7×4)	56		43A71774W01	Roller, Mode	
	3-D	01A71716W01	Assy., Riv. Select Swing	57		03S44205G30	Screw, Pan (M2.6×4)	
	2-F	01A71714W01	Assy., Riv. RF Lever A	58	4-D	03A80629W01	Screw, Special (M2.6×6)	
	2-E	01A71715W01	Assy., Riv. RF Lever B	59	3-D	04B41345P02	Washer, Lock (M1.7)	
				60	2-F	04S40075G05	Washer, Polyslider (M2.1)	
	2-F	41A71781W01	Spring, RF	● or	2-F	04T55449W01	Washer, Teflon	
	3-D	03C42723U12	Screw, Cup (M2×2.5)	61	3-F	04B41345P13	Washer, Lock (M1.7)	
		03A80452W01	Screw, F Locks (M2×10.7)	<b>Miscellaneous</b>				
	2-B	41A31756W01	Spring, Head					
○	2-B	84T45462W01	Head P.C.Board	501	2-A	88T75612W01	Head	
●	2-B	84T25151W01	Head P.C.Board	○	502	2-C	01V74500W16	Assy., Main Motor (13.2V-55mA)
	2-G	44A71747W01	Gear, Sun	●	502	2-C	01V84200W63	Assy., Main Motor (6V-90mA)
		44A71748W01	Gear, Planet	503	3-D	01V74500W23	Assy., Sub Motor (7V-370mA)	
	3-F	44A71749W01	Gear, Inner	504	3-F	51T63433F03	Sensor, Photo ON2170-R2	
	2-F	44A71751W01	Pinion, Eject Base	505	4-F	51T63433F03	Sensor, Photo ON2170-R2	
				506	2-D	40T15222W01	Switch, Detector (PACK IN)	
20	2-F	44A71752W01	Pinion, Eject	507	4-F	40T15382W02	Switch, Detector (PAUSE)	
21		04B41345P11	Washer, Lock (M1.2)	508	4-F	40T15382W02	Switch, Detector (MODE)	
22	2-G	43A41656W01	Spacer, UHMW-PE	509	4-F	40T15382W02	Switch, Detector (METAL)	
24	3-G	30T65174W07	Wire, Flat 10P					
26	5-B	07B71778W01	Holder, Cassette					
27	3-C	45A71736W01	Lever, Pack In Switch					
28	5-C	43A71775W01	Roller, Plate Base					
29		04B41345P01	Washer, Lock (M1.2)					
30	4-B	04B41345P15	Washer, Lock (M1.2)					
32	5-C	44A71753W01	Rack, GR-S					
33	5-C	41A80634W01	Spring, Rack					
34	4-C	01A71720W01	Assy., Riv. Eject Arm A					
35	4-C	41B63283F11	Spring					
36	4-A	01A71712W01	Assy., Riv. Plate Base					
37	3-B	45B71750W01	Slider					
38		01A71783W01	Flywheel					
39		01A71784W01	Reel					
40	3-B	01B81372W01	Assy., Pinch Roller					
41	3-B	01B81372W02	Assy., Pinch Roller					
42	3-F	44B71726W01	Rack, Mode					
45	2-C	45B71729W01	Lever, Select					
46	3-E	45A71737W01	Lever, Mode Switch					
47	3-E	45A71733W01	Lever, Lock					
48	2-E	44A71741W01	Gear, Take Up					
49	2-F	44A71742W01	Gear, RF					
50		43A71743W01	Guide, Pack					
51	2-E	49A71744W01	Pulley, Idler					
52	3-D	44A71746W01	Pinion, Motor					
53		49A71003W01	Reel, Cap					
54	2-F	42A71780W01	Belt					

NOTE : ○ : For GR75S120 Model Only, ● : For GR75S130 Model Only, Others : Common.

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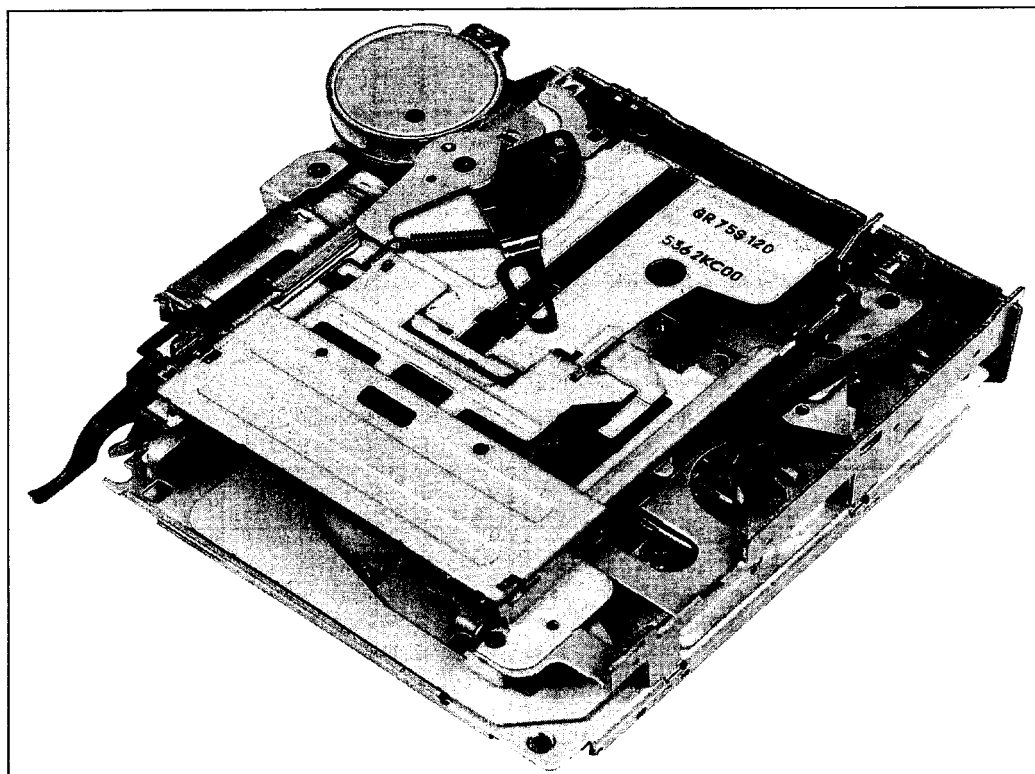
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68E23241S01  
Printed in Japan

# ///ALPINE® SERVICE MANUAL

## Cassette Deck Mechanism

### ADDENDUM & REVISED

- This manual is described on GR75S310 only. The GR75S310 is developed from GR-S SERIES. For information that is not mentioned in this service manual, refer to the Service Manual • GR-S SERIES (68E23241S01).
- 当マニュアルはGR75S310についてのみ記載しております。又、GR-S SERIESがベースモデルとなっておりますので、相違部分のみ記載しております。詳細についてはGR-S SERIES (68E23241S01) を参照願います。



# GR-S SERIES

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Basic Operation of GR-S Mechanism  
 Disassembly, Assembly and Replacement of Function Parts } Refer to the Service Manual · GR-S SERIES  
 (Part No. 68E23241S01).

NOTE : Due to continuing product improvement, specifications and designs are subject to change without notice.

## Cassette Deck Mechanism Assembly Parts List

NOTE: The parts is not mentioned, refer to the Service Manual · DR-S SERIES (Part No.68E23241S01).

Symbol No.	Index	Part No.	Description	Symbol No.	Index	Part No.	Description
4	3-D	01A90342W01	Assy., Riv. Select Swing	45	2-C	45B90320W01	Lever, Select
5	2-F	01A90340W01	Assy., Riv. RF Lever A	46	3-E	45A71737W02	Lever, Mode Switch
6	2-F	01A90341W01	Assy., Riv. RF Lever B	47	3-E	45A71733W02	Lever, Lock
11	2-A	03A80452W02	Screw, F Locks (M2X10.7)	53		49A81855W01	Reel, Cap
13	2-B	41A31756W02	Spring, Head	54	2-F	42A71780W02	Belt
26	5-B	07B40012W02	Holder, Cassette	55	2-B	41A10387W02	Spring, Pinch Roller
27	3-C	45A71736W02	Lever, Pack In Switch	62	3-B	45A90322W01	Lever, Eject Arm A
34	4-B	01A90346W01	Assy., Riv. Eject Arm (B)	Miscellaneous			
36	4-A	01A90338W01	Assy., Riv. Plate Base	501	2-B	88T95215W02	Head
38		01A90350W01	Assy., Flywheel	503	3-C	01V91700W81	Assy., Sub Motor (7V-370mA)
40	3-B	01B30863W01	Assy., Pinch Roller				
41	3-B	01B30863W02	Assy., Pinch Roller				
42	3-F	44B90318W01	Rack, Mode				

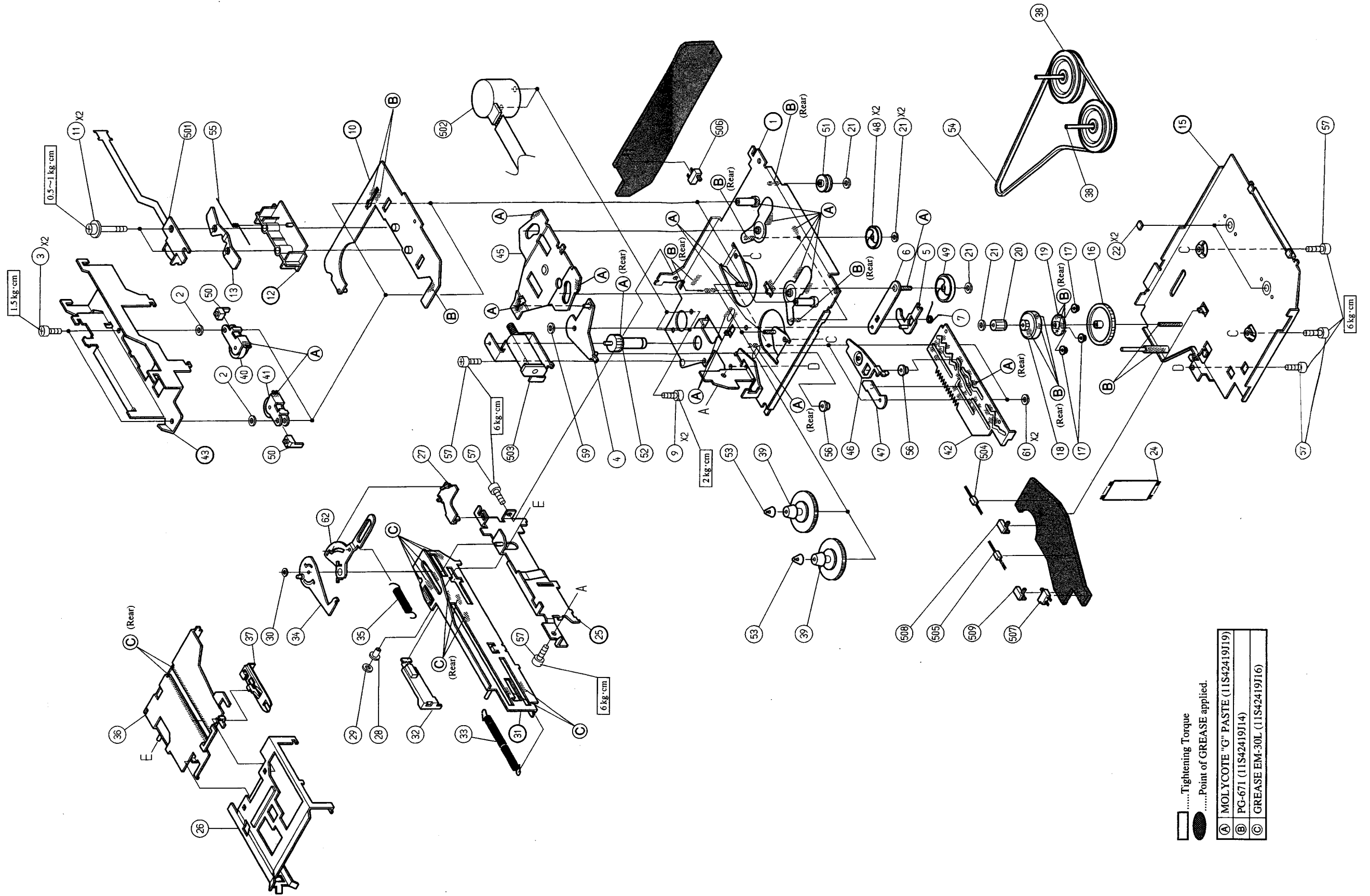
## カセットデッキメカニズム関係部品表

※ 記載されていない部品については、サービスマニュアル・GR-S SERIES (68E23241S01) を参照願います。

記号	索引	部品番号	部品名	標準卸価格	記号	索引	部品番号	部品名	標準卸価格
4	3-D	01A90342W01	Assy., Riv. Select Swing	—	45	2-C	45B90320W01	Lever, Select	—
5	2-F	01A90340W01	Assy., Riv. RF Lever A	—	46	3-E	45A71737W02	Lever, Mode Switch	—
6	2-F	01A90341W01	Assy., Riv. RF Lever B	—	47	3-E	45A71733W02	Lever, Lock	—
11	2-A	03A80452W02	Screw, F Locks (M2X10.7)	45	53		49A81855W01	Reel, Cap	45
13	2-B	41A31756W02	Spring, Head	60	54	2-F	42A71780W02	Belt	—
26	5-B	07B40012W02	Holder, Cassette	260	55	2-B	41A10387W02	Spring, Pinch Roller	—
27	3-C	45A71736W02	Lever, Pack In Switch	—	62	3-B	45A90322W01	Lever, Eject Arm A	—
34	4-B	01A90346W01	Assy., Riv. Eject Arm (B)	—	その他の電気部品				
36	4-A	01A90338W01	Assy., Riv. Plate Base	—	501	2-B	88T95215W02	Head	1,210
38		01A90350W01	Assy., Flywheel	—	503	3-C	01V91700W81	Assy., Sub Motor (7V-370mA)	1,440
40	3-B	01B30863W01	Assy., Pinch Roller	240					
41	3-B	01B30863W02	Assy., Pinch Roller	240					
42	3-F	44B90318W01	Rack, Mode	—					

# Exploded View (Cassette Deck Mechanism)

1  
2  
3  
4  
5



A | B -3- | C | D | E | F -4- | G |

.....	Tightening Torque
.....	Point of GREASE applied.
(A)	MOLYCOTE "G" PASTE (11S42419J19)
(B)	PG-671 (11S42419J14)
(C)	GREASE EM-30L (11S42419J16)



# MEMO

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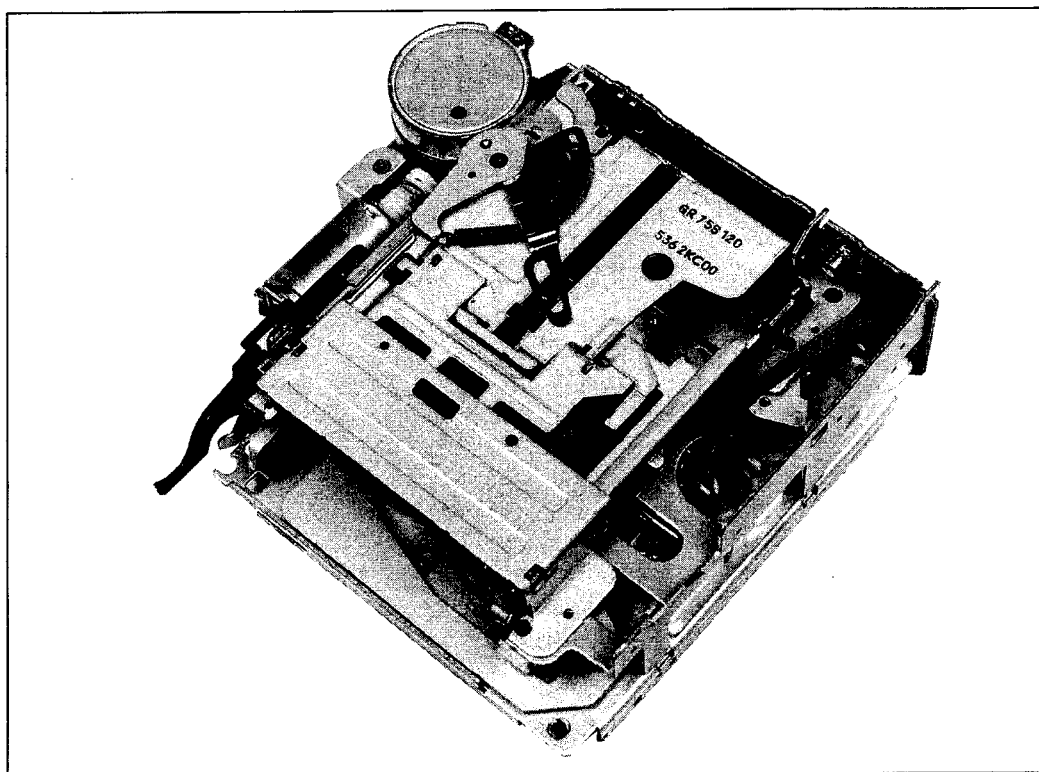
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Printed in Japan

# ALPINE<sup>®</sup> SERVICE MANUAL

## Cassette Deck Mechanism

### ADDENDUM & REVISED (II)

- This manual is described on GR75S410/42Y only. The GR75S410/42Y is developed from GR-S SERIES. For information that is not mentioned in this service manual, refer to the Service Manual • GR-S SERIES (68E23241S01).
- 当マニュアルはGR75S410/42Yについてのみ記載しております。又、GR-S SERIESがベースモデルとなっておりますので、相違部分のみ記載しております。詳細についてはGR-S SERIES (68E23241S01) を参照願います。



# GR-S SERIES

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Basic Operation of GR-S Mechanism

Disassembly, Assembly and Replacement of Function Parts

Refer to the Service Manual ·  
GR-S SERIES  
(Part No. 68E23241S01).

---

NOTE: Due to continuing product improvement, specifications and designs are subject to change without notice.

# Cassette Deck Mechanism Assembly Parts List

NOTE: No parts number on parts list are not supplied.

Symbol No.	Index	Part No.	Description	Symbol No.	Index	Part No.	Description
2		04B41345P32	Washer, Lock (M3.1)	57		03S44205G30	Screw, Pan (M2.6X4)
3		03S43997P63	Screw, Pan (M1.7X4)	● 58	4-D	03A80629W01	Screw, Special (M2.6X6)
4	3-D	01A90342W02	Assy., Riv. Select Swing	59	3-D	04B41345P02	Washer, Lock (M1.7)
5	2-F	01A71714W01	Assy., Riv. RF Lever A	● 60	2-F	04S40075G05	Washer, Polyslider (M2.1)
6	2-E	01A90341W02	Assy., Riv. RF Lever B	● or	2-F	04T55449W01	Washer, Polyslider (M2.1)
7	2-F	41A71781W01	Spring, RF	61	3-F	04B41345P23	Washer, Lock (M1.7)
9	3-D	03C42723U12	Screw, Cup (M2X2.5)	62	3-B	45A90322W02	Lever, Eject Arm A
11	2-A	03A80452W02	Screw, F Locks (M2X10.7)	<b>Miscellaneous</b>			
13	2-B	41A31756W01	Spring, Head	○ 501	2-B	88T95215W02	Head
16	2-F	44A71747W01	Gear, Sun	● 501	2-B	88T75612W03	Head
17		44A71748W01	Gear, Planet	○ 502	2-C	01V94900W74	Assy., Main Motor (13.2V-95mA)
18	3-F	44A71749W01	Gear, Inner	● 502	2-C	01V74500W16	Assy., Main Motor (13.2V-95mA)
19	2-F	44A71751W01	Pinion, Eject Base	503	3-C	01V74500W23	Assy., Sub Motor (7V-370mA)
20	2-F	44A71752W01	Pinion, Eject	504	3-F	51T63433F03	Sensor, Photo ON2170-R2
21		04B41345P11	Washer, Lock (M1.2)	505	4-F	51T63433F03	Sensor, Photo ON2170-R2
22	2-G	43A41656W01	Spacer, UHMW-PE	506	2-D	40T15222W01	Switch, Detector (PACK IN)
24	3-G	30T65174W07	Wire, Flat 10P	507	4-F	40T15382W02	Switch, Detector (PAUSE)
26	5-B	07B71778W01	Holder, Cassette	508	4-E	40T15382W02	Switch, Detector (MODE)
27	3-C	45A71736W03	Lever, Pack In Switch	509	4-F	40T15382W02	Switch, Detector (METAL)
28	4-C	43A71775W01	Roller, Plate Base				
29	4-C	04B41345P01	Washer, Lock (M1.2)				
30	4-B	04B41345P15	Washer, Lock (M1.2)				
32	4-C	44A71753W01	Rack, GR-S				
33	4-C	41A80634W01	Spring, Rack				
34	4-B	01A90346W02	Assy., Riv. Eject Arm (B)				
35	4-C	41B63283F11	Spring				
36	4-A	01A71712W01	Assy., Riv. Plate Base				
37	4-B	45B71750W01	Slider				
○ 38		01A90350W01	Assy., Flywheel				
● 38		01A71783W10	Assy., Flywheel				
39		01A71784W01	Reel				
40	3-B	01B30863W01	Assy., Pinch Roller				
41	3-B	01B30863W02	Assy., Pinch Roller				
42	3-F	44B71726W01	Rack, Mode				
45	2-C	45B90320W02	Lever, Select				
46	3-E	45A71737W03	Lever, Mode Switch				
47	3-E	45A71733W03	Lever, Lock				
48	2-E	44A71741W01	Gear, Take Up				
49	2-F	44A71742W01	Gear, RF				
50		43A71743W01	Guide, Pack				
51	2-E	49A71744W01	Pulley, Idler				
52	3-D	44A71746W01	Pinion, Motor				
53		49A81855W01	Reel, Cap				
54	2-F	42A71780W02	Belt				
55	2-B	41A10387W02	Spring, Pinch Roller				
56	3-E	43A71774W01	Roller, Mode				

NOTE: ○: For GR75S410 Model Only, ●: For GR75S42Y Model Only, Others: Common.

# カセットデッキメカニズム関係部品表

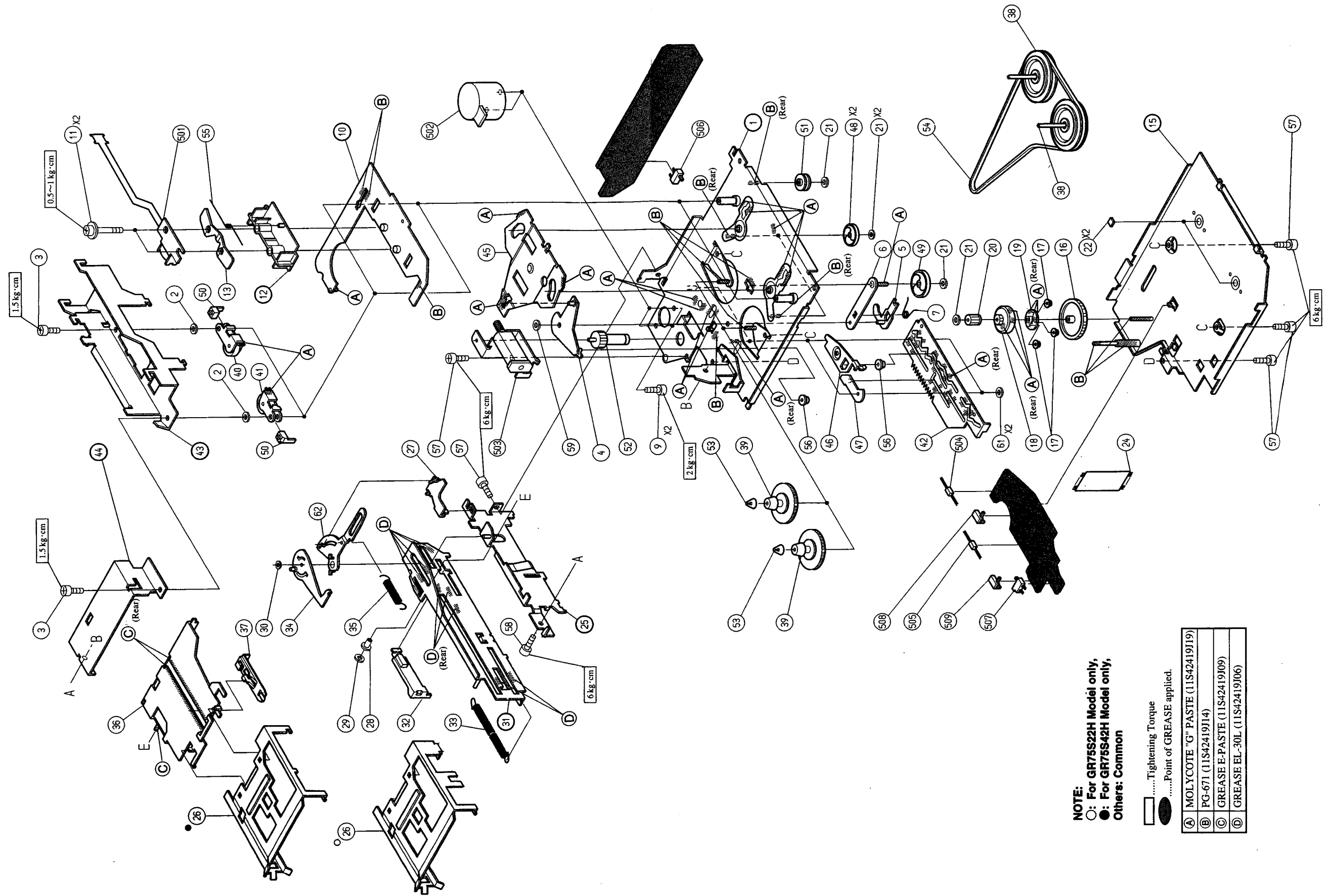
※ 部品表に記入されていない部品は供給されません。

記号	索引	部品番号	部品名	標準 卸価格	記号	索引	部品番号	部品名	標準 卸価格
2		04B41345P32	Washer, Lock (M3.1)	45	56	3-E	43A71774W01	Roller, Mode	50
3		03S43997P63	Screw, Pan (M1.7X4)	45	57		03S44205G30	Screw, Pan (M2.6X4)	45
4	3-D	01A90342W02	Assy., Riv. Select Swing	—	● 58	4-D	03A80629W01	Screw, Special (M2.6X6)	50
5	2-F	01A71714W01	Assy., Riv. RF Lever A	120	59	3-D	04B41345P02	Washer, Lock (M1.7)	45
6	2-E	01A90341W02	Assy., Riv. RF Lever B	—	● 60	2-F	04S40075G05	Washer, Polyslider (M2.1)	45
7	2-F	41A71781W01	Spring, RF	45	● or	2-F	04T55449W01	Washer, Polyslider (M2.1)	45
9	3-D	03C42723U12	Screw, Cup (M2X2.5)	45	61	3-F	04B41345P23	Washer, Lock (M1.7)	45
11	2-A	03A80452W02	Screw, F Locks (M2X10.7)	45	62	3-B	45A90322W02	Lever, Eject Arm A	—
13	2-B	41A31756W01	Spring, Head	60	その他の電気部品				
16	2-F	44A71747W01	Gear, Sun	50					
17		44A71748W01	Gear, Planet	45	○ 501	2-B	88T95215W02	Head	1,210
18	3-F	44A71749W01	Gear, Inner	—	● 501	2-B	88T75612W03	Head	1,240
19	2-F	44A71751W01	Pinion, Eject Base	100	○ 502	2-C	01V94900W74	Assy., Main Motor (13.2V-95mA)	1,460
20	2-F	44A71752W01	Pinion, Eject	90	● 502	2-C	01V74500W16	Assy., Main Motor (13.2V-95mA)	1,480
21		04B41345P11	Washer, Lock (M1.2)	45	503	3-C	01V74500W23	Assy., Sub Motor (7V-370mA)	1,500
22	2-G	43A41656W01	Spacer, UHMW-PE	45	504	3-F	51T63433F03	Sensor, Photo ON2170-R2	310
24	3-G	30T65174W07	Wire, Flat 10P	160	505	4-F	51T63433F03	Sensor, Photo ON2170-R2	310
26	5-B	07B71778W01	Holder, Cassette	240	506	2-D	40T15222W01	Switch, Detector (PACK IN)	130
27	3-C	45A71736W03	Lever, Pack In Switch	—	507	4-F	40T15382W02	Switch, Detector (PAUSE)	130
28	4-C	43A71775W01	Roller, Plate Base	50	508	4-E	40T15382W02	Switch, Detector (MODE)	130
29	4-C	04B41345P01	Washer, Lock (M1.2)	45	509	4-F	40T15382W02	Switch, Detector (METAL)	130
30	4-B	04B41345P15	Washer, Lock (M1.2)	45					
32	4-C	44A71753W01	Rack, GR-S	130					
33	4-C	41A80634W01	Spring, Rack	80					
34	4-B	01A90346W02	Assy., Riv. Eject Arm (B)	—					
35	4-C	41B63283F11	Spring	45					
36	4-A	01A71712W01	Assy., Riv. Plate Base	260					
37	4-B	45B71750W01	Slider	45					
○ 38		01A90350W01	Assy., Flywheel	380					
● 38		01A71783W10	Assy., Flywheel	450					
39		01A71784W01	Reel	370					
40	3-B	01B30863W01	Assy., Pinch Roller	240					
41	3-B	01B30863W02	Assy., Pinch Roller	240					
42	3-F	44B71726W01	Rack, Mode	120					
45	2-C	45B90320W02	Lever, Select	—					
46	3-E	45A71737W03	Lever, Mode Switch	—					
47	3-E	45A71733W03	Lever, Lock	—					
48	2-E	44A71741W01	Gear, Take Up	45					
49	2-F	44A71742W01	Gear, RF	45					
50		43A71743W01	Guide, Pack	45					
51	2-E	49A71744W01	Pulley, Idler	45					
52	3-D	44A71746W01	Pinion, Motor	60					
53		49A81855W01	Reel, Cap	45					
54	2-F	42A71780W02	Belt	140					
55	2-B	41A10387W02	Spring, Pinch Roller	45					

注記 : ○ : GR75S410 モデル専用, ● : GR75S42Y モデル専用, その他 : 共通

# Exploded View (Cassette Deck Mechanism)

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A  
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F -6-  
G



**NOTE:**  
 ○: For GR75S22H Model only,  
 ●: For GR75S42H Model only,  
 Others: Common

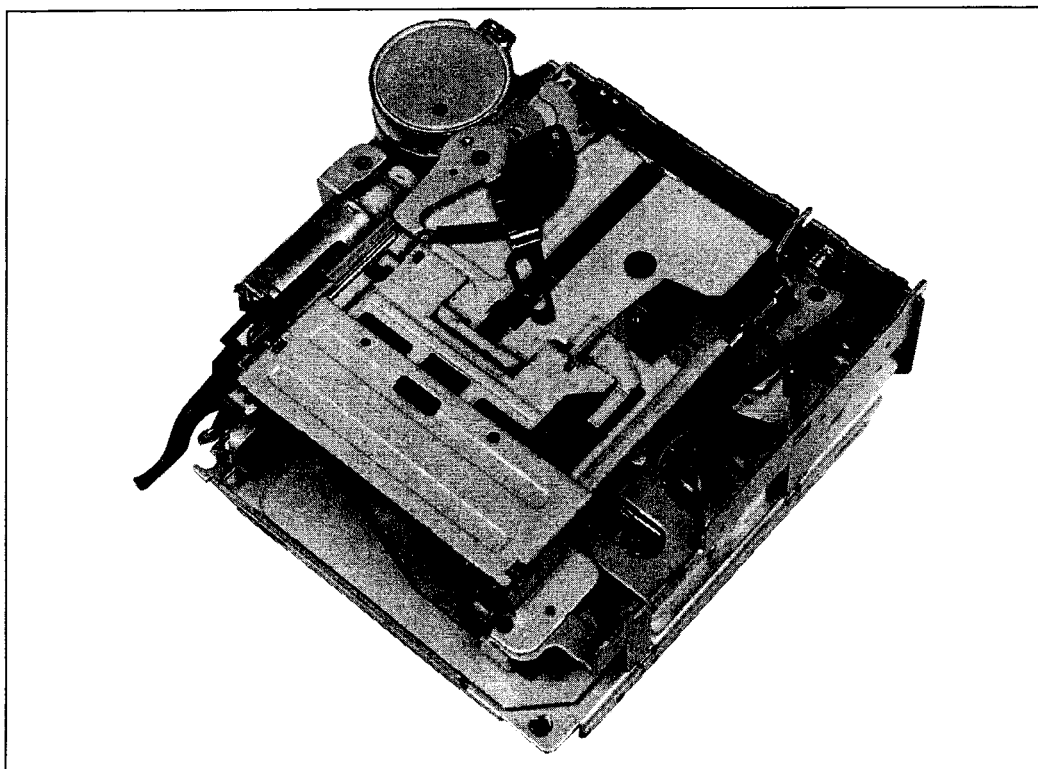
○	.....Tightening Torque
●	.....Point of GREASE applied.
Ⓐ	MOLYCOTE "G" PASTE (11S42419119)
Ⓑ	PG-671 (11S42419114)
Ⓒ	GREASE E-PASTE (11S42419109)
Ⓓ	GREASE EL-30L (11S42419106)

# ALPINE<sup>®</sup> SERVICE MANUAL

## Cassette Deck Mechanism

### ADDENDUM & REVISED (III)

- This manual is described on GR75S22H/42H only. The GR75S22H/42H is developed from GR-S SERIES. For information that is not mentioned in this service manual, refer to the Service Manual • GR-S SERIES (68E26177S01).
- 当マニュアルはGR75S22H/42Hについてのみ記載しております。又、GR-S SERIESがベースモデルとなっておりますので、相違部分のみ記載しております。詳細についてはGR-S SERIES (68E26177S01) を参照願います。



# GR-S SERIES

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## Contents

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Cassette Deck Mechanism Assembly Parts List.....	3 to 4
Exploded View (Cassette Deck Mechanism) .....	5 to 6

Basic Operation of GR-S Mechanism

Disassembly, Assembly and Replacement of Function Parts

Refer to the Service Manual -  
GR-S SERIES  
(Part No. 68E23241S01).

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NOTE: Due to continuing product improvement, specifications and designs are subject to change without notice.



# Cassette Deck Mechanism Assembly Parts List

NOTE: No parts number on parts list are not supplied.

Symbol No.	Index	Part No.	Description	Symbol No.	Index	Part No.	Description
		04B41345P32	Washer, Lock (M3.1)	● 47	3-E	45A71733W03	Lever, Lock
		03S43997P63	Screw, Pan (M1.7X4)	48	2-E	44A71741W01	Gear, Take Up
○ 4	3-D	01A90342W01	Assy., Riv. Select Swing	49	2-F	44A71742W01	Gear, RF
● 4	3-D	01A90342W02	Assy., Riv. Select Swing	50		43A71743W01	Guide, Pack
○ 5	2-F	01A90340W01	Assy., Riv. RF Lever A	51	2-E	49A71744W01	Pulley, Idler
● 5	2-F	01A71714W01	Assy., Riv. RF Lever A	52	3-D	44A71746W01	Pinion, Motor
○ 6	2-E	01A90341W01	Assy., Riv. RF Lever B	53		49A81855W01	Reel, Cap
● 6	2-E	01A90341W02	Assy., Riv. RF Lever B	54	2-F	42A71780W02	Belt
7	2-F	41A71781W01	Spring, RF	55	2-B	41A10387W02	Spring, Pinch Roller
9	3-D	03C42723U12	Screw, Cup (M2X2.5)	56		43A71774W01	Roller, Mode
11	2-A	03A80452W02	Screw, F Locks (M2X10.7)	57		03S44205G30	Screw, Pan (M2.6X4)
13	2-B	41A31756W01	Spring, Head	58	4-D	03A80629W01	Screw, Special (M2.6X6)
16	2-F	44A71747W01	Gear, Sun	59	3-D	04B41345P02	Washer, Lock (M1.7)
17		44A71748W01	Gear, Planet	61	3-F	04B41345P23	Washer, Lock (M1.7)
18	3-F	44A71749W01	Gear, Inner	○ 62	3-B	45A90322W01	Lever, Eject Arm A
19	2-F	44A71751W01	Pinion, Eject Base	● 62	3-B	45A90322W02	Lever, Eject Arm A
20	2-F	44A71752W01	Pinion, Eject	<b>Miscellaneous</b>			
21		04B41345P11	Washer, Lock (M1.2)	○ 501	2-B	88T75612W03	Head
22	2-G	43A41656W01	Spacer, UHMW-PE	○ 502	2-C	01V74500W16	Assy., Main Motor (13.2V-95mA)
24	3-G	30T65174W07	Wire, Flat 10P	● 502	2-C	01V94900W74	Assy., Main Motor (13.2V-95mA)
○ 26	5-C	07B40012W01	Holder, Cassette	○ 503	3-C	01V91700W81	Assy., Sub Motor (7V-370mA)
● 26	5-B	07B71778W01	Holder, Cassette	● 503	3-C	01V11700Y92	Assy., Sub Motor (7V-370mA)
○ 27	3-C	45A71736W02	Lever, Pack In Switch	504	3-F	51T63433F03	Sensor, Photo ON2170-R2
● 27	3-C	45A71736W03	Lever, Pack In Switch	505	4-F	51T63433F03	Sensor, Photo ON2170-R2
28	4-C	43A71775W01	Roller, Plate Base	506	2-D	40T15222W01	Switch, Detector (PACK IN)
29	4-C	04B41345P01	Washer, Lock (M1.2)	507	4-F	40T15382W02	Switch, Detector (PAUSE)
30	4-B	04B41345P15	Washer, Lock (M1.2)	508	4-E	40T15382W02	Switch, Detector (MODE)
32	4-C	44A71753W01	Rack, GR-S	509	4-F	40T15382W02	Switch, Detector (METAL)
33	4-C	41A80634W01	Spring, Rack				
○ 34	4-B	01A90346W01	Assy., Riv. Eject Arm (B)				
● 34	4-B	01A90346W02	Assy., Riv. Eject Arm (B)				
35	4-C	41B63283F11	Spring				
○ 36	4-A	01A40024W03	Assy., Riv. Plate Base				
● 36	4-A	01A71712W01	Assy., Riv. Plate Base				
37	4-B	45B71750W01	Slider				
38		01A90350W01	Assy., Flywheel				
39		01A71784W01	Reel				
40	3-B	01B30863W01	Assy., Pinch Roller				
41	3-B	01B30863W02	Assy., Pinch Roller				
○ 42	3-F	44B90318W01	Rack, Mode B				
● 42	3-F	44B71726W01	Rack, Mode				
○ 45	2-C	45B90320W01	Lever, Select				
● 45	2-C	45B90320W02	Lever, Select				
○ 46	3-E	45A71737W02	Lever, Mode Switch				
● 46	3-E	45A71737W03	Lever, Mode Switch				
○ 47	3-E	45A71733W02	Lever, Lock				

NOTE: ○: For GR75S22H Model Only, ●: For GR75S42H Model Only, Others: Common.

# カセット・デッキ・メカニズム関係部品表

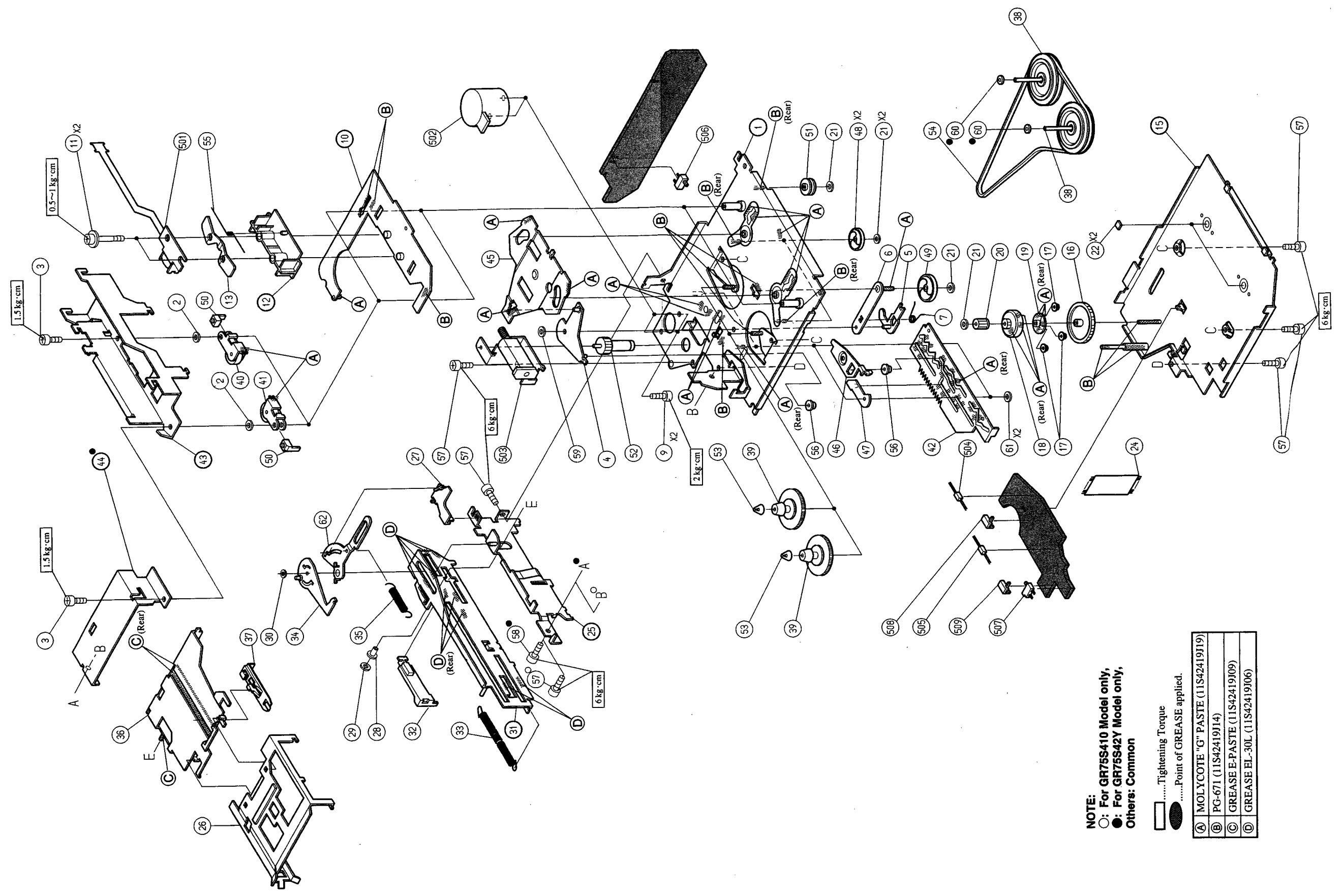
※ 部品表に記入されていない部品は供給されません。

記号	索引	部品番号	部品名	標準卸価格	記号	索引	部品番号	部品名	標準卸価格
2		04B41345P32	Washer, Lock (M3.1)	45	● 47	3-E	45A71733W03	Lever, Lock	—
3		03S43997P63	Screw, Pan (M1.7X4)	45	48	2-E	44A71741W01	Gear, Take Up	45
○ 4	3-D	01A90342W01	Assy., Riv. Select Swing	—	49	2-F	44A71742W01	Gear, RF	45
● 4	3-D	01A90342W02	Assy., Riv. Select Swing	—	50		43A71743W01	Guide, Pack	45
○ 5	2-F	01A90340W01	Assy., Riv. RF Lever A	160	51	2-E	49A71744W01	Pulley, Idler	45
● 5	2-F	01A71714W01	Assy., Riv. RF Lever A	120	52	3-D	44A71746W01	Pinion, Motor	60
○ 6	2-E	01A90341W01	Assy., Riv. RF Lever B	—	53		49A81855W01	Reel, Cap	45
● 6	2-E	01A90341W02	Assy., Riv. RF Lever B	—	54	2-F	42A71780W02	Belt	140
7	2-F	41A71781W01	Spring, RF	45	55	2-B	41A10387W02	Spring, Pinch Roller	45
9	3-D	03C42723U12	Screw, Cup (M2X2.5)	45	56		43A71774W01	Roller, Mode	50
11	2-A	03A80452W02	Screw, F Locks (M2X10.7)	45	57		03S44205G30	Screw, Pan (M2.6X4)	45
13	2-B	41A31756W01	Spring, Head	60	58	4-D	03A80629W01	Screw, Special (M2.6X6)	50
16	2-F	44A71747W01	Gear, Sun	50	59	3-D	04B41345P02	Washer, Lock (M1.7)	45
17		44A71748W01	Gear, Planet	45	61	3-F	04B41345P23	Washer, Lock (M1.7)	45
18	3-F	44A71749W01	Gear, Inner	—	○ 62	3-B	45A90322W01	Lever, Eject Arm A	—
19	2-F	44A71751W01	Pinion, Eject Base	100	● 62	3-B	45A90322W02	Lever, Eject Arm A	—
20	2-F	44A71752W01	Pinion, Eject	90	その他の電気部品				
21		04B41345P11	Washer, Lock (M1.2)	45	○ 501	2-B	88T75612W03	Head	1,240
22	2-G	43A41656W01	Spacer, UHMW-PE	45	○ 502	2-C	01V74500W16	Assy., Main Motor (13.2V-95mA)	1,460
24	3-G	30T65174W07	Wire, Flat 10P	160	● 502	2-C	01V94900W74	Assy., Main Motor (13.2V-95mA)	1,480
○ 26	5-C	07B40012W01	Holder, Cassette	280	○ 503	3-C	01V91700W81	Assy., Sub Motor (7V-370mA)	1,440
● 26	5-B	07B71778W01	Holder, Cassette	240	● 503	3-C	01V11700Y92	Assy., Sub Motor (7V-370mA)	1,460
○ 27	3-C	45A71736W02	Lever, Pack In Switch	—	504	3-F	51T63433F03	Sensor, Photo ON2170-R2	310
● 27	3-C	45A71736W03	Lever, Pack In Switch	—	505	4-F	51T63433F03	Sensor, Photo ON2170-R2	310
28	4-C	43A71775W01	Roller, Plate Base	50	506	2-D	40T15222W01	Switch, Detector (PACK IN)	130
29	4-C	04B41345P01	Washer, Lock (M1.2)	45	507	4-F	40T15382W02	Switch, Detector (PAUSE)	130
30	4-B	04B41345P15	Washer, Lock (M1.2)	45	508	4-E	40T15382W02	Switch, Detector (MODE)	130
32	4-C	44A71753W01	Rack, GR-S	130	509	4-F	40T15382W02	Switch, Detector (METAL)	130
33	4-C	41A80634W01	Spring, Rack	80					
○ 34	4-B	01A90346W01	Assy., Riv. Eject Arm (B)	—					
● 34	4-B	01A90346W02	Assy., Riv. Eject Arm (B)	—					
35	4-C	41B63283F11	Spring	45					
○ 36	4-A	01A40024W03	Assy., Riv. Plate Base	240					
● 36	4-A	01A71712W01	Assy., Riv. Plate Base	260					
37	4-B	45B71750W01	Slider	45					
38		01A90350W01	Assy., Flywheel	380					
39		01A71784W01	Reel	370					
40	3-B	01B30863W01	Assy., Pinch Roller	240					
41	3-B	01B30863W02	Assy., Pinch Roller	240					
○ 42	3-F	44B90318W01	Rack, Mode B	160					
● 42	3-F	44B71726W01	Rack, Mode	120					
○ 45	2-C	45B90320W01	Lever, Select	—					
● 45	2-C	45B90320W02	Lever, Select	—					
○ 46	3-E	45A71737W02	Lever, Mode Switch	—					
● 46	3-E	45A71737W03	Lever, Mode Switch	—					
○ 47	3-E	45A71733W02	Lever, Lock	—					

注記：○：GR75S22Hモデル専用， ●：GR75S42Hモデル専用， その他：共通

# Exploded View (Cassette Deck Mechanism)

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A | B - 5 - | C | D | E | F - 6 - | G |

**NOTE:**  
 ○: For GR75S410 Model only,  
 ●: For GR75S42Y Model only,  
 Others: Common

○	.....	Tightening Torque
●	.....	Point of GREASE applied.
A	MOLYCOTE "G" PASTE (11S42419119)	
B	PG-671 (11S42419114)	
C	GREASE E-PASTE (11S42419109)	
D	GREASE EL-30L (11S42419106)	