

# Service Manual

Simplified

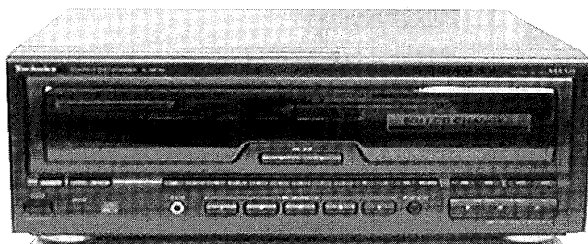
COMPACT  
disc  
DIGITAL AUDIO

DIGITAL

MASH\*  
multi-stage noise shapingCompact Disc Changer  
**SL-MC70**

Colour

(K) . . . . . Black Type



Area

Suffix for Model No.	Area	Colour
(P)	U.S.A.	(K)
(PC)	Canada	

\* MASH is a trademark of NTT.

RAE0152Z-M TRAVERSE DECK SERIES

Please file and use this manual together with the service manual for Model No. SL-MC50(P/PC), Order No : AD9510245C1.

**Note :** • This simplified service manual is provided to indicate the main differences between the original model no. SL-MC50 (P/PC) and the subsequent model no. SL-MC70 (P/PC) respectively.

## Change In Replacement Parts List

**Notes:** • Important safety notice:


Components identified by mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant(resistors), high-quality sound(capacitors), low noise(resistors), etc are used. When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list .

• [M] Indicates in the Remarks columns indicates parts supplied by **MESA**.

• The parenthesized indications in the Remarks columns specify the areas.(Refer to the cover page for area)

Parts without these indications can be used for all areas.

Ref. No.	Description	Change of Parts Number			Remarks
		SL-MC50 (P/PC) (Original)		SL-MC70 (P/PC)	
CABINET AND CHASSIS					
1	CABINET ASSEMBLY	RKM0314-K	RKM0336-K	[M]	CHANGED
4	CONNECTOR ASSEMBLY(6P)	REX0810-1	—	[M]	DELETED
5	CORD HOLDER	SHRD162	—	[M]	DELETED
6	32P FCC	REZ0828	REE0828	[M]	CHANGED
8	REAR PLATE	RGR0231A-A1	RGR0247A-WA	[M]	CHANGED (P)
8	REAR PLATE	RGR0231A-B	RGR0247A-XA	[M]	CHANGED (PC)
9	CHASSIS ASS'Y	RFKJLMC50P-K	RFKJLMC70P-K	[M]	CHANGED
9-1	LEG	RKA0053-A	RKA0079-A	[M]	CHANGED
21	14P FCC	REZ0830	REE0830	[M]	CHANGED
22	FRONT PANEL ASSEMBLY	RFKGLMC50P-K	RFKGLMC70P-K	[M]	CHANGED
25	SCREW	RHD26024-T	RHD26028-T	[M]	CHANGED
28	MECHA ANGLE	RMA0918	RMA0998	[M]	CHANGED

### ⚠ WARNING

This service information is designed for experience repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

# Technics®

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Ref. No.	Description	Change of Parts Number			Remarks
		SL-MC50 (P/PC) (Original)	➔	SL-MC70 (P/PC)	
29	GRILLE ASSEMBLY	RFKNLMC50PAK		RFKNLMC70PAK [M]	CHANGED
32	MAIN BUTTON	RFKNLMC50PFK		RGU1319-K1 [M]	CHANGED
33	PROGRAM BUTTON	RFKNLMC50PGK		RGU1320-K1 [M]	CHANGED
34	DISC SKIP BUTTON	RFKNLMC50PHK		RGU1321-K1 [M]	CHANGED
35	POWER BUTTON	RFKNLMC50PIK		RGU1322-K1 [M]	CHANGED
37	PCB SPACER	SHRD51-1		— [M]	DELETED
40	GRILLE CAP	RGQ0186-K		— [M]	DELETED
42	ID SCAN BUTTON	—		RGU1325-K1 [M]	ADDED
43	BUTTON ORNAMENT	—		RGK0534-N [M]	ADDED
44	P.C.B. ASS'Y	—		RFKBMC410PK [M]	ADDED
121	SENSOR HOLDER	RMN0357		—	DELETED
124	FFC (23P)	REZ0829		REZ0916 [M]	CHANGED
171	GUARD ROPE	RMW0007		RMW0009 [M]	CHANGED
201	TRAVERSE UNIT	RAE0150Z		RAE0152Z-M [M]	CHANGED
208	SCREW	XTV2+6G		—	DELETED
208	FIXED PIN A	RMS0123-1		RMS0350 [M]	CHANGED
210	GUIDE FELT	—		RMF0237-1 [M]	ADDED
211	S LEVER PLATE	—		RMA0985 [M]	ADDED
212	SCREW	—		XTBS26+10J [M]	ADDED
213	BACK YOKE	—		RMA0989 [M]	ADDED
214	WASHER	—		RHW42002 [M]	ADDED
215	LOCK PLATE SPRING	—		RME0225 [M]	ADDED
216	SPRING PLATE	—		RMC0316 [M]	ADDED
INTEGRATED CIRCUIT					
IC 401	MICRO COMPUTER	UPD78044A168		UPD78044F019 [M]	CHANGED
IC 801	OP AMP	BA4558FHTT1		BA4558FDXE2 [M]	CHANGED
TRANSISTORS					
Q 11	TRANSISTOR	UN4214TA		BA1A4PTA [M]	CHANGED
Q 12	TRANSISTOR	UN4114TA		BA1A4PTA [M]	CHANGED
Q 17	TRANSISTOR	2SC3311AIQST		2SC2785FETA [M]	CHANGED
Q 18	TRANSISTOR	2SC3311AIQST		2SC2785FETA [M]	CHANGED
Q 401	TRANSISTOR	2SC3311AIQST		2SC2785FETA [M]	CHANGED
Q 432	TRANSISTOR	UN4212TA		— [M]	DELETED
Q 451	TRANSISTOR	2SA1309A-R		— [M]	DELETED
Q 452	TRANSISTOR	2SC3311AIQST		— [M]	DELETED
Q 461	TRANSISTOR	UN4215		BA1A4ZTA [M]	CHANGED
Q 462	TRANSISTOR	—		BA1F4MTA [M]	ADDED
Q 501	TRANSISTOR	—		2SB1320AQRTA [M]	ADDED
Q 502	TRANSISTOR	—		2SC3311AIQST [M]	ADDED
Q 801	TRANSISTOR	2SD1450RTA		2SD1302STA [M]	CHANGED
Q 802	TRANSISTOR	2SD1450RTA		2SD1302STA [M]	CHANGED
Q 851	TRANSISTOR	UN4112		BN1F4MTA [M]	CHANGED
Q 852	TRANSISTOR	UN4212TA		BA1F4MTA [M]	CHANGED

Ref. No.	Description	Change of Parts Number		Remarks
		SL-MC50 (P/PC) (Original)	➔ SL-MC70 (P/PC)	
RESISTORS				
R 451	RESISTOR(1/4W, 10K)	ERDS2TJ103	— [M]	DELETED
R 452	RESISTOR(1/4W, 10K)	ERDS2TJ103	— [M]	DELETED
R 453	RESISTOR(1/4W, 10K)	ERDS2TJ103	— [M]	DELETED
R 501	RESISTOR(1/4W, 10K)	—	ERDS2TJ103T [M]	ADDED
R 502	RESISTOR(1/4W, 10K)	—	ERDS2TJ103T [M]	ADDED
R 503	RESISTOR(1/4W, 1K)	—	ERDS2TJ102T [M]	ADDED
CAPACITORS				
C 19	CAPACITOR(50V, 1)	—	ECEA1HKA010B [M]	ADDED
DIODES				
D 15	DIODE !	MA4091-M	MTZJ9R1CTA [M]	CHANGED
D 18	DIODE !	MA4043HTA	MTZJ4R3BTA [M]	CHANGED
D 20	DIODE	MA165	RVD1SS133TA [M]	CHANGED
D 23	DIODE !	MA4091-M	MTZJ9R1CTA [M]	CHANGED
D 24	DIODE !	MA4091-M	MTZJ9R1CTA [M]	CHANGED
D 33	DIODE !	MA4270	MTZJ27CTA [M]	CHANGED
D 41	DIODE !	MA4062MTA	MTZJ6R2CTA [M]	CHANGED
D 42	DIODE	MA165	RVD1SS133TA [M]	CHANGED
D 51	DIODE !	MA165	RVD1SS133TA [M]	CHANGED
D 52	DIODE !	MA165	RVD1SS133TA [M]	CHANGED
D 53	DIODE !	MA4051MTA	MTZJ5R1BTA [M]	CHANGED
D 54	DIODE	MA165	RVD1SS133TA [M]	CHANGED
D 431	DIODE	MA4056MTA	— [M]	DELETED
D 461	DIODE	MA4075MTA	MTZJ7R5CTA [M]	CHANGED
D 462	DIODE	—	MTZJ5R6CTA [M]	ADDED
D 601	DIODE	—	RVD1SS133TA [M]	ADDED
D 602	DIODE	MA165	RVD1SS133TA [M]	CHANGED
D 603	DIODE	MA165	RVD1SS133TA [M]	CHANGED
D 604	DIODE	MA165	RVD1SS133TA [M]	CHANGED
D 605	DIODE	MA165	RVD1SS133TA [M]	CHANGED
D 606	DIODE	MA165	RVD1SS133TA [M]	CHANGED
D 607	DIODE	MA165	RVD1SS133TA [M]	CHANGED
D 608	DIODE	MA165	RVD1SS133TA [M]	CHANGED
D 630	DIODE	MA4051MTA	MTZJ5R1BTA [M]	CHANGED
D 631	DIODE	MA4051MTA	MTZJ5R1BTA [M]	CHANGED
D 801	DIODE	MA165	RVD1SS133TA [M]	CHANGED
D 802	DIODE	MA165	RVD1SS133TA [M]	CHANGED
CONNECTOR				
CN 531	CONNECTOR(3P)	SJT30344-H	RJS3T6ZA [M]	CHANGED

Ref. No.	Description	Change of Parts Number			Remarks
		SL-MC50 (P/PC) (Original)	➔	SL-MC70 (P/PC)	
FLAT CABLE					
FC 11	3 PIN WIRE KIT	REZ0898	REZ0899	[M]	CHANGED
FC 12	6 PIN WIRE KIT	REZ0899	REZ0898	[M]	CHANGED
SWITCH					
S 636	TACT SWITCH	—	EVQ21405R	[M]	ADDED
VARIABLE RESISTOR					
VR 501	VR, CD SENSOR	—	EVMLGGA00B14	[M]	ADDED
PACKING MATERIAL					
P 1	PACKING CASE	RPG2723	RPG4001	[M]	CHANGED
P 3	PAD	RPQ0164	—		DELETED
P 4	MIRAMAT BAG	SPP730	RPFX0012	[M]	CHANGED
ACCESSORIES					
A 1	INSTRUCTION MANUAL (REMOTE CTRL)	—	RQT3921-P	[M]	ADDED
A 1	INSTRUCTION MANUAL	RFKSLMC50P-K	RQT4488-P	[M]	CHANGED (P)
A 1	INSTRUCTION MANUAL	RFKSLMC50PCK	RQT4488-P	[M]	CHANGED (PC)
A 1	INSTRUCTION MANUAL	—	RQT3922-C	[M]	ADDED (PC)
A 1	INSTRUCTION MANUAL	—	RQT4587-C	[M]	ADDED (PC)
A 2	WARRANTY CARD	RQA0114	—	[M]	DELETED (P)
A 2	WARRANTY CARD	SQX7183	—	[M]	DELETED (PC)
A 3	SERVICENTER LIST	RQCB0391	—	[M]	DELETED (P)
A 3	SERVICENTER LIST	SQX9131	—	[M]	DELETED (PC)
A 4	REMOTE CONTROL	RAK-SL413WH	EUR643808	[M]	CHANGED
A 4-1	BATTERY COVER	RKK0080-K	UR64EC1638	[M]	CHANGED
A 5	NOTEBOOK-LIKE BINDER	RFA0622-K1	—		DELETED
A 6	ADHESIVE NUMBER	RQLA0321	—		DELETED
A 8	STEREO CONNECTOR CABLE	SJP2249-3	RJL2P004B08	[M]	CHANGED
GREASE OR JIG/TOOL					
SA 1	RFKXPG671	MOLYCOAT GREASE	—		DELETED
SA 2	SZZP1101C	ALLEN WRENCH(M2.0)	—		DELETED
SA 3	RFKZ0062	EXTENDED FFC	—		DELETED

## ■ Measurement and Adjustments

### •CD LOADING MECHANISM SECTION

#### •DISC SENSOR ADJUSTMENT

1. Set the unit to "CD TEST MODE".
2. Connect the DC electronic voltmeter across **TP501** (+) and **TP502** (–) on the MOTOR P.C.B.(Pg 14.)
3. Adjust VR501 so that the DC electronic voltmeter reads **2.8±0.1V**
4. Check the play operation after adjustment.

## ■ Replacement Parts List For New Servo P.C.B.(REPX0144C)

**Notes:** • Important safety notice :

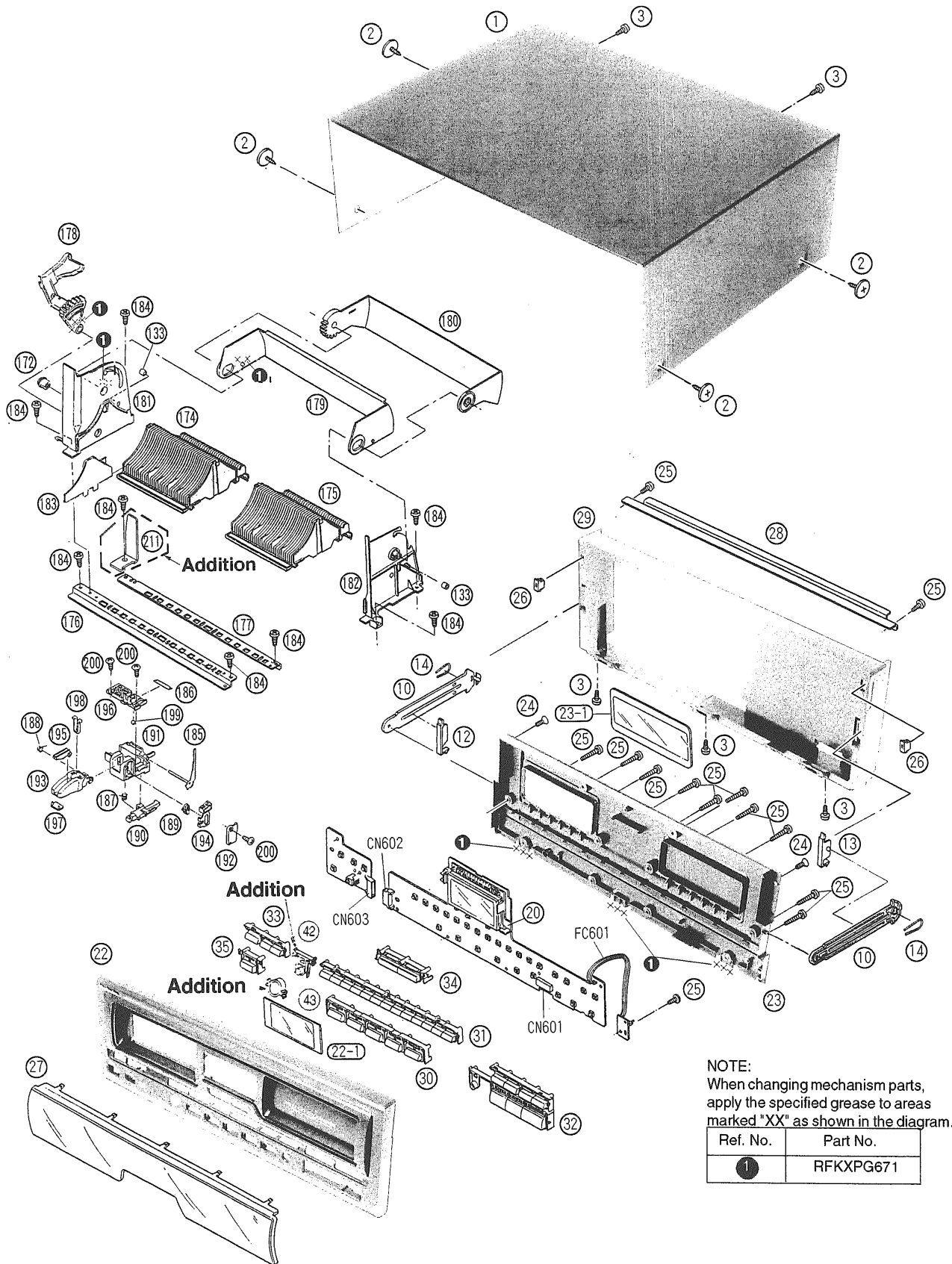
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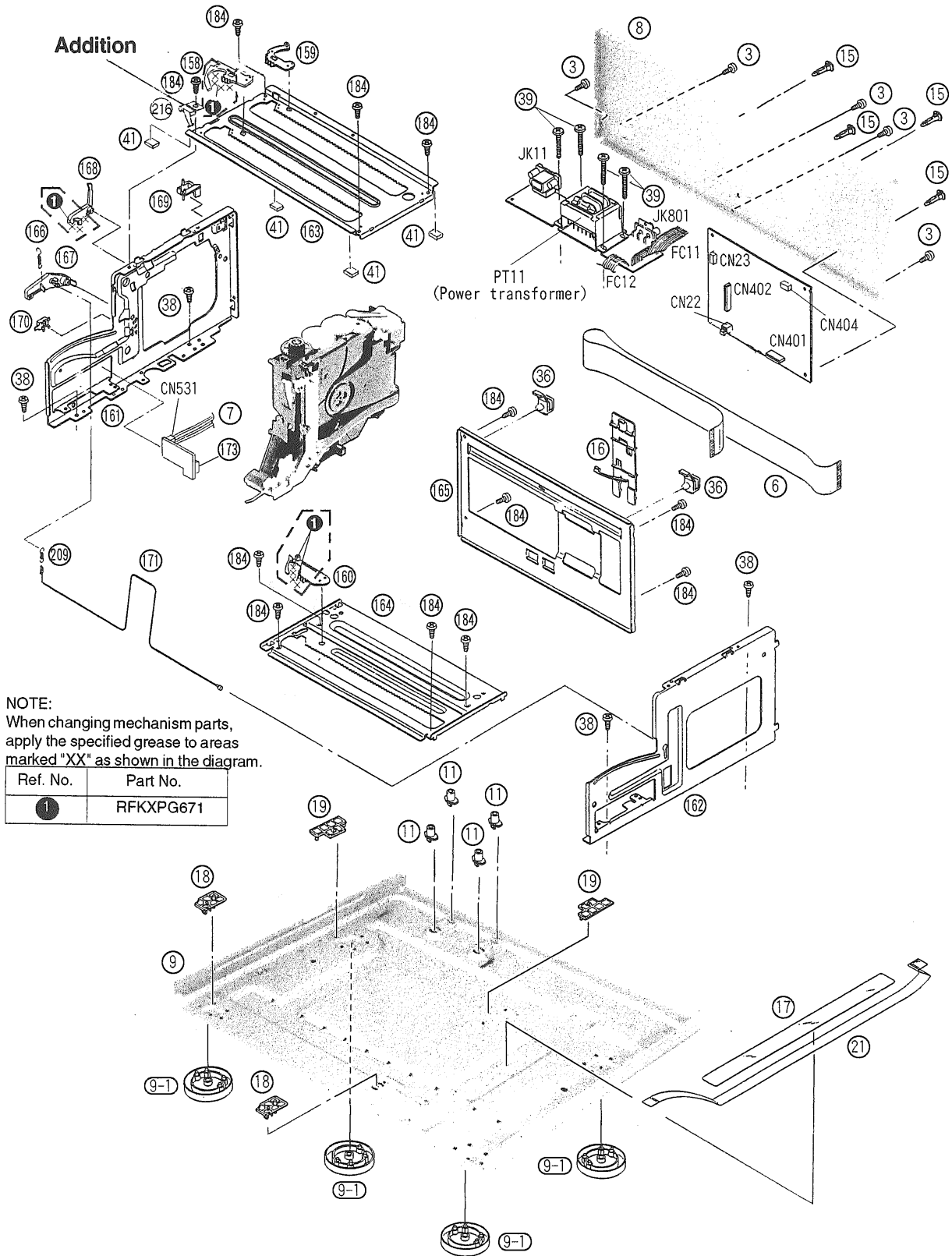
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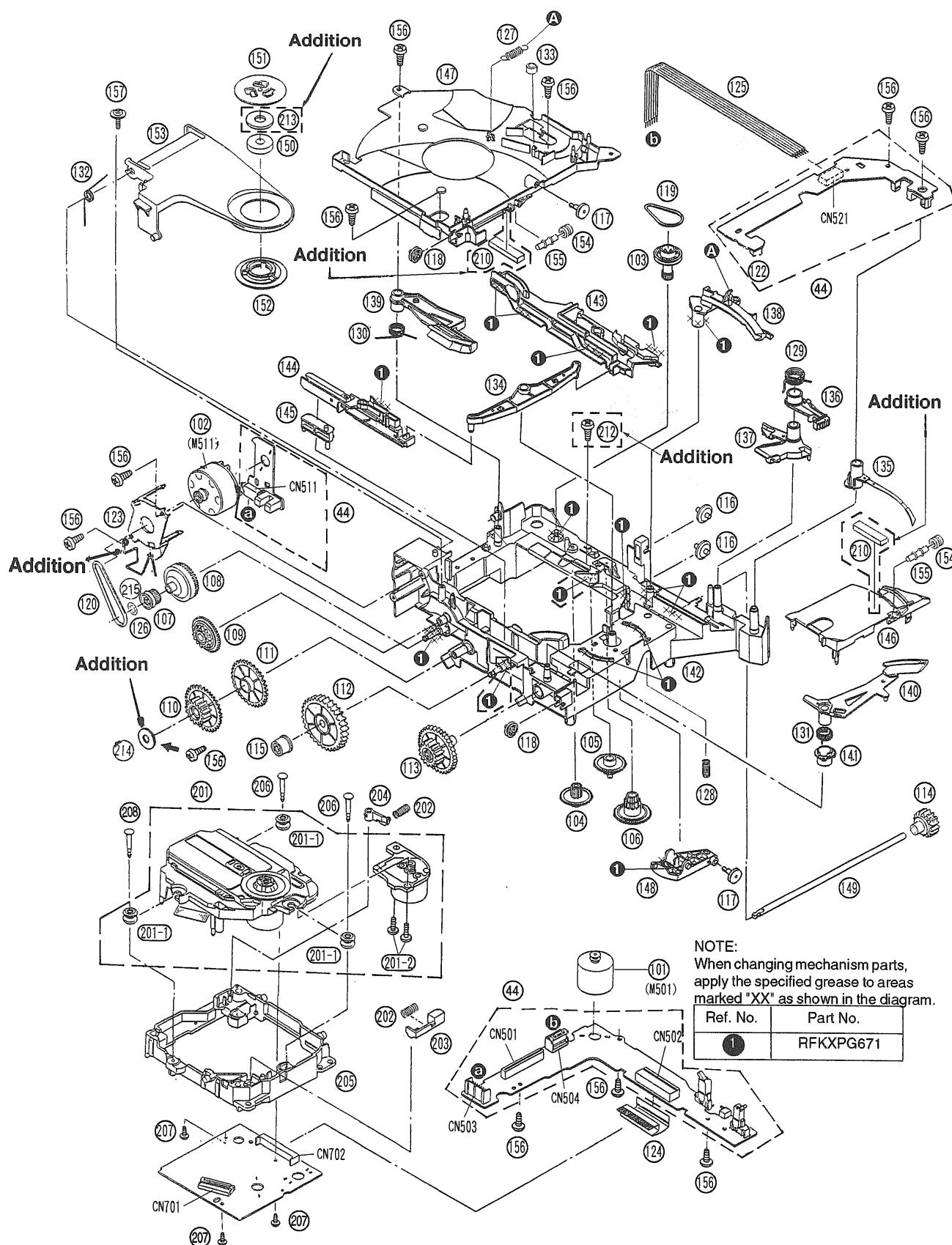
- The parenthesized indications in the Remarks column specify the areas and/or colour. (Refer to the cover page for area and colour.)
- Parts without these indications can be used for all areas.
- [M] indicates parts that are supplied by MESA.

Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks	Ref No.	Part No.	Part Name & Description	Remarks
		<b>INTEGRATED CIRCUITS</b>									
IC701	AN8837SBE1	IC, HEAD AMP	[M]	R721	ERJ6GEYJ101A	100 1/10W	[M]	C723	ECEA1AKA221I	220 10V	[M]
IC702	MN662741RPA	IC, DIGITAL LSI	[M]	R722	ERJ6GEYJ563A	56K 1/10W	[M]	C724	ECUZ1E104MBN	0.1 25V	[M]
IC703	AN8780NSBE2	IC	[M]	R723	ERJ6GEYJ182A	1.8K 1/10W	[M]	C730	ECUZ1E104ZFN	0.1 25V	[M]
				R724	ERJ6GEYJ333A	33K 1/10W	[M]	C731	ECEA0JKA221I	220 6.3V	[M]
				R725	ERJ6GEYJ122A	1.2K 1/10W	[M]	C732	ECEA0JKA221I	220 6.3V	[M]
		<b>TRANSISTORS</b>		R726	ERJ6GEYJ473A	47K 1/10W	[M]	C733	ECUZ1E104MBN	0.1 25V	[M]
				R727	ERJ6GEYJ682A	6.8K 1/10W	[M]	C734	ECEA1AKA221I	220 10V	[M]
				R728	ERJ6GEYJ682A	6.8K 1/10W	[M]	C735	ECUZ1E104ZFN	0.1 25V	[M]
Q701	2SA1037AKSTX	TRANSISTOR	[M]	R729	ERJ6GEYJ562A	5.6K 1/10W	[M]	C736	ECUZ1E104ZFN	0.1 25V	[M]
Q702	DTC114YKA146	TRANSISTOR	[M]	R731	ERJ6GEYJ822A	8.2K 1/10W	[M]	C737	ECUZ1E104ZFN	0.1 25V	[M]
				R735	ERJ6GEYJ101A	100 1/10W	[M]	C738	ECUZ1E104MBN	0.1 25V	[M]
		<b>SWITCHES</b>		R736	ERJ6GEYJ101A	100 1/10W	[M]	C739	ECUZ1H102KBN	1000P 50V	[M]
				R738	ERJ6GEYJ223A	22K 1/10W	[M]	C742	ECUZ1E273KBN	0.027 25V	[M]
S701	RSH1A043-U	SW, RESET	[M]	R744	ERJ6GEYJ104A	100K 1/10W	[M]	C743	ECUZ1E104ZFN	0.1 25V	[M]
				R745	ERJ6GEYJ155A	1.5M 1/10W	[M]	C744	ECUZ1E123KBN	0.012 25V	[M]
		<b>CONNECTORS</b>		R748	ERJ6GEYJ182A	1.8K 1/10W	[M]	C745	ECUZ1H102KBN	1000P 50V	[M]
				R749	ERJ6GEYJ682A	6.8K 1/10W	[M]	C747	ECUV1H221KBN	220P 50V	[M]
CN701	RJS2A6016	16P FFC CONNECTOR	[M]	R752	ERJ8GEYJ220A	22 1/8W	[M]	C749	ECUZ1H222KBN	2200P 50V	[M]
CN702	RJS1A6723-1Q	23P FFC CONNCTOR	[M]	R753	ERJ6GEYJ102A	1K 1/10W	[M]	C750	ECUZ1E104MBN	0.1 25V	[M]
								C751	ECUZ1E104MBN	0.1 25V	[M]
		<b>OSCILLATORS</b>				<b>CAPACITORS</b>		C753	ECUZ1H471KBM	470P 50V	[M]
								C755	ECUZ1H102KBN	1000P 50V	[M]
X701	RSXZ16M9M01T	CERAMIC OSC	[M]	C701	ECEA0JKA330I	33 6.3V	[M]	C756	ECUZ1H102KBN	1000P 50V	[M]
				C702	ECUZ1E104MBN	0.1 25V	[M]	C757	ECUZ1H102KBN	1000P 50V	[M]
		<b>RESISTORS</b>		C703	ECEA0JKA101I	100 6.3V	[M]	C762	ECUZ1H471KBN	470P 50V	[M]
				C704	ECUZ1E104MBN	0.1 25V	[M]				
R701	ERJ6GEYJ4R7A	4.7 1/10W	[M]	C706	ECUZ1H272KBN	2700P 50V	[M]			<b>TEST JUMPERS</b>	
R702	ERJ6GEYJ822A	8.2K 1/10W	[M]	C707	ECUZ1E273KBN	0.027 25V	[M]				
R703	ERJ6GEYJ823A	82K 1/10W	[M]	C708	ECUZ1H392KBN	3900P 50V	[M]	TJ701	EYF8CU	TEST JUMPER	[M]
R704	ERJ6GEYJ102A	1K 1/10W	[M]	C709	ECUZ1E563KBN	0.056 25V	[M]				
R705	ERJ6GEYJ124A	120K 1/10W	[M]	C710	ECUV1H151KCN	150P 50V	[M]				
R706	ERJ6GEYJ102A	1K 1/10W	[M]	C711	ECUZ1E104ZFN	0.1 25V	[M]				
R707	ERJ6GEYJ474A	470K 1/10W	[M]	C712	ECUZ1E104ZFN	0.1 25V	[M]				
R708	ERJ6GEYJ154A	150K 1/10W	[M]	C713	ECUZ1E104MBN	0.1 25V	[M]				
R709	ERJ6GEYJ473A	47K 1/10W	[M]	C714	ECEA0JKA101I	100 6.3V	[M]				
R710	ERJ6GEYJ103A	10K 1/10W	[M]	C715	ECUZ1H182KBN	1800P 50V	[M]				
R711	ERJ6GEYJ154A	150K 1/10W	[M]	C716	ECUZ1H821KBN	820P 50V	[M]				
R712	ERJ6GEYJ221A	220 1/10W	[M]	C717	ECUZ1E104ZFN	0.1 25V	[M]				
R715	ERJ6GEYJ122A	1.2K 1/10W	[M]	C718	ECUZ1C224KBN	0.22 16V	[M]				
R717	ERJ6GEYJ101A	100 1/10W	[M]	C721	ECUZ1H150JCN	15P 50V	[M]				
R718	ERJ6GEYJ101A	100 1/10W	[M]	C722	ECUZ1H150JCN	15P 50V	[M]				

# Cabinet and Loading Mechanism Parts Location





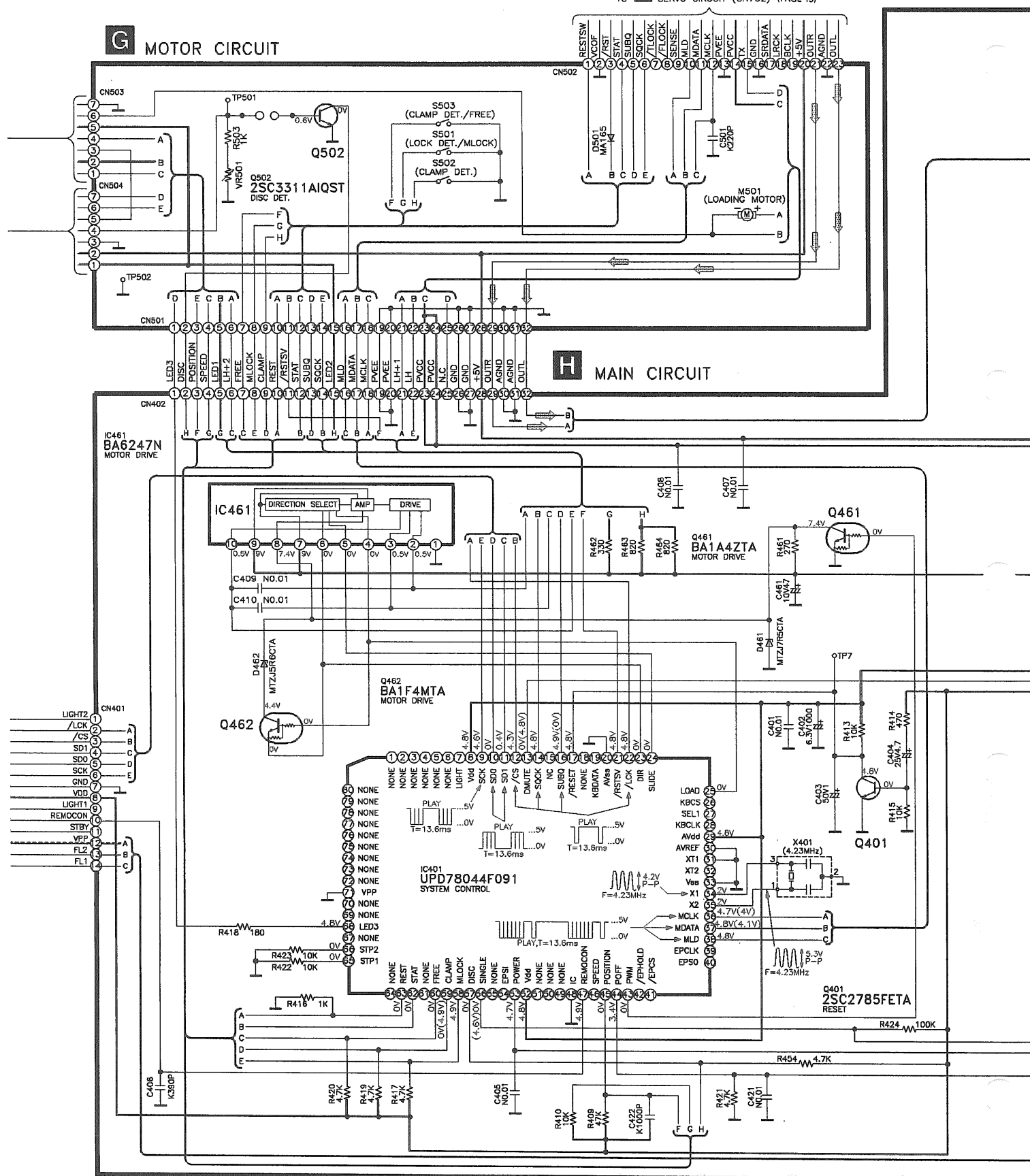


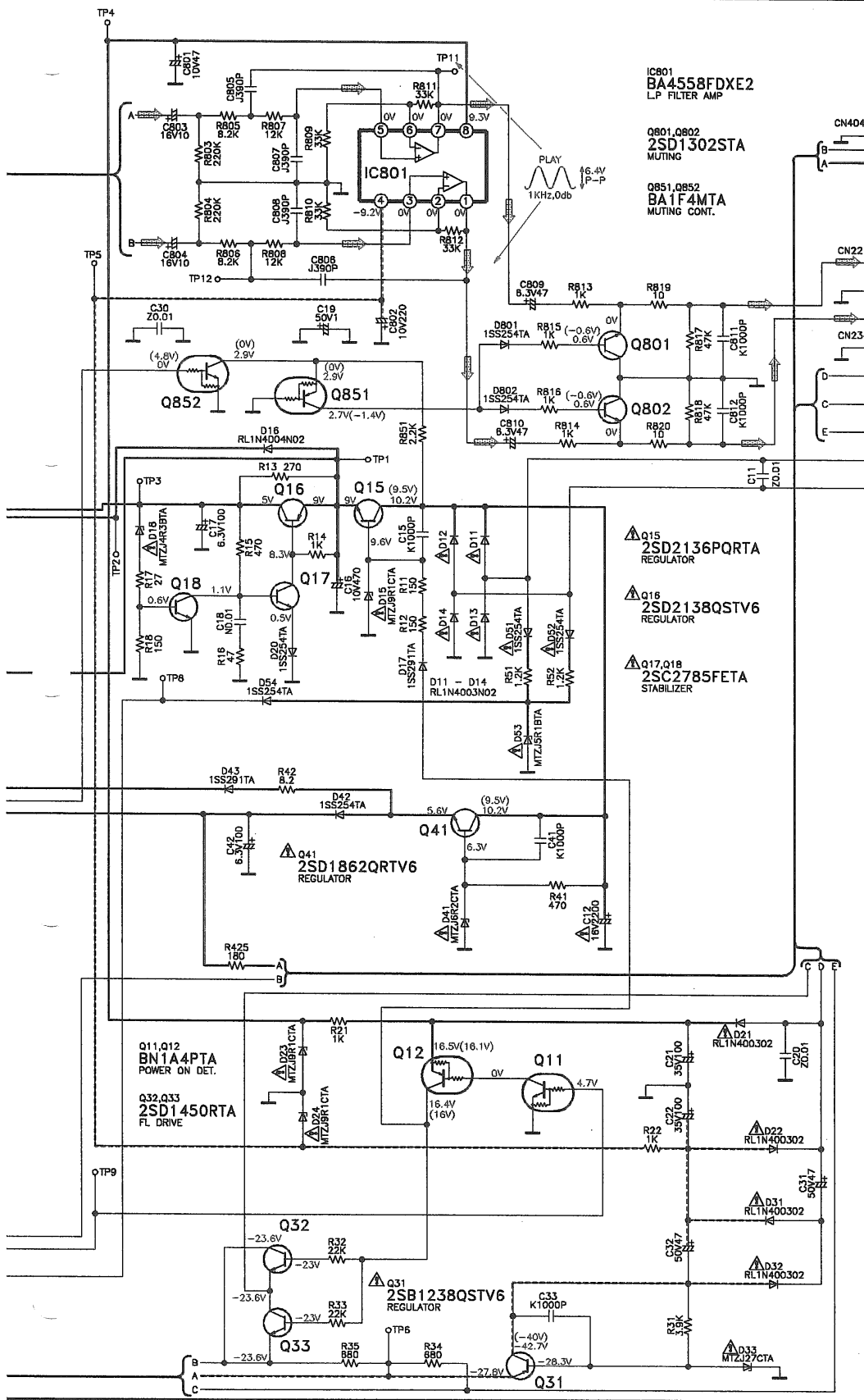
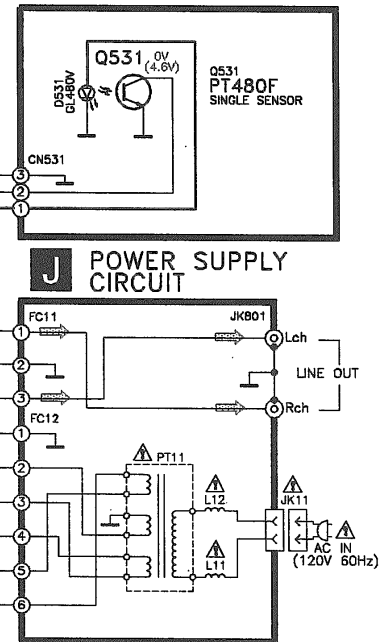


**D** PHOTO TR.(1)  
CIRCUIT

## E SWITCH CIRCUIT

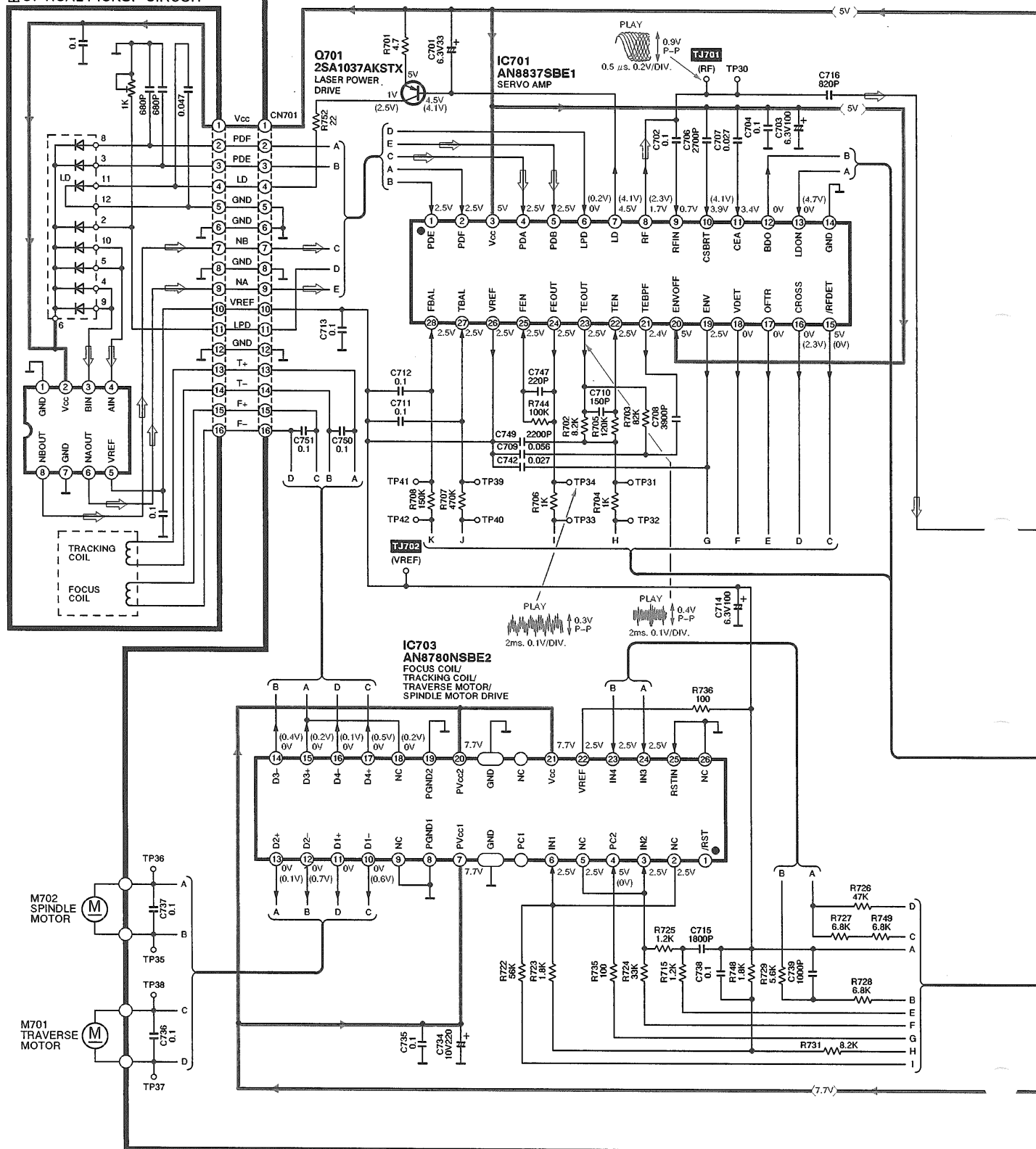
## F SENSOR CIRCUIT

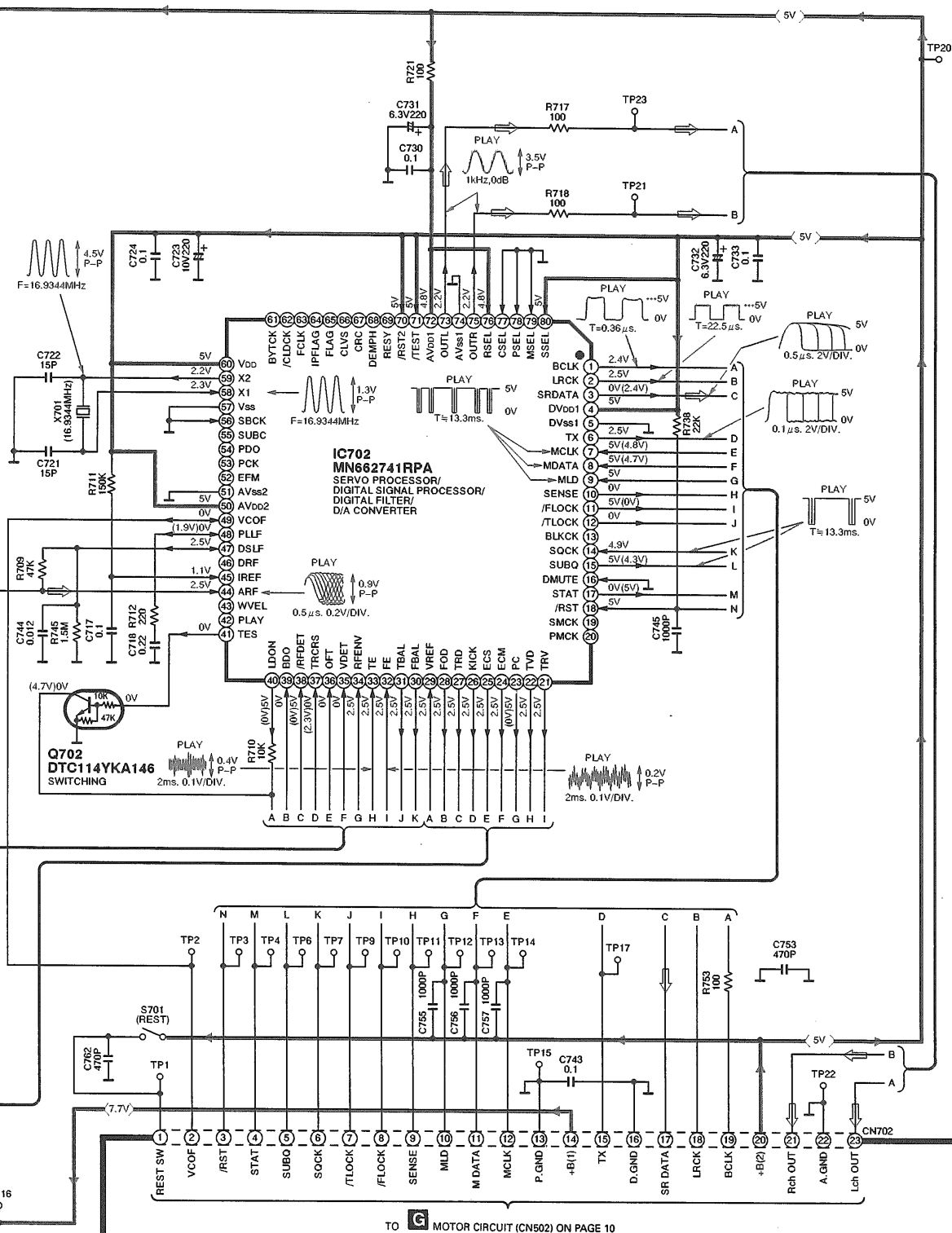


I PHOTO TR.(2)  
CIRCUIT

## A CD SERVO CIRCUIT

### Δ OPTICAL PICKUP CIRCUIT

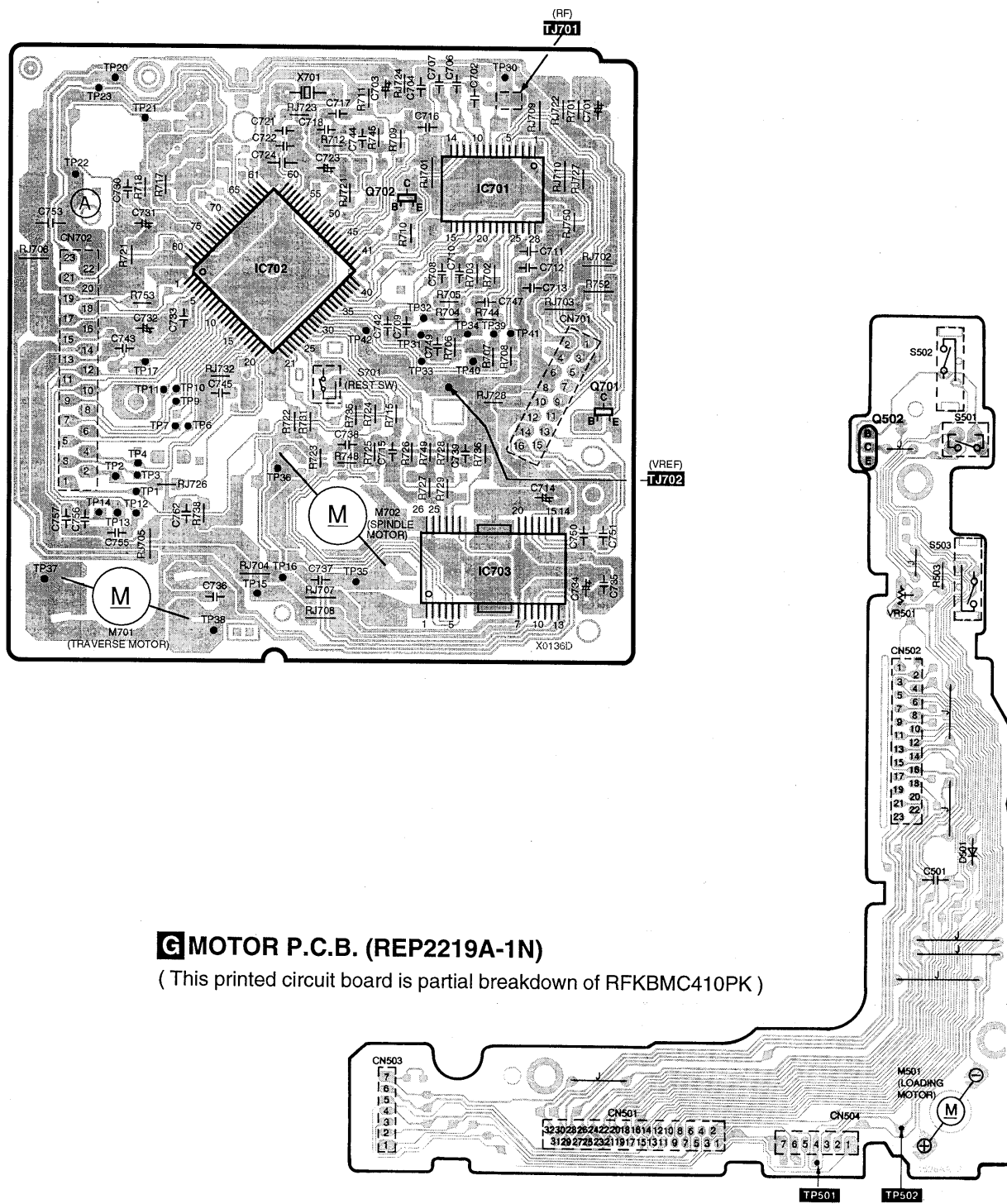


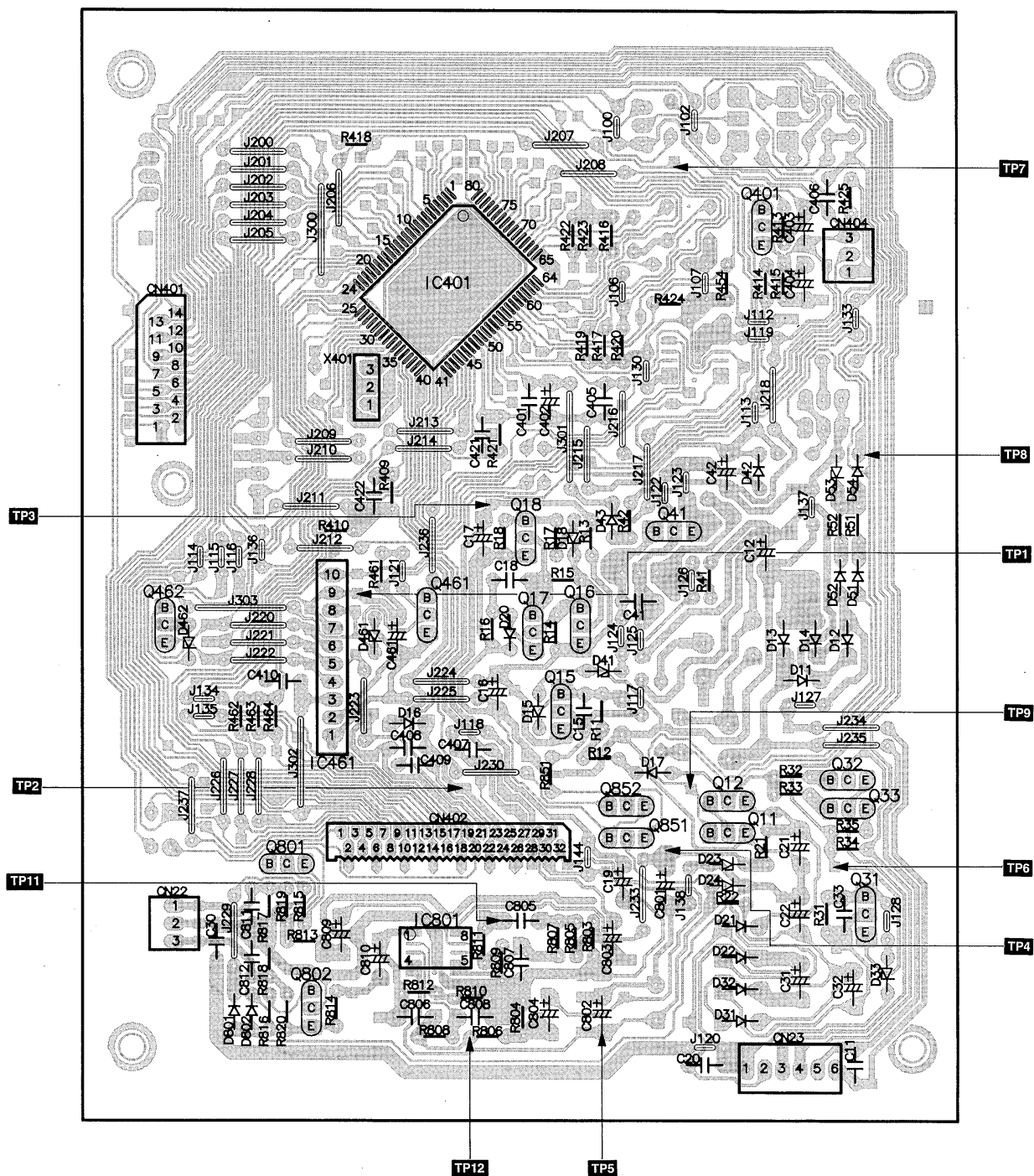


## ■ Printed Circuit Board

(This schematic diagram may be modified at any time with the development of new technology)

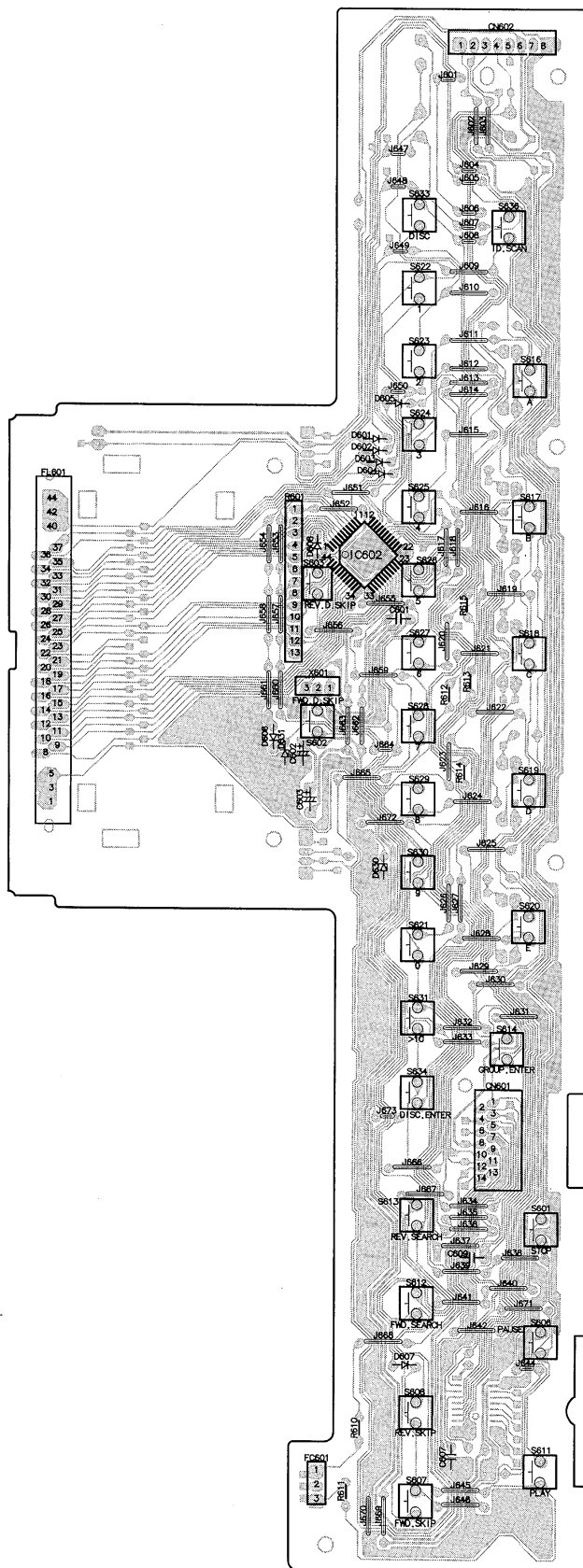
## A SERVO P.C.B. (REPX0144C)



**H MAIN P.C.B. (REP2216A-M)**


For Sensor P.C.B. and Switch P.C.B.  
 REP2217A-S...SL-MC50(P/PC) changed to REP2217G-S...SL-MC70(P/PC)

## **B FRONT PANEL P.C.B.(REP2217G-S)**



**D PHOTO TR.(1) P.C.B.(REP2219A-2N)**

( This printed circuit board is partial breakdown of  
RFKBMC410PK )

