

CONTROLS

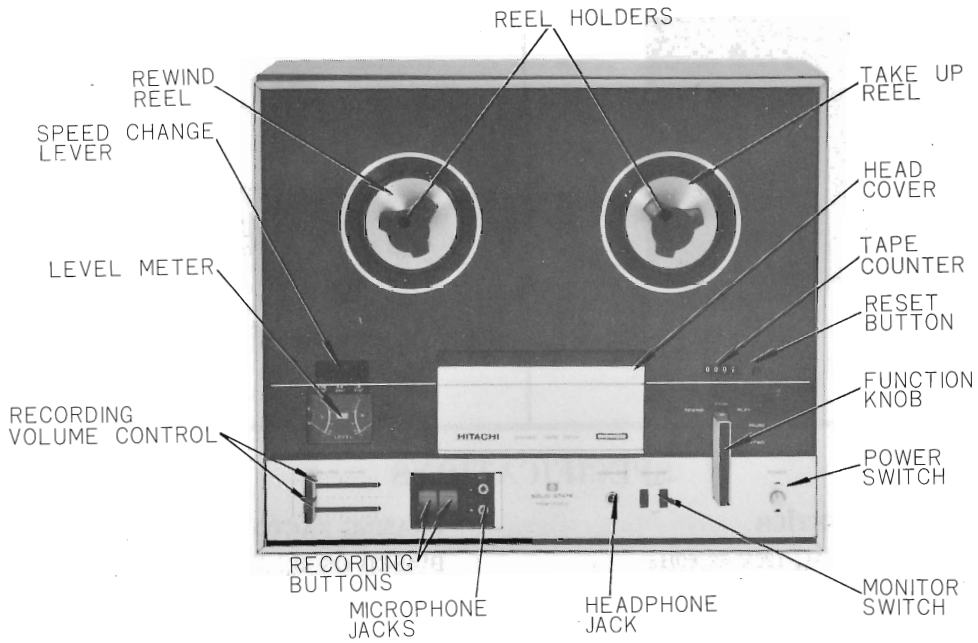
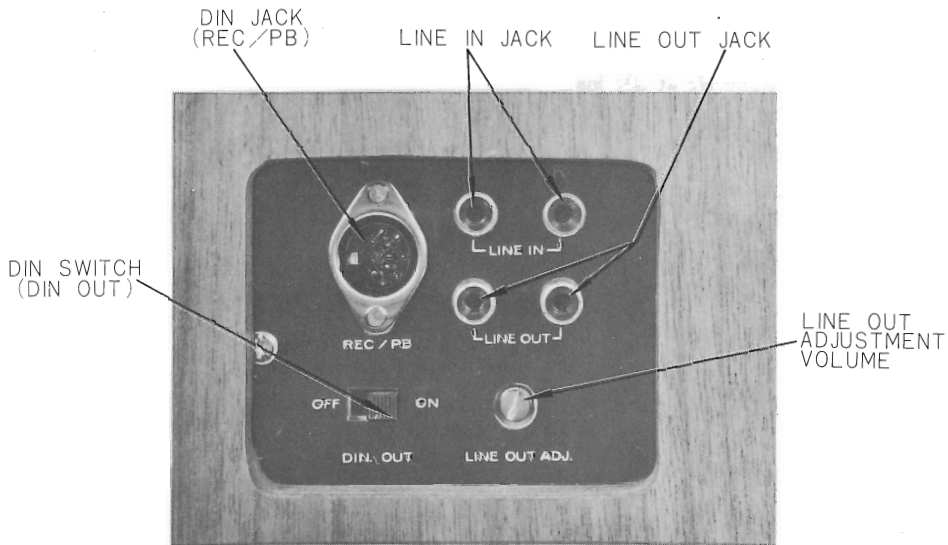


Fig. 1



(TERMINALS ARRANGED ON THE LEFT SIDE AS)
(SEEN FROM THE FRONT)

Fig. 2

BLOCK DIAGRAM

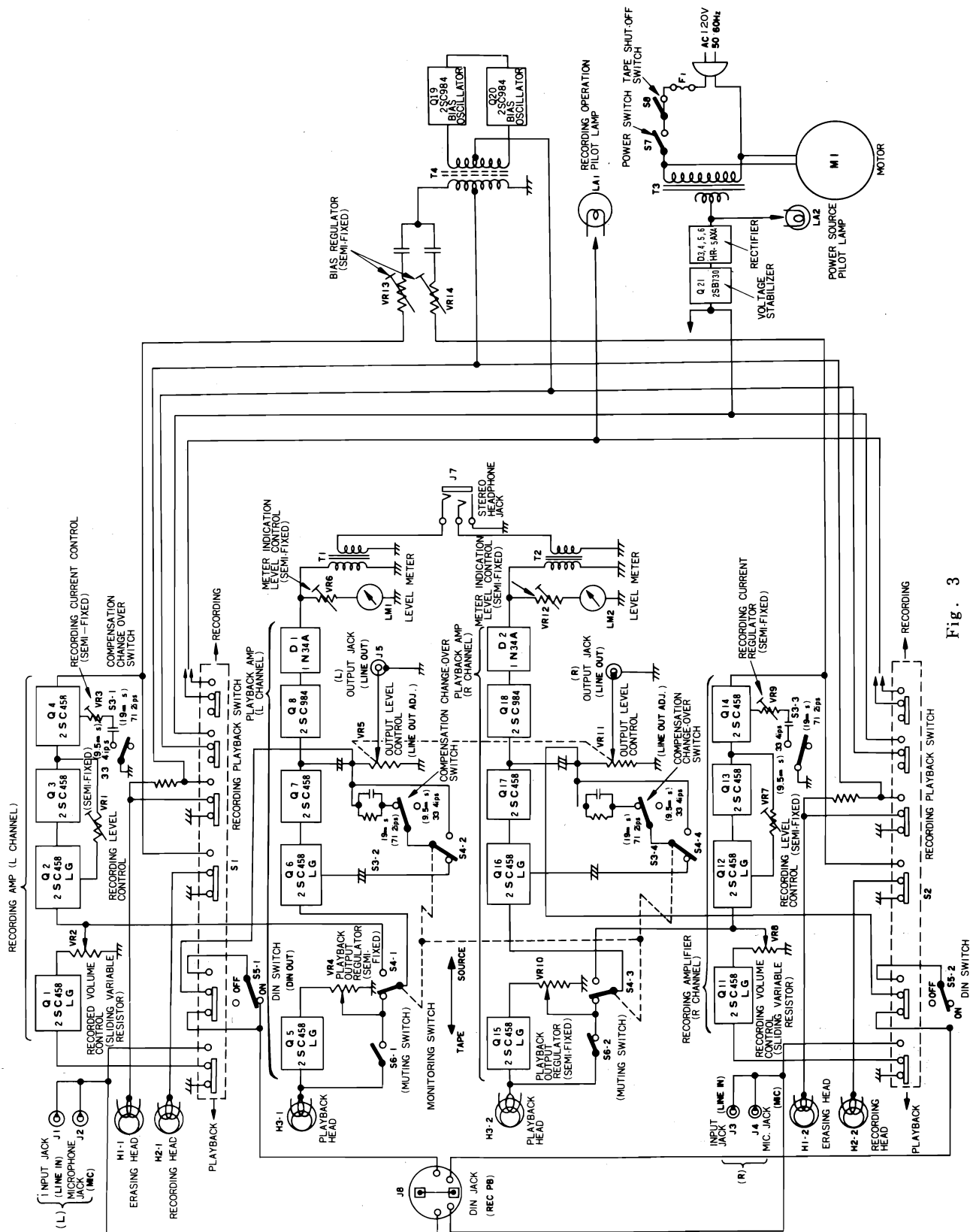


Fig. 3

DISASSEMBLY

When inspecting, repairing or lubricating, disassemble the machine in the following manner.

1. Removal of rear cover

Remove four screws holding rear cover and four screws holding chassis shown in Fig. 4.

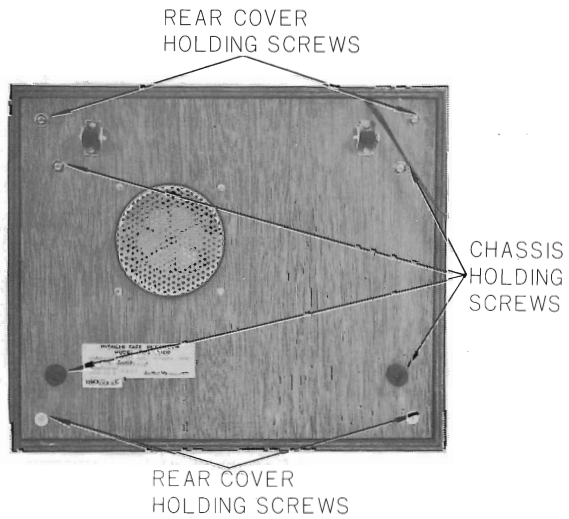


Fig. 4

2. Removal of cabinet

Remove four screws holding chassis and one screw holding power cord shown in Fig. 5.

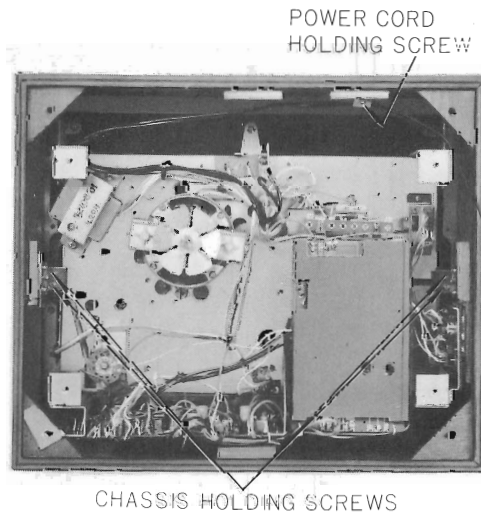


Fig. 5

3. Removal of front panel

- 1) Remove one screw holding head cover shown in Fig. 6.
- 2) Remove eight screws holding front panel shown in Figs. 7 and 8.



Fig. 6

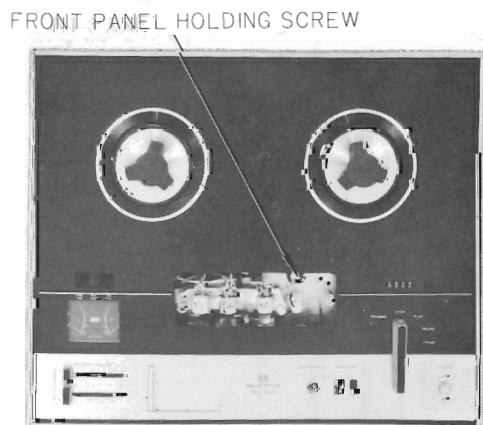


Fig. 7

LUBRICATION

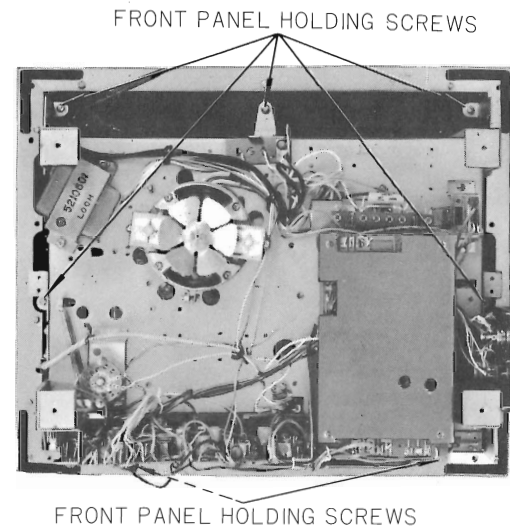


Fig. 8

4. Removal of circuit board

Note: Take care with the wires connecting several parts of circuit board.

1) Circuit board for amplifier block: Remove five screws holding circuit board shown in Fig. 9.

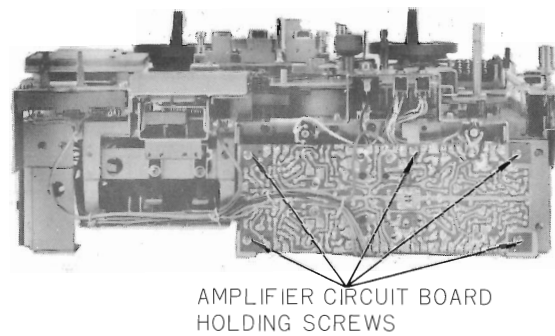


Fig. 9

SWITCHING CIRCUIT BOARD HOLDING SCREWS

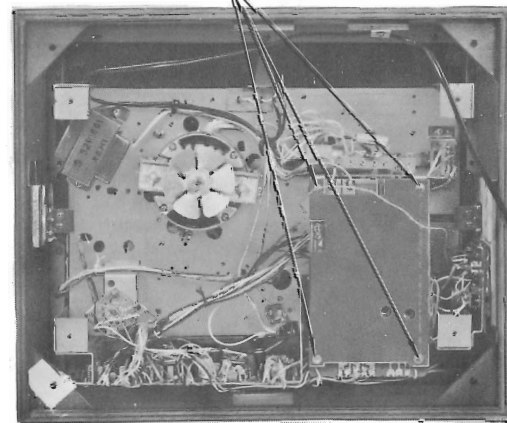


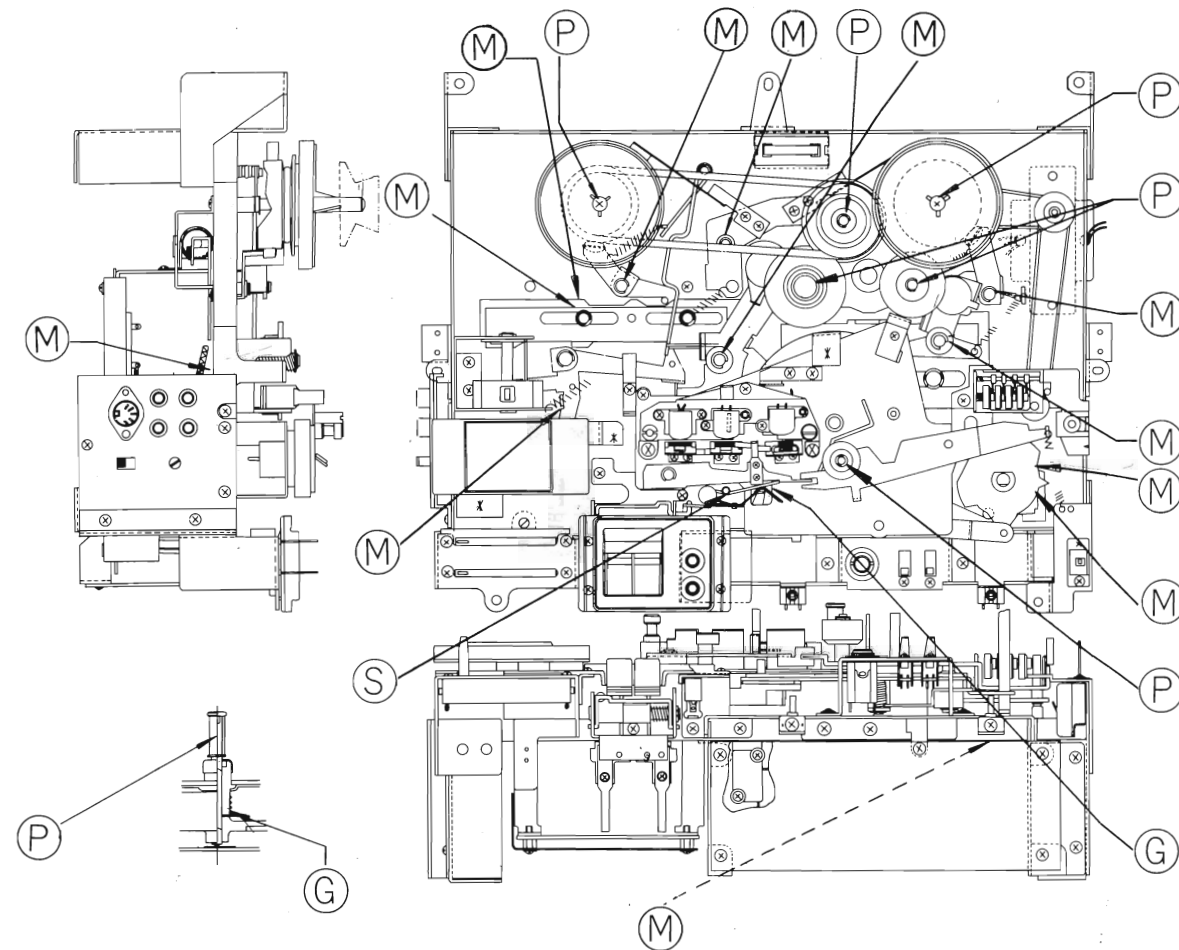
Fig. 10

2) Circuit board for switching block: Remove four screws holding circuit board shown in Fig. 10.

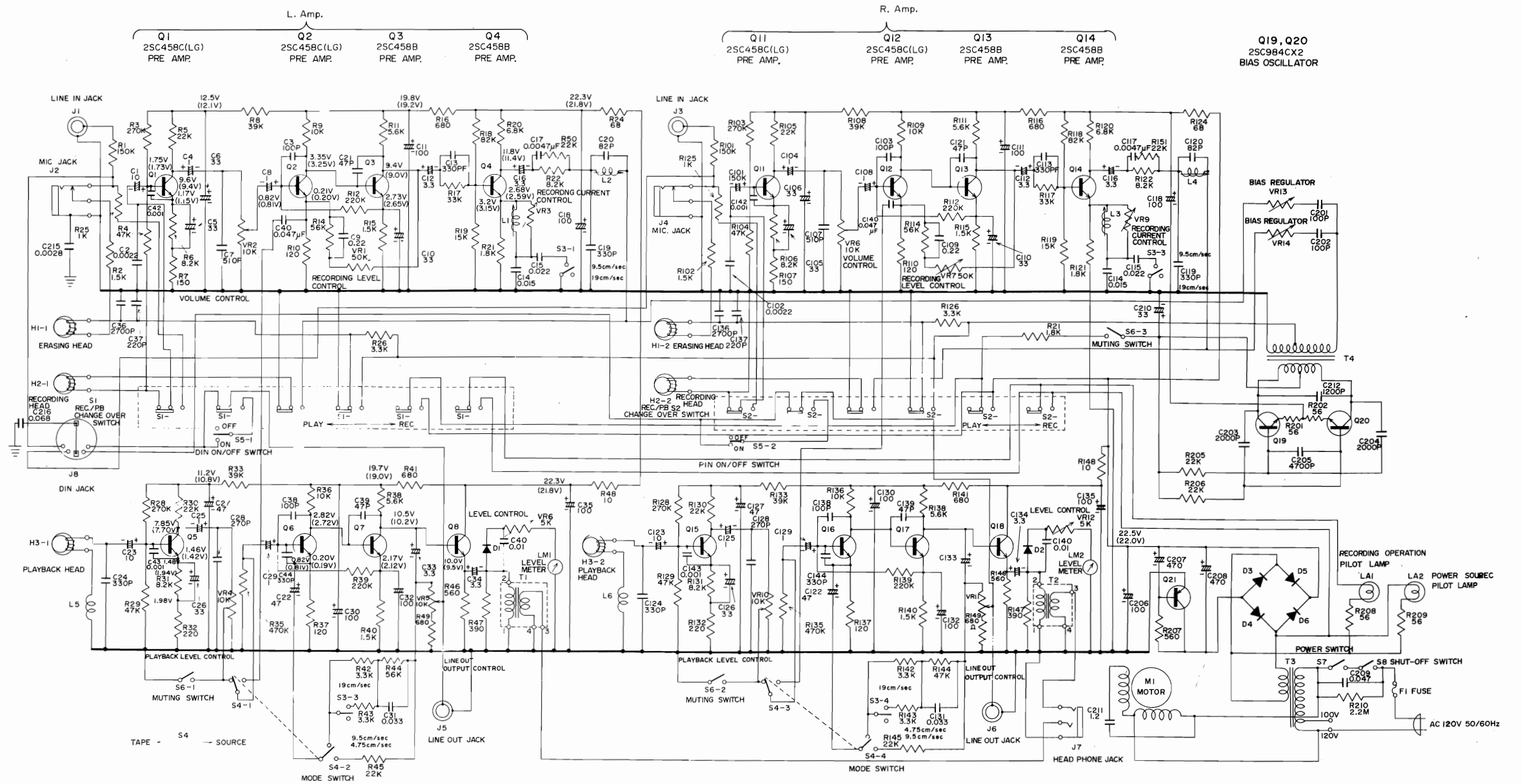
Lubricate each part shown in Fig. 11, when repairing. Lubricate to each revolving part with one drop of pan motor oil and use a suitable quantity of grease on each sliding part. On the shafts of the idler, pinch roller and capstan, oilless metal is used, ensuring stable operation without the use of feeding oil.

(Note) If oil is deposited on belts, idler, capstan, pinch roller and so on, they will slip. Be sure to remove the oil with alcohol.

- ⓅSAE#30
- ⓂMACHINE OIL
- ⓈSONIC SLIDUS OIL #30 (SAE#30)
- ⒸGRASE



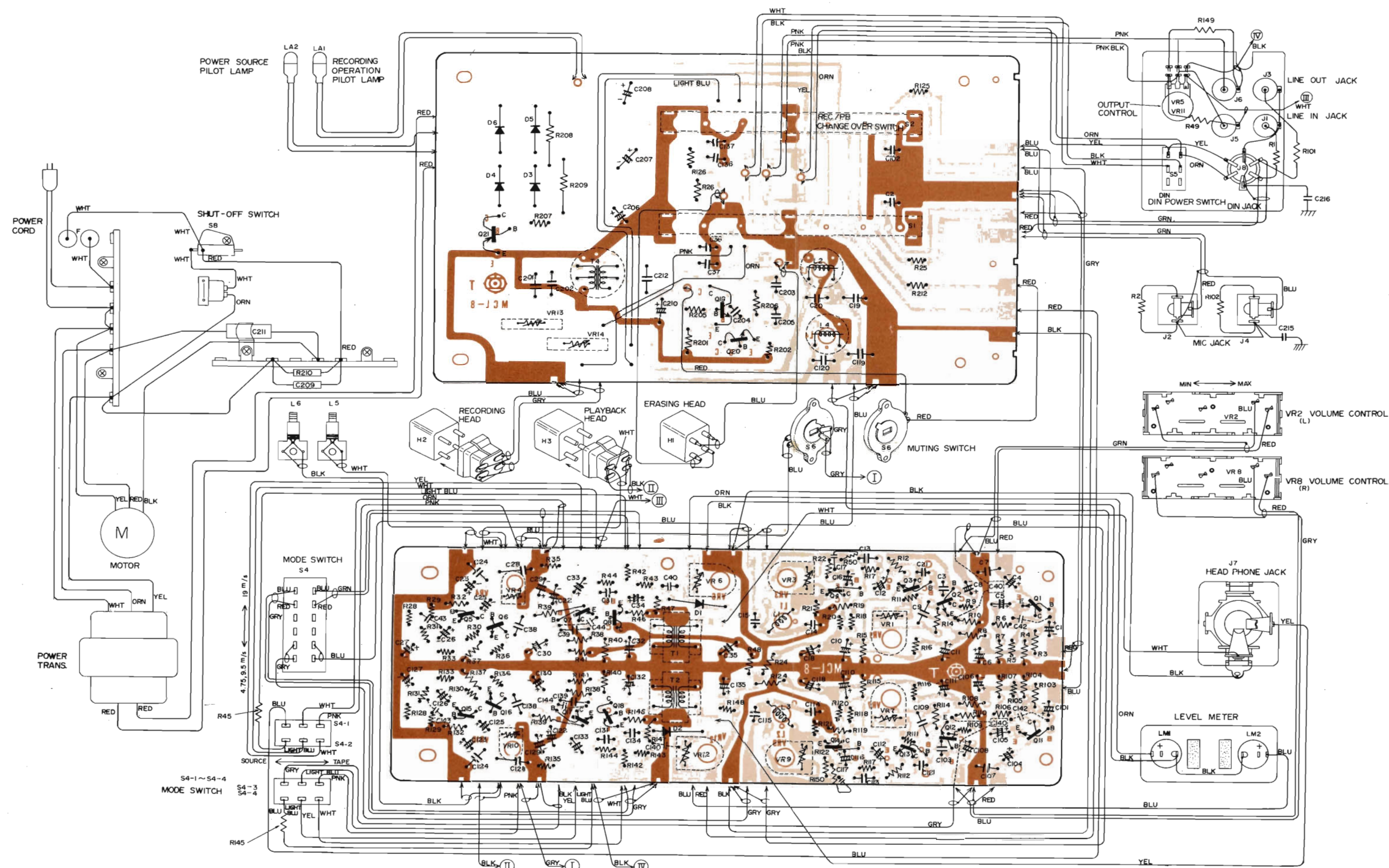
CIRCUIT DIAGRAM



- | | | | | | | | | | | | |
|-------------------------------|-------------------------------|---------------------------|------------------------------------------------|-------------|--------------------------------|--------------------------------|----------------------------|------------------------------------------------------------|-------------|---------------------------|----------------------------------------|
| Q5
2SC458C(LG)
PRE AMP. | Q6
2SC458C(LG)
PRE AMP. | Q7
2SC458B
PRE AMP. | Q8
2SC984B
PRE AMP. RECT. for LEVELMETER | D1
IN34A | Q15
2SC458C(LG)
PRE AMP. | Q16
2SC458C(LG)
PRE AMP. | Q17
2SC458B
PRE AMP. | Q18
2SC984B
PRE AMP. RECT. for LEVELMETER STABILIZER | D2
IN34A | Q21
2SB370C
VOLTAGE | D3, D4, D5, D6
HR-5AX4
RECTIFIER |
|-------------------------------|-------------------------------|---------------------------|------------------------------------------------|-------------|--------------------------------|--------------------------------|----------------------------|------------------------------------------------------------|-------------|---------------------------|----------------------------------------|

NOTE: 1. VOLTAGE MEASURED WITH VOLTMETER AT 120V AC, BASE OF - SIDE POWER SUPPLY.
 2. VOLUME CONTROL AT MINIMUM AND NO SIGNAL.
 3. VOLTAGE SHOWN IN () ARE IN RECORDING CONDITION.
 4. ALL RESISTANCE VALUES IN OHMS, K=1000 M=1000K
 5. ALL CAPACITANCE VALUES IN μF EXCEPT *P* NOTED. P=μF+PF

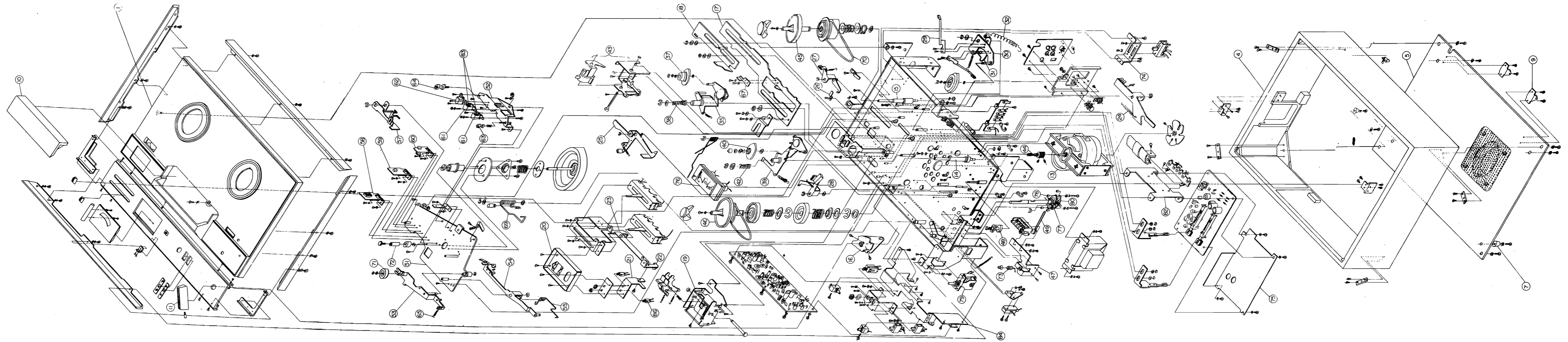
CIRCUIT BOARD DIAGRAM



REPLACEMENT PARTS

Symbol No.	Stock No.	Description	Symbol No.	Stock No.	Description
CAPACITORS:					
C 1	101	0252621 Electrolytic	R14	114	0137910 Carbon film
C 2	102	0274013 Mylar	R15	115	0137853 Carbon film
C 3	103	0248724 Ceramic, discal	R16	116	0137811 Carbon film
C 4	104	0256004 Electrolytic	R17	117	0137907 Carbon film
C 5	105	0252223 Electrolytic	R18	118	0137912 Carbon film
C 6	106	0252523 Electrolytic	R19	119	0137903 Carbon film
C 7	107	0249515 Ceramic, discal	R20	120	0137861 Carbon film
C 8	108	0256004 Same as C4, 104	R21	121	J137607 Carbon film
C 9	109	0276013 Mylar	R22	122	0137623 Carbon film
C10	110	0252223 Same as C5, 105	R24	124	0137769 Carbon film
C11	111	0252631 Electrolytic	R25	125	0137851 Carbon film
C12	112	0252613 Electrolytic	R26	126	0134379 Composition
C13	113	0248736 Ceramic, discal	R28	128	0137956 Carbon film
C14	114	0275012 Mylar	R29	129	0137909 Carbon film
C15	115	0275013 Same as C12, 112	R30	130	0137905 Carbon film
C16	116	0252613 Same as C11, 111	R31	131	0137862 Carbon film
C17	117	0274015 Mylar	R32	132	0137805 Carbon film
C18	118	0252631 Same as C11, 111	R33	133	0137909 Carbon film
C19	119	0248736 Same as C13, 113	R35	135	0137959 Carbon film
C20	120	0248722 Ceramic, discal	R36	136	0137901 Carbon film
C21	121	0248716 Ceramic, discal	R37	137	0137553 Carbon film
C22	122	0252525 Electrolytic	R38	138	0137860 Carbon film
C23	123	0252621 Electrolytic	R39	139	0137955 Carbon film
C24	124	0248736 Ceramic, discal	R40	140	0137853 Carbon film
C25	125	0256004 Same as C4, 104	R41	141	0137811 Carbon film
C26	126	0252223 Electrolytic	R42	142	0137613 Carbon film
C27	127	0252525 Electrolytic	R43	143	0137613 Same as R42, 142
C28	128	0248734 Ceramic, discal	R44	144	0137669 Carbon film
C29	129	0256004 Same as C25, 125	R45	145	0137659 Carbon film
C30	130	0252631 Electrolytic	R46	146	0137810 Carbon film
C31	131	0275014 Mylar	R47	147	0137808 Carbon film
C32	132	0252231 Electrolytic	R48	148	0137759 Carbon film
C33	133	0252613 Electrolytic	R49	149	0131659 Composition
C34	134	0252613 Same as C33, 133	R50	150	0137905 Same as R30, 130
C35	135	0252631 Same as C30, 130	R 201	0137768 Carbon film	
C36	136	0221345 Styrol film	R 202	0137768 Same as R201	
C37	137	0221319 Styrol film	R 205	0137905 Same as R5, 105	
C38	138	0248724 Ceramic, discal	R 206	0137905 Same as R5, 105	
C39	139	0248716 Ceramic, discal	R 207	0137810 Carbon film	
C40	140	0275111 Mylar	R 208	0134298 Composition	
C42	142	0274111 Mylar	R 209	0134298 Same as R208	
C43	143	0274111 Same as C42, 142	R 210	0134413 Composition	
C44	144	0248736 Same as C13, 113	R 212	0137759 Carbon film	
C45	145	0275115 Mylar	VR 1	0151362 Semi variable	
C 201	0247894 Ceramic, discal	VR 2	0171523 Slide volume		
C 202	0247894 Same as C201	VR 3	0151362 Same as VR1		
C 203	0221342 Styrol film	VR 4	0151821 Semi variable		
C 204	0221342 Same as C203	VR 5	0151370 Variable resistor		
C 205	0221351 Styrol film	VR 6	0192006 Semi variable		
C 206	0252631 Same as C11, 111	VR 7	0151362 Same as VR1		
C 207	0256008 Electrolytic	VR 8	0171523 Same as VR2		
C 208	0256008 Same as C207	VR 9	0151362 Same as VR1		
C 209	0215045 Paper	VR 10	0151821 Same as VR4		
C 210	0252623 Electrolytic	VR 11	0151370 Same as VR5		
C 211	0256929 MP	VR 12	0192006 Same as VR6		
C 212	0221337 Styrol film	VR 13	0151129 Semi variable		
C 215	0274113 Mylar	VR 14	0151129 Same as VR13		
C 216	0275116 Mylar				
RESISTORS:					
R 1	101	0131803 Composition	R 11	111	0137860 Carbon film
R 2	102	0131693 Composition	R 10	110	0137553 Carbon film
R 3	103	0137956 Carbon film	R 11	111	0137860 Carbon film
R 4	104	0137909 Carbon film	R 12	112	0137955 Carbon film
R 5	105	0137905 Carbon film			
R 6	106	0137862 Carbon film			
R 7	107	0137803 Carbon film			
R 8	108	0137908 Carbon film			
R 9	109	0137901 Carbon film			
R 10	110	0137553 Carbon film			
R 11	111	0137860 Carbon film			
R 12	112	0137955 Carbon film			
R 14	114	0137910 Carbon film			
R 15	115	0137853 Carbon film			
R 16	116	0137811 Carbon film			
R 17	117	0137907 Carbon film			
R 18	118	0137912 Carbon film			
R 19	119	0137903 Carbon film			
R 20	120	0137861 Carbon film			
R 21	121	J137607 Carbon film			
R 22	122	0137623 Carbon film			
R 24	124	0137769 Carbon film			
R 25	125	0137851 Carbon film			
R 26	126	0134379 Composition			
R 28	128	0137956 Carbon film			
R 29	129	0137909 Carbon film			
R 30	130	0137905 Carbon film			
R 31	131	0137862 Carbon film			
R 32	132	0137805 Carbon film			
R 33	133	0137909 Carbon film			
R 35	135	0137959 Carbon film			
R 36	136	0137901 Carbon film			
R 37	137	0137553 Carbon film			
R 38	138	0137860 Carbon film			
R 39	139	0137955 Carbon film			
R 40	140	0137853 Carbon film			
R 41	141	0137811 Carbon film			
R 42	142	0137613 Carbon film			
R 43	143	0137613 Same as R42, 142			
R 44	144	0137669 Carbon film			
R 45	145	0137659 Carbon film			
R 46	146	0137810 Carbon film			
R 47	147	0137808 Carbon film			
R 48	148	0137759 Carbon film			
R 49	149	0131659 Composition			
R 50	150	0137905 Same as R30, 130			
R 201	0137768 Carbon film				
R 202	0137768 Same as R201				
R 205	0137905 Same as R5, 105				
R 206	0137905 Same as R5, 105				
R 207	0137810 Carbon film				
R 208	0134298 Composition				
R 209	0134298 Same as R208				
R 210	0134413 Composition				
R 212	0137759 Carbon film				
VR 1	0151362 Semi variable				
VR 2	0171523 Slide volume				
VR 3	0151362 Same as VR1				
VR 4	0151821 Semi variable				
VR 5	0151370 Variable resistor				
VR 6	0192006 Semi variable				
VR 7	0151362 Same as VR1				
VR 8	0171523 Same as VR2				
VR 9	0151362 Same as VR1				
VR 10	0151821 Same as VR4				
VR 11	0151370 Same as VR5				
VR 12	0192006 Same as VR6				
VR 13	0151129 Semi variable				
VR 14	0151129 Same as VR13				
TRANSISTORS:					
Q1	11	5320023	Q2	12	5320023
Q2	12	5320023	Q3	13	0573480
Q3	13	0573480	Q4	14	0573480
Q4	14	0573480	Q5	15	5320023
Q5	15	5320023	Q6	16	5320023
Q6	16	5320023	Q7	17	0573480
Q7	17	0573480	Q8	18	5320372
Q8	18	5320372	Q9	19	5320373
Q9	19	5320373	Q 20	5320373	

DISASSEMBLED DIAGRAM



Symbol No.	Stock No.	Description	Symbol No.	Stock No.	Description	
Q 21	0573024	2SB370 Ge 10KH z200mW	⑩	7178654 0941259	Function can assembly ∅E' ring-4mmφ	
D 1	0575001	Diode	⑪	7178691	Function bar assembly	
D 2	0575001	Same as D1	⑫	7178721	Tape speed exchange arm assembly	
D 3	5330041	Diode		0948810	Fiber washer-8.1mmφ×12mm	
D 4	5330041	Same as D3		0948603	Fiber washer	
D 5	5330041	Same as D3		0948544	Fiber washer	
D 6	5330041	Same as D3		0941259	∅E' ring-4mmφ	
TRANSFORMERS:						
T 3	5210601	Power		7711403	Fiber washer-8.1mmφ×12mm	
T 3	5210661	Power		0941561	∅E' ring-5mmφ	
T 4	5260022	Oscillator	⑬	7193471	Recording assembly	
	5250671	Audio output		6712041	Recording button case	
COILS:						
L 1	5270031	Variable coil		7714962	Case sheet	
L 2	5270001	Variable coil		0711306	Pan head screw-2.6mmφ×6mm	
L 3	5270031	Same as L1		8781438	Tapping screw-3mmφ×8mm	
L 4	5270001	Same as L2		0662126	F idler lever spring	
L 5	5270061	Balance		⑭	7178774	Record slide plate (L) assembly
L 6	5270061	Same as L5		⑮	7178792	Record slide plate (R) assembly
MISCELLANEOUS:						
for Final assembly						
①	6119941	Escutcheon assembly	⑯	7178821	Pressure roller arm plate	
	0941277	Escutcheon washer		0662211	H slide plate spring	
	7771274	Escutcheon screw		0948544	Fiber washer	
	8811114	Washer-3mmφ (11req'd)		0941259	∅E' ring-4mmφ	
	8813124	Spring washer-3mmφ (11req'd)	⑰	7180111	P function plate assembly	
	8711408	Pan head screw-3mmφ×8mm (9req'd) for escutcheon cabinet mounting		8781438	Tapping screw-3mmφ×8mm	
	8711410	Pan head screw-3mmφ×10mm (2req'd) for escutcheon mounting	⑱	7178833	Brake lever (L) assembly	
④	6117802	Cabinet assembly		0662129	P idler lever spring	
	0948483	Staple		0941259	∅E' ring-4mmφ	
	8812114	Washer-3mmφ	⑲	7178853	Brake lever (R) assembly	
	8751413	Wood screw-3.1mmφ×13mm		0662211	H Slide plate spring	
⑦	7662191	Rubber base		0941259	∅E' ring-4mmφ	
	8812116	Washer-4mmφ	⑳	7114561	Back tension assembly	
	8711618	Pan head screw-4mmφ×18mm		8711404	Pan head screw-3mmφ×4mm	
	0645201	Special washer-4mmφ	㉑	7178872	R idler lever assembly	
	8711625	Pan head screw-4mmφ×25mm		0971191	R idler assembly	
⑨	6710651	Switch knob	㉒	6313121	R idler lever spring	
	7178472	Roller assembly		0941259	∅E' ring-4mmφ	
	8751410	Wood screw-3.1mmφ×10mm		0948544	Fiber washer	
⑩	6164942	Head cover assembly		0958067	Felt for push switch	
	0747306	Binding screw-2.6mmφ×6mm		0948633	R idler washer	
	8813123	Spring washer-2.6mmφ for head cover mounting		0630564	Flywheel holder	
⑪	6263522	Selector knob assembly		7180792	Voltage change-over holder ass'y	
	7777142	Set screw	F 3	0591163	Fuse (2A) (TRQ-730D(W))	
	6265621	Volume control knob assembly	F 3	0591162	Fust (1A)	
				8781436	Tapping screw-3mmφ×6mm	
				0971120	Motor cushion	
⑬	5570032	Motor assembly		7178891	F idler lever assembly	
	8813126	Spring washer-4mmφ	㉓	0948631	F idler change-over spring	
	8711610	Pan head screw-4mmφ×10mm (2 req'd) for motor ass. mounting		0948675	Fiber washer	
⑭	7500502	Take up reel stand shaft		0941259	∅E' ring-4mmφ	
	7500522	Rewind reel stand shaft		0662193	Pause lever spring	
	8821116	Nut-4mmφ	㉔	7178931	P idler lever assembly	
	8813126	Spring washer-4mmφ	㉕	6314271	Change-over spring	

Symbol No.	Stock No.	Description	Symbol No.	Stock No.	Description
	0948675	Fiber washer		6370331	Flywheel assembly
	0941259	∅E' ring-4mmφ		6313332	Take up spring
⑬	6312101	P lever spring		7715551	Flywheel washer
	7178971	Tape speed change over ass'y	⑰	7180121	F idler stopper
	8781438	Tapping screw-3mmφ×8mm (3 req'd) for tape speed change-over holder mounting		8711408	Pan head screw-3mmφ×8mm (4 req'd) for chassis mounting
⑭	6340628	Motor pulley	⑱	7506122	Shut off lot assembly
	7771252	Set screw		0941258	∅E' ring-3mmφ
⑮	6410583	Rewind reel stand assembly		0637119	Fiber washer
⑯	6410612	Take up reel stand assembly		0948634	Flywheel washer
	0948595	Nylon washer		0941183	Oil cap
	0948482	Fiber washer	㉑	0971126	Rewinding belt
	7771312	Special screw	㉒	6380171	Pressure roller
	7660261	Reel supporter		0636553	Rewind washer
⑰	7179031	Counter holder assembly		0941258	∅E' ring-3mmφ
	8781436	Tapping screw-3mmφ×6mm (2 req'd) for Counter mounting	㉓	6360028	Capstan
⑱	6340341	Counter pulley		6360023	Capstan (TRQ-730D(W))
	0636553	Rewind washer		6360011	Capstan screw
	0941258	∅E' ring-3mmφ		7715951	Capacitor shield plate
㉑	7660162	Counter belt (large)		8781440	Tapping screw-3mmφ×10mm (2 req'd) for 6P terminal board, capacitor mounting
	0971236	Counter belt (large)		0971002	Lamp cushion
	0662222	Brake lever spring	㉔	0594110	Pilot lamp
	5210601	Power transformer (TRQ-730D(A))		6313052	Balance spring
	5210661	Power transformer (TRQ-730D(W))	㉕	0941258	∅E' ring
	8711606	Pan head screw-4mmφ×6mm		7179221	Equalizer arm assembly
	8811116	Washer-4mmφ		0941259	∅E' ring-4mmφ
	8813126	Spring washer-4mmφ		0639391	Motor spring
				0544404	6P terminal board
㉖	7113694	Chassis assembly		0923972	Staple
㉗	7179052	Head plate assembly	㉖	7715401	Shield plate
㉘	7179072	P roller arm assembly		0745303	Binding screw-2.6mmφ×3mm
㉙	7196971	Lock arm assembly		8811114	Washer-3mmφ
	6313591	Arm spring		8711406	Pan head screw-3mmφ×6mm for PCB holder mounting
	0941259	∅E' ring-4mmφ		7714961	Case sheet
	7732081	Felt for flywheel brake		7714771	Fuse sheet
	7196881	Cover holder assembly		8781438	Tapping screw-3mmφ×8mm (14 req'd) for equalizer holder jack holder PCB holder mounting
	8711406	Pan head screw-3mmφ×6mm		7197941	M jack holder
	0923972	Staple	㉗	5550252	Level indicator
㉚	7179112	T shifter arm assembly		0680772	Level indicator cushion
	0941259	∅E' ring-4mmφ	㉘	7161314	Switch assembly
	7586331	Tape guide		7511781	Switch collar
㉛	7179142	Pad assembly		7585852	Switch shaft
㉜	7191301	Pad assembly		8811113	Washer-2.6mmφ
㉝	7191331	Pad assembly		8813123	Spring washer-2.6mmφ
	8711405	Pan head screw-3mmφ×5mm (6 req'd) for pad plate mounting		0821233	Nut-2.6mmφ (2 req'd) for rotary switch mounting
㉞	5440531	Recording playback head		8813124	Spring washer-3mmφ
㉟	5440511	Erase head		8711406	Pan head screw-3mmφ×6mm
㊱	0944741	Tape guide (right)			
㊲	0948154	Tape guide spring			
㊳	7505216	Tape guide (left)			
	0711306	Pan head screw-2.6mmφ×6mm		8711625	Pan head screw-4mmφ×25mm TRQ-730W for capstan mounting
	0821233	Nut-2.6mmφ		0711316	Pan head screw-2.6mmφ×16mm (2 req'd) for balance mounting
	0948102	Head adjust spring		7204451	Push switch sheet
	8811233	Washer-2.6mmφ	㉙	7771873	Screw with spring washer-3mmφ
㊴	6312081	Pressure roller spring		5630922	Push switch
			㊱	5610251	Rotary switch

Symbol No.	Stock No.	Description	Symbol No.	Stock No.	Description
	5610252	Rotary switch	J 7	5670282	Headphone jack
	5741286	Power cord	⊗	5650261	Head socket
	0043793	Bushing	⊗	7195331	PCB supporter
		for Printed circuit board assembly			
⊗	7512391	PCB shaft	S 5	7663721	Rubber sheet
S 4	5620183	Slide switch		0532161	Slide switch
	7715351	Slide switch sheet		0721306	Flat screw-2.6mmφ×6mm
J 2 4	5670331	Jack	⊗	5670431	pin jack
	8811114	Washer-3mmφ (2 req'd) for P.C.B. shield plate mounting		8745406	Binding screw-3mmφ×6mm
	0948771	Insulating washer		7508221	Volume screw
	8711406	Pan head screw-3mmφ×6mm		0544186	Lug terminal
	8813124	Spring washer-3mmφ } (4 req'd) for slide volume mounting	S 1 2	5620602	Slide switch
	7710091	Fiber washer		0948570	Radiator plate
	8745406	Binding screw-3mmφ×6mm } (5 req'd) for PCB holder mounting			



Head Office : 5, 1-chome, Marunouchi, Chiyoda-ku, Tokyo
 Tel. Tokyo (212) 1111 (80 lines)
 Cable Address : "HITACHY" TOKYO
 Codes : All Codes Used