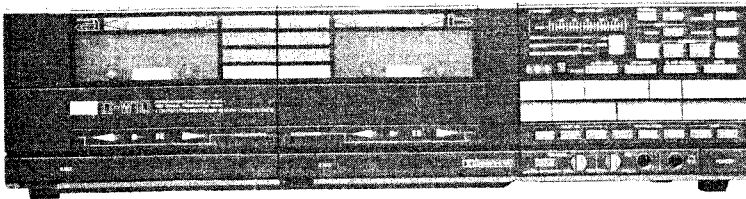


# SERVICE MANUAL

COMPU-SYNCHRO  
DOUBLE REVERSE CASSETTE DECK

## SANSUI D-W10

(Silver & Black Model)



### CAUTION

1. Parts identified by the  $\triangle$  symbol on the schematic diagram and the parts list are critical for safety. Use only replacement parts that have critical characteristics recommended by the manufacturer.
2. Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

### •SPECIFICATIONS

Track format .....	4-track/2-channel system
Tape speed.....	4.8 cm/sec, 9.5 cm/sec.
<b>Heads</b>	
Rec/play head.....	HIGH-Bs hard permalloy x 2
Erase head.....	Double-gap HIGH-Bs ferrite x 2
<b>Motor</b> .....	
	Electronically controlled DC motor x 2
	Reels: DC Motor x 2
<b>Wow/flutter</b> .....	0.05% max (WRMS)
<b>Fast forwarding (rewinding) time</b>	
.....	Approx. 85 sec. (for C-60 tape)
<b>Frequency response</b> (—20 VU recording/playback)	
Normal tape (LH) .....	20 to 15,000 Hz
	(30 to 14,000 Hz $\pm$ 3 dB)
Chrome tape .....	20 to 17,000 Hz
	(30 to 16,000 Hz $\pm$ 3 dB)
Metal tape.....	20 to 18,000 Hz
	(30 to 17,000 Hz $\pm$ 3 dB)
<b>Signal to noise ratio</b> (Record/Playback)	
Metal Tape (without Dolby Noise Reduction)	..... better than 57 dB
(With Dolby Noise Reduction Effect)	
DOLBY "B" NR ....	better than 66 dB
	(above 5 kHz)
DOLBY "C" NR ....	better than 73 dB
	(above 1 kHz)
<b>Erasure factor</b> (Metal Tape)	
.....	more than 70 dB at 1 kHz
<b>Recording bias frequency</b>	
.....	85 kHz
<b>Input sensitivity/impedance</b>	
LINE IN (REC).....	150 mV/47 kohms (AUTO)
	70 mV/47 kohms (MANUAL)
MIC .....	0.5 mV/10 kohms
<b>Power requirements</b> .....	
	120/220/240 V
	50/60 Hz
For U.S.A. and Canada	
.....	120V (60 Hz)
<b>Power consumption</b> .....	35W
<b>Dimensions</b> .....	
	430 mm (16-15/16") W
	111 mm (4-38") H
	304 mm (12") D
<b>Weight</b> .....	
	6.2 kg (13.7 bs) net
	7.6 kg (16.8 bs) packed

- Design and specifications subject to changes without notice for improvements.
- Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the double D symbol are trademarks of Dolby Laboratories Licensing Corporation.

**Sansui**

SANSUI ELECTRIC CO., LTD.

## CAUTION

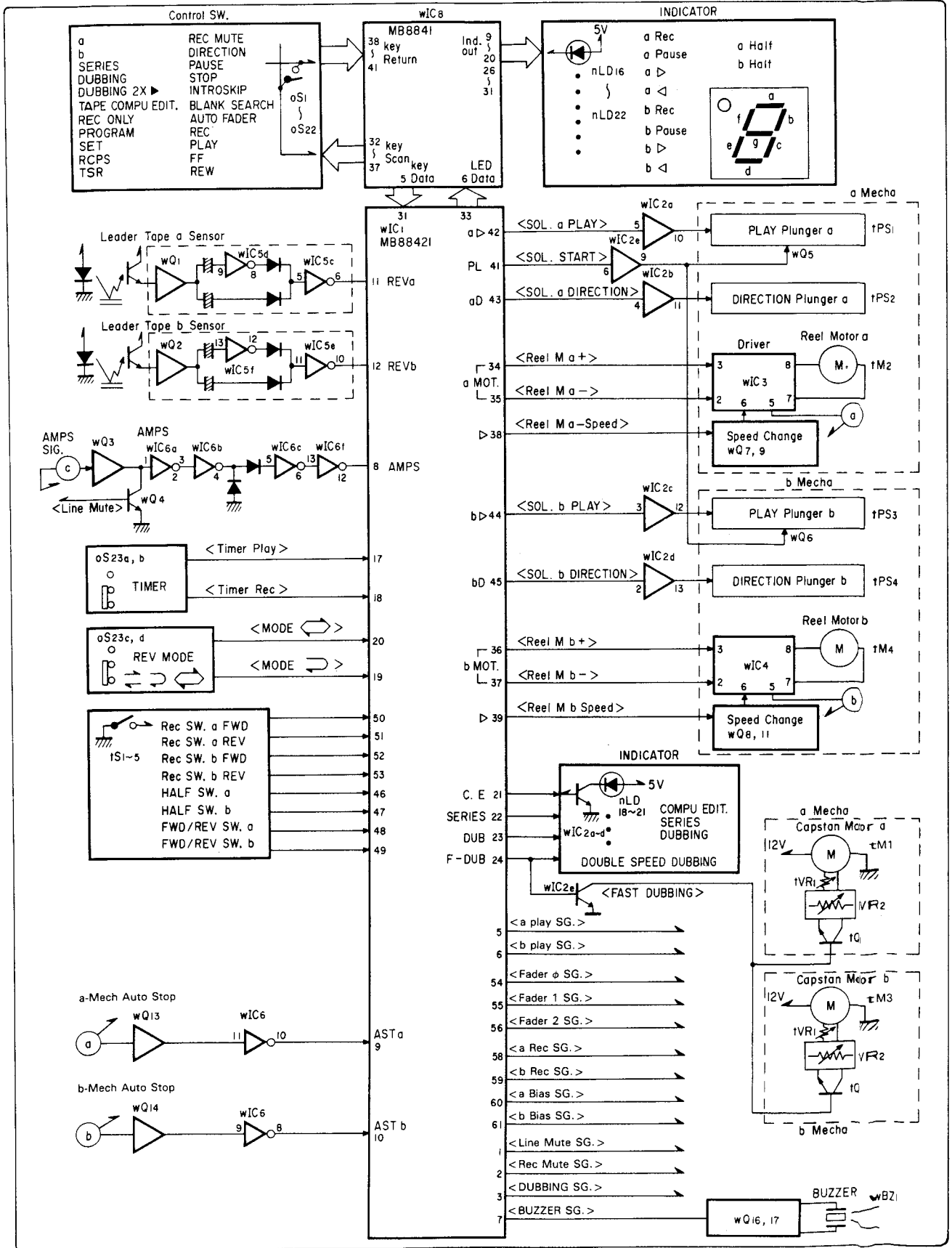
1. The symbols, UL, CSA, SA, BS, UK, EU, AS and XX (EXPORT) on the parts list and the schematic diagram mean followings respectively.
  - UL..... Manufactured for U.S.A market.  
(Underwriters Laboratories approved model.)
  - CSA..... Manufactured for Canadian market.
  - SA..... Manufactured for South African market.
  - BS, UK ..... Manufactured for United Kingdom market.
  - EU ..... Manufactured for European market.
  - AS..... Manufactured for Australian market.
  - XX (EXPORT) ..... Standard Version.
  - NON MARK ..... Common Parts.
  
2. Some printed circuit boards are not supplied as the assembled. To separate these in this service manual, the stock No's are not indicated at the ends of the board names. However, the individual parts on the circuit boards are provided by orders.
  
3. Since some of capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.
  
4. Abbreviations in this service manual are as follows.

•Abbreviations List

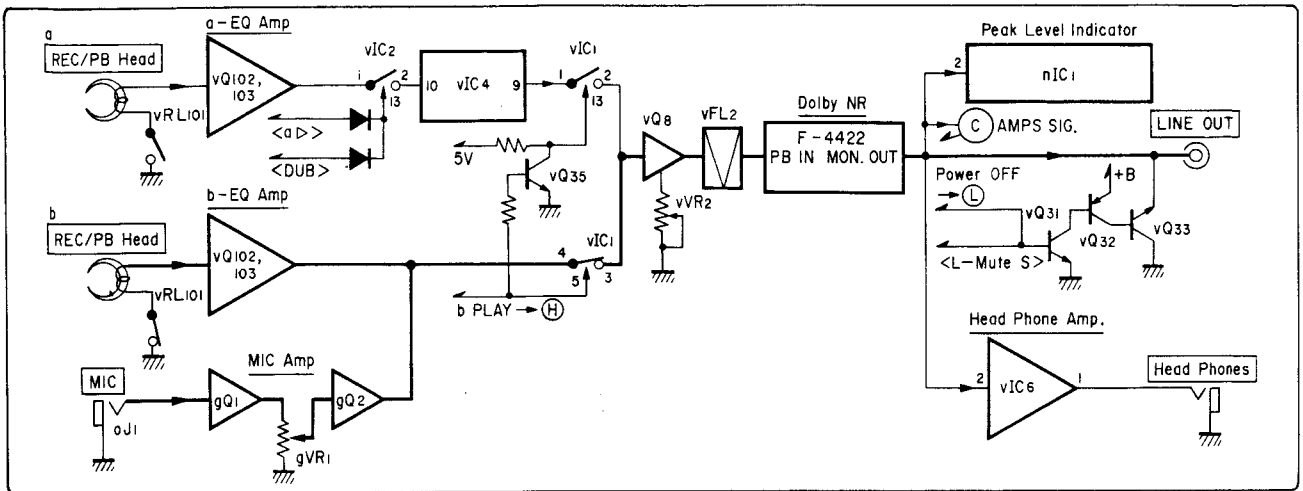
C.R.	: Carbon Resistor	E.B.L.	: Low Leak Bi-Polar Electrolytic Capacitor
S.R.	: Solid Resistor	Ta.C.	: Tantalum Capacitor
Ce.R.	: Cement Resistor	F.C.	: Film Capacitor
M.R.	: Metal Film Resistor	M.P.	: Metalized Paper Capacitor
F.R.	: Fusing Resistor	P.C.	: Polystyrene Capacitor
N.I.R.	: Non-Inflammable Resistor	G.C.	: Gimmic Capacitor
A.R.	: Array Resistor	A.C.	: Array Capacitor
C.C.	: Ceramic Capacitor	V.R.	: Variable Resistor
C.T.	: Ceramic Capacitor, Temperature Compensation	S.V.R.	: Semi Variable Resistor
E.C.	: Electrolytic Capacitor	SW.	: Switch
E.L.	: Low Leak Electrolytic Capacitor	Chip R.	: Chip Resistor
E.B.	: Bi-Polar Electrolytic Capacitor	Chip C.	: Chip Capacitor

# 1. BLOCK DIAGRAM

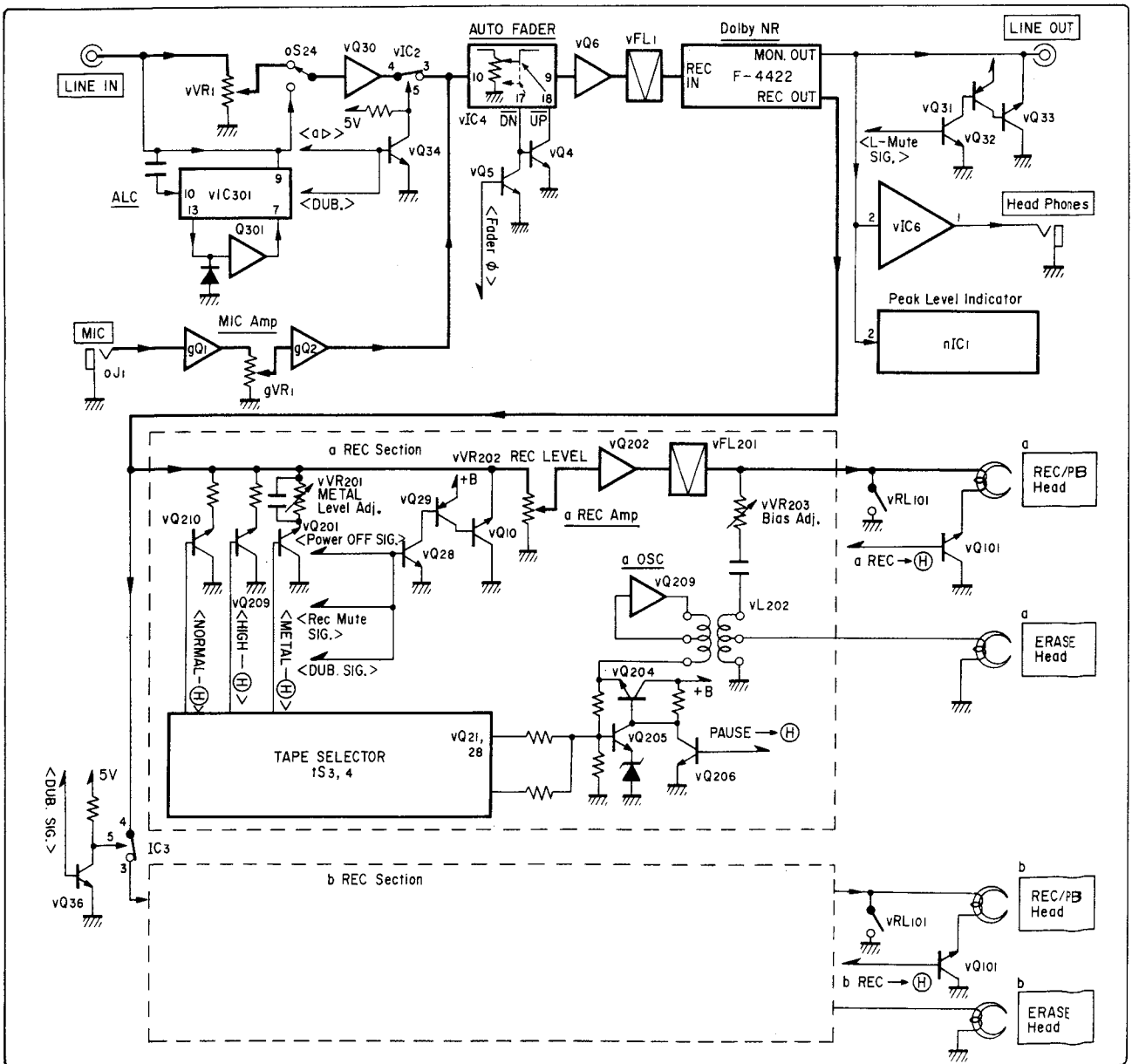
## 1-1. Logic Control Section



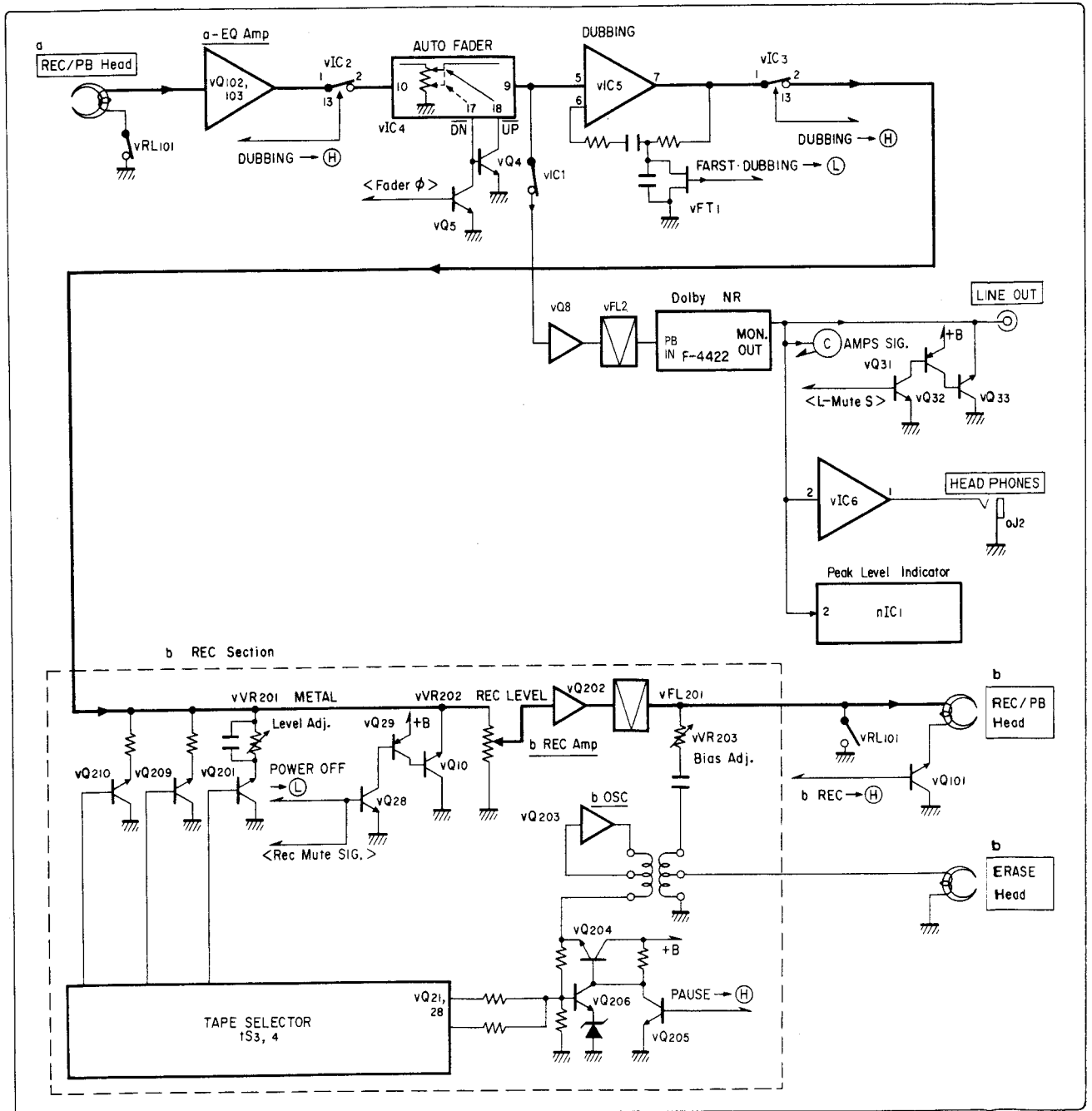
### 1-2. Playback Section



### 1-3. Recording Section

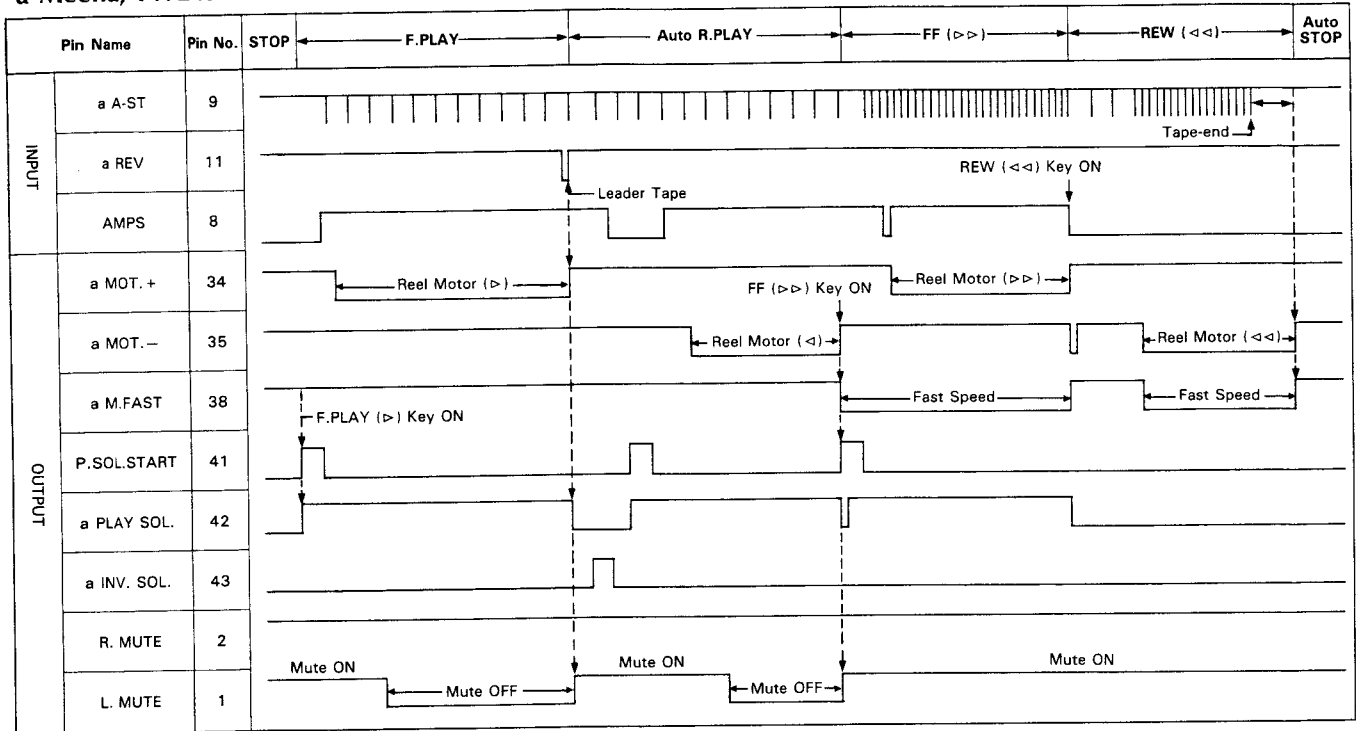


1-4. Dubbing Section

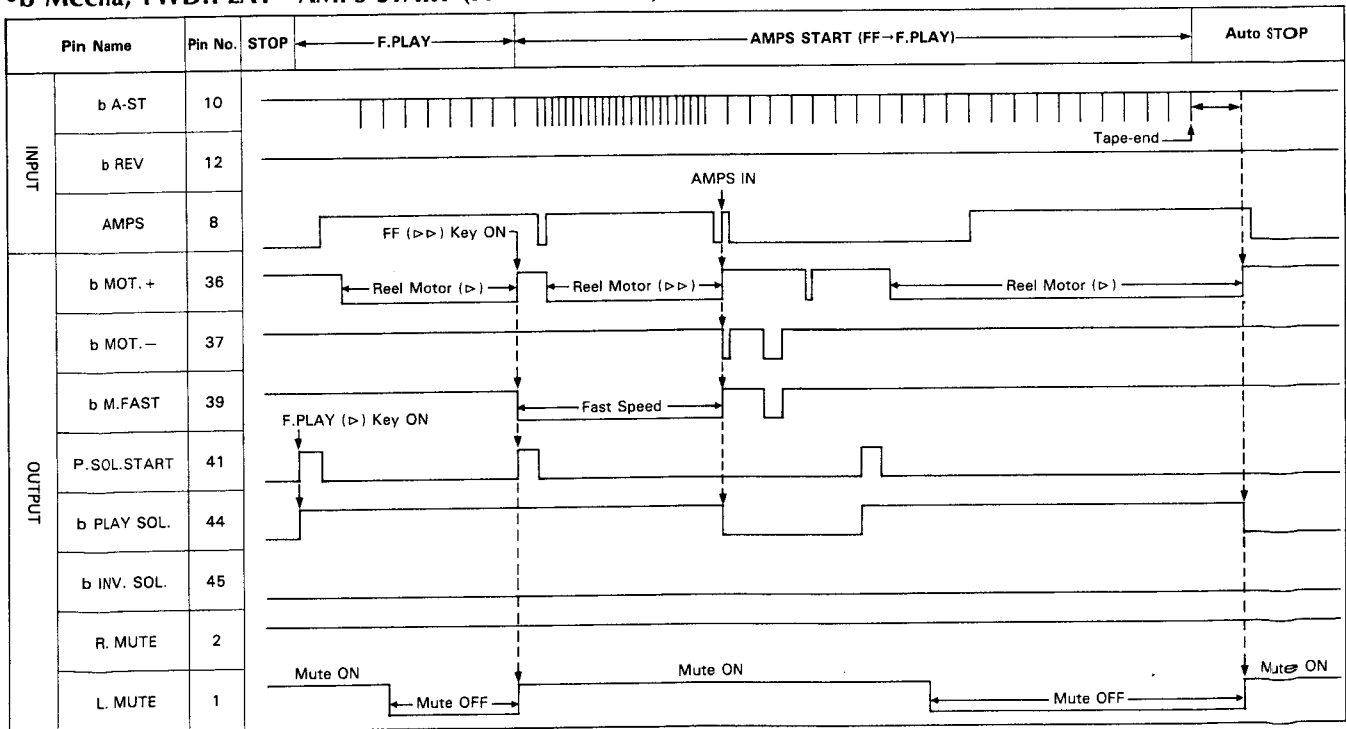


## 2. TIMING CHART OF IC, MB88421

•a Mecha, FWD.PLAY→Auto REV.PLAY→FF→REW→Auto STOP



•b Mecha, FWD.PLAY→AMPS START (FF→FWD.PLAY)→Auto STOP



### 3. DESCRIPTION OF IC MB88421, MB8841, LC7530

#### •MB88421 (Logic Control IC)

Pin No.	I/O	Function
58	O	a Mechanism recording output terminal ("L" active)
59	O	b Mechanism recording output terminal ("L" active)
60	O	a Mechanism bias output terminal ("L" active)
61	O	b Mechanism bias output terminal ("L" active)
21	O	C•EDIT indicator output terminal ("H" active)
22	O	SERIES indicator output terminal ("H" active)
23	O	DUBBING indicator output terminal ("H" active)
24	O	FAST DUBBING indicator output terminal ("H" active)
1	O	Line muting signal output terminal ("H" active)
2	O	REC muting signal output terminal ("H" active)
3	O	DUBBING output terminal ("H" active)
5	O	a Mechanism play output terminal ("H" active)
6	O	b Mechanism play output terminal ("H" active)
7	O	Buzzer output terminal ("H" active)
8	I	AMPS signal input terminal
9	I	a Mechanism auto-stop signal input terminal
10	I	b Mechanism auto-stop signal input terminal
11	I	a Mechanism auto-reverse signal input terminal
12	I	b Mechanism auto-reverse signal input terminal
13	O	LED data send output terminal
14	O	Busy/ready output terminal
15	I	Busy/ready input terminal
34	O	a Mechanism reel motor + output terminal ("H" active)
35	O	a Mechanism reel motor - output terminal ("H" active)
36	O	b Mechanism reel motor + output terminal ("H" active)
37	O	b Mechanism reel motor - output terminal ("H" active)
38	O	a Mechanism reel motor fast output terminal ("L" active)
39	O	b Mechanism reel motor fast output terminal ("L" active)
41	O	PLAY solenoid start output terminal
42	O	a Mechanism PLAY solenoid output terminal ("H" active)
43	O	a Mechanism DIRECTION solenoid output terminal ("H" active)
44	O	b Mechanism PLAY solenoid output terminal ("H" active)
45	O	b Mechanism DIRECTION solenoid output terminal ("H" active)
46	I	a Mechanism half SW. terminal ("L" active)
47	I	b Mechanism half SW. terminal ("L" active)
48	I	a Mechanism FWD. play sensor terminal
49	I	b Mechanism FWD. play sensor terminal
50	I	a Mechanism FWD. rec SW. terminal
51	I	a Mechanism REV. rec SW. terminal
52	I	b Mechanism FWD. rec SW. terminal
53	I	b Mechanism REV. rec SW. terminal
54	O	Fader up/down signal output terminal
55	O	Fader up/down speed 1 output terminal
56	O	Fader up/down speed 2 output terminal
17	I	Timer play terminal ("L" active)
18	I	Timer rec terminal ("L" active)
19	I	Reverse mode 1 terminal ("L" active)
20	I	Reverse mode 2 terminal ("L" active)
28	I	Key data send input terminal
30	O	Shift clock output terminal
31	I	Key data signal input terminal
33	O	LED data signal output terminal

#### •MB8841 (Key Input/Indicator Output Control IC)

Pin No.	I/O	Function
9	O	b Mechanism REC indicator output terminal ("L" active)
10	O	b Mechanism PAUSE indicator output terminal ("L" active)
11	O	b Mechanism FWD. play indicator output terminal ("L" active)
12	O	b Mechanism REV. play indicator output terminal ("L" active)
13	O	a Segment output terminal ("L" active)
14	O	b Segment output terminal ("L" active)
15	O	g Segment output terminal ("L" active)
16	O	c Segment output terminal ("L" active)
17	O	o indicator output terminal ("L" active)
18	O	f Segment output terminal ("L" active)
19	O	e Segment output terminal ("L" active)
20	O	d Segment output terminal ("L" active)
22	O	Key data send output terminal
23	O	Busy/ready output terminal
24	I	Busy/ready input terminal
25	I	Clock input terminal
26	O	a Mechanism REC indicator output terminal ("L" active)
27	O	a Mechanism PAUSE indicator output terminal ("L" active)
28	O	a Mechanism FWD. play indicator output terminal ("L" active)
29	O	a Mechanism REV. play indicator output terminal ("L" active)
30	O	a Mechanism half indicator output terminal ("L" active)
31	O	b Mechanism half indicator output terminal ("L" active)
32	O	Key scan 0 output terminal
33	O	Key scan 1 output terminal
34	O	Key scan 2 output terminal
35	O	Key scan 3 output terminal
36	O	Key scan 4 output terminal
37	O	Key scan 5 output terminal
38	I	Key return 0 input terminal
39	I	Key return 1 input terminal
40	I	Key return 2 input terminal
41	I	Key return 3 input terminal
4	I	LED data send input terminal
5	O	Key data signal output terminal
6	I	LED data signal input terminal
7	I	Shift clock input terminal

#### •LC7530 (Auto Fader IC)

Pin No.	Pin Name	Function
9	SIG 1	L-ch signal input terminal
14	SIG 2	R-ch signal input terminal
10	COM 1	L-ch signal output terminal
13	COM 2	R-ch signal output terminal
11	V <sub>M</sub>	Bias terminal
12	V <sub>SS</sub>	GND terminal
17	DN	Volume level down control terminal ("L" active)
18	UP	Volume level up control terminal ("L" active)
19	CR	Down/up step speed control terminal
20	V <sub>DD</sub>	Power supply terminal

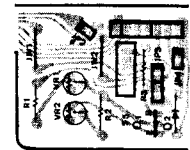
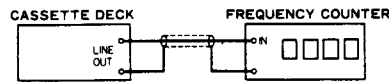
## 4. ADJUSTMENTS

### 4-1. Tape Speed Adjustment

- Adjust the tape speed of b-side as fast as a-side.
- Note:** 1. Use Sansui Test Tape, SCT-S3K. (3 kHz signals are recorded on the tape).
- 2. Connections are shown in Fig. 4-1.

Fig. 4-2 <F-3748>

Fig. 4-1



#### 1) Tape Speed Adjustment (NORMAL SPEED)

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	A Side Mecha. (NORMAL)	LINE OUT Frequency counter	Playback the TEST TAPE SCT-S3K. A Side Mecha.	Turn semi-variable resistor (tVR1) of A Side Mecha. as Fig. 4-2.	3000Hz ± 30Hz	Use small screw driver.
2.	B Side Mecha. (NORMAL)		Playback the TEST TAPE SCT-S3K. B Side Mecha.	Turn semi-variable resistor (tVR1) of B Side Mecha. as Fig. 4-2.	3000Hz ± 30Hz	

#### 2) Tape Speed Adjustment (HIGH SPEED)

- Note:** 1. Before this adjustment, regulate "4-1. Tape Speed Adjustment (NORMAL SPEED)".
2. Short between jW2 (Cross Conductor) & R3 (Resistor) on F-3748. (See Fig. 4-2)

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	A Side Mecha. (HIGH)	LINE OUT Frequency counter	Playback the TEST TAPE SCT-S3K. A Side Mecha.	Turn semi-variable resistor (tVR2) of A Side Mecha. as Fig. 4-2.	6000Hz ± 60Hz	Use small screw driver.
2.	B Side Mecha. (HIGH)		Playback the TEST TAPE SCT-S3K. B Side Mecha.	Turn semi-variable resistor (tVR2) of B Side Mecha. as Fig. 4-2.	6000Hz ± 60Hz	

### 4-2. Playback Adjustment

- Note:** 1. Before this adjustment, clean REC/P.B. head surface.
2. For this adjustment, use Sansui Test Tape, SCT-F10K, and SCT-L400.
3. Set the Dolby NR switch to be OFF.
4. Connections are shown in Fig. 4-3.

Fig. 4-3

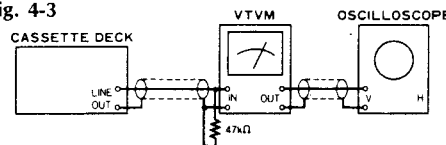
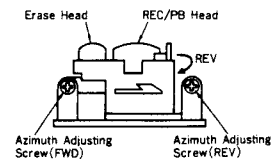


Fig. 4-4



#### 1) a-Side Mecha. Adjustment

**Note:** Push a-button.

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	REC/P.B. Head Adj.	LINE OUT VTVM and Scope	Playback the TEST TAPE SCT-F10K	Adjust the azimuth adjusting screw in Fig. 4-4.	MAX. Output both channels on FWD and REV PLAY	Refer to removal of Lide Ass'y on Page 23. After this adjustment, lock the screw with paint.
2.	Playback Level Pre Adj.	Between across vR1 (L-CH and R-CH, F-4670) VTVM and Scope	Playback the TEST TAPE SCT-L400	Adjust each vVR101 (L-CH and R-CH, F-4678)	10mV ± 2dB	See Top View on Page 18.
3.	Playback Level Adj.	LINE OUT VTVM and Scope	Playback the TEST TAPE SCT-L400	Adjust each vVR2 (L-CH and R-ch, F-4670)	420mV ± 2dB	See Top View on Page 18.

#### 2) b-Side Mecha. Adjustment

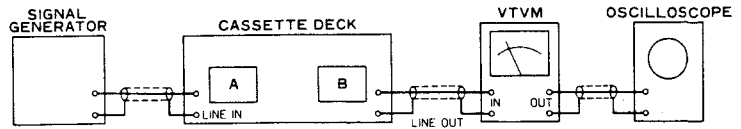
**Note:** Push b-button.

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	REC/P.B. Head Adj.	LINE OUT VTVM and Scope	Playback the TEST TAPE SCT-F10K	Adjust the azimuth adjusting screw in Fig. 4-4.	MAX. Output both channels on FWD and REV PLAY	Refer to removal of Lide Ass'y on Page 23. After this adjustment, lock the screw with paint.
2.	Playback Level Adj.	LINE OUT VTVM and Scope	Playback the TEST TAPE SCT-L400	Adjust each vVR101 (L-CH and R-CH, F-4678)	420mV ± 2dB	See Top View on Page 18.



### 4-3. REC Level & Frequency Response Adjustment

**Note:** 1. Connections are shown in Fig. 4-5. **Fig. 4-5**  
 2. Set the Dolby NR switch to be OFF.



#### 1) a-Side Mecha. Adjustment

**Note:** Push a-button.

STEP	SUBJECT	INPUT SIGNAL	MEASURE OUTPUT	SETTING	ADJUSTMENT	REMARKS
1.	REC Level Adj.	Feed 1kHz, 50mV from S.G. into LINE IN.	LINE OUT VTVM and Scope	Load the TEST TAPE SCT-SA. 1.Push REC button. 2.Playback the 1kHz signal.	Adjust vVR202 (L-CH and R-CH, F-4679) until playback level of the A side Mecha. and output signal level on recording operation will be equal.	See Top View on Page 18.
2.	Frequency Response Adj.	Feed 1kHz 15mV and 10kHz 15mV from S.G. into LINE IN	LINE OUT VTVM and Scope	Load the TEST TAPE SCT-SA. 1.Record the 1kHz and 10kHz signals from S.G. 2.Playback the 1kHz and 10kHz signals, then confirm 10kHz signal level in less than 1kHz signal level $\pm 2\text{dB}$ on VTVM.	1.If not, adjust vVR203 (L-CH and R-CH, F-4679) slightly until the 10kHz signal level in less than 1kHz signal level $\pm 2\text{dB}$ on VTVM.	See Top View on Page 18.
3.	Metal REC Level Adj.	Feed 1kHz, 50mV from S.G. into LINE IN	LINE OUT VTVM and Scope	Load the TEST TAPE SCT-MA. 1.Push REC button. 2.Playback the 1kHz signal.	Adjust vVR201 (L-CH and R-CH, F-4679) until playback level of the A side Mecha. and output signal level on recording operation will be equal.	See Top View on Page 18.

#### 2) b-Side Mecha. Adjustment

**Note:** Push b-button.

STEP	SUBJECT	INPUT SIGNAL	MEASURE OUTPUT	SETTING	ADJUSTMENT	REMARKS
1.	REC Level Adj.	Feed 1kHz, 50mV from S.G. into LINE IN.	LINE OUT VTVM and Scope	Load the TEST TAPE SCT-SA. 1.Push REC button. 2.Playback the 1kHz signal.	Adjust vVR202 (L-CH and R-CH, F-4679) until playback level of the B side Mecha. and output signal level on recording operation will be equal.	See Top View on Page 18.
2.	Frequency Response Adj.	Feed 1kHz 15mV and 10kHz 15mV from S.G. into LINE IN	LINE OUT VTVM and Scope	Load the TEST TAPE SCT-SA. 1.Record the 1kHz and 10kHz signals from S.G. 2.Playback the 1kHz and 10kHz signals, then confirm 10kHz signal level in less than 1kHz signal level $\pm 2\text{dB}$ on VTVM.	1.If not, adjust vVR203 (L-CH and R-CH, F-4679) slightly until the 10kHz signal level in less than 1kHz signal level $\pm 2\text{dB}$ on VTVM.	See Top View on Page 18.
3.	Metal REC Level Adj.	Feed 1kHz, 50mV from S.G. into LINE IN	LINE OUT VTVM and Scope	Load the TEST TAPE SCT-MA. 1.Push REC button. 2.Playback the 1kHz signal.	Adjust vVR201 (L-CH and R-CH, F-4679) until playback level of the B side Mecha. and output signal level on recording operation will be equal.	See Top View on Page 18.

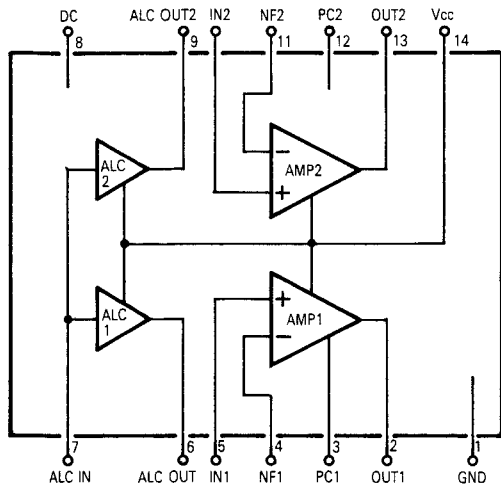
#### ◆ List of Sansui Test Tape

Name of TEST TAPE	Recorded Frequency	Description	Equivalent To
SCT-F40	40 Hz	Playback Frequency Response Check	—
SCT-F1K	1 kHz	High Frequency Equalization Check	—
SCT-F10K	10 kHz	REC/PB Head Adjustment	—
SCT-L400N	400 Hz	Playback Level and Indicator Level Adjustment	—
SCT-S3K	3 kHz	Speed Check and Wow & Flutter Check	—
*SCT-AD (NORMAL)	—	Recording Bias Adjustment	TDK AD
*SCT-SA (HIGH)	—	REC/PB Level Adjustment	TDK SA
*SCT-MA (METAL)	—	Frequency Response Check	TDK MA

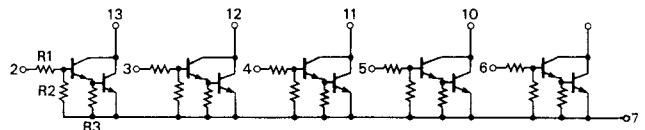
•**Note:** Some reference tapes marked \* are not supplied.  
 As these are equivalent to ones indicated above, please obtain these blank tapes on your side as possible.

## 5. INTERIOR BLOCK DIAGRAM OF IC

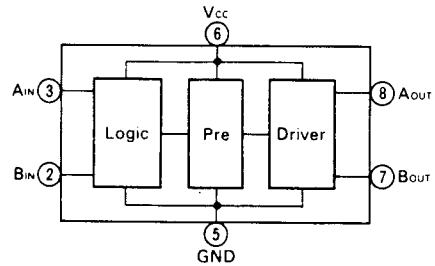
•LA3220 (ALC & PB EQ.Amp. IC)



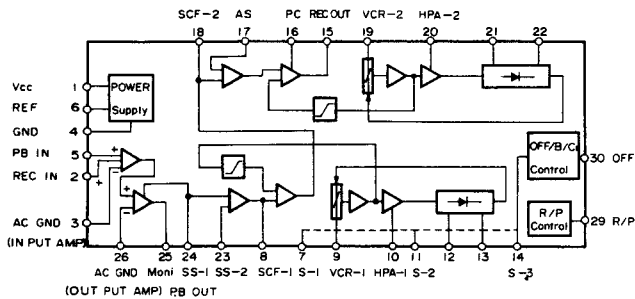
•BA-612 (Drive IC)



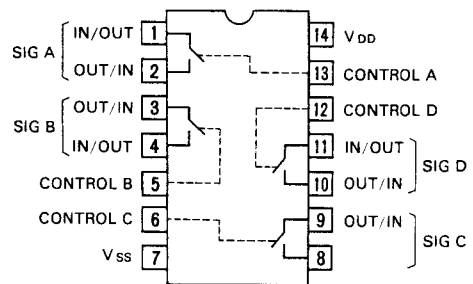
•BA6208 (Motor Drive IC)



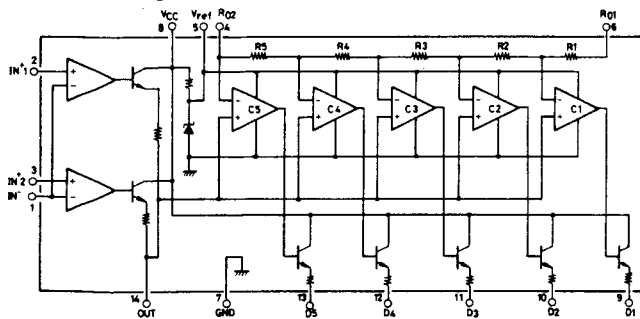
•HA12058NT (B & C-type DOLBY Noise Reduction IC)



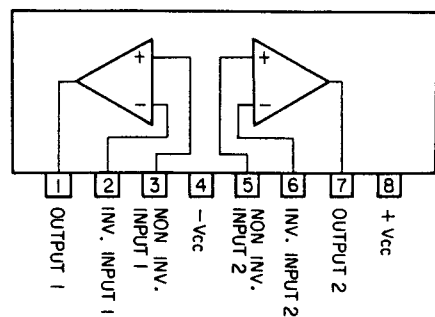
•TC4066BP/μPD4066BC (Quard Analog SW. IC)



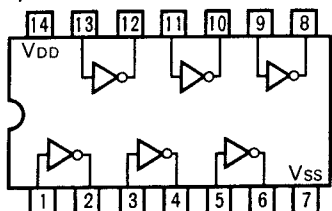
•LB-1416 (Signal Indicator Drive)



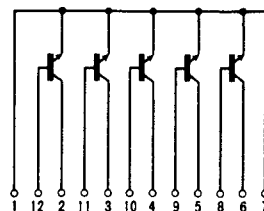
•M5218L (OP AMP. IC)



•MSM4069RS/μPD4069UBC (Inverter IC)

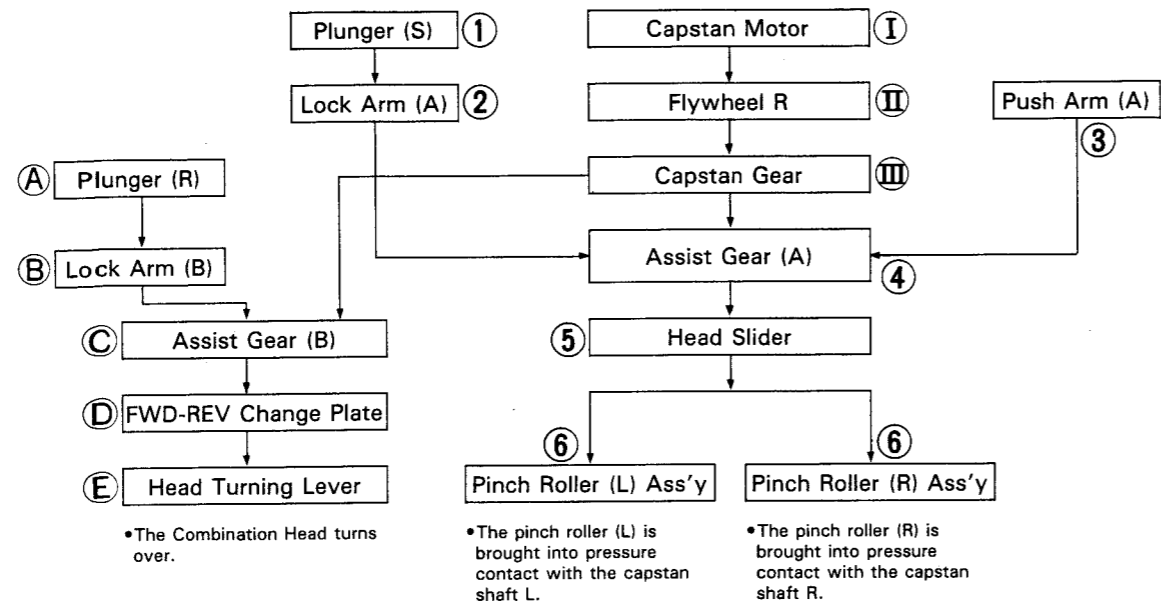


•TA78 (5 Array Transistor)

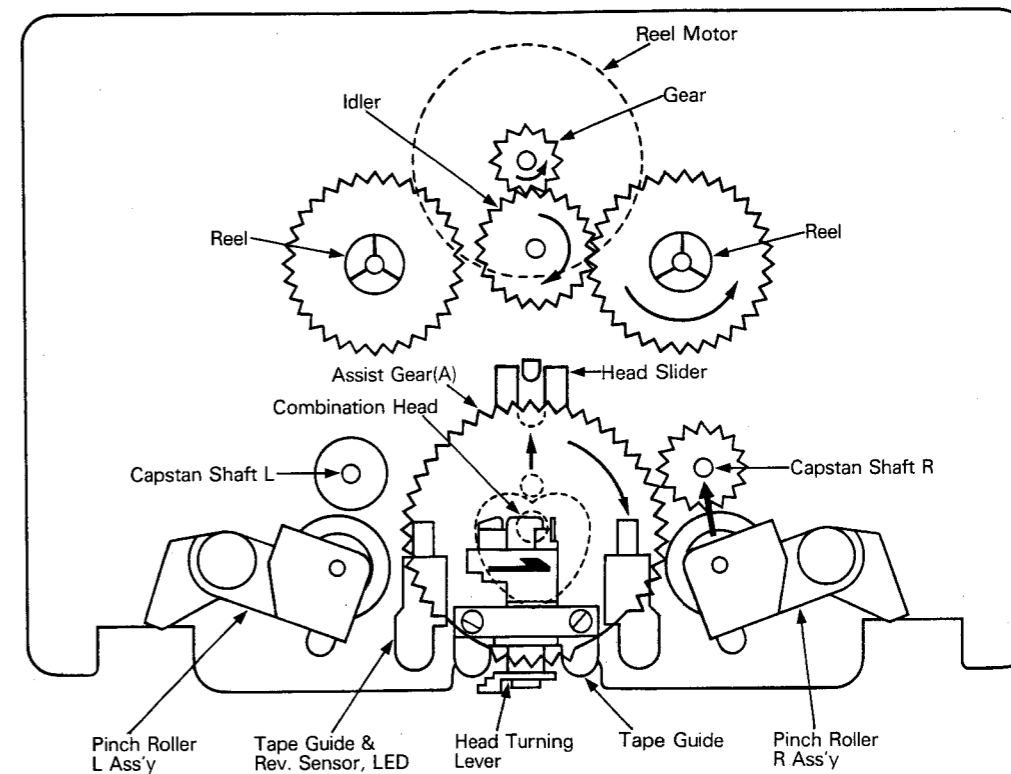


## 6. OPERATIONS OF PINCH ROLLER & COMBINATION HEAD

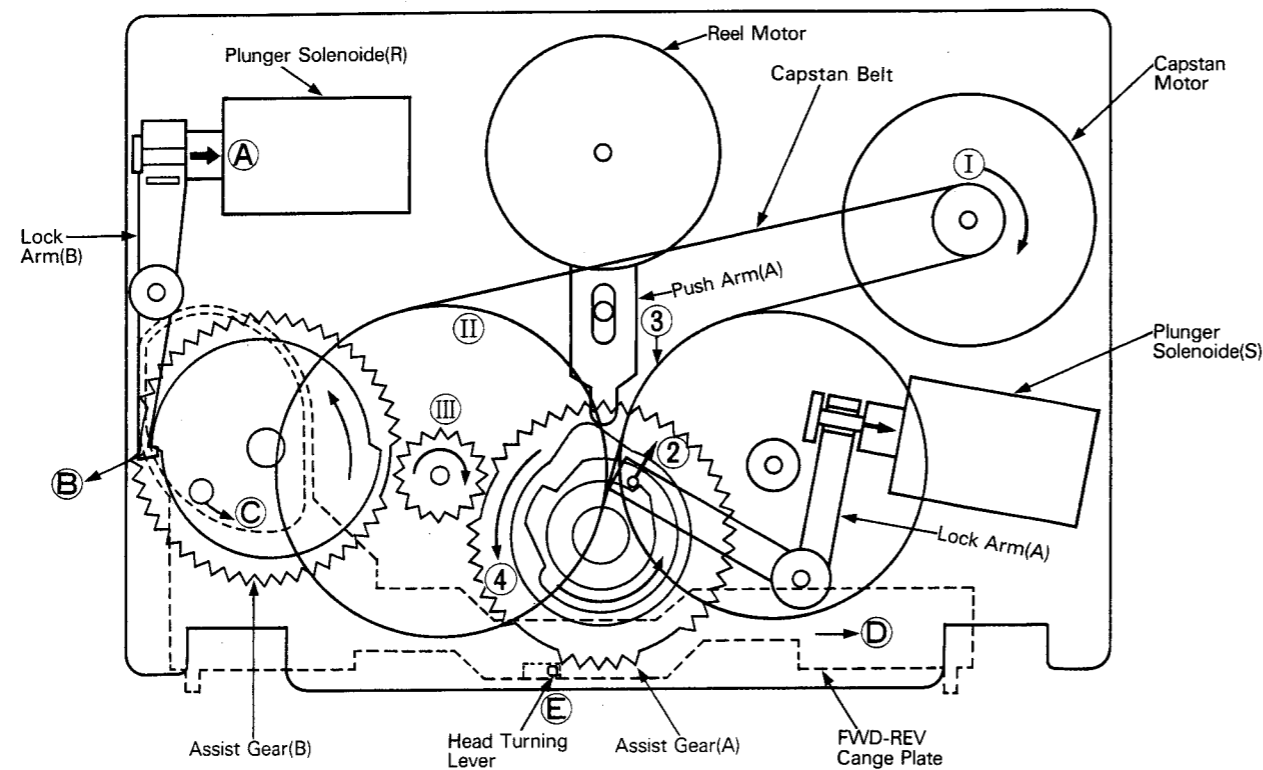
6-1. Torque Transportation Flowchart



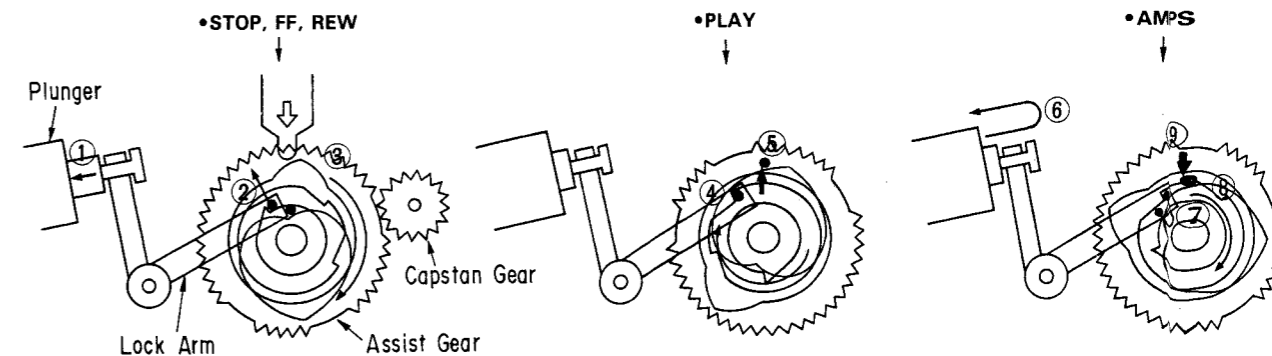
6-3. Front View of Mechanism Chassis



6-2. Rear View of Mechanism Chassis



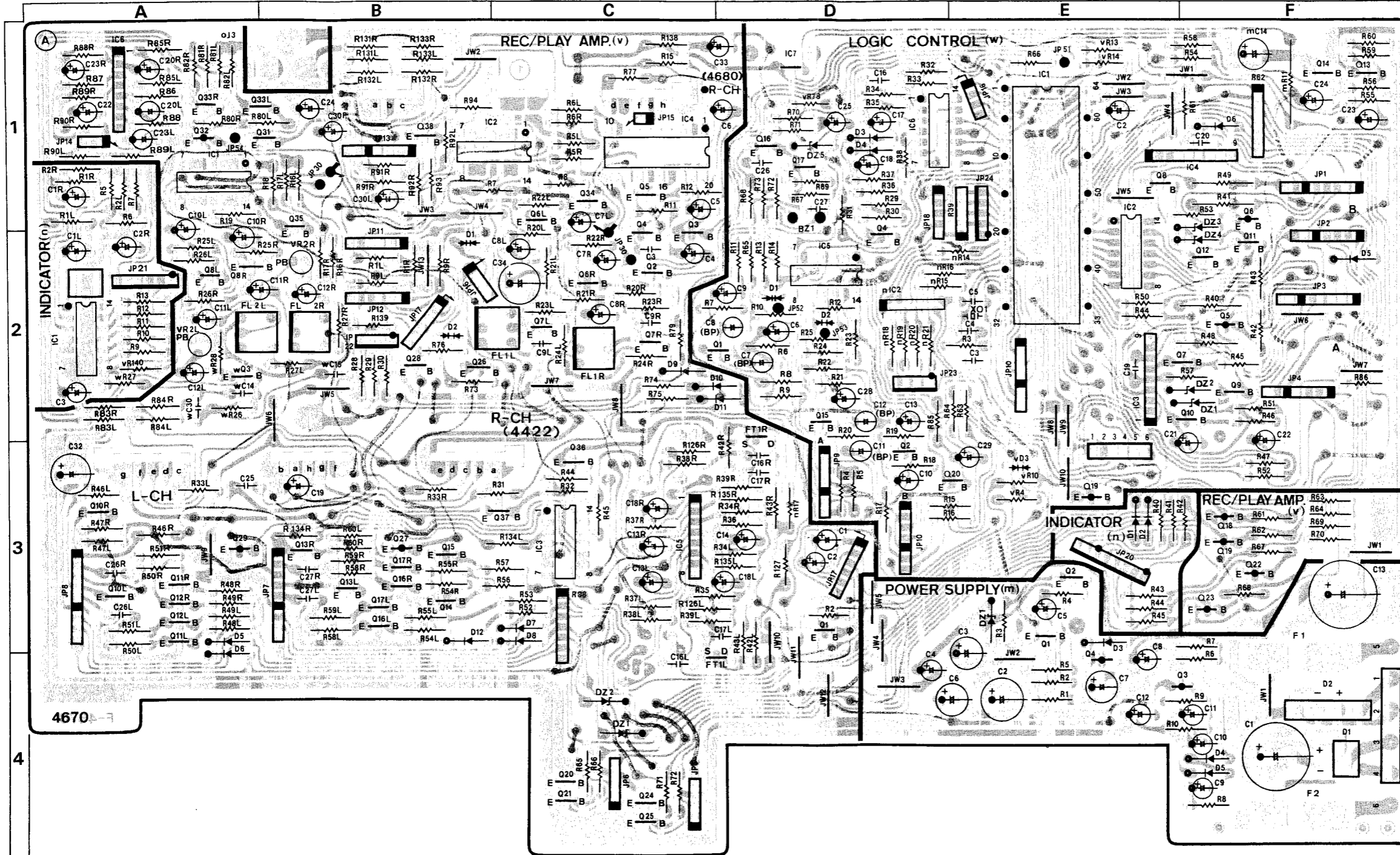
6-4. Cam Positions in the Modes of PLAY, FF, REW & STOP



# 7. PARTS LOCATION & PARTS LIST

7-1. F-4670 Main Circuit Board (Stock No. 00837801)

Component Side



Parts List

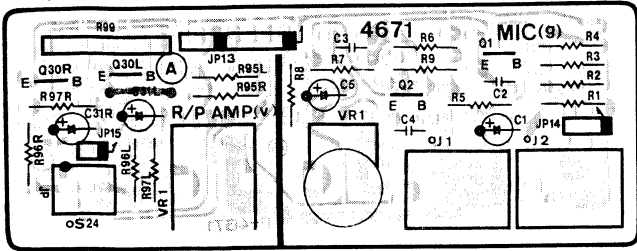
Parts No.	Stock No.	Description
• Transistor		
ΔmQ1	03086101	2SD357
mQ2	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
mQ3	46367001	2SA1115
	or 46392001	2SA1175
	or 48058601	2SA933S
mQ4	46367001	2SA1115
	or 46392001	2SA1175
	or 48058601	2SA933S
• Diode		
ΔmD1	46273600	DBB10-B
ΔmD2	03117000	RB152-LFF
mD3	03117600	1S2473T77
mD4	03117600	1S2473T77
mD5	03117600	1S2473T77
• Zener Diode		
mDZ1	46111700	05Z6.2-X
	or 46111800	05Z6.2-Y
ΔmR1	00111500	150Ω 1/4W F.R.
ΔmR2	00111500	150Ω 1/4W F.R.
mR11	00185500	10Ω 2W N.I.R.
• IC		
nIC1	03611600	LB1416
nIC2	46502800	TA78
• Diode		
nD1	03117600	1S2473T77
nD2	03117600	1S2473T77
oJ3	46371500	4P Terminal Board LINE IN/LINE OUT
• Transistor		
vQ1	46719900	DTC124
vQ2	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ3	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ4	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ5	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ6	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ7	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ8	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ10	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ11	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ12	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ13	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S

## Parts List &lt;F-4670&gt;

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
vQ14	46367101	2SC2603	vIC3	46421000	UPD4066BC	wQ15	46367101	2SC2603
	or 46391901	2SC2785		or 48054500	MSM4066BRS		or 46391901	2SC2785
	or 48058801	2SC1740S		or 48063800	BU4066B		or 48058801	2SC1740S
vQ15	46367101	2SC2603	vIC4	46671600	LC7530	wQ16	46367101	2SC2603
	or 46391901	2SC2785	vIC5	46078900	M5218L		or 46391901	2SC2785
	or 48058801	2SC1740S	vIC6	46078900	M5218L		or 48058801	2SC1740S
vQ16	46367101	2SC2603				wQ17	46367101	2SC2603
	or 46391901	2SC2785	•Diode				or 46391901	2SC2785
	or 48058801	2SC1740S	vD1	46464000	MC921		or 48058801	2SC1740S
vQ17	46367101	2SC2603	vD2	46464000	MC921	wQ19	46923300	DTA124ES
	or 46391901	2SC2785	vD3	46464000	MC921	wQ20	46367101	2SC2603
	or 48058801	2SC1740S	vD5	03117600	1S2473T77		or 46391901	2SC2785
vQ18	46367001	2SA1115	vD6	03117600	1S2473T77		or 48058801	2SC1740S
	or 46392001	2SA1175	vD7	03117600	1S2473T77	•IC		
	or 48058601	2SA933S	vD8	03117600	1S2473T77	wIC1	48109400	MB88421-161M
vQ19	46367001	2SA1115	vD9	03117600	1S2473T77	wIC2	46397500	BA612
	or 46392001	2SA1175	vD10	03117600	1S2473T77	wIC3	46149600	BA6208
	or 48058601	2SA933S	vD11	03117600	1S2473T77	wIC4	46149600	BA6208
vQ20	46367101	2SC2603	vD12	03117600	1S2473T77	wIC5	46427000	UPD4069UBC
	or 46391901	2SC2785	•Zener Diode				or 48050700	MSM4069UBRS
	or 48058801	2SC1740S	vDZ1	46111100	05Z5.1-X		or 48063900	BU4069UB
vQ21	46367101	2SC2603		or 46111200	05Z5.1-Y	wIC6	46427000	UPD4069UBC
	or 46391901	2SC2785	vDZ2	46111100	05Z5.1-X		or 48050700	MSM4069UBRS
	or 48058801	2SC1740S		or 46111200	05Z5.1-Y		or 48063900	BU4969UB
vQ22	46367001	2SA1115	vR98	46346800	100k $\Omega$ $\times$ 6 1/8W A.R.	wIC7	46359400	HD14069UBP L78N05
	or 46392001	2SA1175				wXO1	46505500	Ceramic Element K8R-3.58M
	or 48058601	2SA933S	vFL1	46177501	Dolby Filter	•Diode		
vQ23	46367001	2SA1115	vFL2	46935500	Low Pass Filter (85kHz)	wD1	46464000	MC921
	or 46392001	2SA1175	vVR2	46839300	1k $\Omega$ S.V.R., P.B. Level Adj.	wD2	46464000	MC921
	or 48058601	2SA933S	•Transistor			wD3	03117600	1S2473T77
vQ24	46367101	2SC2603	wQ	46367101	2SC2603	wD4	03117600	1S2473T77
	or 46391901	2SC2785		or 46391901	2SC2785	wD5	03117600	1S2473T77
	or 48058801	2SC1740S	wQ2	46367101	2SC2603	wD6	03117600	1S2473T77
vQ25	46367101	2SC2603		or 46391901	2SC2785	•Zener Diode		
	or 46391901	2SC2785	wQ3	46367101	2SC2603	wDZ1	46111100	05Z5.1-X
	or 48058801	2SC1740S		or 48058801	2SC1740S		or 46111200	05Z5.1-Y
vQ26	46719900	DTC124	wQ4	46367101	2SC2603	wDZ2	46111700	05Z6.2-X
vQ27	46719800	DTA124		or 46391901	2SC2785		or 46111800	05Z6.2-Y
vQ28	46719900	DTC124	wQ5	46367101	2SC2603	wDZ3	46111700	05Z6.2-X
vQ29	46719800	DTA124		or 46391901	2SC2785		or 46111800	05Z6.2-Y
vQ31	46367101	2SC2603	wQ6	46359701	2SA952	wDZ4	46111100	05Z5.1-X
	or 46391901	2SC2785		or 46614001	2SA1283		or 46111200	05Z5.1-Y
	or 48058801	2SC1740S		or 48000801	2SA934	wDZ5	46113000	05Z9.1-Y
vQ32	46719800	DTA124		or 46359701	2SA952		or 46113100	05Z9.1-Z
vQ33	46367101	2SC2603	wQ7	46614101	2SC3243	$\Delta$ wR11	00192400	8.2 $\Omega$ 2W N.I.R.
	or 46391901	2SC2785	wQ8	46614101	2SC3243	wR39	46341500	4.7k $\Omega$ $\times$ 4 1/8W A.R.
	or 48058801	2SC1740S	wQ9	46367101	2SC2603	$\Delta$ wR40	00184900	8.2 $\Omega$ 1W N.I.R.
vQ34	46367101	2SC2603		or 46391901	2SC2785	$\Delta$ wR41	00184900	8.2 $\Omega$ 1W N.I.R.
	or 46391901	2SC2785	wQ10	46367101	2SC2603	$\Delta$ wR48	00181100	2.2 $\Omega$ 1W N.I.R.
	or 48058801	2SC1740S		or 48058801	2SC1740S	$\Delta$ wR49	00181100	2.2 $\Omega$ 1W N.I.R.
vQ35	46367101	2SC2603		or 46391901	2SC2785	wR62	46345200	4.7k $\Omega$ $\times$ 6 1/8W A.R.
	or 46391901	2SC2785	wQ11	46367101	2SC2603	wC7	08451000	1 $\mu$ F 16V E.B.
	or 48058801	2SC1740S		or 46391901	2SC2785	wC8	08450800	3.3 $\mu$ F 16V E.B.
vQ36	46367101	2SC2603		or 48058801	2SC1740S	wC11	08451000	1 $\mu$ F 16V E.B.
	or 46391901	2SC2785	wQ12	46367101	2SC2603	wC12	08450800	3.3 $\mu$ F 16V E.B.
	or 48058801	2SC1740S		or 46391901	2SC2785	wBZ1	07244900	Bzzer PKM12
vQ37	46719900	DTC124	wQ13	46367101	2SC2603			
vQ38	46367101	2SC2603		or 46391901	2SC2785			
	or 46391901	2SC2785		or 48058801	2SC1740S			
	or 48058801	2SC1740S	wQ14	46367101	2SC2603			
•FET				or 46391901	2SC2785			
vFT1	46643800	2SJ103-Y		or 48058801	2SC1740S			
	or 46643801	2SJ103-GR		or 46391901	2SC2603			
	or 46643802	2SJ103-BL		or 48058801	2SC1740S			
•IC				or 46391901	2SC2785			
vIC1	46421000	UPD4066BC		or 48058801	2SC1740S			
	or 48054500	MSM4066BRS		or 46391901	2SC2785			
	or 48063800	BU4066B		or 48058801	2SC1740S			
vIC2	46421000	UPD4066BC		or 46391901	2SC2785			
	or 48054500	MSM4066BRS		or 48058801	2SC1740S			
	or 48063800	BU4066B						

7-2. F-4671 MIC Amp. Circuit Board (Stock No. 00837901)

Component Side



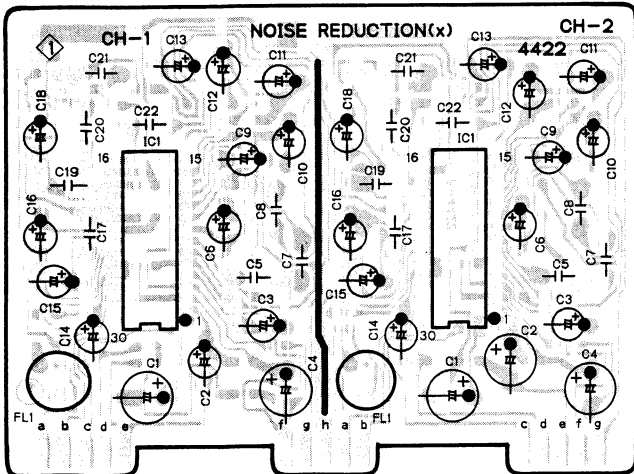
Parts List

Parts No.	Stock No.	Description
•Transistor		
gQ1	46577801	2SC2320L
	or 46581701	2SC1845
	or 46947401	2SC2459
gQ2	46577801	2SC2320L
	or 46581701	2SC1845
	or 46947401	2SC2459

Parts No.	Stock No.	Description
gVR1	48080700	20kΩ (A) V.R., MIC
oS24	46556400	Push SW., REC LEVEL
oJ1	48109200	Jack, MIC
oJ2	46706300	Jack, PHONES
•Transistor		
vQ30	46577801	2SC2320L
	or 46581701	2SC1845
	or 46947401	2SC2459
vR99	48076000	100kΩ × 4 A.R.
vVR1	48080800	20kΩ (A) V.R., REC LEVEL

7-3. F-4422 Noise Reduction Circuit Board (Stock No. 00775301)

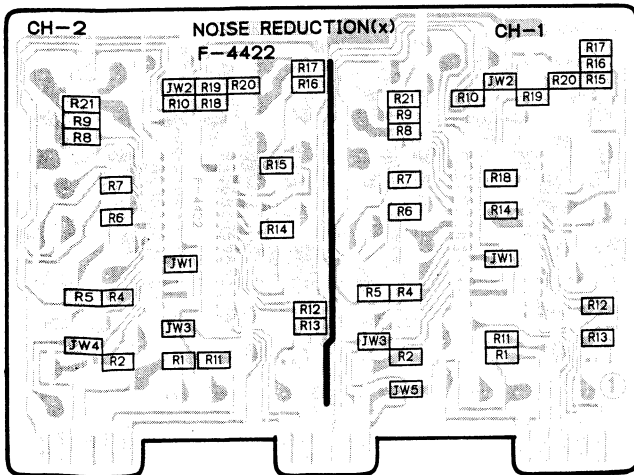
Component Side



Parts List (Component Side)

Parts No.	Stock No.	Description
•IC		
xIC1	46671900	HA12058NT
xFL1	46177600	Trap Filter (19.8kHz)

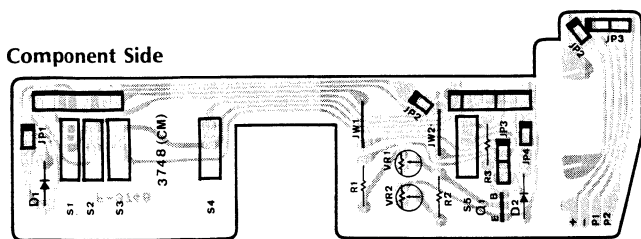
Pattern Side < Chip Parts >



Parts List (Pattern Side < Chip Parts >)

Parts No.	Stock No.	Description
xJW1	46741100	Cross Conductor (Chip)
xJW2	46741100	Cross Conductor (Chip)
xJW3	46741100	Cross Conductor (Chip)
xJW4	46741100	Cross Conductor (Chip)
xJW5	46741100	Cross Conductor (Chip)
xR1	46754000	470kΩ 1/8W Chip R.
xR2	46749400	5.6kΩ 1/8W Chip R.
xR4	46749800	8.2kΩ 1/8W Chip R.
xR5	46748800	3.3kΩ 1/8W Chip R.
xR6	46750900	24kΩ 1/8W Chip R.
xR7	46749500	6.2kΩ 1/8W Chip R.
xR8	46752200	82kΩ 1/8W Chip R.
xR9	46754800	1MΩ 1/8W Chip R.
xR10	46752200	82kΩ 1/8W Chip R.
xR11	46752200	82kΩ 1/8W Chip R.
xR12	46748800	3.3kΩ 1/8W Chip R.
xR13	46747600	1kΩ 1/8W Chip R.
xR14	46752200	82kΩ 1/8W Chip R.
xR15	46749500	6.2kΩ 1/8W Chip R.
xR16	46751600	47kΩ 1/8W Chip R.
xR17	46746800	470Ω 1/8W Chip R.
xR18	46749200	4.7kΩ 1/8W Chip R.
xR19	46750000	10kΩ 1/8W Chip R.
xR20	46752000	68kΩ 1/8W Chip R.
xR21	46754800	1MΩ 1/8W Chip R.

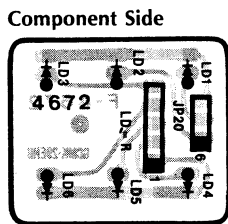
7-4. F-3748 HALF & PREVENTION TAB SENSOR SW. Board



Parts List

Parts No.	Stock No.	Description
• Transistor		
tQ1	07206901	2SC2001
• Diode		
tD1	03111600	1S2473D
tD2	03111600	1S2473D
tVR1	46839400	2.2kΩ S.V.R., NORMAL SPEED
tVR2	46839500	4.7kΩ S.V.R., HIGH SPEED
tS1	47292700	Leaf SW., half sensor
tS2	47292700	Leaf SW., prevention tab sensor (for A-side)
tS3	47292700	Leaf SW., tape sel. HIGH
tS4	47292700	Leaf SW., tape sel. METAL
tS5	47292700	Leaf SW., prevention tab sensor (for B-side)

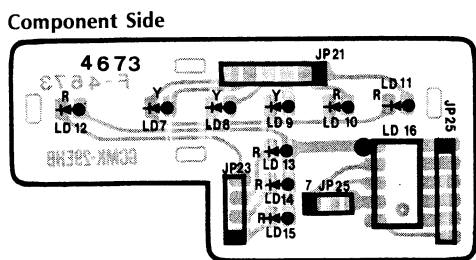
7-5. F-4672 AUTO TAPE SELECTOR Indicators Board



Parts List

Parts No.	Stock No.	Description
• LED		
nLD1	46176900	TLS-123
nLD2	46176900	TLS-123
nLD3	46176900	TLS-123
nLD4	46176900	TLS-123
nLD5	46176900	TLS-123
nLD6	46176900	TLS-123

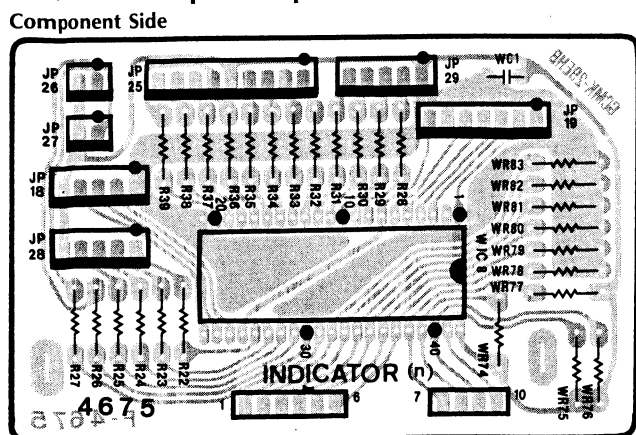
7-6. F-4673 PEAK LEVEL Indicator Board



Parts List

Parts No.	Stock No.	Description
• LED		
nLD7	07251000	TLY-123
nLD8	07251000	TLY-123
nLD9	07251000	TLY-123
nLD10	46176900	TLS-123
nLD11	46176900	TLS-123
nLD12	46176900	TLS-123
nLD13	46176900	TLS-123
nLD14	46176900	TLS-123
nLD15	46176900	TLS-123
nLD16	48069000	GL-9P03D

7-7. F-4675 Input/Output Control Circuit Board (Stock No. 00838301)

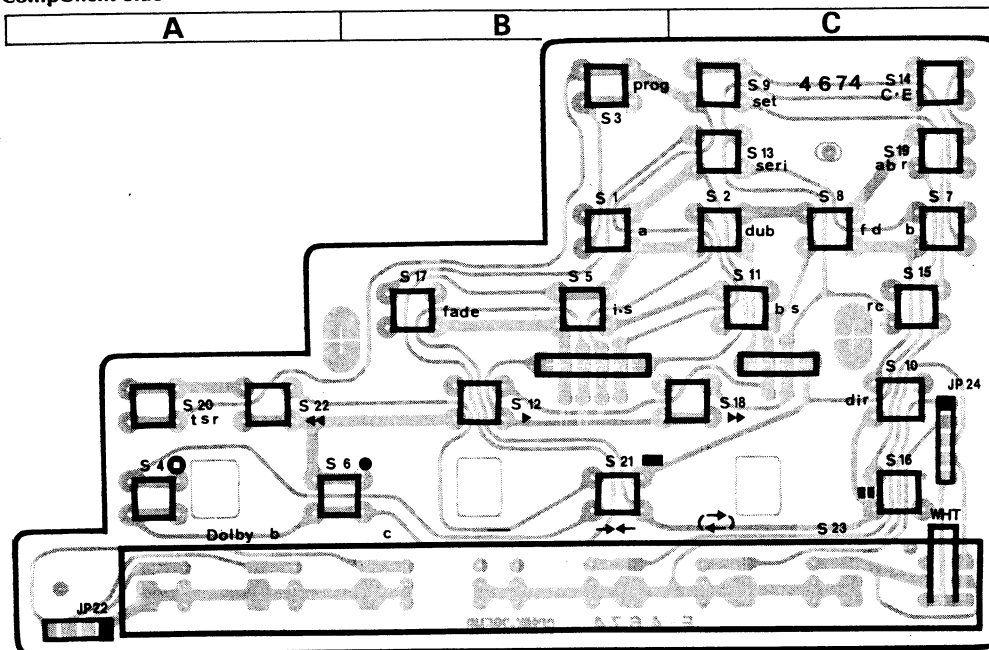


Parts List

Parts No.	Stock No.	Description
• IC		
wIC8	48109300	MB8841H-1357K
wR1	46341500	4.7kΩ × 4 1/8W A.R.
wR2	46345200	4.7kΩ × 6 1/8W A.R.

7-8. F-4674 Control SW. Circuit Board

Component Side



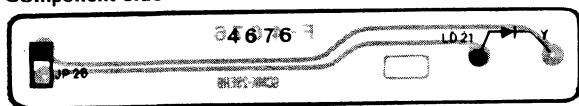
Parts List

Parts No.	Stock No.	Description
oS1	46549500	Push SW., a
oS2	46549500	Push SW., DUBBING ▷
oS3	46549500	Push SW., PROGRAM
oS4	46549500	Push SW., REC. MUTE
oS5	46549500	Push SW., INTRO SKIP
oS6	46549500	Push SW., REC
oS7	46549500	Push SW., b
oS8	46549500	Push SW., DUBBING 2 x ▷
oS9	46549500	Push SW., SET
oS10	46549500	Push SW., DIRECTION
oS11	46549500	Push SW., BLANK SEARCH
oS12	46549500	Push SW., PLAY

Parts No.	Stock No.	Description
oS13	46549500	Push SW., SERIES
oS14	46549500	Push SW., COMPU EDIT
oS15	46549500	Push SW., RCPS
oS16	46549500	Push SW., PAUSE
oS17	46549500	Push SW., AUTO FADER
oS18	46549500	Push SW., F.F
oS19	46549500	Push SW., REC ONLY a b
oS20	46549500	Push SW., TSR
oS21	46549500	Push SW., STOP
oS22	46549500	Push SW., REW
oS23	48080900	Push SW., DOLBY NR/REVERSE MODE/TIMER

7-9. F-4676 b-Half Indicator Board

Component Side



Parts List

Parts No.	Stock No.	Description
•LED nLD21	48157400	LD-702YY

7-11. F-4736 TAPE OPERATION Indicators Board

Component Side

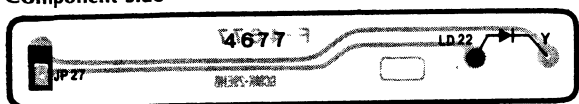


Parts List

Parts No.	Stock No.	Description
•LED		
nLD17	48069100	LD-6021MT
nLD18	48069100	LD-6021MT
nLD19	48120400	LD-6021YT
nLD20	48120300	LD-6021VT

7-10. F-4677 a-Half Indicator Board

Component Side



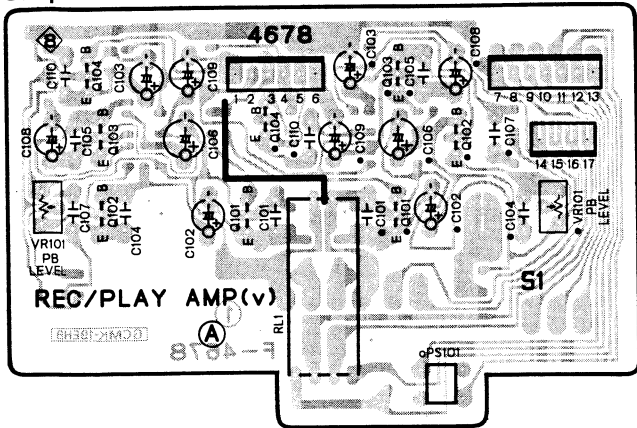
Parts List

Parts No.	Stock No.	Description
•LED nLD22	48157400	LD-702YY

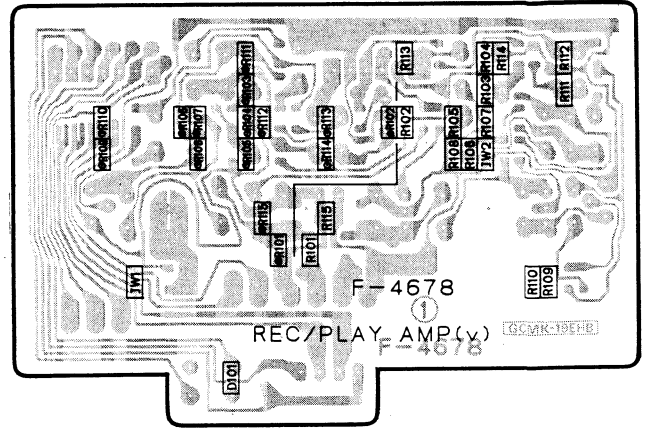


7-12. F-4678 PLAY Amp. Circuit Board (Stock No. 00838601)

Component Side



Pattern Side < Chip Parts >



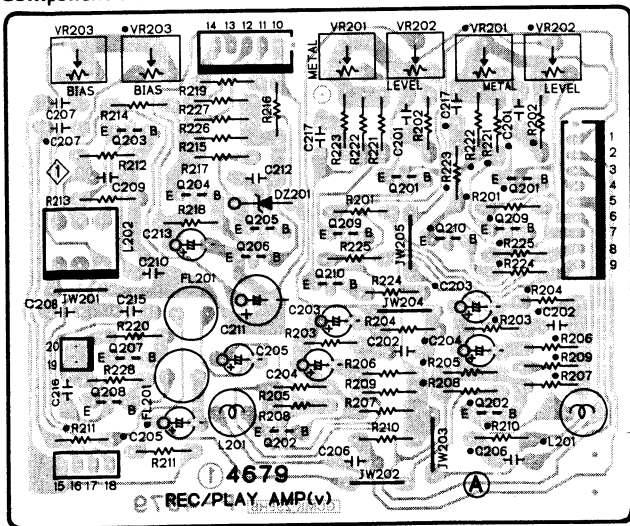
Parts List

Parts No.	Stock No.	Description
• Transistor		
vQ101	46359801	2SC2001
	or 48055901	2SD1468S
vQ102	46577801	2SC2320L
	or 46581701	2SC1845
vQ103	46577801	2SC2320L
	or 46581701	2SC1845
vQ104	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
• Diode		
vD101	46852000	RLS-73
vJW2	46741100	Cross Conductor (Chip)
vr101	46742800	10 $\Omega$ 1/8W Chip R.
vr102	46749200	4.7k $\Omega$ 1/8W Chip R.
vr103	46752800	150k $\Omega$ 1/8W Chip R.

Parts No.	Stock No.	Description
vr104	46751600	47k $\Omega$ 1/8W Chip R.
vr105	46750400	15k $\Omega$ 1/8W Chip R.
vr106	46752800	150k $\Omega$ 1/8W Chip R.
vr107	46744000	33 $\Omega$ 1/8W Chip R.
vr108	46747800	1.2k $\Omega$ 1/8W Chip R.
vr109	46746800	470 $\Omega$ 1/8W Chip R.
vr110	46752800	150k $\Omega$ 1/8W Chip R.
vr111	46748600	2.7k $\Omega$ 1/8W Chip R.
vr112	46747600	1k $\Omega$ 1/8W Chip R.
vr113	46750000	10k $\Omega$ 1/8W Chip R.
vr114	46753200	220k $\Omega$ 1/8W Chip R.
vr115	46752400	100k $\Omega$ 1/8W Chip R.
vVR101	48078600	1k $\Omega$ S.V.R., Pre P.B. Level Adj.
vS101	46133300	Push SW., Direction Sensor
vRL101	11504700	Relay
	or 11504701	Relay LR2A-12B

7-13. F-4679 REC Amp. Circuit Board (Stock No. 00838701)

Component Side



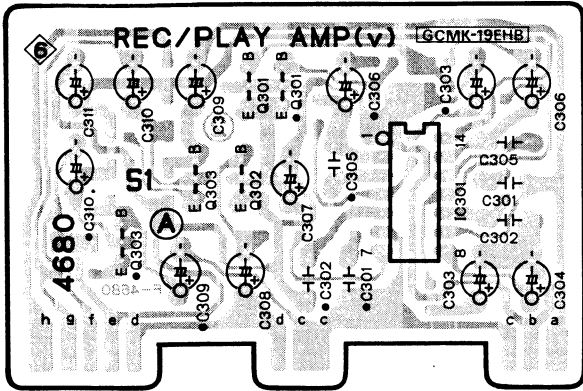
Parts No.	Stock No.	Description
vQ203	46725801	2SC1627A
	or 48061801	2SC3244
vQ204	46614101	2SC3243
vQ205	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ206	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ209	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ210	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
• Zener Diode		
vDZ201	46109300	05Z3.0-X
	or 46109400	05Z3.0-Y
vc208	46657000	3900pF 100V F.C.
vFL201	42904400	Peaking Coil
vL201	48121500	Inductor 2.7mH
vL202	46362200	Bias OSC Coil
vVR201	10354100	47k $\Omega$ (B) S.V.R., Mesl Rec Level Adj.
vVR202	10353900	22k $\Omega$ (B) S.V.R., Rec Level Adj.
vVR203	10354300	100k $\Omega$ (B) S.V.R., Bis Adj.

Parts List

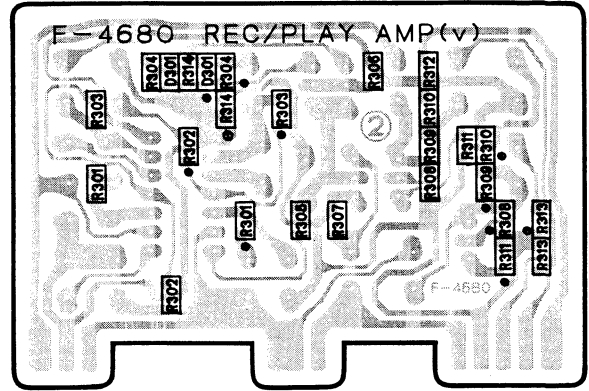
Parts No.	Stock No.	Description
• Transistor		
vQ201	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ202	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S

7-14. F-4680 Auto Level Control Circuit Board (Stock No. 00838801)

Component Side



Pattern Side <Chip Parts>



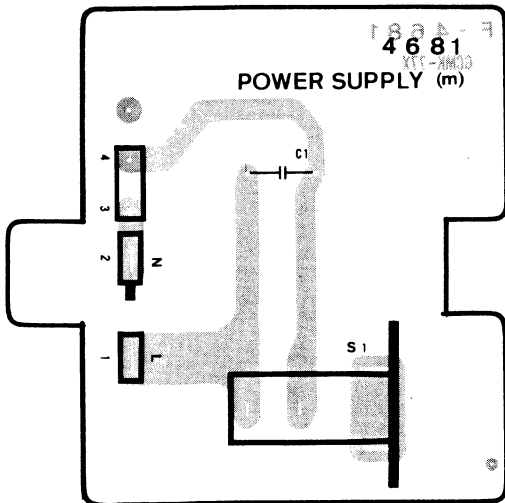
Parts List

Parts No.	Stock No.	Description
• Transistor		
vQ301	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ302	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
vQ303	46367101	2SC2603
	or 46391901	2SC2785
	or 48058801	2SC1740S
• IC		
vIC301	46899000	LA3220
• Diode		
vD301	46852000	RLS-73

Parts No.	Stock No.	Description
vR301	46750000	10kΩ 1/8W Chip R.
vR302	46746800	470Ω 1/8W Chip R.
vR303	46751000	27kΩ 1/8W Chip R.
vR304	46745200	100Ω 1/8W Chip R.
vR305	46754800	1MΩ 1/8W Chip R.
vR306	46749200	4.7kΩ 1/8W Chip R.
vR307	46750000	10kΩ 1/8W Chip R.
vR308	46753200	220kΩ 1/8W Chip R.
vR309	46754000	470kΩ 1/8W Chip R.
vR310	46749200	4.7kΩ 1/8W Chip R.
vR311	46748000	1.5kΩ 1/8W Chip R.
vR312	46746800	470Ω 1/8W Chip R.
vR313	46750800	22kΩ 1/8W Chip R.
vR314	46754800	1MΩ 1/8W Chip R.

7-15. F-4681 POWER SW. Circuit Board

Component Side



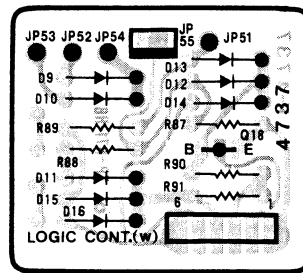
Parts List

Parts No.	Stock No.	Description
△ pC1	46425800	0.01μF 400V C.C.
△ pS1	46413900	Push SW., POWER (XX, UL, EU, BS)
△	48065200	Push SW., POWER (CSA)

7-16. F-4737 Logic Control Circuit Board

Component Side

(Stock No. 00867401)

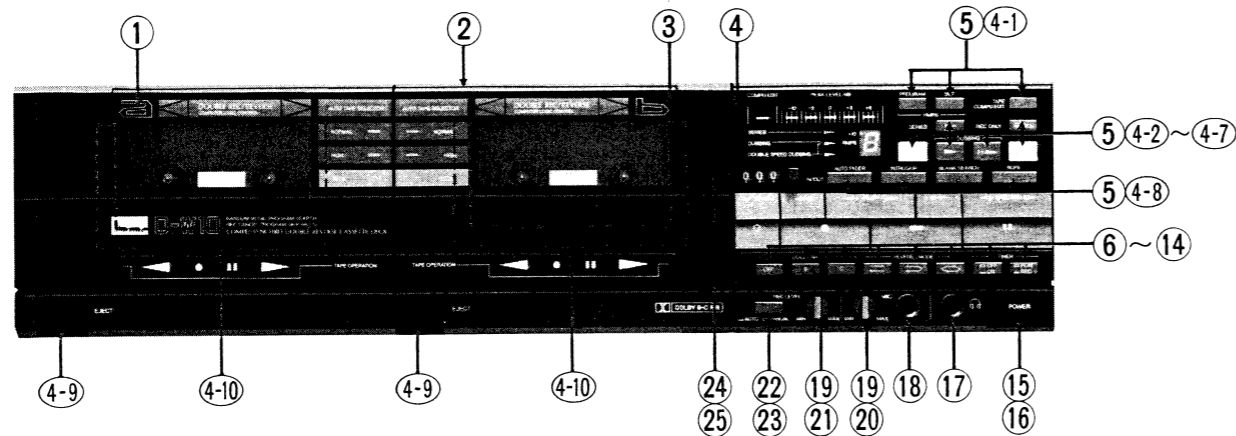


Parts List

Parts No.	Stock No.	Description
• Transistor		
wQ18	46923300	DTA124ES
• Diode		
wD9	03111800	1S1588
	or 07176400	1S2473HS
wD10	03111800	1S1588
	or 07176400	1S2473HS
wD11	03111800	1S1588
	or 07176400	1S2473HS
wD12	03111800	1S1588
	or 07176400	1S2473HS
wD13	03111800	1S1588
	or 07176400	1S2473HS
wD14	03111800	1S1588
	or 07176400	1S2473HS
wD15	03111800	1S1588
	or 07176400	1S2473HS
wD16	03111800	1S1588
	or 07176400	1S2473HS

## 8. OTHER PARTS

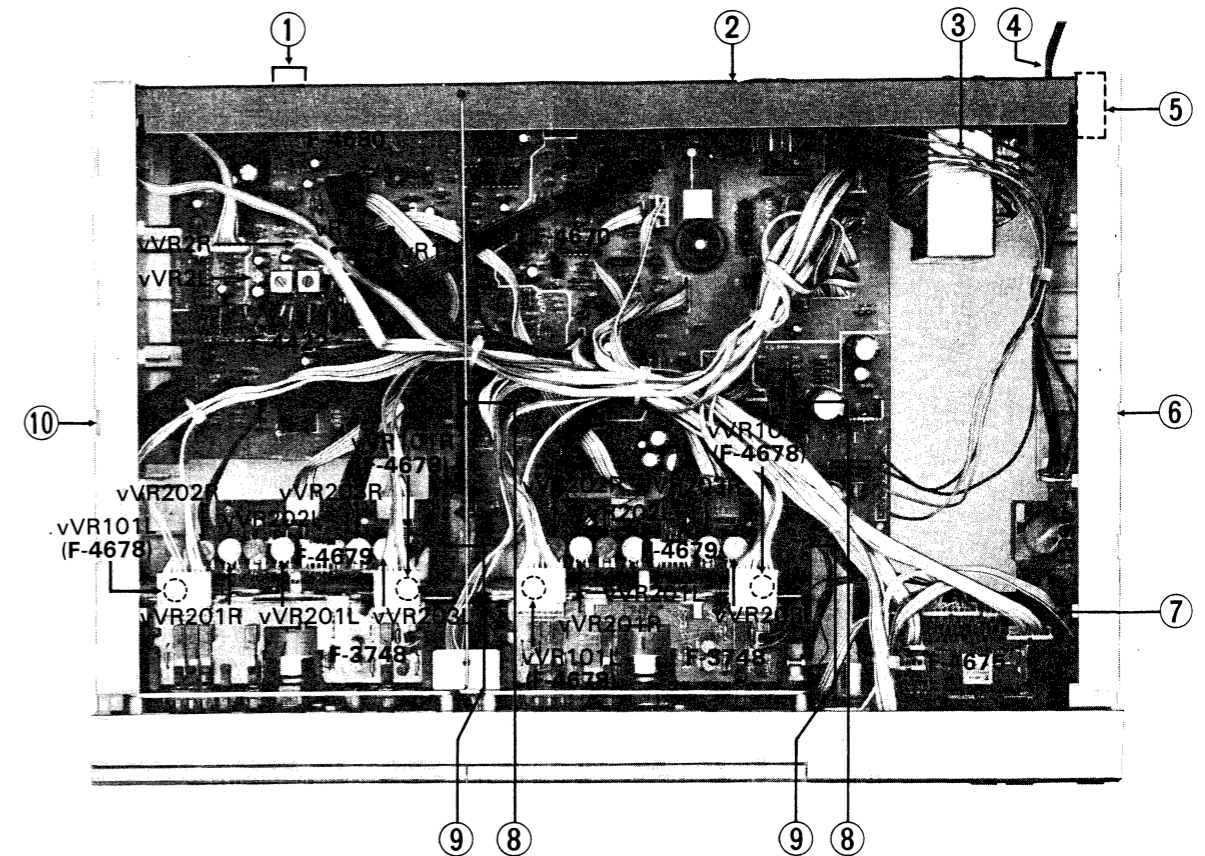
### 8-1. Front View



#### Parts List <Front View>

Parts No.	Stock No.	Description
1	47676800	a Lid Ass'y (Silver Model)
	47676900	a Lid Ass'y (Black Model)
2	47643600	Bonnet (Silver Model)
3	47677000	b Lid Ass'y (Silver Model)
	47677100	b Lid Ass'y (Black Model)
	47677100	b Lid Ass'y
4	47678500	Front Panel Ass'y (Silver Model)
	47678600	Front Panel Ass'y (Black Model)
4-1	47715800	Knob, PROGRAM, SET, COMPU EDIT
4-2	47677900	Knob, SERIES
4-3	47678000	Knob, REC ONLY a b
4-4	47677200	Knob, a
4-5	47677400	Knob, DUBBING ▷
4-6	47677500	Knob, DUBBING 2×▷
4-7	47677300	Knob, b
4-8	47715900	Knob, AUTO FADER, INTRO SKIP, BLANK SEARCH, RCPS
4-9	47628700	Knob, EJECT (Silver Model)
	47628800	Knob, EJECT (Black Model)
4-10	47678700	Cassette Holder Ass'y
5	46549500	Push SW., Control
6	48080900	Push SW., DOLBY NR/REVERSE MODE/TIMER
7	47633100	Knob, OFF
8	47633200	Knob, B
9	47633300	Knob, C
10	47632800	Knob, ⇐
11	47632900	Knob, ⇐
12	47633000	Knob, ⇐
13	47633400	Knob, OFF-ON
14	47633500	Knob, PLAY·REC
15	47626700	Knob, POWER (Silver Model)
	47626800	Knob, POWER (Black Model)
△16	46413900	Push SW., POWER (XX, UL, EU, BS)
△	48065200	Push SW., POWER (CSA)
17	46706300	Jack, PHONES
18	48109200	Jack, MIC
19	47696700	Knob, MIC, REC LEVEL (Silver Model)
	47639300	Knob, MIC, REC, LEVEL (Black Model)
20	48080700	20kΩ (A) V.R., MIC
21	48080800	20kΩ (A) V.R., REC LEVEL
22	47626900	Knob, REC LEVEL
23	46556400	Push SW., REC LEVEL
24	46899300	Tape Counter
25	47673100	Counter Belt

### 8-2. Top View



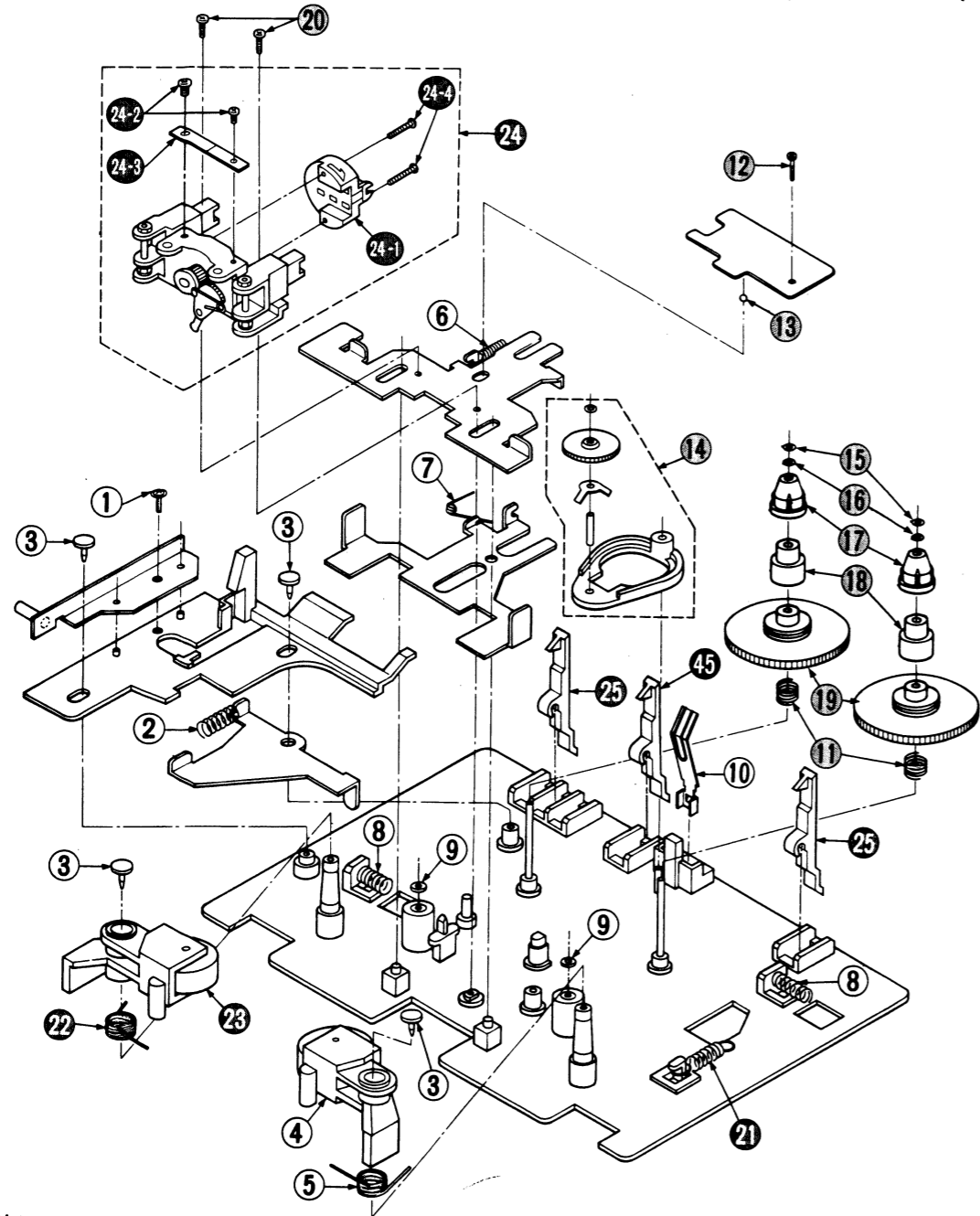
#### Parts List <Top View>

Parts No.	Stock No.	Description
1	46371500	4P Terminal Board, LINE IN/LINE OUT
△ 2	48069600	Voltage Selector (XX)
△	48111800	Voltage Selector (EU, BS)
△ 3	15017901	Power Transformer (XX)
△	15017902	Power Transformer (UL, CSA)
△	15017905	Power Transformer (EU, BS)
△ 4	38004700	Power Supply Cord (XX, UL, CSA)
△	38004500	Power Supply Cord (EU)
△	38004300	Power Supply Cord (BS)
5	47157300	AC Cord Cover
6	47679000	Right Side Panel Ass'y (Silver Model)
	47679100	Right Side Panel Ass'y (Black Model)
7	47113100	Joint Shaft
8	48126700	Damper Ass'y
9	47628500	Damper Joint Shaft
10	47678800	Left Side Panel Ass'y (Silver Model)
	47608900	Left Side Panel Ass'y (Black Model)

# 9. EXPLODED VIEW & PARTS LIST

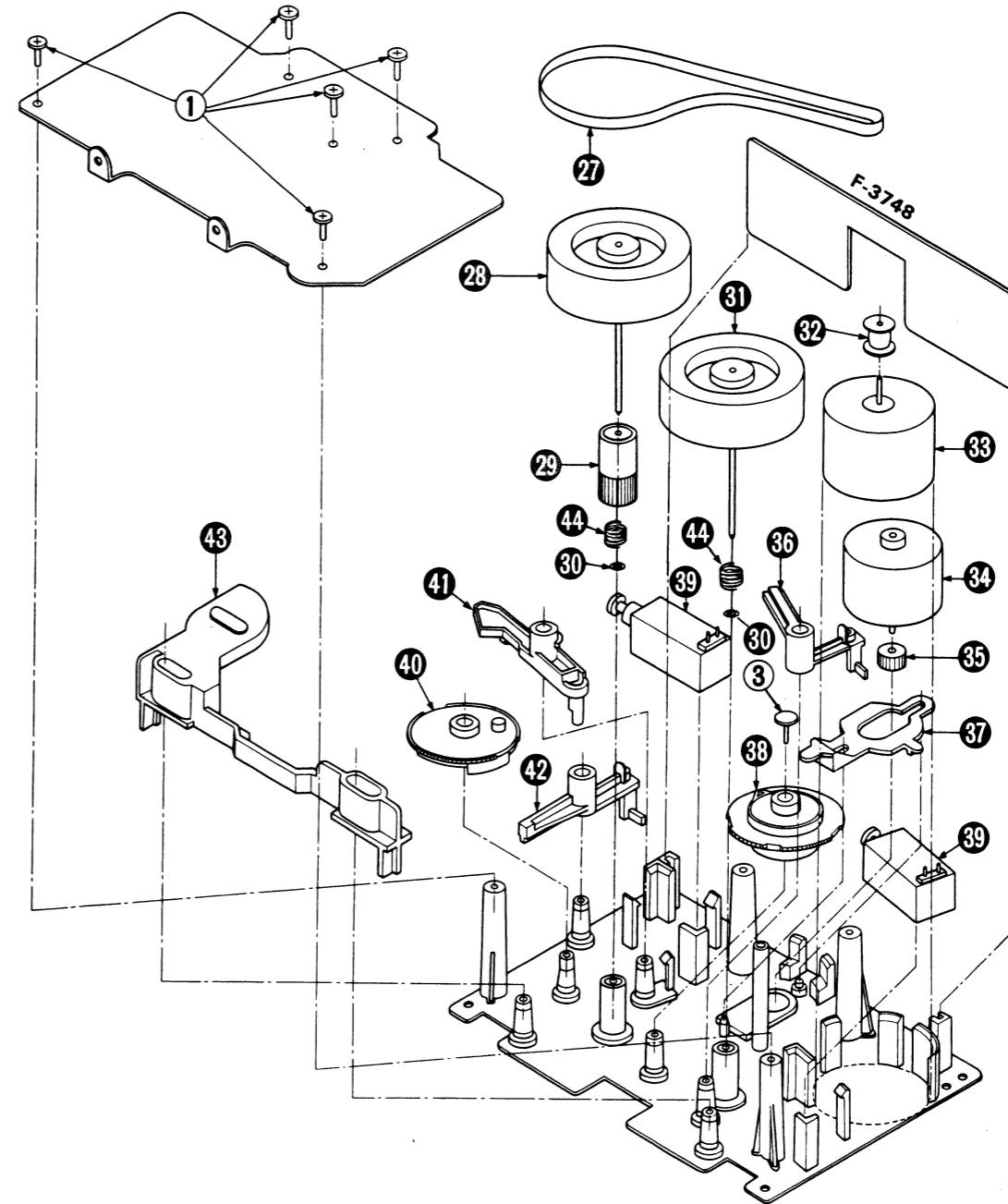
9-1. Front View of Mechanism Ass'y

• Though every part included in mechanism ass'y is numbered in exploded view, parts unlisted in the parts list are not supplied.

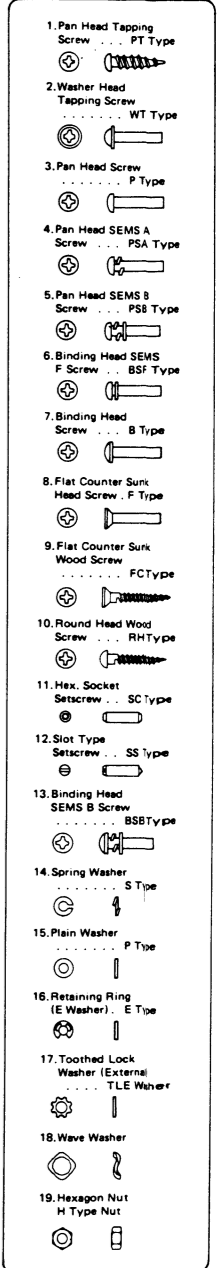


- ① ~ ⑩
- ⑪ ~ ⑳
- ㉑ ~ ㉓
- ㉔ ~ ㉕

9-2. Rear View of Mechanism Ass'y



•Shapes of standard mechanical parts



Parts List

Parts No.	Stock No.	Description
1	48005900	Tapping Screw, M3×8
2	47644500	Spring, eject
3	47420900	Plastic Tack
4	47281810	Pinch Roller (R) Ass'y
5	47483100	Spring, pinch roller (R) ass'y
6	47406200	Spring, head base
7	47405600	Spring, Slide base
8	47668600	Spring, plunger solenoid
9	47404700	Nylon Washer, d=2.5
10	47293510	Spring, half
11	47709610	Spring, reel
12	13127800	Binding Head Screw, M2×12
13	47404900	Steel Ball, φ=2.0

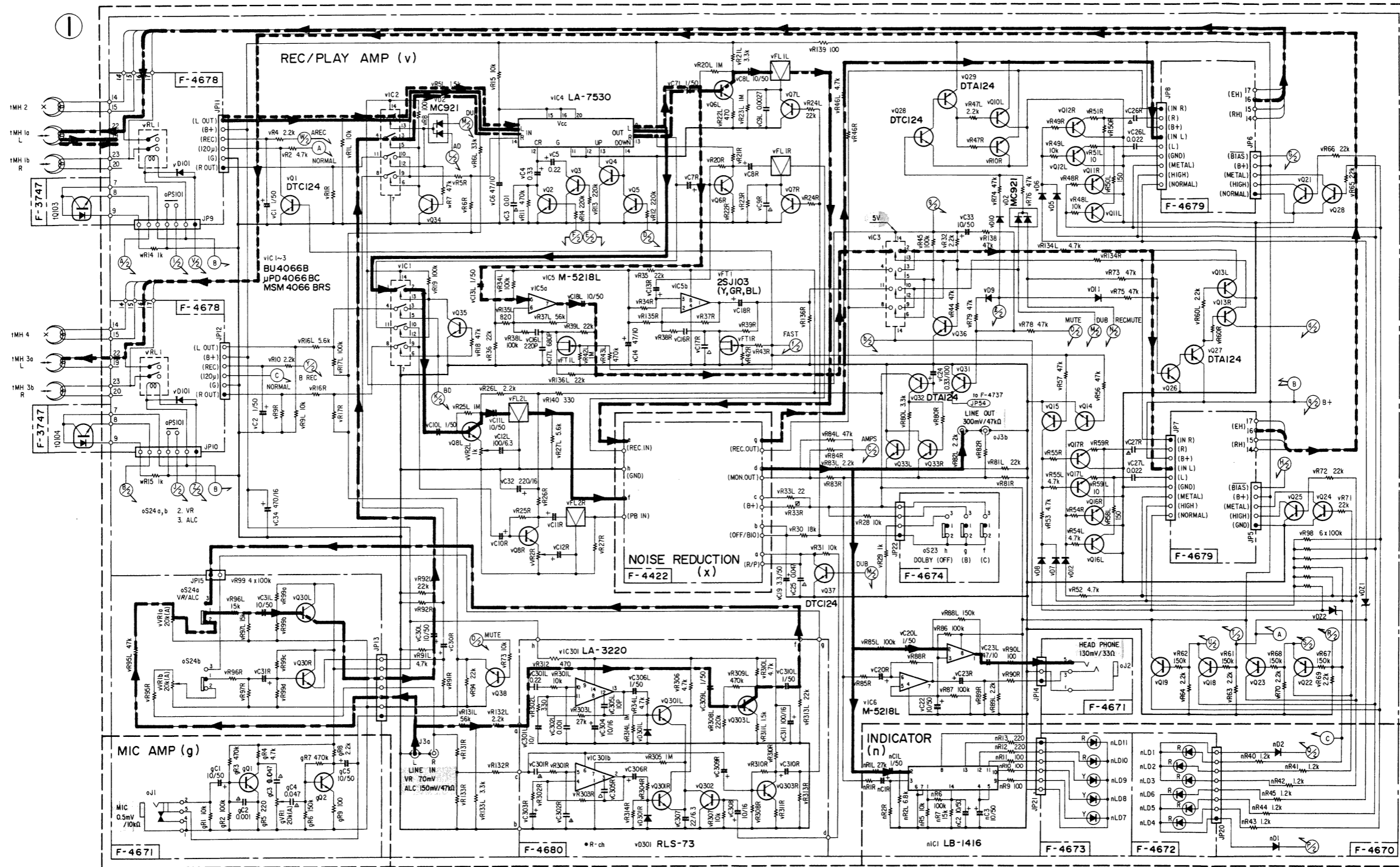
Parts No.	Stock No.	Description
14	47405000	Arm Ass'y
15	47404800	Washer, d=1.6
16	47497100	Washer, d=2.0
17	47281000	Sprocket
18	47281100	Damper, reel
19	47283300	Reel Gear
20	46398800	Screw, M2×6
21	47406300	Spring, push arm
22	47724100	Spring, pinch roller (L) ass'y
23	47281910	Pinch Roller (L) Ass'y
24	16610301	REC/PB & Erase Head Ass'y (with sensor)
24-1	46858000	REC/PB & Erase Head

Parts No.	Stock No.	Description
24-2	47289100	Screw, M2.0×5
24-3	47289200	Spring Plate, azimuth
24-4	46731300	Screw, M1.4×6
25	47723000	Sensor Arm
27	47405200	Capstan Belt
28	47282900	Flywheel (R) Ass'y
29	47281210	Gear, flywheel ass'y
30	47404600	Washer, d=2.5
31	47283000	Flywheel (L) Ass'y
32	47283100	Pulley
33	48122800	Capstan Motor
34	46737500	Reel Motor
35	47293110	Gear, reel motor

Parts No.	Stock No.	Description
36	47281610	Lock Arm (A)
37	47293800	Arm (B)
38	47283810	Asist Gear (A)
39	47292600	Plunger Solenoid
40	47283910	Assist Gear (B)
41	47283710	Push Arm
42	47281710	Lock Arm (B)
43	47284200	FWD-REV Change Plate
44	47530000	Spring A, Flywheel
45	47292500	Sensor Arm B

# 10. SCHEMATIC DIAGRAM 10-1. Amplifier Section

\* Design and specifications subject to change without notice for improvement.  
 \* La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.  
 \* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



001.2 2SC2320L (F,G) 2SC1845 (E,F) 2SC2459 (GR, BL) nLD7-9 TLY-123 nLD10,11 TLS-123 nLD1-6 TLS-123

— a Mecha. PLAY Signal Line  
 - - - a Mecha. REC Signal Line  
 - · - · - DUBBING Signal Line

- 2SA934
- 2SA952
- 2SA1283
- 2SC1627A
- 2SC1845
- 2SC2001
- 2SC3243
- 2SC3244
- 2SC2320
- 2SA1115
- 2SC2459
- 2SC2603
- 2SA933S
- 2SA1175
- 2SC1740S
- 2SC2785
- 2SD1468S
- DTA124
- DTA124
- 2SD357
- 2SJ103
- μPD4066BC
- μPD4069C
- BA612
- BU4066B
- BU4069B
- HA12058NT
- HD14069
- LA3220
- LC7530
- MB8841H-1357K
- MB88421-161M
- MSM4069UBRS
- Det. or Silt. or Line
- LB1416
- TA78
- M5218L
- L78N05
- BA6208
- MC921
- DBB10-B
- RB152
- 1S2473177
- 05Z3.0
- 05Z5.1
- 05Z6.2
- 05Z9.1

1  
2  
3  
4  
5



10-2. Control Section

\* Design and specifications subject to change without notice for improvement.  
 \* La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.  
 \* Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

**SYMBOL OF FUNCTION**  
 (m) POWER SUPPLY (n) INDICATOR  
 (o) SELECTOR (g) MIC AMP  
 (p) FIXED PARTS  
 (t) MECHANISM  
 (v) REC/PLAY AMP  
 (w) LOGIC CONTROL  
 (x) NOISE REDUCTION

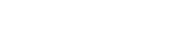
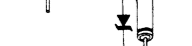
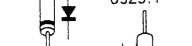
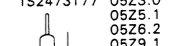
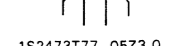
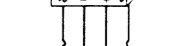
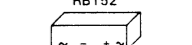
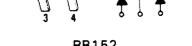
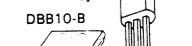
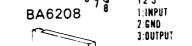
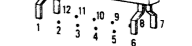
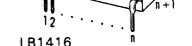
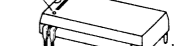
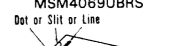
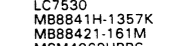
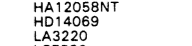
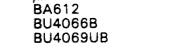
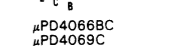
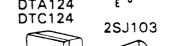
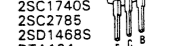
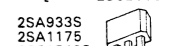
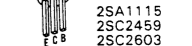
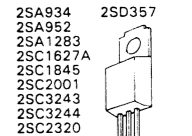
**SYMBOL**  
 (P.P) Polypropylene  
 Δ Ceramic  
 ▽ Barrie Layer Capacitor  
 □ Non-Inflammable Resistor  
 ⊙ Chip Component (Cylindrical Type)  
 ⊞ Fusing Resistor  
**RESISTORS**  
 Are in ohms, 1/4 Watts, ±5% Tolerance  
 Unless Otherwise Noted. k, M, Ω

**CAPACITORS**  
 Are in μF, Unless Otherwise Noted. p, P

**OPTIONAL USE OF SEMICONDUCTOR**

PARTS NO	TYPE NO
m03-5, 101, 2, v05-12	IS2473, IS1588
w03-6	2SC2603 (E, F, G)
m02, v02-8, 10-17, 20	2SC2785 (J, H, F, E)
21, 24, 25, 31, 30, 33-36	2SC1740S (R, S, E)
36, 30-3	
w01-9, 9-17, 20	
w03, 4, v018, 19, 22	2SA1115 (E, F)
23	2SA1175 (J, H, F, E)
	2SA933S (R, S, E)
w05, 6	2SA952 (M, L), 2SA934 (R, S)
101	2SC2001 (M, L), 2SD1468 (R, S)
w07, 8	2SC3243 (D, E)
1C5, 6	BU4069UB, HD14069BP μPD4069UBC, MSM4069UBRS

Each D.C Voltage shows the nominal value in volts at during recording  
 Electrolytic Capacitor: Capacitance(μF) / Volt (V)  
 ⚡ is Safety Part.  
 Use only replacement parts recommended by the manufacturer.



2

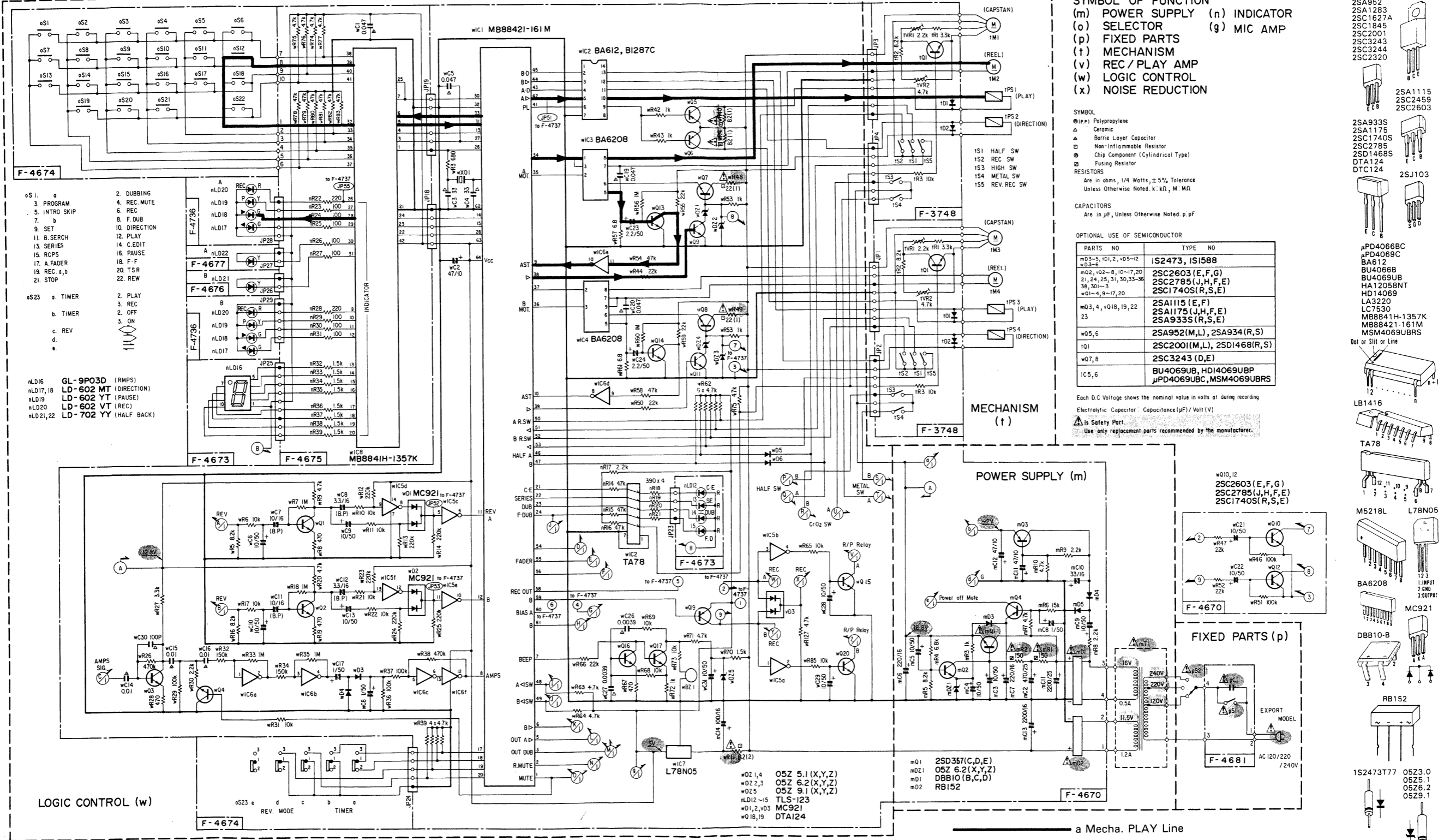
1

2

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4

5



- oS1, a
- 3. PROGRAM
- 5. INTRO SKIP
- 7. b
- 9. SET
- 11. B. SERCH
- 13. SERIES
- 15. RCPS
- 17. A. FADER
- 19. REC. a, b
- 21. STOP
- 2. DUBBING
- 4. REC. MUTE
- 6. REC
- 8. F. DUB
- 10. DIRECTION
- 12. PLAY
- 14. C. EDIT
- 16. PAUSE
- 18. F. F
- 20. TSR
- 22. REW
- oS23 a. TIMER
- 2. PLAY
- 3. REC
- b. TIMER
- 2. OFF
- 3. ON
- c. REV
- e.
- nLD16 GL-9P03D (RMPS)
- nLD17, 18 LD-602 MT (DIRECTION)
- nLD19 LD-602 YT (PAUSE)
- nLD20 LD-602 VT (REC)
- nLD21, 22 LD-702 YY (HALF BACK)

LOGIC CONTROL (w)

POWER SUPPLY (m)

FIXED PARTS (p)

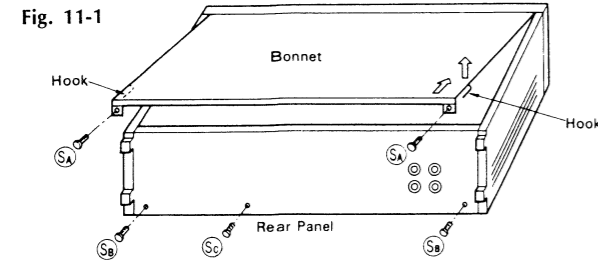
a Mecha. PLAY Line



## 11. MAIN PARTS REPLACEMENT (See Exploded View on page 19)

### A. Bonnet (See Fig. 11-1)

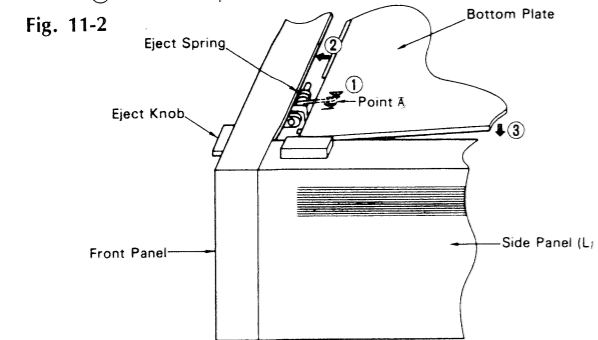
- 1) Remove two screws (S<sub>A</sub>).
- 2) Push the rear side of the bonnet to undo the hooks and then remove it.



### B. Bottom Plate (See Fig. 11-1 and Fig. 11-2)

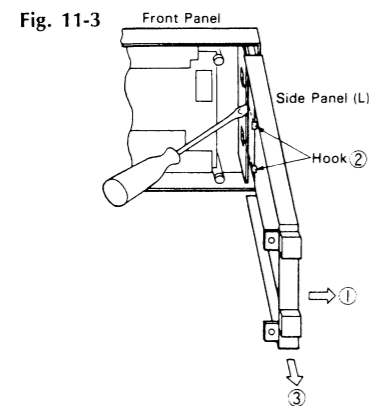
- 1) Remove two screws (S<sub>B</sub>).
- 2) Push the rear side of the bottom plate to undo the hooks and then remove it.

**Note:** Install the bottom plate after matching eject spring with point (A) of bottom plate.



### C. Side Panel L (or R) (See Fig. 11-3).

- 1) Remove the bonnet and the bottom plate.
- 2) Shift the position of the side panel L (or R) 2.0 cm in to the arrow direction (1).
- 3) Undo the hooks (2) of the side panel and then pull it to the arrow direction (3) to remove it.



### D. F-4678 and F-4679 Circuit Board

- 1) Remove the bonnet and the bottom plate.
- 2) Pluck out two connectors from F-4678 Circuit board.
- 3) Unhook two stopper lid of sockets on the F-4679 Circuit board and then pull out two parallel cables.
- 4) Remove the protection cover on the F-4678 circuit board.
- 5) Unsolder heads, LED and sensor read wires.
- 6) Loosen two screws fixing F-4678 circuit board and then undo two hooks near S.V.R. on the F-4679 circuit board.

### E. Mechanism Ass'y

- 1) Take off the lid ass'y.
- 2) Remove the bonnet and the bottom plate.
- 3) Take off tension wire.
- 4) Pluck out two connectors from F-3748 board.
- 5) Unhook two stopper lid of sockets on the F-4679 circuit board and then pull out three parallel cables.
- 6) Extract two connectors from the F-4678 circuit board.
- 7) Remove the side panel L.
- 8) Loosen one screw (5) and then push up reinforcement to extract from support nails.
- 9) Take off counter belt.
- 10) Loosen four screws fixing the mechanism ass'y.
- 11) Draw out the mechanism ass'y.

### F. REC/PB Head and Erase Head (24-1)

- 1) Remove the mechanism ass'y from Set.
- 2) Loosen two screws. (24)
- 3) Pull out the head toward the arm ass'y (18), softly.
- 4) Unsolder head wires at head terminal board.

**Note:** Care must be taken not to give tension.

### G. Pinch Roller Ass'y (4)

- 1) Remove the mechanism ass'y from set.
- 2) Pluck out the plastic tack (3).
- 3) Take out the pinch roller ass'y.

### H. Reel Gear (19)

- 1) Remove the mechanism ass'y from set.
- 2) Take off two washers (15) (16) to pull out reel gear.

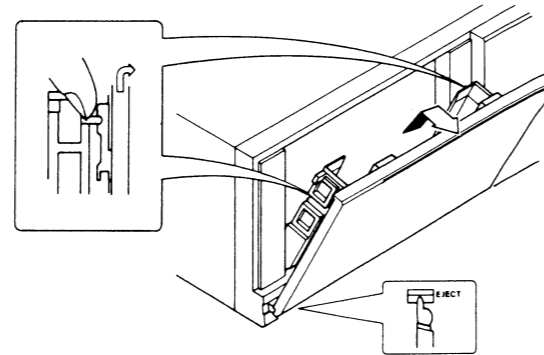
### I. Capstan Motor (33), Reel Motor (34), Capstan Belt (27), Flywheel (28) (31) & Plunger Solenoid (39)

- 1) Remove the mechanism ass'y from set.
- 2) Remove the F-4678 and F-4679 circuit board.
- 3) Loosen five screws (1) fixing sub chassis.

### J. Lid Ass'y

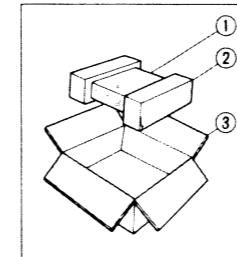
Press the EJECT knob to open the cassette holder, push the parts locked at the left and right in the figure while pulling it upward, and remove the Lid ass'y.

Fig. 11-4



## 12. PACKING LIST

Parts No.	Stock No.	Description
1	13729900	Vinyl Cover
2	47673600	Styrofoam Packing
3	47673200	Carton Case <Silver Model>
	47673300	Carton Case <Black Model>



## 13. ACCESSORY LIST

Stock No.	Description
07193400	PJP Cord x 2
or 38103300	PJP Cord x 2
94300500	Head Cleaner
46962000	Operating Instruction

**Sansui**

SANSUI ELECTRIC CO., LTD.:  
SANSUI ELECTRONICS CORPORATION:  
SANSUI ELECTRONICS (U.K.) LTD.:  
SANSUI ELECTRONICS G.M.B.H.:

14-1, Izumi 2-chome, Suginami-ku, Tokyo 168 Japan  
PHONE: (03) 324-8891/TELEX: 232-2076 (International Division)  
1250 Valley Brook Ave. Lyndhurst, N.J. 07071 U.S.A.  
17150 South Margay Ave. Carson, California 90746 U.S.A.  
3036 Koapaka Street, Honolulu, Hawaii 96819 U.S.A.  
Unit 10A, Lyon Industrial Estate, Rockware Avenue, Geenford, Midx UB6, OAA, England  
Pau Ehrich Strasse 8, 6074 Rödermark 2, West Germany