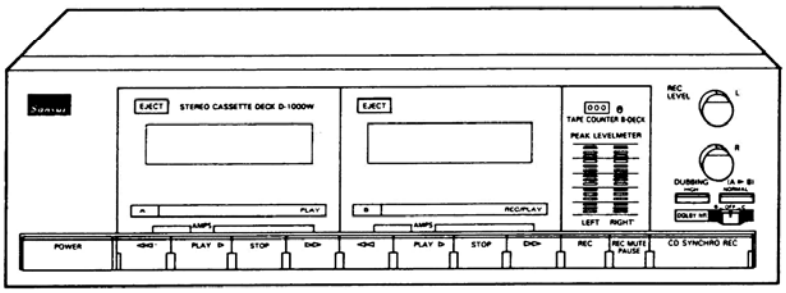
SERVICE MANUAL

STEREO CASSETTE DECK

SANSUI D-1000W



CAUTION

1. Parts identified by the ⚠ 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.

Sansui

SANSUI ELECTRIC CO., LTD.

•SPECIFICATIONS

Track format ..... 4-track/2-channel system
Tape speed ..... 4.8 cm/sec
Heads
Rec/play head ..... HIGH-Bs hard permalloy
Play head ..... HIGH-Bs hard permalloy
Erase head ..... Double-gap HIGH-Bs ferrite
Motor ..... Electronically controlled DC motor × 2
Reels: DC Motor × 2
Wow/flutter ..... 0.09% max (WRMS)
Fast forwarding (rewinding) time ..... Approx. 90 sec. (for C-60 tape)
Frequency response (—20 VU recording/playback)
Normal tape (LH) ..... 20 to 15,000 Hz (30 to 14,000 Hz ±3 dB)
Chrome tape ..... 20 to 16,000 Hz (30 to 15,000 Hz ±3 dB)
Metal tape ..... 20 to 17,000 Hz (30 to 16,000 Hz ±3 dB)
Signal-to-noise ratio (recording/playback with metal tape)
DOLBY NR OFF ..... Better than 54 dB
DOLBY-B NR ON ..... Better than 64 dB
DOLBY-C NR ON ..... Better than 72 dB
Erasure rate (metal tape) . More than 70 dB at 1 kHz
Recording bias frequency 105 kHz
Input sensitivity/Impedance
LINE IN (REC) ..... 70 mV/47 kohms
Power requiremets ..... 110/120/220/240V 50/60 Hz
For U.S.A. and Canada 120V (60 Hz)
Power consumption ..... 24 watts
Dimensions ..... 430 mm (16-15/16″) W
127 mm (5″) H
228 mm (8-31/32″) D
Weight ..... 4.4 kg (9.68 lbs) net
5.2 kg (11.44 lbs) 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 trade marks of Dolby Laboratories Licensing Corporation.

NOTE

1. The symbols, UL, CSA, SA, BS, UK, EU, AS, SEV, SS, XX <EXPORT> and XX-V <EXPORT(V)> 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.
SEV	Manufactured for Swiss market.
SS	Manufactured for Saudi Arabia market.
XX <EXPORT>	Standard Version with Inner Voltage Selector.
XX-V <EXPORT(V)>	Standard Version with Outer Voltage Selector.
NON MARK	Common Parts.

2. Some printed circuit boards are not supplied assembled. To separate these in this service manual, the stock numbers are not indicated for these boards. However, stock numbers for individual parts are indicated.

3. Since some capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors and resistors, which was issued on June 1987.

4. Abbreviations in this service manual are as follows.

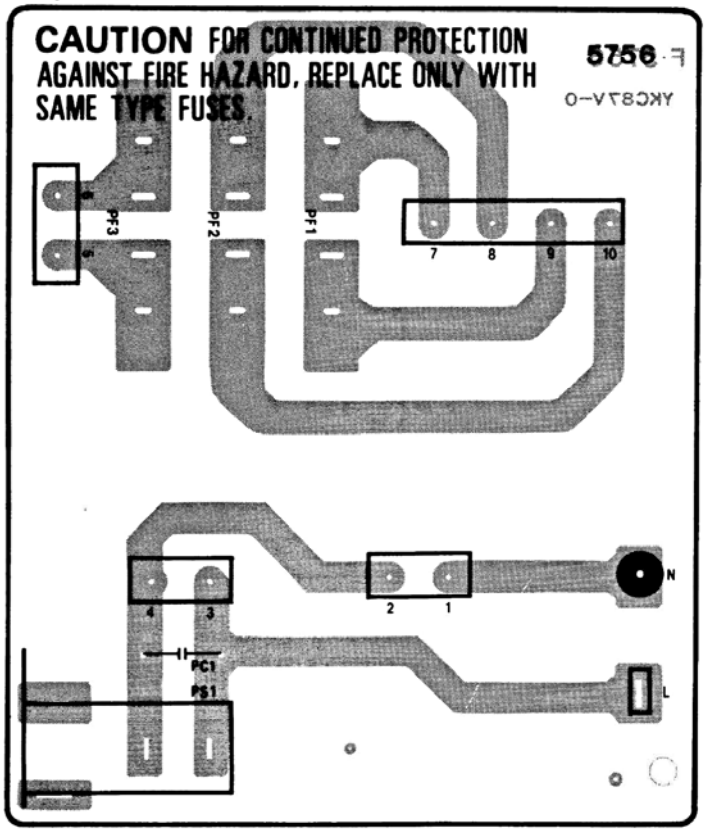
•Abbreviations List

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. PARTS LOCATION ON BOARD

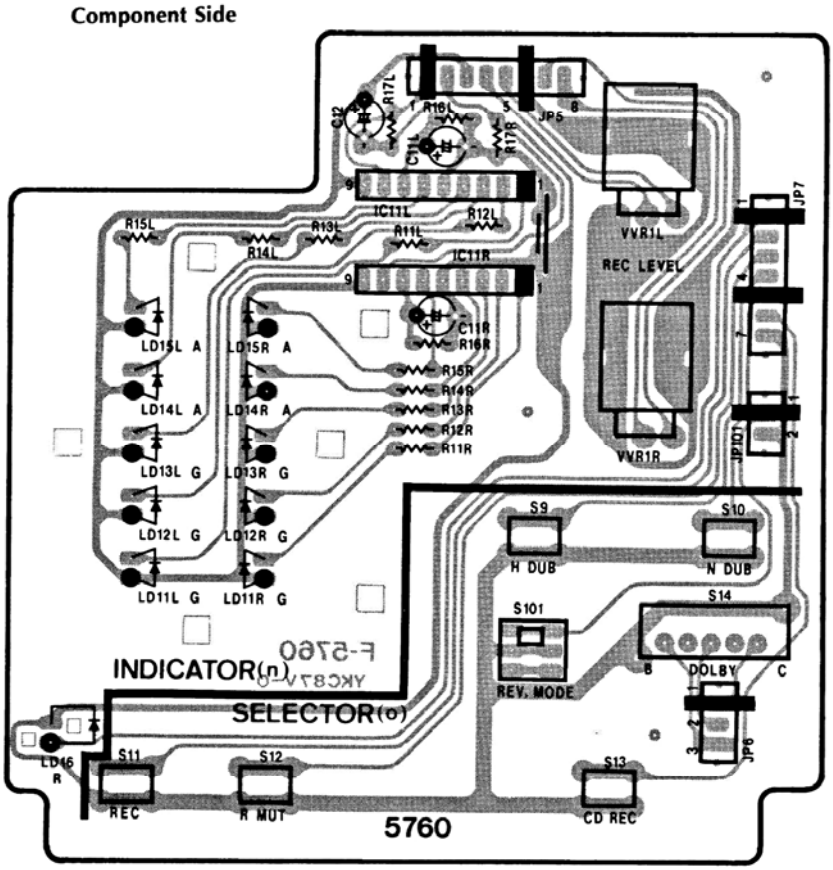
1-1. F-5756 Power SW. Board

Component Side



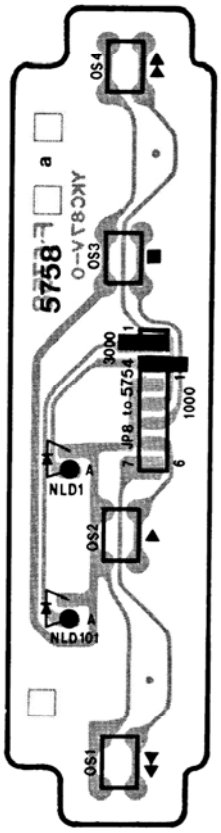
1-2. F-5760 Rec Level VR & Peak Meter Board

Component Side



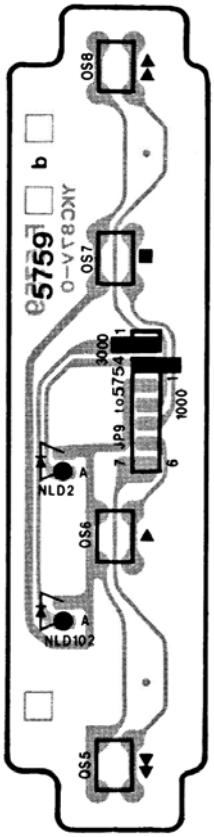
1-3. F-5758 A-Side Control SW. Board

Component Side (Stock No. 010327100)



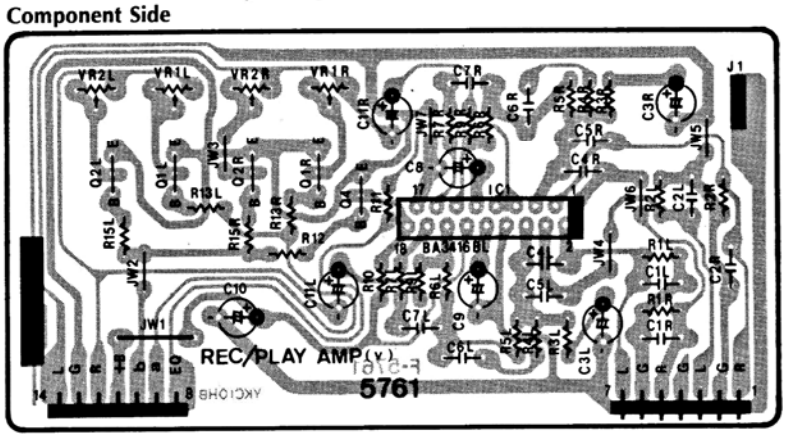
1-4. F-5759 B-Side Control SW. Board

Component Side



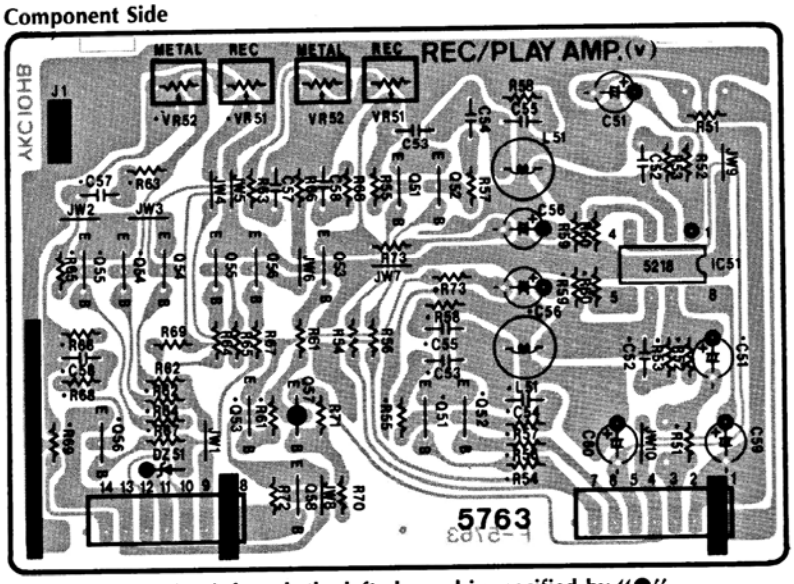
1-5. F-5761 A-Side Play Amp. Board

Component Side



1-6. F-5763 B-Side Rec/Play Amp. Board

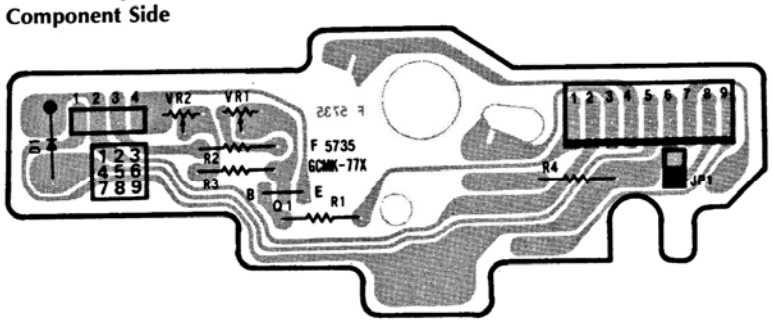
Component Side



•Note: On this circuit board, the left channel is specified by "●" mark on top of the parts number.

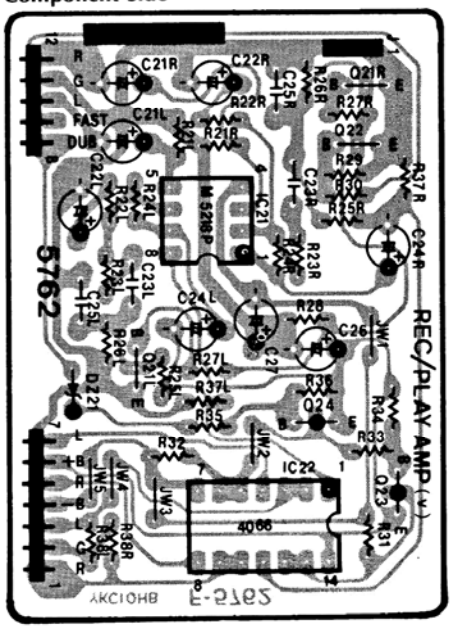
1-7. F-5735 Speed Control Board

Component Side



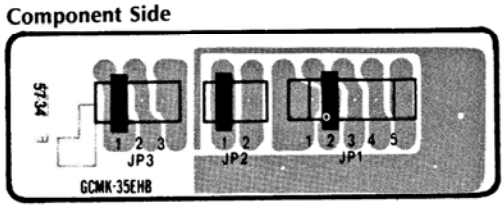
1-8. F-5762 A-Side Play Amp. Dubbing Board

Component Side



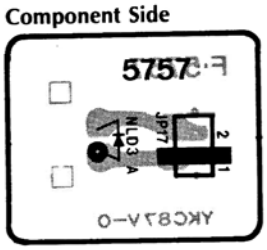
1-9. F-5734 Wiring Board

Component Side



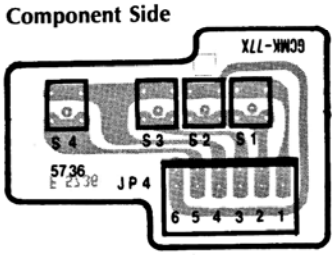
1-10. F-5757 Power Indicator Board

Component Side



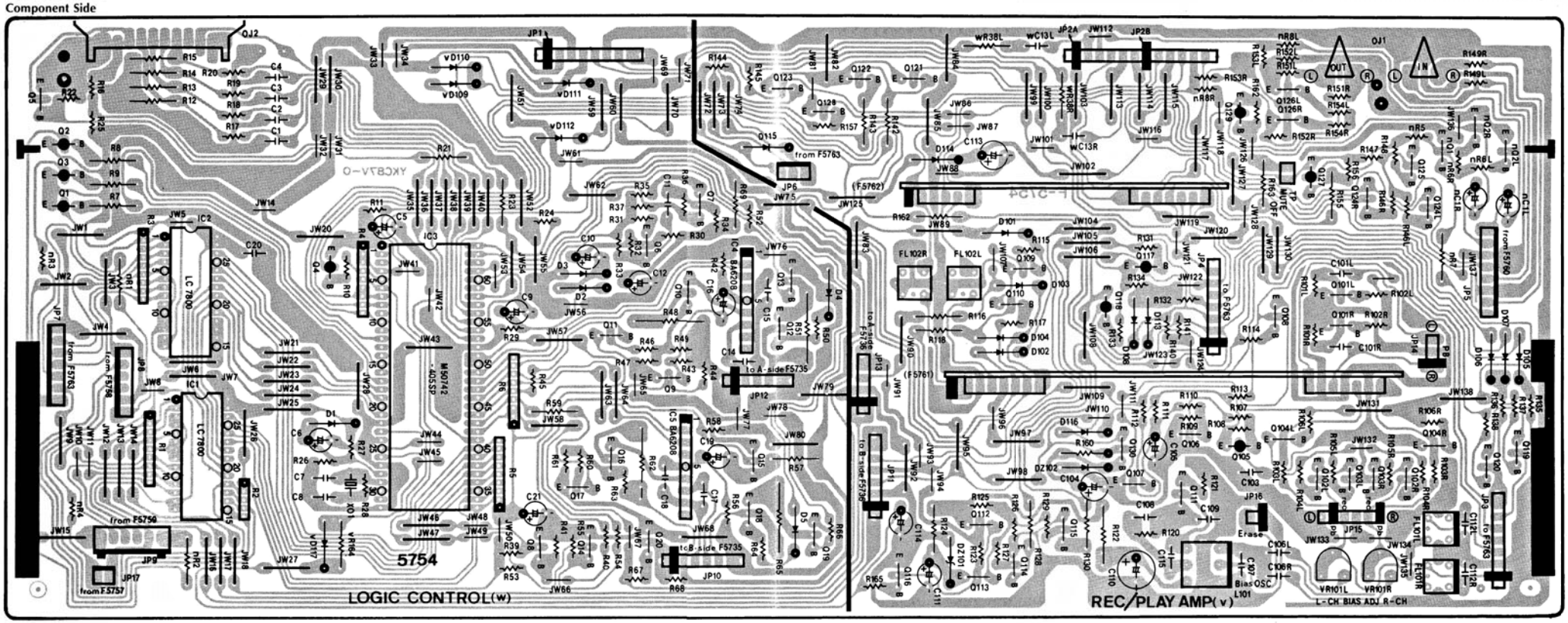
1-11. F-5736 Sensor SW. Board

Component Side



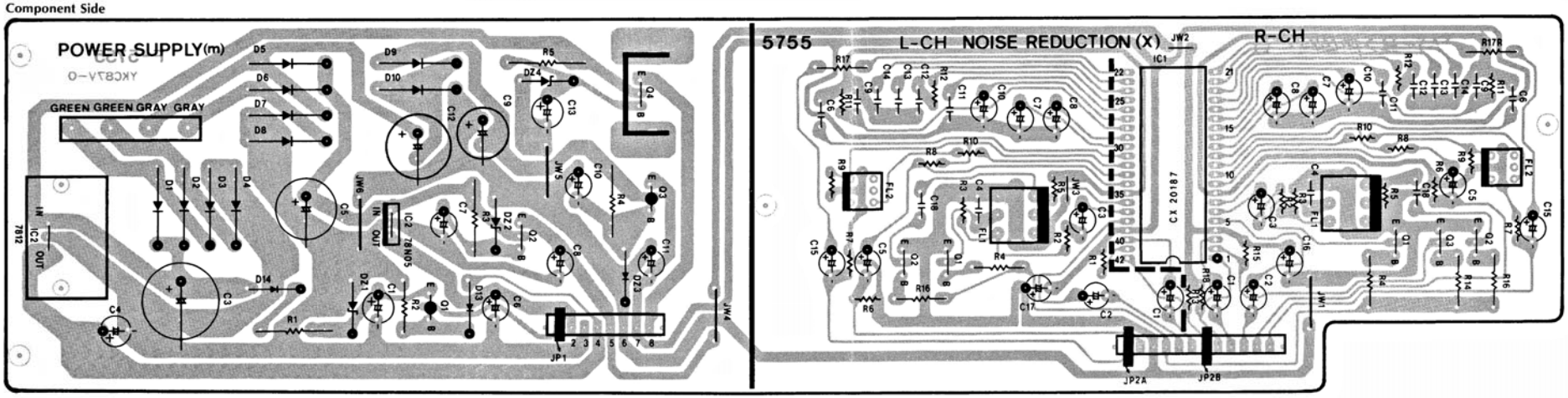
1-12. F-5754 Logic Control & Rec/Play Amp. Board

Component Side



1-13. F-5755 Dolby Noise Reduction & Power Supply Board

Component Side



2. PARTS LIST OF BOARD

2-1. F-5754 Logic Control & Rec/Play Amp. Board (Stock No. 01044201)

Parts No.	Stock No.	Description
•Transistor		
nQ1	46367101	2SC2603
	or 48058801	2SC1740S
nQ2	46367101	2SC2603
	or 48058801	2SC1740S
oJ2	48313900	ST Socket (10 Pin) SYSTEM CONTROL
oJ1	48845900	4P Terminal, LINE IN. OUT
	or 83004300	4P Terminal, LINE IN. OUT
•Transistor		
vQ101	46367101	2SC2603
	or 48058801	2SC1740S
vQ102	46581701	2SC1845
vQ103	46581701	2SC1845
vQ104	46359801	2SC2001
	or 48055901	2SD1468S
vQ105	46581601	2SA992
vQ106	46367101	2SC2603
	or 48058801	2SC1740S
vQ107	46367101	2SC2603
	or 48058801	2SC1740S
vQ108	46367101	2SC2603
	or 48058801	2SC1740S
vQ109	46367101	2SC2603
	or 48058801	2SC1740S
vQ110	46367101	2SC2603
	or 48058801	2SC1740S
vQ111	46614101	2SC3243
vQ112	46614101	2SC3243
	or 48000901	2SC2060
vQ113	46367101	2SC2603
	or 48058801	2SC1740S
vQ114	46367101	2SC2603
	or 48058801	2SC1740S
vQ115	46367101	2SC2603
	or 48058801	2SC1740S
vQ116	46367101	2SC2603
	or 48058801	2SC1740S
vQ117	46367001	2SA1115
	or 48058601	2SA933S
vQ118	46367001	2SA1115
	or 48058601	2SA933S
vQ119	46367101	2SC2603
	or 48058801	2SC1740S
vQ120	46367101	2SC2603
	or 48058801	2SC1740S
vQ121	46367101	2SC2603
	or 48058801	2SC1740S
vQ122	46367101	2SC2603
	or 48058801	2SC1740S
vQ123	46367101	2SC2603
	or 48058801	2SC1740S
vQ124	46367101	2SC2603
	or 48058801	2SC1740S
vQ125	46367101	2SC2603
	or 48058801	2SC1740S
vQ126	46367101	2SC2603
	or 48058801	2SC1740S
vQ127	46367001	2SA1115
	or 48058601	2SA933S
vQ128	46367101	2SC2603
	or 48058801	2SC1740S
vQ129	46367001	2SA1115
	or 48058601	2SA933S
vQ130	46367101	2SC2603
	or 48058801	2SC1740S
•Diode		
vD101	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD102	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD103	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD104	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD105	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD106	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD107	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD108	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD109	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD110	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD111	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD112	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD113	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD114	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD115	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD116	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD117	03117600	1S2473T77
	or 46086000	1S1588TP-3
vD118	03117600	1S2473T77
	or 46086000	1S1588TP-3
•Zener Diode		
vDZ101	46108800	05Z2.4-X
vDZ102	46112800	05Z8.2-Z
vFL101	48848300	Trap Filter (105kHz)
	or 83008400	Trap Filter (105kHz)
vFL102	48366300	Trap Filter
vL101	48525100	OSC Coil OF-10
vVR101	46634900	100kΩ S.V.R., Bias adj.
	or 83009500	100kΩ S.V.R., Bias adj.
•Transistor		
wQ1	46367001	2SA1115
	or 48058601	2SA933S
wQ2	46367001	2SA1115
	or 48058601	2SA933S
wQ3	46367001	2SA1115
	or 48058601	2SA933S
wQ4	46367001	2SA1115
	or 48058601	2SA933S
wQ5	46367101	2SC2603
	or 48058801	2SC1740S
wQ6	46367101	2SC2603
	or 48058801	2SC1740S
wQ7	46367101	2SC2603
	or 48058801	2SC1740S
wQ8	46367101	2SC2603
	or 48058801	2SC1740S
wQ9	46367101	2SC2603
	or 48058801	2SC1740S
wQ10	46614101	2SC3243
	or 48000901	2SC2060
wQ11	46367101	2SC2603
	or 48058801	2SC1740S
wQ12	46359801	2SC2001
	or 48055901	2SD1468S
wQ13	46359801	2SC2001
	or 48055901	2SD1468S
wQ14	46367101	2SC2603
	or 48058801	2SC1740S
wQ15	46367101	2SC2603
	or 48058801	2SC1740S
wQ16	46614101	2SC3243
	or 48000901	2SC2060
wQ17	46367101	2SC2603
	or 48058801	2SC1740S
wQ18	46359801	2SC2001
	or 48055901	2SD1468S
wQ19	46359801	2SC2001
	or 48055901	2SD1468S
wQ20	46367101	2SC2603
	or 48058801	2SC1740S
wQ101	48229200	DTA124XS
wQ102	48229200	DTA124XS
wQ103	48229200	DTA124XS
wQ104	48229200	DTA124XS
•IC		
wIC1	48840900	LC7800
wIC2	48840900	LC7800
wIC3	48840700	M50742-405SP
wIC4	46149600	BA6208
wIC5	46149600	BA6208
wXO1	48241600	Ceramic OSC Element KBR 4.0MS
•Diode		
wD1	03117600	1S2473T77
	or 46086000	1S1588TP-3
wD2	03117600	1S2473T77
	or 46086000	1S1588TP-3
wD3	03117600	1S2473T77
	or 46086000	1S1588TP-3
wD4	03117600	1S2473T77
	or 46086000	1S1588TP-3
wD5	03117600	1S2473T77
	or 46086000	1S1588TP-3
wR1	48773200	4.7kΩX8 A.R.
wR2	48765800	4.7kΩX4 A.R.
wR3	48773200	4.7kΩX8 A.R.
wR4	48773200	4.7kΩX8 A.R.
wR5	48773200	4.7kΩX8 A.R.
wR6	48773200	4.7kΩX8 A.R.
⚠wR48	46248500	22Ω 1W N.I.R.
⚠wR51	46624100	68Ω 2W N.I.R.
⚠wR62	46624100	68Ω 2W N.I.R.
⚠wR63	46490900	910Ω 1/6W C.R.
wR65	46624100	68Ω 2W N.I.R.

2-2. F-5755 Dolby Noise Reduction & Power Supply Board (Stock No. 01044301)

Parts No.	Stock No.	Description
•Transistor		
mQ1	46367001	2SA1115
	or 48058601	2SA933S
⚠mQ2	46614101	2SC3243
⚠	or 48000901	2SC2060
⚠mQ3	46614001	2SA1283
⚠	or 48000801	2SA934
⚠mQ4	03083901	2SD313HP
⚠	or 48369801	2SC1826
•IC		
⚠mIC1	48470500	μPC7812H
⚠	or 48567100	AN7812
⚠mIC2	46359400	L78N05
⚠	or 48599500	AN78N05
•Diode		
⚠mD1	03117700	10E-2
⚠	or 83005000	1N4002
⚠mD2	03117700	10E-2
⚠	or 83005000	1N4002
⚠mD3	03117700	10E-2
⚠	or 83005000	1N4002
⚠mD4	03117700	10E-2
⚠	or 83005000	1N4002
⚠mD5	03117700	10E-2
⚠	or 83005000	1N4002
⚠mD6	03117700	10E-2
⚠	or 83005000	1N4002
⚠mD7	03117700	10E-2
⚠	or 83005000	1N4002
⚠mD8	03117700	10E-2
⚠	or 83005000	1N4002
⚠mD9	03117700	10E-2
⚠	or 83005000	1N4002
⚠mD10	03117700	10E-2
⚠	or 83005000	1N4002
mD13	03117600	1S2473T77
	or 46086000	1S1588TP-3
⚠mD14	03117600	1S2473T77
⚠	or 46086000	1S1588TP-3
•Zener Diode		
mDZ1	46113300	05Z10-Y
	or 46113400	05Z10-Z
mDZ2	46112800	05Z8.2-Z
mDZ3	46112800	05Z8.2-Z
mDZ4	46114000	05Z12-Z
•Transistor		
xQ1	46367101	2SC2603
	or 48058801	2SC1740S
xQ2	46367101	2SC2603
	or 48058801	2SC1740S
xQ3	46367101	2SC2603
	or 48058801	2SC1740S
⚠mR1	46230200	1kΩ 1/2W N.I.R.
⚠mR2	46230000	680Ω 1/2W N.I.R.
⚠mR4	46230000	1kΩ 1/2W N.I.R.
⚠mR5	46250100	470Ω 1W N.I.R.
•IC		
xIC1	48179900	CX-20187
xFL1	48668300	DOLBY Filter
	or 83013500	DOLBY Filter
xFL2	48848400	DOLBY SQ Filter
	or 83011000	DOLBY SQ Filter

2-3. F-5756 Power SW. Board

Parts No.	Stock No.	Description
⚠pC1	46425800	0.01μF 400V C.C.
⚠	or 46943200	0.01μF 400V C.C.
⚠	or 48186700	0.01μF 400V C.C.
⚠pS1	46364300	Push SW., POWER (XX-V. UL.EU.UK)
⚠	or 83004200	Push SW., POWER (XX-V. UL.EU.UK)
⚠	83004200	Push SW., POWER (CSA)
⚠	or 48065000	Push SW., POWER (CSA)

2-4. F-5757 Power Indicator Board

Parts No.	Stock No.	Description
nLD3	48849300	SEL3913K POWER

2-5. F-5758 A-Side Control SW. Board

Parts No.	Stock No.	Description
•LED		
nLD1	48841200	SEL3910A PLAY
oS1	46708100	Push SW., ◄◄
	or 83000300	Push SW., ◄◄
oS2	46708100	Push SW., PLAY
	or 83000300	Push SW., PLAY
oS3	46708100	Push SW., STOP
	or 83000300	Push SW., STOP
oS4	46708100	Push SW., ►►
	or 83000300	Push SW., ►►

2-6. F-5759 B-Side Control SW. Board

Parts No.	Stock No.	Description
•LED		
nLD2	48841200	SEL3910A PLAY
oS5	46708100	Push SW., ◄◄
	or 83000300	Push SW., ◄◄
oS6	46708100	Push SW., PLAY
	or 83000300	Push SW., PLAY
oS7	46708100	Push SW., STOP
	or 83000300	Push SW., STOP
oS8	46708100	Push SW., ►►
	or 83000300	Push SW., ►►

2-7. F-5760 Rec Level VR & Peak Level Meter Board

Parts No.	Stock No.	Description
•IC		
nIC11	46129100	BA6124
•LED		
nLD11	48841300	SEL3813A, PEAK LEVEL METER
nLD12	48841300	SEL3813A, PEAK LEVEL METER
nLD13	48841300	SEL3813A, PEAK LEVEL METER
nLD14	48841300	SEL3813A, PEAK LEVEL METER
nLD15	48841300	SEL3813A, PEAK LEVEL METER
nLD16	48841100	SEL3210S, REC
oS9	46708100	Push SW., DUBBING (A ► B)
	or 83000300	Push SW., DUBBING (A ► B)
oS10	46708100	Push SW., DUBBING (A ► B)
	or 83000300	Push SW., DUBBING (A ► B)
oS11	48240500	Push SW., REC
	or 83004000	Push SW., REC
oS12	48240500	Push SW., REC MUTE PAUSE
	or 83004000	Push SW., REC MUTE PAUSE
oS13	48240500	Push SW., CD SYNCHRO REC
	or 83004000	Push SW., CD SYNCHRO REC
oS14	48158200	Slide SW., DOLBY NR
vVR1	83008600	50kΩ V.R., REC LEVEL adj.
	or 48846200	50kΩ V.R., REC LEVEL adj.

2-8. F-5761 A-Side Play Amp. Board

(Stock No. 01044901)

Parts No.	Stock No.	Description
•Transistor		
vQ1	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ2	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ4	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
•IC		
vIC1	48840800	BA3416BL
vVR1	48079400	22kΩ S.V.R., P.B. Level adj.
	or 83010400	20kΩ S.V.R., P.B. Level adj.
vVR2	48079400	22kΩ S.V.R., P.B. Level adj.
	or 83010400	20kΩ S.V.R., P.B. Level adj.

2-9. F-5762 A-Side Play Amp. Dubbing Board

(Stock No. 01045001)

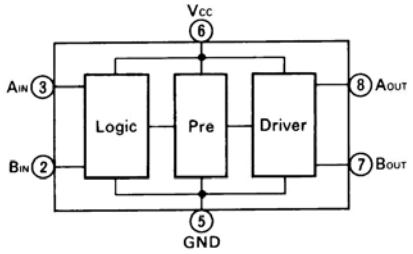
Parts No.	Stock No.	Description
•Transistor		
vQ21	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ22	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ23	46367001	2SA1115
	or 46392001	2SA1175
	or 48058601	2SA933S
vQ24	46367001	2SA1115
	or 46392001	2SA1175
	or 48058601	2SA933S
•IC		
vIC21	46580100	M5218P
vIC22	07224800	TC4066BP
	or 46421000	μPD4066BC
	or 48054500	MSM4066BRS
•Zener Diode		
vDZ21	48552300	MTZ5.6AT-77
	or 48552400	MTZ5.6BT-77
	or 48631100	RD5.6B1 ES
	or 48631200	RD5.6B2 ES

2-10. F-5763 B-Side Rec/Play Amp. Board (Stock No. 01045101)

Parts No.	Stock No.	Description
•Transistor		
vQ51	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ52	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ53	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ54	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ55	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ56	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
vQ57	46367001	2SA1115
	or 46392001	2SA1175
	or 48058601	2SA933S
vQ58	46367101	2SC2603
	or 46367301	2SC2458
	or 48058801	2SC1740S
•IC		
vIC51	46580100	M5218P
•Zener Diode		
vDZ51	48552300	MTZ5.6AT-77
	or 48552400	MTZ5.6BT-77
	or 48631100	RD5.6B1 ES
	or 48631200	RD5.6B2 ES
vL51	46090500	Inductor 2.7mH
vVR51	48079600	47kΩ S.V.R., REC Level adj.
	or 83010500	50kΩ S.V.R., REC Level adj.
vVR52	48079600	47kΩ S.V.R., METAL Rec Level adj.
	or 83010500	50kΩ S.V.R., METAL Rec Level adj.

3. INTERRIOR BLOCK DIAGRAM OF IC

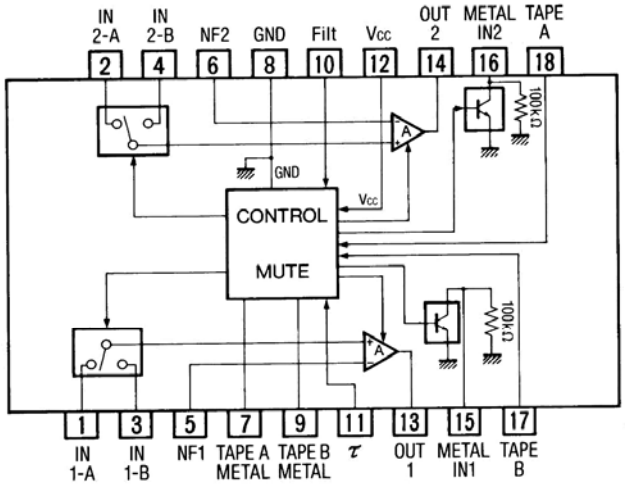
• BA6208 (Motor Drive)



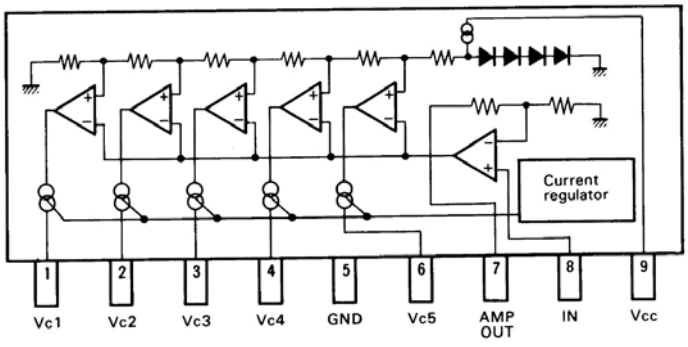
Input		Output		Output Mode
Input A	Input B	Output A	Output B	
1	1	L	L	Motor Short
1	0	H	L	Normal Turn
0	1	L	H	Reverse Turn
0	0	—	—	Motor Open

1: More than 2.0V, 0: Less than 0.8V

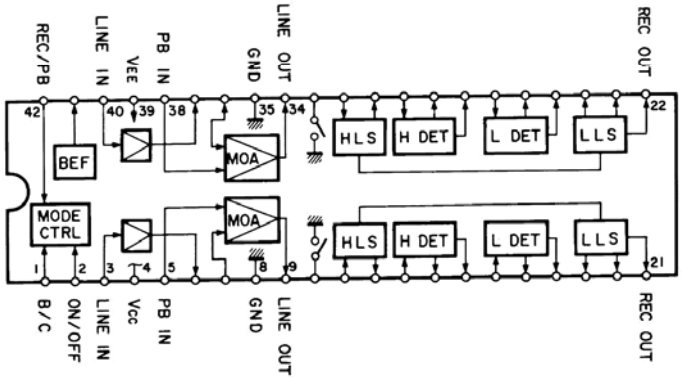
• BA3416BL (Play Back Pre Amp.)



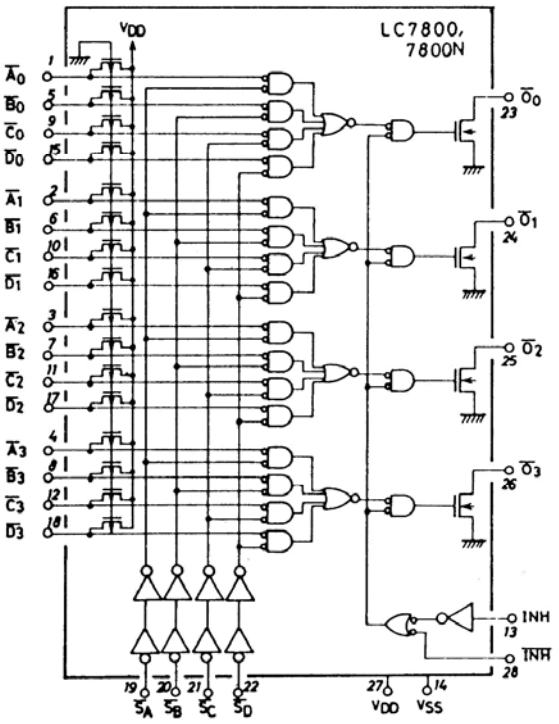
• BA6124 (LED Drive)



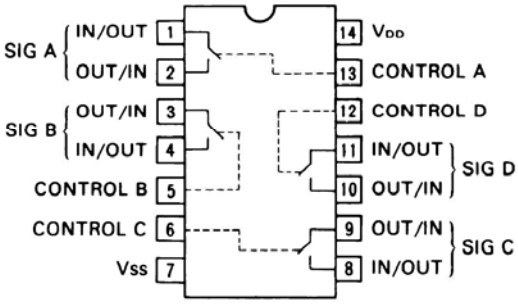
• CX20187 (Dolby Noise Reduction)



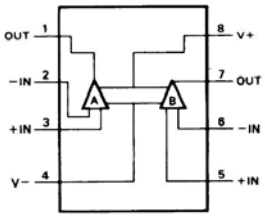
• LC7800 (Input Expander)



• TC4066BP, MSM4066BPS, μPD4066BC,
(Quad Analog SW.)



• M5218P, M5220P (OP Amp.)



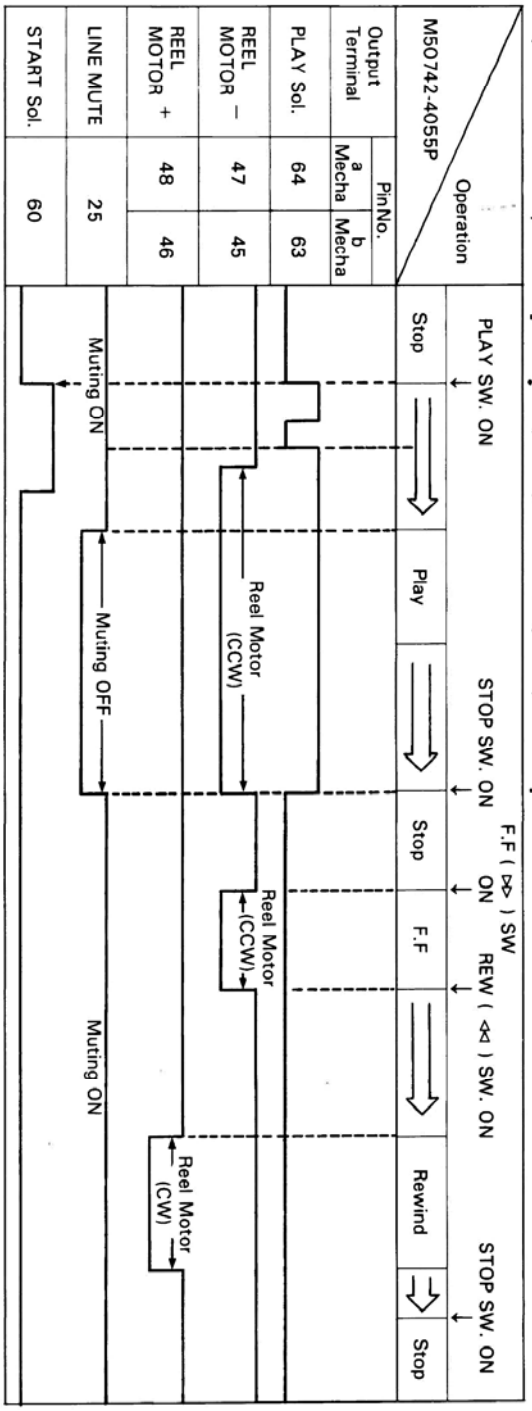
Input																		Output			
DATA Input															Select Input						
A				B				C				D									
$\overline{A0}$	$\overline{A1}$	$\overline{A2}$	$\overline{A3}$	$\overline{B0}$	$\overline{B1}$	$\overline{B2}$	$\overline{B3}$	$\overline{C0}$	$\overline{C1}$	$\overline{C2}$	$\overline{C3}$	$\overline{D0}$	$\overline{D1}$	$\overline{D2}$	$\overline{D3}$	$\overline{C0}$	$\overline{C1}$	$\overline{C2}$	$\overline{C3}$	INH	$\overline{INH}$	$\overline{00}$	$\overline{01}$	$\overline{02}$	$\overline{03}$
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	0	1	1	1
1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	0	1	1
1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	0	1
1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	1	1	0
1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	0	1	1	1
1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	0	1	1
1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	0	1
1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	0	1	1	1	1	0
1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	1	1
1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	0	1	1	0	1	1
1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	0	1	1	1	0	1
1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	0	1	0	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	0	1	1	1	1	0
1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	0	1	1	0	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	0	1	1	1	0	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	0	1	1	1	1	0
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1	*	1	1	1	1
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0	1	1	1	1

1: [H] Level/0: [L] Level/*: dont care

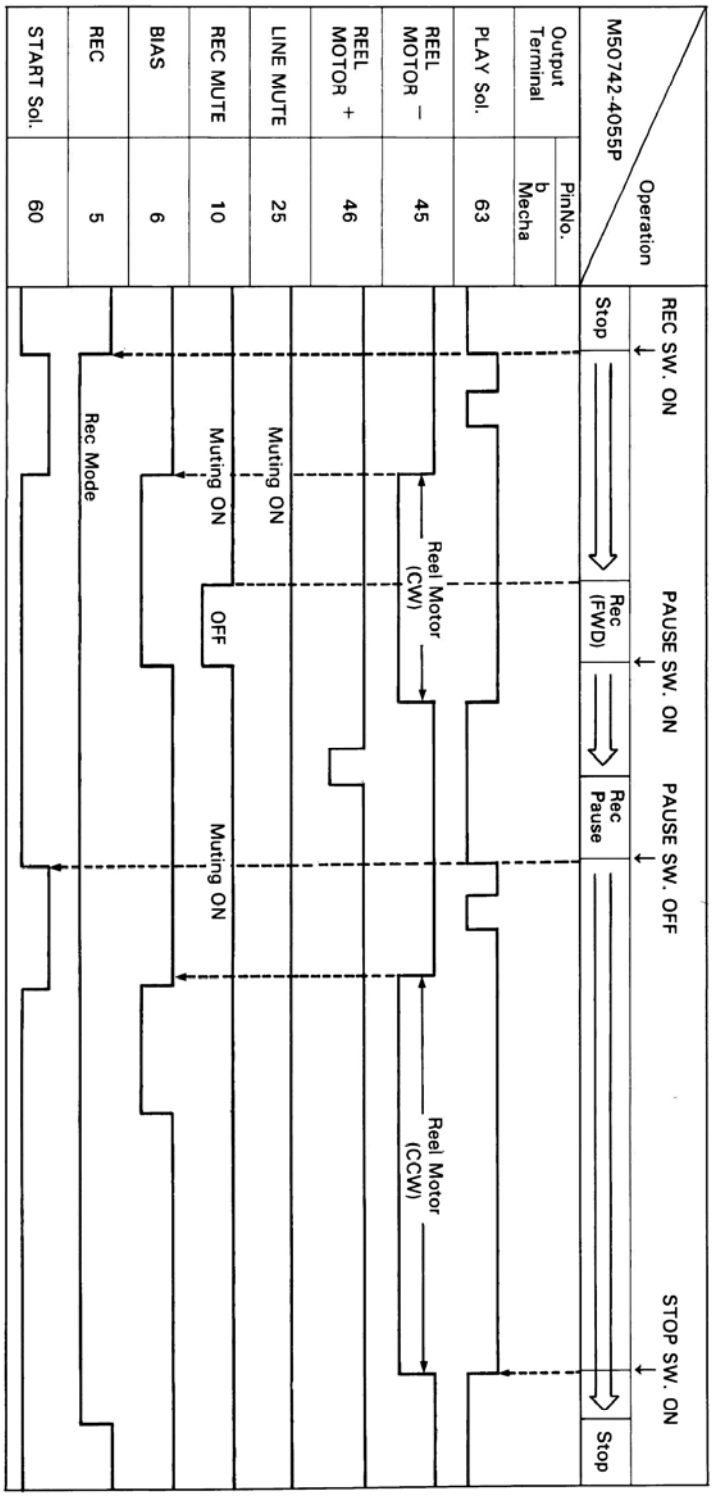
4. TIMING CHART OF CONTROL IC M50742-405SP

4-1. Timing Charts

• a, b-Mecha Play → Stop → F.F (▷▷) → REW (◁◁) → Stop



• b-Mecha Rec → Rec Pause (ON, OFF) → Rec → Stop



4-2. Terminal Function of IC M50742-405SP

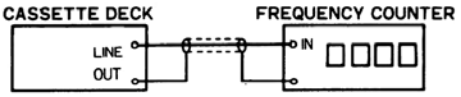
Pin No.	Pin Name	i/o	Description	ACTIVE	
				H	L
21~18	P34~P37	o	Terminals for outputting key matrix return timing signals.		
33~40	P57~P50	i	Terminals for inputting key matrix timing signals.		
4	a PLAY	o	This terminal outputs an "H" signal in PLAY or AMPS mode, but an "L" signal in REC mode.	○	
5	b REC	o	This terminal outputs an "L" signal in REC or DUBBING mode of b-side mechanism.		○
6	b BIAS	o	This terminal outputs an "L" signal in REC or DUBBING mode of b-side mechanism.		○
7	b PLAY	o	This terminal outputs an "H" signal in PLAY or AMPS mode, but an "L" signal in REC mode.	○	
8	DUBBING	o	This terminal outputs an "H" signal in DUBBING mode. And terminal for outputting a signal for DUBBING indicator LED.	○	
10	REC MUTE	o	Terminal for outputting REC MUTE signal. This terminal outputs an "H" signal until set to PAUSE mode, when REC MUTE key is depressed in REC mode.	REC Mute ON	REC Mute OFF
12	a ▷	o	Terminal for outputting a signal for driving ▷ indicator LED of a-side mechanism.		○
15	b ▷	o	Terminal for outputting a signal for driving ▷ indicator LED of b-side mechanism.		○
17	b REC	o	Terminal for outputting a signal for driving REC indicator LED of b-side mechanism.		○
23	a REEL PULSE	i	Terminal for inputting a pulse signal detected by reel motor driver circuit of a-side mechanism to perform auto-stop operation.		
25	LINE MUTE	o	Terminal for outputting LINE MUTE signal. If at "H" level, LINE OUT is muted.	Line Mute ON	Line Mute OFF
26	b REEL PULSE	i	Terminal for inputting a pulse signal detected by reel motor driver circuit of b-side mechanism to perform auto-stop operation.		
42	CAP FAST	o	Terminal for switching capstan motor speed from NORMAL speed dubbing to HIGH speed dubbing or vice versa in DUBBING mode. NORMAL speed dubbing at "L", HIGH speed at dubbing "H". Further, in HIGH speed dubbing, f-characteristics of	HIGH Speed Dubbing	NORMAL Speed Dubbing
43	b REEL FAST	o	Terminal for switching b-side mechanism reel motor speed from NORMAL play to FF/REW or vice versa. If at "L" level, FF/REW speed is obtained.	Normal Play	F.F & REW
44	a REEL FAST	o	Terminal for switching a-side mechanism reel motor speed from NORMAL play to FF/REW or vice versa. If at "L" level, FF/REW speed is obtained.	Normal Play	FF & REW
45	b REEL M+	o	If at "L" level, b-side mechanism reel motor rotates CW.		○
46	b REEL M−	o	If at "L" level, b-side mechanism reel motor rotates CCW.		○
47	a REEL M+	o	If at "L" level, a-side mechanism reel motor rotates CW.		○
48	a REEL M−	o	If at "L" level, a-side mechanism reel motor rotates CCW.		○
49	AMPS	i	Terminal for inputting music blank signals in AMPS operation.	Music play	Music blank
50	b LEADER	i	When photosensor detects a tape leader during b-side mechanism operation, tape running direction is switched.		○
51	a LEADER	i	When photosensor detects a tape leader during a-side mechanism operation, tape running direction is switched.		○
41 53~56	P17 P03~P00	i/o i	Terminals for remote-control computer selector, to which data from a remote-control system controller is inputted.		
60	SOL START	o	Terminal for generating a driving current to energize PLAY plunger. The plunger is initially energized by a pulse (⊔⊓⊔).		
63	b PLAY SOL.	o	Terminal for outputting a current to hold b-side mechanism PLAY plunger. If at "H", PLAY plunger is held.	○	
64	a PLAY SOL.	o	Terminal for outputting a current to hold b-side mechanism PLAY plunger. If at "H", PLAY plunger is held.	○	
29 30	Xin Xout	— —	Terminals to connect a OSC.		
1	V_{DD}	—	Power supply terminal.		
57	SELECT CD	i/o	When CD synchro Rec SW., (OS13) is switched "ON", set the selector of Amp. AT CD position, output ACTIVE "H".	○	
58	CD synchro REC	i/o	When CD synchro Rec SW., (OS13) is switched "ON", set the selector CD Rector player play output Active "H".	○	

5. ADJUSTMENTS

5-1. Tape Speed Adjustment

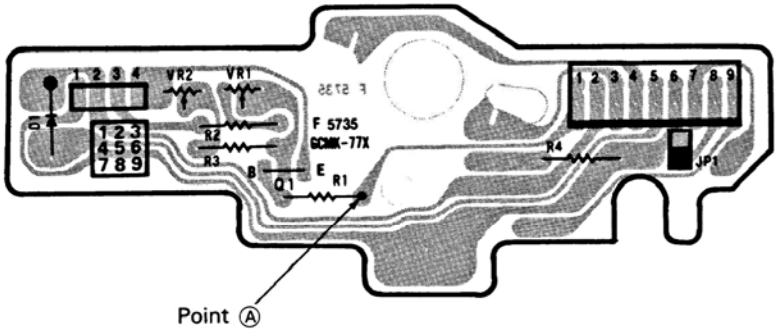
Note: 1. Use Sansui Test Tape, SCT-3SK.
(3 kHz signals are recorded on the tape).
2. Connections are shown in Fig. 5-1.

Fig. 5-1



STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	Normal speed Adj.	LINE OUT. Frequency counter	Playback the TEST TAPE SCT-S3K. B Side Mecha.	Turn the tVR2 on the F-5735 board (See Fig. 5-2)	3000Hz$^{+30Hz}_{-0Hz}$	
2.	High Speed Adj.	Same as above.	1. Short between Point Ⓐ (t R1, F-5735 and GND (See Fig. 5-2) 2. Play back the Test Tape SCT-3SK. B side Mecha.	Turn the tvR1 on the F-5735 board (See Fig. 5-2)	6000Hz$^{+60Hz}_{-0Hz}$	

• **Fig. 5-2 F-5735 Speed Control Board**



5-2. 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-L400N.
3. Set the Dolby NR switch to OFF.
4. Connections are shown in Fig. 5-3.

Fig. 5-3

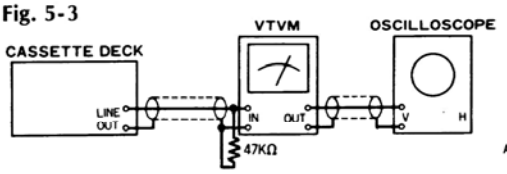
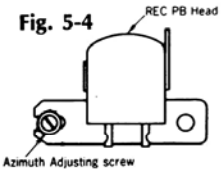


Fig. 5-4



1) a-Side Mecha. Adjustment

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	P.B. Head Adj.	LINE OUT VTVM and Scope	Playback the TEST TAPE SCT-F10K	Adjust the azimuth adjusting screw in Fig. 5-4.	MAX. Output both channels.	After this adjustment, lock the screw with paint.
2.	Playback Level Adj.	Same as above	Playback the TEST TAPE SCT-L400N	Adjust each vVR1 (L-CH and R-CH, F-5761)	500mV ± 1dB	See Top View on Page 16.

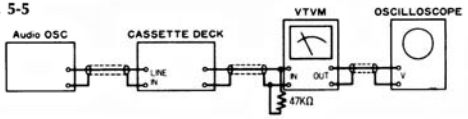
2) b-Side Mecha. Adjustment

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. 5-4.	MAX. Output both channels.	After this adjustment, lock the screw with paint.
2.	Playback Level Adj.	Same as above	Playback the TEST TAPE SCT-L400N	Adjust each vVR2 (L-CH and R-CH, F-5761)	500mV ± 1dB	See Top View on Page 16.

5-3. REC Level & Frequency Response Adjustment <b Side Mecha. only>

Note: 1. Connections are shown in Fig. 5-5.
2. Set the Dolby NR switch to OFF.
3. Short between TP terminal pins on F-5754 (See Top View on page 15).

Fig. 5-5



STEP	SUBJECT	INPUT SIGNAL	MEASURE OUTPUT	SETTING	ADJUSTMENT	REMARKS
1.	REC Level Adj.	Feed 1kHz from Audio S.G. into LINE IN.	LINE OUT, VTVM and Scope	Load the TEST TAPE SCT-SA. 1. Push the PAUSE and REC knob. 2. Adjust the output level of Audio SG. for obtaining 200mV on VTVM. 3. Push the PAUSE knob, then record the 1kHz signal. 4. Playback the 1kHz signal. 5. Confirm that the output levels on both channels are 200mV ± 2dB on VTVM.	1. If not turn vVR51 (REC, L-CH, F-5763) and vVR51 (REC, R-CH, F-5763) until output level 200mV ± 2dB on both channels are obtained.	vVR51 (REC, L-CH) and vVR51 (REC, R-CH) are shown in Top View on Page 15.
2.	Frequency Response Adj.	Feed 1kHz 10mV and 10kHz 10mV, from Audio S.G. into LINE IN.	Same as above	Load the TEST TAPE SCT-SA. 1. Record the 1kHz and 10kHz signals. 2. Playback the 1kHz and 10kHz signals, then confirm that both output levels equal.	1. If not, adjust vVR101 (F-5754) for L-CH and vVR101 (F-5754) for R-CH slightly unitil the ouput levels will be equal.	
3.	METAL REC Level Adj.	Feed 1kHz, from Audio S.G. into LINE IN.	LINE OUT, VTVM and Scope	Load the TEST TAPE SCT-MA. 1. Push the PAUSE, and REC knob. 2. Adjust the output level of Audio SG. for obtaining 200mV on VTVM. 3. Push the PAUSE knob, the record the 1kHz signal. 4. Playback the 1kHz signal. 5. Confirm that the output levels on both channels are 200mV ± 2dB on VTVM.	1. If not turn vVR52 (METAL, L-CH, F-5763) and vVR52 (METAL, R-CH, F-5763) until output level 200mV ± 2dB on both channels are obtained.	vVR52 (METAL, L-CH) and vVR52 (METAL, R-CH) are shown in Top View on page 15.

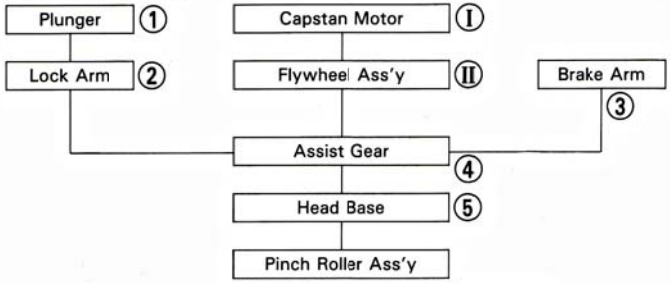
◆ List of Sansui Test Tape

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.

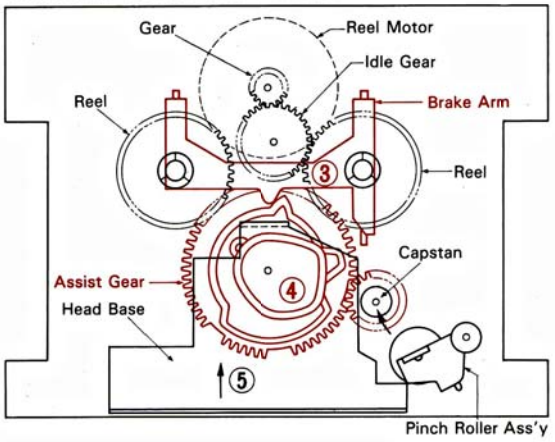
6. OPERATIONS OF PINCH ROLLER & HEAD OF MECHANISM

A. Torque Transportation Flowchart

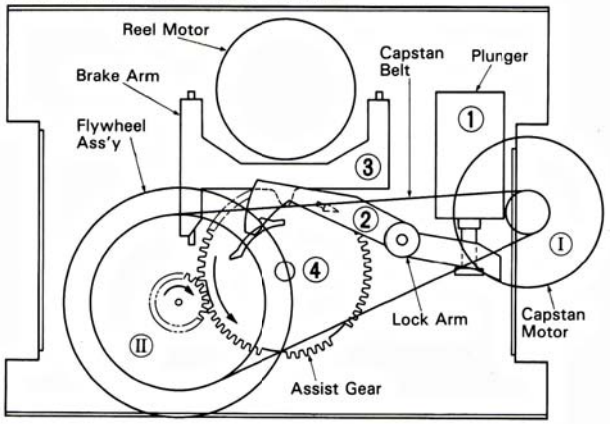


• The pinch roller is brought into pressure contact with the capstan shaft.

B. Front View of Mechanism Chassis

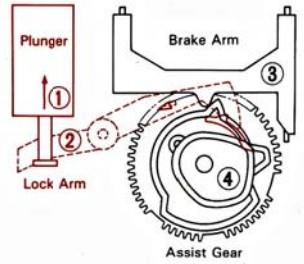


C. Rear View of Mechanism Chassis

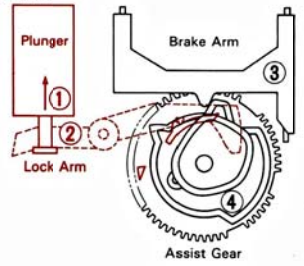


D. Cam Positions in the Modes of PLAY. FF. REW & STOP

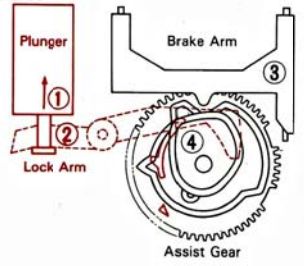
• STOP FF: REW



• AMPS

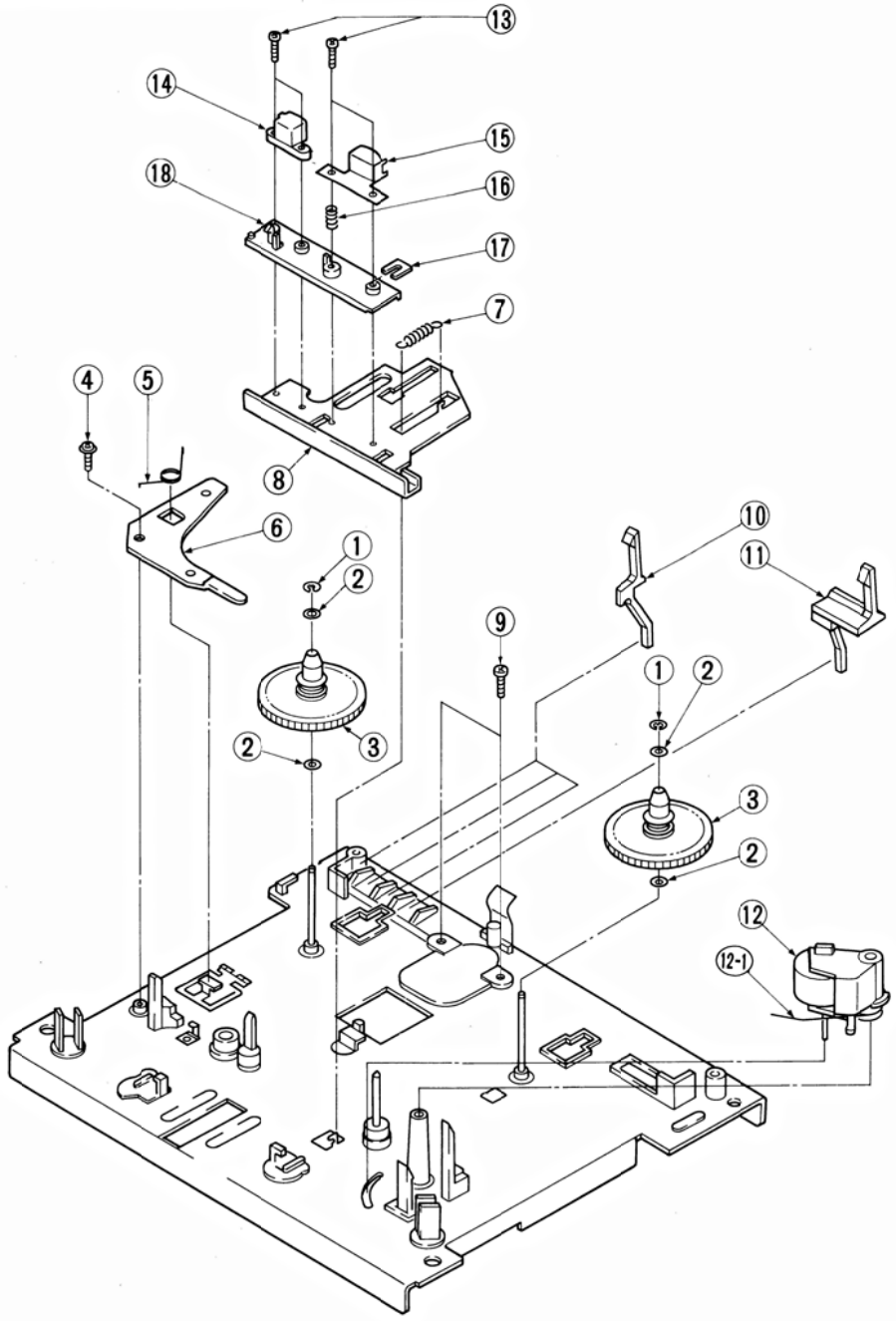


• PLAY

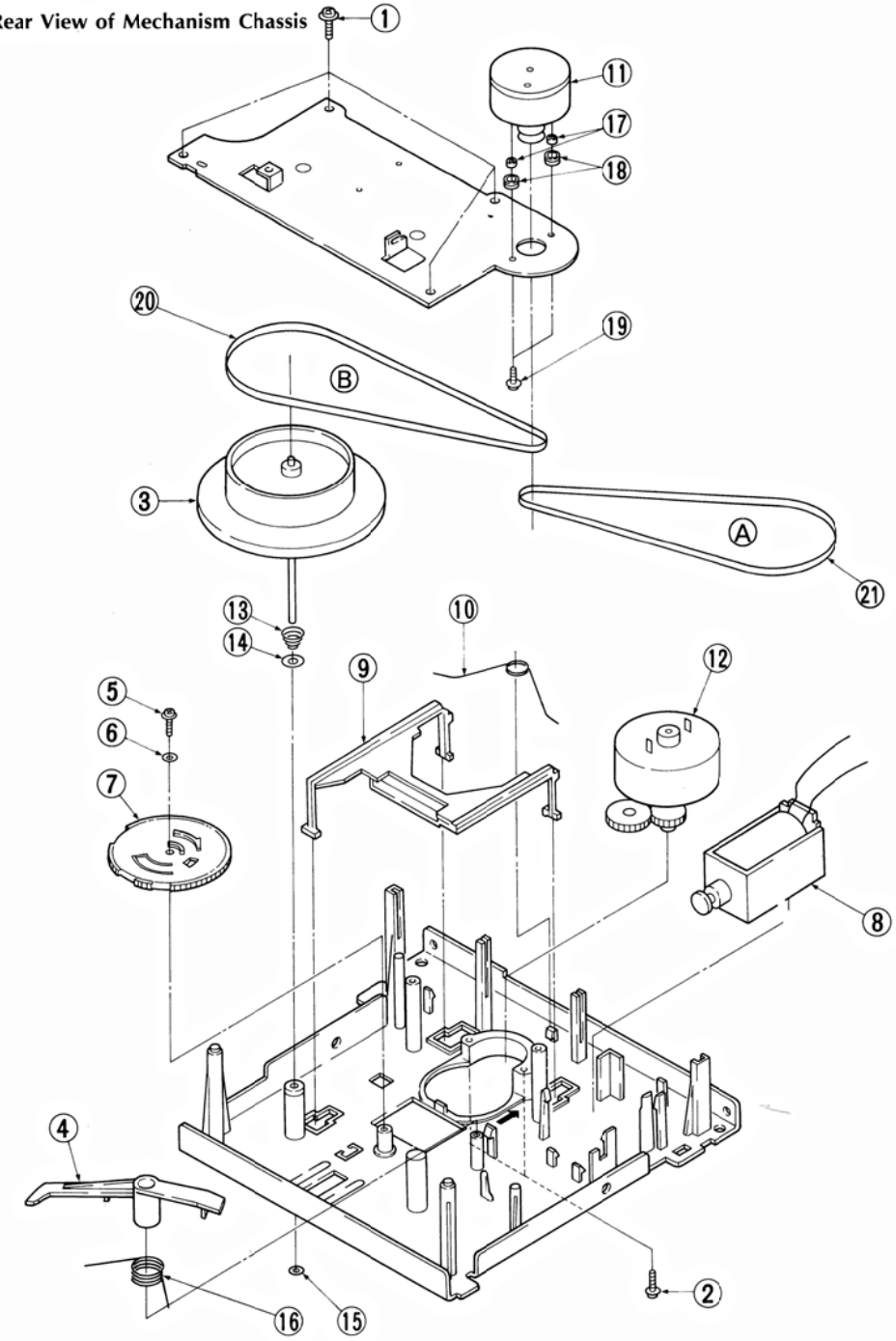


7. EXPLODED VIEW OF MECHANISM Ass'y & PARTS LIST

7-1. Front View of Mechanism Chassis



7-2. Rear View of Mechanism Chassis



• Parts List <Front View of Mechanism Chassis>

Parts No.	Stock No.	Description
1	27083100	Llit Washer D=1.6
2	27452200	Washer
3	27377700	Reel Gear Ass'y
4	48843500	M2x10 Screw,
5	27412400	Spring, eject
6	———	Eject Stopper
7	27378500	Spring, head base
8	———	Head Base
9	00421600	M2.6x12 Binding Head Screw
10	27368800	Switch Arm A
11	27368900	Switch Arm B (B-Side)
12	18157701	Pinch Roller Ass'y
12-1	27378200	Spring Pinch Roller
13	00420800	M2x10 Binding Head Srew
14	07997400	Erase Head (B-Side)
	46867800	Dummy Head (A-Side)
15	48589000	REC/PB Head
16	47406100	Spring, Azumuth
17	27470600	Space
18	27372100	Head Base

• Parts List <Rear View of Mechanism Chassis>

Parts No.	Stock No.	Description
1	18158700	M3x8 Screw,
2	00421600	M2.6x12 Screw,
3	27377300	Flywheel Ass'y
4	27370600	Lock Arm
5	48914100	M2x12 Truss Head Screw
6	27452200	Teflon Washer M2
7	27370700	Assist Gear
8	48844900	Plunger Solenoide
9	27370500	Brake Arm
10	27379300	Spring, Brake
11	48831200	Capstan Motor Ass'y
12	18157301	Reel Motor Ass'y
13	47530000	Spring, Flywheeel
14	47404600	Washer, D=2.5
15	47404700	Nylon Washer, D=2.5
16	27378800	Spring, Lock Arm
17	27459800	Motor Collar
18	27459800	Motor Pushing
19	48913100	M2.6x4 Screw,
20	27413400	Capstan Belt (B-Side)
21	27401600	Capstan Belt (A-Side)
	84504900	Counter Belt

8. MAIN PARTS REPLACEMENT

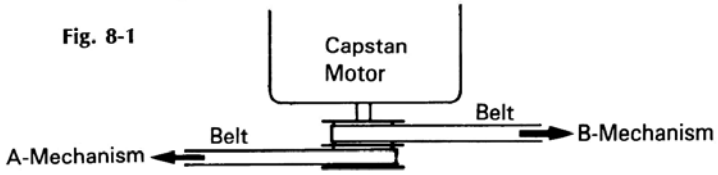
A. How to remove mechanical Ass'y A-Mechanism and B-Mechanism (See Page 16)

1. Remove the bonnet.
2. Remove the bottom plate.
3. Remove the side panel both right & left.
4. Loosen the two Screw Ⓒ to remove PWB stay.
5. Loosen the two Screw Ⓐ to remove Gear Holder ㉖ & Gear ㉗.
6. Remove the Belt from the Capstan Motor.
7. Loosen the Belt from the Tape Counter.
8. Loosen the Screw Ⓑ.

B. How to set the Capstan Belt (See Fig. 8-1)

Put the capstan belt of A and B mechanism to the capstan motor as shown Fig. 8-1.

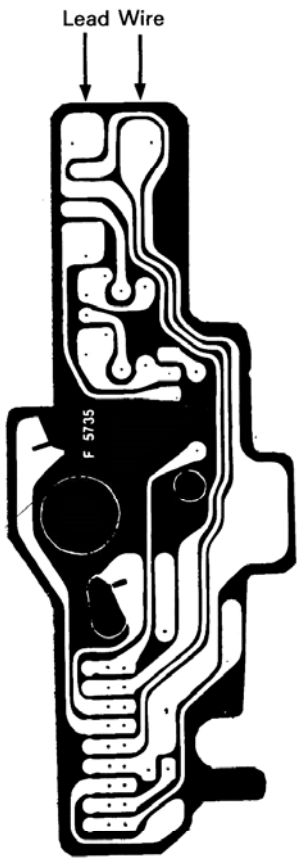
Fig. 8-1



C. How to remove Reel Motor

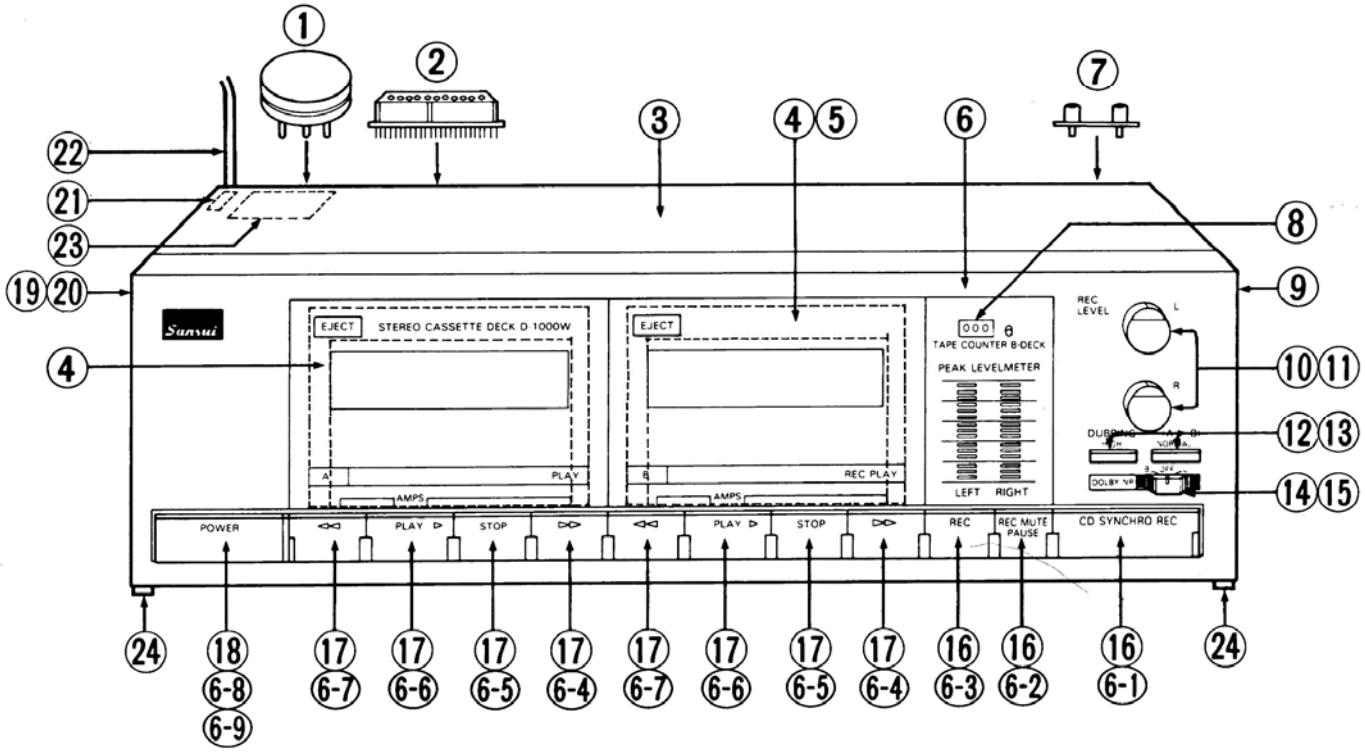
1. Loosen the Screw ① & ② (See Page 13 Rear View of Mechanism Chassis).
2. Remove the lead wire of Plunger Solenoid from F-5735 Board (See Fig. 8-2).
3. Remove the Terminal of Reel Motor ⑫ from F-5735 Board (See Page 13 Rear View of Mechanism Chassis).

Fig. 8-2

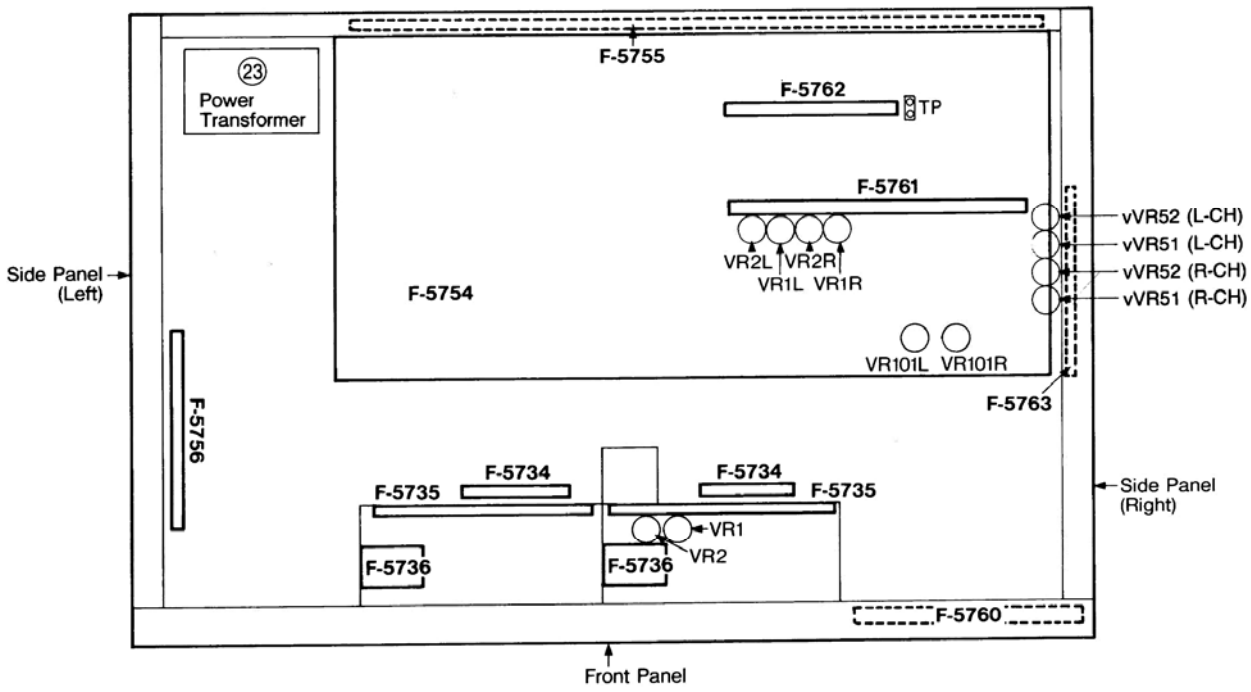


9. OTHER PARTS

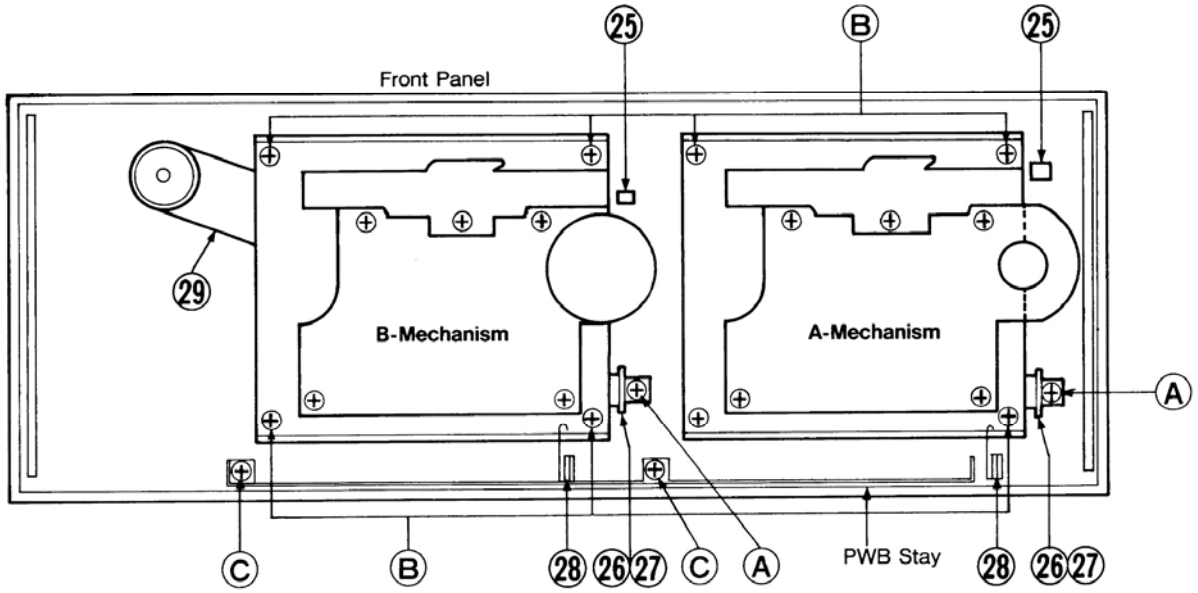
• Front View



• Top View



• Inside View of Front Panel



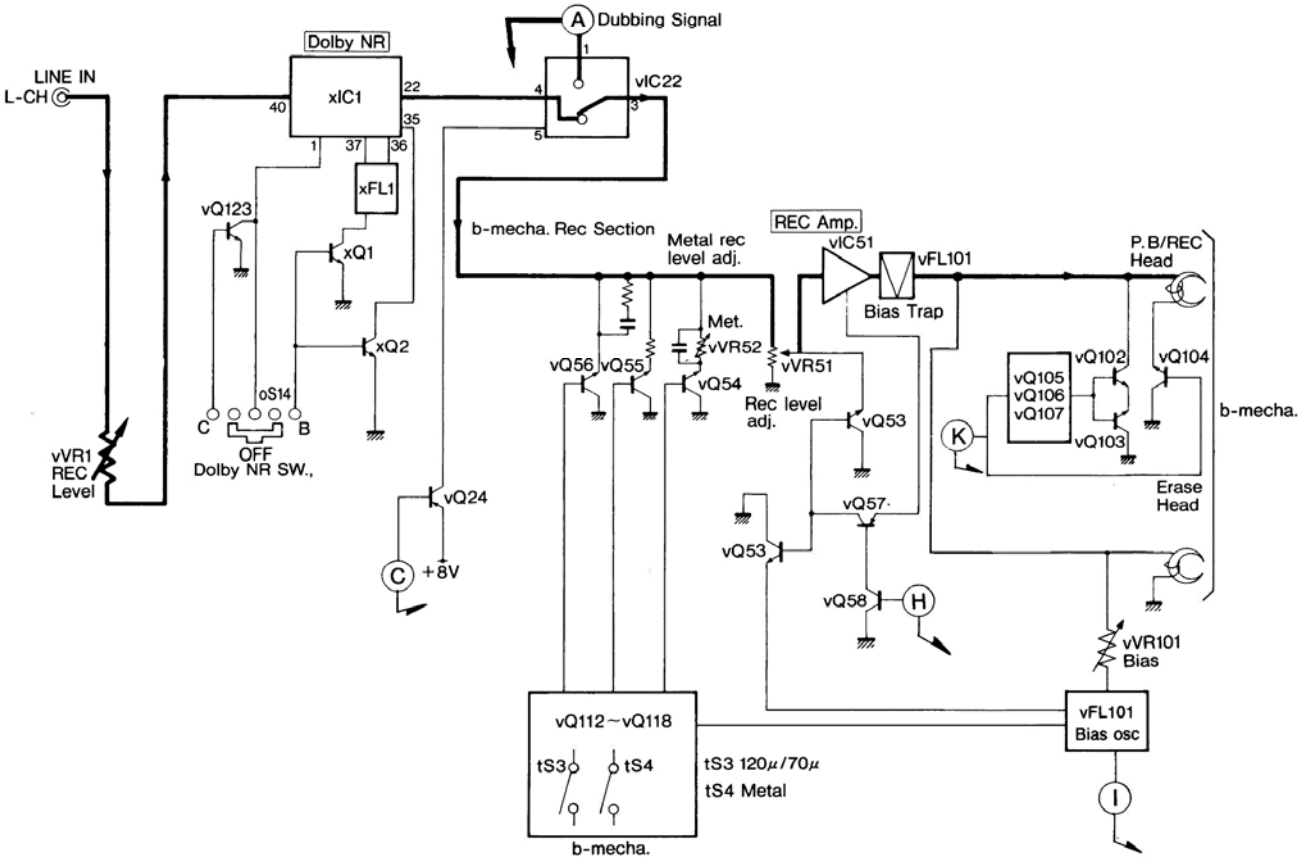
Parts List

Parts No.	Stock No.	Description
1	48484200	Plug, VOLTAGE SELECTOR (XX-V)
	07204700	Slide SW. VOLTAGE SELECTOR (EU.BS/UK.SEV)
2	48313900	ST SOCKET (10P.PIN) SYSTEM CONTROL
3	84504200	Bonnete
4	27411400	Cassette Holder Ass'y,
5	27410400	b-Side Cassette Lid Ass'y
6	02041501	Front Panel Ass'y (XX-V. CSA.EU.BS/UK.SEV)
	02041502	Front Panel Ass'y (UL)
6-1	84515800	Knob. CD SYNCHRO REC
6-2	84516600	Knob. REC MUTE PAUSE
6-3	84556700	Knob. REC MUTE PAUSE
6-4	84517000	Knob. ►►
6-5	84517100	Knob. STOP
6-6	84556600	Knob. Ass'y PLAY
6-7	84516900	Knob. ►
6-8	84517800	Knob. POWER
6-9	84505100	Knob Spring. POWER
7	83004300	4P Terminal LINE IN.OUT
	or 48845900	4P Terminal LINE IN.OUT
8	48835300	Tape Counter
9	84512100	Right Side Panel (XX-V. CSA.EU.BS/UK.SEV)
	84519900	Right Side Panel (UL)
10	84531300	Knob., REC LEVEL
11	83008600	50 kΩ (B) V.R., REC LEVEL
	or 48846200	50 kΩ (B) V.R., REC LEVEL
12	27466800	Push Knob., DUBBING (A ► B)
13	83000300	Push SW., DUBBING (A ► B)
	or 46708100	Push SW., DUBBING (A ► B)
14	84504600	Slide Knob., DOLBY NR

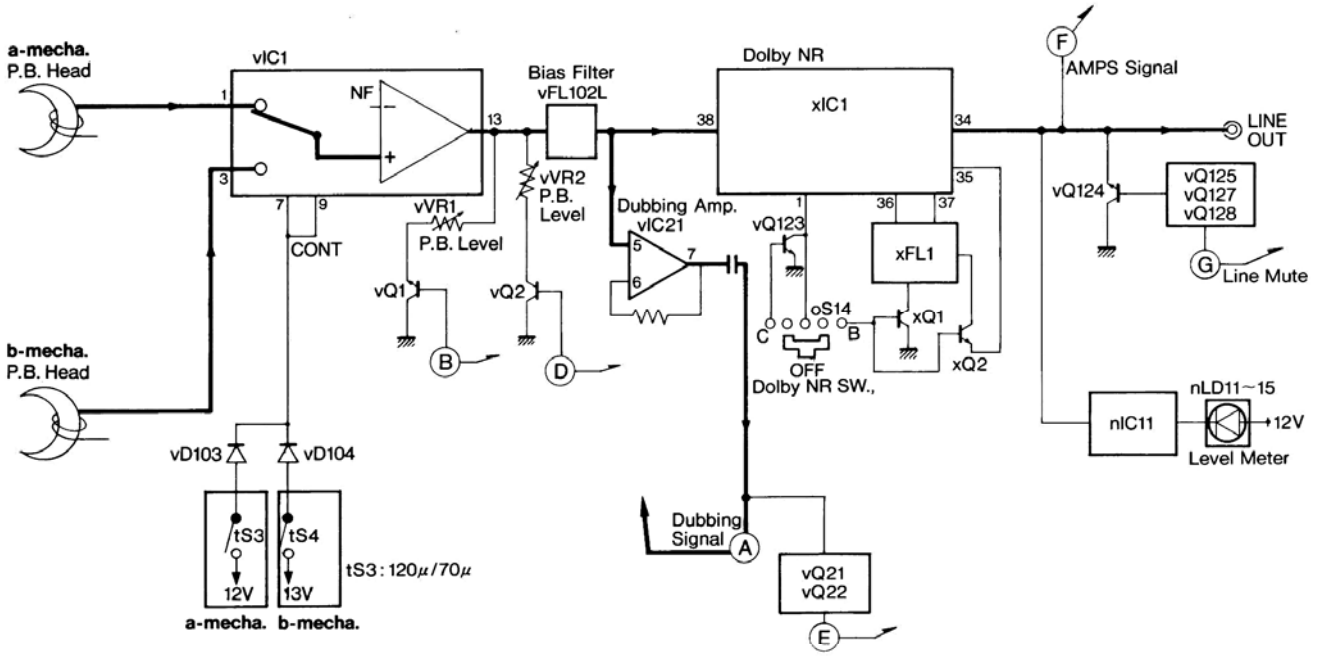
Parts No.	Stock No.	Description
15	48158200	Slide SW., DOLBY NR
16	83004000	Push SW., REC.REC MUTE PAUSE.CD SYNCHRO REC.
	or 48240500	Push SW., REC.REC MUTE PAUSE.CD SYNCHRO REC.
17	83000300	Push SW., ►►. STOP.PLAY. ◄
	or 46708100	Push SW., ►►. STOP.PLAY. ◄◄
18	83004200	Push SW., POWER (XX-V. UL.EU.BS/UK.SEV)
	or 46364300	Push SW., POWER (XX-V. UL.EU.BS/UK.SEV)
	83004200	Push SW., POWER (CSA)
	or 48065000	Push SW., POWER (CSA)
19	27410300	a-Side Cassette Lid Ass'y
20	84512000	Left Side panel (XX-V. CSA.EU.BS/UK.SEV)
	84519800	Left Side Panel (UL)
21	84514000	AC Cord Holder
22	38005400	Power Sypply Cord (XX-V)
	or 48837700	Power Sypply Cord (XX-V)
	38004700	Power Sypply Cord (UL)
	38005400	Power Sypply Cord (CSA)
	38004500	Power Sypply Cord (EU.SEV)
	38004300	Power Sypply Cord (BS/UK)
23	15029509	Power Transformer (XX-V)
	15029502	Power Transformer (UL.CSA)
	15029505	Power Transformer (EU.BS/UK.SEV)
24	07952800	Leg
25	48865100	Door Latch
26	83011400	Gear Holder
27	84532100	Gear
28	84505000	Damper Spring
29	84504900	Counter Belt

10. BLOCK DIAGRAM

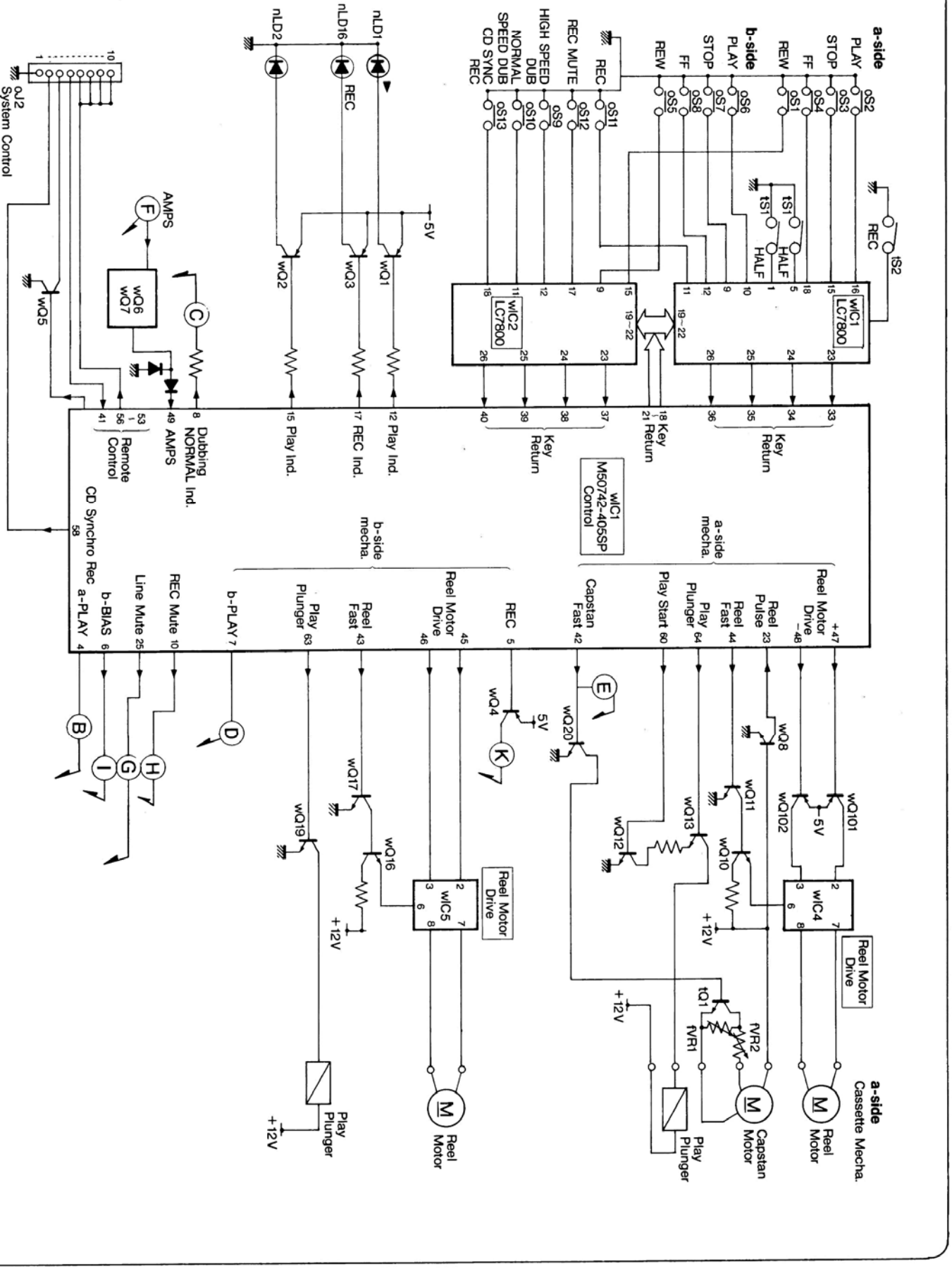
10-1. Rec Operation



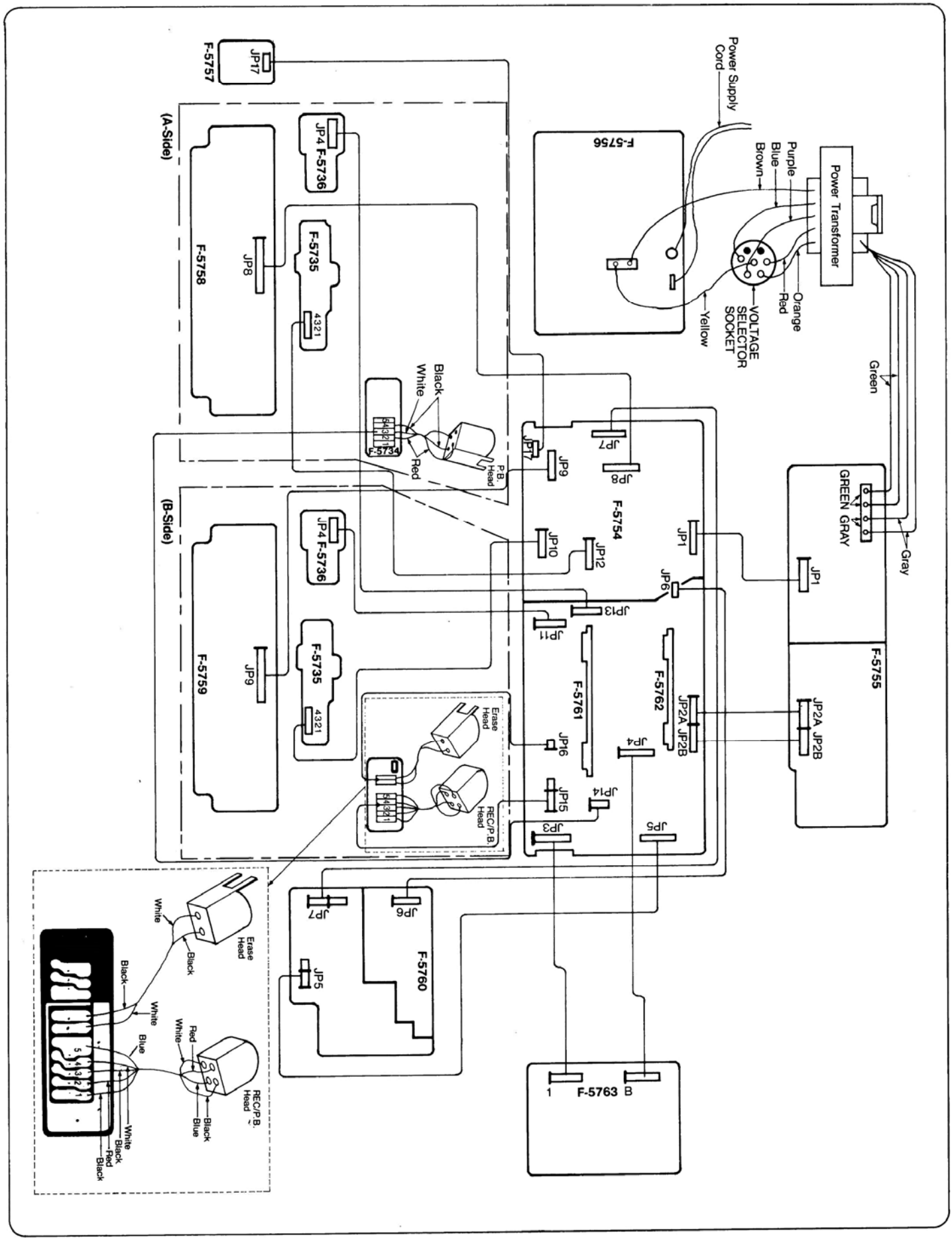
10-2. Playback/Dubbing Operation



10-3. Logic Control Section

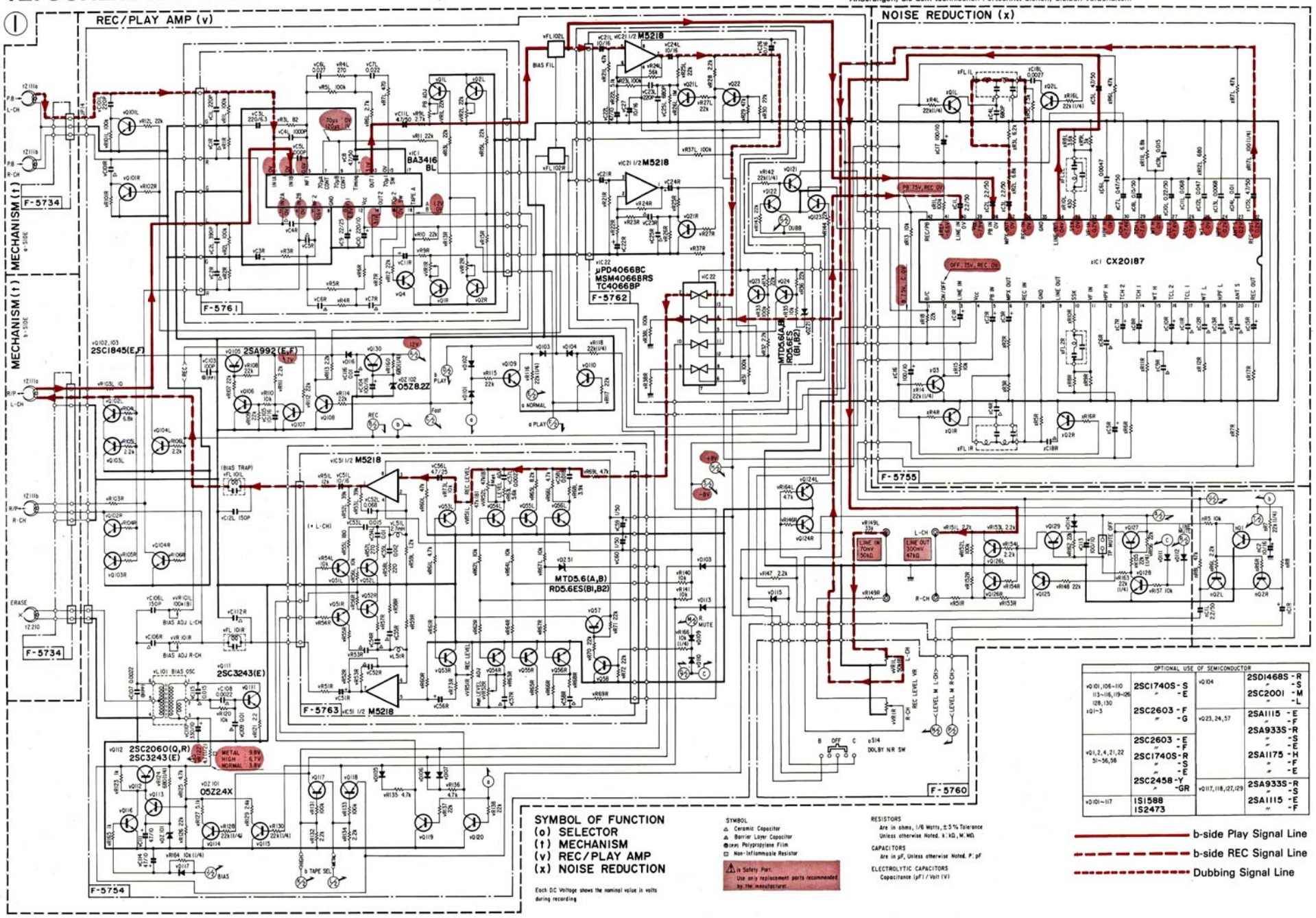


11. WIRING DIAGRAM



12. SCHEMATIC DIAGRAM 12-1 Audio Amp. Section

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



OPTIONAL USE OF SEMICONDUCTOR			
vQ101,106~110 113~116,119~126 128,130	2SC1740S-S	vQ104	2SD1468S-R
	" -E		" -S
vQ1~3	2SC2603-F		2SC2001 -M
	" -G		" -L
vQ1,2,4,21,22 51~56,58	2SC2603-E	vQ23,24,57	2SA1115 -E
	" -F		" -F
	2SC1740S-R		2SA933S-R
	" -S		" -S
	" -E		" -E
	2SC2458-Y		2SA1175 -H
	" -GR		" -F
v0101~117	1S1588	v0117,118,127,129	2SA933S-R
	1S2473		" -S
			2SA1115 -E
			" -F

2SA934 2SC1826
2SA992 2SD313
2SA1283
2SC1845
2SC2001
2SC2060
2SC3243

2SA1115 2SC2458
2SA1175 DTA124XS
2SA9335
2SC1740S
2SC2603
2SD1468S

μPC7812
AN7812
L78N05

μPD4066BC
BA3416BL
CX20187
LC7800
M5218P
M50742
MSM4066BRS
TC4066BP

SEL3110S 1S1588
SEL3813A 1S2473
SEL3910A 10E-2
SEL3913K

05Z2.4
05Z8.2
05Z10
05Z12
MTZ5.6A
MTZ5.6B
RD5.6ES
RD12E

12-2 Logic Control Section

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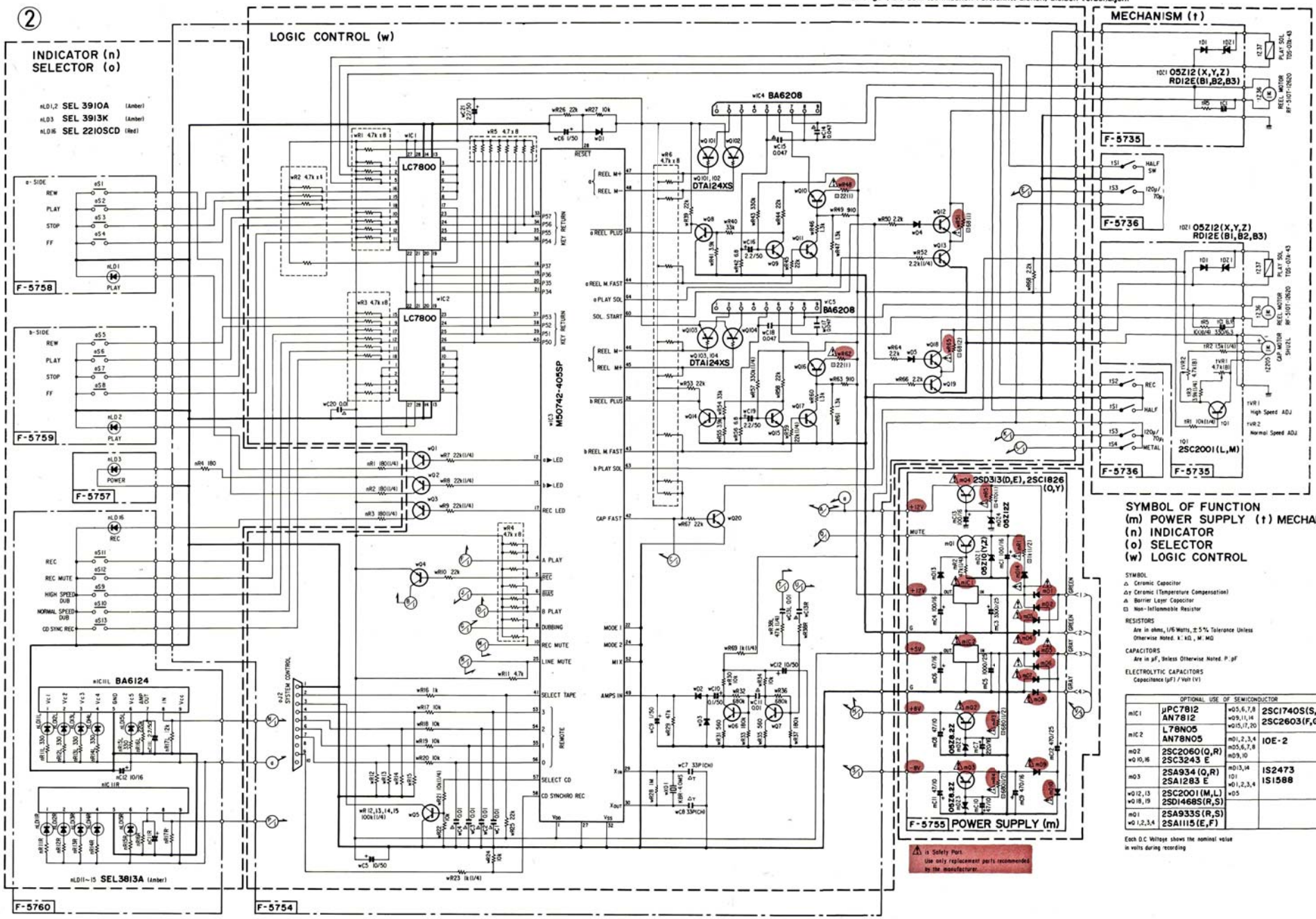


OPTIONAL USE OF SEMICONDUCTOR			
nIC1	µPC7812 AN7812	nQ5,6,7,8 nQ9,11,14 nQ15,17,20	2SC1740S(S,E) 2SC2603(F,G)
nIC2	L78N05 AN78N05		
nQ2 nQ10,16	2SC2060(Q,R) 2SC3243 E	nD1,2,3,4 nD5,6,7,8 nD9,10	1OE-2
nQ3	2SA934(Q,R) 2SA1283 E	nD13,14 nD1 nD1,2,3,4	1S2473 1S1588
nQ12,13 nQ18,19	2SC2001(M,L) 2SD1468S(R,S)	nD5	
nQ1 nQ1,2,3,4	2SA933S(R,S) 2SA1115(E,F)		

Each D.C Voltage shows the nominal value in volts during recording

2SA934 2SC1826
2SA992 2SD313
2SA1283
2SC1845
2SC2001
2SC2060
2SC3243

2SA1115 2SC2458
2SA1175 DTA124XS
2SA9335
2SC1740S
2SC2603
2SD14685

µPC7812
AN7812
L78N05

µPD4066BC
BA3416BL
CX20187
LC7800
M5218P
M50742
MSM4066BRS
TC4066BP

Dot or Slit or Line

SEL3110S 1S1588
SEL3813A 1S2473
SEL3910A 10E-2
SEL3913K

05Z2.4
05Z8.2
05Z10
05Z12
MTZ5.6A
MTZ5.6B
RD5.6ES
RD12E

SYMBOL
△ Ceramic Capacitor
△Y Ceramic (Temperature Compensation)
△ Barrier Layer Capacitor
□ Non-Inflammable Resistor

RESISTORS
Are in ohms, 1/6 Watts, ±5% Tolerance Unless Otherwise Noted. k: kΩ, M: MΩ

CAPACITORS
Are in pF, Unless Otherwise Noted. P: pF

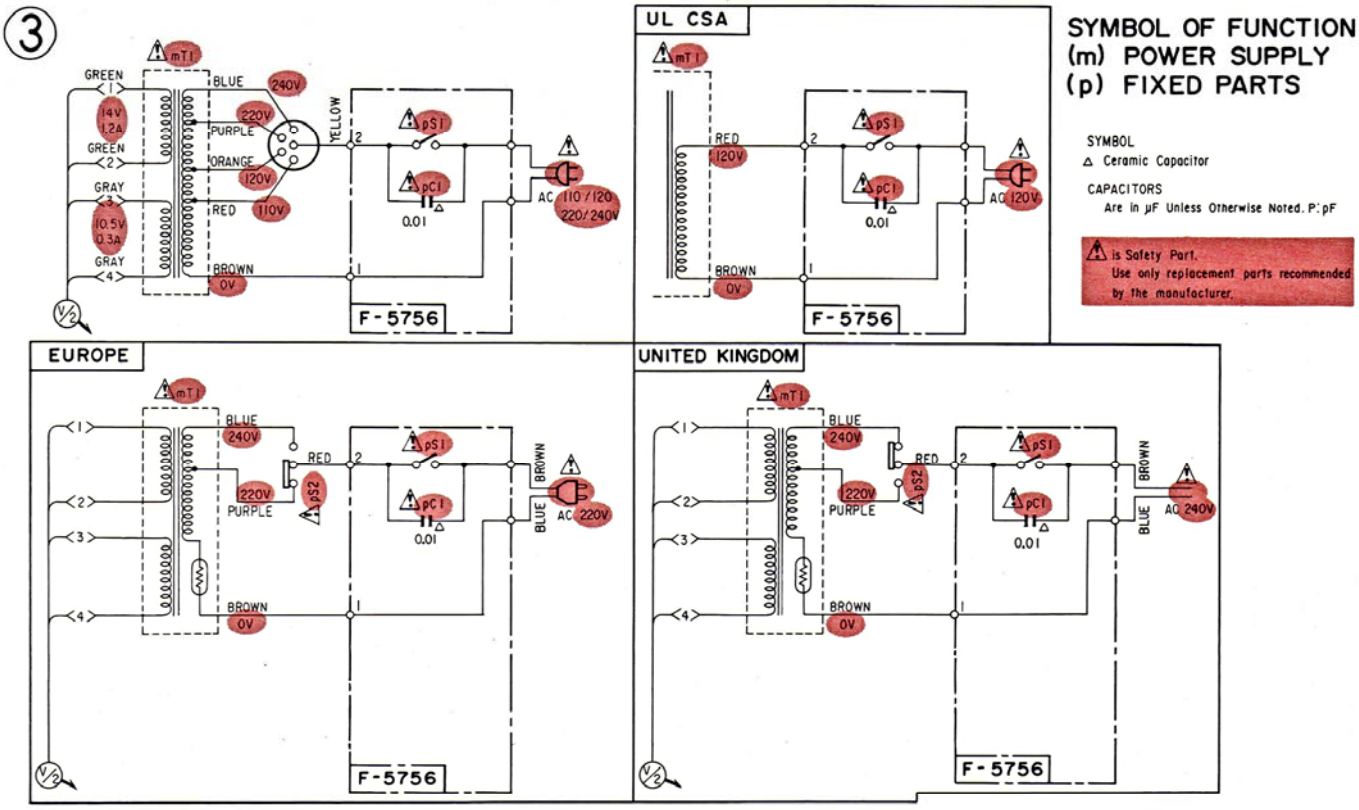
ELECTROLYTIC CAPACITORS
Capacitance (µF) / Volt (V)

⚠ is Safety Part.
Use only replacement parts recommended by the manufacturer.

A	B	C	D

12-3 Power Sypply Section

* Design and specifications subject to change without notice for improvement.
* La présention 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
(p) FIXED PARTS

SYMBOL
△ Ceramic Capacitor

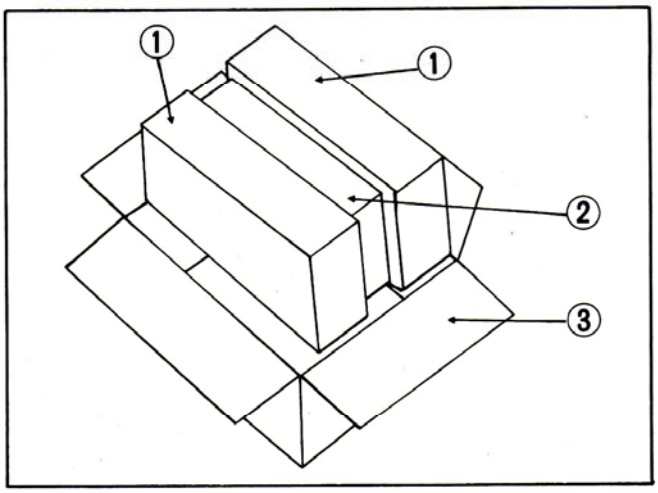
CAPACITORS
Are in μF Unless Otherwise Noted. P: pF

⚠ is Safety Part.
Use only replacement parts recommended by the manufacturer.

1
2
3

13. PACKING LIST

Parts No.	Stock No.	Description
1	27411500	Styrofam Packing
2	27306000	Vinyl Bag
3	27409800	Carton Case



14. ACCESSORY LIST

Stock No.	Description
46118600	PJP Cord
or 38103200	PJP Cord
or 48802200	PJP Cord
49026800	Operating Instruction (*E.F.S)
49026900	Operating Instruction (*G.I.Sw)

Note:
E·F·S: **E**nglish·**F**rench· and **S**panish Version
G·I·Sw: **G**erman·**I**talian· and **Sw**edish Version

Sansui

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PHONE: (03) 324-8891/TELEX: 232-2076 (International Division)
SANSUI ELECTRONICS CORPORATION: 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.
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