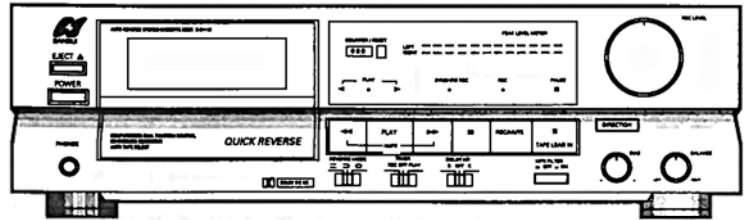




SERVICE MANUAL

D-X111 D-X111R

STEREO CASSETTE DECK



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.

NOTICE

1. The symbols UK, EU, SEV, SS and XX <EXPORT> on the parts list and the schematic diagram mean followings respectively.
 UK..... Manufactured for United Kingdom market.
 EU..... Manufactured for European market.
 (Except United Kingdom and Swiss market.)
 SEV..... Manufactured for Swiss market.
 SS..... Manufactured for Saudi Arabian market.
 XX..... Standard Version.
 <EXPORT>
 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	M.M.C.	: Metalized Mylar Capacitor
A.R.	: Array Resistor	G.C.	: Gimmic Capacitor
C.C.	: Ceramic Capacitor	A.C.	: Array Capacitor
C.T.	: Ceramic Capacitor, Temperature Compensation	V.R.	: Variable Resistor
E.C.	: Electrolytic Capacitor	S.V.R.	: Semi Variable Resistor
E.L.	: Low Leak Electrolytic Capacitor	SW.	: Switch
E.B.	: Bi-Polar Electrolytic Capacitor	Chip R.	: Chip Resistor
		Chip C.	: Chip Capacitor

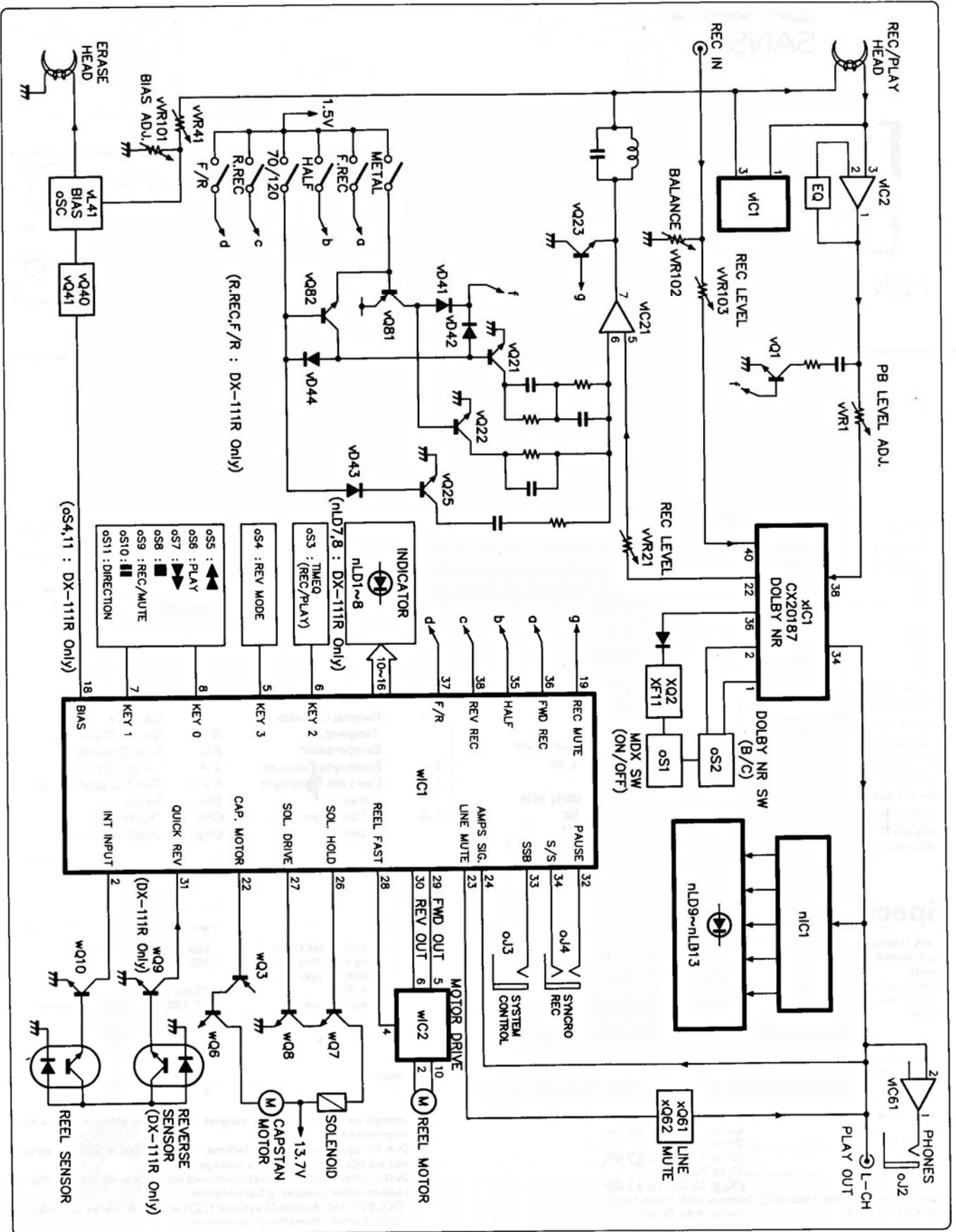
Specifications

Track format.....	4-track/2-channel system
Tape speed.....	4.8 cm/sec
Heads	
Rec/play head.....	Hard permalloy
Erase head.....	Double-gap ferrite
Motor	
.....	Capstan: Electronically controlled DC motor
.....	Reels: DC motor
Wow/flutter.....	0.06 % max (WRMS)
Fast forwarding (rewinding) time.....	Approx. 100 sec. (for C-60 tape)
Frequency response (-20 VU recording/playback)	
Normal tape (LH).....	20 to 18,000 Hz
.....	(30 to 17,000 Hz ± 3 dB)
Chrome tape.....	20 to 19,000 Hz
.....	(30 to 18,000 Hz ± 3 dB)
Metal tape.....	20 to 20,000 Hz
.....	(30 to 19,000 Hz ± 3 dB)
Signal-to-noise ratio (recording/playback with metal tape)	
DOLBY NR OFF.....	Better than 58 dB
DOLBY-B NR ON.....	Better than 65 dB
DOLBY-C NR ON.....	Better than 75 dB

Erasure rat(metal tape).....	More than 70 dB at 1kHz
Recording bias frequency.....	105 kHz
Input sensitivity/Impedance	
LINE IN (REC).....	70 mV / 50 kohms
Power requirements.....	AC 120, 220, 240 V (50/60 Hz)
Power consumption.....	16 watts
Dimensions.....	430 mm (16-15/16") W
.....	125 mm (4-15/16") H
.....	275 mm (10-7/8") D
Weight.....	3.7 kg (8.2 lbs) net
.....	4.7 kg (10.4 lbs) packed

- Design and specifications subject to changes without notice for improvements.
- Due to local laws and regulations, this unit sold in some areas are not equipped with variable voltage selectors.
- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY", the double-D symbol (\square) are trade marks of Dolby Laboratories Licensing Corporation.

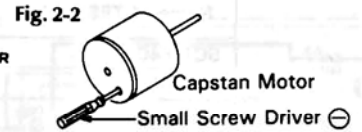
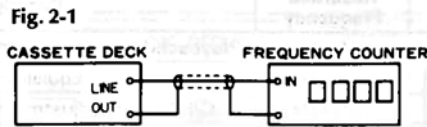
1. BLOCK DIAGRAM



2. ADJUSTMENTS (See Fig. 2-7 Parts Location on Page 4)

2-1. Tape Speed Adjustment

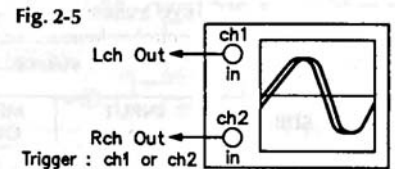
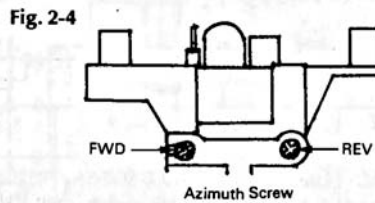
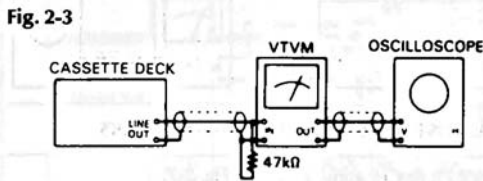
- Note:** 1. Use Sansui Test Tape, SCT-S3K.
(3kHz signals are recorded on the tape).
2. Connections are shown in Fig. 2-1.



STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	Tape Speed Adj.	LINE OUT, Frequency counter	Playback the TEST TAPE SCT-S3K.	Turn semi-variable resistor as Fig. 2-2.	3000Hz ± 10Hz	

2-2. 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. Remove the Lid Ass'y.
5. Connections are shown in Fig. 2-3.



STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	P.B. Head Adj.	LINE OUT, AC Volt Meter and Scope (Dual Trase)	Playback the TEST TAPE SCT-F10K FWD & REV (D-X111R only)	Adjust the azimuth adjusting screw in Fig.2-4.	<ul style="list-style-type: none"> Max. Output both channels. Adjust the left output in phase with right output (See Fig. 2-5) 	Adjust A, B side of TEST TAPE After this adjustment, lock the screw with paint.
2.	Playback Level Adj.	LINE OUT, AC Volt Meter and Scope	Playback the TEST TAPE SCT-L400	Adjust each vVR1 (L-CH and R-CH)(F-6304)	500mV ± 1dB	See Fig. 2-7.

2-3. Bias Adjustment

- Note:** 1. BIAS control volume..... Center click position.
2. BALANCE control volume..... Center click position.
3. REC LEVEL volume..... Max.
4. DOLBY NR switch..... OFF
5. MPX FILTER switch..... OFF

STEP	SUBJECT	MEASURE OUTPUT	SETTING	ADJUSTMENT	ADJUST FOR	REMARKS
1.	Bias Frequency Adj.	Between Point (A) of JP 13 and GND AC Volt Meter and Frequency counter.	1. Load the TEST TAPE SCT-MA 2. Push the REC and PLAY button.	Turn the core of vL41 (F-6304)	105kHz ± 2kHz	See Fig. 2-7.

◆ List of Sansui Test Tape

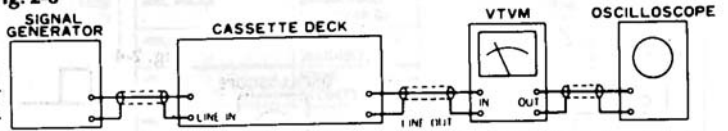
Name of TEST TAPE	Recorded Frequency	Description	Equivalent To
SCT-F40	40 Hz	Playback Frequency Response Check	—
SCT-F1K	1 kHz	High Frequency Equalization Check	—
SCT-F10K	10 kHz	REC/PB Head Adjustment	—
SCT-L400N	400 Hz	Playback Level and Indicator Level Adjustment	—
SCT-S3K	3 kHz	Speed Check and Wow & 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.

2-4. REC Level & Frequency Response Adjustment

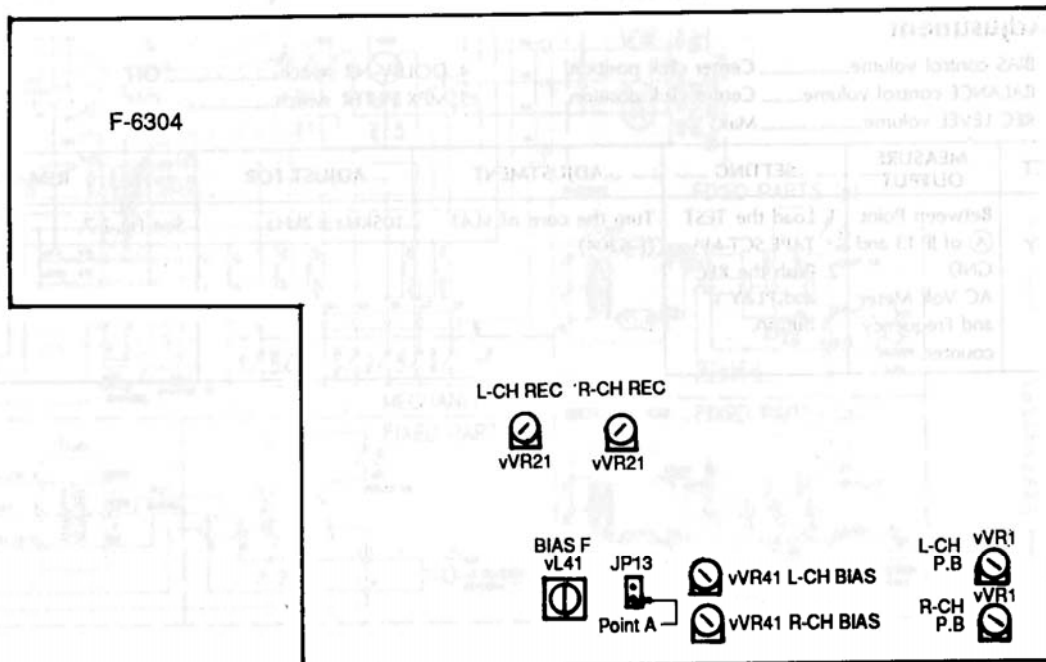
- Note: 1. Connections are shown in Fig. 2-6.
2. Set the Dolby NR switch to be ON (C position).
3. REC Level volume.....Max.
4. BIAS control volume.....Center click position.
5. BALANCE control volume.....Center click position.

Fig. 2-6



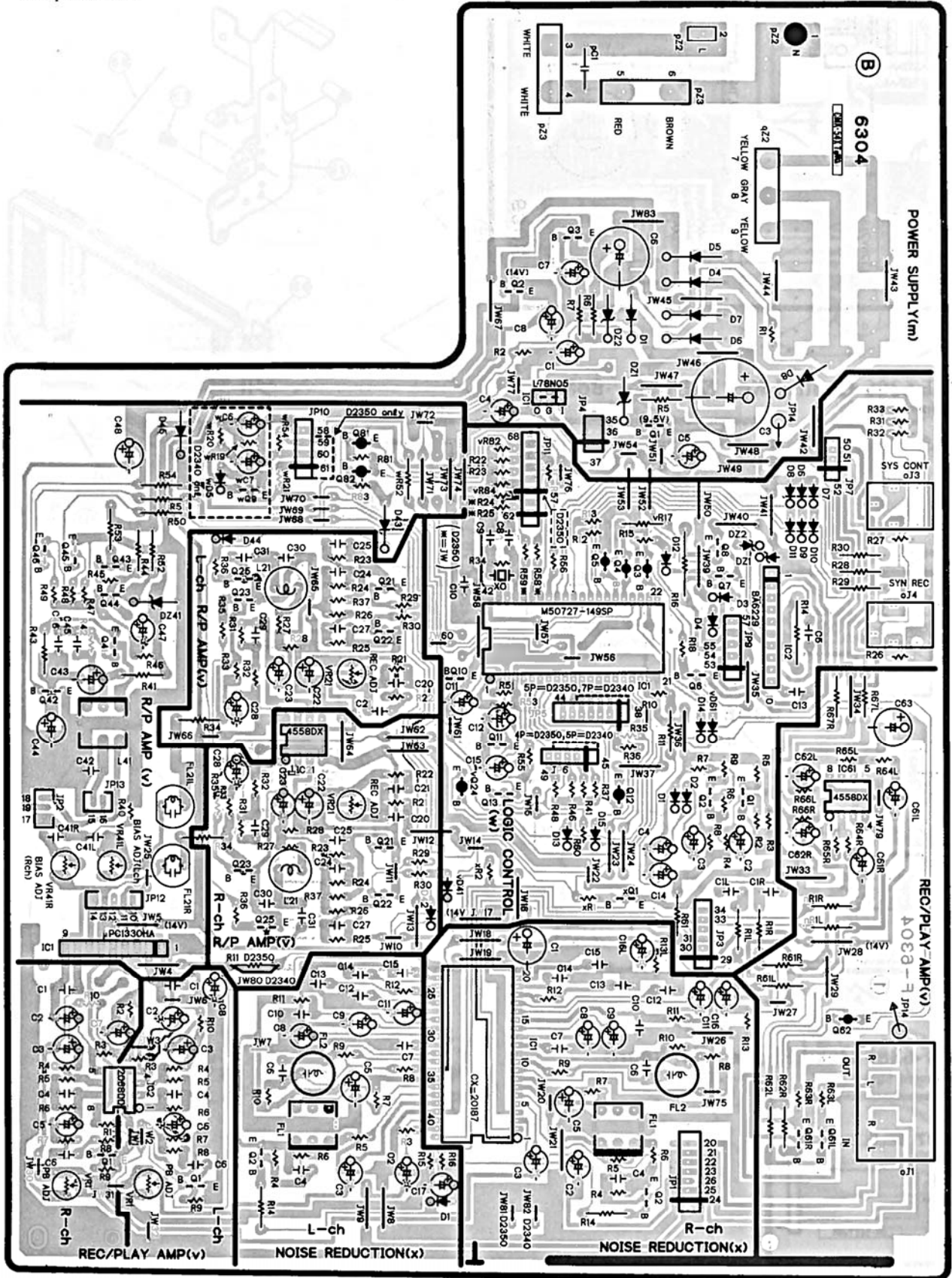
STEP	SUBJECT	INPUT SIGNAL	MEASURE OUTPUT	SETTING	ADJUSTMENT	REMARKS
1.	REC Level Adj.	Feed 1kHz, 50mV from S.G. into LINE IN.	LINE OUT AC Volt Meter and Scope.	Load the TEST TAPE SCT-SA. 1. Record the 1kHz signal. 2. Confirm that output terminal level. 3. Playback the 1kHz signal.	Adjust vVR21 (L-CH and R-CH, F-6304) until playback level and output signal level on recording operation will be equal.	See Fig. 2-7.
2.	Frequency Response Adj.	Feed 1kHz 7mV and 12kHz 7mV from S.G. into LINE IN.	LINE OUT AC Volt Meter and Scope.	Load the TEST TAPE SCT-SA. 1. Record the 1kHz and 12kHz signals from S.G. 2. Playback the 1kHz and 12kHz signals, then confirm 12kHz signal level in less than 1kHz signal level ± 2 dB on AC Volt Meter.	1. If not, adjust vVR41 (L-CH and R-CH, F-6304) slightly until the 12kHz signal level in less than 1kHz signal level ± 2 dB on AC Volt Meter.	See Fig. 2-7.

Fig. 2-7



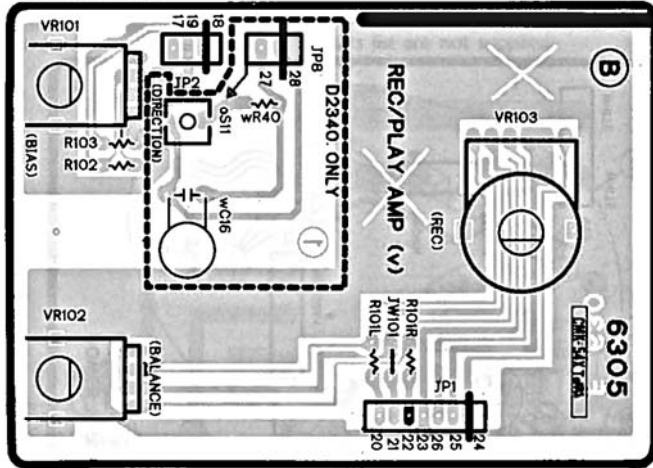
3. PARTS LOCATION ON BOARD

3-1. F-6304 Main Board Component Side

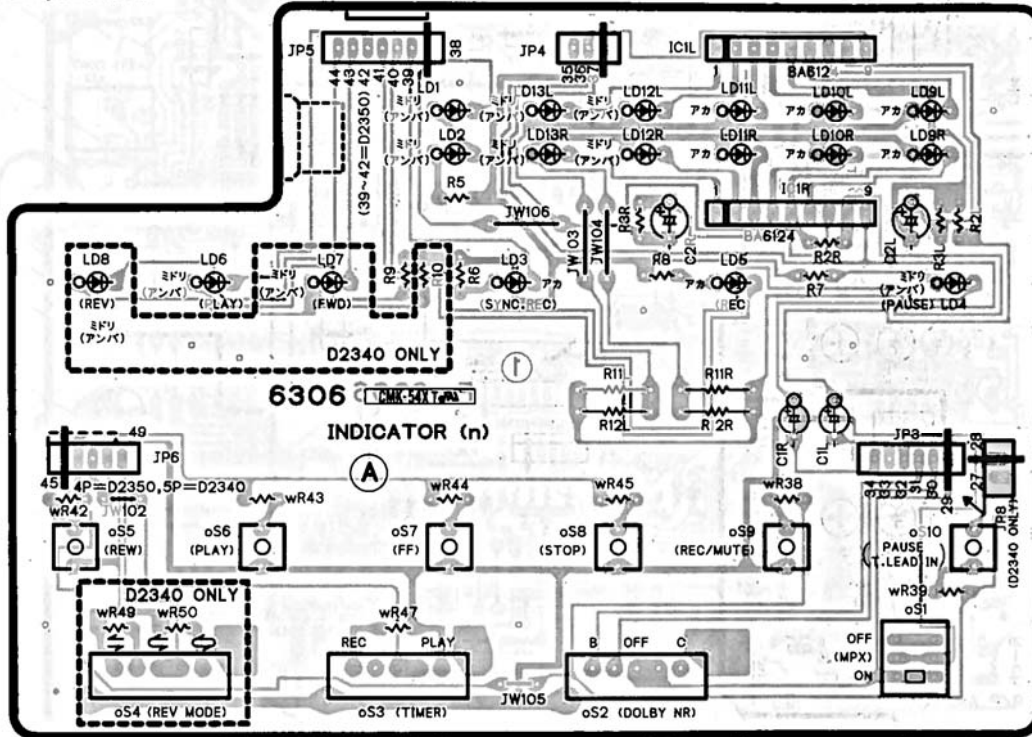


D-X111/D-X111R

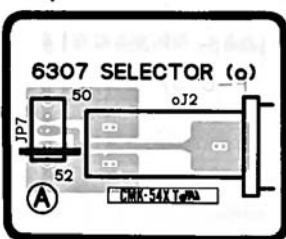
3-2. F-6305 Bias & Balance Volume Board Component Side



3-3. F-6306 Control Key & Display Board Component Side



3-4. F-6307 Head Phone Jack Board Component Side



4. PARTS LIST OF BOARD

4-1. F-6304 Main Board (Stock No. 01214101 = D-X111R/01213501 = D-X111)

Parts List

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
*Transistor			vD45	03117600	1S2473T77
△ mQ1	03083901	2SD313HP	or 46086000		1S1588TP-3
△ mQ2	03083901	2SD313HP	vD61	46464100	1SS133
△ mQ3	46367301	2SC2458	*Zener Diode		
or 48058801		2SC1740S	vDZ41	49302700	05AZ5. 1-Y
*IC			vFL21	48363500	Trap Coil
△ mIC1	46359400	L78N05	vL21	46091010	Inductor 6. 8mH
*Diode			vL41	49473300	Bias OSC coil
mD1	03117600	1S2473T77	vVR1	49367200	22kΩ S. V. R., PB Level
or 46086000		1S1588TP-3	vVR21	49367300	47kΩ S. V. R., REC Level
△ mD4	03117700	10E-2	vVR41	49367400	100kΩ S. V. R., Bias
△ mD5	03117700	10E-2	△ vR41	46402900	56Ω 1/2W N. I. R.
△ mD6	03117700	10E-2	△ vR53	46402500	27Ω 1/2W N. I. R.
△ mD7	03117700	10E-2	*Transistor		
△ mD8	03117700	10E-2	wQ1	46367301	2SC2458
*Zener Diode			or 48058801		2SC1740S
mDZ1	49305000	05AZ10-R	wQ2	46367301	2SC2458
or 49305100		05AZ11-X	or 48058801		2SC1740S
mDZ2	49306300	05AZ16-X	wQ3	48183400	DTA114YS
oJ1	48528500	4P Terminal Board, REC/PLAY	or 49390800		RN2207
oJ3	48985400	Mini Jack, SYSTEM CONTROL	wQ4	48183400	DTA114YS
oJ4	49436400	Jack, SYNCHRO REC	or 49390800		RN2207
△ pC1	46425800	0. 01 μ F 400V C. C.	wQ5	48183400	DTA114YS
△ or 46943200		0. 01 μ F 400V C. C.	or 49390800		RN2207
*Transistor			wQ6	46359801	2SC2001
vQ1	48223100	DTC114TS	or 48000901		2SC2060
or 49389000		RN1211	wQ7	46359801	2SC2001
vQ21	46367301	2SC2458	or 48000901		2SC2060
or 48058801		2SC1740S	wQ8	46359801	2SC2001
vQ22	46367301	2SC2458	or 48000901		2SC2060
or 48058801		2SC1740S	wQ9	48223100	DTC114TS (D-X111R only)
vQ23	46604301	2SC3327	or 49389000		RN1211 (D-X111R only)
vQ24	48229200	DTA214XS	wQ10	46367301	2SC2458
or 49390900		RN2208	or 48058801		2SC1740S
vQ25	46367301	2SC2458	wQ11	48171600	DTC114YS
or 48058801		2SC1740S	or 49388600		RN1207
vQ41	46614101	2SC3243	wQ12	48183400	DTA114YS
vQ42	46359801	2SC2001	or 49390800		RN2207
or 48000901		2SC2060	wQ13	48171600	DTC114YS
vQ43	46614101	2SC3243	or 49388600		RN1207
vQ44	46367301	2SC2458	*IC		
or 48058801		2SC1740S	w IC1	49473700	M50727-149SP
vQ45	46367301	2SC2458	w IC2	49473800	BA6229
or 48058801		2SC1740S	w X01	49473400	Quartz Element
vQ46	46367301	2SC2458	*Diode		
or 48058801		2SC1740S	wD1	46464100	1SS133
vQ61	46604301	2SC3327	wD2	46464100	1SS133
vQ62	48229200	DAT124XS	wD3	46464100	1SS133
or 49390900		RN2208	wD4	46464100	1SS133
vQ81	46367201	2SA1048	wD5	46464100	1SS133 (D-X111R only)
or 48058601		2SA933S	wD6	46464100	1SS133
vQ82	46367201	2SA1048	wD7	46464100	1SS133
or 48058601		2SA933S	wD8	46464100	1SS133
*IC			wD9	46464100	1SS133
vIC1	49323500	UPC1330HA	wD10	46464100	1SS133
vIC2	49264000	NJM2068D-D	wD11	46464100	1SS133
vIC21	07208900	NJM4558D-X	wD12	46464100	1SS133
vIC61	07208900	NJM4558D-X	wD13	46464100	1SS133
*Diode			wD14	46464100	1SS133
vD41	46464100	1SS133	wD15	46464100	1SS133
vD42	46464100	1SS133	*Zener Diode		
vD43	03117600	1S2473T77	wDZ1	48553400	MTZ7. 5C
or 46086000		1S1588TP-3	or 48632500		RD7. 5B3 ES
vD44	46464100	1SS133	to be continued		

D-X111/D-X111R

<F-6304>

Parts No.	Stock No.	Description
wD22	48552200	MTZ5. 1C
or	48630900	RD5. 1B3
△ wR14	46241700	27Ω 1W N. I. R.
△ wR16	46241700	27Ω 1W N. I. R.
wR37	48437200	1kΩ 1/5W M. R.
wR41	48437200	1kΩ 1/5W M. R.
wR48	48438800	4.7kΩ 1/5W M. R. (D-X111R only)
•Transistor		
xQ1	46367301	2SC2458
or	48058801	2SC1740S
xQ2	46367301	2SC2458
or	48058801	2SC1740S
•IC		
xIC1	48179900	CX-20187
•Diode		
xD1	46464100	1SS133
xC1	49451600	47μF 25V E. C.
xFL1	49370600	Dolby Filter
xFL2	48193300	Dolby Filter

4-2. F-6305 Bias & Balance Volume Board

Parts No.	Stock No.	Description
oS11	49326300	Push SW., DIRECTION (D-X111R only)
vVR101	49485100	100kΩ B V. R., BIAS
vVR102	49485100	100kΩ B V. R., Balance
vVR103	49326400	50kΩ Bx2 V. R., REC Input

4-3. F-6306 Control Key & Display Board

(Stock No. D-X111R 01214301 = XX, SS
01214305 = EU, UK, SEV
D-X111 01213701 = XX, SS
01213705 = EU, UK, SEV)

Parts No.	Stock No.	Description
•IC		
nIC1	46129100	BA6124
•LED		
nLD1	49493300	SEL3413E, - <XX, SS>
	49493100	SEL3913K, - <EU, UK, SEV>
nLD2	49493300	SEL3413E, ∞ <XX, SS>
	49493100	SEL3913K, ∞ <EU, UK, SEV>
nLD3	49493200	SEL3213C, SYNCHRO
nLD4	49493300	SEL3413E, PAUSE <XX, SS>
	49493100	SEL3913K, PAUSE <EU, UK, SEV>
nLD5	49493200	SEL3213C, REC
nLD6	49493300	SEL3413E, PLAY <XX, SS>
	49493100	SEL3913K, PLAY <EU, UK, SEV>
nLD7	49493300	SEL3413E, FWD <XX, SS>
	49493100	(D-X111R only) SEL3913K, FWD <EU, UK, SEV>
nLD8	49493300	SEL3413E, REV <XX, SS>
	49493100	(D-X111R only) SEL3913K, REV <EU, UK, SEV>
nLD9	49493200	SEL3213C, +6
nLD10	49493200	SEL3213C, +3
nLD11	49493200	SEL3213C, 0

<F-6306>

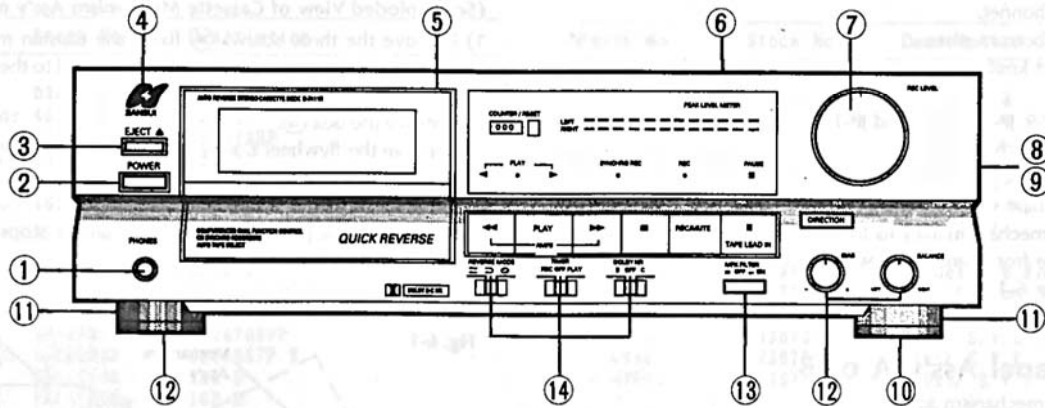
Parts No.	Stock No.	Description
nLD12	49493300	SEL3413E, -5 <XX, SS>
	49493100	SEL3913K, -5 <EU, UK, SEV>
nLD13	49493300	SEL3413E, -10 <XX, SS>
	49493100	SEL3913K, -10 <EU, UK, SEV>
oS1	46563500	Push SW., MPX
oS2	46178400	Slide SW., DOLBY NR
oS3	46178400	Slide SW., TIMER
oS4	46178400	Slide SW., REV MODE (D-X111R only)
oS5	49326300	Push SW., ◀
oS6	49326300	Push SW., PLAY
oS7	49326300	Push SW., ▶
oS8	49326300	Push SW., ■
oS9	49326300	Push SW., REC/MUTE (D-X111R only)
oS10	49326300	Push SW., ■■
wR38	48438700	3.3kΩ 1/5W M. R.
wR39	48438400	3.3kΩ 1/5W M. R.
wR42	48439000	5.6kΩ 1/5W M. R.
wR43	48438700	4.3kΩ 1/5W M. R.
wR44	84438400	3.3kΩ 1/5W M. R.
wR49	48439200	6.8kΩ 1/5W M. R. (D-X111R only)

4-4. F-6307 Head Phone Jack Board

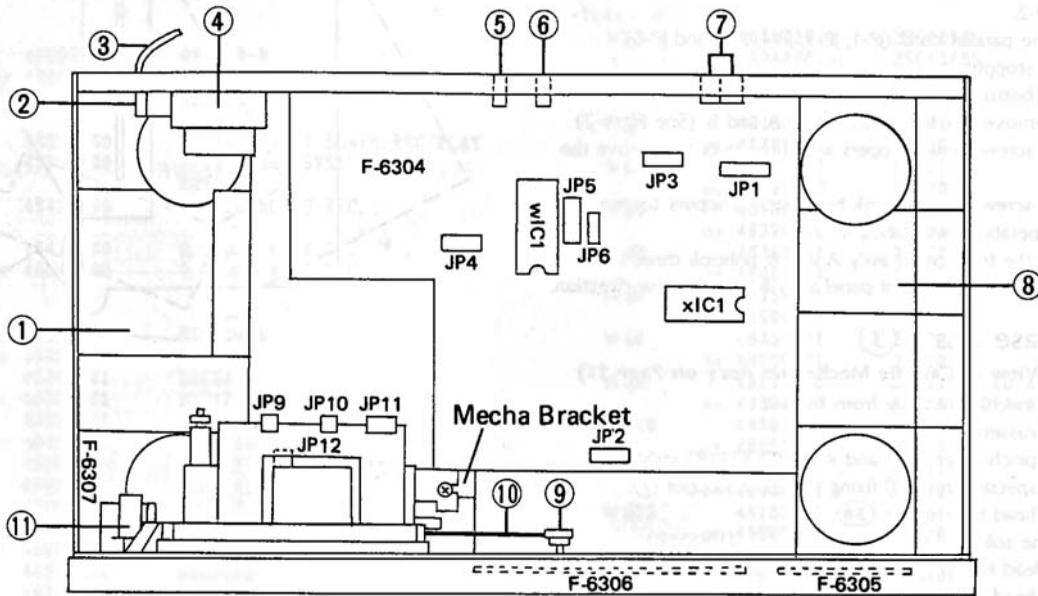
Parts No.	Stock No.	Description
oJ2	49495100	Jack

5. OTHER PARTS

<Front View>



<Top View>



Parts List <Front View>

Parts No.	Stock No.	Description
1	49495100	Headphone Jack
2	27626500	Power SW., Knob
3	27818910	Eject Knob
4	27833300	Logo Badge
5	27841000	Lid Cover Ass'y <D-X111>
	27840900	Lid Cover Ass'y <D-X111R>
6	27835400	Bonnet
7	27821210	Knob, VOLUME
8	27820100	Front Panel Ass'y A <D-X111>
	27820000	Front Panel Ass'y A <D-X111R>
9	27840800	Front Panel Ass'y B <D-X111>
	27840700	Front Panel Ass'y B <D-X111R>
10	27842000	Leg Sheet
11	27857010	Ring for Leg
12	27821300	Knob, BIAS/BALANCE VR.
13	27819400	Knob MPX FILTER
14	27819500	Knob, Slide SW.

Parts List <Top View>

Parts No.	Stock No.	Description
1	27820710	Channel, Left
2	47157300	AC Cord Cover
△ 3	38004700	Power Supply Cord <XX>
△	48837700	Power Supply Cord <SS>
△	49299300	Power Supply Cord <EU, SEV>
△	49252900	Power Supply Cord <UK>
△ 4	15036705	Power Transformer <EU, SEV>
△	15036701	Power Transformer <XX, SS>
△	15036706	Power Transformer <UK>
5	48985400	Jack, System Control
6	49436400	Jack Synchro Control
7	48528500	4P Terminal Board REC/PLAY
8	27820810	Channel, Right
9	49493600	Tape Counter
10	27838000	Counter Belt
△ 11	46364300	Push SW., POWER

6. MAIN PARTS REPLACEMENT (See Top View on Page 8)

A. Mechanism Ass'y

- 1) Remove the bonnet.
- 2) Remove the bottom plate.
- 3) Press the eject knob to open the cassette pocket and remove the lid ass'y.
- 4) Disconnect JP-9, JP-10, JP-11 and JP-12.
- 5) Remove the mecha bracket.
- 6) Remove two screws (B) and two screws (C). (See Fig. 6-2)
- 7) Remove the tape counter belt.
- 8) Remove the mechanism ass'y to the back side passing through the bottom of the front panel ass'y with the cassette pocket (66) kept open. (See Fig. 6-1)

B. Front Panel Ass'y A or B

- 1) Remove the mechanism ass'y.
- 2) Pull out the REC LEVEL, BIAS, BALANCE knob.
- 3) Remove two screws to remove the power switch and power knob.
- 4) Disconnect JP-2.
- 5) Disconnect the parallel cord (JP-1, JP-3, JP-4, JP-5 and JP-6).
- 6) Unhook two stoppers to remove the F-6307 phones board.
- 7) Remove two bottom screws (D), two stoppers (C) and three stoppers (E) to remove the front panel ass'y A and B. (See Fig. 6-2)
- 8) Remove one screw, three stoppers and three nuts to remove the F-6305.
- 9) Remove five screws and unhook two black stoppers to remove the F-6306 operation switch board.
- 10) To separate the front panel ass'y A and B, unhook three stoppers (F) in all while pushing a front panel ass'y B to the arrow direction.

C. Head Base Ass'y (3)

(See Exploded View of Cassette Mechanism Ass'y on Page 11)

- 1) Remove the mechanism ass'y from the set.
- 2) Remove the cassette pocket (66).
- 3) Remove the pinch roller F (31) and R (32) (D-X111R) ass'y.
- 4) Remove the special screw (37) fixing the eject stopper (7).
- 5) Remove the head base spring (3-8).
- 6) Disconnect the soldered QS lead wire (3-21) (D-X111R).
- 7) Unhook the lead holder (10) from the mechanism chassis.
- 8) Remove the head base ass'y (3) from the mechanism chassis.

D. Cam Gear (14), Belt (18), Flywheel Ass'y (29), (30)

(See Exploded View of Cassette Mechanism Ass'y on Page 11)

- 1) Remove the three screws (36) fixing the capstan motor ass'y (4).
- 2) Disconnect two soldered lead wire connected to the P.C.B. (control) (5) and the capstan motor ass'y (4).
- 3) Remove the belt (18).
- 4) Remove the flywheel F ass'y (29) and R ass'y (30) (D-X111R).
- 5) Remove the play arm (12).
- 6) Remove the P.C.B. (Direction SW.) (5-18).
- 7) Move the slide plate (9) to the right until it stops and remove it together with the cam gear (14).

Fig. 6-1

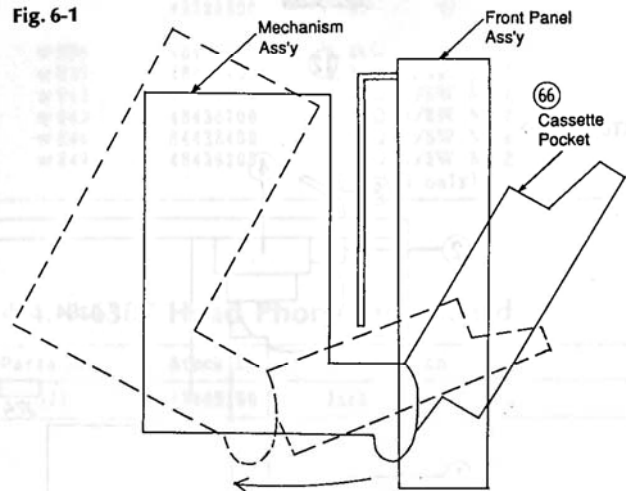
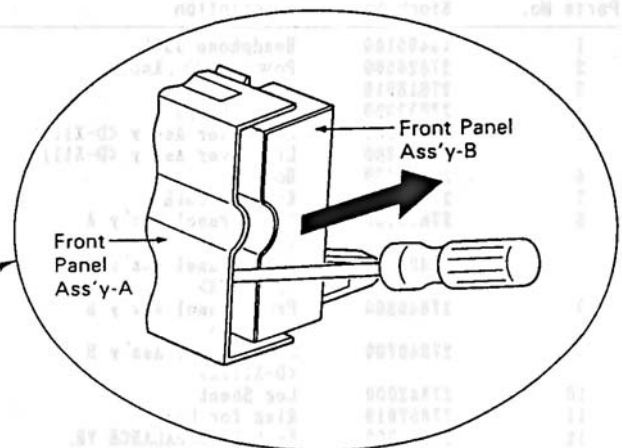
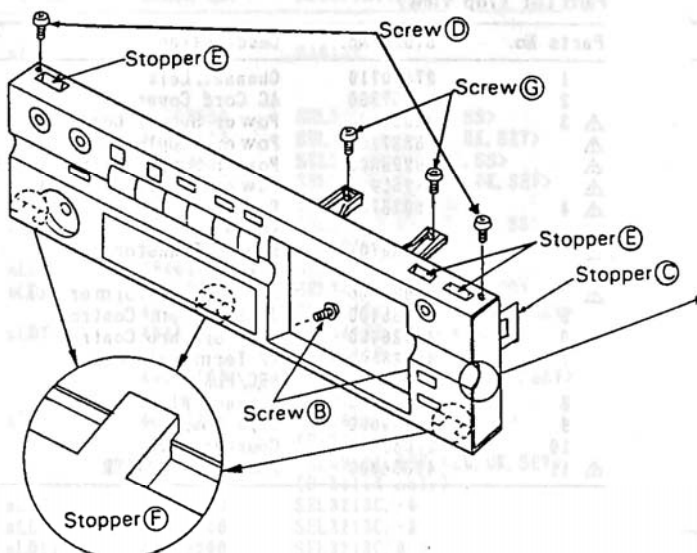


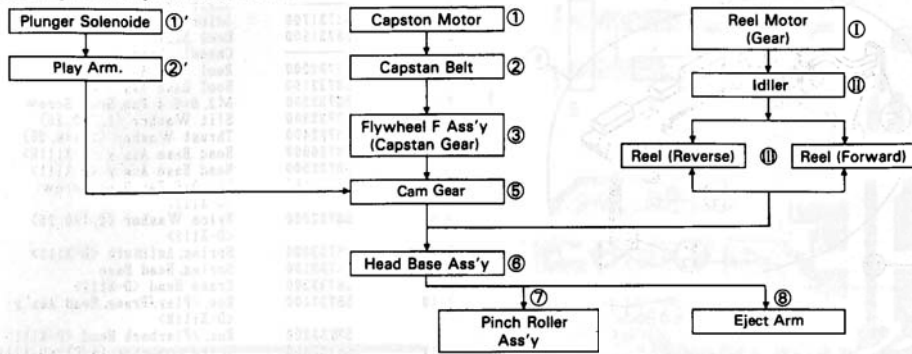
Fig. 6-2



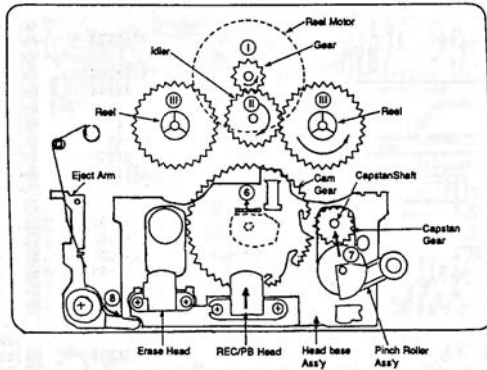
7. OPERATION OF CASSETTE MECHANISM

7-1. D-X111

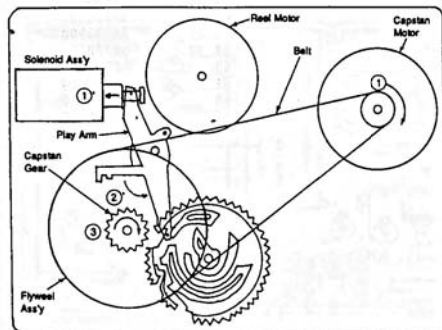
A. Torque Transportation Flowchart



B. Front View of Mechanism Chassis

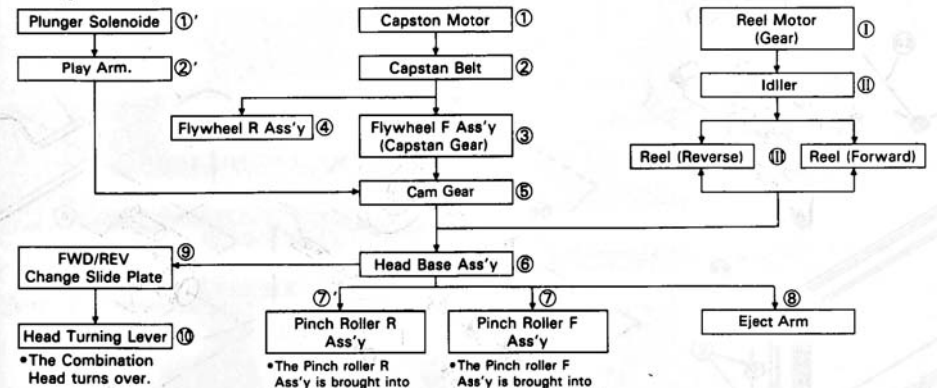


C. Rear View of Mechanism Chassis

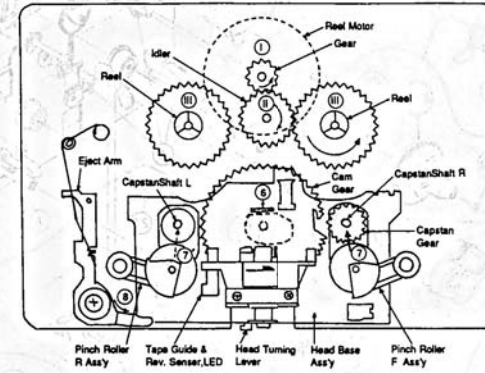


7-2. D-X111R

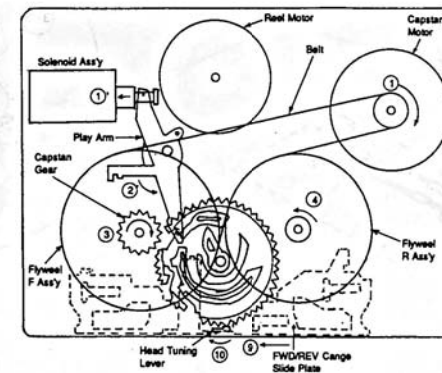
A. Torque Transportation Flowchart



B. Front View of Mechanism Chassis

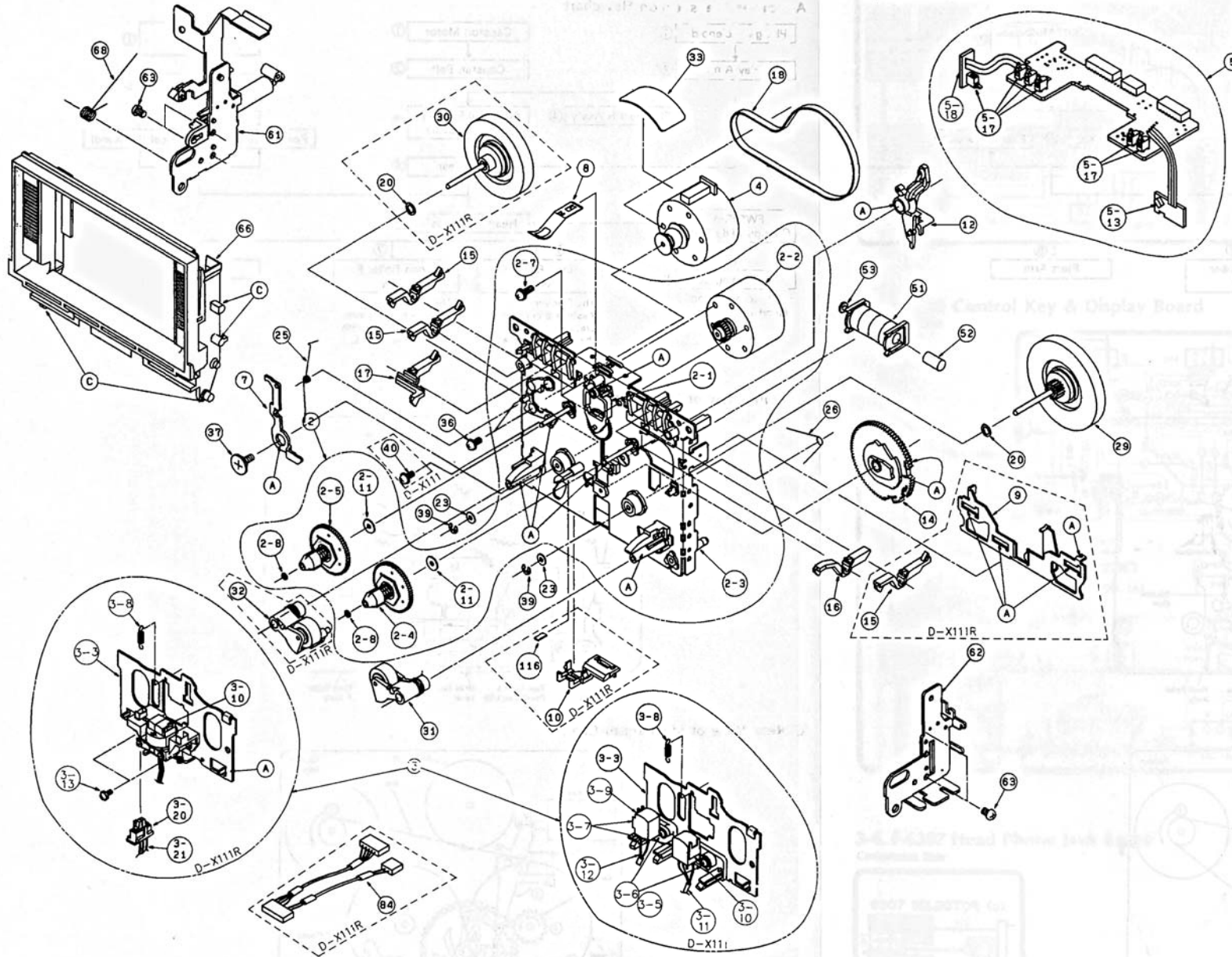


C. Rear View of Mechanism Chassis



8. EXPLODED VIEW OF MECHANISM AND PARTS LIST

• Though every Part included in mechanism ass'y is numbered in exploded View, Parts Unlisted in parts list are not supplied.

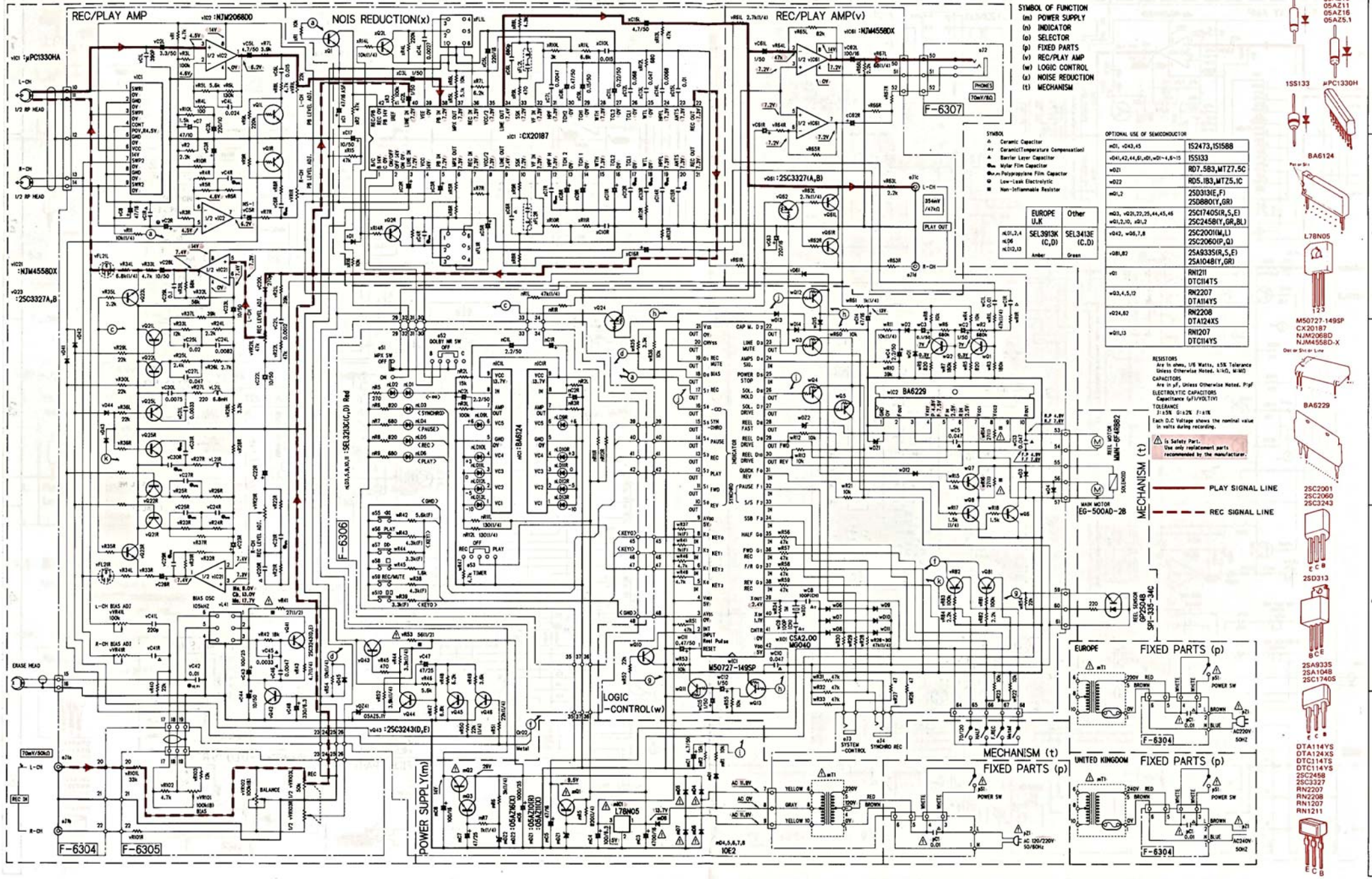


Parts List

Parts No.	Stock No.	Description
2		Main Chassis Ass'y
2-1	58731700	Idler Ass'y
2-2	58731800	Reel Motor Ass'y
2-3		Chassis Base Ass'y
2-4	58732000	Reel Base Ass'y R
2-5	58732100	Reel Base Ass'y F
2-7	58732200	M2. 6X6. 4 Pan. Head Screw
2-8	58732300	Slit Washer (1.7X0.25)
2-11	58732400	Thrust Washer (2.1X0.25)
3	58736900	Head Base Ass'y <D-X111R>
3	58732500	Head Base Ass'y <D-X111>
3-5	58732800	M2. 0x9 Pan. Head Screw <D-X111>
3-6	58732900	Nylon Washer (2.1X0.25) <D-X111>
3-7	58733000	Spring, Azimuth <D-X111>
3-8	58733100	Spring, Head Base
3-9	58733300	Erase Head <D-X111>
3-10	58737100	Rec./Play/Erase, Head Ass'y <D-X111R>
	58733200	Rec./Playback Head <D-X111>
3-11	58733400	Wire Conector (R/P) <D-X111>
3-12	58733500	Wire Conector (E) <D-X111>
3-13	58737200	M2X5 Pan. Tapping Screw <D-X111R>
3-20	58737300	Photo Sensor SPI320BC <D-X111R>
3-21	58737400	QS Lead Wire <D-X111R>
4	58733600	Motor Ass'y, Capstan
5	58737500	P. C. B. (Control) <D-X111R>
	58733700	P. C. B. (Control) <D-X111>
5-13	58737700	Photo Sensor GP2S04B <D-X111R>
	58733900	Photo Sensor SPI-335-34 <D-X111>
5-17	58734000	Push Switch
8	58734200	Cassette Hold Spring
10	58738000	Lead Holder <D-X111R>
12	58734300	Play Arm
14	58734400	Cam Gear
15	58734500	Switch Arm A
16	58734600	Switch Arm B
17	58734700	Switch Arm C
18	58738100	Belt <D-X111R>
	58734800	Belt <D-X111>
20	58734900	Thrust Washer (2.6X0.25)
23	58735000	Nylon Washer (D=2.6X0.5)
25	58735100	Spring
26	58735200	Slide Spring
29	58735300	Flywheel Ass'y F
30	58738200	Flywheel Ass'y R <D-X111R>
31	58735400	Pinch Roller Ass'y F
32	58738300	Pinch Roller Ass'y R <D-X111R>
	58735500	M2. 6X5 Pan. Head Screw
36	58735600	Special Screw
37	58735700	E-type Ring
39	58735800	M3X8 Screw <D-X111>
40	58735900	Solenoid Ass'y
51	58736000	Fix Core
52	58736100	Plunger
53	58736200	Plate Hold Ass'y
61	58736400	M2. 6X4 Pan. Head Screw
63	58736500	Cassette Pocket
66	58736600	Door Spring
68	58736600	Door Spring

9. SCHEMATIC DIAGRAM

9-1. D-X111



SYMBOL OF FUNCTION
 (m) POWER SUPPLY
 (v) INDICATOR
 (s) SELECTOR
 (p) FIXED PARTS
 (w) REC/PLAY AMP
 (x) LOGIC CONTROL
 (y) NOISE REDUCTION
 (t) MECHANISM

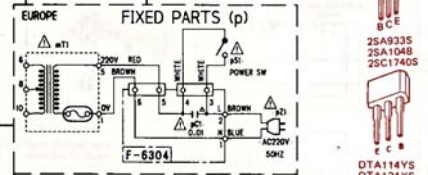
SYMBOL
 A Ceramic Capacitor
 AT Ceramic (Temperature Compensation)
 Δ Barier Layer Capacitor
 □ Mylar Film Capacitor
 □ Polystyrene Film Capacitor
 ○ Low-Leak Electrolytic
 ■ Non-Flammable Resistor

OPTIONAL USE OF SEMICONDUCTOR

w01, w04, 45	IS2473, IS1588
w01, 42, 44, 61, 60, w01-1, 6-15	IS5133
w021	RD7.583, MT27.5C
w022	RD5.183, MT25.1C
w01, 2	2SD3013E(F), 2SD880(Y,GR)
w03, w01, 22, 25, 44, 45, 46	2SC1740S(R,S,E), 2SC2458(Y,GR,BL)
w01, 21, 0, w011	2SC2001(M,L), 2SC2060(P,Q)
w042, w05, 7, 8	2SA933S(R,S,E), 2SA1048(Y,GR)
w01, 87	2SA1048(Y,GR)
w01	2SC1145
w03, 4, 5, 12	2SC2207
w01, 14, 15	2SC1145
w024, 52	2SC2207
w01, 13	2SC1145

RESISTORS
 Are in ohms, 1/8 Watts, ±5% Tolerance Unless Otherwise Noted. K=K, M=M
CAPACITORS
 Are in pF, Unless Otherwise Noted. P=pf
ELECTROLYTIC CAPACITORS
 Capacitance (μF)/VOLTAGE
 TOLERANCE: J=±5%, K=±10%, M=±20%
 Each D.C. Voltage shows the nominal value in volts during recording.

MECHANISM (t)
 ——— PLAY SIGNAL LINE
 - - - - REC SIGNAL LINE

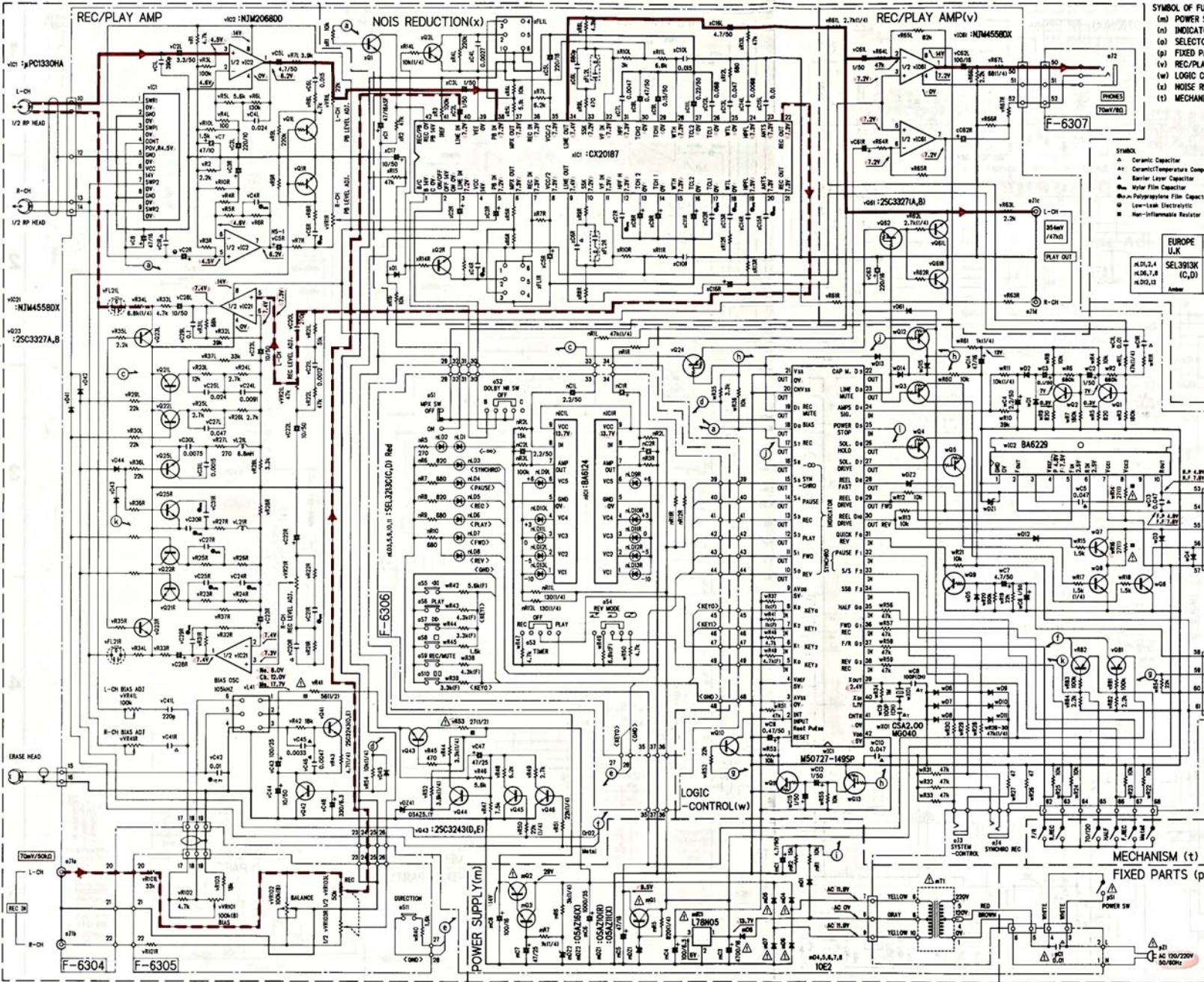


- 151588 MT25.1C
- 152473 MT27.5C
- 10E2 RD5.1ES
- RD7.5ES
- OS4210
- OS4211
- OS4216
- OS425.1
- 15S133 #PC1330H
- BA6124
- 1.78N05
- M50727-149SP
- CX20187
- NJM20680D
- NJM45580-X
- BA6229
- 2SC2001
- 2SC2060
- 2SC2443
- 2SD313
- 2SA933S
- 2SA1048
- 2SC1740S
- DTA114YS
- DTA124XS
- DTA114YS
- 2SC2458
- 2SC3327
- RN2207
- RN2208
- RN1207
- RN1211

D-X111/D-X111R D-X111/D-X111R

9-2. D-X111R

• 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
 (p) FIXED PARTS
 (v) REC/PLAY AMP
 (w) LOGIC CONTROL
 (x) NOISE REDUCTION
 (t) MECHANISM

SYMBOL
 Δ Ceramic Capacitor
 □ Barium Layer Capacitor
 ● Mylar Film Capacitor
 ● Polypropylene Film Capacitor
 ○ Low-Leak Electrolytic
 ■ Non-Inflammable Resistor

EUROPE U.K.
 SEL3913K (C,D)
 SEL3413E (C,D)
 Amber Green

OPTIONAL USE OF SEMICONDUCTOR

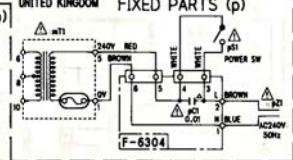
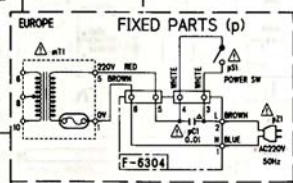
w01, w03, 45	IS2473, IS1588
w04, w2, 44, 46, w0, w0-10	ISS133
w021	RD7.583, MT25.1C
w022	RD5.183, MT25.1C
w023	25D313(E, F)
w024	25D8801(Y, GR)
w03, w01, 22, 25, 44, 45, 46	25C17405(R, S, E)
w01, 2, 10, w0-2	25C2458(Y, GR, BL)
w047, w06, 7, 8	25C2001(M, L)
w048, w08	25C2060(P, D)
w01, w02	25A8335(R, S, E)
w01, w02	25A1048(Y, GR)
w01, w02	RN121
w01, w02	DT114TS
w03, 4, 5, 10	RN2207
w01, w02	DT114YS
w024, 42	RN2208
w01, w02	DT124XS
w01, 13	RN1207
w01, 13	DT114YS

RESISTORS
 1/8 W, 1/4 W, 1/2 W, 1 W, 5% Tolerance
 Unless Otherwise Noted, 1/4 W, 1/2 W
CAPACITORS
 100 pF, Unless Otherwise Noted, 5%
 ELECTROLYTIC CAPACITORS
 Capacitance 10% TOL, 15V

TOLEANCES
 ±1.5% 1/4 W, 1/2 W, 1 W
 Each D.C. Voltage shows the nominal value
 in volts before recording.

Is Safety Part:
 Use only replacement parts
 recommended by the manufacturer.

PLAY SIGNAL LINE
REC SIGNAL LINE



1S1588
 IS2473
 10E2

MT25.1C
 MT27.5C
 RD6.1ES
 RD7.5ES
 OS42.10
 OS42.11
 OS42.16
 OS42.21

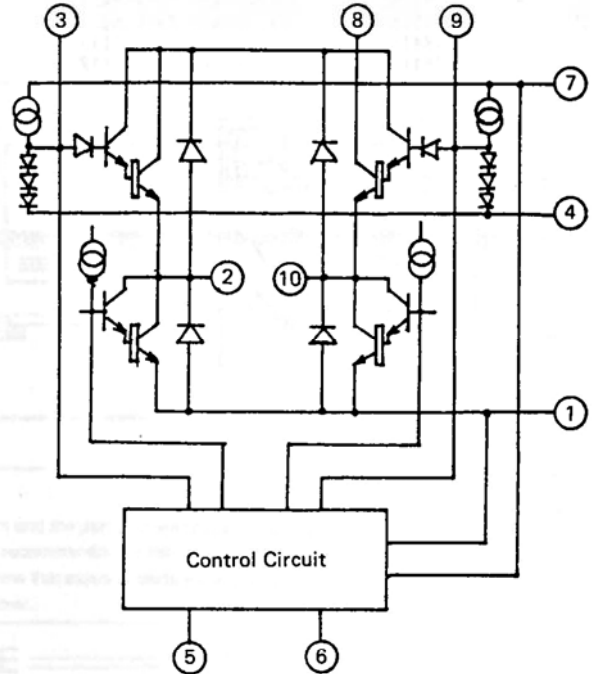


1
 2
 3
 4
 5

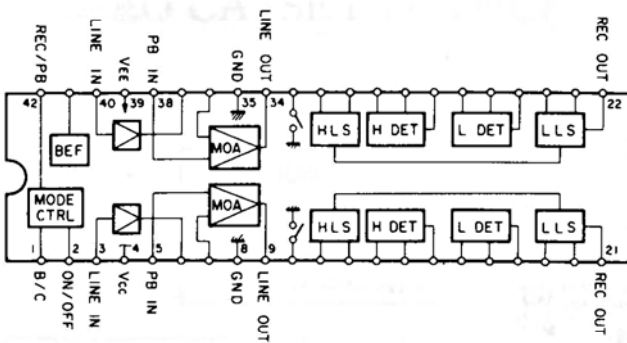
10. TERMINAL FUNCTION & INTERIOR BLOCK DIAGRAM OF ICs

•BA6229< Motor Control >

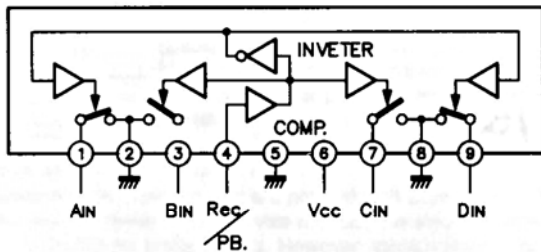
INPUT		OUTPUT		Description
IN1 (5)	IN2 (6)	OUT1 (2)	OUT2 (10)	
L	L	OPEN	OPEN	Stop
H	L	H	L	Normal
L	H	L	H	Reverse
H	H	L	L	Brake



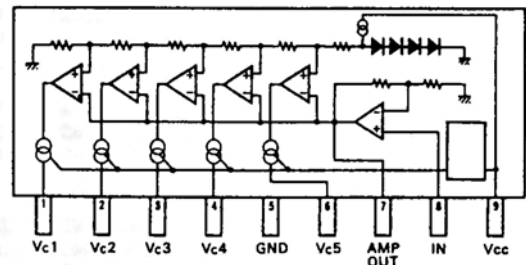
•CX-20187< Dolby Noise Reduction >



•μPC1330H< Selector >



•BA6124< LED Drive >



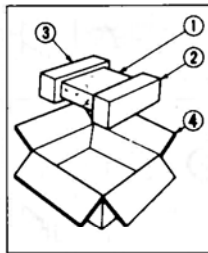
•Terminal Function of M50727-149SP (Mecha Control)

Pin No.	Part	I/O	Function	Active
1	RESET	I	Reset Input	L
2	INT	I	Reel Pulse Input	H
3	AVss	-	Ground Input of A/D Converter	-
4	VREF	I	Reference Power Supply A/D Converter	-
5	K0	I	Key Input 3	-
6	K1	I	Key Input 2	-
7	K2	I	Key Input 1	-
8	K3	I	Key Input 0	-
10	S0	O	LED Display (REV)	L
11	S1	O	LED Display (FWD)	L
12	S2	O	LED Display (PLAY)	L
13	S3	O	LED Display (REC)	L
14	S4	O	LED Display (PAUSE)	L
15	S5	O	LED Display (SYNCHRO)	L
16	S6	O	LED Display (⊕)	L
17	S7	O	REC Signal Output	H
18	D0	O	Bias Signal Output	H
19	D1	O	REC Mute Signal Output	H
20	CNVss	-	Connect Vss	-
21	Vss	-	0V Power Supply	-
22	D2	O	Capstan Motor Control Signal Output	L
23	D3	O	Line Mute Signal	H

Pin No.	Part	I/O	Function	Active
24	D4	I	AMPS Signal Input	L
25	D5	I	Power Stop Signal	L
26	D6	O	Solenoid Start Signal Output	L
27	D7	O	Solenoid Signal Output	L
28	D8	O	Reel Out Signal Output	H
29	D9	O	- Signal Output for Reel Motor	H
30	D10	O	+ Signal Output for Reel Motor	H
31	F0	I	Leader Tape Signal Input	L
32	F1	I	Synchro Signal Input (1) (Pause ON : H→L, Pause OFF : L→H)	H/L
33	F2	I	Synchro Signal Input (2) (Start : H→L, Stop : L→H)	H/L
34	F3	I	SSB Signal Input	I
35	G0	I	Cassette tape IN/OUT Detection Input Signal	H : ON
36	G1	I	Forward Recording OK Signal Input	H : OK
37	G2	I	Forward Recording OK Signal Input	L : FWD H : REV
38	G3	I	Reverse Recording OK Signal Input	H : OK
39	X out	O	Clock Output Terminal	-
40	X in	I	Clock Output Terminal	-

11. PACKING LIST

Parts No.	Stock No.	Description
1	47859100	Vinyl Bag
2	27831600	Styrofoam Packing, R-CH
3	27831500	Styrofoam Packing, L-CH
4	27841500	Carton Case <D-X111>
	27841400	Carton Case <D-X111R>



12. ACCESSORY LIST

Parts No.	Stock No.	Description
	48802100	PJP Cord, 1m
	46267300	Mini Pin Plug Cord
	19058700	Operating Instruction <D-X111>
	19058900	Operating Instruction <D-X111R>



SANSUI ELECTRIC CO., LTD.:
 SANSUI ELECTRONICS CORPORATION:
 SANSUI ELECTRONICS G.M.B.H.:

山水電気株式会社

14-1, Izumi 2-chome, Suginami-ku Tokyo 168 Japan
 PHONE: (03) 324-8891/TELEX: 232-2078 (International Division)
 1250 Valley Brook Ave. Lyndhurst, N.J. 07071 U.S.A.
 17150 South Margay Ave. Carson, California 90746 U.S.A.
 Paul Ehrlich Strasse 8, 6074 Rödermark 2, West Germany

東京都杉並区和泉2-14-1(〒168)