

# SERVICE MANUAL

AUTO RETURN DC SERVO TURNTABLE

## SANSUI P-E70/E50



### ● SPECIFICATIONS

Type .....	Belt drive system
Rated speed .....	33-1/3, 45 rpm
Platter .....	Plastic platter (diameter 285 mm) (11-7/32")
Motor .....	DC servo motor
Wow/flutter .....	0.06% (WRMS)
Signal-to-noise .....	Better than 72dB (DIN-B)
Tonearm .....	Dynamically balanced straight arm
Effective tonearm length .....	220 mm (8-11/16")
Power Voltage .....	DC 12V
Power consumption .....	5 W
Dimensions .....	380 mm (14-31/32") W 98 mm (3-27/32") H 365 mm (14-3/8") D
Weight .....	2.9 kg (6.4 lbs.) net
Dust Cover-less .....	2.3 kg (5.1 lbs.) net
<b>Pick up</b>	
Type .....	Dual Magent type
Output voltage .....	2.5 mV (1,000Hz 50 mm/sec)
Correct load impedance .....	47 kohms
Frequency response .....	20-20,000 Hz
Stylus .....	0.6 mil diamont stylus (SN-111 replacement stylus)

\* Design and specifications subject to change without notice for improvements.

### 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.

**Sansui**

SANSUI ELECTRIC CO., LTD.

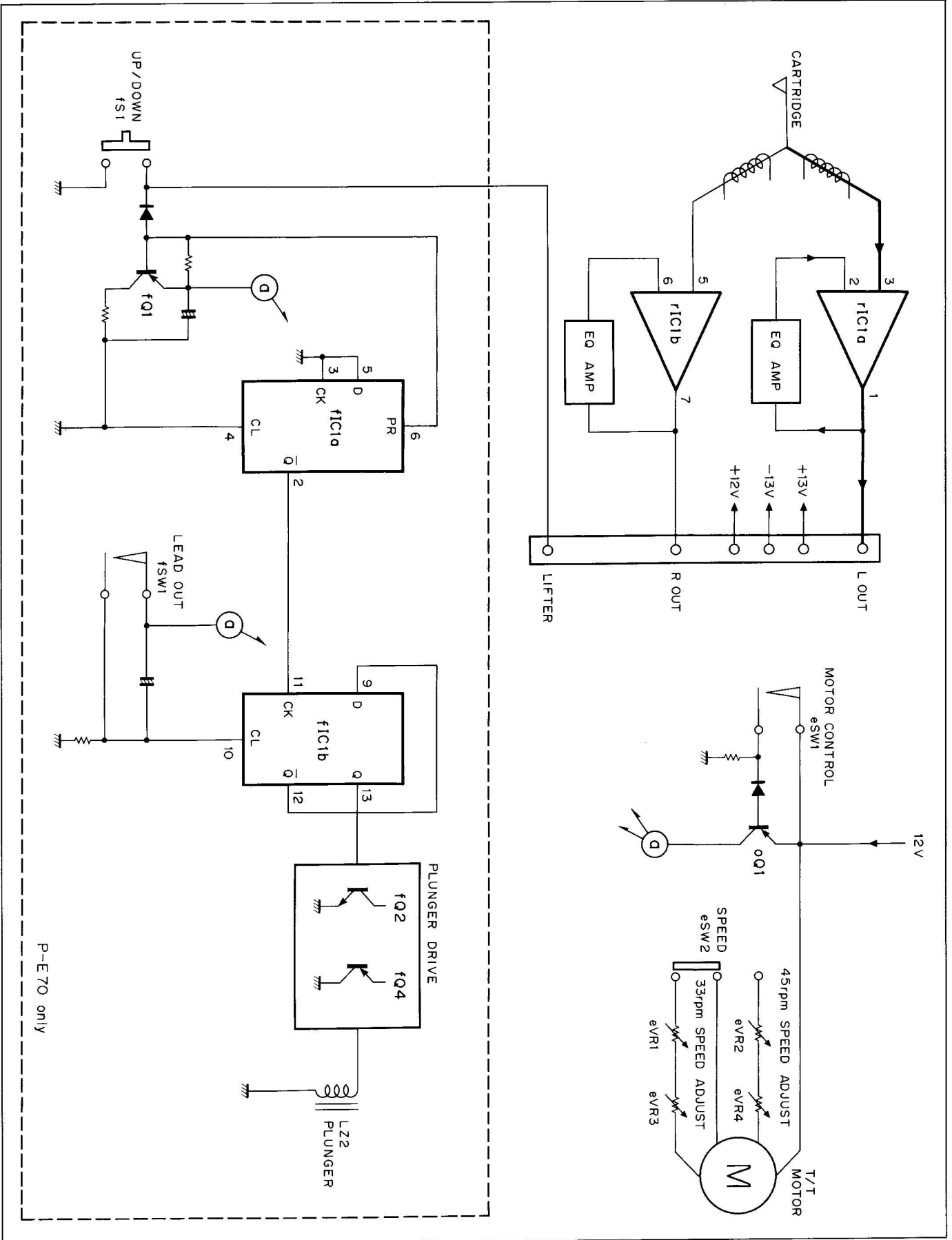
## CAUTION

1. 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.
2. 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.
3. Abbreviations in this service manual are as follows.

### • Abbreviations List

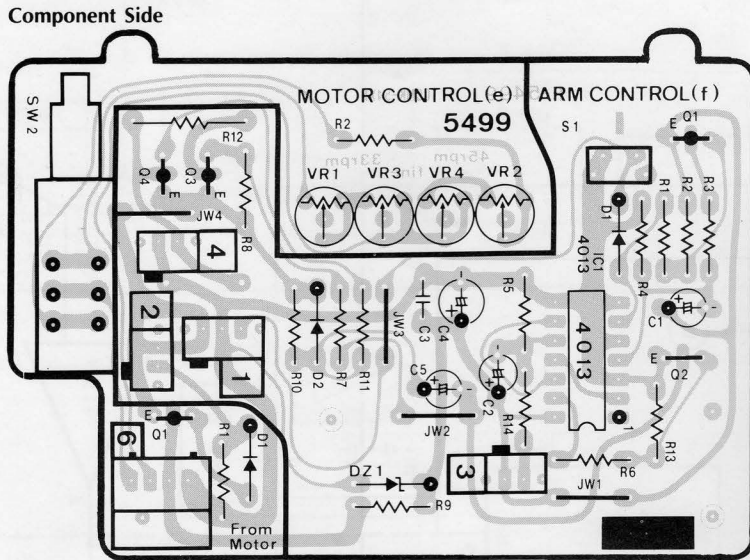
C.R.	: Carbon Resistor	E.B.L.	: Low Leakage Bi-Polar Electrolytic Capacitor
S.R.	: Solid Resistor	Ta.C.	: Tantalum Capacitor
W.R.	: Wire Wound Resistor	F.C.	: Film Capacitor
M.R.	: Metal Film Resistor	M.P.	: Metallized Paper Capacitor
F.R.	: Fusing Resistor	P.C.	: Polystyrene Capacitor
N.I.R.	: Non-Inflammable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

# 1. BLOCK DIAGRAM



## 2. PARTS LOCATION & PARTS LIST

### 2-1. F-5499 Tone Arm & Speed Control Board (Stock No. 01001601=P-E70/01002101=P-E50)

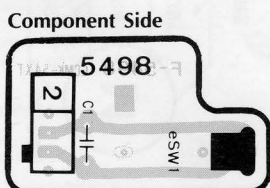


**Parts List**

Parts No.	Stock No.	Description
<b>&lt; Common Parts &gt;</b>		
• Transistor		
eQ1	46614001 or 48000801	2SA1283 2SA934
• Diode		
eD1	03117600 or 46086000	1S2473T77 1S1588TP-3
eVR1	46634100 or 48199500	4.7kΩ S.V.R., 33 rpm 5kΩ (B) S.V.R., 33 rpm
eVR2	46634300 or 48199600	10kΩ S.V.R., 45 rpm 10kΩ S.V.R., 45 rpm
eVR3	46633700 or 48199300	1kΩ (B) S.V.R., 33 rpm 1kΩ (B) S.V.R., 33 rpm
eVR4	46633900 or 48199400	2.2kΩ S.V.R., 45 rpm 2kΩ (B) S.V.R., 45 rpm
eSW2	46164900	Push SW., SPEED
<b>&lt; P-E70 only &gt;</b>		
• Transistor		
fQ1	46367001 or 46367201 or 48058601	2SA1115 2SA1048 2SA933S
fQ2	46367101 or 46367301 or 48058801	2SC2603 2SC2458 2SC1740S

Parts No.	Stock No.	Description
fQ3	46367001 or 46367201 or 48058601	2SA1115 2SA1048 2SA933S
fQ4	46614001 or 48000801	2SA1283 2SA934
• IC		
fIC1	07107500 or 07207300 or 48050200 or 48053600	TC4013BP MB84013BM MSM4013BRS μPD4013BC
• Diode		
fD1	03117600 or 46086000	1S2473T77 1S1588TP-3
fD2	03117600 or 46086000	1S2473T77 1S1588TP-3
fD3	48123600	11E2
• Zener Diode		
fDZ1	46110800 or 46110900 or 46111000	05Z4.7-X 05Z4.7-Y 05Z4.7-Z
fR12	46249500	150Ω 1W N.I.R
fS1	46547000	Push SW., UP/DOWN

### 2-2. F-5498 Motor SW Board



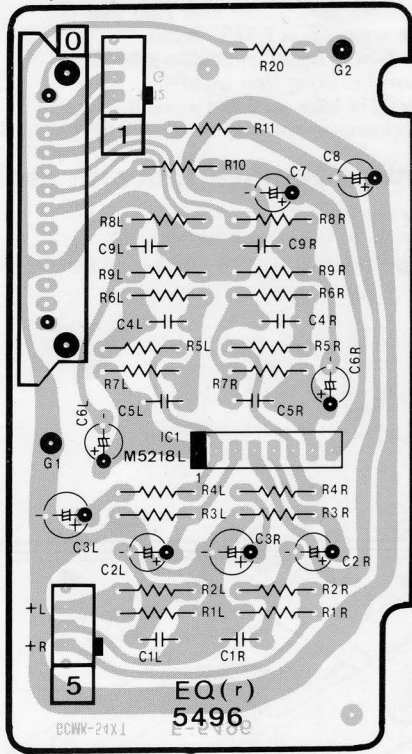
**Parts List**

Parts No.	Stock No.	Description
eSW1	46394100	Leaf SW.,



### 2-3. F-5496 EQ. Amp Board (Stock No. 01001301=P-E70/01001801=P-E50)

Component Side

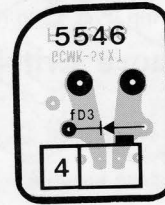


**Parts List**

Parts No.	Stock No.	Description
iZ10	48519900	ST Socket 13P < P-E70 only >
	48582200	ST Socket 13P < P-E50 only >
• IC		
rIC1	46078900	M5218L
△ rR10	46229600	330Ω 1/2W N.I.R.
△ rR11	46229600	330Ω 1/2W N.I.R.
rC4	46282400	3300pF 50V F.C.
rC5	46283000	0.012μF 50V F.C.

### 2-4. F-5546 Plunger Board <P-E70 only >

Component Side

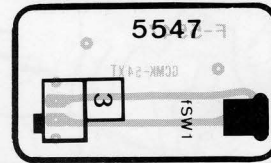


**Parts List**

Parts No.	Stock No.	Description
iZ2	47292610	Plunger Solenoid

### 2-5. F-5547 Wiring Board <P-E70 only >

Component Side

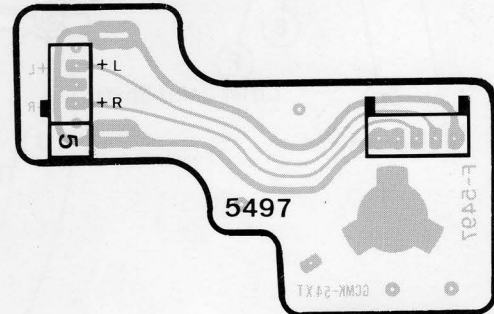


**Parts List**

Parts No.	Stock No.	Description
fSW1	46394100	Leaf SW.,

### 2-6. F-5497 Wiring Board

Component Side



## 3. MAIN PARTS REPLACEMENT

### 3-1. How to extract chassis ass'y (A) (Fig. 3-1)

- 1) Loosen the screw ① at the chassis ass'y (A).
- 2) Loosen the screw ② at slide arm (B).
- 3) Loosen the screw ③ at trip lever (C) to remove chassis ass'y (A).

### 3-2. How to remove switch plate (D) (Fig. 3-1)

- 1) Loosen the screw ④ at switch plate (D).
- 2) Pull out switch plate (D).  
(Switch plate is fixing F-5498 board)

### 3-3. How to remove lifter ass'y (Fig. 3-1)

- 1) Loosen screw ⑤ at plunger holder (E).
- 2) Remove plunger holder (E).

- 3) Loosen the screw ⑥ at lifter joint shaft (F).
- 4) Move restor lever (G) clockwise.
- 5) Remove plunger spring from lifter joint shaft (F).
- 6) Loosen the screw ⑦ at F-5497 board.
- 7) Lift up the F-5497 board and pull out 5p-plug.  
(F-5497 board is fixing lifter ass'y)
- 8) Push point ① of lifter ass'y and move it counterclockwise to point (K) to remove lifter ass'y (Fig. 3-3).

### 3-4. How to remove tonearm ass'y

- 1) Remove restor lever (G).
- 2) Extract spring (K) from the restor lever (G).
- 3) Move stopper ass'y (J) to arrow direction to pull out tonearm ass'y (Fig. 3-2).

Fig. 3-1

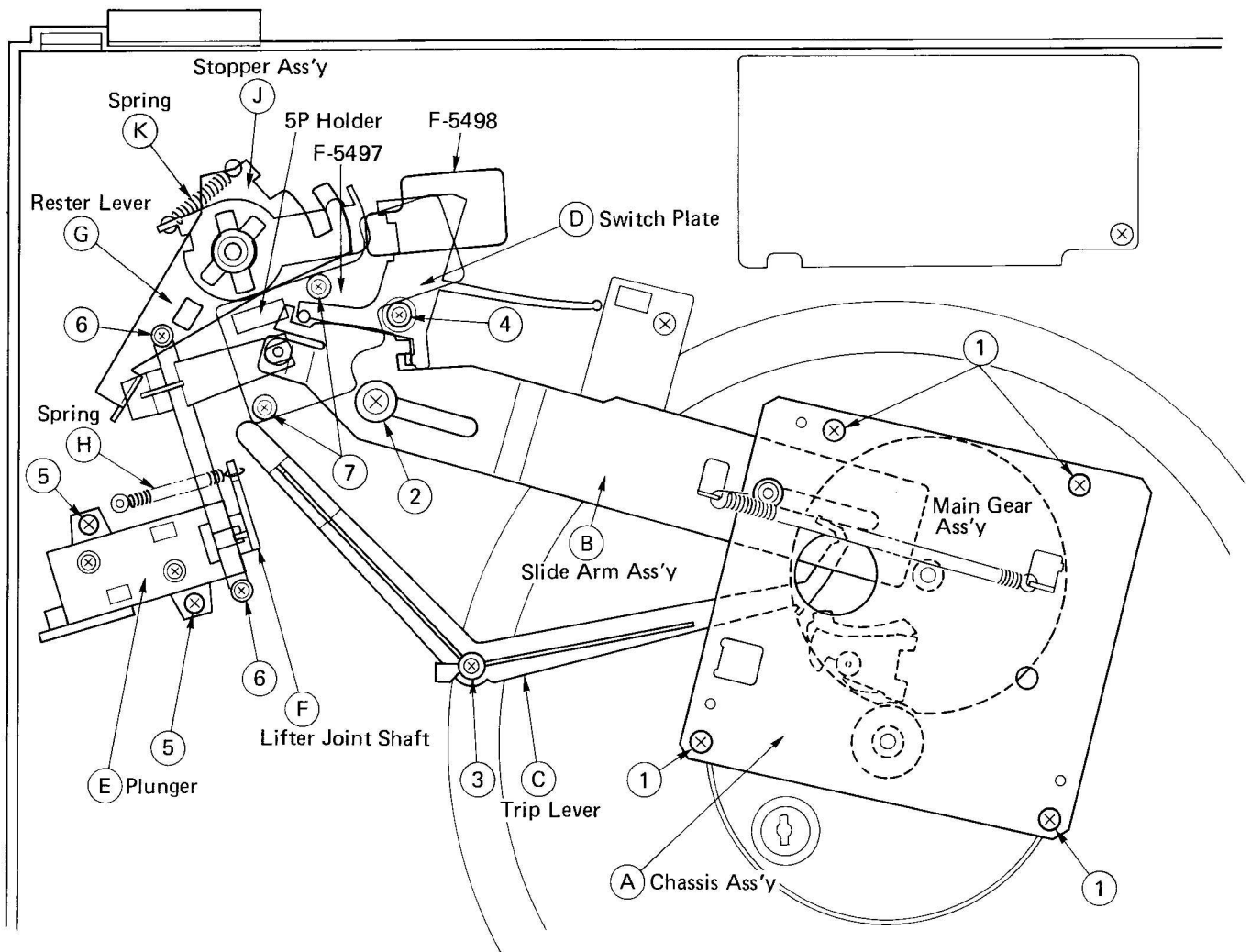


Fig. 3-2

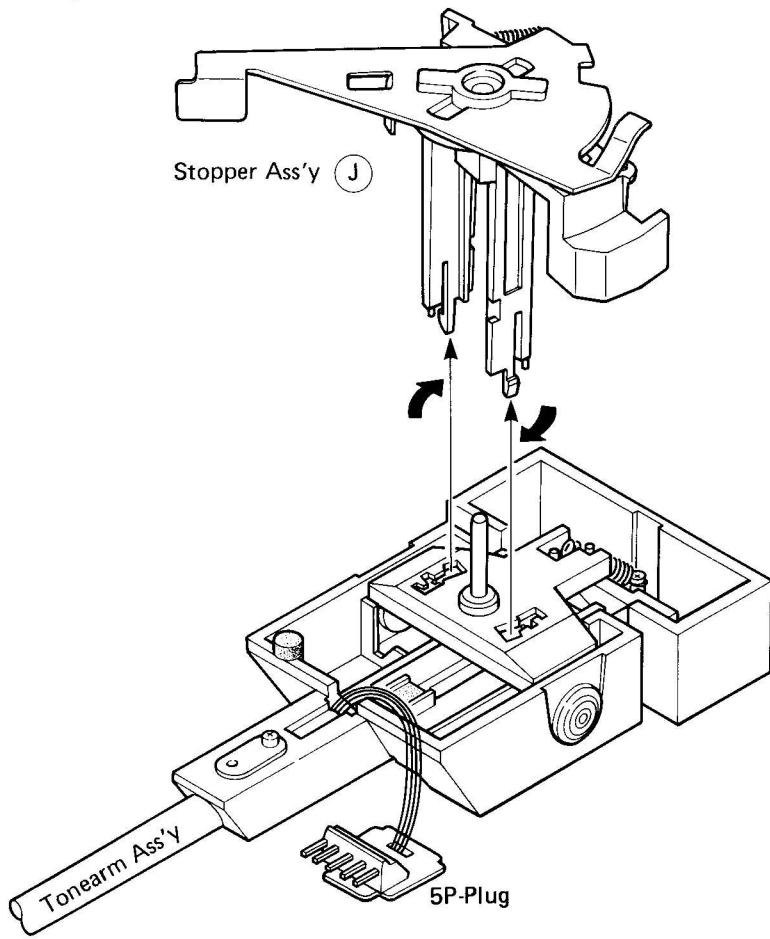
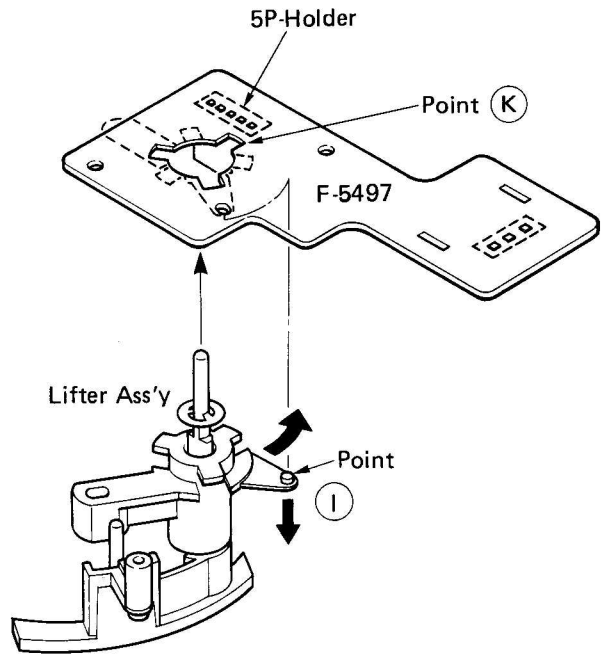


Fig. 3-3



## 4. SPEED ADJUSTMENT

\*Note: The power for this unit is supplied from the cassette deck amplifier (P-E50: DA-E50/P-E70: DA-E70 or DA-E90)

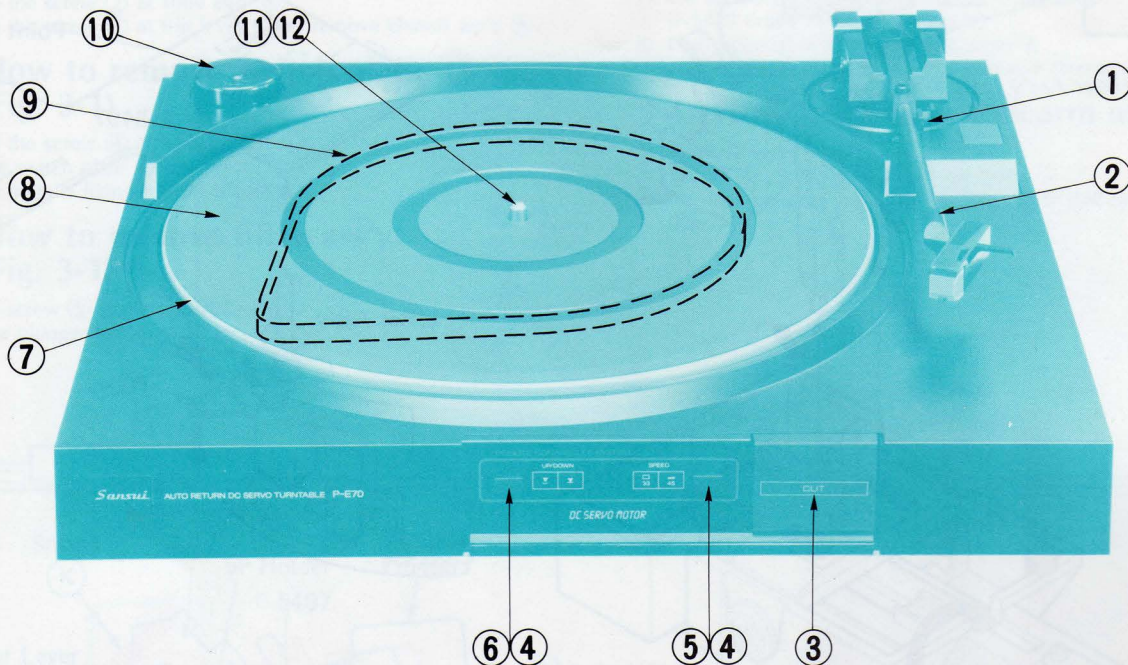
• See Bottom View on page 8.

STEP	SPEED SELECTOR	ADJUST	ADJUST FOR
1.	33-1/3 r.p.m.	eVR1 Rough Adj. eVR3 Fine Adj. (F-5499)	Strobo marking pattern appears to stand still.
2.	45 r.p.m	eVR2 Rough Adj. eVR4 Fine Adj. (F-5499)	Same as above

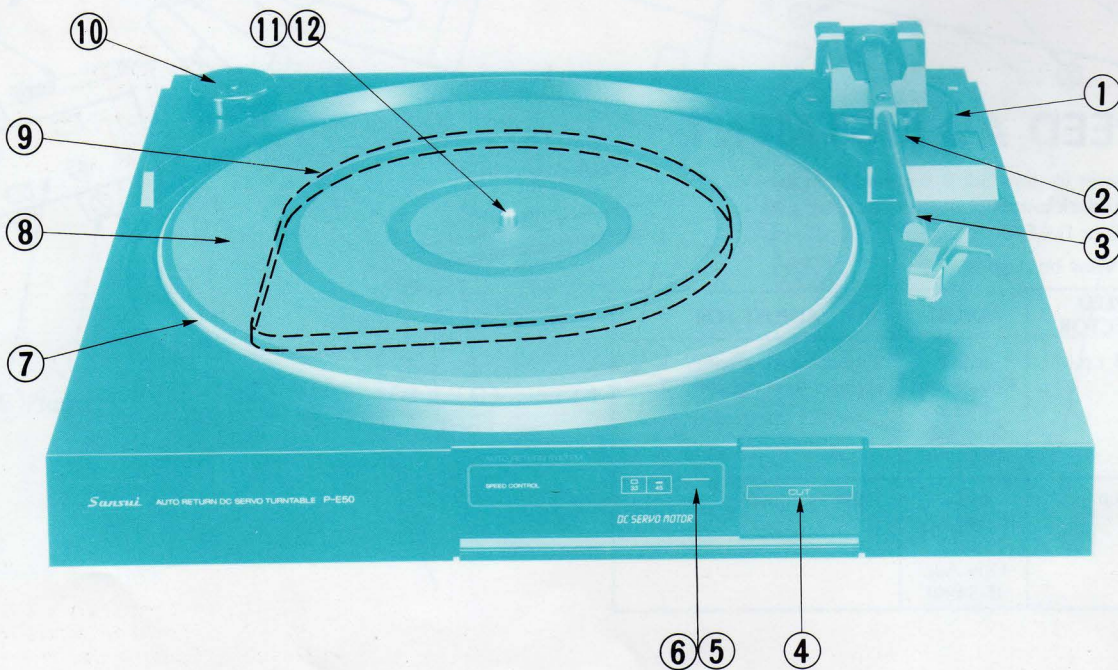


# 5. OTHER PARTS

## 5-1. Front View (P-E70)

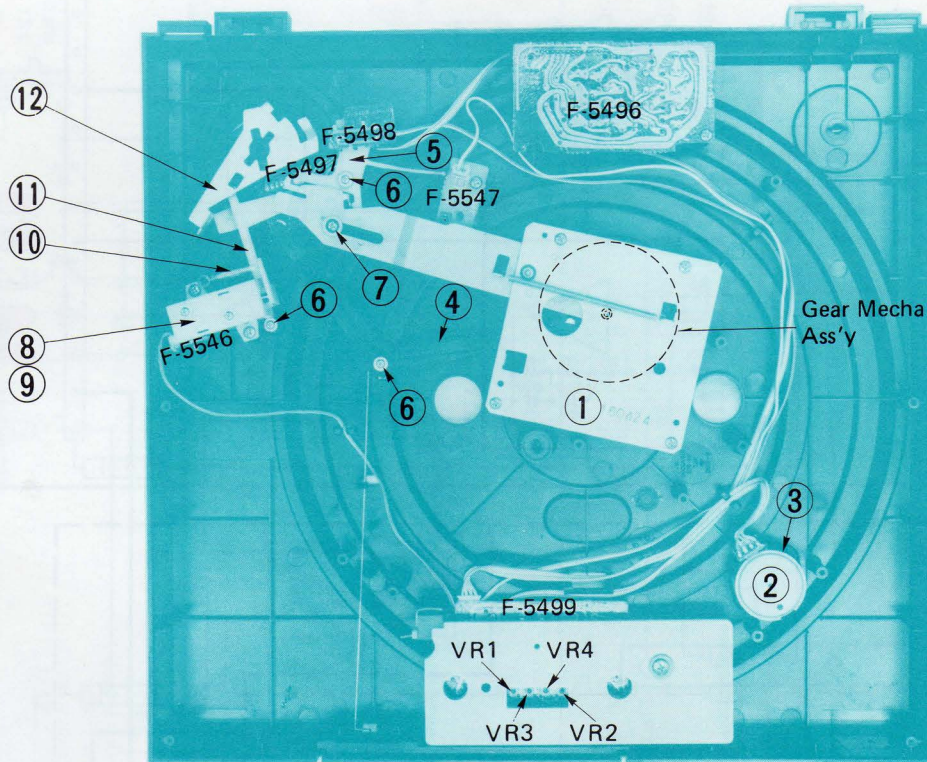


## Front View (P-E50)





5-2. Bottom View



P-E70 Parts List (Front View)

Parts No.	Stock No.	Description
1	13734501	Lifter Ass'y
2	13734400	Tonearm Ass'y
3	27228800	Knob CUT
4	27228500	Knob SPEED UP/DOWN
5	46164900	Push SW., SPEED
6	46547000	Push SW., UP/DOWN
7	27060100	Turntable Platter
8	27229100	Turntable Sheet
9	47797600	Belt
10	13012300	45 r.p.m. Adaptor
11	13734700	Spindle Ass'y
12	13734800	Steel Ball
	13153500	Insulator
	48782200	Stylus SN-111

Parts No.	Stock No.	Description
8	27229100	Turntable Sheet
9	47797600	Belt
10	13012300	45 r.p.m. Adaptor
11	13734700	Spindle Ass'y
12	13734800	Steel Ball
	27227800	Insulator
	48782200	Stylus SN-111

P-E50 Parts List (Front View)

Parts No.	Stock No.	Description
1	27228600	Lifter Knob
2	13734501	Lifter Ass'y
3	13734400	Tonearm Ass'y
4	27228800	Knob CUT
5	27228500	Knob SPEED
6	46164900	Push SW., SPEED
7	27060100	Turntable Platter

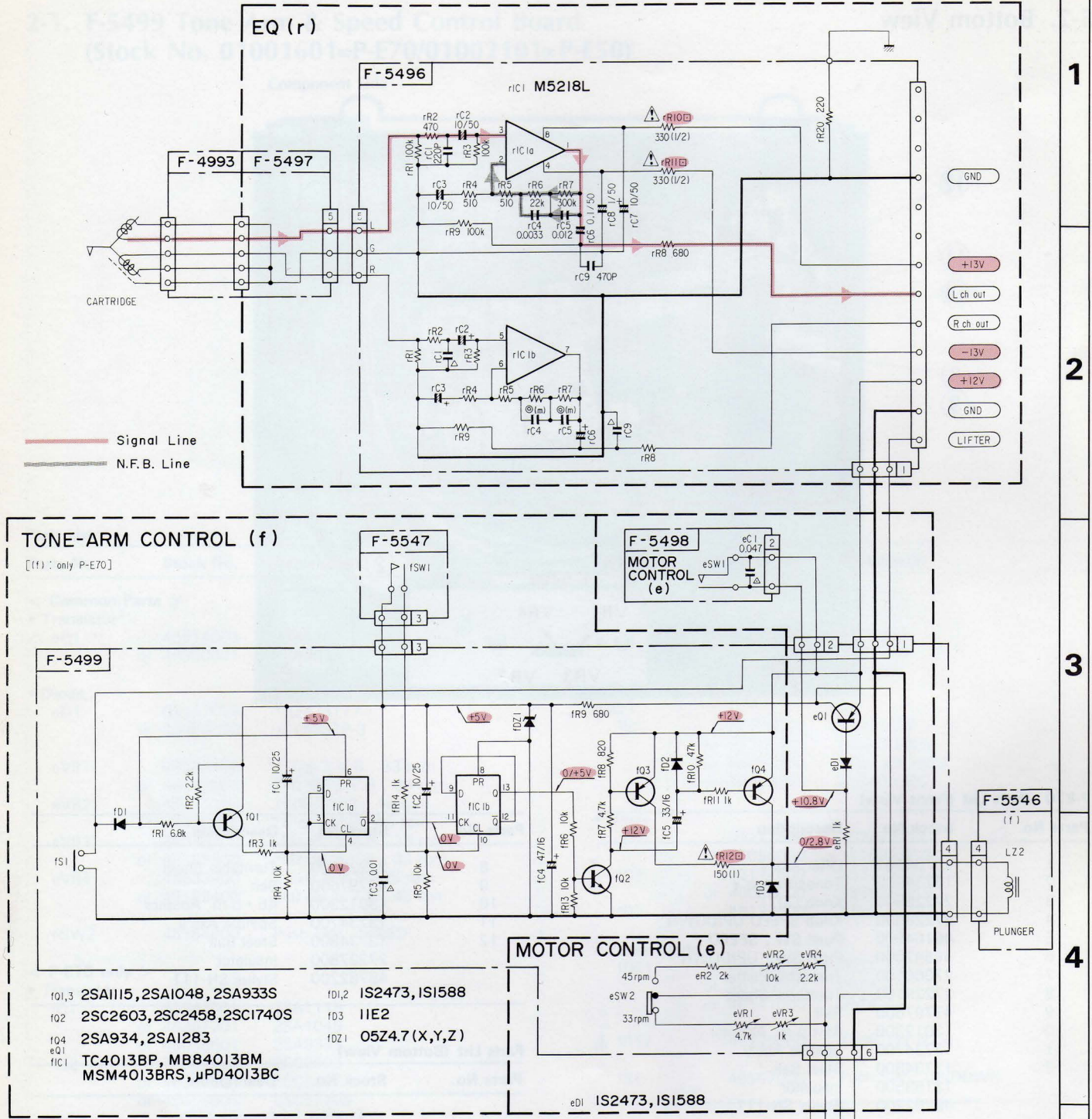
Parts List (Bottom View)

Parts No.	Stock No.	Description
1	27310000	Chassis Ass'y
2	48526000	DC Motor Ass'y (with Pulley)
3	27227800	Motor Insulator
4	27310100	Trip Lever
5	27228900	Switch Plate
6	46911800	M2.6x6 Washer Head Tapping Screw
7	13038200	Tapping Screw
8	47292610	Plunger Solenoid (P-E70 only)
9	27228100	Spring (P-E70 only)
10	27266200	Lifter Spring
11	27229600	Lifter Joint Shaft
12	27310200	Restor Lever Ass'y (with stopper Ass'y)
	13734600	Gear Mecha Ass'y



# 6. SCHEMATIC DISGRAM

• 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.



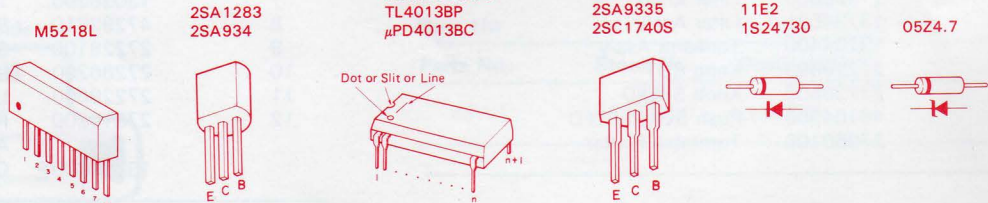
SYMBOL  
 △ Ceramic Capacitor  
 ▽ Barrier Layer Capacitor  
 □ Non-Inflammable Resistor

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

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

CAPACITORS  
 Are in μF, Unless Otherwise Noted. p: pF

ELECTROLYTIC CAPACITORS  
 Capacitance (μF) / Volt (V)



## 7. PACKING & PARTS LIST

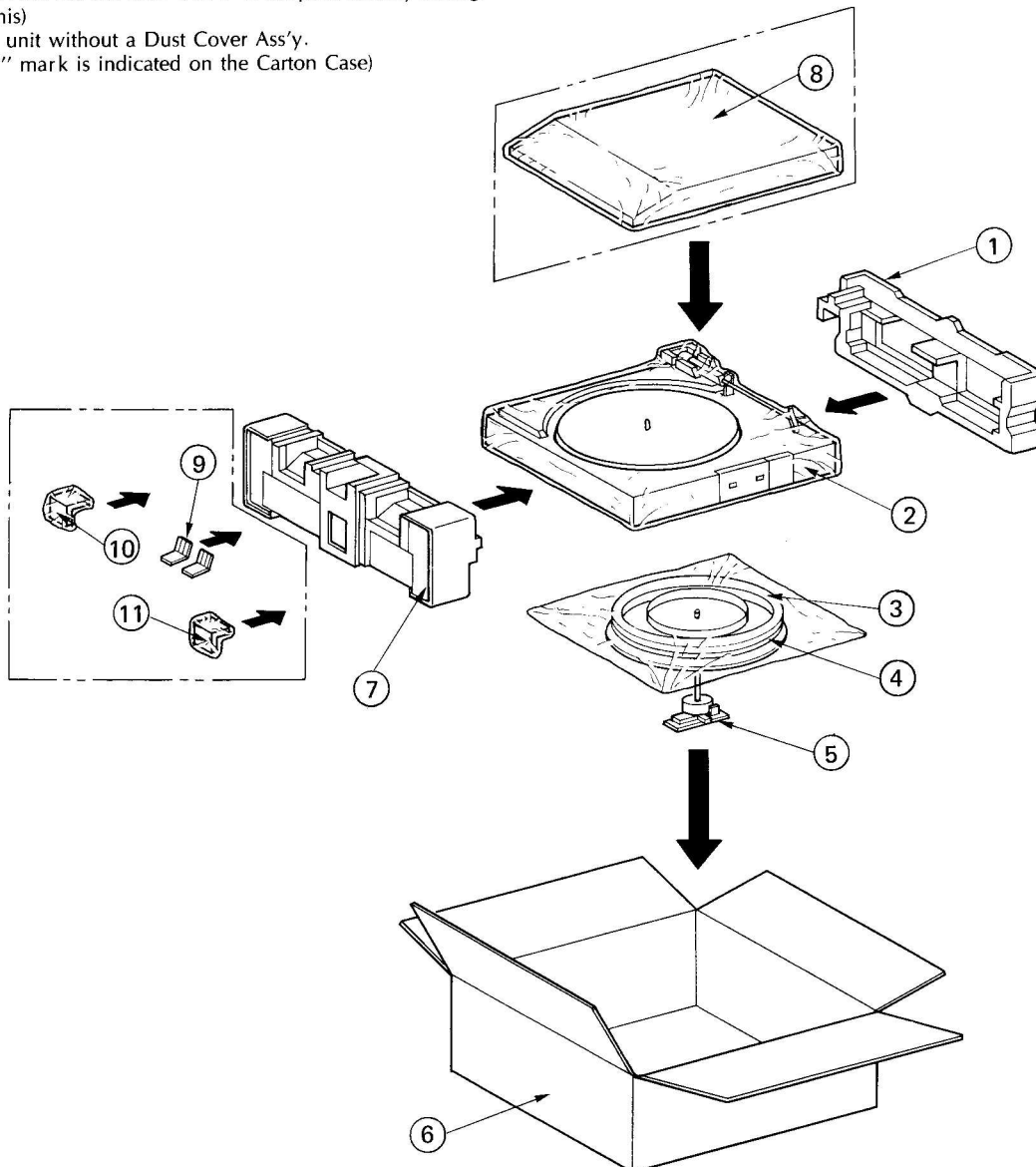
Parts No.	Stock No.	Description
1	27234800	Styrofoam Packing (Right)
2	47859600	Vinyl Bag
3	27060100	Turntable Platter
4	27229100	Turntable Sheet
5	27251900	Turntable Holder
6	27227100	Carton Case < P-E70 >
	27244900	Carton Case < P-E70M >
	27227000	Carton Case < P-E50 >
	27244800	Carton Case < P-E50M >
7	27234900	Styrofoam Packing (Left)
8	27229800	Dust Cover Ass'y < A >
9	48366700	Auto Hinge < A >
10	27106000	Player Stand Ass'y (Left) < A >
11	27105900	Player Stand Ass'y (Right) < A >

- **Note:** There are two types of units in P-E70 and P-E50
- 1) The unit with a Dust Cover Ass'y.  
(The Parts marked with < A > in the parts list only belongs to this)
  - 2) The unit without a Dust Cover Ass'y.  
("M" mark is indicated on the Carton Case)

## 8. ACCESSORY LIST

Parts No.	Stock No.	Description
	49014600	Operating Instruction E.F.S. < P-E70 >
	49014700	Operating Instruction G.I.SW < P-E70 >
	49015200	Operating Instruction E.F.S. < P-E50 >
	49015300	Operating Instruction G.I.SW < P-E50 >

- \***Note:**  
**E.F.S:** English-French and Spanish Version  
**G.I.Sw:** German-Italian and Swedish Version





The Sansui logo is written in a stylized, italicized serif font. The letters are white and set against a solid black rectangular background.

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