

# **SERVICE MANUAL**

STEREO TURNTABLE

**PL-55** FV·FVT

**PL-55D** FV

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# 1. SPECIFICATIONS

## 1.1 PL-55D

### MOTOR AND TURNTABLE

Motor . . . . .	Brushless DC servo motor
Turntable drive . . . . .	Direct-driven
Speed . . . . .	Two speeds, 33-1/3, 45 rpm
Wow and flutter . . . . .	0.06% (WRMS) or less
S/N . . . . .	55dB or more (in case of using Pioneer cartridge model PC-Q1)
Turntable platter . . . . .	31cm diam. Aluminum-diecast alloy

### TO NEARM

Tonearm type . . . . .	Static balance, S-shaped, pipe arm
Effective arm length . . . . .	221mm
Usable cartridge weight . . . . .	4g (MIN)~14g (MAX)
Furnished cartridge . . . . .	Pioneer model PC-Q1 (Induced magnet type)

### FURNISHED CARTRIDGE

Type . . . . .	Induced magnet type
Structure . . . . .	The inside of the cartridge is shielded by Super Permalloy; and the outside, injection molded.
Frequency response . . . . .	10 ~ 50,000Hz
Channel balance . . . . .	Within 1.5dB at 1,000Hz
Load impedance . . . . .	100kΩ
Stylus . . . . .	PN-Q1
Stylus compliance . . . . .	10 × 10 <sup>-6</sup> cm/dyne at 100Hz
Tracking force requirement . . . . .	1.0 ~ 2.1g (proper 1.8g)
Weight . . . . .	5.5g
Mounting . . . . .	Conforms to the EIA standards and can be mounted in almost any make of tonearm.

### SUBFUNCTIONS

- Automatic return tonearm system
- Skating force canceler
- Hydraulic cueing device
- Plug-in type light aluminum head shell
- Dust cover with free stop hinges
- Lateral balance control
- Wooden base with anti-acoustic feedback suspension

### MISCELLANEOUS

Power requirements . . . . .	AC 240V, 220V, 130V, 120V or 110V, 50/60Hz
Power consumption . . . . .	5.2W (MAX)
Outer dimensions . . . . .	480(W) × 185(H) × 410(D) mm 18-7/8(W) × 7-5/16(H) × 16-1/8(D) in.
Weight . . . . .	11.2kg

### ACCESSORIES

Weight shim . . . . . 1	EP record adaptor . . . . . 1
(cartridge weight-adjustable)	Subcounter weight . . . . . 1
Screwdriver . . . . . 1	Operating instructions . . . . . 1
Overhang gauge . . . . . 1	
Connection cord . . . . . 1	

#### NOTE:

Specifications and the design subject to possible modification without notice due to improvements.

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**1.2 PL-55**

NOTE: Specifications of the PL-55 are common to those of the PL-55D except for a phono cartridge.

**FURNISHED CARTRIDGE (PC-50)**

Type . . . . .	Induced magnet type
Construction . . . . .	Super permalloy shield
Frequency response . . . . .	10 ~ 25,000Hz
Output voltage . . . . .	3.0mV (1kHz 50mm/sec)
Channel separation . . . . .	Better than 25dB at 1kHz
Load resistance . . . . .	30 ~ 100k $\Omega$
Static compliance . . . . .	22 x 10 <sup>-6</sup> cm/dyne
Dynamic compliance . . . . .	12 x 10 <sup>-6</sup> cm/dyne at 100Hz
Stylus point . . . . .	0.5 mil diamond
Stylus for replacement . . . . .	Pioneer stylus model PN-50
Tracking force . . . . .	1.5 ~ 2.1g
Weight . . . . .	6g
Mounting . . . . .	.Conforms to EIA standards

**NOTES:**

1. *Specifications and the design subject to possible modification without notice due to improvements.*
2. *These instructions apply to both models PL-55 with and without a phono cartridge.*

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## 2. PARTS AND THEIR FUNCTIONS

### Function Lever

This lever has three positions and four functions (motor; on-off, tonearm; up-down).

#### At ON/UP

The turntable is driven. In moving this lever from the DOWN position to this position, the tonearm (stylus) lifts slowly from the record surface, thereby interrupting operation.

#### At DOWN

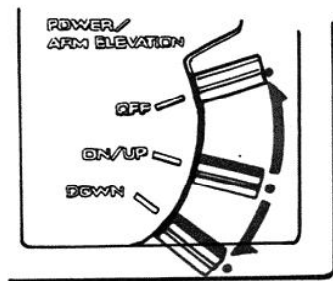
The tonearm is brought into position over the record. Setting the lever to this position gently lowers the stylus onto the record. Playing starts at this time.

#### At OFF

Moving the lever to this position from DOWN causes the tonearm to lift and return to the arm rest. Power is cut off and the turntable stops.

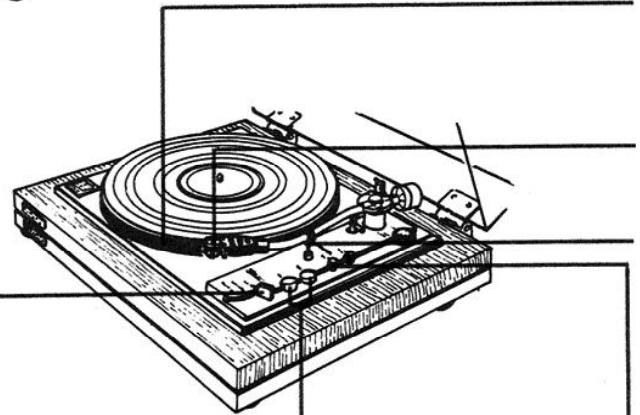
#### NOTES:

1. In moving the function lever from DOWN to OFF, pause momentarily at the ON/UP position. Do not pass through the ON/UP position quickly.
2. Do not change the position of the function lever while the tonearm is in motion.



### EP Record Adaptor

An EP record adaptor is supplied in the accessory group, which permits 45 rpm EP records with large center holes to be played.

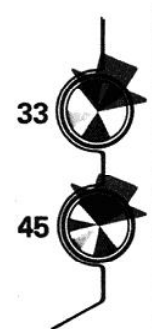


### 33-1/3 rpm Speed Switch

Push this switch if 33-1/3 rpm records are to be played.

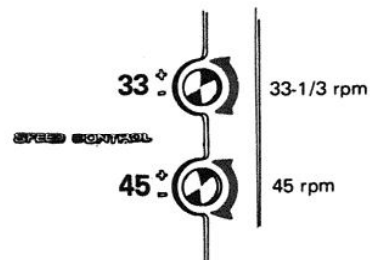
### 45 rpm Speed Switch

Push this switch for 45 rpm operation.



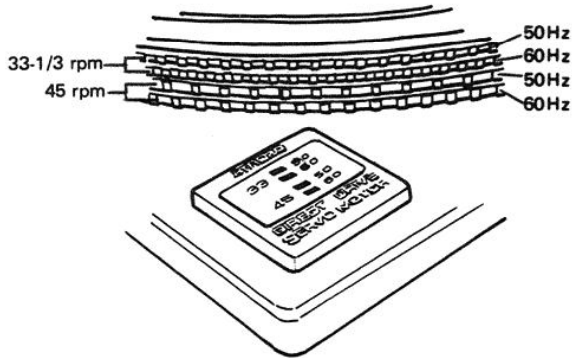
### Fine Speed Adjustment Knob

With the turntable operating at 33-1/3 or 45 rpm, make fine speed adjustment while observing the strobe. Turning the knob in the (+) (clockwise) direction increases speed while turning it in the (-) (counterclockwise) direction decreases speed. Marks on the turntable must appear to "stand still" under strobe lighting, indicating correct speed.



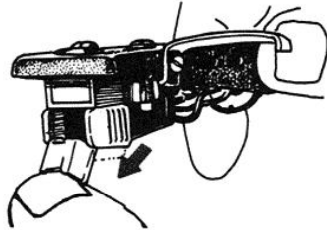
**Strobe**

Refer to the accompanying illustration for positioning of the strobe in respect to the line frequency and turntable speed.



**Cartridge Stylus Cover**

Bring the cartridge stylus cover into position when the PL-55D is not in use as shown in the accompanying illustration.



**Arm Rest**

The arm rest supports the tonearm. The tonearm should always sit on the arm rest when a record is not in use.

Ordinarily, the arm clamp should be engaged to lock the tonearm in place on the rest.



**OPERATION**

Operation of the PL-55D is uncomplicated. Use the following procedure.

1. Place the record to be played on the turntable.
2. Move the cartridge stylus cover out of position. Release the arm rest clamp.
3. Move the function lever from the OFF position to the ON/UP position. At this time, the turntable begins to turn.
4. Push the speed button (33-1/3 or 45 rpm) corresponding to the speed of the record to be played.
5. With the strobe light on, adjust the fine speed control until the turntable appears to "stand still." Turning this control in the (+) direction raises the speed, while turning it in the (-) direction decreases the speed.
6. After the speed has been set to the proper value, carefully move the tonearm into position over the lead-in record grooves to be played.
7. Set the function lever to DOWN. The tonearm drops gently to the record grooves and playing begins.
8. To stop playing at an intermediate point, move the function lever to the ON/UP position. If operation is to be suspended, move the function lever to the OFF position. (This action returns the tonearm to the arm rest and stops the turntable).
9. Upon completion of playing, the tonearm returns automatically to the arm rest and the turntable stops. The function lever returns automatically to the OFF position.

Always turn the power on after placing the turntable platter on the center shaft.



### 3. OPERATION OF MOTOR AND MECHANISM

#### 3.1 MOTOR

Construction of motor control for the PL-55 and 55D is depicted in Fig. 2.

1. Applying power sets the oscillator into operation. Output of this circuit passes to the pole position detecting circuit (L1~L6).
2. Here, assume that coupling between L1 and L4 is the tightest. Voltage induced in L4 is rectified and applied to Q106/Q109 in the driver.
3. Q109 in turn conducts and causes current to flow in the associated drive coil (A-1). The rotor moves in the direction shown by arrow in Fig. 1. The magnetic pole affixed to the rotor induces a voltage proportional to rotor movement, in the sensing coil (A-4).
4. Voltage induced in A-4 is rectified by a diode in the speed sensor and applied to Q103 in the control stage. This point is also fed from the reference voltage generator (voltage  $E_s$ ) through a fine speed control pot.
5. Voltage applied to the base of Q103 in the control stage controls current that flows in Q104.
6. Q104 serves as a constant current source for Q106 through Q111 in the driver and therefore controls current flow in the drive coils.
7. When ambient temperature change causes driver current to rise, the speed of rotation increases above the rated value. Q104 current increases and Q106~Q111 currents decrease. As a result, the speed of rotation falls off.

#### Pole Position Detector

Fig. 1 shows a simplified view of the drive and sense coils. With power applied and coupling between L1 and L4 high, Q109 causes current to flow through A-1. As a result, the rotor end of coil A-1 becomes a south pole (S1) and attracts N1. The rotor moves in the direction shown by arrow. Coupling factor between L2 and L5 increases and operation of Q110 causes current to flow in coil A-2. Pole S2 attracts pole N2 and rotor rotation continues. In the same manner, S3 attracts Pole N3. Continuation of this process causes the rotor to turn on a steady basis.

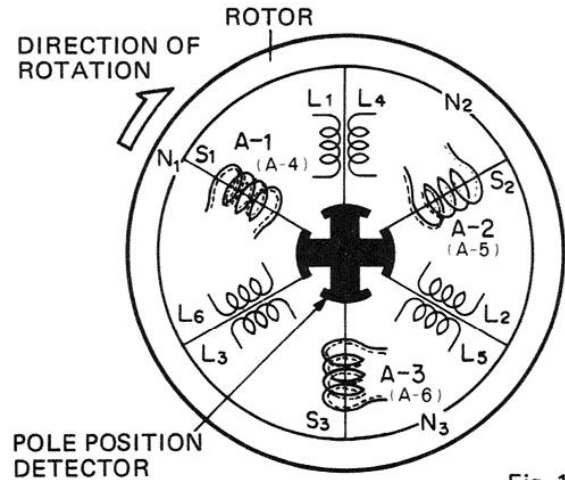


Fig. 1

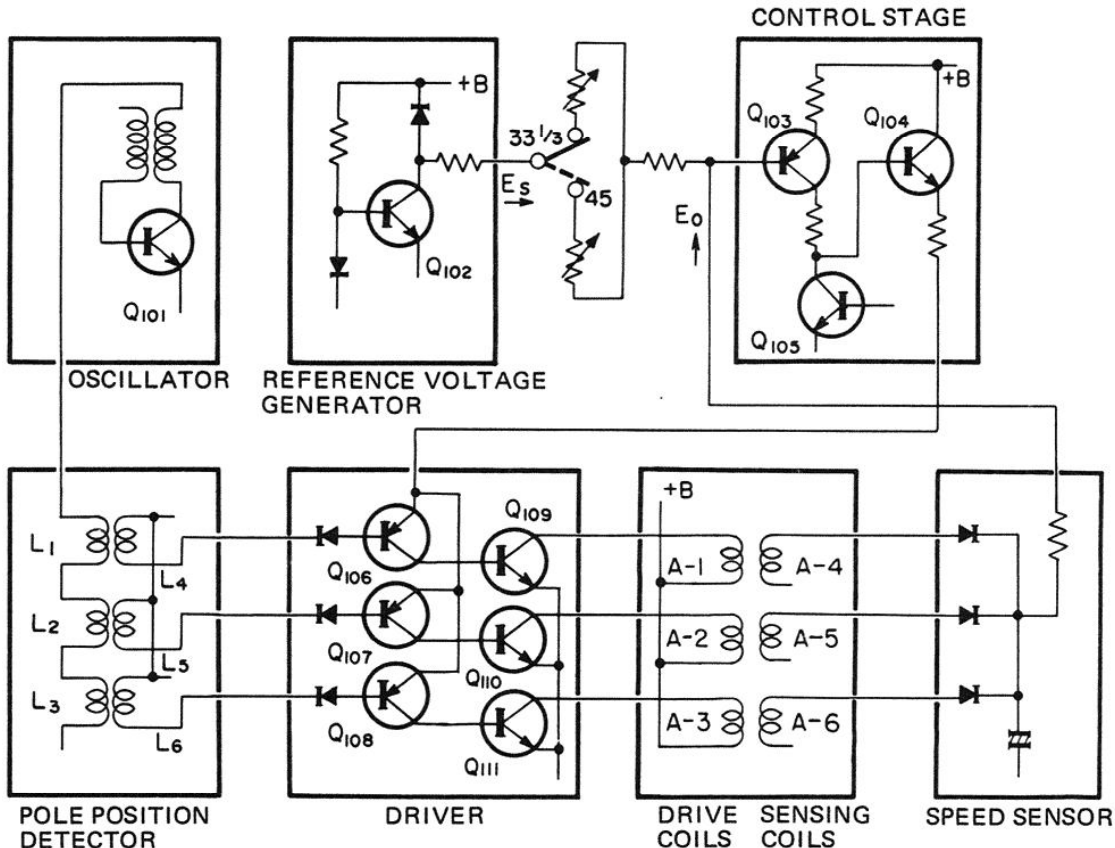


Fig. 2

### 3.2 PRIOR TO START OF PLAYING

1. After the tonearm has been swung into place for the start of playing of the record, moving the FUNCTION lever to the ON/UP position causes plate (1) to turn through connecting link (1) to the point at which pawl (1) engages plastic arm (1).
2. Plate (2) turns along with plate (1), through action of interconnecting spring (1). Upon completion of this action, the microswitch actuator is released, thereby applying power to the phono motor. The turntable begins to revolve.
3. Moving the FUNCTION lever to the DOWN position turns plate (1) still further through link (1). Pawl (2) engages plastic arm (1).
4. The arm elevator riding on the cam portion of plate (2) drops, lowering the tonearm onto the record.
5. Pawl (3) of plate (2) applies pressure to plastic arm (2), so that there is no interference to motion of the stop required for automatic return operation.

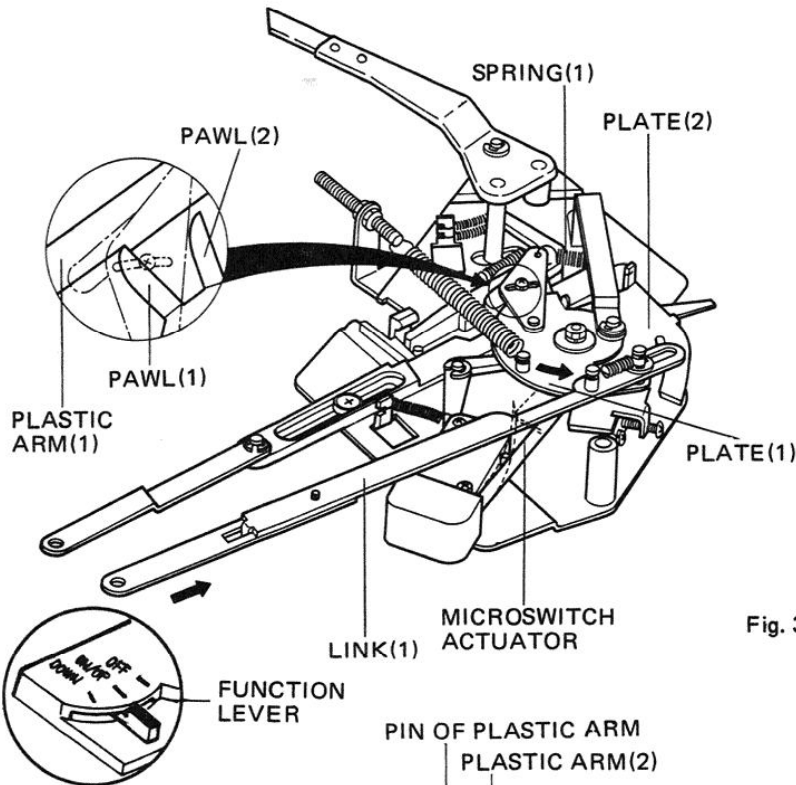


Fig. 3

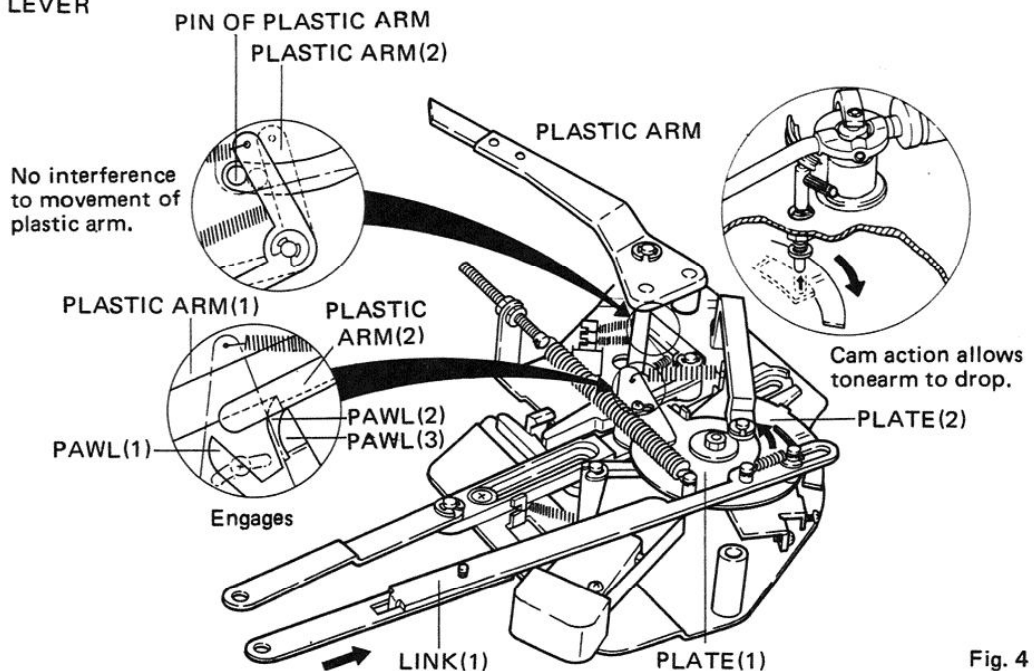


Fig. 4



### 3.3 RETURN OPERATIONS

1. When the tonearm is going to come to the inside (end) of the record, the pick-up lever applies pressure to the aluminum arm. This means that the arm is coupled indirectly to the plastic arm. Resultant action causes the end of the plastic arm to swing toward the center of the turntable.
2. As soon as the tonearm enters the return groove of the record, the pin on the bottom of the turntable imparts a kick to the plastic arm.
3. Motion of the plastic arm at this time acts on plastic arm (1), thereby releasing plate (1).
4. Plastic arm (3) then locks plastic arm (1). This action closes the shorting switch so that noise will not be generated as the tonearm separates from the record.
5. Plate (1) returns through action of spring (2). Plate (2) also returns.
6. Return of plate (1) results in the following sequence.
  - Pressure is applied to plastic arm (1) and the FUNCTION lever is forced back to the OFF position.
  - Action of link (2) returns the aluminum arm to the start position.
7. Return of plate (2) results in the following sequence.
  - Action at the cam portion of plate (2) lifts the tonearm from the record.
  - Plate (3) indirectly coupled to plate (2) swings the tonearm back to the arm rest.
  - Pressure is applied to the microswitch actuator, opening the microswitch contacts and stopping the phono motor.

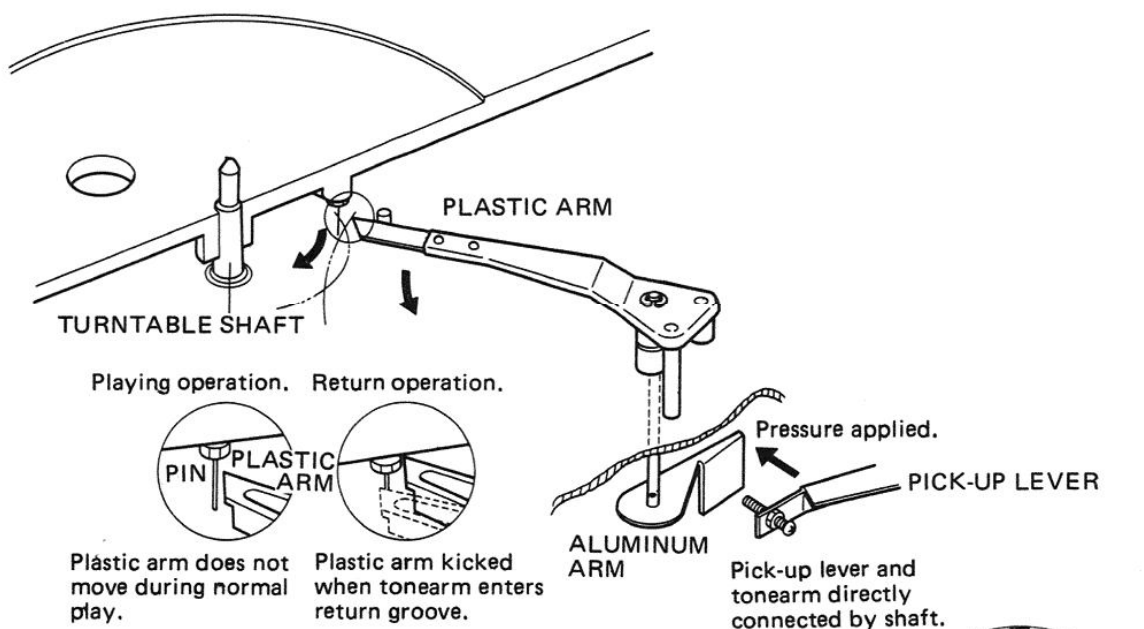


Fig. 5

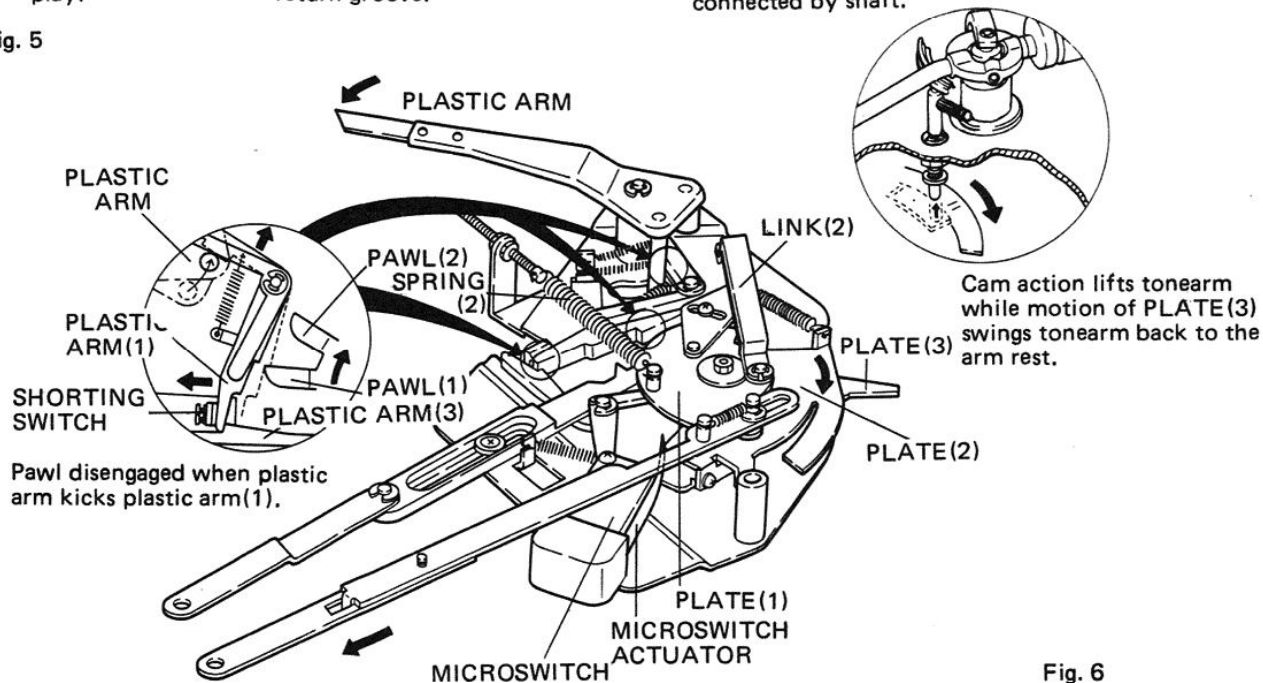


Fig. 6

### 3.4 STOPPING UNDER MANUAL

1. Moving the FUNCTION lever to the ON/UP position causes pawl (1) of plate (1) to engage plastic arm (1). Phono motor operation begins.
2. Moving the FUNCTION lever to the OFF position causes plastic link (4) to shift, in turn disengaging pawl (2) from plastic arm (1).
3. Action of spring (2) returns plate (1). As a result, the phono motor stops, as described under (10) and (12) on page 6.
4. Moving the FUNCTION lever to the DOWN position initiates playback of the record.

When this lever is moved from the DOWN to the OFF position, pawl (2) is disengaged from plastic arm (1) through action of plastic link (4).

The phono motor stops, as described under (4) through (7) on page 6.

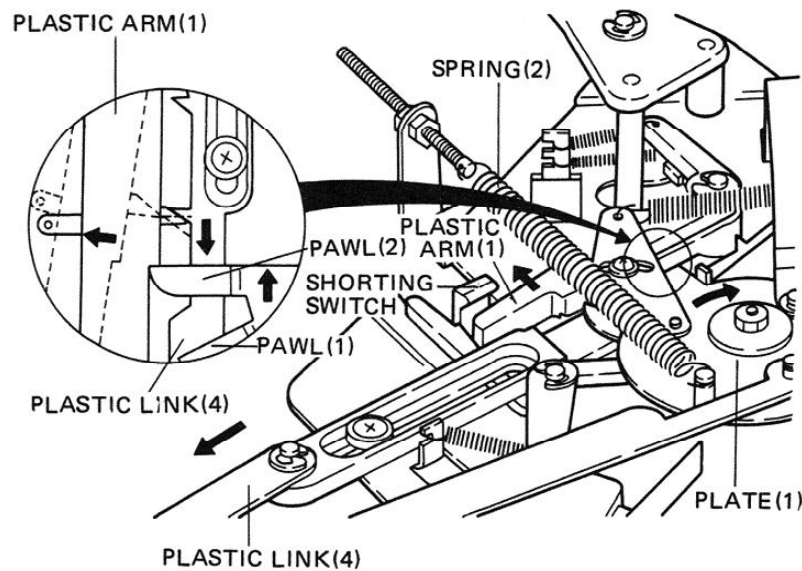


Fig. 7



## 4. ADJUSTMENTS

### 4.1 TONEARM WILL NOT RETURN TO THE ARM REST

If the pin at the back of the turntable is not (or incorrectly) engaged with the plastic arm the tonearm will not return to the arm rest. The probable causes of the trouble are as follows;

(a) The tip of the plastic arm bends downward.

(b) The pin is bent.

(c) The pick-up lever is incorrectly mounted. In case (a) or (b) is responsible for the trouble, correct the curve of the plastic arm or the bend of the pin. If necessary, replace the plastic arm as the case may be.

In case (c) is the cause of the trouble, adjust the screw provided at the tip of the pick-up lever so that the pick-up lever will push the aluminum arm when the head of the tonearm reaches the point of 130φ from the center of the turntable (Fig. 8).

### 4.2 TONEARM RETURNS TO THE ARM REST BEFORE THE RECORD FINISHES

The pick-up lever is incorrectly mounted. The best solution to this trouble is to replace the plastic arm.

This trouble also occurs when the plastic arm fails to move smoothly. Oil the automatic return mechanism.

### 4.3 TONEARM RETURN SPEED IS INCORRECT

If the return speed is too slow, first insure that the cause is not due to dirt.

Adjust spring (2) tension to give the correct spring, increasing tension to increase speed and reducing tension to decrease speed (Fig. 9).

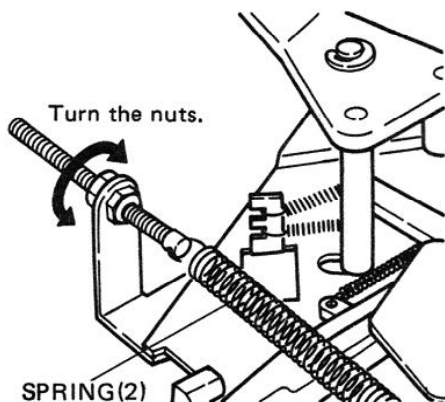


Fig. 9

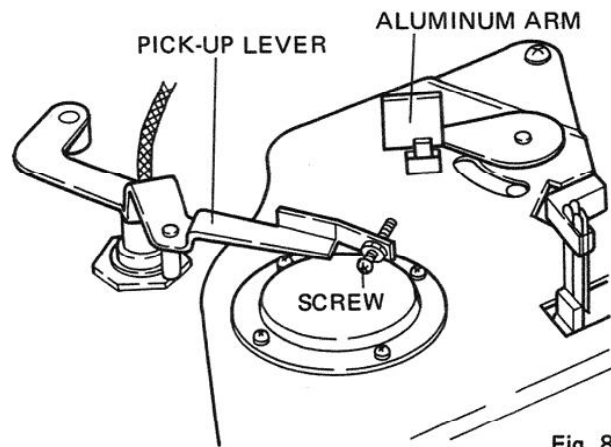


Fig. 8

### 4.4 TONEARM STOPS BEFORE IT REACHES THE ARM REST

This trouble occurs when the plate (1) and the plate (2) fail to move smoothly.

Oil the plate (1) and plate (2) first and see if they move smoothly.

If not, replace them.

### 4.5 TONEARM HITS THE INSIDE OF THE ARM REST

See if the head of the tonearm rises 5~10mm off the turntable with the FUNCTION lever set to OFF. If the tonearm rises incorrectly, adjust the height of the arm rest by means of the screw provided on the arm rest base; if not, adjust the height of the elevator rubber by means of the adjust screw on the elevator arm shaft (Figs. 10, 11).

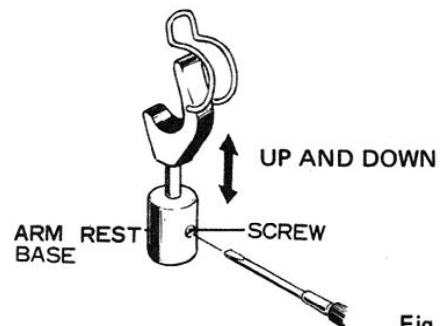


Fig. 10

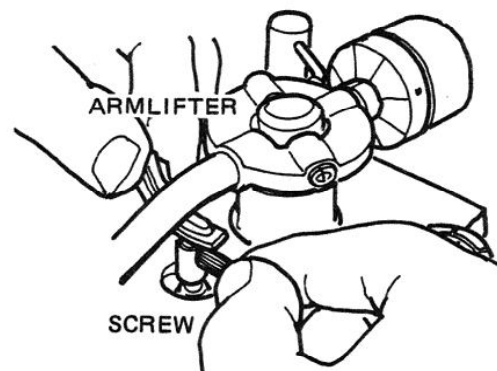


Fig. 11



#### 4.6 TONEARM BOUNDS IN THE ARM REST

The tonearm hits the inside of the arm rest and bounds. The tonearm moves too fast, correct the speed in the manner described in "Tonearm return speed is incorrect."

#### 4.7 ARM ELEVATOR WILL NOT MOVE AT A CORRECT SPEED

Adjust the tension of the spring (1) attached to the plate (2). Turning the screw clockwise will make the plate (2) move slowly: turning it counterclockwise will make the plate (2) move fast (Fig. 12).

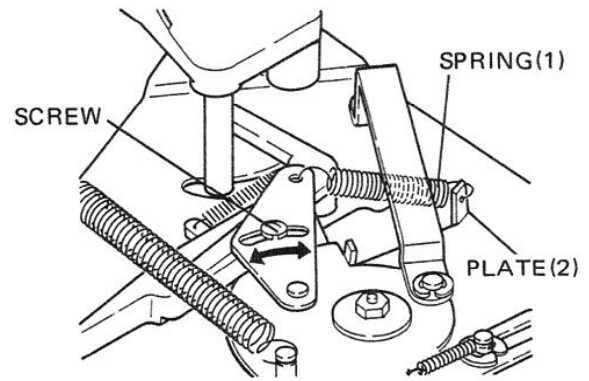


Fig. 12

#### 4.8 TURNTABLE WILL NOT TURN OR STOP

This trouble indicates that the microswitch is not functioning correctly. Repeat automatic return cycle several times and adjust the microswitch actuator so that it performs ON, OFF action correctly (Fig. 13).

#### 4.9 ADJUSTMENT OF THE SHORTING SWITCH CONTACTS

If the shorting switch does not contact at the very moment the tonearm starts returning, a pulse noise may be reproduced through the speakers.

#### 4.10 ADJUSTMENT PROCEDURE

1. Set the FUNCTION lever to the OFF position.
2. Confirm that the plastic arm (5) is at the position shown in Fig. 14. If necessary, pull plastic link (4) so that (5) moves to this position.
3. Loosen the screw fixing the shorting switch contacts so that no gap remains between plastic arm (1) and the molded portion of the switch assembly.
4. At this time, contact clearance should be 0.3~0.7mm.

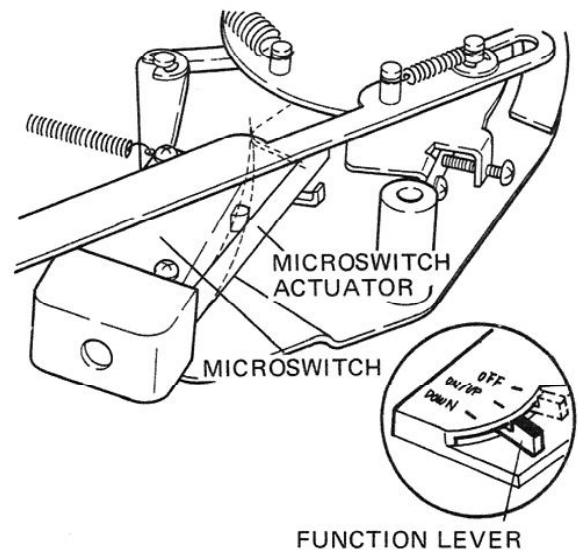


Fig. 13

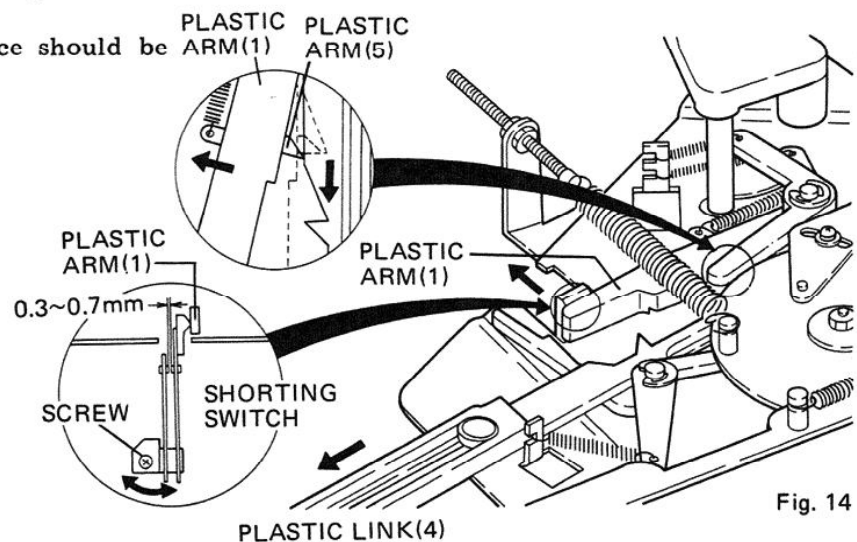


Fig. 14

### 4.11 ADJUSTMENT OF MOTOR SPEED

When adjustment of the fine speed control does not give a satisfactory speed, adjust the motor in accordance with the following procedure.

1. Remove the bottom cover.
2. Set the fine speed control to the midposition.
3. While observing the edge of the turntable platter with a strobe, adjust screws inside the motor as shown in Fig. 15.
4. Alternate switching between 33-1/3 and 45 rpm speeds while making adjustment. Make sure that both speeds are correct.

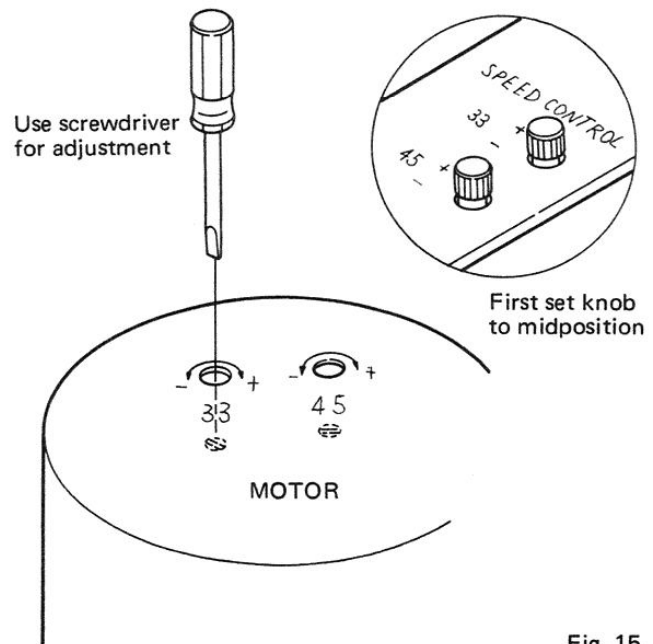
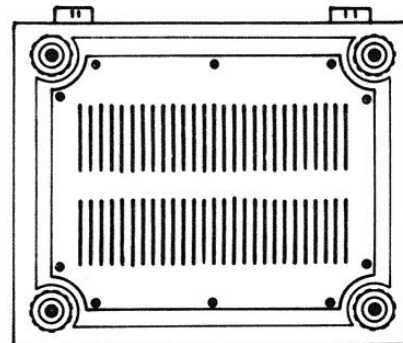


Fig. 15

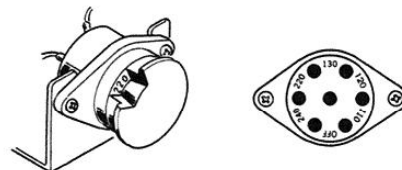
### 4.12 LINE VOLTAGE SELECTOR

If model PL-55 does not agree with the line voltage of your service area, set the unit to the proper line voltage as follows:

1. Remove the bottom cover, now you can see the line voltage selector plug (Fig. 16)
2. Pull out the line voltage selector plug and put it back as shown in Fig. 16 for operation on 240V, 220V, 130V, 120V or 110V.



To remove bottom plate, unscrew a total of 10 screws.



Insert selector plug so that correct voltage figure is visible in cut-off.

Fig. 16







**NOTES:**

N . . . . . nut  
 FW . . . . . flat washer  
 SW . . . . . spring washer  
 E . . . . . E-type washer  
 T . . . . . Tapping screw

Sems A . . . . . Screw and spring washer  
 Sems B . . . . . Screw, spring washer and flat washer  
 Sems F . . . . . Screw and flat washer

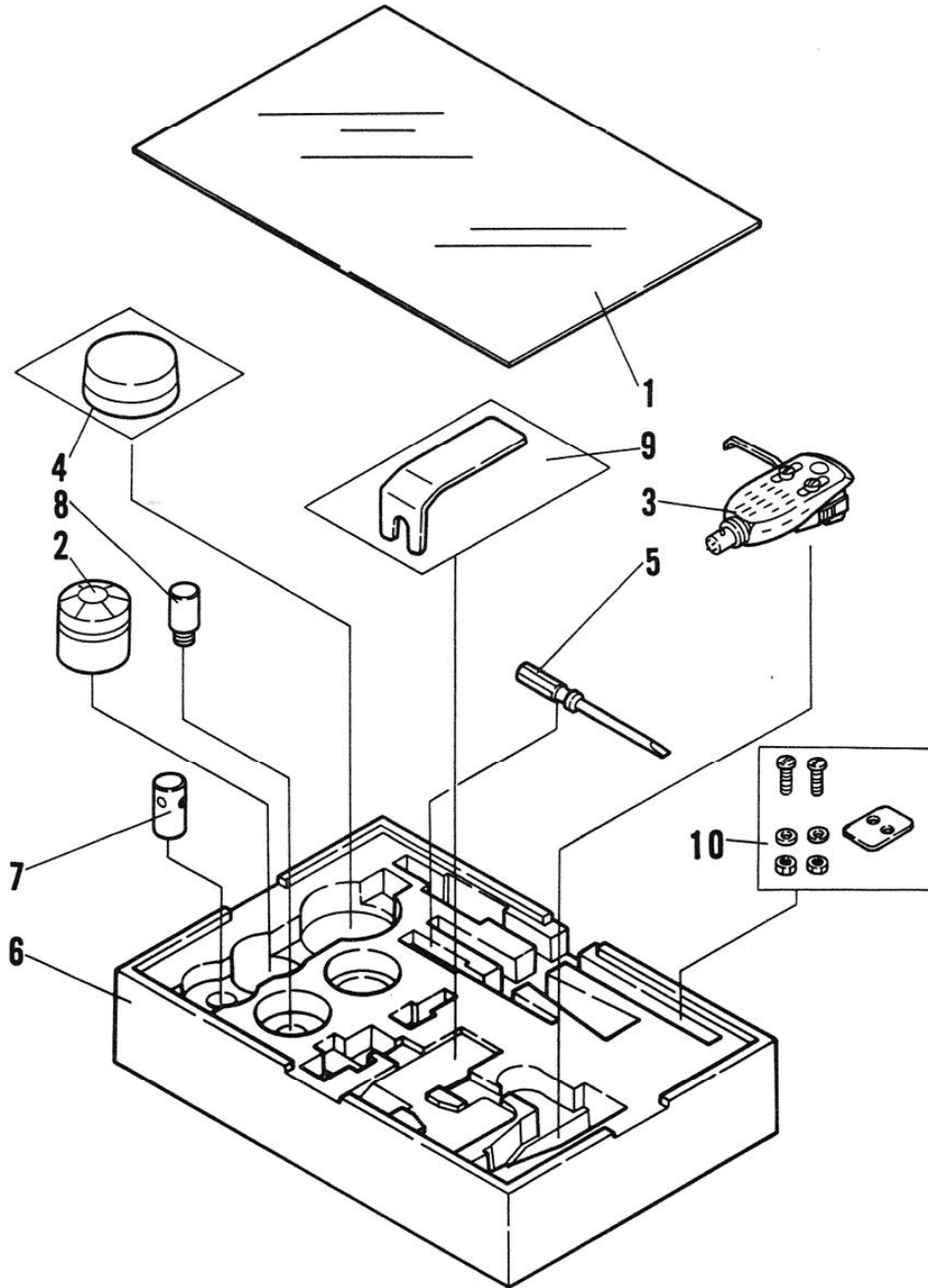
**PARTS LIST**

NOTICE: Any parts asterisked(\*) are subject to being not supplied.

Key No.	Description	Part No.
1	Ring	KAH-007-A
2	Rubber mat	KEB-058-A
3	Turntable platter	KXA-758-0
4	Motor	KXM-021-A
5*	Panel	KNA-668-B
6	Name plate	KNK-339-A
7	Name plate	KNK-340-A
8	Auto return assembly	KXA-784-0
9	Terminal	KKC-008-0
10*	Protection angle	KNA-375-0
11	Start lever assembly	KXA-761-0
11-1*	Start lever base	KXA-762-0
11-2*	Start lever	KXA-763-0
12	Anti-skating assembly	KXA-502-F
13	Start lever knob	KNK-122-0
14	Stopper unit	KXA-764-0
15	Elevation	KXA-768-0
16	Nut	B22-632-0
17	Washer	B71-619-0
18	Tone arm elevation assembly	KXA-760-0
18-1*	Shaft	KLA-679-0
18-2*	Holder	KLA-325-0
18-3*	Guide pin	KLA-326-0
18-4*	Spring	B31-696-0
19	Knob	N51-676-A
20	Anti-skating knob	KAA-008-A
21	Screw M3 x 10	
22	Shaft	N51-722-0
23	Arm clamp spring	KBH-125-0
24	Tonearm stand	KLA-671-0
25	Set screw M2.6 x 4	
26	Flat washer M6	
27	Nut M6	
28	Tonearm assembly	KPD-038-0
29*	Speed selector base	KNA-675-0
30	Knob	KLA-518-A
31	Potention meter	KCS-006-A
32	Nut M9	
33	Flat washer M9	
34	Speed selector assembly	KXA-766-A
34-1	Button	KLA-527-0
34-2	Spring	KBH-099-0
34-3*	Brind sheet	KED-023-0
34-4*	Lever	KNA-192-A
34-5*	Angle	KNA-190-D

Key No.	Description	Part No.
34-6	Spring	KBH-029-E
34-7*	Shaft	KLA-154-0
34-8*	Lever	KNA-191-B
34-9*	Washer	KLA-155-B
34-10	Microswitch	KSF-023-0
34-11*	Shaft	KLA-530-D
35	Power supply circuit assembly	KWR-030-B
36*	Boss	KNK-186-A
37	Transformer	KTT-015-0
38*	Transformer holder	KNA-621-0
39*	Transformer rubber	KEB-065-A
40	Voltage selector socket	KKP-006-0
41	Voltage selector plug	KKP-007-A
42*	Cord clamber	KNK-213-A
43*	Circuit board base	KNA-674-A
44	Printed circuit board	KNP-049-0
45	Ceramic capacitor 0.033 $\mu$ F	KCE-009-0
46	Ceramic capacitor 0.01 $\mu$ F	C43-003-0
47	Fuse 0.3A	KEK-005-0
48*	Terminal	K28-008-0
49*	Terminal	K28-005-0
50	Wood screw 3.1 $\phi$ x 16	
51*	Cord cranper	KEX-004-0
52	PU-plate assembly	KXA-765-A
53	Stopper	KNK-341-0
54	Dust cover	KNK-266-A
55	Lock plate	N61-084-0
56	Spring hinge	KXA-603-A
57*	Name plate	KAM-042-0
58*	Name plate	A55-013-A
59*	Cord clamber	KNA-522-B
60	Cord stopper	E32-056-0
61	Output terminal assembly	KXA-571-E
62	Under board assembly	KNA-677-A
63*	Angle	KNA-597-A
64	Insulator assembly A	KXA-660-A
65	Insulator assembly D	KXA-774-0
66	Insulator assembly B	KXA-661-A
67	Insulator assembly C	KXA-775-A
68	Bottom cover	KMS-074-0
69	Power cold PL-55	KDG-007-0
69	Power cord PL-55D	KDG-003-0
70	Name plate PL-55	KAM-058-0
71	Name plate PL-55D	KAM-056-0
72	PU Name plate	KNK-254-C
73	AC Name plate	KNK-253-D
74	Lateral balance weight	KXA-420-B
75	Main weight	KXA-756-0
76	Ovalcountersunk head screw M4 x 10	
77	Wood screw 3.1 $\phi$ x 13	
78	Upper board	KMM-071-A

5.2 ACCESSORY PARTS



NOTICE: Any parts asterisked(\*) are subject to being not supplied.

Key No.	Description	Part No.
1	Box cover	KHX-027-0
2	Main weight	KXA-756-0
3*	PC-Q1 PL-55D only PC-50 PL-55fv only	
4	Ep adaptor	KNK-055-0
5	Screw driver	KEX-002-A
6	Case	KHX-026-0
7	Lateral balance weight	KXA-420-B
8	Sub-weight	KLA-131-0
9	Over hange geage	KNK-290-0
10	Accessory assembly	KEA-008-A



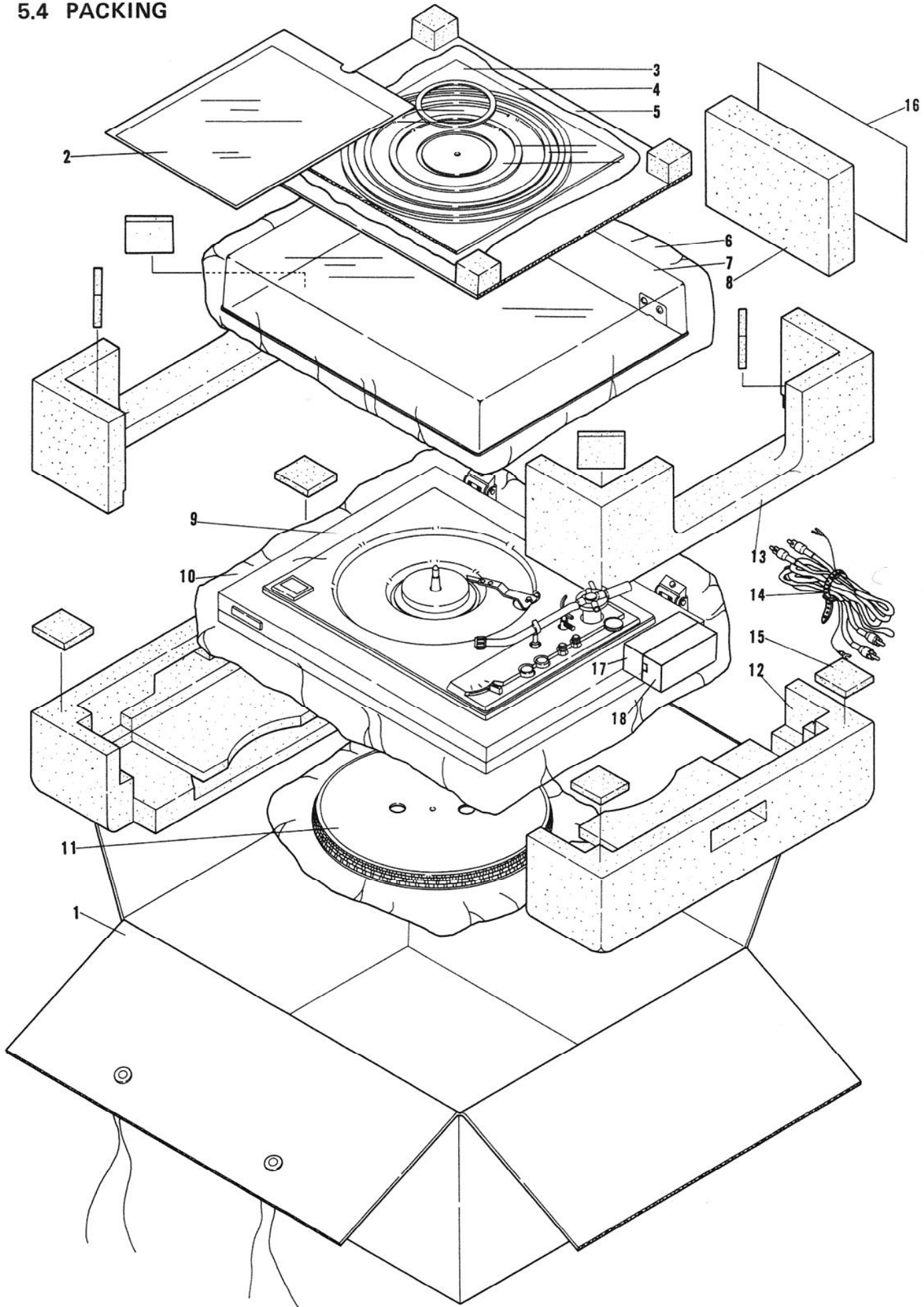


**PARTS LIST**

NOTICE: Any parts asterisked(\*) are subject to being not supplied.

Key No.	Description	Part No.
1*	Coupling plate	W72-604-0
2	Spring	KBH-041-0
3*	Spring fixed plate	N61-623-A
4*	Crank lever (A)	KXA-244-C
5	Washer (A)	B22-602-0
6*	Rotator plate unit (A)	KXA-246-A
7	Spring (B)	KBH-049-0
8	Rotator plate (A) collar	N51-607-0
9	Nut	B71-602-0
10	Washer (B)	B22-603-0
11*	Rotator plate (B)	KNA-289-0
12*	Return guide plate	KNA-288-A
13	Washer (C)	B23-601-0
14*	Return guide plate unit	W71-603-B
15	Teflon washer	KBF-007-0
16*	Crank lever (C)	KNA-371-0
17*	Cam lever	KNK-146-0
18	Spring (Return lever spring)	KBH-044-0
19*	Lock lever (B)	KNK-147-A
20*	Return lever	KNK-148-A
21	Spacer	KLA-252-0
22*	Slide cam	KNK-145-0
23*	Retaining collar	N51-609-0
24	Setscrew M2 x 4	
25*	Lock lever (A)	KNK-144-A
26	Lock lever spring	KBH-042-0
27	Spring (Lever spring)	B31-612-A
28	Spring (Return lever spring)	KBH-044-0
29*	Adjust lever unit	W72-697-A
30*	Auto-return mechanism unit	KXA-245-D
31	Aluminum plate	W71-602-0
32*	Cord fixer	M16-610-0
33	Spring (Return spring)	KBH-050-0
34	Screw	KLA-683-0
35*	Switch angle	KNA-284-A
36	Spring switch	KSN-001-A
37	Microswitch	KSF-008-0
38	Microswitch spring	N64-605-A
39*	Microswitch cover	N93-742-A
40	Washer (D)	B23-602-0
41*	Rotator plate unit (C)	W72-603-A
42*	Packing (Rubber)	KEB-035-0
43*	Rotator plate (C) cover	KNA-287-0
44	Fiber washer	KBF-006-0
45	Teflon washer	B23-635-0
46	Cord clamp	KEX-004-0

5.4 PACKING





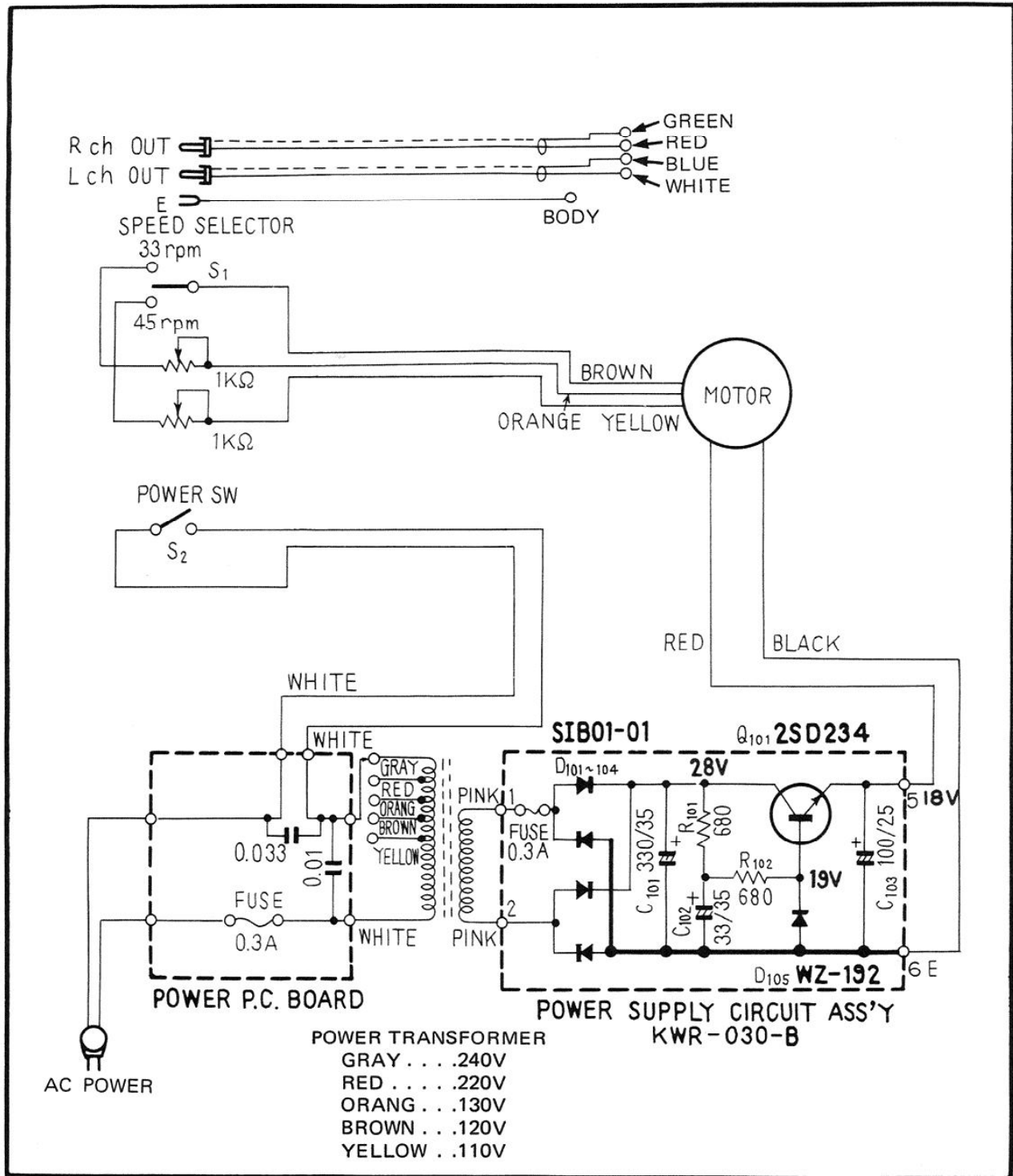
**PARTS LIST**

NOTICE: Any parts asterisked(\*) are subject to being not supplied.

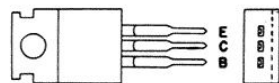
Key No.	Description	Part No.	
1	Packing case PL-55D/FV	KHK-238-A	
	Packing case PL-55/FV	KHK-243-A	
	Packing case PL-55/FVT	KHK-265-0	
2	Operating instructions PL-55D	KRB-040-0	
	PL-55	KRB-043-0	
3*	Cord board		
4*	Vinyl bag		
5	Card board		
6*			
7	Dust cover	KNK-266-A	
8	Accessory box	KHX-026-0	
9*	PL-55 or PL-55D		
10	Vinyl bag		
11	Turn table platter	KXA-758-0	
12	Styrotector	KHA-227-0	
13	Styrotector	KHA-226-0	
14	Output cord	KDE-037-C	
15	Dust cover pad PL-55D only	KHA-125-0	
16	Box cover	KHX-027-0	
17	Tonearm protector L	KNK-344-0	
18	Tonearm protector R	KNK-345-0	

# 6. SCHEMATIC DIAGRAMS AND P.C. BOARD PATTERN

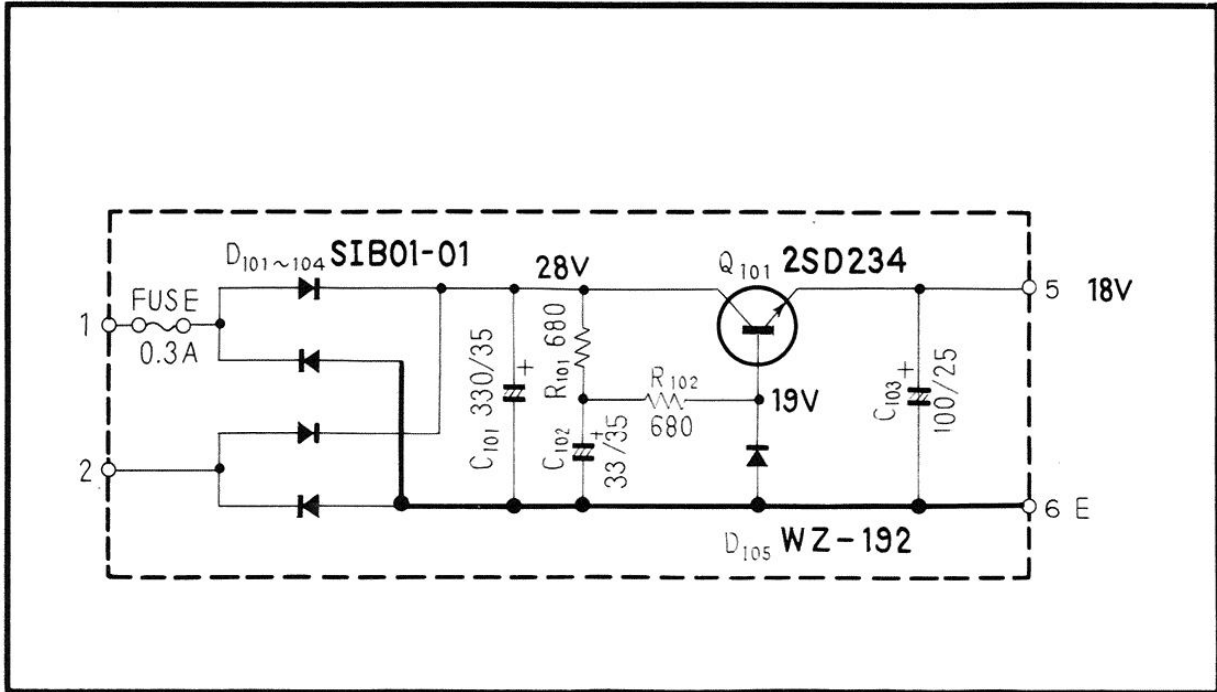
## 6.1 SCHEMATIC DIAGRAM



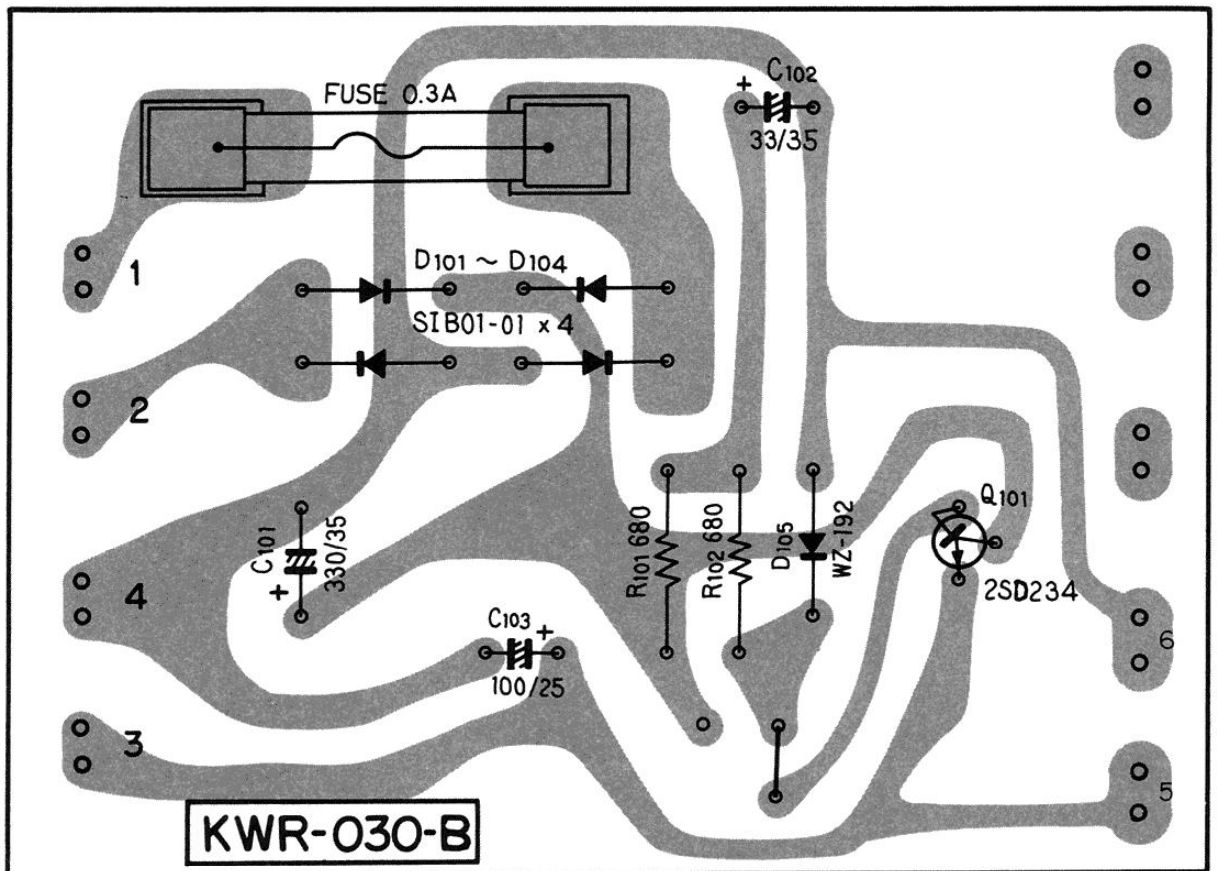
2SD234



6.2 POWER SUPPLY CIRCUIT ASSEMBLY



Foil Side





- CAPACITORS: IN  $\mu$ F UNLESS OTHERWISE NOTED p: pF
- RESISTORS: IN  $\Omega$ ,  $\frac{1}{4}$ W UNLESS OTHERWISE NOTED k: k $\Omega$ , M: M $\Omega$

## Parts List of Power Supply Circuit Assembly

### CAPACITORS

Symbol	Description	Part No.
C101	Electrolytic 330 35V	CEA 331P 35
C102	Electrolytic 33 35V	CEA 330P 35
C103	Electrolytic 100 25V	CEA 101P 25

### RESISTORS

Symbol	Description	Part No.
R101	Carbon film 680	RD $\frac{1}{4}$ PS 681J
R102	Carbon film 680	RD $\frac{1}{4}$ PS 681J

### SEMICONDUCTORS

Symbol	Description	Part No.
Q101	Transistor 2SD234	
D101	Diode SIB01-01	
D102	Diode SIB01-01	
D103	Diode SIB01-01	
D104	Diode SIB01-01	
D105	Zener diode WZ-192	

### OTHERS

Symbol	Description	Part No.
	Fuse 0.3A	E21-030-0
	Fuse holder	K91-006-0

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JULY 1973

Printed in Japan