ORDER NO. SD7908-1601

Service Manual

Turntable System

SL-1200MK2

(M), (MC)

SL-1200MK2

- The model SL-1200MK2 (M) is available in U.S.A. only.
- The model SL-1200MK2 (MC) is available in Canada only.

SPECIFICATIONS Specifications subject to change without notice. Weight and dimensions shown are approximate.

General

Power supply:	120 V, AC, 50 or 60 Hz
Power consumption:	12 W
Dimensions:	45.3 x 16.2 x 36 cm
(W x H x D)	(17-27/32"x6-19/64"x14-11/64")
Weight:	11 kg (24.3 lb)

Turntable section

Type:	Quartz direct drive Manual turntable
Drive method:	Direct drive
Motor:	Brushless DC motor
Turntable platter:	Aluminum diecast Diameter 33.2 cm (13-5/64") Weight 2 kg (4.4 lb.)
Turntable speeds:	33-1/3 rpm and 45 rpm
Pitch control:	All quartz-locked ±8% range
Starting torque:	1.5 kg·cm (1.3 lb·in)
Build-up characteristics:	0.7 s. from standstill to 33-1/3 rpm
Braking system:	Electronic brake
Speed change due to load torque:	0% within 1.0 kg·cm (0.87 lb·in)
Wow and flutter:	0.01% WRMS* 0.025% WRMS (JIS C5521) ±0.035% peak (IEC 98A Weighted)

* This rating refers to turntable assembly alone, excluding effects of record, cartridge or tonarm, but including platter. Measured by obtaining signal from built-in frequency generator of motor assembly.

Rumble:	–56 dB (IEC 98A Unweighted) –78 dB (IEC 98A Weighted)

Tonearm section

Type:	Universal
Effective length:	230mm (9-1/16")
Arm height adjustment range:	31.8–37.8 mm (helicoid part 6 mm) (1-21/32"–3-35/64") (helicoid part 15/64")
Overhang:	15 mm (19/32")
Effective mass:	12 g (without cartridge)
Offset angle:	22°
Friction:	Less than 7 mg (lateral, vertical)
Tracking error angle:	Within 2°32' (at the outer groove of 30 cm (12") record Within 0°32' (at the inner groove of 30 cm (12") record
Stylus pressure adjustment range:	0–2.5 g
Applicable cartridge weight range:	6–10 g
(with auxiliary weight):	13.5–17.5 g (including headshell) 9.5–13 g
(with shell weight):	17–20.5 g (including headshell) 3.5–6.5 g 11–14 g (including headshell)
Headshell weight:	7.5 g

Technics

Panasonic Company
Division of Matsushita Electric
Corporation of America
One Panasonic Way, Secaucus,
New Jersey 07094

Panasonic Hawaii, Inc.
320 Waiakamilo Road, Honolulu,
Hawaii 96817

Matsushita Electric of Canada Ltd.
5770 Ambler Drive,
Mississauga, Ontario
L4W 2T3

■ CONTENTS

■ DISASSEMBLY PROCEDURE

How to remove panel cover

1. Remove head shell and turntable.
2. Secure arm with arm clamp.
3. Remove 5 screws Ⓐ of the panel cover as shown in Fig. 1.

How to remove stater frame coil and F.G detector coil

4. Remove 3 connectors Ⓑ and 2 read wires Ⓒ from power transformer as shown in Fig. 2.
5. Remove 3 screws Ⓓ of the drive circuit board and 3 screws Ⓔ of the stater frame cover as shown in Fig. 2.
6. Disconnect 18 soldered parts Ⓕ of the stater coil and 4 soldered parts Ⓖ of the F.G detector coil as show in Fig. 3.
7. Remove 3 screws Ⓗ of the stater frame ass'y as shown in Fig. 3.

How to remove bottom base ass'y

8. Remove 4 audio insulators. **(Counterclockwise rotation)**
9. Remove 17 screws and spacer Ⓘ as show in Fig. 4.
10. Remove 11 screws Ⓙ as shown in Fig. 4.

How to remove stylus-illuminator lamp

11. Remove 2 screws Ⓚ of the stylus-illuminator lamp ass'y as shown in Fig. 5.
12. Remove 1 screw Ⓛ as shown in Fig. 6.

How to remove neon-illuminator L.E.D.

13. Remove 4 screws Ⓜ as shown in Fig. 5.
14. Remove 1 circlip Ⓝ and switch cam Ⓞ as shown in Fig. 5.
15. Remove strobo-illuminator case.

How to remove tone arm

16. Remove 4 screws Ⓟ of the arm base cover as shown in Fig. 5.
17. Remove 2 screws Ⓠ of the phono cord clamper as shown in Fig. 5.
18. Remove phono cord clamper as shown in Fig. 7.
19. Remove 2 screws Ⓡ of the phono cord p.c.b. as shown in Fig. 8.
20. Remove 2 screws Ⓢ as shown in Fig. 8.
21. Remove 2 screws Ⓣ of the silicon oil dumper as shown in Fig. 8.
22. Remove 3 screws Ⓤ as shown in Fig. 8.
23. Remove 2 screws Ⓧ of the tone arm as shown in Fig. 9.

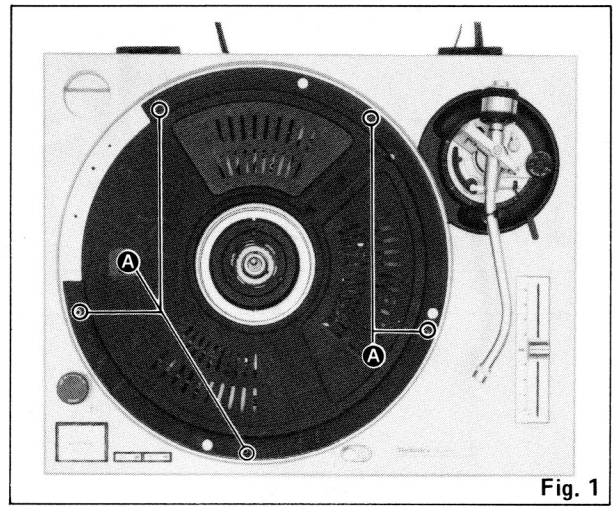


Fig. 1

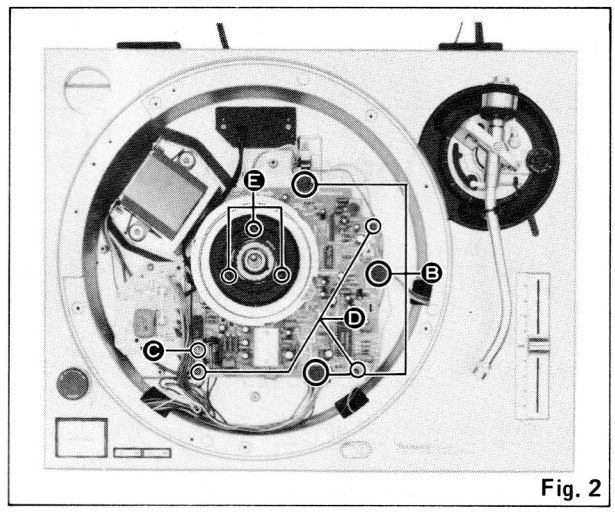


Fig. 2

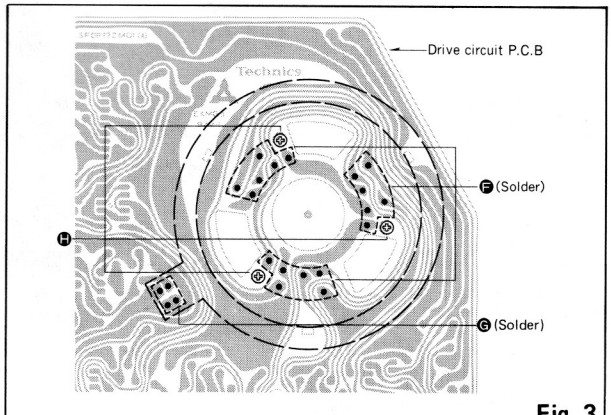


Fig. 3

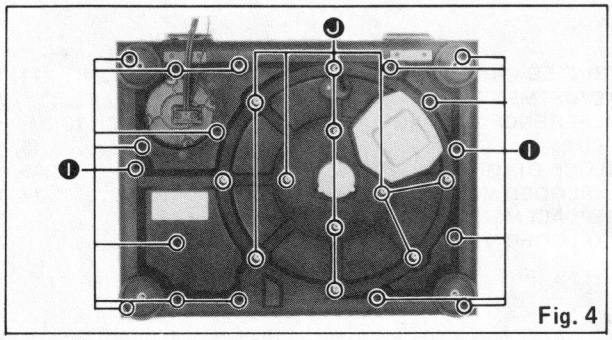


Fig. 4

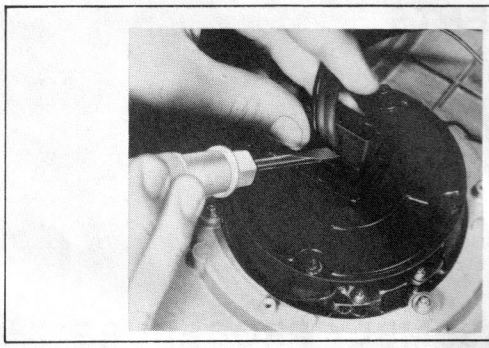


Fig. 7

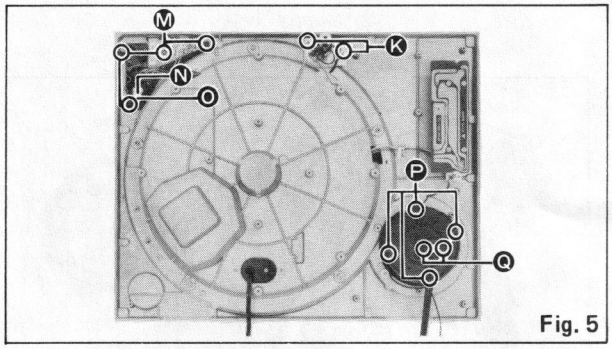


Fig. 5

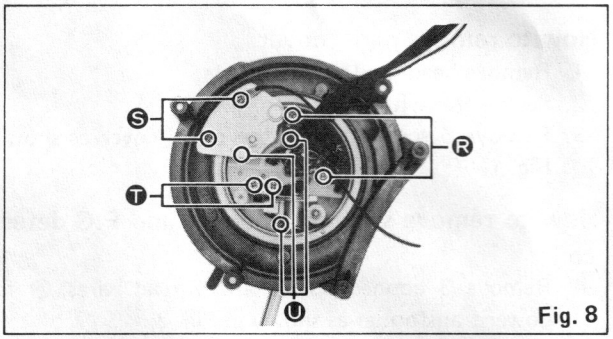


Fig. 8

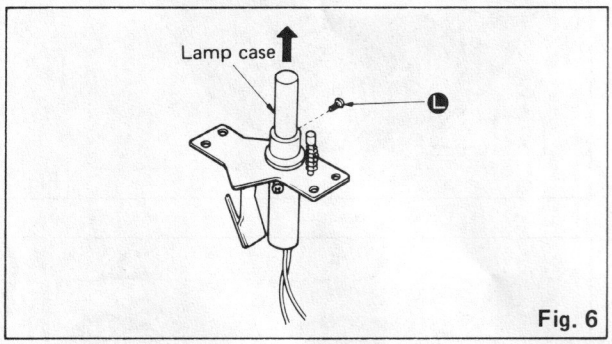


Fig. 6

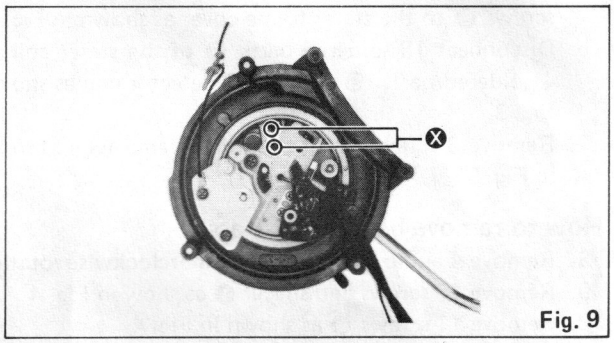


Fig. 9

■ PARTS IDENTIFICATION

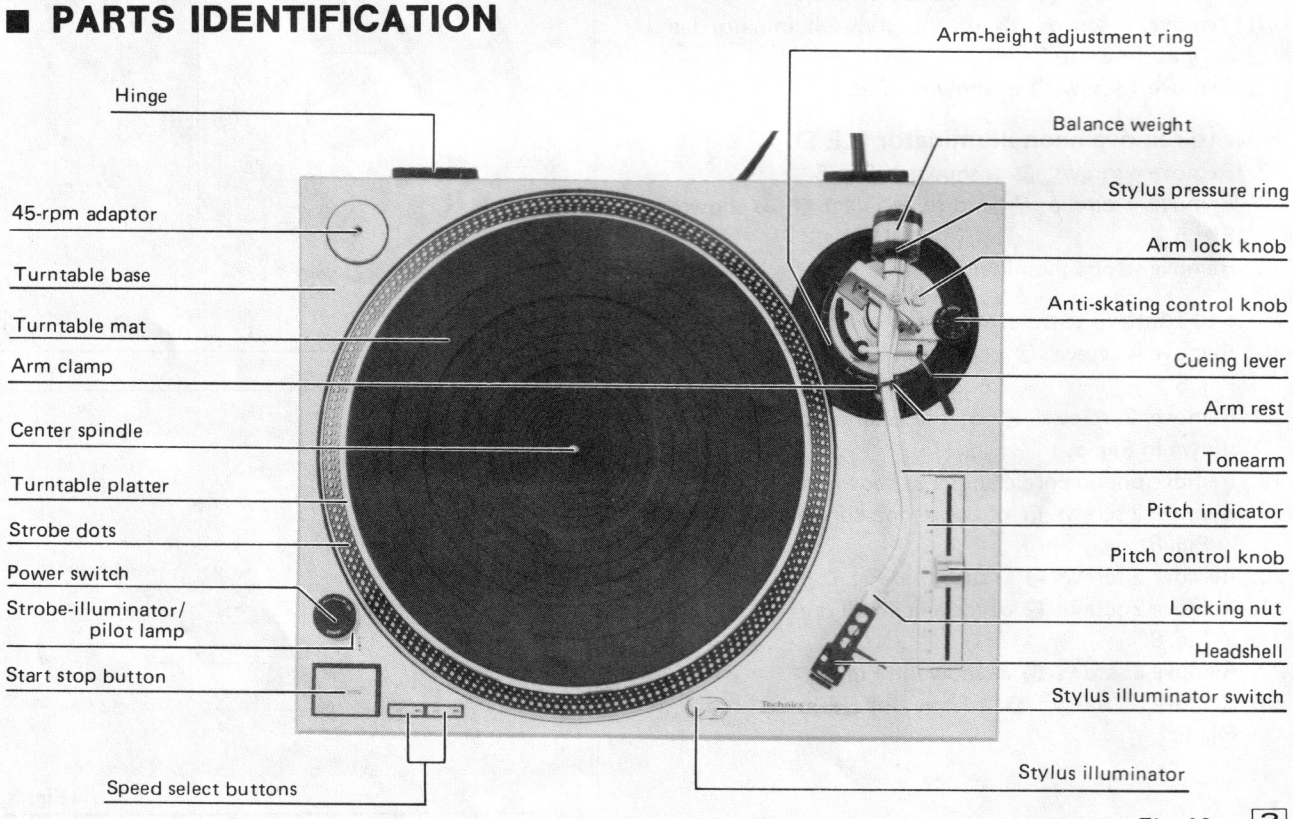


Fig. 10

■ ARM BASE ASSEMBLING PROCEDURE

1. Attach the control ring to the arm base seat. (The control ring should be roated counterclockwise.)
2. Completely tighten the control ring, and then loosen it 1.5~2.5 turns to set the scale to "3". (See Fig. 11)

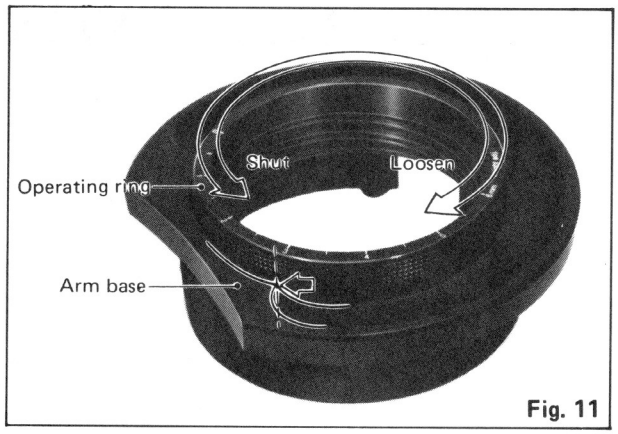


Fig. 11

3. Hold the arm base and set the red line mark on the arm base to the scale near "2", then turn the arm base clockwise. (See Fig. 12)
   Note:
   Take care not to allow deflection of the predetermined positions of the control ring and arm base seat.

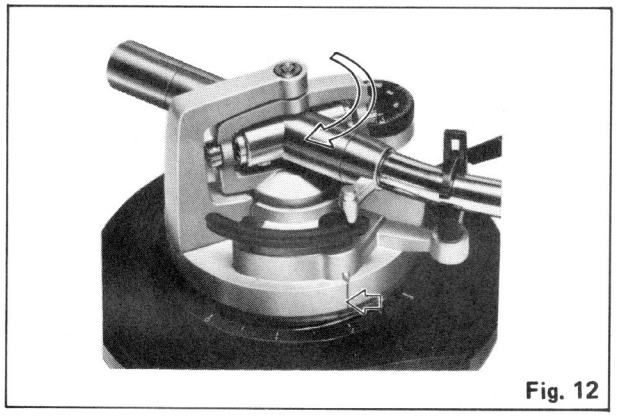


Fig. 12

4. Adjust the arm base so that the red line mark on the arm base is set to the scale "3" of the control ring. Next, secure the positioning base plate with two setscrews. (See Fig. 13)

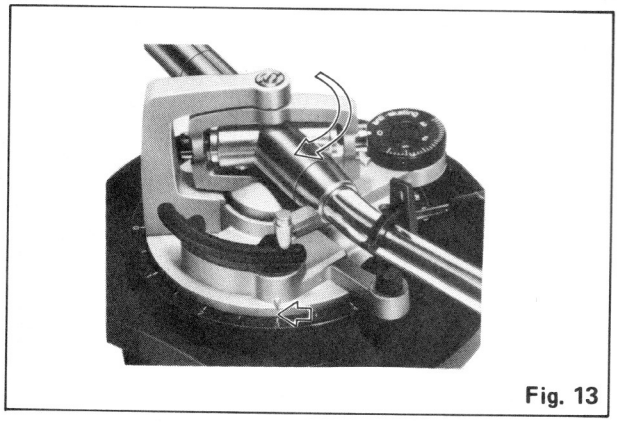


Fig. 13

5. Rotate the control ring and make sure that the arm base shifts within the range of 0~6mm. (See Figs. 14 and 15) If it does not shift within the specified range, the arm base position is deflected. In that case, disassemble the parts and check as specified in step 3.

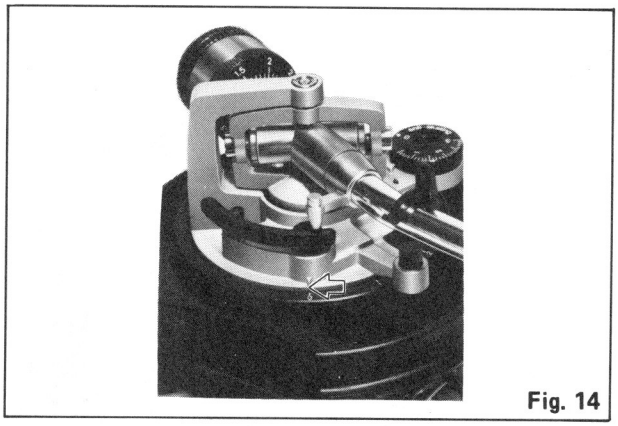


Fig. 14

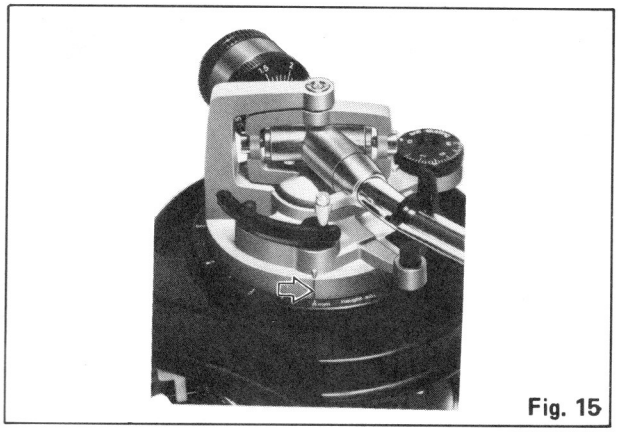


Fig. 15

■ ADJUSTMENT OF CANCELLER SPRING POSITION

If the arm body or PU base plate is replaced, be sure to set the canceller knob to "0.5" and make sure that the canceller spring is in contact with the arm shaft. (See Fig. 16) If the canceller spring is deflected, adjust it as follows:

1. Clamp the arm on the rest.
2. Set the canceller knob to "0.5".
3. Remove the PU base plate, adjust gear Ⓐ so that the canceller spring is in the position of Fig. 16.
4. Mount the PU base plate onto the arm base and check the spring position.

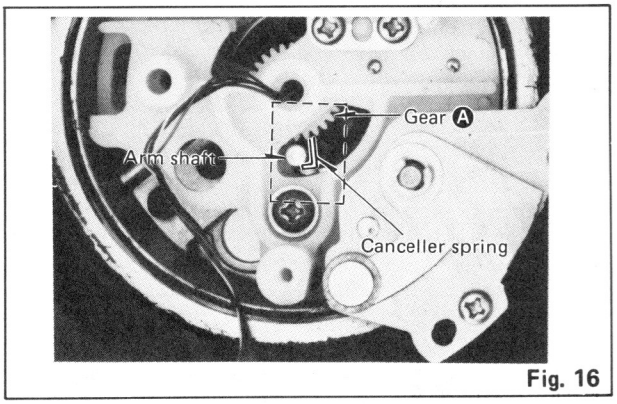


Fig. 16

■ FEATURES

Total quartz locked continuous pitch adjustment ±8%

Quartz-phase-locked control means almost perfect accuracy of turntable rotation.

But with most quartz turntables, this accurate control circuit must be cut out when the pitch control is employed. With the SL-1200MK2, however, pitch is variable continuously (analogically) by up to ±8% under total quartz-locked control. The pitch is controlled with a large sliding lever, located to the right of the turntable platter.

Four lines of platter markings are also provided indicating +6%, +3.3%, 0% (exact rated speed) and −3.3% change from rated speed.

Aluminum diecast cabinet and special heavy rubber base material provide acoustic isolation

The effects of external vibrations are dramatically reduced in the turntable by this new turntable construction.

The turntable base is precision-made aluminum diecast. And the underside of the main base is made of a heavy rubber material (special one-piece molding) which has excellent vibration resistance and absorbing characteristics. The turntable platter is also vibration-damped with specially fabricat rubber matting in the underside along with the thick turntable sheet (rubber mat). Four large-size insulating feet also help to absorb unwanted vibrations.

These features make SL-1200MK2 ideal for use with extra-high sound pressure levels.

High torque for fast starts

The integral rotor/platter motor delivers 1.5kg·cm (1.3lb·in) starting torque. This high torque gives very quick starts enabling the platter to reach 33-1/3 rpm within 0.7 s. (a quarter of a turn). This is a big advantage in many professional applications where fast cueing is a necessity.

Stylus illuminator for low-light conditions

You'll appreciate the stylus illuminator when you are using the turntable under low-light conditions. The illuminator can be hidden in the turntable base, should you need it, simply push a button and it will pop up gently and cast a beam of light across the disc in the area traversed by the tonearm.

You can then clearly see the spaces between the selections on the record, and cue the arm exactly where you want it. The illuminator can then be pushed back down into the base.

High sensitivity, low mass, gimbal suspension tonearm

The highly sensitive tonearm features a genuine gimbal suspension, the rotational center of which is precisely defined at one point. Bearings are finished to a tolerance of ±0.5 microns. This and the extra-closeness of pivot center to the bearings, result in the minimal friction of 7 mg (0.007 g) for both horizontal and vertical movement. Add to this the low 12-gram effective tonearm mass (including headshell, without cartridge) and you have a tonearm compatible with the wide range of compliances found in today's cartridges. If you choose a popular high compliance MM cartridge, the low range resonance frequency will appear in the correct area to avoid warp frequencies of records, but without entering the low end of the audio spectrum. This tonearm is provided with a computer designed, light-weight, high-rigidity headshell made of single-piece diecast aluminum to resist partial vibration. The universal design allows headshell interchangeability. Contacts are gold-plated.

Helicoid tonearm height adjustment

Arm height is adjustable within a range of 6 mm to accommodate varying cartridge dimensions. Adjustments are done with a precision-made helicoid.

Other fine features

- Quick stops are achieved with a fully electronic braking system.
- A strobe illuminator is provided. The stroboscope is controlled by the extremely stable quartz oscillator, rather than potentially unstable AC line frequency.
- Power on/off control built-into strobe illuminator for ease-of-operation.
- Soft-touch start-stop switch allowing precision control capability without the annoyance of accidental operation.
- Technics integral rotor/platter motor construction with full cycle detection FG.

Cross section of SL-1200MK2

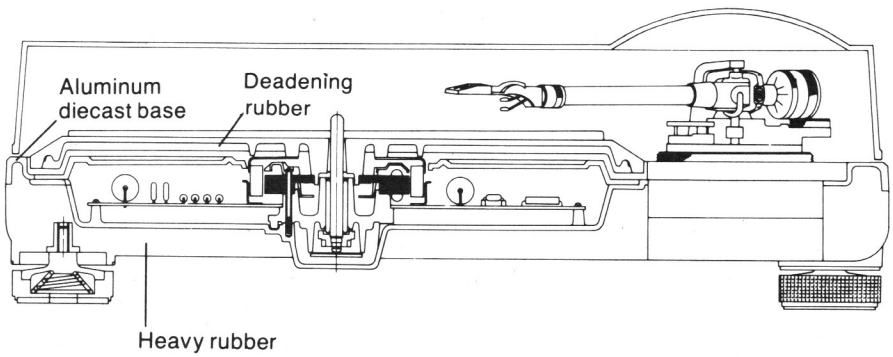


Fig. 17

■ ADJUSTMENTS

Pitch control (fine adjustment of speed) (See Figs. 18 and 19.)

When the pitch control knob is located at the center of the position after turning on the power, the green LED indicator is lit showing the operating condition for the predetermined speed (either 33-1/3 or 45 rpm). The pitch control is variable in a range of 0~±8%.

Adjustment should be done on the basis of indicator scale. Figures on the indicator show approximate percentages for variable pitch control.

When the strobe dots in 4 stages marked at the peripheral edge of the turntable appear to be stationary, variation of individual pitches is shown. **(See Fig. 19.)**

Note:

The strobe-illumination of this unit employs a strobe-illuminator LED synchronized with the precise quartz frequency.

For fine adjustment of the turntable speed, be sure to effect the adjustment according to the LED illumination.

The LED illumination is not synchronized with fluorescent lamps.

Adjustment of arm-lift height (See Figs. 20 and 21.)

The arm-lift height (distance between the stylus tip and record surface when cueing lever is raised) has been adjusted at the factory before shipping to approximately 8-13mm.

If the clearance becomes too narrow or too wide, turn the adjustment screw clockwise or counterclockwise, while pushing the arm lift down.

Clockwise rotation

—distance between the record and stylus tip is decreased.

Counterclockwise rotation

—distance between the record and stylus tip is increased.

Note:

As the adjusting screw has hexagonal head, be sure to make the adjustment while depressing the arm lift, or the screw will not move freely.

Also be sure that the hexagonal head retracts correctly into the arm lift when the latter is released.

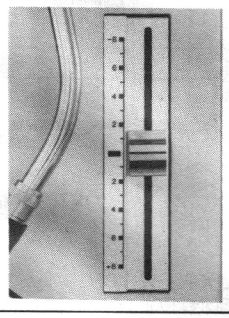
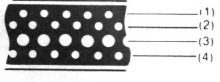


Fig. 18



(1) appears stationary at the pitch of +6%
(2) appears stationary at the pitch of +3.3%
(3) appears stationary at the pitch of 0%
(4) appears stationary at the pitch of −3.3%

Fig. 19

Adjustment of the tonearm height (See Fig. 22.)

The height of the tonearm can be adjusted up to 6 mm, and a scale is provided on the adjust ring in 0.5 mm increments. Be sure to set the proper arm height using the adjust ring scale and referring to the table.

Height of cartridge (mm) (H)	Scale reading on the arm-height adjust ring
15	0
16	1
17	2
18	3
19	4
20	5
21	6

For example, if the cartridge height is 17.5 mm, the arm-height adjust ring should be positioned at the intermediate location between 2 and 3 on the scale. **(See Fig. 22.)**

Caution:

Be sure to lock the tonearm by turning the arm lock knob in the direction indicated by the arrow after finishing the height adjustment for the tonearm.

Lubrication (See Fig. 23.)

Apply 2 or 3 drops of oil once after every 2000 hours of operation.

The time interval is much longer than that for conventional type motors (200-500 hours).

Please purchase original oil. **(Part number is SFWO 010.)**

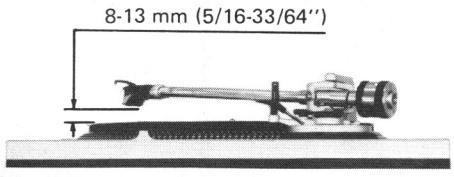


Fig. 20

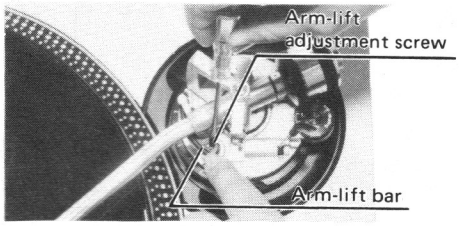


Fig. 21

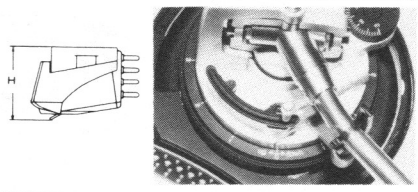


Fig. 22

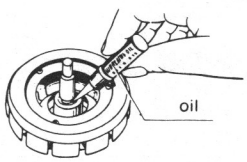
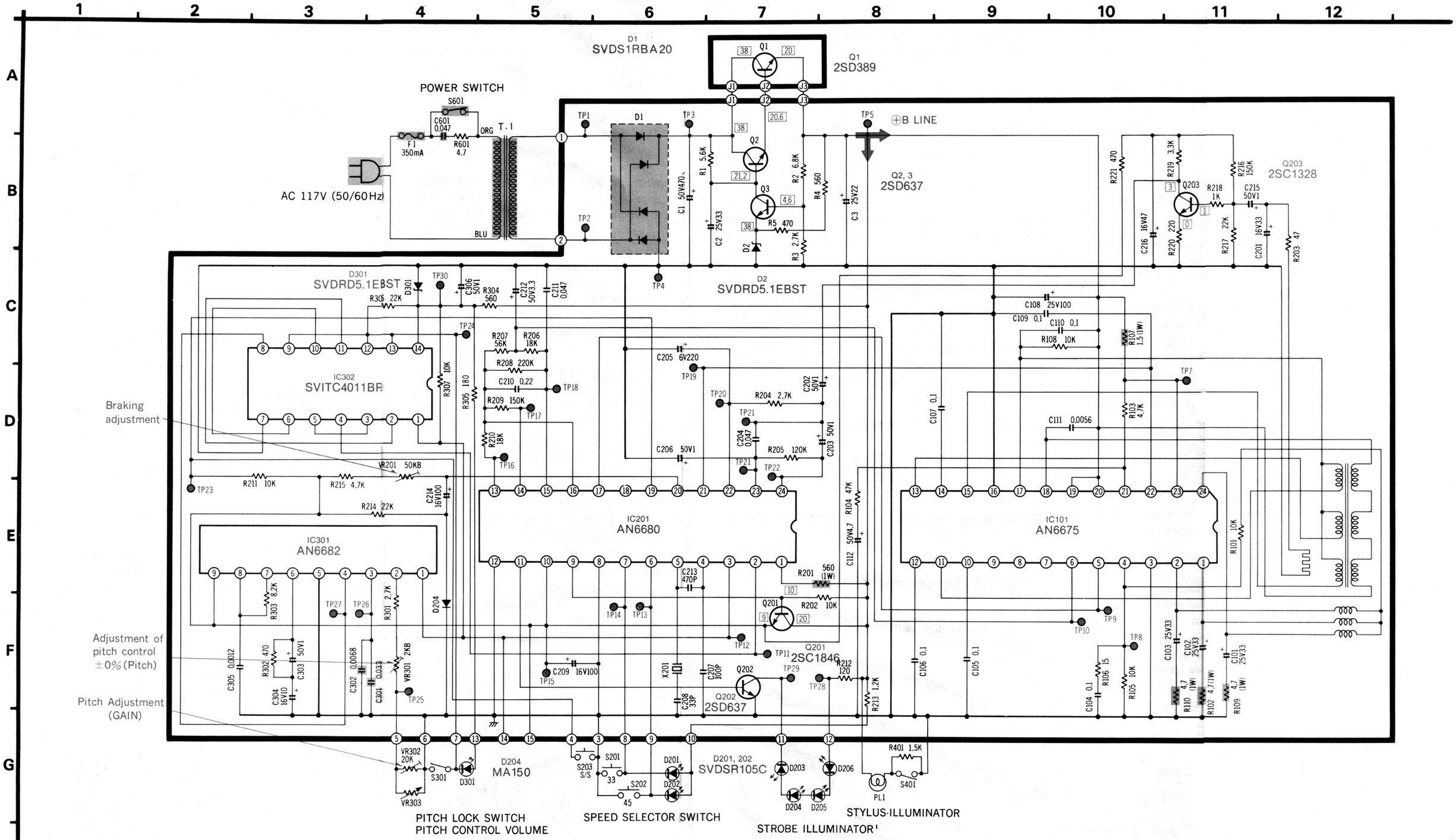


Fig. 23

Schematic Diagram (This schematic diagram may be modified at any time with the development of new technology.)



IMPORTANT SAFETY NOTICE

THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR SAFETY.
WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFACTURER SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC.

NOTO:

1. **S201:** Speed selector switch (33-1/3 r.p.m.) in "**ON**" position. (push condition)
2. **S202:** Speed selector switch (45 r.p.m.) in "**OFF**" position. (not-push condition)
3. **S203:** Start/Stop switch in "**OFF**" position. (not-push condition)
4. **S301:** Pitch lock switch in "**ON**" position. (center position)
5. **S401:** Stylus-illuminator switch in "**OFF**" position.
6. **S601:** Power switch in "**ON**" position.
7. The drive circuit IC voltage and wave form are not indicated in side the schematic diagram.
8. Indicated voltage values are the standard values for the unit measured by DC electronic circuit tester (high impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

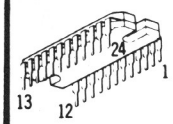
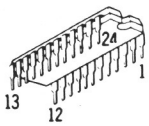
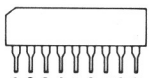
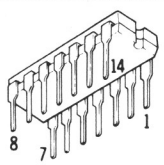
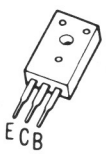
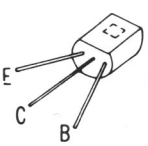
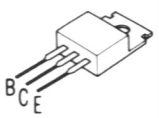
■ REPLACEMENT PARTS LIST (Electrical)

Notes: 1. Part numbers are indicated on most mechanical parts.
Please use this part number for parts orders.
2. ⚠ indicates that only parts specified by manufacturer be used for safety.
3. SL-1200MK2(M) → [M], SL-1200MK2 (MC) → [MC]

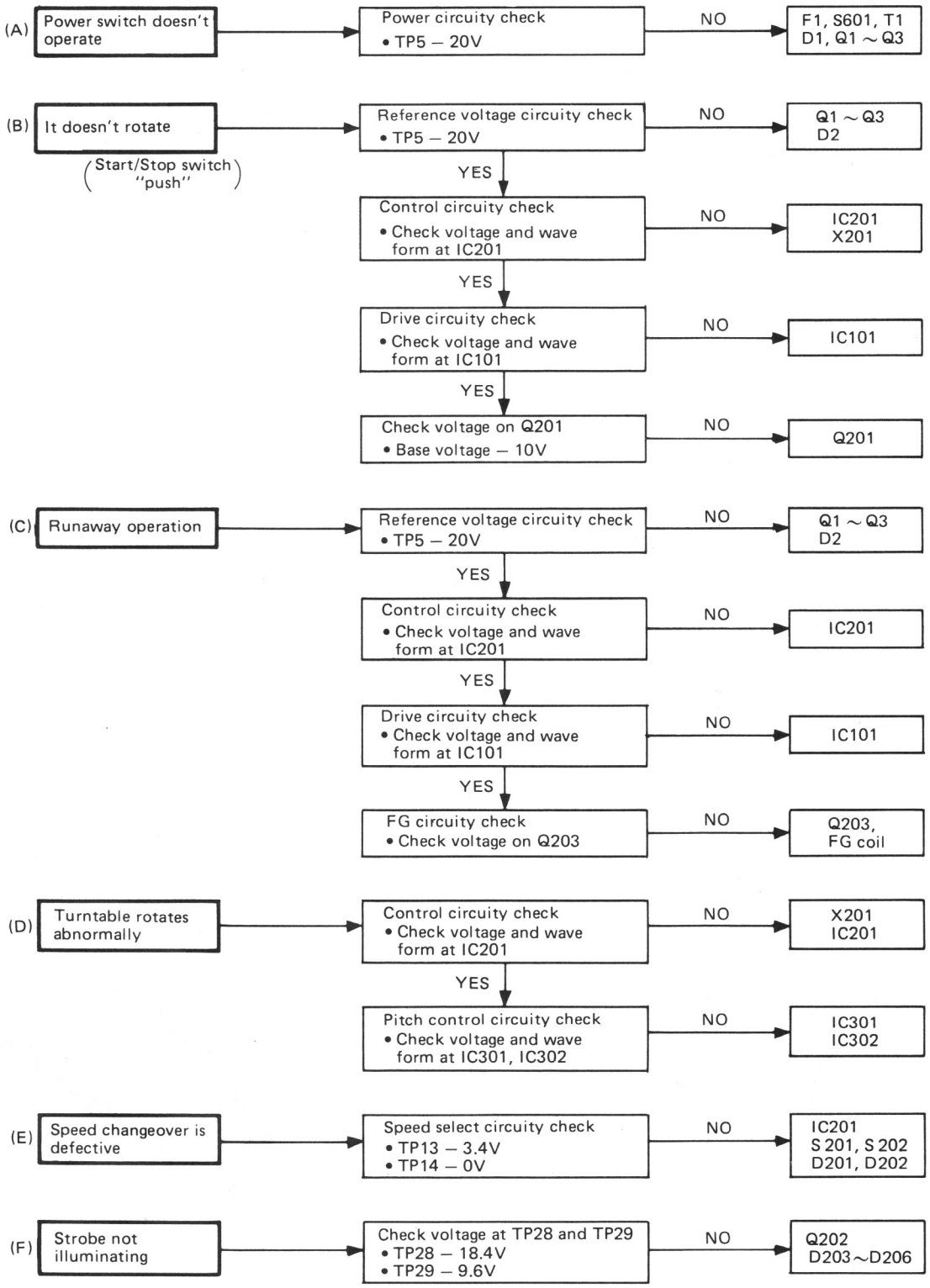
Ref. No.		Part No.	Part Name & Description
INTEGRATED CIRCUITS			
IC101		AN6675	Integrated Circuit
IC201		AN6680	Integrated Circuit
IC301		AN6682	Integrated Circuit
IC302		SVITC4011BP	Integrated Circuit
TRANSISTORS			
Q1		2SD389A-Q	Transistor
Q2, 3, 202		2SD637	Transistor
Q201		2SC1846-R	Transistor
Q203		2SC1328-T	Transistor
DIODES			
D1	⚠	**SVDS1RBA40**	Rectifier
D2, 301		**MA1051**	Diode, Zener 5.1V
D204		**MA162A**	Diode
D201, 202		SVDSR-105C	Light Emitting Diode
D203~206		SVDEBR5505S	Light Emitting Diode
D301		SVDGL-9PG2	Light Emitting Diode
CRYSTAL			
X201		SVQU306115	Crystal, 4.19328MHz Oscillator
VARIABLE RESISTORS			
VR201		EVLS6AA00B54	Braking Adjustment (BRAKE), 50kΩ (B)
VR301		EVMH2GA00B53	Adjustment of Pitch Control ±0%(PITCH), 5kΩ (B)
VR302		EVLS6AA00B54	Pitch Adjustment (Gain) 50kΩ
VR303		EVBJ05C19ABE	Pitch Control Volume
SWITCHES			
S201		EVQP5R04K	Switch, Speed Selector (33-1/3 r.p.m.)
S202		EVQP5R04K	Switch, Speed Selector (45 r.p.m.)
S203		SFDSSS5GL13C	Switch, Start/Stop
S401		SFDSD2MSL-4	Switch, Stylus-illuminator
S601	⚠	SFDSSS5GL-2	Switch, Power
LAMP			
PL1		SFDN172-01	Lamp, Stylus-illuminator
TRANSFORMER			
T1	⚠	SLT60EU7B	Power Transformer
FUSE			
F1	⚠	XBA2F03NU100	Fuse, 350mA
RESISTORS			
R1		**ERD25FJ562**	Carbon, 5.6kΩ, 1/4W, ± 5%
R2		**ERD25FJ682**	Carbon, 6.8kΩ, 1/4W, ± 5%
R3		**ERD25FJ272**	Carbon, 2.7kΩ, 1/4W, ± 5%
R4		**ERD25FJ561**	Carbon, 560Ω, 1/4W, ± 5%
R5		**ERD25FJ471**	Carbon, 470Ω, 1/4W, ± 5%
R101		**ERD25FJ103**	Carbon, 10kΩ, 1/4W, ± 5%
R102	⚠	ERX1ANJ4R7	Metal Film, 4.7Ω, 1W, ± 5%
R103		**ERD25FJ472**	Carbon, 4.7kΩ, 1/4W, ± 5%
R104		**ERD25TJ473**	Carbon, 47kΩ, 1/4W, ± 5%
R105		**ERD25FJ103**	Carbon, 10kΩ, 1/4W, ± 5%
R106		**ERD25FJ150**	Carbon, 15Ω, 1/4W, ± 5%
R107	⚠	ERX1ANJ1R5	Metal Film, 1.5Ω, 1W, ± 5%

Ref. No.		Part No.	Part Name & Description
R108		**ERD25FJ103**	Carbon, 10kΩ, 1/4W, ± 5%
R109, 110	⚠	ERX1ANJ4R7	Metal Film, 4.7Ω, 1W, ± 5%
R201	⚠	ERG1ANJ561	Metal Oxide, 560Ω, 1W, ± 5%
R202		**ERD25FJ103**	Carbon, 10kΩ, 1/4W, ± 5%
R203		**ERD25FJ470**	Carbon, 47Ω, 1/4W, ± 5%
R204		**ERD25FJ272**	Carbon, 2.7kΩ, 1/4W, ± 5%
R205		**ERD25TJ124**	Carbon, 120kΩ, 1/4W, ± 5%
R206		**ERD25TJ183**	Carbon, 18kΩ, 1/4W, ± 5%
R207		**ERD25TJ563**	Carbon, 56kΩ, 1/4W, ± 5%
R208		**ERD25TJ224**	Carbon, 220kΩ, 1/4W, ± 5%
R209		**ERD25TJ154**	Carbon, 150kΩ, 1/4W, ± 5%
R210		**ERD25TJ183**	Carbon, 18kΩ, 1/4W, ± 5%
R211		**ERD25FJ103**	Carbon, 10kΩ, 1/4W, ± 5%
R212		**ERD25FJ121**	Carbon, 120Ω, 1/4W, ± 5%
R213		**ERD25FJ122**	Carbon, 1.2kΩ, 1/4W, ± 5%
R214		**ERD25TJ223**	Carbon, 22kΩ, 1/4W, ± 5%
R215		**ERD25FJ472**	Carbon, 4.7kΩ, 1/4W, ± 5%
R216		**ERD25TJ154**	Carbon, 150kΩ, 1/4W, ± 5%
R217		**ERD25TJ223**	Carbon, 22kΩ, 1/4W, ± 5%
R218		**ERD25FJ102**	Carbon, 1kΩ, 1/4W, ± 5%
R219		**ERD25FJ332**	Carbon, 3.3kΩ, 1/4W, ± 5%
R220		**ERD25FJ221**	Carbon, 220Ω, 1/4W, ± 5%
R221		**ERD25FJ471**	Carbon, 470Ω, 1/4W, ± 5%
R301		ERO25CKF3301	Metal Film, 3.3kΩ, 1/4W, ± 1%
R302		**ERD25FJ471**	Carbon, 470Ω, 1/4W, ± 5%
R303		**ERD25FJ822**	Carbon, 8.2kΩ, 1/4W, ± 5%
R304		**ERD25FJ152**	Carbon, 1.5kΩ, 1/4W, ± 5%
R306		**ERD25TJ223**	Carbon, 22kΩ, 1/4W, ± 5%
R601		**ERD25FJ4R7**	Carbon, 4.7Ω, 1/4W, ± 5%
CAPACITORS			
C1		**ECEB1HS471**	Electrolytic, 470μF, 50V
C2		**ECEA1VS330**	Electrolytic, 33μF, 35V
C3		**ECEA1ES220**	Electrolytic, 22μF, 25V
C101, 102		**ECEA1VS330**	Electrolytic, 33μF, 35V
C103		**ECEA1VS330**	Electrolytic, 33μF, 35V
C104, 105		ECQM1H104KZ	Polyester, 0.1μF, 50V, ±10%
C106, 107		ECQM1H104KZ	Polyester, 0.1μF, 50V, ±10%
C108		**ECEA1ES101**	Electrolytic, 100μF, 25V
C109, 110		ECQM1H104KZ	Polyester, 0.1μF, 50V, ±10%
C111		ECQM1H562KZ	Polyester, 0.0056μF, 50V, ±10%
C112		**ECEA1JS4R7**	Electrolytic, 4.7μF, 63V
C201		**ECEA1CS330**	Electrolytic, 33μF, 16V
C202, 203		**ECEA50Z1**	Electrolytic, 1μF, 50V
C204		ECQM1H473KZ	Polyester, 0.047μF, 50V, ±10%
C205		**ECEA1AS221**	Electrolytic, 220μF, 10V
C206		**ECEA50Z1**	Electrolytic, 1μF, 50V
C207		ECCD1H101K	Ceramic, 100pF, 50V, ±10%
C208		ECCD1H390K	Ceramic, 39pF, 50V, ±10%
C209		**ECEA1ES101**	Electrolytic, 100μF, 16V
C210		ECQM1H224KZ	Polyester, 0.22μF, 50V, ±10%
C211		ECQM1H473KZ	Polyester, 0.047μF, 50V, ±10%
C212		**ECEA50Z3R3**	Electrolytic, 3.3μF, 50V
C213		ECCD1H471K	Ceramic, 470pF, 50V, ±10%
C214		**ECEA1ES101**	Electrolytic, 100μF, 25V
C215		**ECEA50Z1**	Electrolytic, 1μF, 50V
C216		**ECEA1ES470**	Electrolytic, 47μF, 25V
C301, 302	⚠	ECQK1123FZ	Polyester, 0.012μF, 125V, ± 1%
C303		**ECEA50Z1**	Electrolytic, 1μF, 50V
C304		**ECEA1HS100**	Electrolytic, 10μF, 50V
C305		ECQM1H122KZ	Polyester, 0.0012μF, 50V, ±10%
C306		**ECEA50Z1**	Electrolytic, 1μF, 50V
C601 [M]	⚠	ECQF1A473MD	Polyester, 0.047μF, 400V, ±20%
C601 [MC]	⚠	ECQU1A473ME	Polyester, 0.047μF, 400V, ±20%

■ TERMINAL GUIDE OF TRANSISTOR AND IC

AN6675	AN6680	AN6682	SVITC4011BP	2SC1846	2SC1328	2SD637	2SD389
							

■ TROUBLE SHOOTING



Printed Circuit Board

+ B lines
Earth (Ground) lines

1 2 3 4 5 6 7 8 9 10 11 12

A B C D E F G H

SPEED SELECTOR SWITCH

D202 S202 45 D201 S201 33 4 3 8 9 10 S203

START/STOP SWITCH

S401 STYLUS-ILLUMINATOR SWITCH

NL1 BLK BLK R401 1.5K ORG BRN

RED ORG YEL J3 J2 J1 Q1 [20] [38] C B E [20.6] Q1 2SD389

IC301 AN6682

IC302 SVITC4011BP

Q203 2SC1328

BRN RED ORG YEL

BRN RED ORG YEL D301 VR302 VR303 (S301) TP30 TP31

D205 D206 D204 D203

POWER TRANSFORMER

AC 117V (50/60 Hz) C601 0.047 F1 350mA R601 4,7

ORG BLU BRN RED BLU

S601 POWER SWITCH

BRN RED ORG YEL BLK BLU PPL

IC201 AN6680

Q201 2SC1846

IC101 AN6675

Q2, 3 2SD637

Q202 2SD637

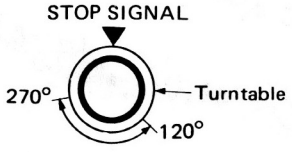
BLU BLU

11 12

■ ADJUSTMENT (Electrical)

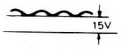
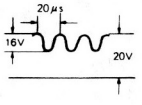
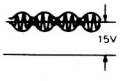
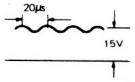
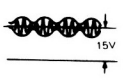
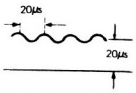
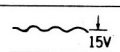
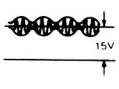
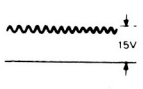
Adjustments (Electrical)

Notes:
- Make the following adjustments after replacing parts such as IC's, transistors, diodes, etc.
- Condition of the set.
  1. Power switch ..... ON
  2. Pitch control ..... Center position
  3. Speed selector switch ..... 33-1/3 r.p.m.
- Instruments to be used
  1. Tester
  2. Frequency counter

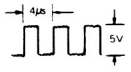
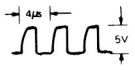
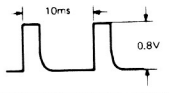
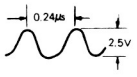
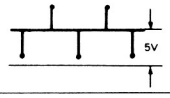
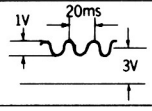
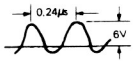
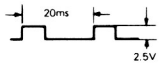
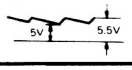
	Adjustment	Connection Points	Adjustment Point	Adjustment Method
A	Adjustment of pitch control ±0% (PITCH)	Frequency counter ⊕ — TP27 ⊖ — GROUND	VR301	1. Pitch control switch to center position. 2. Adjust VR301 for 262.08 kHz ±0.05 kHz of frequency.
B	Adjustment of pitch control gain	Tester TP31 and TP32	VR302	Adjust VR302 for 2.7 kΩ ±0.1 of resistance value
C	Braking adjustment (BRAKE)	–	VR201	Adjust VR201 for complete stop within 120° ~ 270° after stop signal initiated. (Turntable becomes free a few seconds after stop) 

■ REFERENCE VOLTAGE AND WAVEFORM AT EACH IC PIN

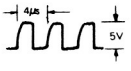
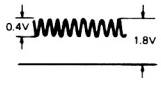
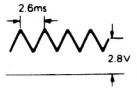
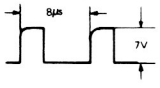
IC101 (AN6675)

	Start	Stop		Start	Stop		Start	Stop
①	2V	2V	⑫		15V	⑱	Same as at right	
②	2V	2V						
③	0V	0V						
④	5V	5V	⑬			⑲	20V	20V
⑤	5V	5V				⑳	20V	20V
⑥	5V	6.6V				㉑	20V	20V
⑦	0V	0V	⑭	15V	15V	㉒	0.2V	0.2V
⑧	5V	5V	⑮			㉓	20V	20V
⑨	0V	0V				㉔	1.7V	1.7V
⑩		15V	⑯	0V	0V			
⑪			⑰	15V	15V			

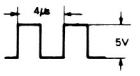
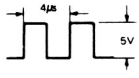
IC201 (AN6680)

	Start	Stop		Start	Stop		Start	Stop
①	2.5V	2.5V	⑧	0V	0V	⑯	5V	2.5V
②	Same as at right		⑨	9.8V	9.8V	⑰	5V	5V
			⑩	10V	10V	⑱	0V	0V
③	Same as at right		⑪	Same as at right		⑲	7.5V	0V
						⑳	0V	5V
						㉑	1.5V	0V
			⑫	0V	0V	㉒	3V	3V
④	Same as at right		⑬		0.2V	㉓		3V
⑤	Same as at right		⑭			㉔	2.8V	2.8V
⑥	3.4V	3.4V	⑮		8V			
⑦	0V	0V						

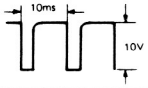
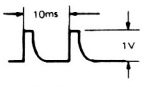
IC301 (AN6682)

	Start	Stop		Start	Stop		Start	Stop
①	Same as at right		④	Same as at right		⑧	Same as at right	
②	Same as at right		⑤	0V	0V	⑨	9V	9V
			⑥	3.9V	3.9V			
③	Same as at right		⑦	Same as at right				

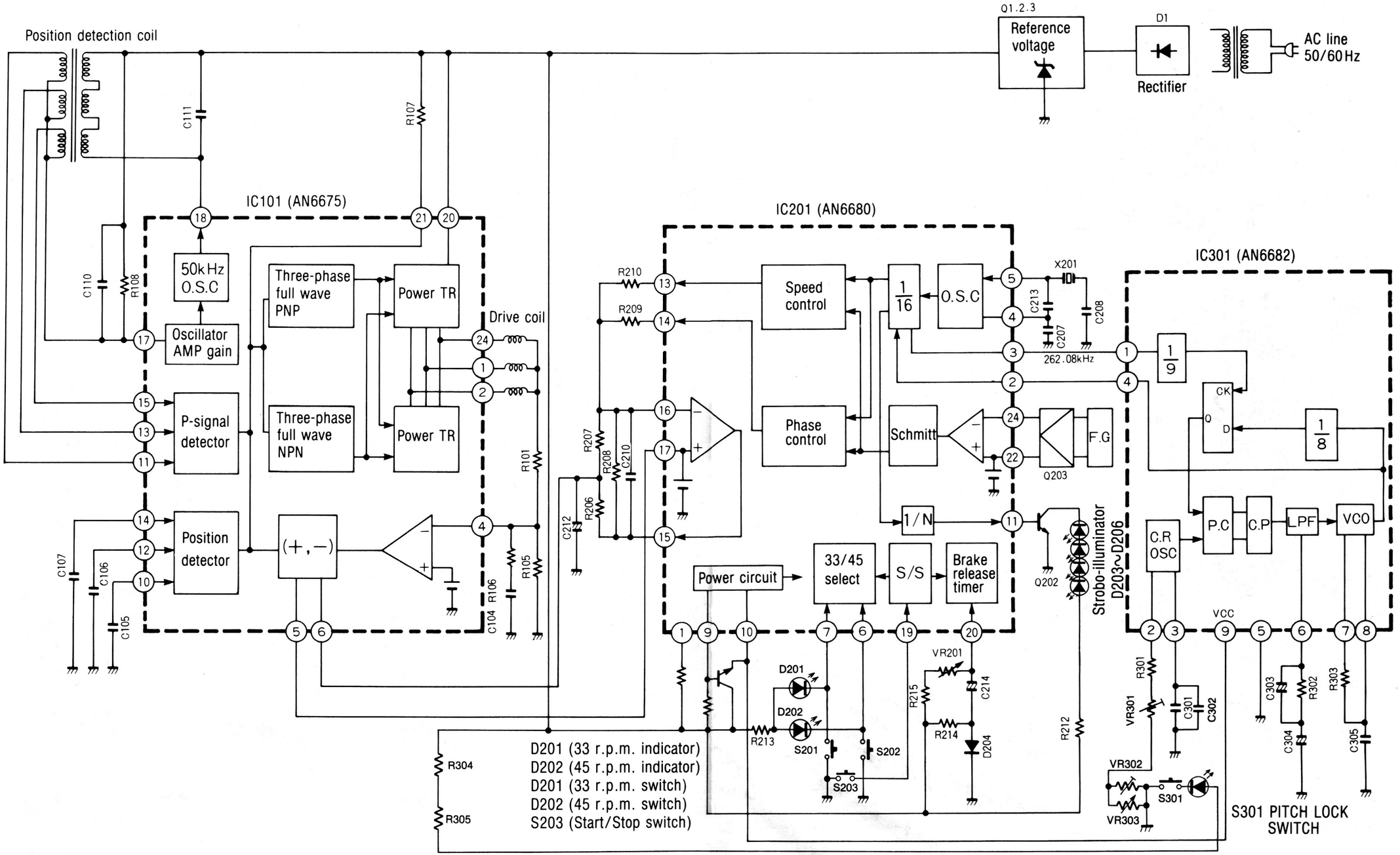
IC302 (SVITC4011BP)

	Start	Stop		Start	Stop		Start	Stop
①	Same as at right		⑤	Same as at right		⑨	5V	5V
						⑩	5V	5V
						⑪	5V	5V
②	5V	5V	⑥	5V	5V	⑫	0.6V	0.6V
③	Same as at right		⑦	0V	0V	⑬	0.6V	0.6V
			⑧	Same as at right		⑭	5V	5V
④	5V	5V						

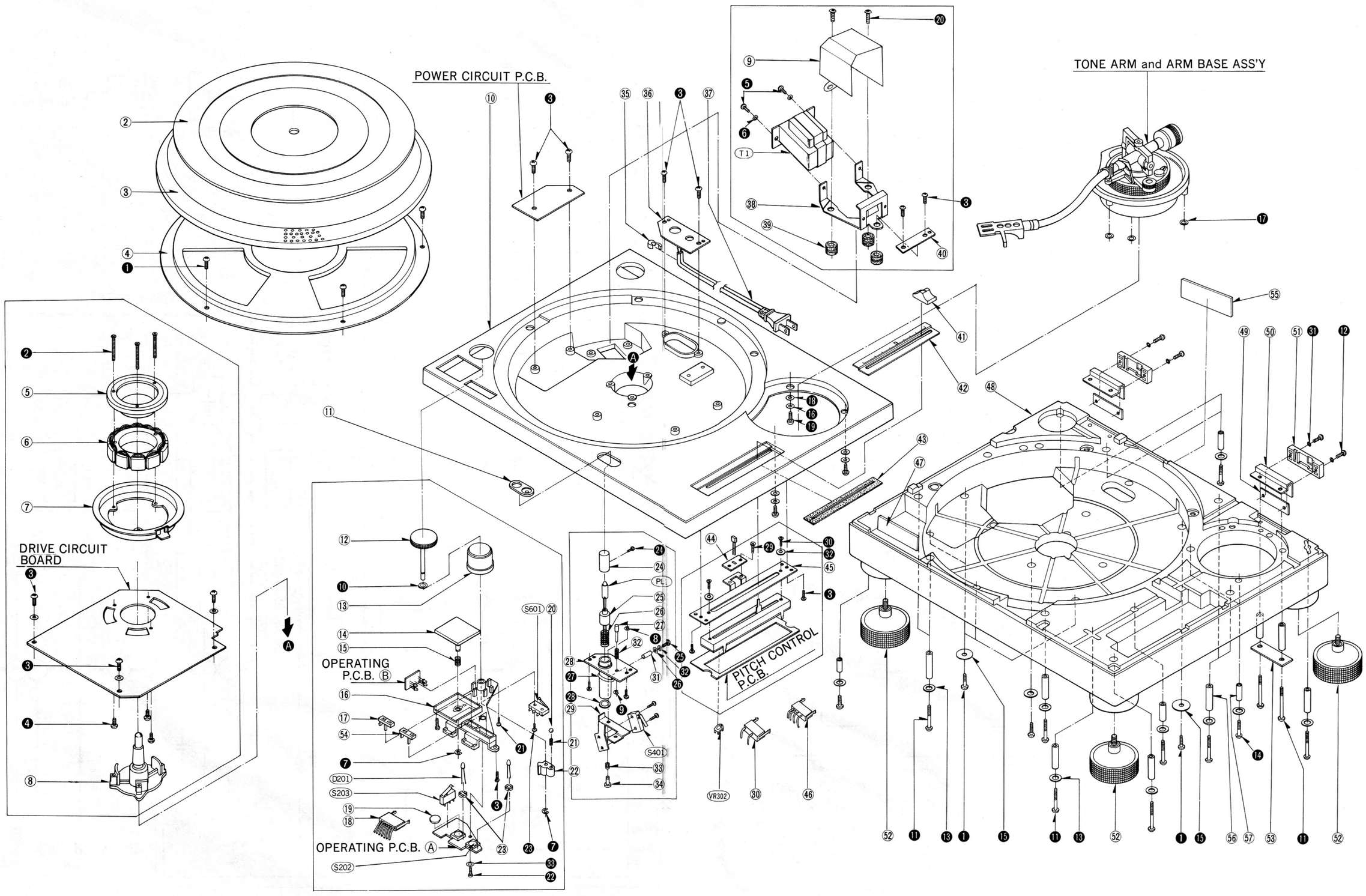
Q202 (2SD637)

	Start	Stop
E	0V	0V
C	Same as at right	
B	Same as at right	

■ BLOCK DIAGRAM



■ EXPLODED VIEWS



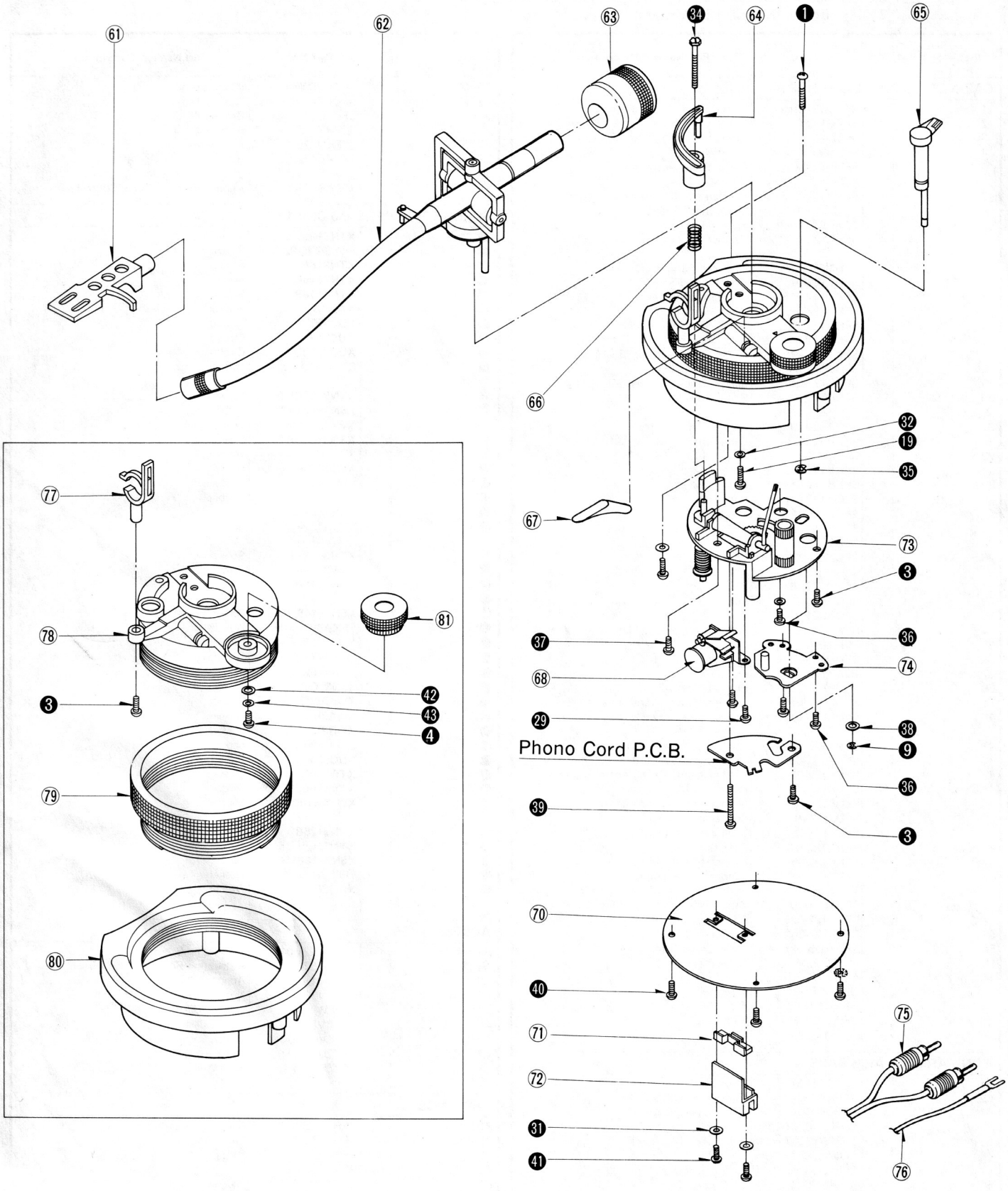
■ REPLACEMENT PARTS LIST (Mechanical)

Notes: 1. Part numbers are indicated on most mechanical parts.
Please use this part number for parts orders.
2. ⚠ indicates that only parts specified by manufacturer be used for safety.
3. SL-1200MK2(M) → [M] , SL-1200MK2(MC) → [MC]

Ref. No.		Part No.	Part Name & Description
CABINET and CHASSIS PARTS			
1		SFAD122-01A	Dust Cover
2		SFTG172-01	Turntable Mat
3		SFTE172-01Z	Turntable
4		SFUM172-05	Cover, Turntable
5		SFMGQ20-01	Cover, Stater Frame Ass'y
6		SFMG520-31A	Stater Frame
7		SFMZ172-01E	FG Detector Coil Ass'y
8		SFMZQ20-01A	Shaft, Stater Frame Ass'y
9		SFUP122-12	Plate, Shield
10		SFAC122-01	Cabinet
11		SFUM172-04	Ornament, Stylus-illuminator
12		SFKT122-01	Knob, Power Switch
13		SFKK122-01E	Case, Strobe-illuminator
14		SFKT015-06	Knob, Start/Stop Switch
15		SFQA122-01	Spring, Start/Stop Knob
16		SFUM122-01	Base, Operation
17		SFKT015-01E	Knob, Speed Selector (33-1/3 r.p.m.)
18		SFDJ122-02E	Connector, 7-PIN
19		SFGZ122-01	Spacer, Rubber (Speed Selector)
20		SFYB5-32	Ball, Switch Cam
21		SFQA520-01	Spring, Switch Cam
22		SFUM122-03	Cam, Switch
23		SFUM015-11	Spacer, LED
24		SFKK172-01	Cover, Lamp
25		SFXB122-02	Boss, Drive
26		SFQA172-01	Spring, Drive Boss
27		SFXJ172-01	Pin, Lock Canceler
28		SFUP122-02E	Bracket, Stylus-illuminator
29		SFUP122-03	Plate, Lock OPeration
30		SFDJ122-03E	Connector, 3-PIN
31		SFXO172-01	Pin, Guide
32		SFQA520-01	Spring, Lock Canceler Pin
33		SFQA001-02	Spring, Lock Operating Plate M'tg
34		SFXJ172-05	Pin, Lock Operating Plate M'tg
35		SFHK040L	Clamper, AC Cord
36		SFUP025-01	Bracket, AC Cord
37		**RJA9YA**	AC Cord
38		SFUP132-03	Bracket, Power Transformer
39		SFGC122-01	Cushion, Power Transformer
40		SFUP122-10	Spacer, Power Transformer
41		SFKT122-02	Knob, Pitch Control Volume
42		SFKK122-03	Ornament, Pitch Control Volume
43		SFUZ122-01	Shading Cloth, Pitch Control Volume
44		SFUP122-09	Holder, LED
45		SFUP122-01	Bracket, Pitch Control Volume
46		SFDJ122-01E	Connector, 4-PIN
47		SFUP122-13	Supporter, Bottom Base
48		SFAU122-01	Base, Bottom
49		SFUP122-05	Supporter (A), Hinge
50		SFUP122-04	Supporter (B), Hinge
51		SFUM170-07	Case, Hinge
52		SFGC122-02E	Audio Insulator
53		SFUP122-06	Supporter (C), Hinge
54		SFKT015-02E	Knob, Speed Selector (45 r.p.m)
55 [M]		SFNN122M01	Name Plate
55 [MC]		SFNN122C01	Name Plate
56		SFXO122-01	Pipe (A)
57		SFXO122-02	Pipe (B)
58		SFAT122-01A	Hinge Ass'y
TONE ARM and ARM BASE			
61		SFPCC31001K	Head Shell
62		SFPAM18201K	Tone Arm Ass'y
63		SFPWG17201K	Balance Weight Ass'y
64		SFPRT18201K	Lift Ass'y
65		SFPZB17202	Knob, Arm Base Lock
66		SFQA829-03	Spring, Lift Ass'y
67		SFPAB13202	Knob, Arm Lift
68		SFPJL18202K	Oil Damper
70		SFPZB12203	Plate, Arm Base Cover
71		SFUM170-06	Spacer, Phono Cord
72		SFPZB12204	Clamper, Phono Cord
73		SFPAB18201K	Tone Arm Fixing Plate Ass'y
74		SFPZB12201K	Plate, Position Fix

Ref. No.		Part No.	Part Name & Description
75 [M]		SFDH360M01	Phono Cord
75 [MC]		SFDH028-01	Phono Cord
76		SFEL028-01E	Ground Wire
77		SFPRT17201K	Arm Rest
78		SFPKD17203	Arm Base
79		SFPKB17201S	Ring, Arm Base Operation
80		SFPKD12201	Bracket, Arm Base
81		SFPAB17206	Knob, Anti-skate Force Control
SCREWS, WASHERS and CIRCLIPS			
❶		**XTN3+8BFZ**	Screw
❷		SFXGQ20-02	Screw
❸		**XTN3+8B**	Screw
❹		**XTN26+6B**	Screw
❺		**XTN4+10B**	Screw
❻		**XWA4B**	Washer
❼		**XUC3FT**	Circlip
❽		**XUC2FT**	Circlip
❾		**XUC25FT**	Circlip
❿		SFXW910J02	Washer
⓫		**XTN3+40BFZ**	Screw
⓬		**XSN3+10BVS**	Screw
⓭		XWE3F12FZ	Washer
⓮		**XTN3+25BFZ**	Screw
⓯		SFXW122-01	Washer
⓰		**XWE3E10**	Washer
⓱		SFPEW1100	Washer
⓲		SFPEW11003	Washer
⓳		**XSN3+8S**	Screw
⓴		SFXG132-01	Screw
㉑		**XTV3+8BFN**	Screw
㉒		**XTN3+10B**	Screw
㉓		**XTN2+10B**	Screw
㉔		XSN17+3FY	Screw
㉕		**XSN3+14S**	Screw
㉖		SFXW172-04	Washer
㉗		XUB14FT	Circlip
㉘		SFUZ172-05	O Ring
㉙		**XTN3+6B**	Screw
㉚		**XSN3+6S**	Screw
㉛		**XWA3BFZ**	Washer
㉜		**XWA3B**	Washer
㉝		**XWG3**	Washer
㉞		SFXG829-1	Screw
㉟		**XUC5FT**	Circlip
㊱		**XTW3+6B**	Screw
㊲		**XTV3+6BFN**	Screw
㊳		**XWE4A10EW**	Washer
㊴		**XTN3+25B**	Screw
㊵		XYN3+C6FZS	Screw
㊶		**XSN3+12BVS**	Screw
㊷		SFPEW17201	Washer
㊸		XWG26	Washer
ACCESSORIES			
A1 [M]		SFNU122M01	Instruction Book
A1 [MC]		SFNU122C01	Instruction Book
A2		SFWE010	Adaptor, 45 r.p.m.
A3		SFPEN3302	Nut, Cartridge
A4		SFPEW9601	Washer, Cartridge
A5		SFCZV8801	Screw, Cartridge
A6		SFPEV9801	Screw, Cartridge
A7		SFKO135-01	Overhang Gauge
A8		SFPZB3501	Shell Weight
PACKINGS			
P1 [M]		SFHP122M01	Carton
P1 [MC]		SFHP122C01	Carton
P2		SFHH122-01	Pad, Front
P3		SFHH122-02	Pad, Rear
P4		SFHD122-01	Pad, Top
P5		SFHD122-02	Pad, (A), Turntable
P6		SFHD122-03	Pad, (B), Turntable
P7		SFYH60X60	Polyethylene Cover, Turntable Unit and Dust Cover
P8		SFYH40X45	Polyehtylene Cover, Turntable

■ EXPLODED VIEWS



Printed in Japan
79084350 A S.H.