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Technics

DIRECT DRIVE PLAYER SYSTEM

SL-1200
SL-120

OPERATING INSTRUCTIONS



This instruction manual covers both SL-1200 and SL-120.
The SL-120 is same with SL-1200 in every aspects. but comes only without tonearm section.

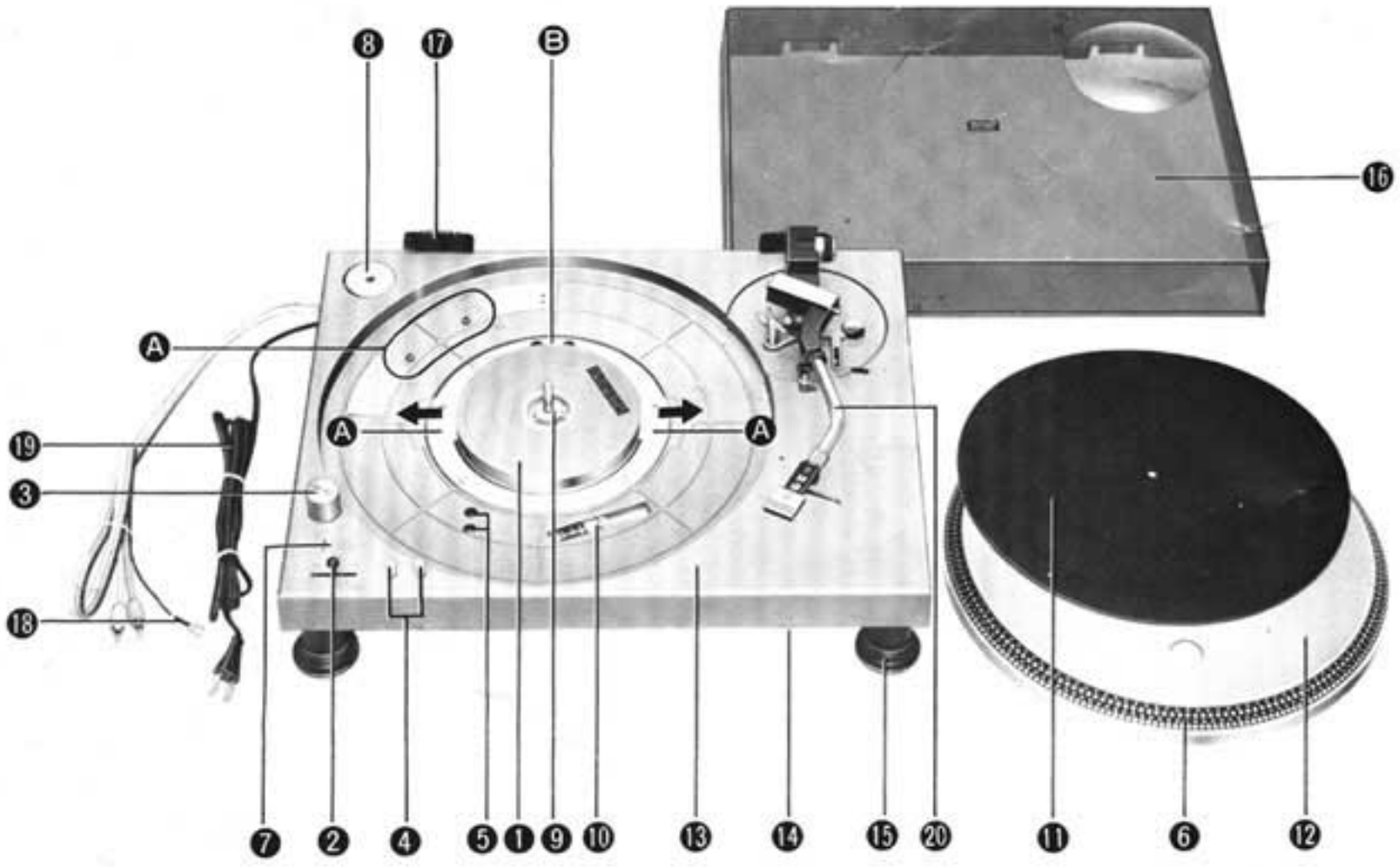


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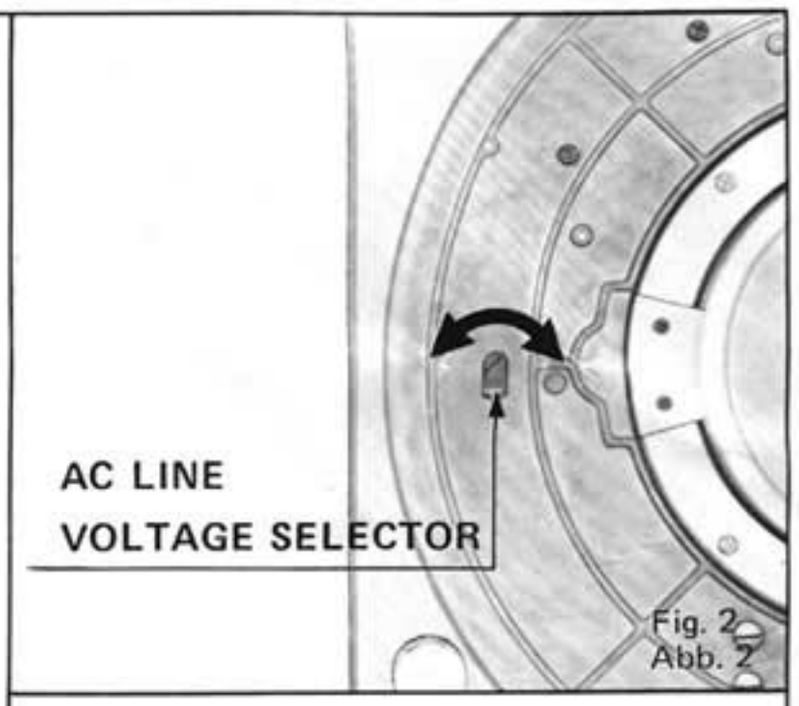


Fig. 2
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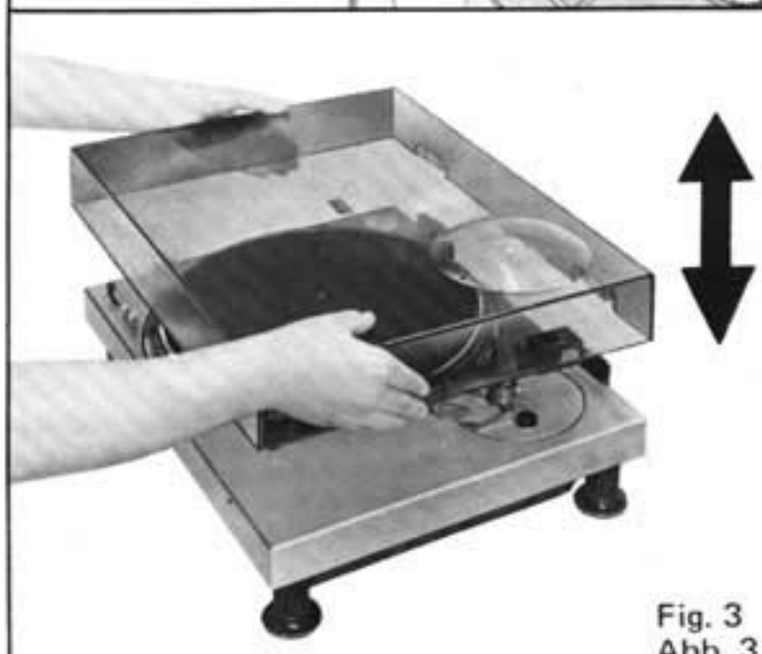


Fig. 3
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We want to thank you for selecting the SL-1200. DIRECT DRIVE PLAYER SYSTEM. To receive optimum performance from this DIRECT DRIVE PLAYER SYSTEM, we recommend that you read these operating instructions carefully.

PARTS IDENTIFICATION OPERATION AND FUNCTION OF CONTROLS

(TURNTABLE SECTION)

AC LINE VOLTAGE (Fig. 2)

Make sure that the AC line voltage selector is correct to your local voltage before connecting the AC power cord.

CAUTION

If your local voltage is different, please turn the AC line voltage selector to your local voltage.

❶ROTOR (See Fig.1- ❶)

This unit uses a direct drive motor. Therefore, the rotor, which is the rotating part of the motor, is connected directly to the turntable platter. The spindle of the motor and the shaft of the turntable platter are the same. For this reason, to maintain the high performance described in the specifications, it is not desirable to apply a large amount of external force to the rotor and the spindle of the motor. The rotor is, therefore, clamped securely to protect the delicate and important parts during transportation.

Be sure to remove these fittings Ⓐ carefully, and save them for future use, as when, for example, the player must again be transported.

CAUTION

The rotor of the motor is constructed so that it cannot be removed, in order to maintain its high performance for a long time.

Do not attempt to remove the removal prevention fitting Ⓑ for the rotor.

❷POWER SWITCH/SPEED SELECTOR (See Fig.1-❷)

Set the "speed selector" to the desired position (33 or 45, depending upon the speed of the record to be played). The strobo illuminator will be lighted, and the turntable platter will rotate.

❸STROBO ILLUMINATOR (See Fig.1-❸)

When the power switch/speed selector is on, the strobo illuminator is lit.

❹VARIABLE PITCH CONTROLS (See Fig.1- ❹)

Adjust the "variable pitch controls" if necessary. These are designed to provide adjustment of the selected speed by 10% range.

Select the speed of the turntable platter by setting the "power switch/speed selector" to the desired position. The rotating turntable platter, when illuminated by strobo illuminator, may show movement of the marks on the strobo disc. Adjust the "variable pitch controls" until the strobo marks are stationary.

After the necessary adjustment has been made, the speed will not change and re-adjustment will not be necessary.

The strobo marks molded around the turntable platter are used to check the correct speed of rotation for 50 Hz (European), and 60 Hz (U.S.A.) Adjust its rotation according to the strobo label.

❺SPEED ADJUSTMENT SCREWS (See Fig.1- ❺)

If, for any reason, the adjustment cannot be successfully made, use a (–) tip screwdriver to adjust the appropriate speed adjustment screw (33 or 45) located beneath the turntable platter.

Turning the speed adjustment screws to the right or left will increase or decrease the speed respectively.

❻STROBO MARKS (See Fig.1- ❻)

❼STROBO LABEL (See Fig.1- ❼)

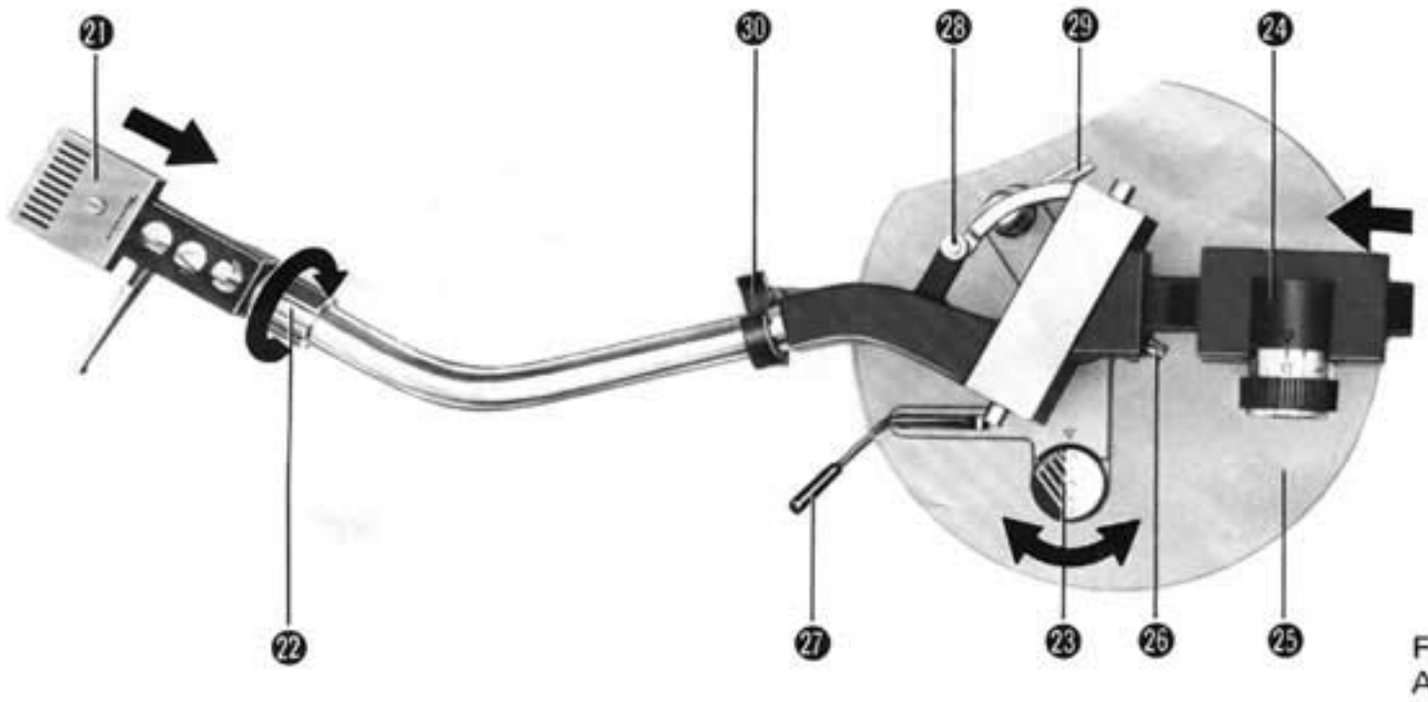


Fig. 4
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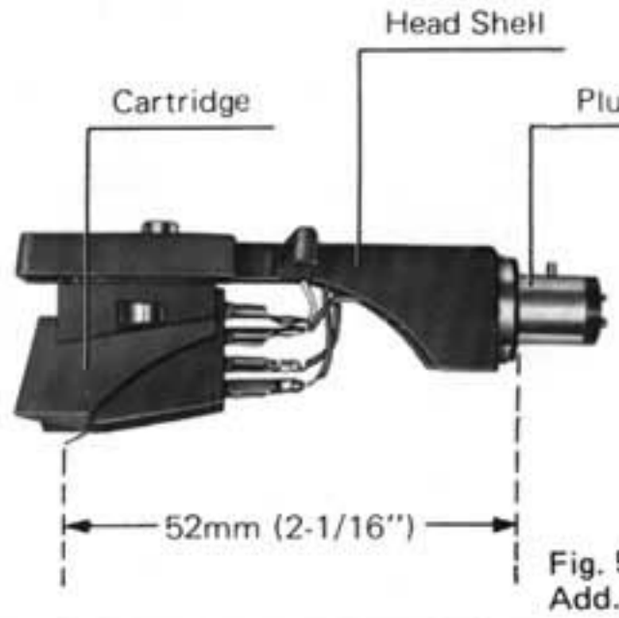


Fig. 5
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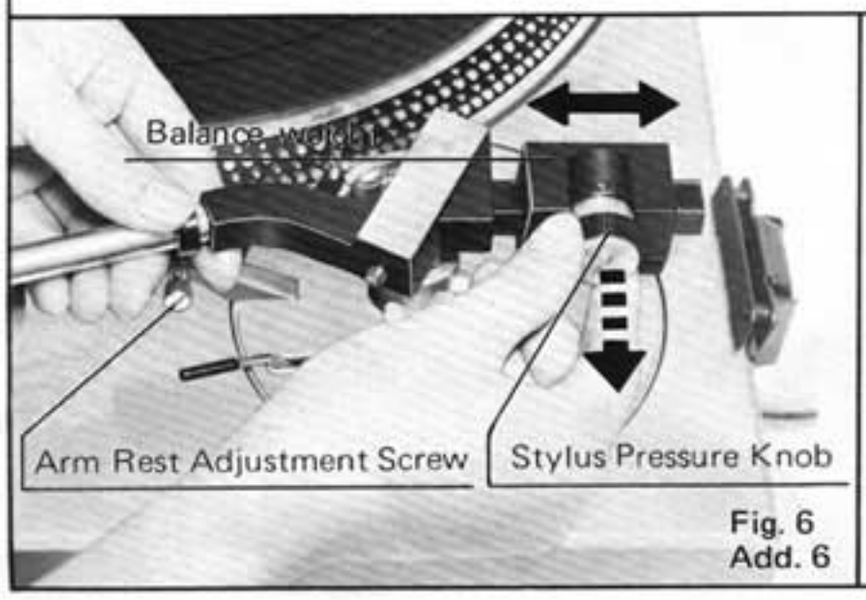


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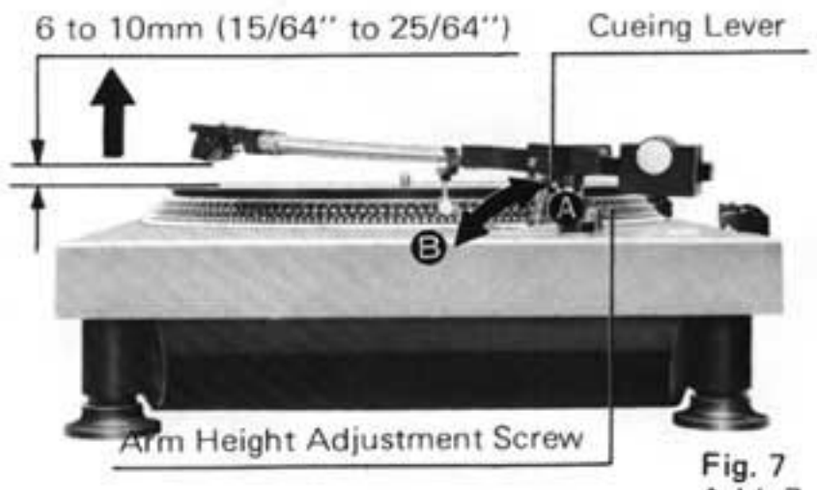


Fig. 7
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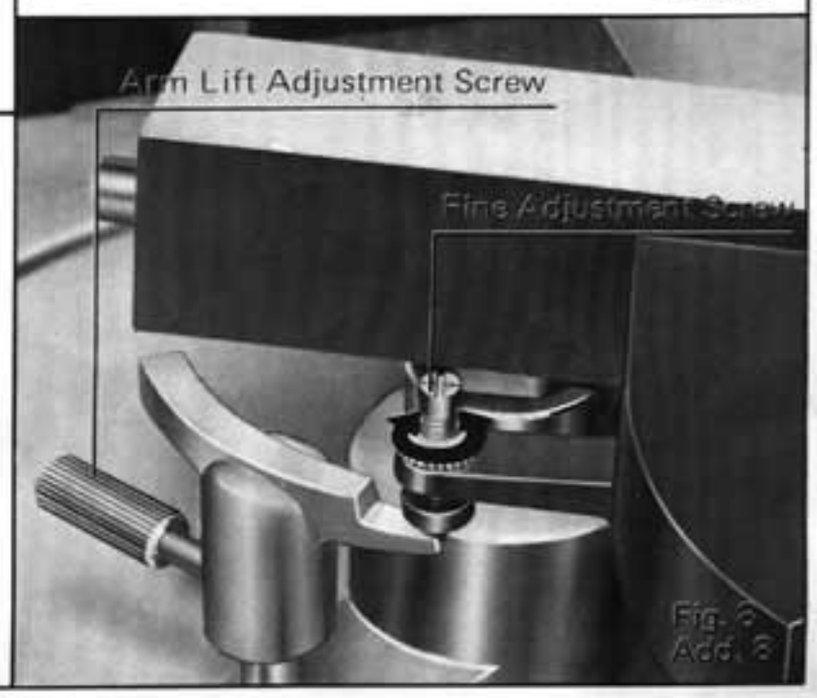


Fig. 8
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❽ADAPTOR FOR 7 INCH 45 R.P.M. RECORD (See Fig.1- ❽)

When playing 45 r.p.m. records, use this accessory.

❾OIL HOLE (See Fig.1- ❾)

❿SPECIAL OIL (See Fig.1- ❿)

The bearing parts of this set are designed with an ultra-precise finish to prevent the generation of "Wow and Flutter"

A special oil has been used to maintain the high-performance efficiency of this set by forming a uniform film of oil over the parts. For this reason, use only the oil included in this set for its lubrication.

Even if there is oil leakage around the oil hole or the rotor, caused during transportation, it will not effect the performance.

Before use, apply about 2 drops of oil into the oil hole.

To lubricate, open the tip of the vessel with a needle. After lubricating, cover the vessel with the cap to prevent the leakage of oil.

Never use any other type of oil. To lubricate, remove the turntable platter and apply about 2 drops of oil into the oil hole.

It is sufficient to lubricate the set once after approximately 2,000 hours of use.

Two thousand hours are equivalent to 5-1/2 years, if the set is used one hour a day, or to 8 months if used 8 hours a day.

This period is much longer than has been necessary on previous, conventional motors. Do not apply too much oil, nor more often than necessary.

⓫TURNTABLE MAT (See Fig.1- ⓫)

⓬TURNTABLE PLATTER (See Fig.1- ⓬)

The turntable platter is a 33 cm (13") ultra-large diameter 1.75 kg (3.86 lb) weight and has inertial moment of 310 kg-cm^2 (105.9 lb-in^2), Each turntable platter is dynamically balanced.

⓭PLAYER CASE (See Fig.1- ⓭)

⓮BOTTOM COVER (See Fig.1- ⓮)

⓯AUDIO-INSULATED LEGS (See Fig.1- ⓯)

The audio-insulated legs are designed to absorb vibration entirely by using special materials inside them. Adjust the height and level of the player system by turning legs.

⓰DUST COVER (See Fig.1- ⓰ Fig.3)

Raise the dust cover upward and place it securely in the hinges.

CAUTION:

We recommend that you take off the dust cover, if the dust cover becomes the cause of "Howling" from the vibration of speakers.

Do not wipe the dust cover with any cleaner containing alcohol, benzine or thinner. Use the polishing cloth included in the carton.

⓱HINGES (See Fig.1- ⓱)

⓲OUTPUT TERMINALS (See Fig.1- ⓲)

Connect the pickup cords provided in this set to the same channel of the amplifier.

R (RED) ⟶ R Channel
L (WHITE) ⟶ L Channel
E (U shaped) ⟶ GND

⓳AC CORD (See Fig.1- ⓳)

⓴TONEARM (See Fig.1- ⓴ , Fig.4)

High quality universal tonearm is designed especially for direct drive player system. Most remarkable features of this tonearm are easy operation, durable structure and automatic reset mechanism of stylus pressure control. Therefore, adjustment of zero balance and stylus pressure can be easily and rapidly accomplished.

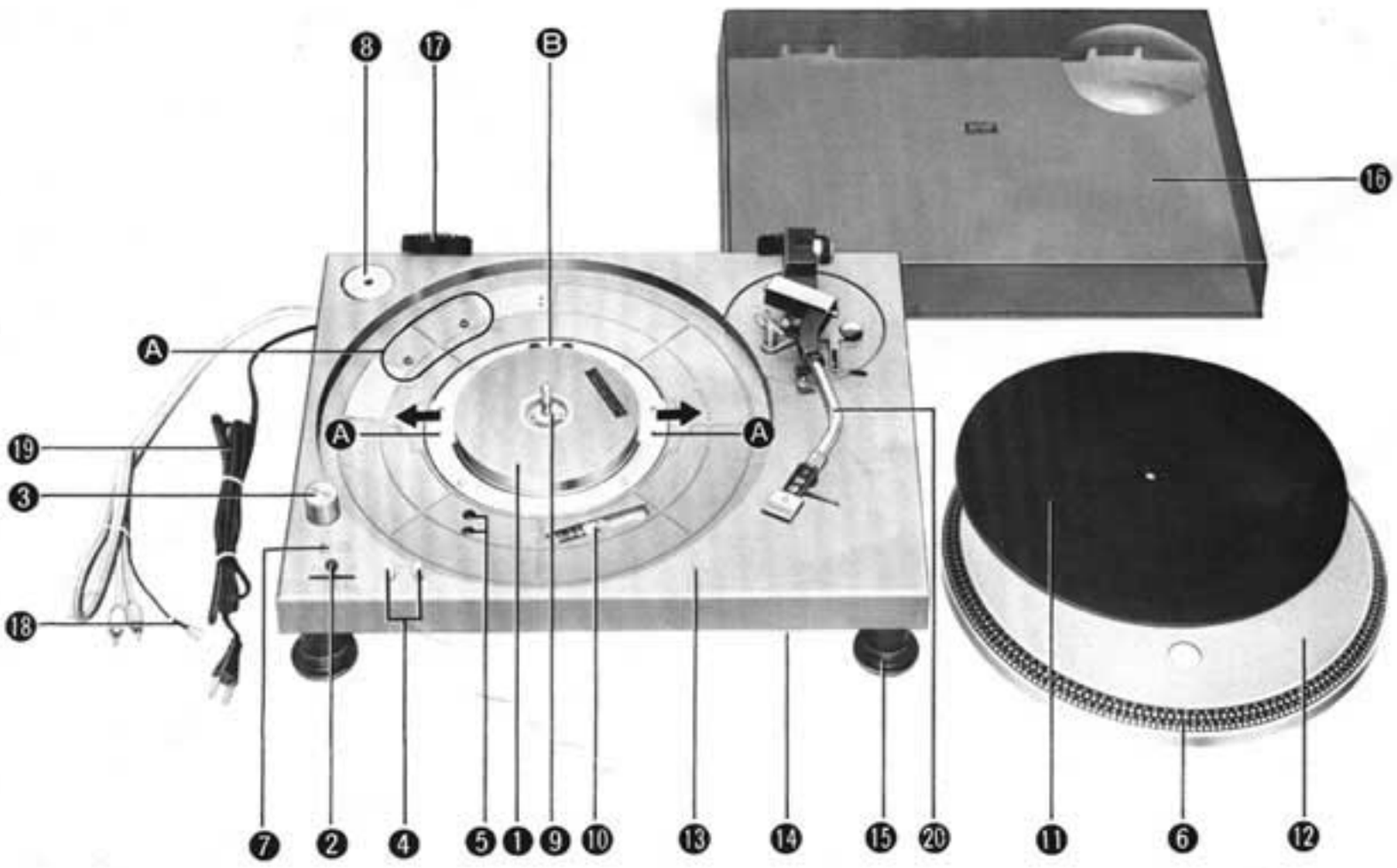


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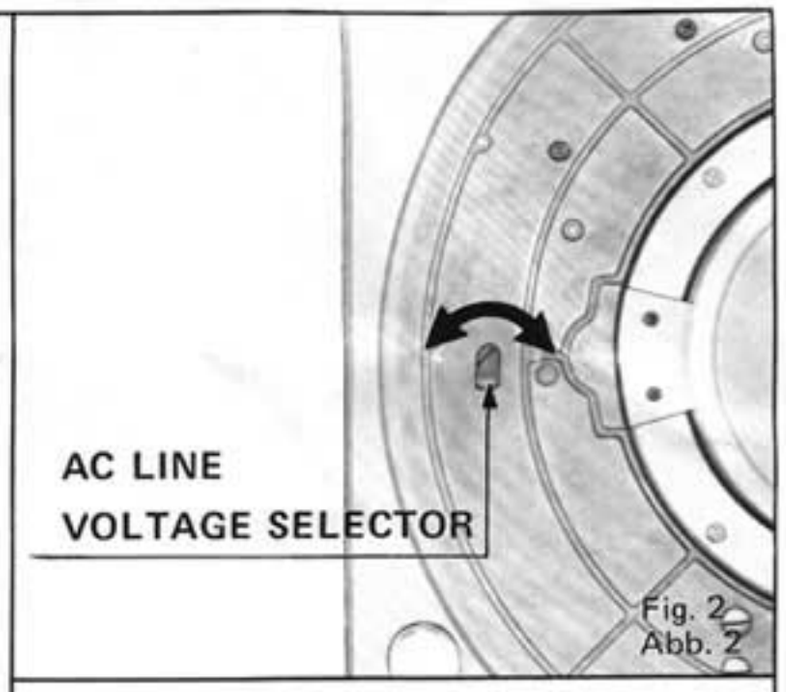


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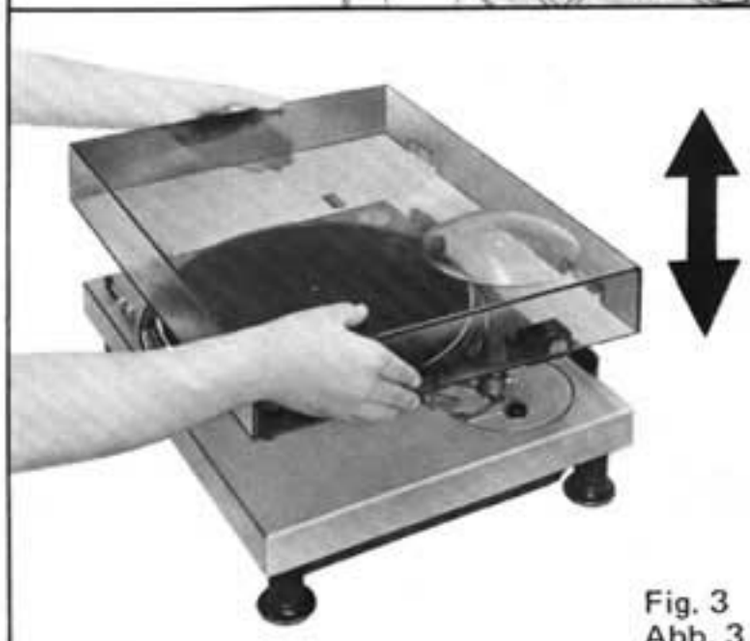


Fig. 3
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(TONEARM SECTION)

㉑HEAD SHELL (See Fig.4- ㉑ , Fig.5)

Insert the head shell in the end of the tonearm, and secure firmly by turning the locking nut of the tonearm in the direction of the arrow, as shown in the picture. Be sure to connect the lead wires to the cartridge terminals according to the instructions included with the cartridge. The cartridge should be inserted in the head shell so that the spacing between the stylus tip and the plug is 52 mm (2-1/16") as shown in the picture.

㉒LOCKING NUT (See Fig.4- ㉒)

㉓ANTI-SKATING FORCE DEVICE (See Fig.4- ㉓)

Skating force is the frictional force caused by contact between the tip of the stylus and the record groove, and is applied to the stylus as a side pressure depending upon the relationship of the geometrical position of the tonearm.

This force results in an unbalance of the contact pressure between the stylus tip and each groove wall of the record, an increase of distortion, a deterioration of the performance, a decrease of separation characteristics and abnormal wear of the stylus tip and the record grooves. For this reason, it is necessary to compensate this skating force. The anti-skating force mechanism performs this compensation function. The quantity of anti-skating force is in proportion to the stylus pressure and, therefore, it should be adjusted according to the stylus pressure. Turn the adjustment knob to the same number as stylus pressure scale indicates.

㉔BALANCE WEIGHT (See Fig.4- ㉔ , Fig.6)

This balance weight is especially designed for easy adjustment of zero balance.

Install the balance weight, packed in the parts box on the rear of the tonearm.

By turning the stylus pressure knob to the arrow, as shown in the picture, adjust the zero balance. (that is, floating the tonearm free).

After adjustment pull the outside of the stylus pressure knob in the direction of the arrow, then the scale will be reset automatically to the zero position.

Adjust the stylus pressure by turning the stylus pressure knob to the arrow in the picture according to the stylus pressure of the cartridge which you use.

This tonearm accepts any cartridge whose weight is from 4.5 to 11.5g.

㉕ARM BASE (See Fig.4- ㉕)

㉖ARM HEIGHT ADJUSTMENT SCREW (See Fig.4- ㉖ , Fig.7)

If it is necessary to adjust the height of the tonearm, loosen screw and move the tonearm up or down.

㉗CUEING LEVER (See Fig.4- ㉗ , Fig.7)

After separating the tonearm from the arm rest, and then moving the cueing lever toward Ⓐ position (as shown in the picture), the tonearm will raise. Hold the tonearm and place the tip of the stylus above the groove of the record from which you desire to play. When the cueing lever is moved to the Ⓑ position, the tonearm will descend slowly and the performance will begin.

㉘FINE ADJUSTMENT SCREW (See Fig.4-㉘,Fig.7,8)

Adjust the fine adjustment screw, so that the interval between the stylus tip and record surface is from 6 to 10 mm (15/64" to 25/64").

㉙ARM LIFT ADJUSTMENT SCREW (See Fig.4-㉙,Fig.8)

If, for any reason, the adjustment cannot be successfully made by the fine adjustment screw, adjust the height of the arm lift by turning this screw.

㉚ARM REST (See Fig.4- ㉚ , Fig.6)

Adjust so that the tonearm is parallel to the record when the height of the tonearm has been adjusted.

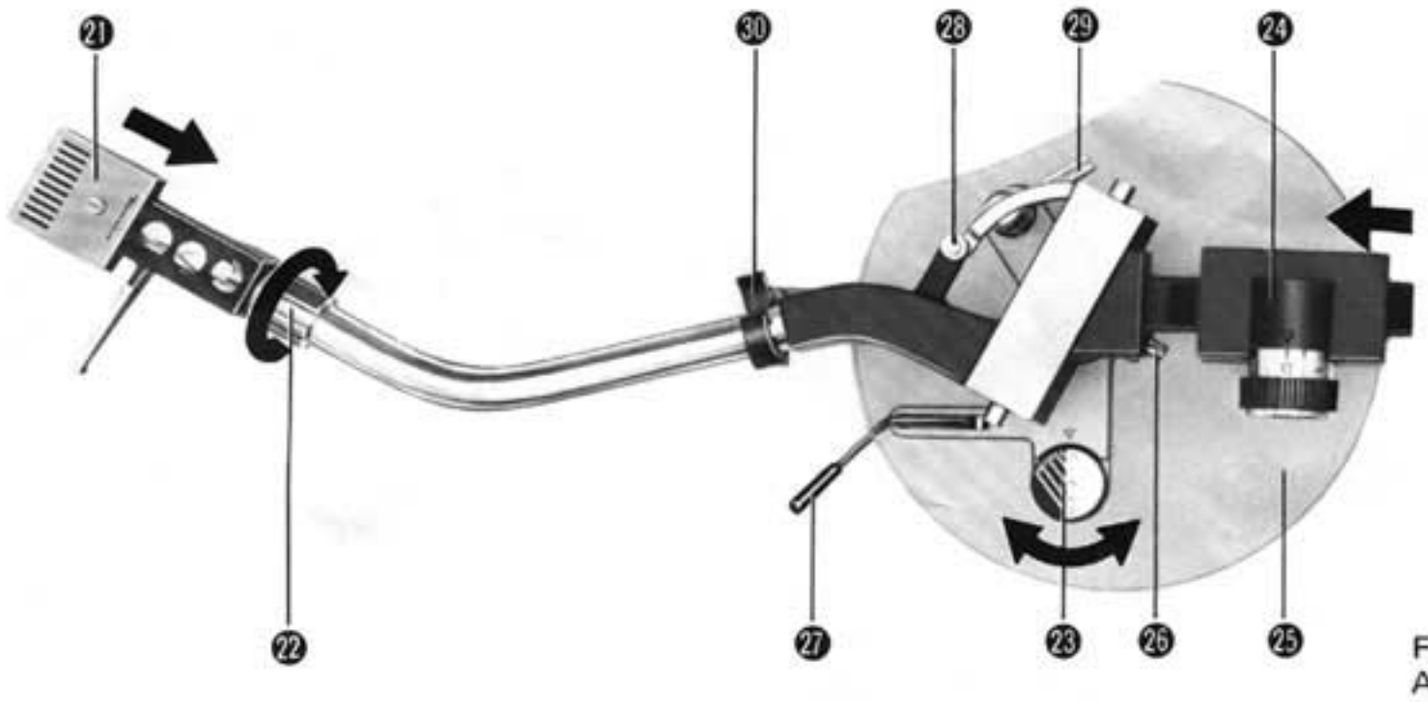


Fig. 4
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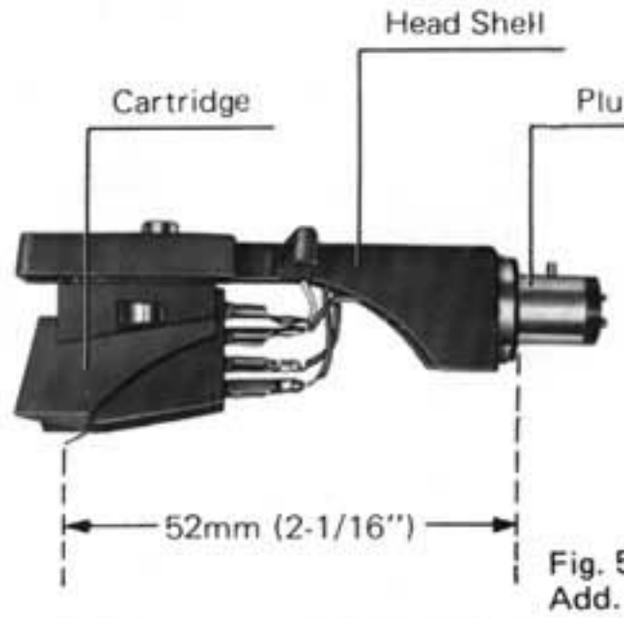


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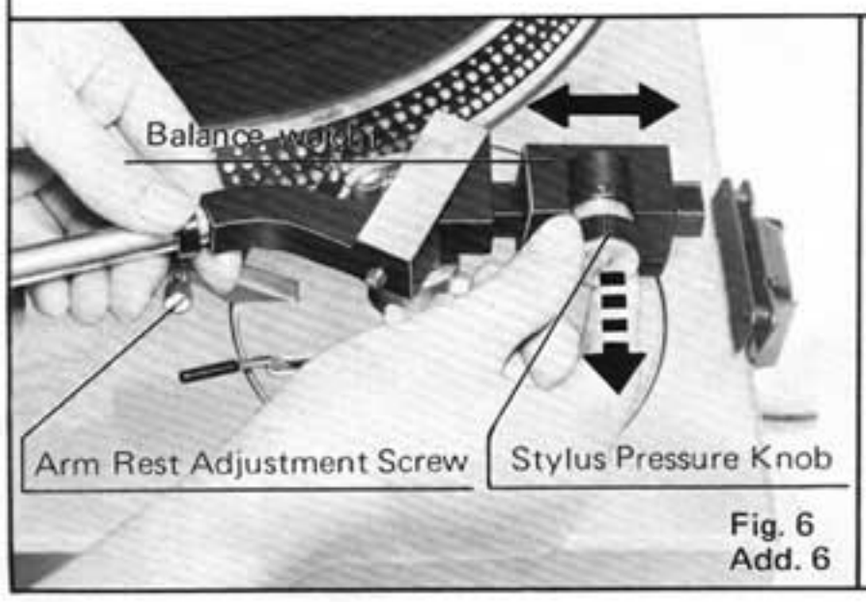


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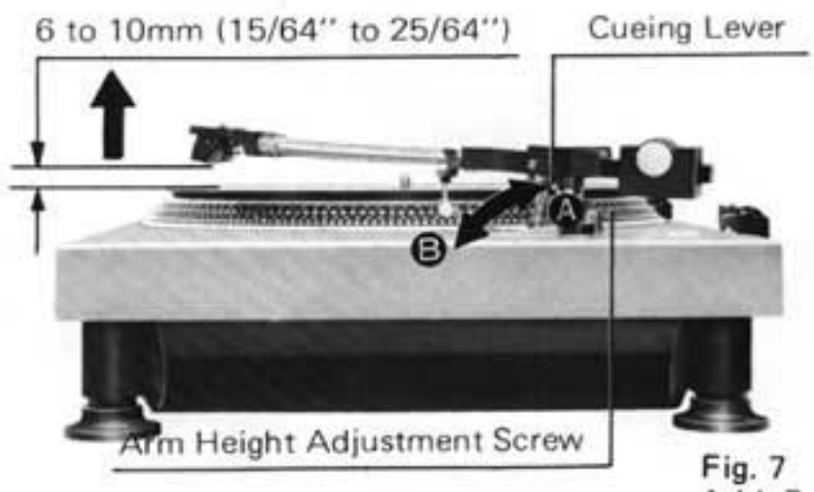


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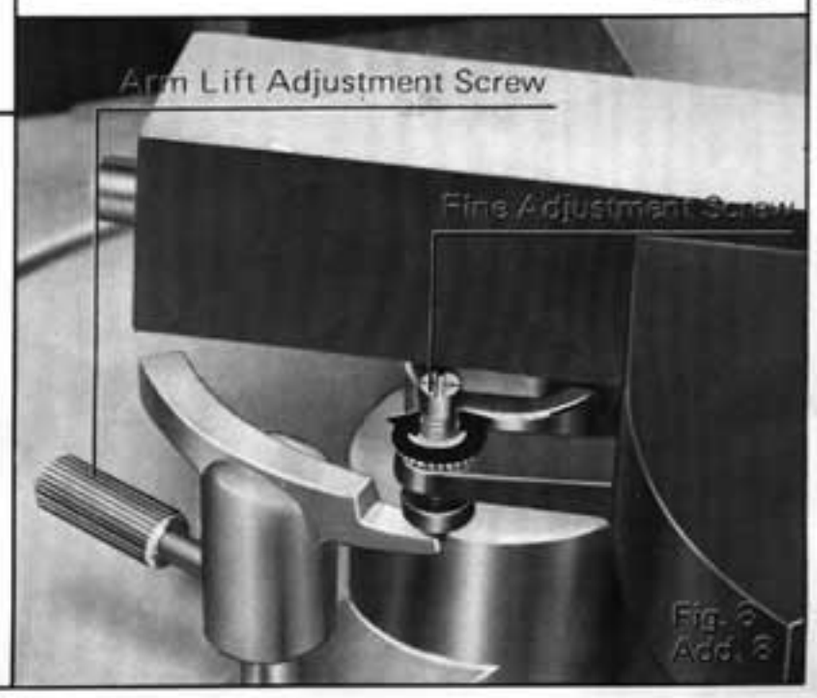


Fig. 8
Add. 8

FEATURES

(TURNTABLE SECTION)

❶33.CM (13") ULTRA-LARGE DIAMETER TURNTABLE PLATTER

33 cm (13") ultra-large diameter, and 1.75 kg (3.86 lb) heavy weight turntable platter has an inertial moment of 310 kg-cm^2 (105.9 lb-in^2) and has been dynamically balanced.

Around the turntable platter are strobo marks which are used to check its speed.

❷DIRECT DRIVE MOTOR

There is no "wow" or "flutter" caused by transmission mechanism. There is no vibration because this motor has no high-speed rotation mechanism. The rumble is extremely low.

❸ELECTRONIC COMMUTATOR BRUSHLESS DC MOTOR

The DC motor is not affected by fluctuations of the power supply frequency. Starting rotation power is large, with complete stability of speed reached within one-half rotation at 33-1/3 r.p.m. since there is no electro-magnetic hum, the signal to noise ratio (rumble) is excellent. And, because the motor includes an electronic commutator, starting is perfectly accurate. There is, therefore, no speed instability or brush deterioration as is often noted in brush commutators, no pulse noise generated by brush sparking and no sound caused by rubbing of brushes.

❹ROTATION OF THE TURNTABLE PLATTER CAN BE STOPPED AT ANY TIME

This is a feature which is not found in players which have speed reduction and transmissions devices such as a belt or idler.

If such stopping is attempted on ordinary players, the belt or idler will soon deteriorate and efficiency soon becomes poor. In this player system, such stopping causes no problem other than a slight increase of the motor current, which is not really a problem.

❺ELECTRONIC STABILIZATION CONTROL

Because this set includes special circuitry to stabilize the speed electrically, speed stability is extremely good.

❻ELECTRICAL SPEED CHANGE

There is no mechanism to change the position of the belt or idler. There is, therefore, no "wow" or unwanted speed change.

❼NO EFFECT FROM FLUCTUATIONS OF POWER SUPPLY FREQUENCY OR VOLTAGE

Since the motor is the DC type, the rotation speed does not depend on the power supply frequency. And, because a DC-stabilizer is used, the set is not affected by changes of the power supply voltage, even if the fluctuation is large.

❽SEMI-PERMANENT HIGH PERFORMANCE

Unlike previous players, there is no reduction or transmission mechanism, such as a belt or idler.

The motor rotates the turntable platter directly at an ultra-low speed. Wear of parts is therefore reduced to the extreme minimum and high-performance efficiency can be maintained semi-permanently.

❾POWER CONSUMPTION IS 1/100 TH THAT OF ORDINARY MOTOR

Motor power consumption is only 0.1 W. which is less than 1/100th that of a conventional AC motor. (There is a power consumption of about 4 W, in addition to the drive, on other electronic circuitry)

(TONEARM SECTION)

❶EASY BALANCING AND STYLUS PRESSURE CONTROL

By a smooth rack-and-pinion type movement, the balance weight can be adjusted easily. After adjusting the zero balance, pull the outside of the stulys pressure knob outward, and the scale will be reset automatically to the zero position. Now you can add the amount of stylus pressure you desire by directly reading the scale.

❷FEATHER-TOUCH CUEING

Feather-touch cueing is viscous-damped in both directions for gentle decent and ascent. The tonearm will be set down exactly on the spot you desire.

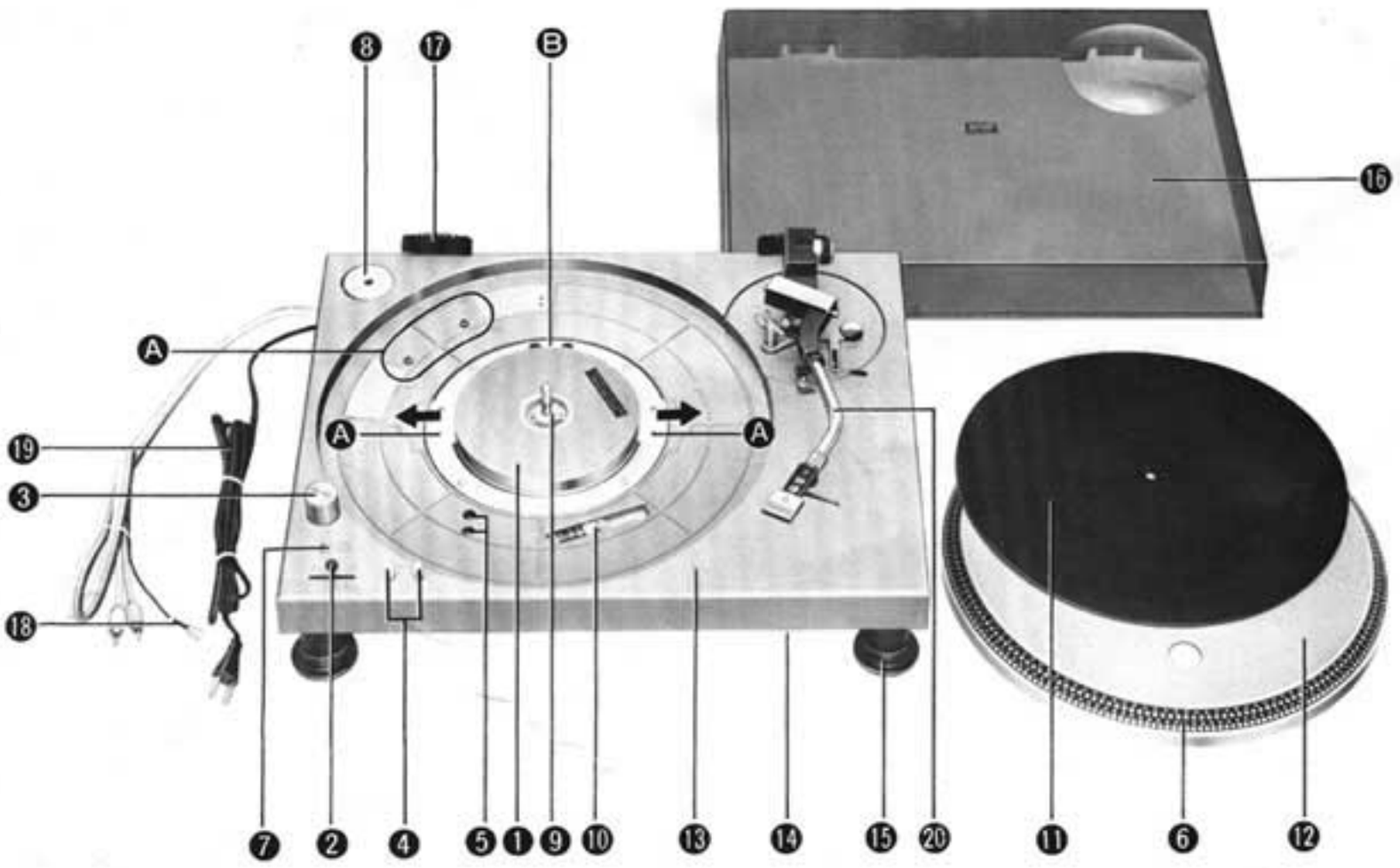


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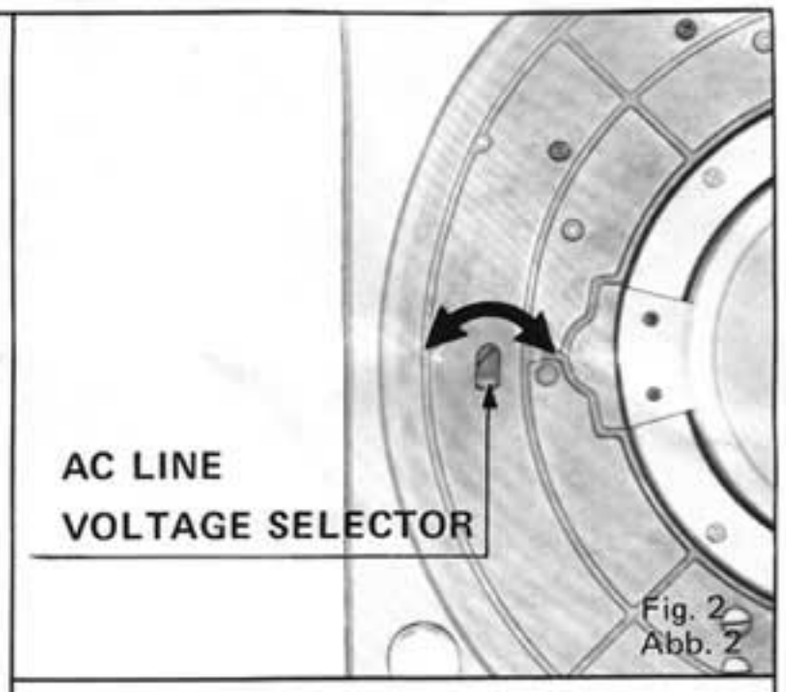


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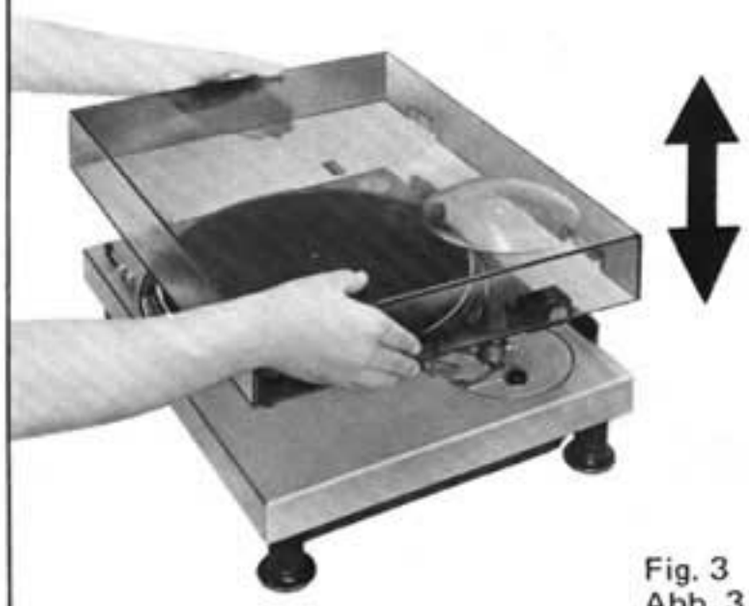


Fig. 3
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SPECIFICATIONS

(TURNTABLE SECTION)

Type	Direct drive player system
Turntable platter	Aluminium die-cast; 33 cm (13") diameter 310 kg-cm^2 (105.9 lb-in^2) inertial moment, 1.75 kg (3.86 lb) weight
Turntable speeds	33-1/3 and 45 r.p.m.
Motor	20 poles (rotor), 15 poles (stator) ultra low-speed brushless DC motor
Power supply	AC 120V, 60Hz
Power consumption	4W
Speed change method	Electronic change
Variable pitch control	Individual adjustment by variable resistor. 10% adjustment range
Wow and flutter	0.03% WRMS
Rumble	-50 dB (DIN A) -70 dB (DIN B)
Build-up time	1/2 rotation at 33-1/3 r.p.m.
Dimensions	45.3 x 36.6 x 18.0 cm (17-13/16" x 14-13/32" x 7-3/32") (W x D x H)
Weight	10 kg (22.1 lb) with dust cover

(TONEARM SECTION)

Type	EPA-120 Direct reading stylus pressure adjustment, static-balanced type, universal head shell, anti-skating force device.
Effective length	220 mm (8-21/32")
Overhang	14 mm (35/64")
Tracking error angle	Within ±2.0°
Stylus pressure	0 - 4 g

PLACEMENT OF PLAYER

❶Use the player system in a stable and horizontal position, where there is little or no vibration.

❷Use the player system as far away from the speakers as possible and isolate the player system from sound radiation from them.

❸Avoid placing the player in excessively hot or cold places, particularly near heaters.