

The home of the turntable

THE VINYL ENGINE®

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precision designed & engineered high fidelity record playing equipment and accessories

MICRO
SOLID—5
OPERATING MANUAL

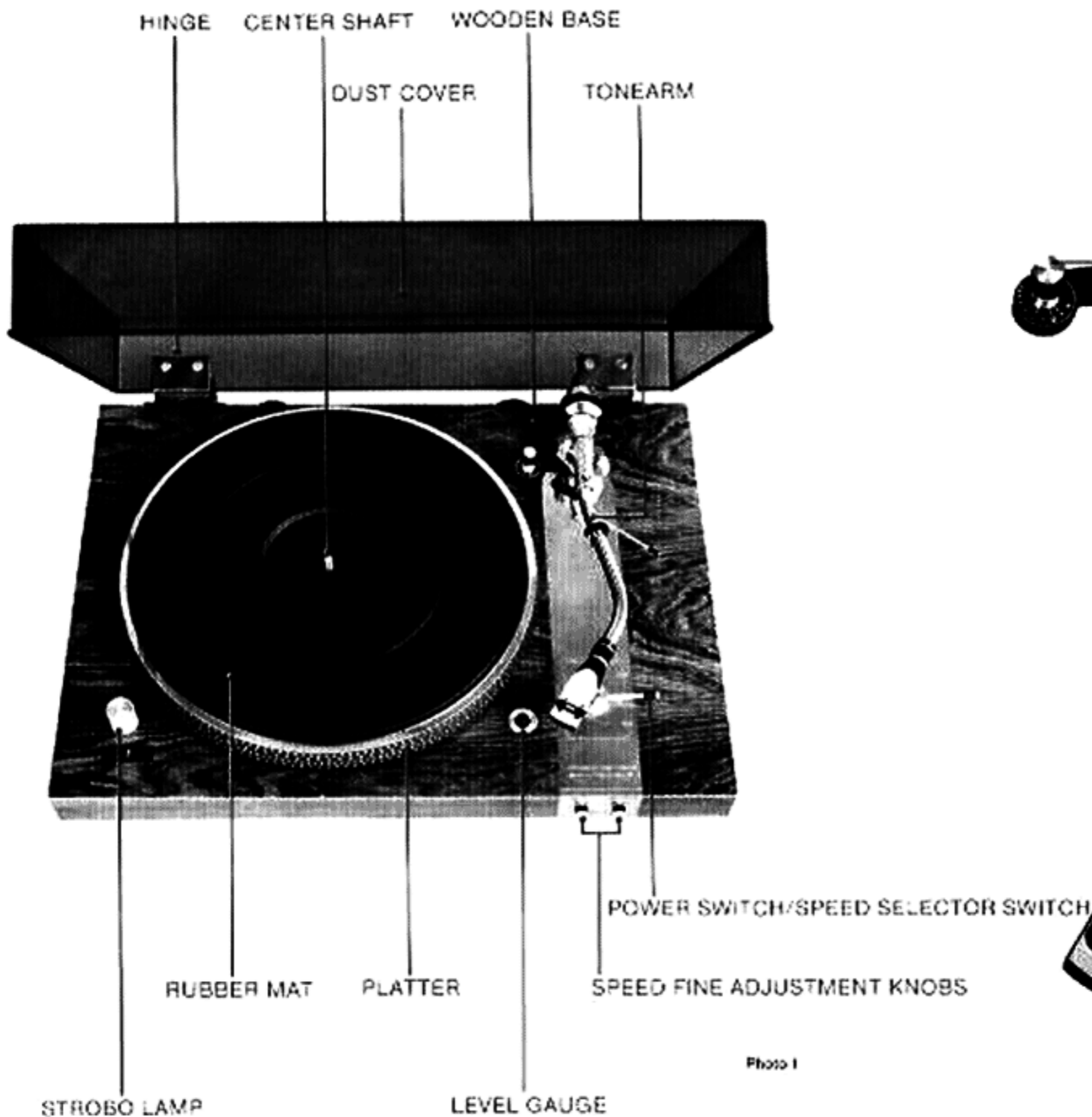


Photo 1

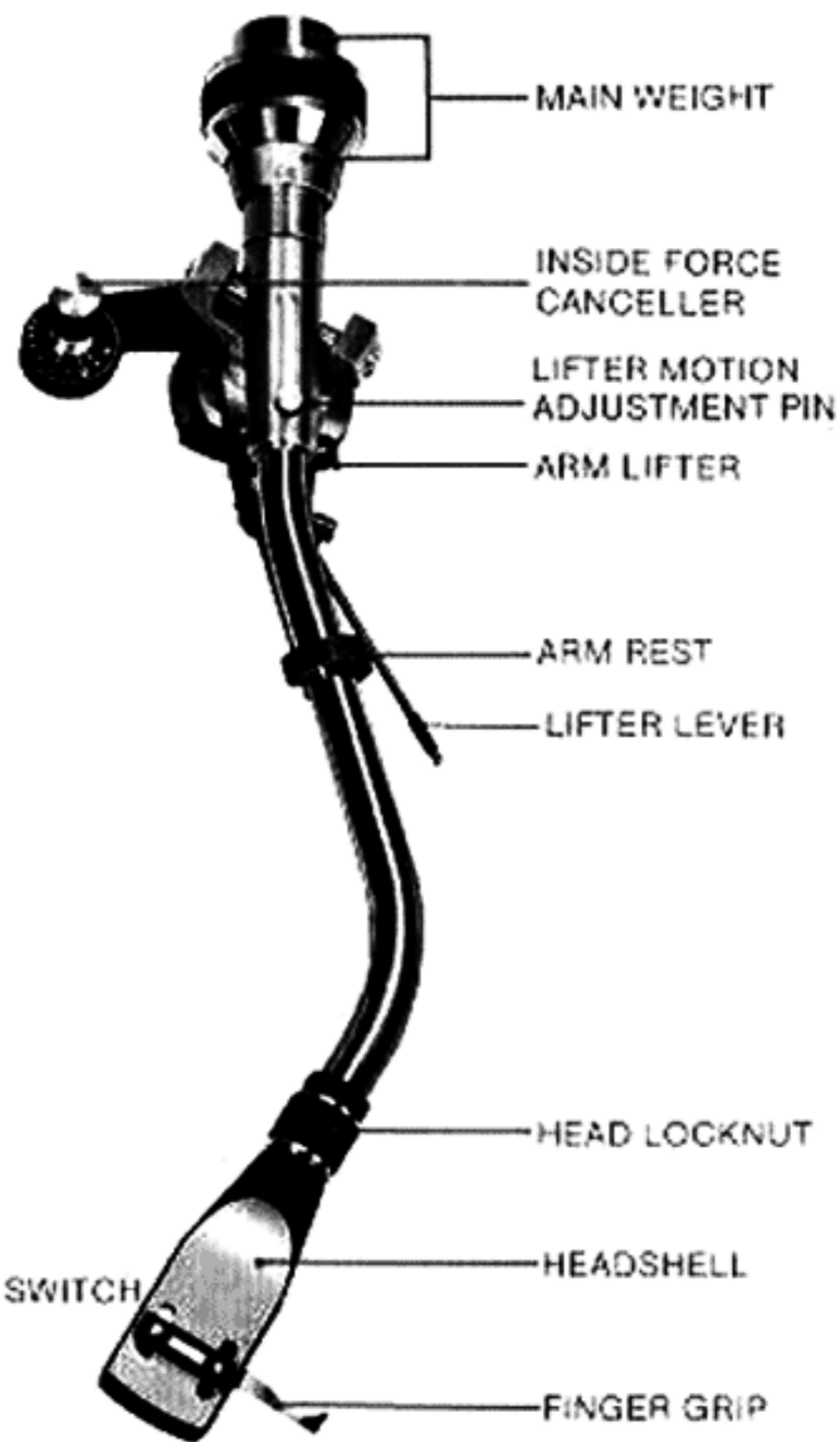


Photo 2



Photo 3

Before proceeding to assemble the Solid-5, check accessory components against the following list.

- 1 PLATTER
- 2 RUBBER MAT
- 3 POLYURETHANE BELT
- 4 MAIN WEIGHT
- 5 HEADSHELL
- 6 45 rpm (EP) ADAPTER
- 7 SCREWDRIVER
- 8 OVERHANG GAUGE
- 9 CENTER SHAFT OIL

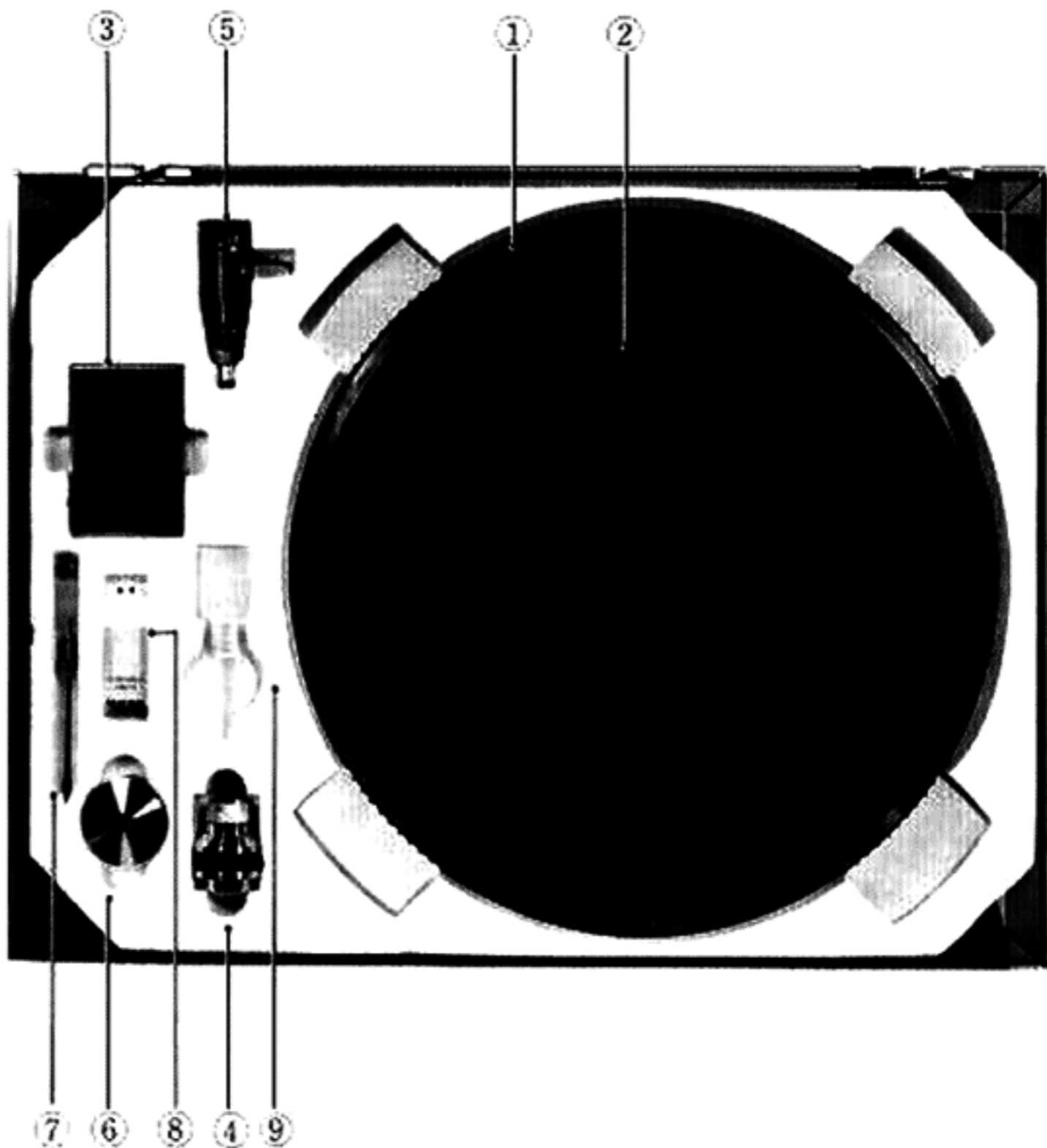


Photo 4

TURNTABLE & TONEARM ASSEMBLY

Turntable components and accessories have been separately packed to prevent damage during shipment. Refer to the assembly designations (Photos 1 & 2) and correctly assemble according to the following steps.

● Remove Clamp Screws

Two clamping screws are employed to protect the motor from shock during shipment. It is important that these be removed before operating the Solid-5. Use a phillips screwdriver to take out the two specially red colored screws. (See Photo 5.)



● Confirm Power Line Voltage

The Solid-5 is supplied to operate from the commercial AC power source available in the region in which it has been sold. Before plugging in the AC line cord, observe that the used line voltage. Remove the bottom cover and check the voltage indicator. If the Solid-5 is to be used in a country where the power line voltage vary according to locality, or when transporting the turntable across international boundaries, perform the following check-out procedure.

1. Determine the available AC power line voltage from the local power source.
2. If voltage is different from that of the previous location, remove the bottom cover.
3. Observe the voltage selector plug. Remove it and re-install it so that the voltage shown in the cut-out portion agrees with the local line voltage. Be sure to inset it firmly.



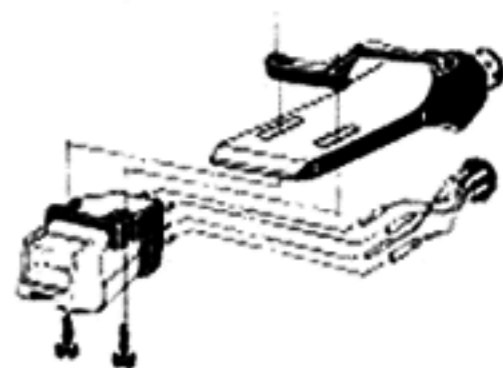
● Assembling Turntable

Unpack turntable platter, rubber pad and polyurethane belt. Position belt on platter inner ring, hold as shown in Photo 8, and set platter onto the turntable shaft. Simultaneously, guide the belt around the capstan pulley.



● Cartridge Installation

Mount the cartridge onto the shell and connect the each lead of the shell with the cartridge pins as per the picture.



When replacing the cartridge, employ tweezers to disconnect and reconnect the lead wires. Be careful to perform the connections properly, as incorrect connections may cause absence of sound or hum. Lead wire color coding is as follows.

White	:	Left (L) channel	+
Blue	:	Left (L) channel	-
Red	:	Right (R) channel	+
Green	:	Right (R) channel	-

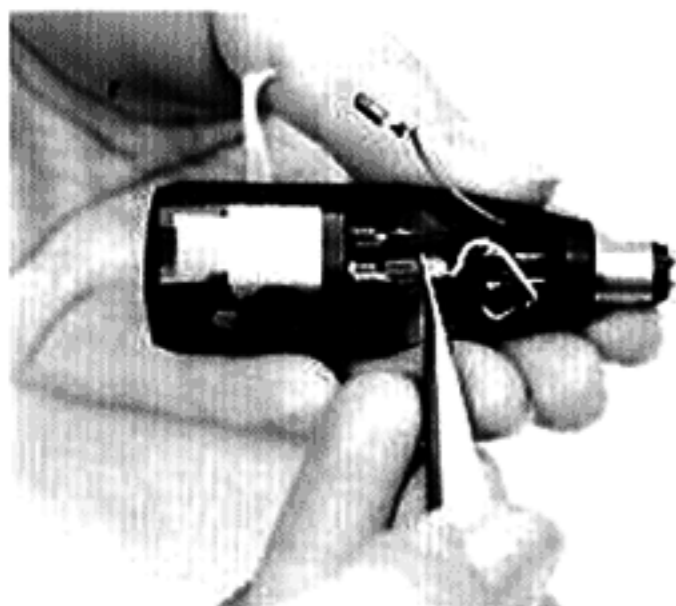


Photo 7

● **Overhang Adjustment**

Overhang refers to the distance by which the stylus exceeds the center of the record disc. The Solid-5 tonearm is designed so that tracking error is minimized when the overhang equals 15mm. According to the attached overhang gauge, adjust the cartridge location so that the styli point agrees with the mark ▲.



Photo 8

● **Assembling Tonearm**

While supporting the tonearm with the right hand, plug in headshell with the left hand. Secure it by turning the lock nut (Photo 9). Use extreme care at this time not to apply unnecessary rotational pressure to the tonearm shaft.



Photo 9

Unpack main weight and headshell with cartridge. Install main weight on rear portion of tonearm so that the stylus pressure adjusting ring faces forward (Photo 10). Rotate the main weight 2 or 3 turns to insure it is properly engaged with the tonearm.



Photo 10

TONEARM ADJUSTMENTS

1. **Horizontal Balancing**

Lower arm lifter, remove tonearm from armrest and rotate main weight to move it forward or rearward and obtain balance. When balance is obtained, the main weight should be rearward of the balance reference point (see Photos 11 & 12). If balance is obtained forward of the reference point, slide the ring weight to where it contacts the tracking force ring and repeat balancing procedure.



Photo 11



Photo 12

2. Tracking Pressure Adjustment

After balancing the tonearm, return it to the arm rest and raise the arm lifter. Turn only the tracking force ring and set the reference line to zero (see Photo 13). Next, turn the rear part of the main weight in the arrow indicated direction so that the tracking force reference line is aligned with the used cartridge stylus pressure, such as 1.5 scale indication for 1.5 gram recommended cartridge. (see Photo 14). The tracking force ring scale is direct reading in 0.5 gram increments.



3. Inside Force Canceller Adjustment

The inside force canceller functions to counteract the force which tends to pull the stylus toward the center of the record. It operates to insure always uniform left and right record groove pressure (tracking force). Set the Bias Knob to the same value as the tracking force [see Photos 15 & 16]



• Tonearm Height Adjustment

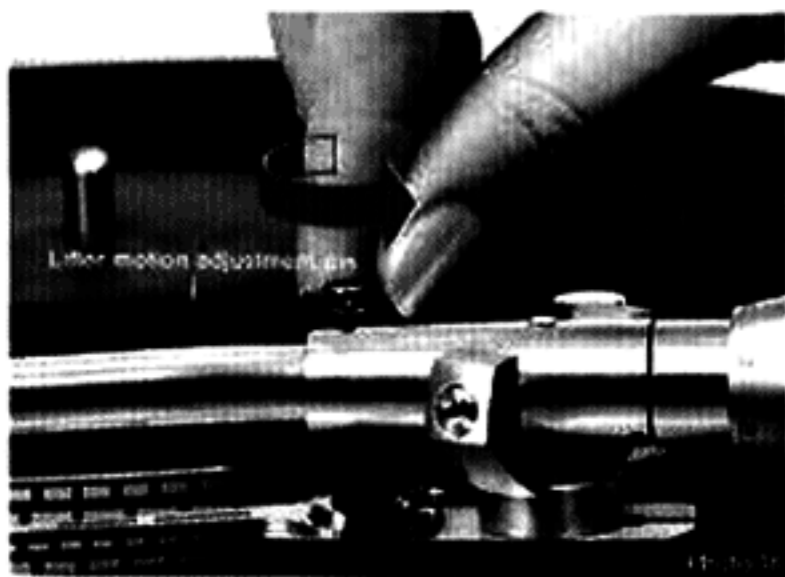
It may become necessary to adjust the tonearm height after cartridge & headshell are installed. To perform this adjustment, place record on turntable. Without turning on the power, set the tonearm stylus onto the record as if the record were being played. While observing from the right side of the turntable, loosen the tonearm height adjusting setscrew (see Photo 17) and adjust so that the tonearm becomes horizontal (use care not to scratch record).



● Arm Lifter

The arm lifter hydraulically raises and lowers the tonearm to prevent undue force from possibly damaging records or stylus. Set the lever in the raised position when the turntable is not being used. To play a record, gently lift the tonearm by the headshell finger grip, position the stylus over the desired portion of the record, then lower the lever (forward direction). The stylus will then be slowly lowered onto the record.

After the tonearm height is determined, check the motion range of the lifter. The lifter does not move up the tonearm, then adjust the pin within the lifter motion range. (See Photo 18)



CONNECTIONS

● Connecting to a Stereophonic Amplifier or receiver

Connect the output plugs of the Solid-5 to the input terminals of the amplifier marked PHONO (or MAG).

1. Connect White pin-plug of the pick up cord to the left jack of the PHONO terminal of the amplifier.
2. Connect Red pin-plug of the pick up cord to the right jack of the PHONO terminal of the amplifier.

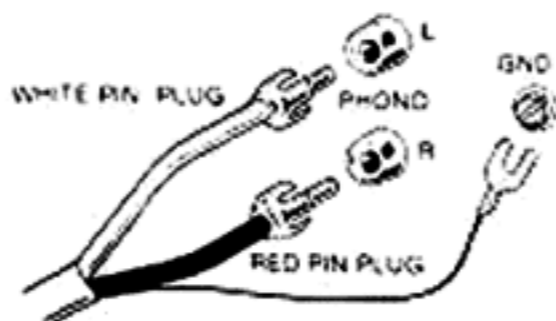


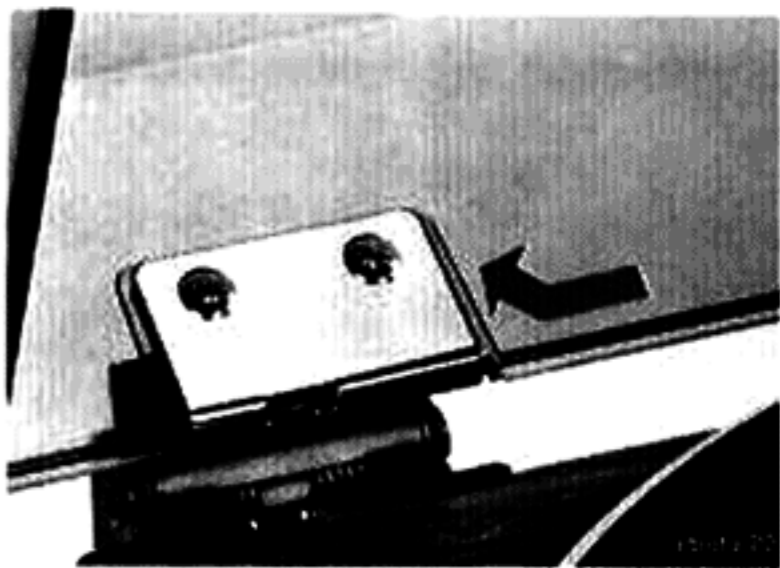
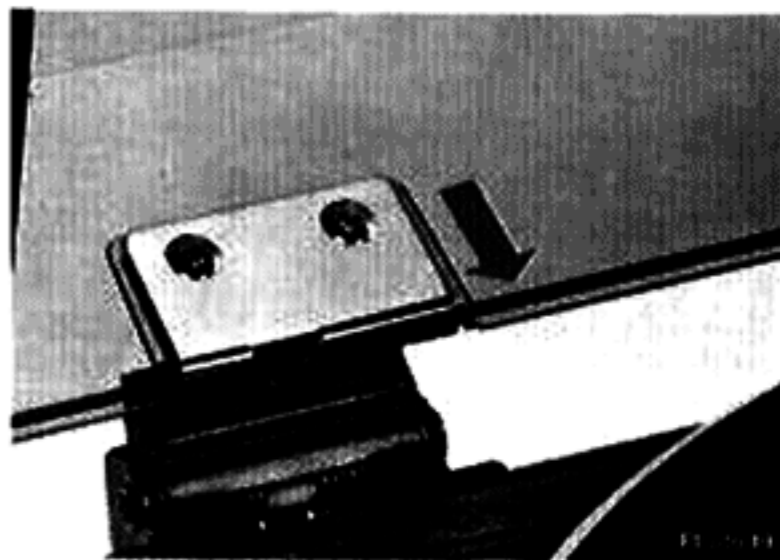
Fig 3

DUST COVER

● Installing Dust Cover

This turntable is supplied with a dust cover, which should be installed when the turntable is set up.

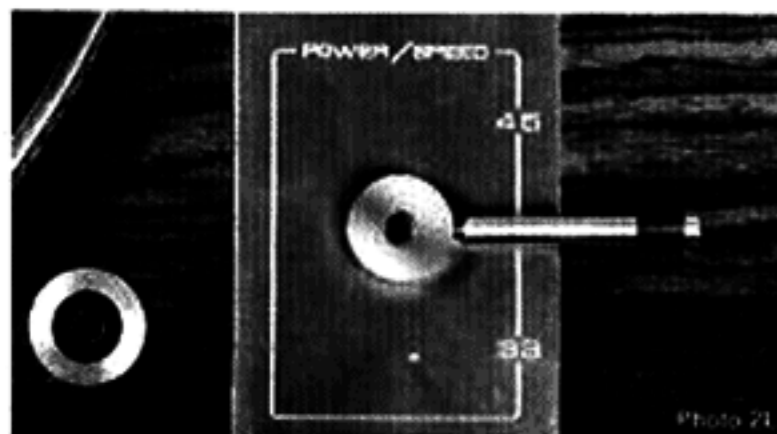
1. As shown in Photo 19, slide left and right dust cover brackets over the raised portion of the turntable hinges.
2. Slide the dust cover in the arrow indicated direction (Photo 20) and confirm that hinges are properly engaged.



OPERATION

Power switch automatically connects with the speed selector switch.

At 33 & 45 position the turntable commences to start (see Photo 21)



• Speed Control Fine Adjustment Knobs

Individual fine adjustment knobs are provided for 33-1/3 and 45 rpm speeds. With the platter rotating at a selected speed, observe the stroboscope inscribed on the outer rim of the platter at the neon lamp lighting. Adjust the knob corresponding to the selected speed until the stroboscope pattern appears to be stopped.

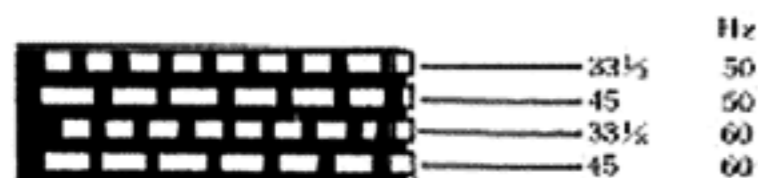


Fig. 4

The stroboscope inscriptions are, from top to bottom, 33-1/3 50 Hz, 45 rpm 50 Hz, 33-1/3 60 Hz, and 45rpm 60 Hz.

• Arm Rest & Lock

The arm rest lock is convenient for securing the tonearm when the turntable is not being used. Slide the arm rest lock in the arrow indicated direction (Fig. 5) only. Do not attempt to force it in any other direction.



Fig. 5

• Arm Lifter

The arm lifter gently raises and lowers the tonearm to safeguard records and stylus.



• Headshell Inclination Adjustment

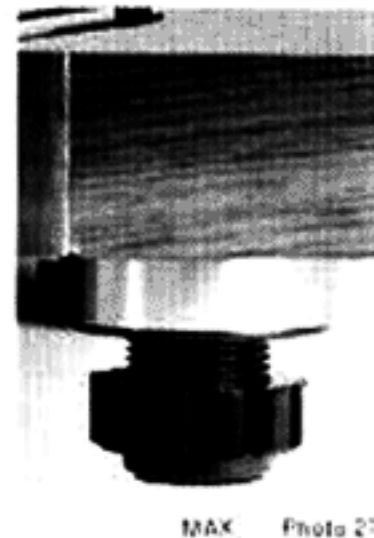
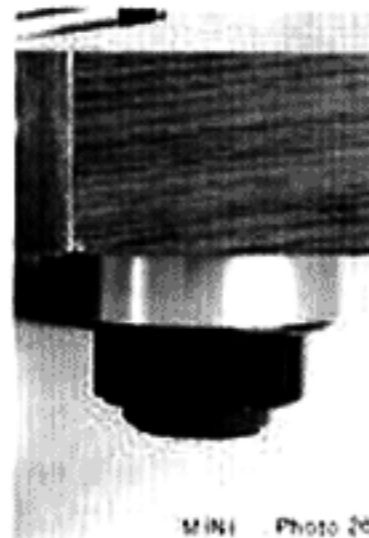
It may become necessary to adjust inclination when replacing the headshell. As shown in Photo 25, loosen the headshell clamp setscrew to adjust.

Note: Other than as required by this adjustment, avoid loosening and lightening the clamp setscrew.



• Player Level Adjustment

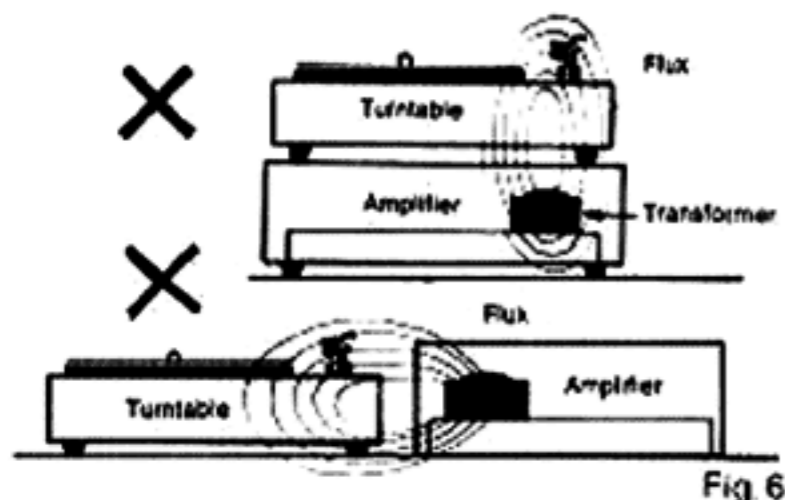
Observe the level gauge, adjust each foot height so that the player lays horizontally.



TURNTABLE HANDLING CAUTIONS & MAINTENANCE

• Turntable Location

1. Avoid placing the Solid-5 near sources of magnetic flux, such as on or near an amplifier, tuner or equipment containing one or more transformers
2. Since the turntable is sensitive to vibration, do not place it directly in front of a speaker, on top of a speaker, or in contact with a wall, etc. These may induce howling
3. Select a sturdy, level support for placing the turntable.
4. Allow for adequate ventilation to dissipate motor heat, which may become significant during long listening sessions.



• If dirt is allowed to adhere to the stylus, sound distortion will be incurred. Periodically sweep dirt from the stylus with the accessory brush. Records should also be cleaned with record cleaner before playing.

• Always close the dust cover when not employing the turntable.

• The motor and belt comprise the heart of accurate turntable performance. Interfering with platter rotation or forcibly turning it may damage the mechanism.

• The Solid-5 employs a sealed motor. Do not open or attempt to adjust the motor, as damage may be incurred. Refer all services to a MICRO service agency.

4-CHANNEL REPRODUCTION

• 4-Channel Stereo Systems

As of 1973, two forms of 4-channel (quadraphonic) stereo have become available. They can be broadly referred to as matrix and discrete.

1. Matrix 4-channel: decoder required, conventional cartridge can be used for RM (Regular Matrix) & SQ (CBS) Matrix.
2. Discrete 4-channel: demodulator and special cartridge required for CD-4

• Reproduction

Both matrix 4-channel systems, RM & SQ, require special decoders to properly reproduce phase differences. While conventional 2-channel cartridges are acceptable, those with superior phase uniformity are desirable. Discrete CD-4 reproduction requires both a special CD-4 demodulator and special cartridge. The cartridge must also be able to cover high frequencies to beyond 45kHz. The employed tonearm must possess correspondingly high sensitivity.

SPECIFICATIONS & DIMENSIONS

Solid 5 Specifications

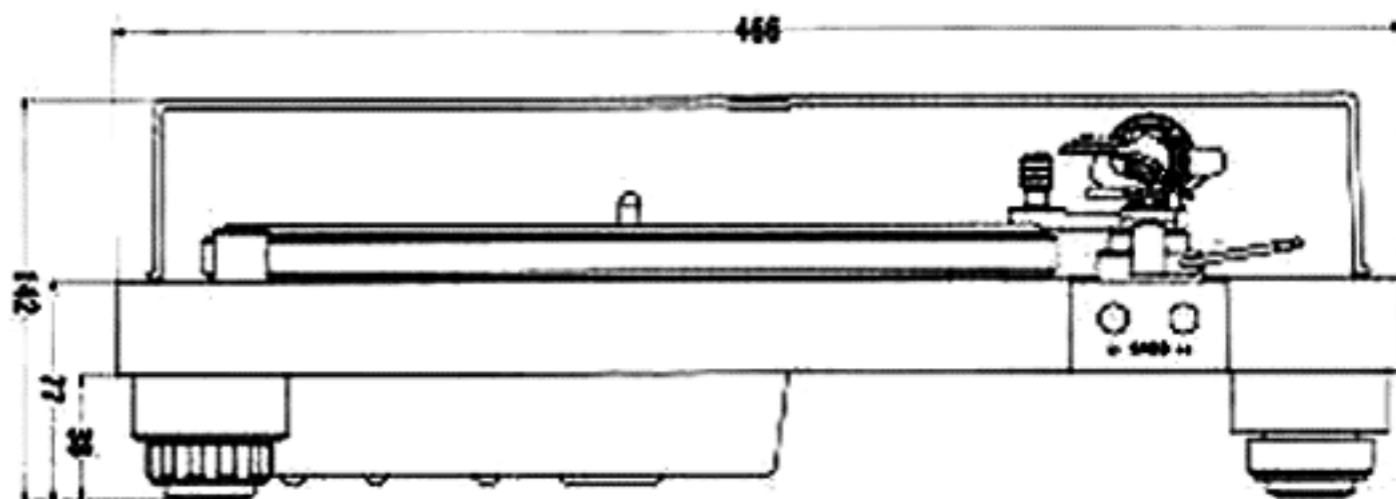
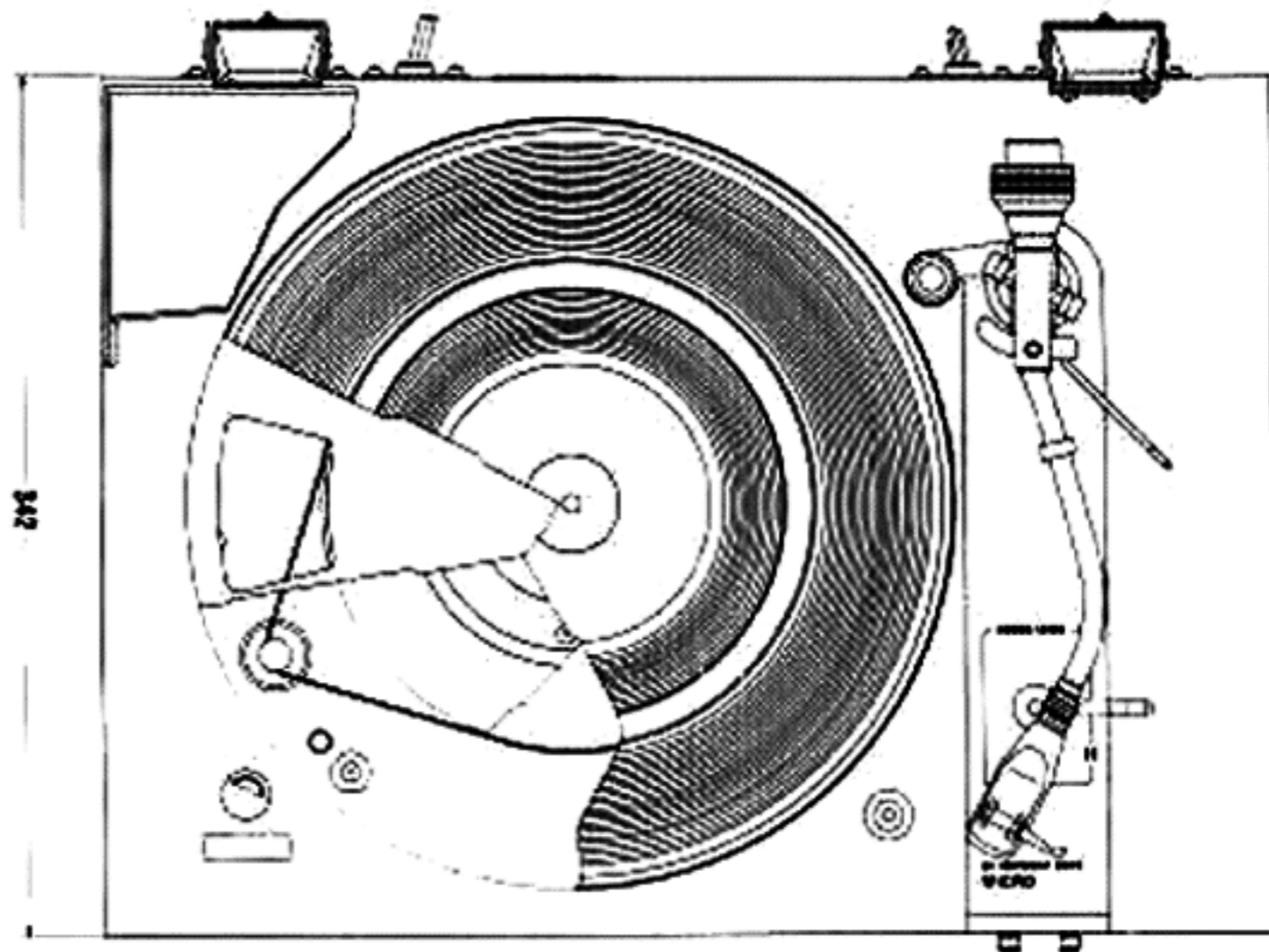
• Turntable

Drive System.....	DC Servo Bell drive system.
Rotation.....	33-1/3 & 45 rpm
Platter.....	Diecast aluminum 31 cm 1.5 kg
Power Consumption.....	100, 110, 117, 200, 220 & 240V 3.5W
Wow & Flutter.....	Less than 0.035%
SN Ratio.....	More than 58 dB

• Tonearm

System.....	Static balance type (inside force canceller responds to stylus pressure)
Overall Length.....	335 mm
Effective Length.....	222 mm
Overhang.....	15 mm
Offset Angle.....	21°
Maximum Tracking Error.....	Less than 1.5°
Recommended Cartridge	
Weight.....	4 to 11 grams (4 - 22 grams with separately sold subweight)
Tracking Force Adjustable	
Range.....	0 - 3 grams (1 rotation)
Dimensions.....	142(H) x 466(W) x 342(D)mm
Weight.....	9.3 kg

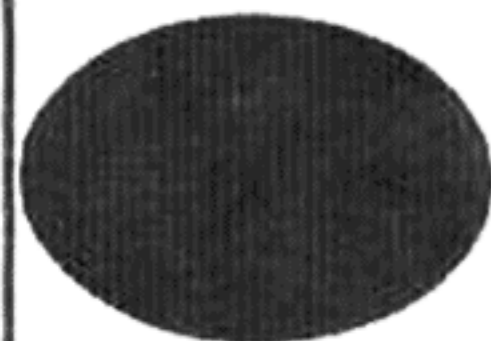
*Specifications subject to modification without notice.



TROUBLE SHOOTING TABLE

The following problems can be easily checked and remedied by the users and do not indicate equipment malfunction

<ul style="list-style-type: none"> ○ Power switch ON, turntable does not rotate. 	<ul style="list-style-type: none"> ○ Power not being supplied to motor. ○ Belt not engaged with pulley. 	<ul style="list-style-type: none"> ○ Check that power is being supplied. ○ Confirm that power cord plug is properly inserted into outlet. ○ Check and adjust belt and pulley.
<ul style="list-style-type: none"> ○ Rotation not smooth. 	<ul style="list-style-type: none"> ○ Center shaft oil depleted. ○ Oil contamination of belt and/or motor pulley. 	<ul style="list-style-type: none"> ○ Center shaft with accessory oil. ○ Clear motor pulley, platter, and belt with gauze moistened in alcohol.
<ul style="list-style-type: none"> ○ Sound not obtained 	<ul style="list-style-type: none"> ○ Improper output cord connection. ○ Headshell not securely attached to tonearm. ○ Incorrect or loose lead wire connections between cartridge and headshell. 	<ul style="list-style-type: none"> ○ Confirm output cord connections between turntable and amplifier. ○ Remove and reinstall headshell onto tonearm (see Photo 9). ○ Check for proper and firm lead wire connections (see Photo 7).
<ul style="list-style-type: none"> ○ Hum produced. 	<ul style="list-style-type: none"> ○ Poor ground (earth) connections. ○ Headshell not securely attached to tonearm. ○ Incorrect or loose lead wire connections between cartridge and headshell. ○ Magnetic flux leakage from nearby amplifier, tuner or other transformer containing equipment. 	<ul style="list-style-type: none"> ○ Connect ground wire to GND (earth) terminal on rear of amplifier. (see Fig.3) ○ Remove and reinstall headshell onto tonearm. ○ Check for proper and firm lead wire connections (see Photo 7). ○ Relocate turntable (see Fig .6).
<ul style="list-style-type: none"> ○ Platter cannot be removed from center shaft. 		<ul style="list-style-type: none"> ○ While raising platter, gently tap center shaft with wooden tool such as screwdriver handle.
<ul style="list-style-type: none"> ○ Dust cover does not close fully. ○ Dust cover slants to one side 	<ul style="list-style-type: none"> ○ Dust cover not properly installed. 	<ul style="list-style-type: none"> ○ Remove and reinstall dust cover (see Photos 19 & 20).
<ul style="list-style-type: none"> ○ Record sound distorted. 	<ul style="list-style-type: none"> ○ Tracking force incorrect. ○ Dirt accumulation on stylus. ○ Tonearm adjustments incorrect. 	<ul style="list-style-type: none"> ○ Set tracking force as recommended for used cartridge ○ Clean dirt from stylus (with brush) and record (with record cleaner). ○ Check tonearm horizontal balance and tracking force adjustments.



MICRO

WORLD OF MICRO is created by the talented team of engineers, skilled sound technicians and expert designers. The complete line represents a combination of many years of our research to send you qualified high fidelity components: Turntable Decks, Stereo Cartridges, Tone Arms, and Complete Players. The MICRO trademark, which symbolizes an elliptic stylus tracing the grooves, is tantamount to the slogan of the company, an integrated manufacturer specializing in the production of turntables that challenge the ultimate in faithful reproduction of the original sound. Each unit is assembled with craftsmanship skill and pride. Each completed unit is quality-tested at the factory and delivered to you to assure dependable and trouble free performance.



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