precision designed & engineered high fidelity record playing equipment and accessories

MICRO

MA-101 MK-Ⅱ

MICRO BALANCE TONE ARM

MICRO

INSTRUCTION MANUAL

STATIC BALANCE TYPE TONE ARM

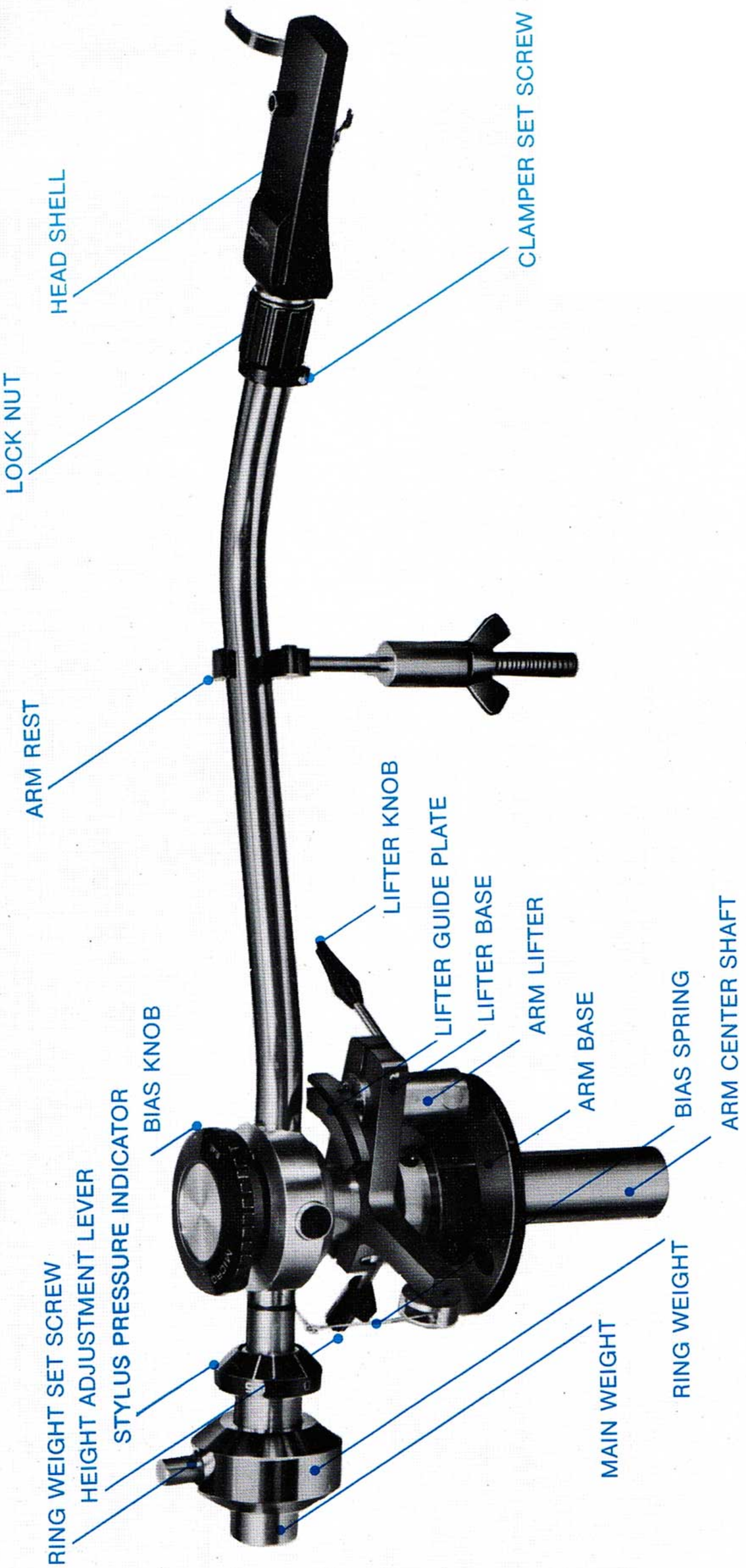
MA-101MK-Ⅱ

with Perfect Anti-Skating Device

An ideal tone arm has been developed at last thorough studies on various problems inherent in the offset tone arm. It is the crystallization of volitional efforts of our engineering staffs aiming always at the best, based on the endorsements by theories and laboratory works. High-quality tone arm exactly fitting the modern sense in points of styling and convenience of use..... it is Micro Balance-type MA-101MK-Ⅱ.

FEATURES

* Inside force can be corrected easily and accurately with newly devised spring type anti-skating device and stylus pressure corresponding vias knob.
* Due to the combination use of a split and revolving type weight and a stylus pressure scale ring, the front and rear balance of tonearm and the stylus pressure of any cartridges can be adjusted accurately and easily.
* Music can be enjoyed at ease, because the delay motion arm lifter assures smooth operation at starting and ending of disc with “feather touch” cuing.
* By means of employing S-shaped pipe arm, a moving axis line of main weight was made to pass near the centroid of cartridge. It is hence not necessary to adjust
* The lateral balance at each time of replacement of cartridge.
* The arm base is provided with a height adjuster with a lever by which the height of arm can be adjusted simply so as to match the cartridge.
* Micro balancing can be kept perfectly by means of turning the weight with fingers, because its minimum turning angle is approximately 2° corresponding to 16mg in stylus pressure that is less than the arm’s initial sensitivity 20mg.
* Beautiful arm designing was realized by increasing precision and physical strength, and fully availing of mechanical beauty.



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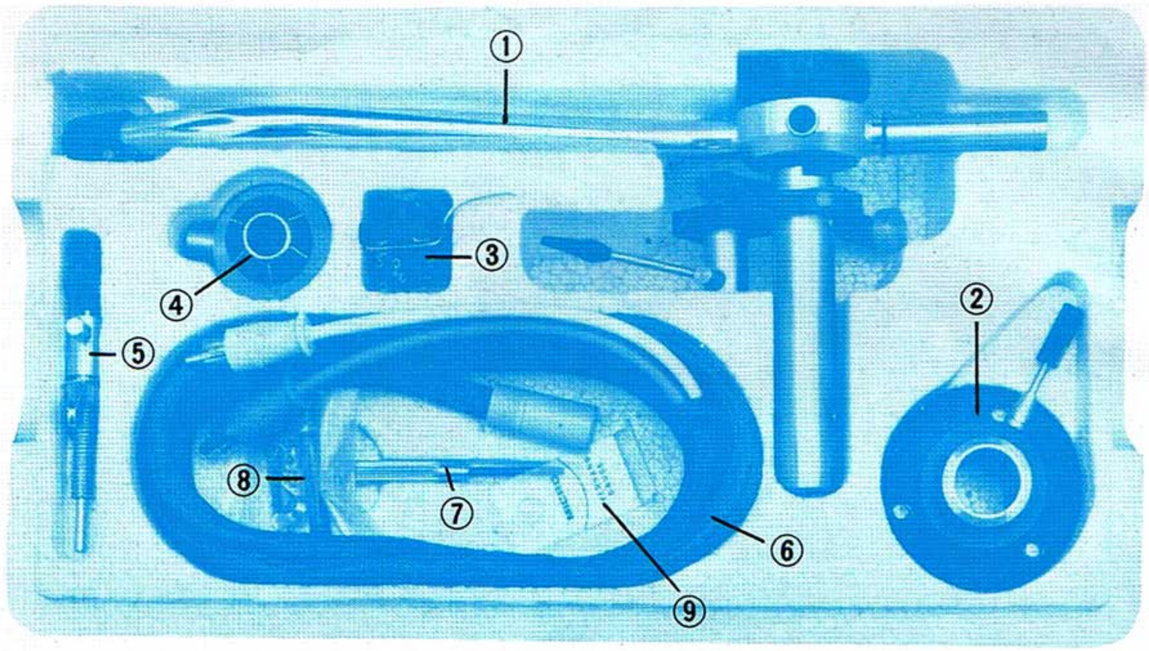

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HOW TO UNPACK

1) Take out a styrofoam inner box, instruction manual, template (fixing diagram), lifter base locating gauge and patronage card from the packing case, and then remove a top cover of styrofoam box.

2) Check and confirm if the components seen in the picture (1) are all contained in the styrofoam box.

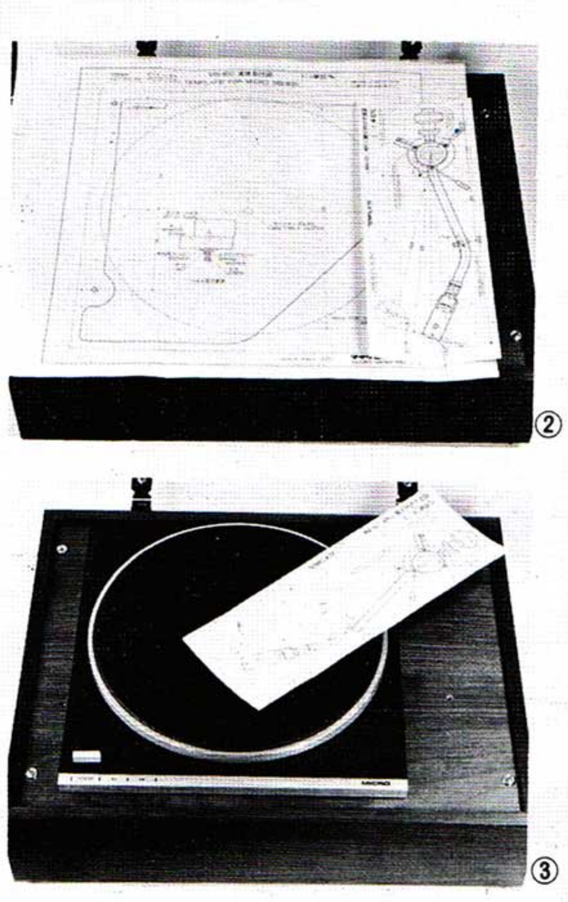
HOW TO FIX TONE ARM

A player case on which the tonearm is fixed should be physically strong. Especially, a motor board is required to be more than 15mm in thickness and superb in surface planing.

1) When a turntable and a tonearm are mounted on the motor board at the same time, the fixing place of tonearm should be located by means of placing a fixing diagram (template) of tonearm on that of the turntable. In this case, care must be taken so that the operation of turntable and tonearm will be made smoothly, and the fixed tonearm can move anywhere on the record, while playing, without trouble. After the location of tonearm is decided, holes for the arm and arm rest will be bored, with diameters of 22mm for the former and 7mm for the latter. (See. 2).

Note: When a tonearm is fixed to the board on which a turntable has been already rnounted, the tonearm template may be not exactly put on the motor board because of the level difference. Accordingly the location must be done carefully so as not to make a divergence of location. (See. 3).

1. MAIN BODY OF ARM
2. ARM BASE
3. HEAD SHELL
4. WEIGHT
5. ARM REST
6. LOW-CAPACITY OUTPUT CORD
7. ATTACHED SCREW DRIVER
8. BASE FIXING SCREWS
9. SERVICING GAUGE



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2 The arm base should be tightly fixed to the motor board with attached wooden screws or metal screws, and the arm rest with flat V-shape nut. (See. 5).

Note: When the arm base is mounted, the height adjustment screw device must be located at the out side. (See. 4).

3) Pass an output cord through the arm base from its reverse side, and then insert it into the center shaft of arm, by making a projection of cord conform to a slot of the said center shaft. During this process, the said center shaft should be held by fingers so that no excessive force is given to the axis bearing of arm. Next, loosen the height adjustment screw of arm base with a screw driver, and insert arm shaft, and tighten the height adjustment screw so moderatly that it does not drop in due to its self weight. And then put the arm on the arm rest. (See. 6).

HOW TO ASSEMBLE TONEARM

1) How to fix Cartridge and Head Shell

a. Picture 7

Fix a cartridge to a head shell by using provided screws or screws attached to the cartridge. In this case, center lines of head shell and cartridge should be on the same line.

b. Picture 8

Connect lead wires of head shell to the terminals of cartridge. The color coding of lead wires is:
Red R+, White L+, Green R− and Blue L− As the connections conform to the European Standard Specifications (EIA), the shell of EIA Specifications can be installed as it is.

c. Picture 9

After the cartridge is fixed, a head shell will be installed to the arm. In this case, in order to prevent the arm revolving part from unnecessary force, the head shell will be pushed in and locked carefully.

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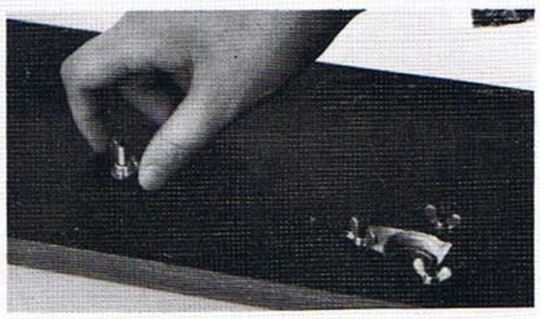
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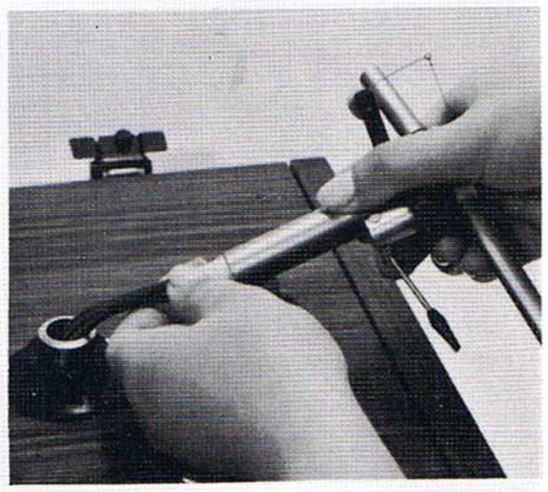
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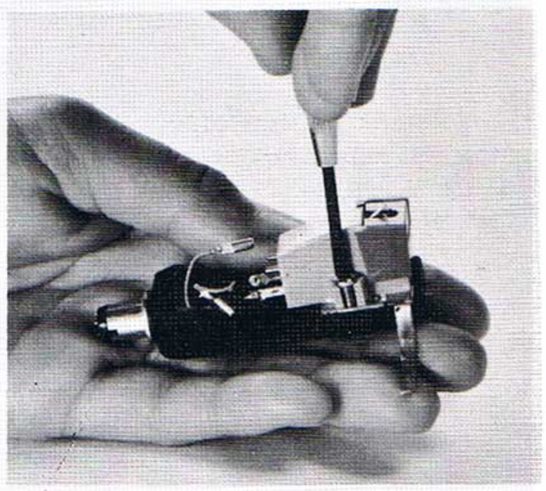
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2)
The main weight will be mounted on the rear part of arm, with a stylus pressure knob being placed in front. And then it will be fitted perfectly by means of turning it a few times. (Picture 10)

HOW TO ADJUST

1) Adjustments of Arm Height and Antiskating Device. Place a record on the turntable, and put a stylus tip of cartridge on the groove of the record, and then adjust the height roughly by loosening the height adjustment screw, so as to make the arm being parallel with the record surface, as seen in the picture 11. Next, set both ends of lifter base locating gauge respectively on the outer circumference of turntable and on the edge of lifter base as seen in the picture 12. And again loosen the height adjustment screw, keeping the height of arm as it is, and decide its location, and tighten the screw firmly. In this way, the anti-skating device is adjusted to work perfectly.

2) Adjustment of Horizontal Balance. After having advanced a ring weight close to the stylus pressure knob as seen in the picture 13. Push forward the entire main weight up to the balance standard point with red mark. If the head shell side keeps floating up when the arm is released from the arm rest and put on the lifter guide plate, it means that the cartridge is less than 4g in self weight. Therefore a counter-weight must be put between head shell and cartridge to make it heavier. Please note the acceptable cartridge weight is between 4~15 grms for MA-101MK-II.
In the ordinary case (the cartridge side is heavier), the entire main weight is moved back by turning it clockwise until the arm comes to be balanced. (At this time, a ring weight setting screw must be fixed tightly to avoid racing.) In case the cartridge side is heavier even when it is moved back in this way up to a point where the stylus pressure standard line disappears, the ring weight setting screw will be loosened and the ring weight will be moved back until the arm is balanced. (It must be noted that the main weight comes off the shaft when it moves back to the point or further where the stylus pressure standard line disappears.) (See. 14, 15.)


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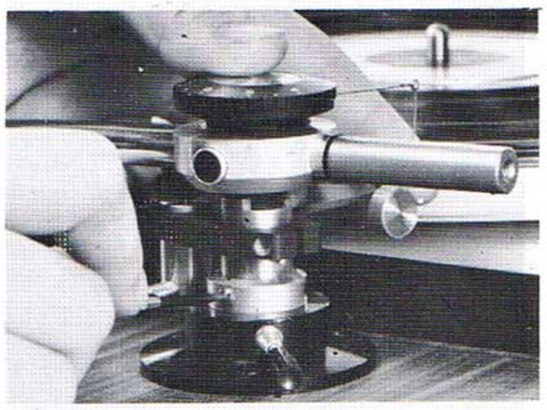
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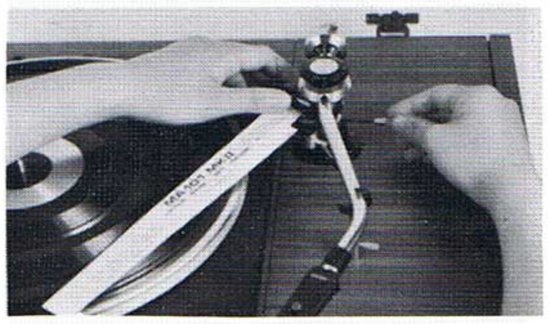
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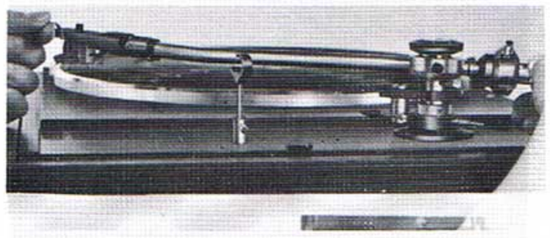
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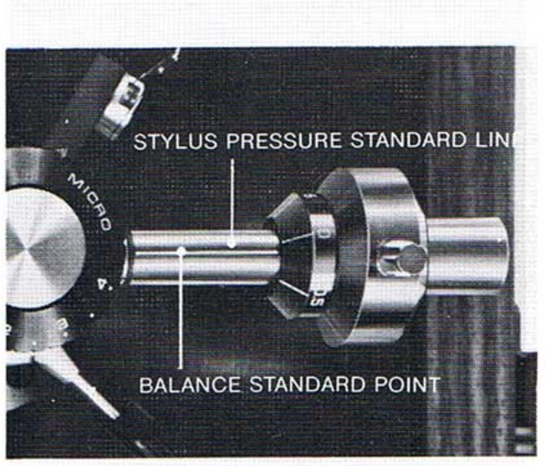

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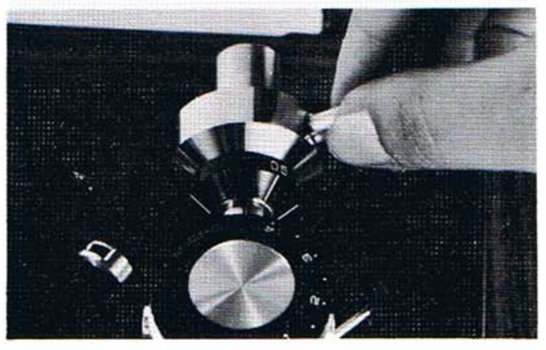
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3) Adjustment of Stylus Pressure

When the arm is balanced horizontally, return it to the arm rest. Next, set a 0-scale of the stylus pressure indicator (a black part of main weight, with engraved figures) on the stylus pressure standard line by means of turning the said knob alone. Then turn counter-clockwise the entire main weight including the stylus pressure indicator and obtain the desired stylus pressure, reading the figure on scale. (Graduation unit of scaling is 0.5g, and 3g per turn.)(See. 16)

Note: In case of applying the stylus pressure, the stylus pressure can not be added unless the entire main weight is turned. Fix tightly a ring weight setting screw. When the horizontal balance is adjusted or the player is not used for long time, the bias knob scale is required to be set on "0" point.

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4) Adjustment of Anti-skating Device

Anti-skating device is a mechanism to cancel the inside force that a stylus is pulled towards the center of record due to revolutions of record during the playing. This force becomes stronger, according as a stylus nears the center of record. As a result, there will take place a difference of pressure between the right wall and left wall of a groove. The device that is designed to cancel this difference of force and give constantly the same stylus pressure to the both walls of a groove is the anti-skating device. The anti-skating device of this tonearm has the graduations corresponding to the stylus pressure scaling. So all that is necessary for balancing is to set the bias scale on 2 when the stylus pressure is 2g, and on 3 when it is 3g. In other words, it is required to set the bias scale on the corresponding figure of graduation. (See. 17)

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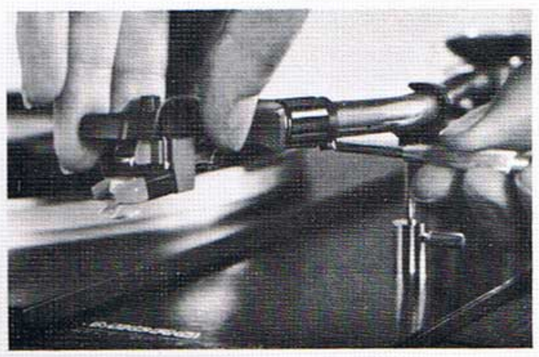
5) How to adjust Irregularly Fixed Head.

As seen in the picture 19, an adjustment screw is provided at a junction point (head lock) of head shell and arm. It is preset at the factory before the shipment, but it is loosened sometimes during the transportation or fixing works. In such a case or when other manufacturer's head shell is installed, the head is apt to be not in parallel with the record face. Such an irregularity has to be adjusted so as to keep the above-mentioned parallel, by loosening an adjustment screw and using a service gauge. (See. 18)

Note: It must be avoided to screw it tightly more than necessary.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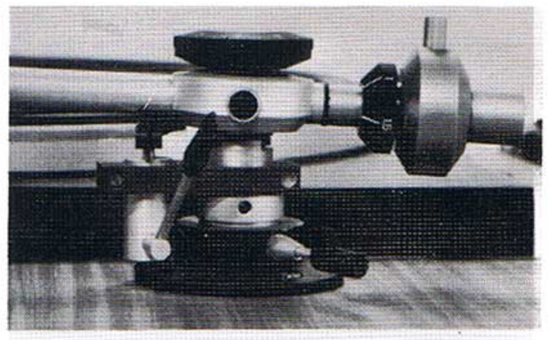
6) How to Use Arm Lifter

The tone arm is provided with a delay motion type lifter. It works slowly in the same way as the ordinary lifter when the arm goes down, but it works slowly even when it goes up. Due to such an operation of lifter, unnecessary force is not added to the revolving part of arm, resulting in preventing record and stylus from being damaged. (See. 21, 22)

7) How to Mount Bias Knob

When a bias knob gets out of place, pull a spring slightly with fingers of the left hand, as seen in the picture 23, so as to pull a spring in the bias knob up to the outside of a hole showing a center of arm. And then set 2 of bias scale on the canceller's standard point, and mount the bias knob. (See. 23)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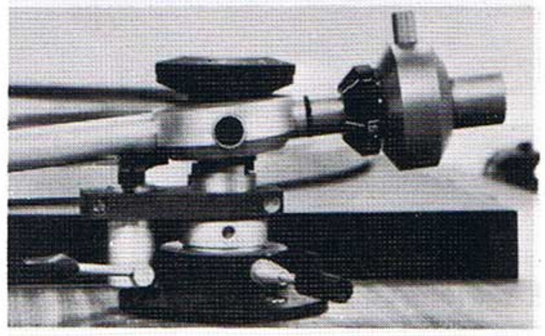
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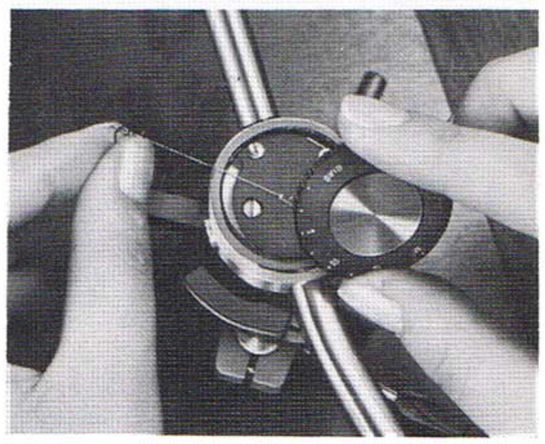
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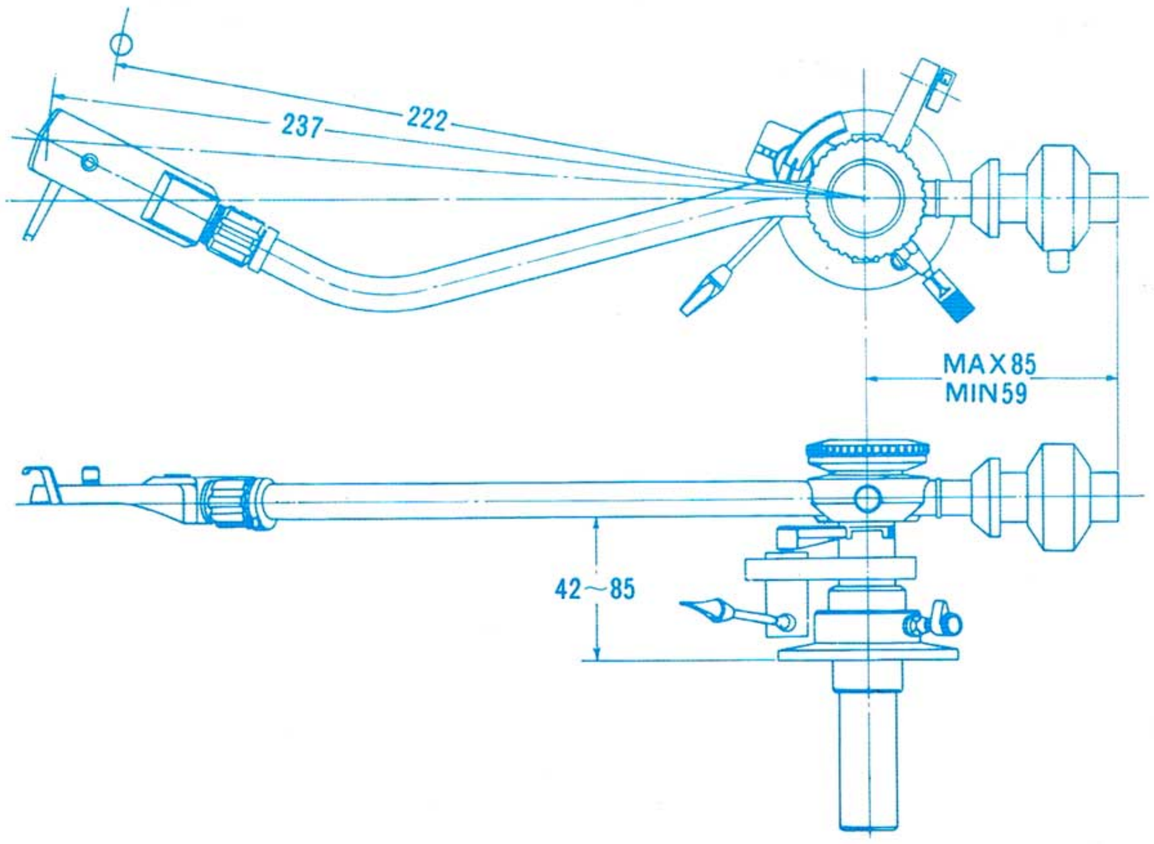

SPECIFICATIONS

Type:
Static balance universal type
Length:
Overall 333mm (maximum)
307 (minimum) Effective 237mm
Overhang:
15mm
Offset angle:
21°
Tracking error angle:
Less than 1.5°
Adjustable range of height:
42～85mm (distance between motor board face and cartridge mounting face)
Height adjustable range by lever manipulation:
Within 6mm
Weight of matching cartridge:
4～15g
Horizontal movement sensitivity:
50mg/mm
Vertical movement sensitivity:
25mg/mm
Stylus pressure variable range:
0～3g direct reading (3g per turn)
Anti-skating device:
Spring system
Cancel force setting:
Stylus pressure corresponding (up to 400mg variable)
Arm lifter:
Delay motion type with a shock absorber for arm lifting
Head shell:
Provided with a head shell adjustment ring
Output cord:
5-p plug-in, low capacity (55 PF/m), shielded cord
Head shell weight:
9.7g (H-77N)
Head connector:
SME type 4-p connector
Connector:
Solid gold-plated

SPECIFICATIONS SUBJECT TO MODIFICATION WITHOUT NOTICE.

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