KUZMA STOGI S 12 TONEARM S/N……..

Instruction manual

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KUZMA LTD

INSTRUCTION MANUAL FOR STOGI S 12 inch tonearm

The **Stogi S 12 (305mm)** tonearm is a very precisely engineered piece of equipment. The construction, however, is robust and requires the minimum of maintenance for optimal performance.

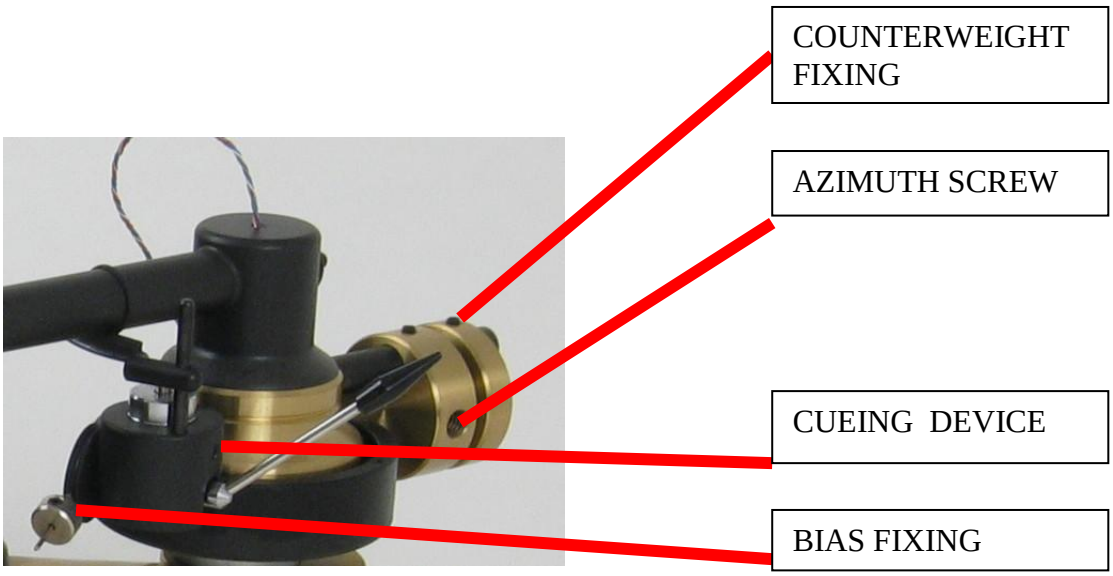

Fig.2.

CONTENTS:

General Description:

the tonearm is packed in one box with the serial number and type of wiring marked on the outside

The tonearm is of a unipivot design with a unique, rigid headshell made from a solid aluminium block and a base of solid brass which, together control all vibration as well as facilitating the stability of the tonearm as a whole. All other parts are also machined from blocks of solid metal in order to provide damping and minimise resonances. The polished pivot point is sited in a well of oil, which allows only minute friction and bearing vibration. The height is at record level for optimum tracking, while silicone damping controls resonance of the cartridge and arm combination and also gives stability in azimuth direction.

Three counterweights allow for easy adjustment of the tracking force and for general and fine azimuth adjustment. Wires are in one continuous piece from the headshell to the RCA plugs. When the tonearm is supplied for use on the Stabi S 12 turntable, it is fixed directly into a brass pillar, which allows VTA adjustment.

Stogi S 12 tonearm:	**Technical data :**
Mass:	740 g (+ armbase 70 g)
Effective length :	304,8 mm
Mounting distance:	291 mm
Offset angle:	17,8 degrees
Effective mass:	13 g
Bearings:	unipivot
VTA adjustment:	yes
Azimuth adjustment:	yes
Bias adjustment:	yes
Arm mount:	Kuzma

Optional: balanced and 5PIN wiring, finger lift, various counterweights

1. Unpacking:

The tonearm with accessories is packed in one box. Before unpacking the individual parts of the tonearm, make some space and check that your turntable has the right tonearm cutout.

Content:
Bearing base, tube base, armbase. PVC bottle with silicone oil, Allen keys: 1.5, 2, and 3 mm, cartridge mounting hex screws M2.5 mm non magnetic, geometry protractor.

Optional:
finger lift for headshell.

2. Basic setup:

Note: When mounting the tonearm on a Stabi S 12 turntable no armbase is required. Check the turntable instruction manual to see how to mount the tonearm and then skip to the 'Bearing base' section of these instructions.

Note: When mounting Stogi S 12 on other turntables, an **armbase** with an appropriate cutout is required. There should be adequate space for the counterweights and counterweight rod when the tonearm is in the 'rest' and inner groove positions. Clearance between the lower edge of the platter and the armboard should be 28-30 mm minimum.

Note: To mount the cartridge, tweezers and a tracking force gauge will be needed
Note: Silicone oil should be poured into the bearing base after all cartridge adjustments have been made.
Note: Remove parts from protective plastic bags.

Armbase:
Locate the black armbase and the three hex screws. Position the armbase over the cutout on the turntable armboard and fix screws to nuts using Allen key (3 mm). Ensure that the screws are long enough to go through the armboard into nuts. Also that the screw for height and VTA adjustment is accessible with an Allen key (1.5 mm), i.e. away from the platter.

Bearing base:
Lift the base from the box. Insert the bearing base into the **armbase** and position so that the chromium plated cylinder for the cueing device is facing the front of the turntable. Gently fix the height with Allen key so that the top of the bearing shaft is on a level with the top of the platter.

If mounting on a **Stabi S 12** turntable, first locate and remove the brass pillar of the turntable by releasing the VTA locking screw (Allen key 3 mm). Insert the bearing base into the brass pillar on the side which does not have threaded holes. The gap between the top of the pillar and the bottom part of the oil reservoir on the bearing base should be between 5 - 10 mm.
Observe the two screws and fix the bearing base into the pillar with Allen key (3 mm). Position the brass pillar into the T base of the turntable so that the tonearm bearing shaft is near to the platter spindle. At the same time both screws should be symmetrical but further away. See fig 2.

Now observe the position of the cueing device cylinder and ensure that this is facing the front of the turntable. This will be the position of the tonearm when in the 'rest' position. If this position is not suitable, release both screws and rotate bearing base in the brass pillar. Repeat this process until you find a position where the tube is parallel to the right hand side of the lid. This seems complicated in theory but is not in practice.

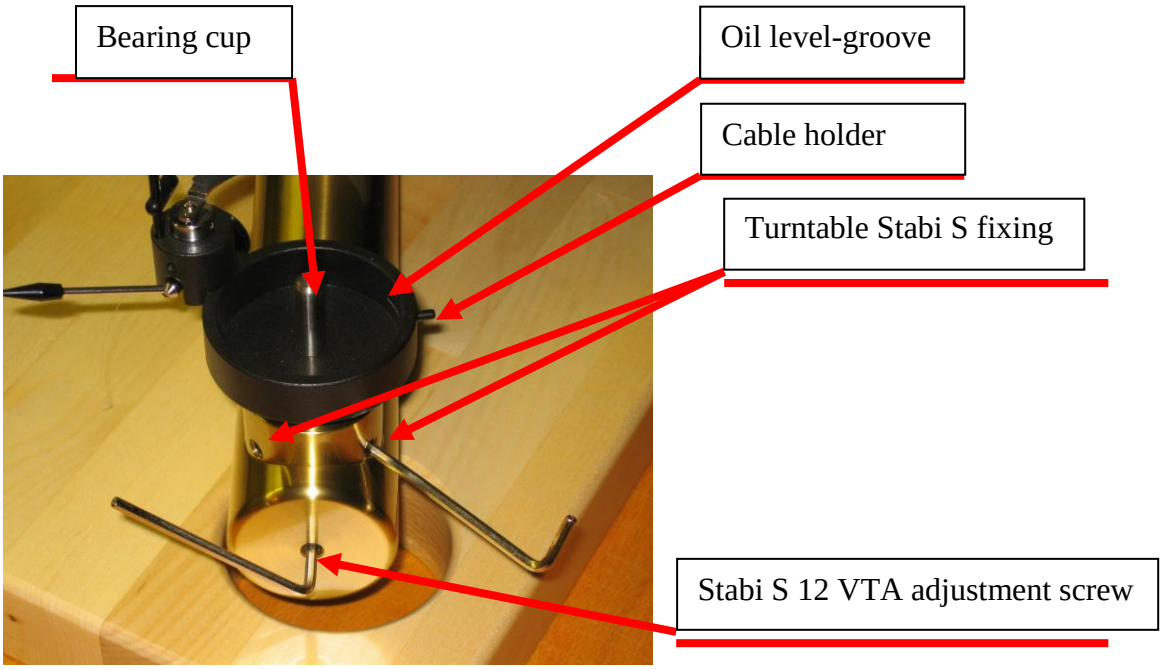

Fig. 4. The bearing base with cable holder in its brass pillar on Stabi S.

Tube base:
Carefully lift the tube base with counterweights and cable which, (for **transport only)** is fixed at the end of the tube. Position it gently onto the bearing shaft. The bearing pivot will automatically fit into the bearing cup on top of the bearing shaft. With Allen key (1.5 mm), release and then remove the metal holder and cable from the back of the tube and carefully fix it on the outside of the bearing base. Rotate the cable in such a way that the wires rise vertically. Then fix it with Allen key 1.5 mm. With fingers gently arrange the wires into a loop. (See Fig.2 and arrow on Fig. 5)
Due to the counterweight being at the end of the tonearm, the headshell end is raised. Using the same Allen key (1.5 mm), release the top screws and slide both weights off. Now you can check the position of the tube in the 'rest' position and rearrange the bearing base if necessary. Return first the thicker and then thinner counterweight to the rod and fix them gently so that the fixing screws are on top.

If Stogi S 12 is mounted on other turntables, move the tube by hand towards the spindle as if in an 'inner groove' position and ensure there is enough clearance for the rod and counterweights. If not, consult your dealer.


Fig. 5. See cable fixing

Cartridge mounting:
Locate the hex screws for fixing the cartridge, or use screws supplied with the cartridge. Fix the cartridge under the headshell in such a position that the tip of the diamond is at the furthest point of the headshell.
With tweezers or other appropriate tool, (if using pliers be aware that strong force can break the wires under the insulation material) connect pins according colours:

Red	right +
Green	right -
White	left +
Blue	left -

Tracking force:
Adjust both thicker counterweights so that the cartridge is balanced while keeping the thinner counterweight as far away from the bearing as possible. If the cartridge is tilted (azimuth) when viewed from the front, rotate the thicker counterweight. For some lighter cartridges one counterweight will be adequate to obtain the correct tracking force.
To adjust tracking force use a gauge and move the counterweight closer to the bearing to obtain the chosen force. Consult your dealer.

Cartridge set up:
Place the needle on the record and observe azimuth and height of the tonearm (VTA).

Height (VTA):
Adjust the height of the tonearm by raising or lowering the bearing base so that the arm tube is parallel to the record.

On Stabi S 12 turntable:
Release the VTA screw which holds the brass pillar, while holding the bearing base. Then reposition it and lock it back.

Armbase:
Release the VTA screw in the armbase while holding the bearing base and reposition it and lock it back.

Azimuth:
Level the turntable horizontally. Any change will affect the azimuth. Observe the mirror image of the cartridge on the record and adjust the tilt of the cartridge so that the mirror image and the cartridge will be vertical and straight. For this adjustment, rotate the thinner counterweight. If you find that the tilt is excessive, then first rotate the thicker counterweight and then make fine adjustments with the thinner counterweight. See Page 3.

Tangential geometry:
Adjust the geometry of the cartridge in the headshell so that zero point will be on the protractor in both null points (66, 120.9 mm). Consult your dealer .

Oil for damping:
Carefully lift the tube base, bearing in mind the length of the wires and put it on top of the platter. Cut the tip off the nozzle of the PVC bottle and squeeze to fill the reservoir surrounding the bearing shaft till the fluid level reaches the groove line inside the reservoir. In addition put 1-2 drops of fluid into the cup on top of the bearing shaft. The level of damping is chosen to suit the best cartridges available but you should experiment, especially with cheaper MM cartridges.

Bias adjustment:
Catch the string loop onto the hook which is at the back of the tube base. Be sure that the string runs in the groove. Adjustments are made by moving the small counterweight after releasing it with the Allen key (1.5mm). The maximum position is for 2.5 g tracking force and the minimum is for 1 g. Finer adjustment should be made using a test record. Consult your dealer.

Fine adjustments:
Re-check and readjust the tracking force, VTA and azimuth if necessary. For more precise adjustments, play the cartridge for 5- 10 hours and then readjust. The cartridge will need about 50 hours playing to settle down for the best sound.

Fine VTA:
The correct height of the tonearm is different for different cartridges and tracking forces. It could be above or below the theoretical 'parallel tube' position for up to 4-5 mm. If you are above the optimum height the sound becomes bright and thin and if below, the sound could be bass heavy and not open. Feel free to experiment or consult your dealer.

Fine Azimuth:
The starting position is in a line with its mirror image. For fine adjustment a test record and oscilloscope are needed. In the thicker counterweight, however, there is a small screw on the right, which can be rotated using Allen key (3 mm). Rotation of the screw will slightly change the azimuth. Counter clockwise rotation tilts the cartridge to the left and vice versa.

Counting rotations enables you to listen to improvements in focus and to return to the original position. If necessary consult your dealer.

Cueing device:
The height of the cueing device can be adjusted with Allen key (1.5 mm).

Tube rest:
The height of the tube rest can be adjusted with Allen key (1.5 mm).

4. Maintenance:

Bearing:
The bearing does not require any maintenance.

Cueing device:
Occasionally clean the black foam tube support to increase grip, using soft cloth soaked in alcohol.

5. Problems:

Silicone oil spill:
If oil is spilled, firmly wipe with cloth or paper towel. Afterwards clean with a soft cloth soaked in alcohol.

Tube running outwards:
Due to the silicone damping and descent rate of the tonearm, lower friction on the cueing device in the 'play' position may cause the tube to travel towards the outer edge of the record. Check that surfaces on the cueing device are clean and, with fingers, bend down the part of the cueing device which lifts the tube at the inner groove. Check that bias is not too strong. Also check that the wire loop is in a normal arc .

Mistracking:
Inadequate tracking force.
The cartridge may be too light. If so check the choice of counterweight and use only one instead of two, or consult your dealer.
Cueing device too high in 'play' position and is touching the tube. See the air gap and lower the cueing device.

6. Transportation:

When moved, be sure to secure the tube against the armrest and be sure that you do not tilt the turntable for more than 15 degrees, as this could cause a leakage of silicone oil.
If moving longer distances, re fix the cable to the back of the tube, lift up the tube base and keep it above the bearing base for a short period of time until the silicone oil has dropped back into the reservoir. Clean the brass damping base with a paper towel. If you cannot be sure that the bearing base will be horizontal during shipment, remove silicone oil by pouring it away and wipe surfaces with a paper tower. If necessary obtain a new bottle of silicone oil from your dealer.

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