SERVICE NOTE

JR6: Mechanical Setting

- Switch the device off, unplug the mains cord from the power supply. To open the pick-up unit unscrew the safety screws and remove the cover, as in Fig. 1

Figure 1: JR6 top cover

- Do not forget to unplug the grounding cable marked by the red arrow, as it is shown in Fig. 2

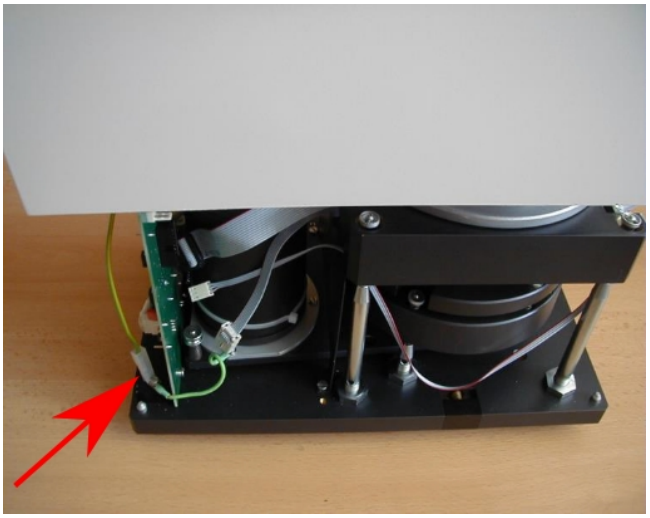

Figure 2: Grounding cable

Initial tests

Before any interfering with mechanical setting of JR6 try to perform several quick tests. Install holder with problematic sample, close the coils and install shielding hat. Then switch ON the spinner and run the JR6SERV.exe software.

Test 1

- Switch on high speed using command "**h**" and run the measurement with command "**g**".
- Slightly move bottom trapezoidal plate, marked by the red arrow in Fig. 4, during the rotation of the sample. Move the plate to right, left, back and forward, **not up or down**.
- If you will notice decrease or disappearing of the vibrations, then try to adjust position of cardan shaft according to **Adjustment 1**.
- If there will not be any improvement during this first test do not try to adjust the cardan axis.
- Try to perform same operation for low speed. Use command "**l**" (small L) for set low speed and do the same things as for high speed.

Test 2

- Check the integrity of two damping foams placed above and between bronze plates, marked by two arrows in Fig. 3.
- Press bronze plates together few times and check flexibility of the damping pads. Primarily the lower one, marked by green arrow in Fig. 3, must be flexible, in good order and in correct distance.
- If the damping pads seems to be disintegrated, ask Agico for further assistance.
- Switch on high speed using command "**h**" and run the measurement with command "**g**".
- During the rotation of the sample try to slightly change the distance between two round plates shown in Fig 3. by pressing them or lifting them by hand.
- If you will notice some improvement try to adjust the distance between two round plates according to the **Adjustment 2**.
- If there will not be any improvement during this test do not try to adjust distance of the plates.

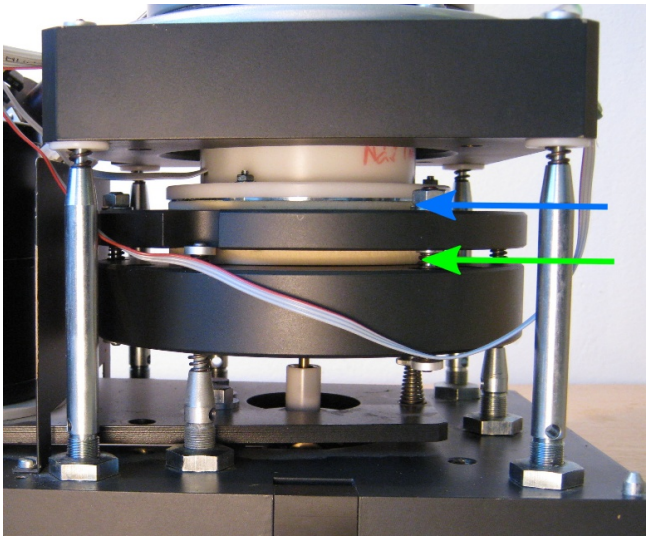

Figure 3: Damping pads

Test 3

Check the correct position of the holder inside the coils, according to the Fig. 7. Perform the operations described in **Adjustment 3**.

Mechanical setting of JR6

Adjustment 1

- In ideal situation, axis of the cardan shaft is coaxial with the sample holder. Correct alignment of cardan shaft is marked by green line in Fig. 4.
- Sometimes a small non-coaxiality is better, because it can remove vibration of mechanics.
- Adjustment can be done by the loosing two screws, marked by the blue circle in Fig. 4, adjusting of the cardan position and tightening the screws.
- It is better to dismantle driving belt when you perform such adjustment.

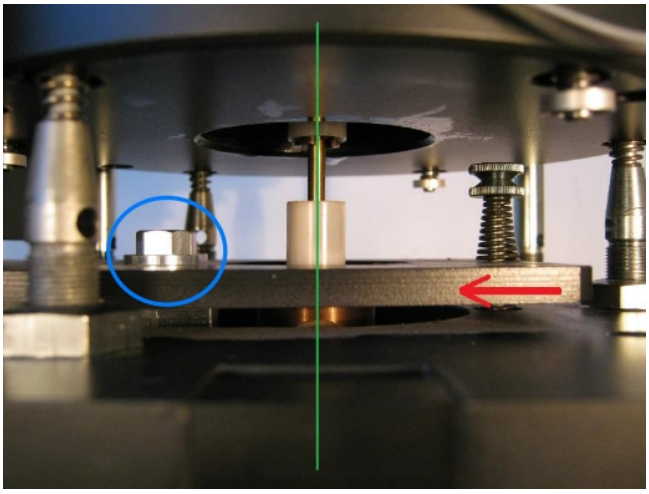

Figure 4: Cardan shaft

Adjustment 2

- This procedure describes how to adjust distance between round plates. For first step, locate three nuts on upper round plate (red arrow in Fig. 5) and loose them a little.
- Turn with three screws (red circle in Fig. 5) to set correct distance between two round plates. Note that only one of three screws is marked.
- Small pliers must be used to turn three screws. Usually quarter of turn is good enough.

- Remove vertical shielding plate between motor and mechanical system (green arrow in Fig. 5) due to access to third screw.
- Correct distance (approx. 0.3 mm) between circle plate and damping pad can be indicated by the piece of paper (business card).
- The system is set properly when you can insert this paper between damping foam and bottom plate easily, but without any space left, as you can see in Fig 6.
- **DO NOT** forget to tighten the nuts after successful adjustment.

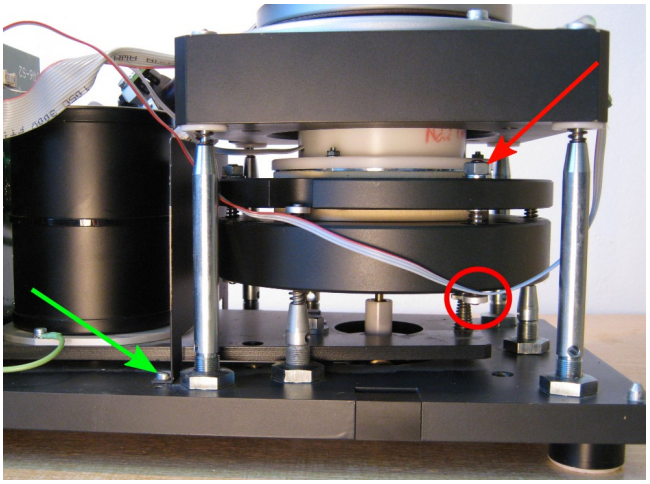

Figure 5: Three screws on round plate

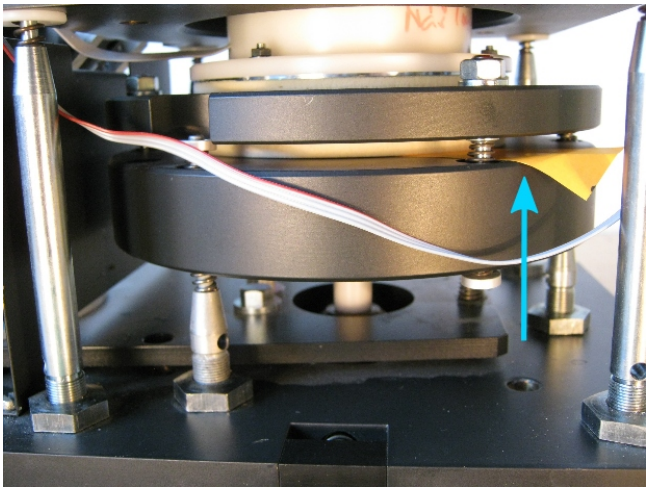

Figure 6: Correct distance between round plates

Adjustment 3

1. Check the axis of sample holder marked by the green line in Fig. 7. Top part of holder must be in the middle of space marked by the red arrows. If not, adjust the holder according to the next step.

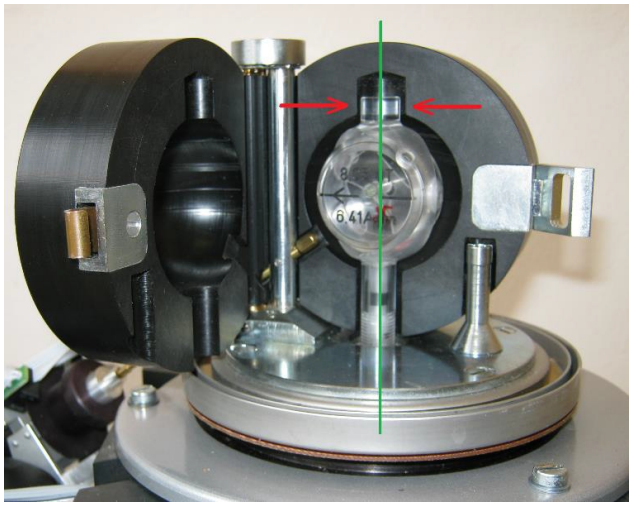

Figure 7: Holder in correct position

2. Locate three screws according to Fig. 8 (only two are marked). First loose the nuts and then try to turn with three screws to adjust proper position of the holder. **Do not** forget to tighten the screws after adjustment.

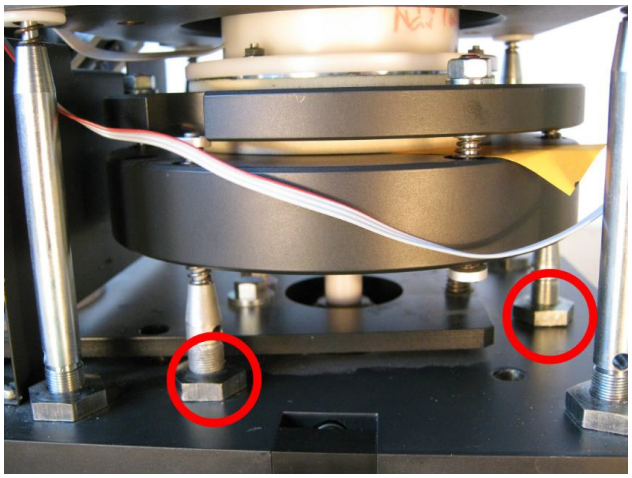

Figure 8: Three screws for setting of holder position

3. Remove sample holder and check if the axis of main shaft is in the middle of the circle plate, as it is marked by the green circle in Fig. 9.

4. If this not the case adjust it according to the next step. But do it only, when the main shaft is far from the center of the hole!

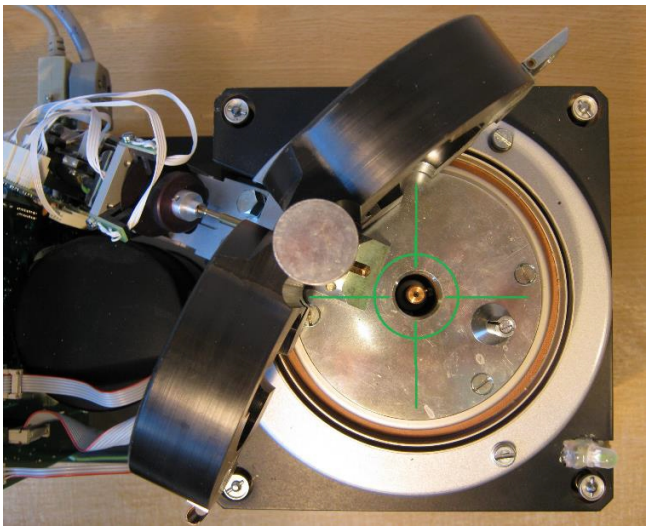

Figure 9: Main shaft in correct position

5. Loose three screws marked by the red circles (only two of them are marked in Fig. 10) and move entire coil system to get the main shaft in the center of the hole.

6. Do not forget to tighten the screws after successful adjustment. Again - do this only, when the main shaft is far from the center of the hole!

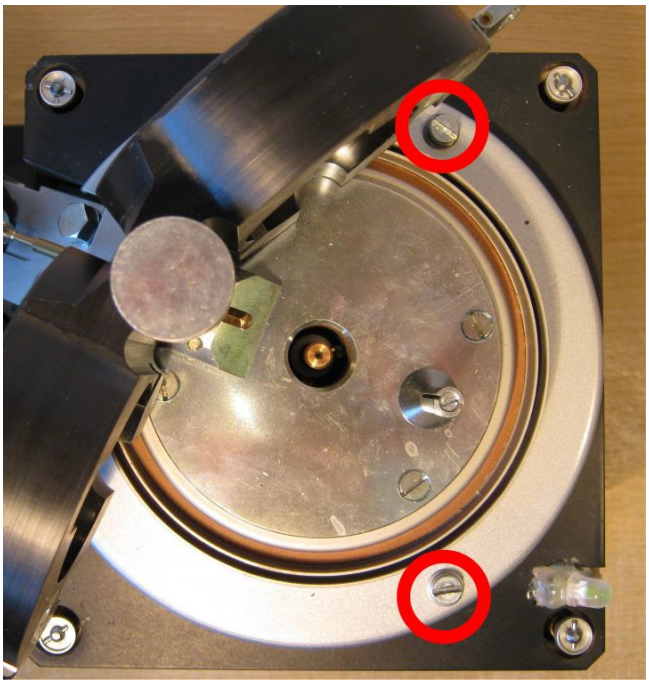

Figure 10: Screws for setting of main shaft

Adujstment 4

Adjust the automatic manipulator according the JR6 User manual pages 39-44.