# SERVICE NOTE

## JR6: How to pack the instrument

JR-6 Spinner Magnetometer is high sensitivity scientific instrument with sophisticated mechanical design. Although at first glance it looks very robust, its mechanical design requires handling with care.

For this reasons correct and careful packing is necessary prior to the shipping to prevent any damage during transportation.

### Installation of the transportation screws

- It is absolutely necessary to install so called transportation screws, before packing of the pick-up unit.
- Absence of these screws during transportation will lead to the extensive damage of the mechanical as well as electrical parts of the pick-up unit!!!
- For the first step, unplug all the cables, loose fixing screws (red arrows in Fig. 1) and remove the cover.
- Do not forget to unplug the grounding cable (blue arrow in Fig. 1).

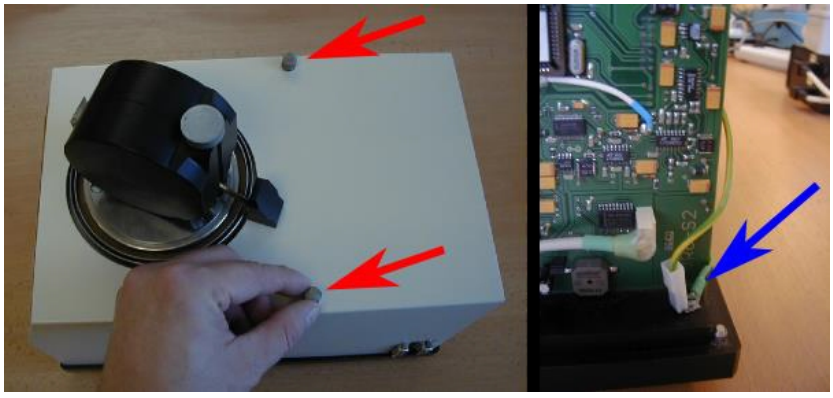

Figure 1: Remove cover and grounding cable

- Put the pick-up unit on stable solid stands and prepare your transportation screws and washers (Fig 2.
- Install all four transportation screws with the respect of correct positions of screws and washers, according to Fig. 3 and 4
- Tighten screws properly (Fig. 5). Then reinstall the cover and fix the fixing screws properly.

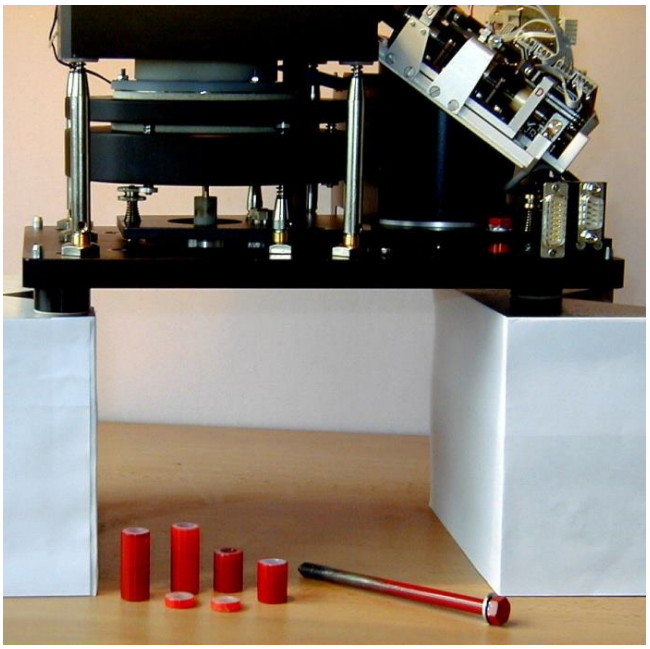

Figure 2: Pick-up unit on stable solid stands

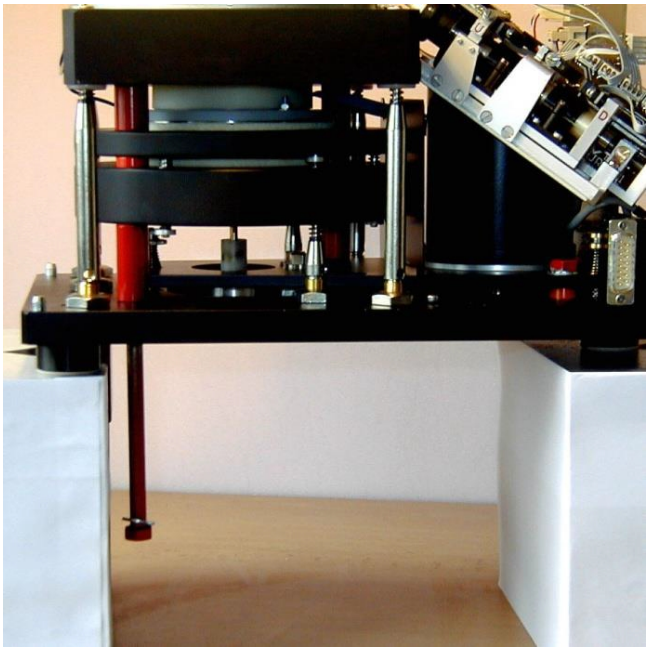

Figure 3: Installation of transportation screws

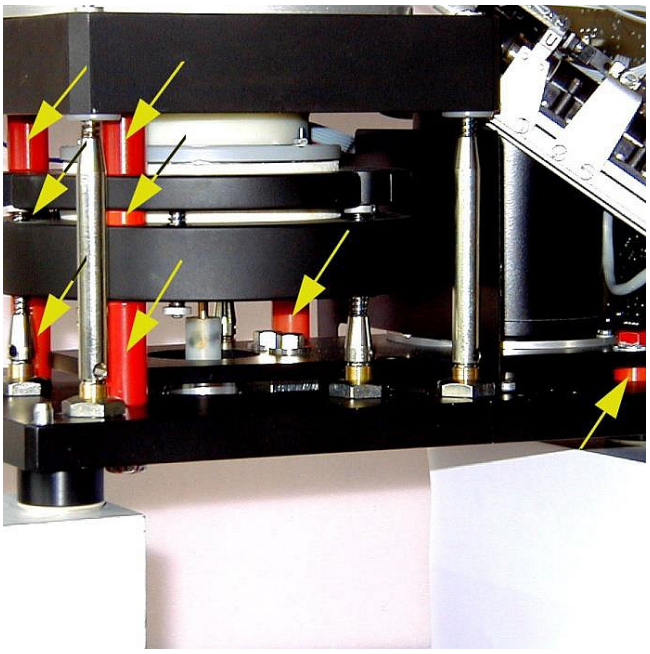

Figure 4: Position of washers

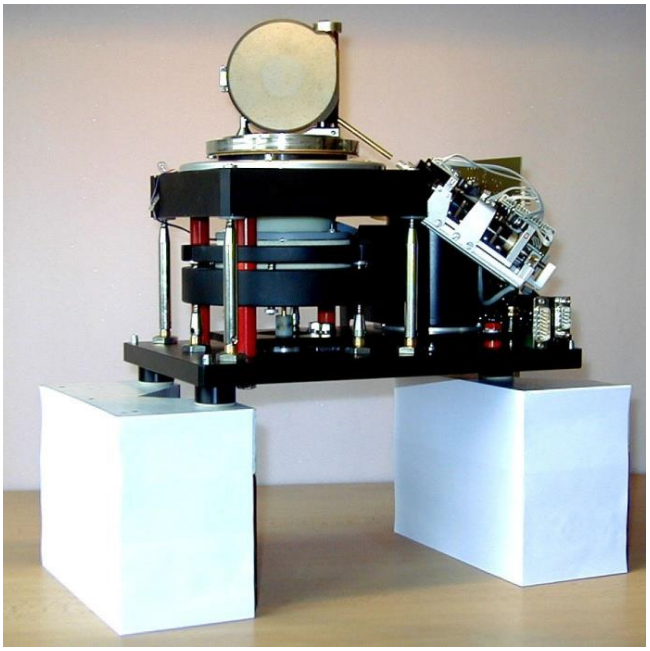

Figure 5: Pick-up unit fixed with transportation screws

## Packing of the pick-up unit

- Use some plastic foil to cover pick-up unit (including shielding hat) as well as electronic unit of the JR6.
- Then put the pick-up unit on the solid board (made of rigid material such as plywood) with dimensions 32x20 cm (12.5x8 inches) and use persistent sticking tape (duct tape) to fix the JR6 pickup unit on it.
- As shown in Fig. 6, bottom board covers the bottom of the instrument and sticking tape fixes the permalloy shielding hat.

Figure 6: Pick-up unit fixed to the board, more sticking tape is better

## Inserting into box

- Wooden or paper box which was provided together with the device is best choice (with exception of tailored boxes which some users have).
- But any good quality paper box with good dimensions may be used for transportation.
- It is necessary to use some damping material (as much as possible) to reduce impacts during the transportation.
- Example of the good packing is shown in Fig. 7. Electronic unit must be packed in the same way.

Figure 7: Packing of the pick-up unit

## Some more packing instructions

- Parts to be sent are Pick-up Unit, Power Supply (electronic) Unit, interconnecting cables, mains cord, calibration standard.
- The pick-up unit must have the transportation screws properly installed for the transportation - see attached special instructions; if the transportation screws are no longer available, please let us know, and wait with the packing until you received them from us.
- All the parts must be carefully and safely packed in a box/case sufficiently strong to prevent the instrument from damage.
- Please keep in mind that the Pick-up Unit is very heavy at relatively small volume; it must be packed in such a way that outer hitting the case does not cause damage of the unit due to its high inertia.
- All the parts must be packed in such a way that they cannot move inside the case during transpiration, all the space inside the transpiration case must be filled with suitable material - preferably strong foam plastic.
- If it is still available, we recommend to pack the instrument into original case in which it was supplied, and use the original style of packing (Pick-up Unit protected by special frame, and suspended by eight foam-plastic "corners").

- If the original case is not available, we recommend plastic container "HARDIGG" type (see attached picture 8) of appropriate size, or a wooden case of appropriate size and strength; if a carton is used, it must be extremely strong, with thick multi-layer strong walls.

Figure 8: HARDIGG container

- Please keep in mind that insufficient packing almost inevitably leads to mechanical damage of the Pick-up Unit during transformation, which increases price of the repair substantially.