

Active NanoDamp Workstation Installation Procedures Guide

This User Guide is meant to supplement, not replace, the AVI-200 Instruction Manual and AVI-200 User Guide. Please read the complete installation procedures guide below.

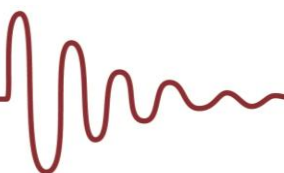
About the Active NanoDamp Workstation

The Active NanoDamp Workstation incorporates the most advanced form of vibration isolation technology available, in a form factor desirable for any research environment. Utilizing the AVI Series platforms as its mechanism for vibration isolation, the Active NanoDamp Workstation provides sub-hertz, active vibration isolation performance in all six degrees of freedom.

The AVI Series platform operates by sensing incoming vibrations using piezo accelerometers mounted inside the isolation modules. The signals from these sensors are integrated by the electronics in the controller, which send signals to the piezo transducers mounted inside the isolation modules. The transducers generate an equal, out-of-phase signal, effectively cancelling incoming vibrations. The isolation system also utilizes a feedback loop which eliminates the system's mechanical resonances.

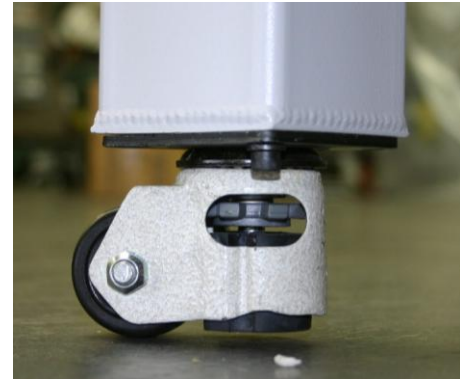
Contents

- Two AVI-200M Modules and
- One AVI-200 Controller
- One Workstation
- One Breadboard Top Plate
- Two 15-Pin D-Sub Cables
- One Power Cable
- Instruction Manual
- ¼ - 20 Allen Key, 10/32 Allen Key, and Attachment Screws



Installation Procedures

1. Unpack the workstation, AVI-200M modules, and AVI-200 controller from the shipment box.
2. Lower the leveling feet of the workstation using the leveling gear counterclockwise to allow the workstation to rest on the caster wheels for high maneuverability.
3. Place the workstation at the desired location using the caster wheels.
4. Once in the desired location, raise the leveling feet from the caster wheels by rotating the leveling gear clockwise.
5. Once the leveling feet are properly secure (i.e. workstation no longer rests on caster wheels), mount the AVI-200M modules in their designated location, whereby the cable inputs are facing towards the middle.
6. Mount the AVI-200M modules to the workstation by inputting the eight ¼ - 20 screws provided (four screws per AVI-200M module, two screws per side of AVI-200M module).
 - a. There will be a ¼ - 20 allen key included to help tighten each screw.
7. Once the AVI-200M modules have been mounted to the workstation frame, connect the two grey D-Sub cables to the lower input on the AVI-200M modules.
8. Place the breadboard on the two AVI-200M modules and align the breadboard to allow the screws to connect underneath.
9. Input and secure the eight 10/32 screws provided to ensure the breadboard is firmly affixed to the AVI-200M modules.
 - a. There will be a 10/32 allen key included to help tighten each screw.



- b. *Please Note:* do not completely tighten each screw until all screws are in place. Once all screws are in place and secured, tighten all screws.
10. Place the AVI-200 controller in the designated location, with the base feet facing outwards.
11. Connect the two D-Sub cables that are currently connected to the AVI-200M modules, to the AVI-200 controller.
- a. Make sure the correctly labeled cables are connecting to the labeled inputs on the back of the AVI-200 controller (A => A and B => B)
12. Install/mount the instrument onto the breadboard.
13. Adjust the AVI-200M modules to accommodate for the load of the breadboard and the instrument installed.
- a. Please refer to the provided AVI-200 User Guide for further instructions on how to adjust the AVI-200M modules.
14. Verify the performance of the Active NanoDamp Workstation.
- a. Please refer to the provided AVI-200 User Guide for further instructions on how to verify the performance of the AVI-200M modules.
15. You are finished!



Please contact Herzan with any questions, support@herzan.com or 949-363-2905.

