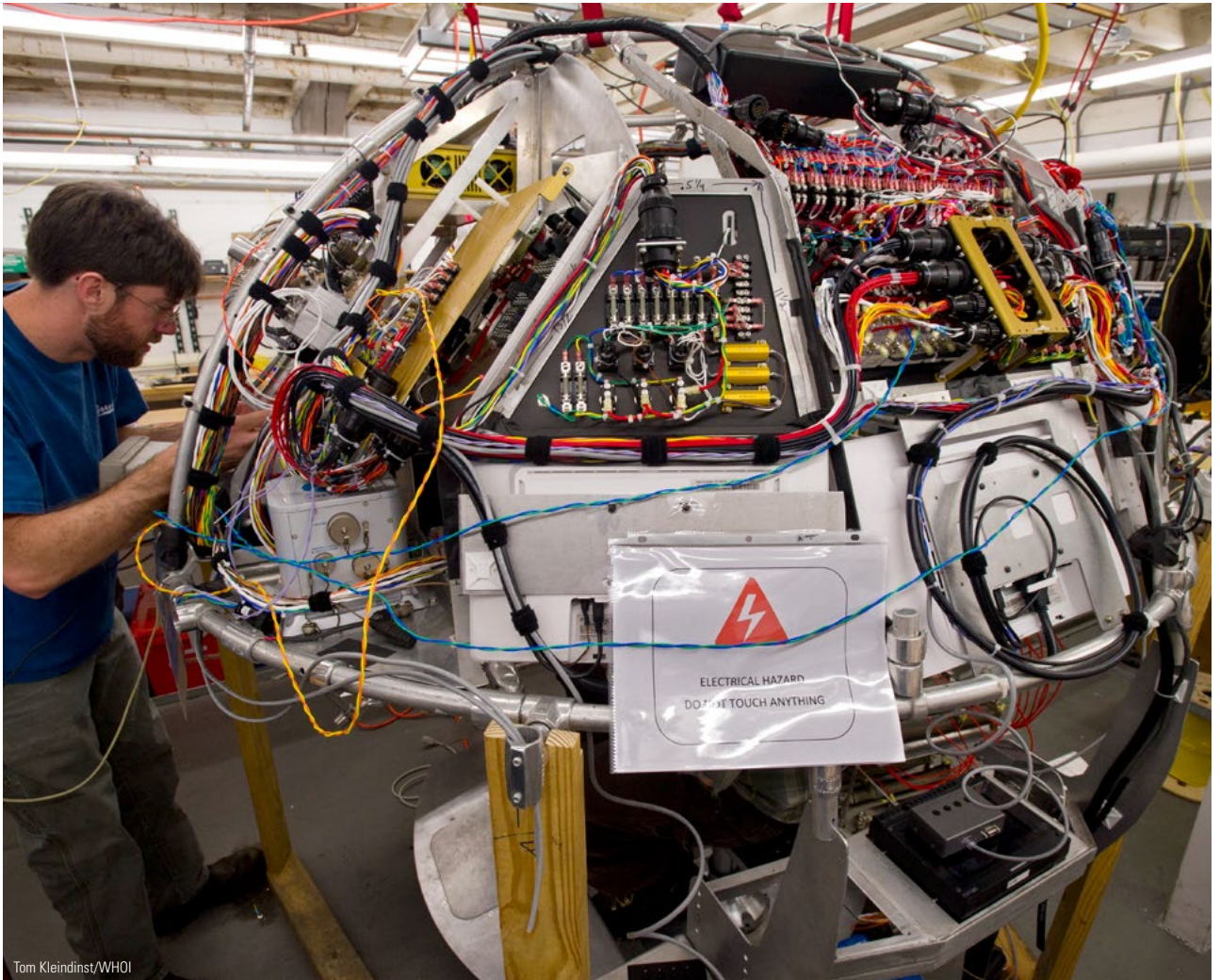


Chris Lathan

ENGINEER ASSISTANT, PILOT IN TRAINING



Tom Kleindinst/WHOI

The birdcage is an aluminum structure that is a replica of the framework on the interior of the *Alvin's* actual personnel sphere. It holds equipment, primarily electrical and electronic gear. We used it as a skeleton to build the wiring harness—the collection of wires that interconnect equipment in the sub.

Using the birdcage, we were able to install and test most of the equipment before actually installing it in the sphere. It is far easier to find and fix problems before things are installed into the sphere. During this testing, we were running our maximum rated power through the wiring harness and all of the panels, so warning signs were set up to help people keep at a safe distance during the test. In this photo, I was attempting to troubleshoot a piece of equipment that we were using to log data for this test.

During this *Alvin* overhaul, the sphere and everything inside the sphere were brand new, so the birdcage had to be built from scratch. Once it was built, it helped us mock up the interior arrangement of all the panels and wiring inside the sphere. In this photo you can see the back side of the panels, the wiring harness, and other equipment, such as the gyroscope

(the gray box near me), and the touchscreen monitors used by *Alvin* pilots. We use the colorful wiring to help us identify particular wires on the panels or in the harness.

Once we were happy with everything, we removed all of the equipment, panels, and the wiring harness in order to install them into the version of the birdcage that's inside the sphere. The birdcage in the photo will be stored and re-used during our next scheduled overhaul. We'll use it to clean, service, and upgrade the wiring harness and other equipment.

On a personal note, I've wanted to work with manned submersibles since I was a kid. The manned submersible niche is extremely small, so I had all but given up hope of being involved until I came across a well-timed job posting. My ocean engineering degree and my previous job experiences, working for a Navy dive and salvage contractor and then helping design sidescan sonar systems, helped get me in the door. I'm now an electronics technician, and I've helped build and test some of the many electrical systems on the vehicle. I'm excited to be a part of the group and ultimately to take part in exploring uncharted waters with an American icon. ▲