To meet the growing demand for new and innovative methods of facilitating seismic measurements, the Program for Array Seismic Studies of the Continental Lithosphere (PASSCAL) has developed various portable sensing packages and methods for installation in challenging environments throughout the Earth. PASSCAL provides and supports a range of portable seismographic instrumentation and expertise to diverse scientific and educational communities. By integrating planning, logistical, instrumentation, and engineering services, and supporting these efforts with full-time professional staff, IRIS has enabled the seismology community to mount hundreds of large-scale experiments throughout the United States and around the globe at scales far exceeding the capabilities of individual research groups. The IRIS PASSCAL Instrument Center (PIC) provides expertise to innovate technical solutions for investigators who continue to push the limits of convention earth observations. The instrumentation staff has developed various methods for sensor deployment and installation suitable for a variety of circumstances and environments. Contemporaneously, the engineering staff has developed state-of-the-art seismic systems for long-term polar observations, which have special size, weight and power requirements. The PIC has developed methods and equipment for quick deployments, wet environments, and improved communications. PASSCAL also provides software support for a combination of commercially available software and in-house developed applications to process and archive data at the IRIS Data Management Center. The PIC staff is constantly scrutinizing and improving operations to provide the highest quality data for interpretation and analysis.