

UNDERWATER BREATHING APPARATUS EX14
PRESS RELEASE
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The Underwater Breathing Apparatus EX14 is a saturation diving system developed by the US Navy to assist in submarine rescue and perform salvage operations to depths of 850 feet. The system includes an umbilical that supplies breathing gas, a helmet, communications, a thermal protection suit, and an emergency come-home backpack.

The US Navy pioneered saturation diving with the Sealab Program, and on the IX501 Elk River. Auxiliary submarine rescue ships USS Pigeon (ASR 21) and USS Ortolan (ASR 22) were developed to support this type of diving, in which divers were transported to the worksite in a Personnel Transfer Chamber (PTC), and then exited in diving gear. The PTC transported the divers back to a pressurized habitat on board ship for rest. Dives could be repeated over many days to complete a mission, with a single decompression at the end. The Pigeon and Ortolan have since been decommissioned. The Navy is evaluating new approaches to meet saturation diving needs, and is open to other applications for the EX14.

An EX14 dive from the NOAA Aquarius habitat is an excellent analog to extravehicular activity in space. The discipline and teamwork required to execute a dive, the helmet fixed to the torso, helmet gas flow, communications, and suit dexterity provide realistic training for astronauts during NASA Extreme Environment Missions Operations (NEEMO). The EX14 has been made available to NASA for NEEMO missions through a cooperative agreement between the NOAA Undersea Research Center, University of North Carolina at Wilmington, and the Naval Surface Warfare Center, Panama City.

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