

Models BT-xRCL and BT-xxUF Guidelines

The BTech Acoustic Communication (AComm) transducers, commonly used with the WHOI Micro-Modem, offer a robust transducer solution. There are many connector options (3-pin low profile, OS style feedthrough, and UF style feedthrough) with durable polyurethane exterior. The devices offer superior transmit and receive sensitivities compared to many alternative devices due to innovative design and construction. However, improper handling or operation could cause damage to the device. The following techniques and procedures should be followed when handling and operating the transducer to ensure reliability.

Proper Handling and Connector Installation (3-Pin Conn)

Twisting or bending of the encapsulated device should always be avoided. The following procedure must be followed.

- Lubricate the connector with a silicone o-ring lubricant.
- Firmly grasp the transducer around the connector base. Avoid applying force to the transducer on the polyurethane surface.
- Attach the female end of the mating cable. Avoid twisting or bending of the transducer and its connector.
- Secure the locking strap around the transducer connector.



Acoustic Loading, Drive Level and Depth Limitations

The transducers are intended for underwater operation only and at depths not to exceed 700 m.

The transducer should never be operated in air at high electrical drive levels. Operation without the proper acoustic water loading will result in overheating of the device. The transducer needs to be submerged underwater in a container not less than 5 gallons for laboratory testing, and with a minimum spacing of 4.5 inches between the container walls and the device. A 5-gallon plastic bucket may be used but larger tanks are recommended. Metal containers are not recommended as they tend to be more reverberant.

The maximum permissible drive voltage for safe operation is 600 Vrms when submerged underwater in the field (ocean). Electrical breakdown can occur at voltage levels exceeding 600 Vrms in the piezoelectric elements of the transducer.



Minimum container size for low level system verification. Not intended for high drive level operation. Do not operate in air.

BTech Acoustics LLC Limited Warranty

There is typically no warranty against electrical or mechanical failures due to misuse or operation outside of the safe operating conditions. We do however honor a 60-day warranty against any manufacturing defects. Contact BTech at dbrown@btechacoustics.com for inquiries or to obtain a RMA number if a device needs to be returned.