

PerCom UIT SERIES UNDERWATER INERTIAL TRANSDUCERS

The Underwater Inertial Transducer is a bone conduction device having applications as a receiver or vibrator in underwater communications equipment. It can also be used as an underwater microphone.



Physically the device is a metal cylinder, 24mm in diameter and about 8mm thick. The case is manufactured from either anodised aluminium or stainless steel, depending on the depth rating required. It is available with an optional dome on the front face which provides a single point contact with the head resulting in improved frequency response.



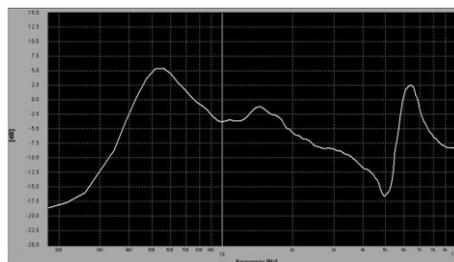
Unlike many inertial receivers which exhibit a frequency response with a single peak around 1200Hz, the Underwater Inertial Transducer has a useful response across the speech spectrum. Reproduced sound is therefore clear with good intelligibility.

As a receiver, the transducer is worn on the head, most commonly on the mastoid bone or the temple. As a microphone it is normally worn on the mastoid.

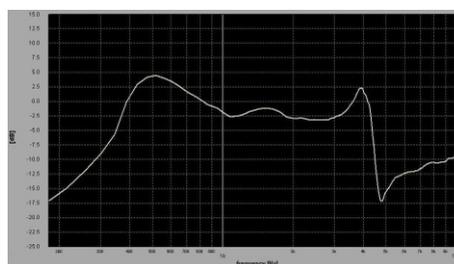
Two versions are available. The UIT-1 series has an aluminium case and is rated to 20 feet. The UIT-2 series has a stainless steel case and is rated to 350 feet (10 bars) for 30 minutes.

Specifications

Impedance	15, 35, 68, or 500 ohms (nominal), other impedances to special order
Sensitivity, free air	100mW for 0.2G at 500 Hz
Perceived sensitivity (when worn on mastoid with 170g pressure)	100mW for 110dB SPL
Max input power (continuous)	100mW
Max input power (50% duty cycle)	200mW
Frequency response	Refer graphs
Directivity pattern	Figure 8, front and back in phase
Weight	UIT-1: 12 grams. UIT-2: 20 grams
Connector	Two solder terminals
Maximum water depth	UIT-1: 8 metres (25 feet). UIT-2: 105 metres (350 feet) for 30 minutes



UIT-1 typical frequency response



UIT-1-D typical frequency response

PerCom 2000 Ltd

P O Box 15437 New Lynn Auckland 0640 New Zealand

Phone +64 9 8277667 Fax +64 9 8270123

sales@percom2000.com www.percom2000.com