B-81
High Output Bone Transducer

#8104108

Features
- Reliable performance
- Meets industry standards
- High maximum output, low distortion
- Mechanically robust
- Sensitivity: 119 dB re.1 µN @ 1 VRMS & 1 kHz
- Total harmonic distortion: 1.1% @ 1 VRMS & 1 kHz
- Impedance: 12.5 ohm @ 1 kHz
- Secured plug concept
- RoHS compliant

Products:
- B-81 Bone Transducer, item #8104108
- Custom Safety Cable, item #8104110
- Standard Transducer Headband, item #8011098
- Pre-assembled packaged (incl. #8104108, #8104110, #8011098), item #8506491

RadioEar B-81 Bone Transducer

The B-81 is the new audiometric Bone Conductor from RadioEar. This new and enhanced bone conductor achieves higher output levels at low frequencies with a superior distortion performance. With the B-81 it is now possible, for example, to reliably measure bone conduction thresholds up to 50 dBHL at 250 Hz.

The B-81 is based on the Balanced Electro-magnetic Separation Transducer (BEST principle, where static forces are counter-balanced so that non-linear distortion forces are reduced and maximum output levels can be increased. Furthermore, the robust mechanical construction results in a significantly improved shock resistance compared to conventional designs.

The B-81 is compatible with all standard headbands and high quality cables. It also has the capability of using a custom cable designed to securely attach the plug to the transducer body. This safety feature eliminates the possibility of accidentally unplugging the device while in use.

Audiometric Benefit
“The B-81 bone vibrator provides higher output and lower harmonic distortion compared to the B71. This may offer a significant clinical advantage. Conductive components of severe hearing losses that cannot be measured with the B71 vibrator may be measurable with the B-81. This is important for medical diagnosis and treatment, programming hearing aids, and determining cochlear implant candidacy.”

Robert H. Margolis
Professor Emeritus, University of Minnesota
B-81

Technical Specifications

Technical Performance

• The maximum output of the B-81 can be increased by 5-20 dB over the whole frequency range and still not exceed 5.5% THD or 6 VRMS drive voltage in reference to the IEC-ANSI Type 1 standard values. At 250 Hz, the maximum output for B-81 (median 48 dB HL) meets the standard IEC 60645-1.

• Measurements performed on Brüel & Kjaer 4930, Artificial Mastoid with static force 5.4N.

• Reference equivalent threshold force levels (RETFLs) for bone vibrators.

Compliance Standards


• ANSI/ASA S3.6-2010 American National Standard Specification for Audiometers


Table taken from ANSI standard (ANSI/ASA S3.6-2010) levels (RETFLs) for bone vibrators.

Graph 1: Vibratory Force Level (VFL)

Graph 2: Total Harmonic Distortion (THD) at Maximum Output

Graph 3: Maximum Output HL

Dimensions

• Height – 16 mm

• Length – 31.7 mm

• Width – 18.2 mm

• Weight: 20 g