



SERIES AEC & AMC

ACOUSTIC COUPLERS & EAR SIMULATORS

- Supra-Aural Earphones
- Circumaural Headsets
- Bone Vibrators
- Insert Earphones
- Hearing Aids

TYPICAL APPLICATIONS

- Audiometer Calibration
- Production Testing
- Hearing Aid Test
- Research & Development

RANGE OF SOLUTIONS

Whether testing an earphone, hearing aid, or audiometer, there is a Larson Davis coupler to satisfy your requirements. Due to the rugged, stainless steel construction and product quality you can rely on your Larson Davis coupler or ear simulator to work dependably for many years. With a range of options, you can test virtually every device including supra-aural and circumaural headsets, bone vibrators, insert earphones, and hearing aids. You can learn more in the Acoustic Coupler & Ear Simulator Comparison Table on the reverse. Each product's in-depth specifications are also available on our website.

ACOUSTIC COUPLERS & EAR SIMULATORS

SUPRA-AURAL EARPHONE TESTING

NBS 9A 6 CC COUPLER MODEL AEC100

The AEC100 Coupler is a precision acoustic coupler designed primarily for the calibration and test of supra-aural earphones used in audiometry. It allows accurate and repeatable measurements within its frequency response (up to 8 kHz). It may also be used for production testing where correlation between the coupler and real ear response is not a requisite. For use with either the Model 377A15 pre-polarized or Model 2575 externally polarized, 1-inch microphone.

SUPRA-AURAL & CIRCUMAURAL EARPHONES

EAR SIMULATOR MODEL AEC201-A

AEC201-A is a new ear simulator designed to be used with both supraaural and circumaural earphone at frequencies up to 16 000 Hz. Its design meets the requirements of IEC 60318-1:2009 Edition 2 and ANSI S3.7 section 5.4, which make it compatible with earphones like TDH 39, TDH 49, TDH 50, HDA200 and Koss HV/1A. The AEC201-A is supplied with the Model 377C13 microphone and a Type 1 adapter plate. The optional AEC201-2 is a Type 2 adapter plate for testing earphones such as Koss HV/1A. Weights, accessories and the AEC201-A are all packaged in a durable, weather-tight case.

BONE VIBRATORS

ARTIFICIAL MASTOID MODEL AMC493C

The AMC493C artificial mastoid is a precision mechanical coupler used to calibrate bone conduction hearing aids and audiometer bone vibrators. The AMC493C is cost effective and simple to use. Its patented design converts the vibrator force output to an acoustic signal measured with the system's sound level meter. It is used with the AEC100 coupler or AEC201-A Ear Simulator to perform bone vibrator tests.

INSERT TYPE HEARING AIDS & EARPHONES

COUPLER MODELS AEC202 & AEC203

- Use AEC202 for ½-inch microphones
- Used for 1-inch microphones
- Both units meet IEC 60126 and IEC 60318-5 requirements
- AEC202 meets ANSI S3.7 2cc and AEC203 meets ANSI S3.7

INSERT EARPHONES

OCCLUDED EAR SIMULATOR MODEL AEC304

- Designed to test insert earphones
- Includes ½-inch 12.5 mV/Pa matched microphone
- Meets IEC 60318-4 and IEC 60711:1981 requirements













| Which Coupler Should I Use for Calibrating Audiometers? | | | | | | | |
|---|--------------|--|-------------|-------------|------------|--------------------------------------|--|
| Head phone | AEC100 | AEC201-A | AEC202 | AEC203 | AEC304 | RETSPL | Notes |
| Ear Tone ER-3A/5A | | | $\sqrt[]{}$ | $\sqrt[]{}$ | (occluded) | ISO 389-2 ANSI S3.6 | |
| Koss HV/1A | | $\sqrt[]{}$ | | | | ISO 389-5 ANSI S3.6 | Use 9-10 N weight and optional AEC201-2 |
| Telephonics TDH-39 | $\sqrt[]{}$ | $\sqrt[]{}$ | | | | ISO 389-1 ANSI S3.6 | Use 4-5 N weight |
| Telephonics TDH-49 | \checkmark | $\sqrt[]{}$ | | | | ISO 389-1 ANSI S3.6 | Use 4-5 N weight |
| Telephonics TDH-50 | \checkmark | $\sqrt[]{}$ | | | | ISO 389-1 ANSI S3.6 | Use 4-5 N weight |
| Sennheiser HDA200 | | \checkmark \checkmark \checkmark | | | | ISO 389-5 ISO 389-8 ANSI S3.6 | Use 9-10 N weight and type 1 adapter plate |
| Sennheiser HDA280 | \checkmark | | | | | ISO 389-1 ANSI S3.6 Sennheiser | Use 4-5 N weight |
| Sennheiser HDA300 | \checkmark | \checkmark | | | | Sennheiser | Use 4-5 N weight |
| Beyer DT-48 | \checkmark | $\sqrt[]{}$ | | | | ISO 389-1 ANSI S3.6 | Use 4-5 N weight |
| Interacoustics DD45 | \checkmark | \checkmark | | | | Interacoustics | Use 4-5 N weight |
| Radio Ear B-71 | $\sqrt[]{}$ | $\sqrt[]{}$ | | | | ISO 389-3 ANSI S3.6 | Use 4-5 N weight and optional AMC493C weighting mass |



AEC202 Configurations

| SPECIFICATIONS | | | | | |
|------------------------------|--|---|--|---|--|
| Coupler | AEC100 | AEC201-A | AEC202 | AEC203 | AEC304 |
| Description | NBS 9A (6 cc) Coupler | Ear Simulator | ½ in 2cc Coupler | 1 in 2cc Coupler | IEC711 Ear Simulator |
| Standards Compliance | IEC 60318-3:1998 ANSI S3.7-1995 | IEC 60318-1:2009 IEC 60318-2:1998 ANSI S3.7-1995 Section 5.4 | IEC 60318-5:2006 ANSI S3.7-1995 | IEC 60318-5:2006 ANSI S3.7-1995 | IEC 60318-4:2010 |
| CE Compliant | — | Yes | Yes | Yes | Yes |
| ANSI S3.6 Test Configuration | — | — | HA-1, HA-2 | HA-2 | — |
| Weight | 5.5 lb (2.5 kg) | 3.2 lb (1.4 kg) | 2.7 oz (77.5 g) | 1.7 oz (49.0 g) | 3.3 oz (94.8 g) |
| Height | 2.5 in (65 mm) without mass and retainer | 2.0 in (50.9 mm) without mass and retainer | 1.62 in (4.12 cm) | 1.55 in (3.94 cm) | 1.5 in (3.81 cm) |
| Diameter | 3.2 in (82 mm) | 3.2 in (82 mm) | 0.98 in (2.48 cm) | 0.98 in (2.48 cm) | 0.94 in (2.37 cm) |
| Effective Volume | 6 cc | — | 2 cc | 2 cc | — |
| Microphone | 1 in 377A15 or LD 2575 (not included) | ½ in 377C13 (included) | ½ in 377B13 or ½ in 377B11 (not included) | 1 in 377A15 or LD 2575 (not included) | ½ in 377B13 (included) |
| Included Accessories | Vibration isolation pillow | Vibration isolation pillow | 0.035 in. hex key, acoustic tubing #13 thick | Acoustic tubing #13 thick | _ |
| Optional Accessories | 377A15 microphone 2575 microphone CAL250 Calibrator AMC493C Artificial Mastoid | AEC201-2 Type 2 adapter plate for circumaural earphones AMC493C Artificial Mastoid | 377B13 or 377B11 microphone | 377A15 microphone 2575 microphone CAL250 Calibrator | CAL250 Calibrator |
| Additional Features | _ | 377C13 is removable | Earmold substitute for BTE hearing aids, cup for insert headphones and ITE hearing aids | Can be used with AEC100 to share 1 inch microphone | Can be calibrated using CAL250 by removing top cone and mesh |
| Applications | _ | _ | IIC, CIC, ITC, ITE, RIC, BTE | BTE | ITC, ITE, RIC |

Specification Table Acronym Key

| BTE | Behind The Ear |
|------|-----------------------------|
| CIC | Completely In Canal |
| HA-1 | Without Ear Mold Substitute |
| HA-2 | With Ear Mold Substitute |
| IIC | Invisible In Canal |
| ITC | In The Canal |
| ITE | In The Ear |
| RIC | Receiver In Canal |

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