



## 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 supra-aural 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			√ √	√ √	√ (occluded)	ISO 389-2 ANSI S3.6	
Koss HV/1A		√ √				ISO 389-5 ANSI S3.6	Use 9-10 N weight and optional AEC201-2
Telephonics TDH-39	√ √	√ √				ISO 389-1 ANSI S3.6	Use 4-5 N weight
Telephonics TDH-49	√	√ √				ISO 389-1 ANSI S3.6	Use 4-5 N weight
Telephonics TDH-50	√	√ √				ISO 389-1 ANSI S3.6	Use 4-5 N weight
Sennheiser HDA200		√ √ √ √				ISO 389-5 ISO 389-8 ANSI S3.6	Use 9-10 N weight and type 1 adapter plate
Sennheiser HDA280	√	√ √				ISO 389-1 ANSI S3.6 Sennheiser	Use 4-5 N weight
Sennheiser HDA300	√	√				Sennheiser	Use 4-5 N weight
Beyer DT-48	√	√ √				ISO 389-1 ANSI S3.6	Use 4-5 N weight
Interacoustics DD45	√	√				Interacoustics	Use 4-5 N weight
Radio Ear B-71	√ √	√ √				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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