



APPLICATIONS

- ITC (in the canal)
- ITE (in the ear)
- RIC (receiver in canal)

HIGHLIGHTS

- Sensitivity: 12.5 mV/Pa
- Temperature: -40° to +80° C
- Polarization: prepolarized (0 V dc)

STANDARDS COMPLIANCE

- IEC 60318-4:2010
- IEC 60711:1981

In addition to its selection of measurement microphones, Audio Precision offers an Occluded Ear Simulator, designed to measure earphones coupled to the ear by ear inserts.

AECM304 occluded ear simulator

The AECM304 occluded ear simulator presents an artificial ear canal to the ear insert, approximating the acoustic impedance of a human ear. The AECM304 has a prepolarized 1/2" 12.5 mV/Pa measurement microphone internally mounted; a compatible preamplifier (such as the recommended Audio Precision 426M14) is required.

The 426M14 preamplifier is designed to operate on ICP® sensor power, and can be used with most 2–20 mA constant current power (CCP) microphone power supplies, including the APx1701; the preamplifier output is available on a 10-32 (microdot) jack.

Prepolarized free-field measurement microphones

The capacitor (or *condenser*) transducer element in a condenser microphone must carry a charge to function. The AECM304 microphone element is prepolarized to provide this charge, and does not require a polarizing voltage from the power supply, unlike measurement microphones that require a high (often +200 V dc) polarizing voltage. This brings several advantages: less expensive power supplies, simpler two-conductor cabling, and improved performance in high-humidity environments.

AUDIO PRECISION MODEL AECM304 OCCLUDED EAR SIMULATOR



AECM304



AECM304 WITH 426M14 PREAMP

KEY SPECIFICATIONS

Description	IEC711 ear simulator
Applications	ITC, ITE, RIC
Nominal Microphone Diameter	1/2"
Dimensions	0.94" diameter, 1.5" length
Sensitivity	12.5 mV/Pa
Mounting Thread	0.5 – 60 UNS
Required Accessory	Compatible preamplifier, such as 426M14, below



AECM304 IN TEST CHAMBER WITH EARBUD

426M14 PREAMPLIFIER

Description	ICP® / CCP microphone preamplifier
Nominal Diameter	1/2"
Mounting Thread	0.5 – 60 UNS
Dimensions	0.50" diameter, 1.44" length
Output Connector	10-32 (microdot type) jack
Power	CCP 2–20 mA, 10–14 V dc
Recommended Cable	CAB-BNC-MD-10

OPTIONAL ACCESSORIES

APx1701	Transducer Test Interface
CAB-BNC-10	10' BNC to BNC coaxial cable
CAB-BNC-3	3' BNC to BNC coaxial cable
482A21	ICP® power supply/signal conditioner, 1 channel, unity gain, AC mains powered
480C02	ICP® power supply/signal conditioner, 1 channel, unity gain, battery powered
480B21	ICP® power supply/signal conditioner, 3 channels, x1, x10, x100 gain, battery powered
488B10	AC mains adapter for 480B21
CAL250	Sound level calibrator, 250 Hz, 114 dB SPL, 1" and 1/2" diameter

CALIBRATION AND WARRANTY

Audio Precision measurement microphones are made in the United States. The microphones are manufactured to the highest standards, using a combination of systematic quality control, the finest materials, and clean-room assembly. Each unit is qualified and comes with a traceable calibration certification, and is backed by a five-year warranty.

APx1701 TRANSDUCER TEST INTERFACE



If you are making acoustic measurements with your AECM304 and an APx analyzer, consider adding an APx1701 Transducer Test Interface to your setup. The APx1701 provides the correct power to the preamplifier and will read the TEDS data and pass it on to the APx500 measurement software. The 1701 also features a high-performance two-channel power amplifier optimized for acoustic test, switchable hardware for loudspeaker impedance measurements, and complete control and automation integration with the APx500 measurement software.