

## Acoustic Products and Technologies

# Innovation and Technology

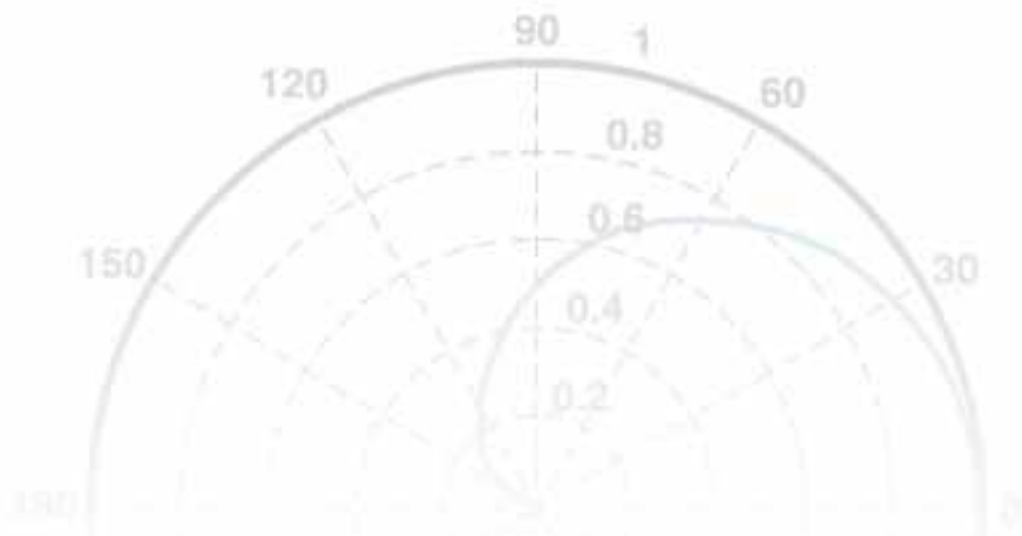
**Our mission is to provide the acoustic interface solution that will enhance the audio performance of your product while simplifying your manufacturing process....**



Knowles Acoustics, previously known as Emkay Innovative Products, is a division of Knowles Electronics LLC, the world leader in microacoustic technology for the Hearing Health Industry. Leveraging the company's heritage of fifty plus years supplying acoustic expertise to this market, we have expanded this capability with additional competencies to new markets and customers globally.

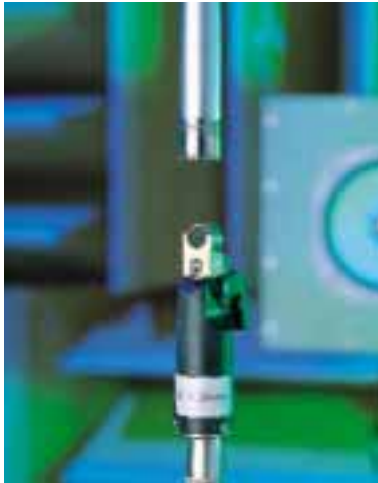
Our mission is to improve the acoustic interface of your product while simplifying your manufacturing process. Our full spectrum of acoustic interface solutions ranges from sound porting and subminiature microphones and speakers to the world's most advanced line of surface mount microphones and sound conditioning software.

If you feel the time has come to evolve both your product and your production process, look to Knowles Acoustics. Together, we can improve your audio performance, simplify your manufacturing process, lower your total cost of ownership, and accelerate your time to market.



# Dedicated to Performance

**Your acoustic requirements are perfected in our production facilities, where our subassembly manufacturing expertise elevates the performance of your product, increases its value, sets your brand apart and grows your market share.**



With over fifty years of research and development and over 300 patents the Knowles company has long been recognized as the leading supplier of subminiature acoustic assemblies. Meticulous attention to detail at every stage of design, coupled with vertical integration throughout the entire manufacturing process results in the highest level of quality, reliability and product repeatability for our partner customers. Knowles Acoustics offers you micro transducer technology second to none. Our manufacturing facilities combine

state of the art lasers with advanced robotics to ensure superb product consistency. Our facilities offer flexible but fast turnaround and exceptional price/performance considerations. These ISO and QS certified operations are located throughout the world but mainly in Asia, making JIT not only logistically possible but convenient for the majority of our partners.

We have a full range of environmental and acoustic testing capabilities to meet your needs, including anechoic chambers, temperature and humidity chambers, shock

and vibration test equipment, and lead pull testers to name a few. All of our micro acoustic component technologies are thoroughly tested before being shipped. If you have special qualification tests of your own that need to be considered, we can handle those for you as well.

Because we control our products from preliminary design concepts through complete manufacturing and final inspection, you can depend upon Knowles Acoustics for the highest levels of quality, order after order.





# Full Spectrum of Expertise

Look to Knowles Acoustics for complete audio interface solutions ranging from microphones and specialty transducers to custom assemblies and standard-setting sound conditioning technologies...



## Microphones

- *Silicon Microphones...* based on MEMS technology and surface mountable for high speed automation, including mobile phones, PDAs, tablets, etc.
- *Condenser Microphones...* for mobile phones, cordless phones, PDAs, laptops, PCs, digital cameras, etc.



## Specialty Transducers

- *High Performance Microphones...* for use in communications, instrumentation sound level meters, etc.
- *Waterproof Speakers and Microphones...* for submersion and wet environment applications
- *Accelerometers...* for instrumentation and music pickups
- *Balanced Armature Speakers...* for communication and audio products
- *Dampers...* for voice tube headsets
- *Beeppers...* for ringers and pagers, alarms, etc.



## Custom Assemblies

- *Boom Microphones...* for headset manufacturers
- *Components...* for sub-assemblies, including attaching leads, cables, connectors, etc.
- *Computer Headsets...* for voice recognition and internet telephony
- *Mobile Headsets...* for mobile hands-free communication
- *Lapel Microphones...* for business presentations, entertainment and live marketing
- *USB Adapters and Accessories...* for computer and telephony connections



## Acoustic Software

- *Far Field Array...* for precisely directed, ambient noise canceling solutions for tablets, PDAs, smart phones, telematics
- *Directional Technology...* for customized sound projection and reception applications requiring select-radius or total-circumference audio performance

# Customer-Focused

Knowles Acoustics is scientifically, culturally and philosophically dedicated to Customer product enhancement.



*Mobile Phones*

*Tablets & PCs*

*PDA's*

*Automotive*

*Digital Cameras*

*Smart Phones*

*Telematics*

*Sensors & Instrumentation*

*Pro Audio*

*Radio Communications*

*Voice Recognition*

*Aerospace*

*Medical*

*Industrial*

*Telephony*

*Military*

# Globally Positioned



*Knowles Acoustics maintains sales, marketing, engineering and manufacturing globally.  
For immediate assistance on your specific requirements, please call the nearest facility listed below.*

*[www.knowlesacoustics.com](http://www.knowlesacoustics.com)*



**AMERICAS:**

Knowles Acoustics  
1151 Maplewood Drive  
Itasca, IL 60143 U.S.A.  
Phone: 630-250-5930  
Fax: 630-250-5932

**EUROPE:**

Knowles Acoustics  
York Road, Burgess Hill  
West Sussex, RH15 9TT  
England  
Phone: +44-1444-235432  
Fax: +44-1444-248724

**JAPAN:**

Knowles Acoustics  
Kyodo Bloom Building  
2-19-1 Miyasaka  
Setagaya-Ku  
Tokyo, 156-0051 Japan  
Phone: 81-3-3439-1151  
Fax: 81-3-3439-2828

**ASIA:**

Knowles Acoustics  
5F, No. 129, Lane 235, Bauchiou Rd.  
Shindian City, Taipei 231, Taiwan  
Republic of China  
Phone: 886-2-8919-1799  
Fax: 886-2-8919-1798