PUI Audio's Ultrasonic Sensors

pui audio™ inc
a projects unlimited company

Ultrasound (or ultrasonic) refers to the band of audio above 20 kHz, which is over the range of human hearing. This band of audio is very directional and reflective due to the very small wavelengths of these frequencies.

Health and Medical Industries use ultrasonic products to make cross-sectional images of the body, detection of air, and for deep tissue massage.

Popular uses for ultrasonics in the manufacturing industry include robotic position detection, high-pressure gas and liquid leak detection, non-destructive UT (ultrasonic testing) of gas cylinders, ultrasonic cleaning and machining.

Automotive manufacturers make use of this band for distance detection in bumper and side mirror sensors, speed detection, and even in a car alarm's window breakage detection circuit.

Ultrasonic sensors are often used in applications where a photoelectric sensor would struggle due to poor target visibility, which is especially useful in line-of-sight remote controls and range finders.

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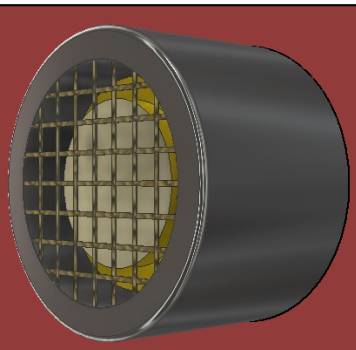
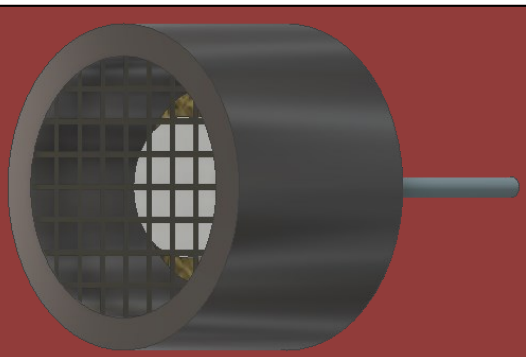
PUI Audio's new line of ultrasonic sensors are designed for use in distance measuring, fluid flow and fluid level systems, ultrasonic cleaning systems, or for detecting glass breakage. Each part is custom-built with an integrated piezo-electric bender that has a resonant frequency targeted for ultrasonic use, and works identically to that of other piezo-electric benders.



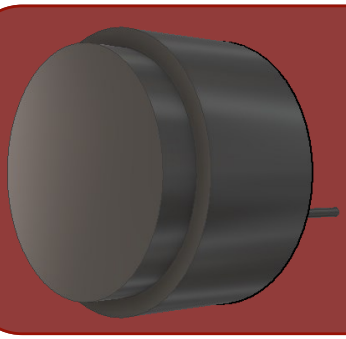
UR1240K-TT-R and **UT-1240K-TT-R**



UR-1640K-TT-2-R and UT-1640K-TT-2-R

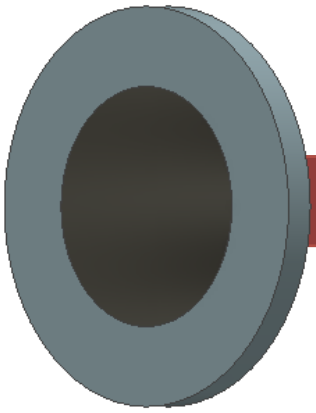
Ultrasonic receivers (**UR** parts) convert high frequency into an AC voltage when activated with the target frequency. Ultrasonic transmitters (**UT** parts) convert high frequency voltage into an audio signal for triggering ultrasonic receivers.

The 12.8mm diameter **UR-1240K-TT-R** and **UT-1240K-TT-R** are optimized to work together, while the 16.2mm **UR-1640K-TT-2-R** and **UT-1640K-TT-2-R** are designed to work together.



The 14.4mm diameter **UTR-1440K-TT-R** is a stand-alone, IP65-rated **u**ltrasonic **t**ransmitter/**r**eceiver unit.

Great for use outdoors and in dusty, humid environments!



The PUI Audio **u**ltrasonic **b**enders are designed for very high frequency, high voltage circuits meant for ultrasonic cleaning or atomizing liquids.

The **UB161M7** features a resonant frequency of 1.7 MHz.

The **UB162M4** features a resonant frequency of 2.4 MHz.